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(54) Title: COMPOSITIONS AND METHODS FOR THE TREATMENT OF IMMUNE RELATED DISEASES

(57) Abstract: The present invention relates to compositions containing novel proteins and methods of using those compositions for the diagnosis and treatment of immune related diseases.

COMPOSITIONS AND METHODS FOR THE TREATMENT OF IMMUNE RELATED DISEASES

Field of the Invention

The present invention relates to compositions and methods useful for the diagnosis and treatment of immune related diseases.

Background of the Invention

Immune related and inflammatory diseases are the manifestation or consequence of fairly complex, often multiple interconnected biological pathways which in normal physiology are critical to respond to insult or injury, initiate repair from insult or injury, and mount innate and acquired defense against foreign organisms. Disease or pathology occurs when these normal physiological pathways cause additional insult or injury either as directly related to the intensity of the response, as a consequence of abnormal regulation or excessive stimulation, as a reaction to self, or as a combination of these.

Though the genesis of these diseases often involves multistep pathways and often multiple different biological systems/pathways, intervention at critical points in one or more of these pathways can have an ameliorative or therapeutic effect. Therapeutic intervention can occur by either antagonism of a detrimental process/pathway or stimulation of a beneficial process/pathway.

Many immune related diseases are known and have been extensively studied. Such diseases include immune-mediated inflammatory diseases, non-immune-mediated inflammatory diseases, infectious diseases, immunodeficiency diseases, neoplasia, *etc.*

Immune related diseases could be treated by suppressing the immune response. Using neutralizing antibodies that inhibit molecules having immune stimulatory activity would be beneficial in the treatment of immune-mediated and inflammatory diseases. Molecules which inhibit the immune response can be utilized (proteins directly or via the use of antibody agonists) to inhibit the immune response and thus ameliorate immune related disease.

Macrophages represent an ubiquitously distributed population of fixed and circulating mononuclear phagocytes that express a variety of functions including cytokine production, killing of microbes and tumor cells and processing and presentation of antigens. Macrophages originate in the bone marrow from stem cells that give rise to a bipotent granulocyte/macrophage cell population. Distinct granulocyte and macrophage colony forming cell lineages arise from GM-CSF under the influence of specific cytokines. Upon division, monoblasts give rise to promonocytes and monocytes in the bone marrow. From there, monocytes enter the circulation. In response to particular stimuli (e.g. infection or foreign bodies) monocytes migrate into tissues and organs where they differentiate into macrophages.

Macrophages in various tissues vary in their morphology and function and have been assigned different names, e.g. Kupffer cells in the liver, pulmonary and alveolar macrophages in the lung and microglial cells in the central nervous system. However, the relationship between blood monocytes and tissue macrophages remains unclear.

In the present study monocytes were differentiated into macrophages by adherence to plastic in the presence of a combination of human and bovine serum. After 7 days in culture, monocytes-derived macrophages display features typical of differentiated tissue macrophages including their ability to phagocytose opsonized particles, secretion of TNF-alpha upon lipopolysaccharide (LPS) stimulation, formation of processes and the presence of macrophage cell surface markers.

Using microarray technologies, gene transcripts from non-differentiated monocytes harvested before adhering were compared with those at 1 day and 7 days in culture. Genes selectively expressed in monocytes or macrophages could be used for the diagnosis and treatment of various chronic inflammatory or autoimmune diseases in the human. In particular, surface expressed molecules or transmembrane receptors involved in monocyte/macrophage adhesion and endothelial cell transmigration could provide novel targets to treat chronic inflammation by interference with the homing of these cells to the site of inflammation. In addition, transmembrane inhibitory receptors could be used to down-regulate monocyte/macrophage effector functions. Therapeutic molecules can be antibodies, peptides, fusion proteins or small molecules.

Despite the above research in monocyte/macrophages, there is a great need for additional diagnostic and therapeutic agents capable of detecting the presence of monocyte/macrophage mediated disorders in a mammal and for effectively reducing these disorders. Accordingly, it is an objective of the present invention to identify polypeptides that are differentially expressed in macrophages as compared to non-differentiated monocytes, and to use those polypeptides, and their encoding nucleic acids, to produce compositions of matter useful in the therapeutic treatment and diagnostic detection of monocyte/macrophage mediated disorders in mammals.

Summary of the Invention

A. Embodiments

The present invention concerns compositions and methods useful for the diagnosis and treatment of immune related disease in mammals, including humans. The present invention is based on the identification of proteins (including agonist and antagonist antibodies) which are a result of stimulation of the immune response in mammals. Immune related diseases can be treated by suppressing or enhancing the immune response. Molecules that enhance the immune response stimulate or potentiate the immune response to an antigen. Molecules which stimulate the immune response can be used therapeutically where enhancement of the immune response would be beneficial. Alternatively, molecules that suppress the immune response attenuate or reduce the immune response to an antigen (*e.g.*, neutralizing antibodies) can be used therapeutically where attenuation of the immune response would be beneficial (*e.g.*, inflammation). Accordingly, the PRO polypeptides, agonists and antagonists thereof are also useful to prepare medicines and medicaments for the treatment of immune-related and inflammatory diseases. In a specific aspect, such medicines and medicaments comprise a therapeutically effective amount of a PRO polypeptide, agonist or antagonist thereof with a pharmaceutically acceptable carrier. Preferably, the admixture is sterile.

In a further embodiment, the invention concerns a method of identifying agonists or antagonists to a PRO polypeptide which comprises contacting the PRO polypeptide with a candidate molecule and monitoring a biological activity mediated by said PRO polypeptide. Preferably, the PRO polypeptide is a

native sequence PRO polypeptide. In a specific aspect, the PRO agonist or antagonist is an anti-PRO antibody.

In another embodiment, the invention concerns a composition of matter comprising a PRO polypeptide or an agonist or antagonist antibody which binds the polypeptide in admixture with a carrier or excipient. In one aspect, the composition comprises a therapeutically effective amount of the polypeptide or antibody. In another aspect, when the composition comprises an immune stimulating molecule, the composition is useful for: (a) increasing infiltration of inflammatory cells into a tissue of a mammal in need thereof, (b) stimulating or enhancing an immune response in a mammal in need thereof, (c) increasing the proliferation of monocytes/macrophages in a mammal in need thereof in response to an antigen, (d) stimulating the activity of monocytes/macrophages or (e) increasing the vascular permeability. In a further aspect, when the composition comprises an immune inhibiting molecule, the composition is useful for: (a) decreasing infiltration of inflammatory cells into a tissue of a mammal in need thereof, (b) inhibiting or reducing an immune response in a mammal in need thereof, (c) decreasing the activity of monocytes/macrophages or (d) decreasing the proliferation of monocytes/macrophages in a mammal in need thereof in response to an antigen. In another aspect, the composition comprises a further active ingredient, which may, for example, be a further antibody or a cytotoxic or chemotherapeutic agent. Preferably, the composition is sterile.

In another embodiment, the invention concerns a method of treating an immune related disorder in a mammal in need thereof, comprising administering to the mammal an effective amount of a PRO polypeptide, an agonist thereof, or an antagonist thereto. In a preferred aspect, the immune related disorder is selected from the group consisting of: systemic lupus erythematosis, rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, spondyloarthropathies, systemic sclerosis, idiopathic inflammatory myopathies, Sjögren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia, autoimmune thrombocytopenia, thyroiditis, diabetes mellitus, immune-mediated renal disease, demyelinating diseases of the central and peripheral nervous systems such as multiple sclerosis, idiopathic demyelinating polyneuropathy or Guillain-Barré syndrome, and chronic inflammatory demyelinating polyneuropathy, hepatobiliary diseases such as infectious, autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis, and sclerosing cholangitis, inflammatory bowel disease, gluten-sensitive enteropathy, and Whipple's disease, autoimmune or immune-mediated skin diseases including bullous skin diseases, erythema multiforme and contact dermatitis, psoriasis, allergic diseases such as asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity and urticaria, immunologic diseases of the lung such as eosinophilic pneumonias, idiopathic pulmonary fibrosis and hypersensitivity pneumonitis, transplantation associated diseases including graft rejection and graft -versus-host-disease.

In another embodiment, the invention provides an antibody which specifically binds to any of the above or below described polypeptides. Optionally, the antibody is a monoclonal antibody, humanized antibody, antibody fragment or single-chain antibody. In one aspect, the present invention concerns an isolated antibody which binds a PRO polypeptide. In another aspect, the antibody mimics the activity of a PRO polypeptide (an agonist antibody) or conversely the antibody inhibits or neutralizes the activity of a PRO polypeptide (an antagonist antibody). In another aspect, the antibody is a monoclonal antibody, which preferably has nonhuman complementarity determining region (CDR) residues and human framework region

(FR) residues. The antibody may be labeled and may be immobilized on a solid support. In a further aspect, the antibody is an antibody fragment, a monoclonal antibody, a single-chain antibody, or an anti-idiotypic antibody.

In yet another embodiment, the present invention provides a composition comprising an anti-PRO antibody in admixture with a pharmaceutically acceptable carrier. In one aspect, the composition comprises a therapeutically effective amount of the antibody. Preferably, the composition is sterile. The composition may be administered in the form of a liquid pharmaceutical formulation, which may be preserved to achieve extended storage stability. Alternatively, the antibody is a monoclonal antibody, an antibody fragment, a humanized antibody, or a single-chain antibody.

In a further embodiment, the invention concerns an article of manufacture, comprising:

(a) a composition of matter comprising a PRO polypeptide or agonist or antagonist thereof;

(b) a container containing said composition; and

(c) a label affixed to said container, or a package insert included in said container referring to the use of said PRO polypeptide or agonist or antagonist thereof in the treatment of an immune related disease. The composition may comprise a therapeutically effective amount of the PRO polypeptide or the agonist or antagonist thereof.

In yet another embodiment, the present invention concerns a method of diagnosing an immune related disease in a mammal, comprising detecting the level of expression of a gene encoding a PRO polypeptide (a) in a test sample of tissue cells obtained from the mammal, and (b) in a control sample of known normal tissue cells of the same cell type, wherein a higher or lower expression level in the test sample as compared to the control sample indicates the presence of immune related disease in the mammal from which the test tissue cells were obtained.

In another embodiment, the present invention concerns a method of diagnosing an immune disease in a mammal, comprising (a) contacting an anti-PRO antibody with a test sample of tissue cells obtained from the mammal, and (b) detecting the formation of a complex between the antibody and a PRO polypeptide, in the test sample; wherein the formation of said complex is indicative of the presence or absence of said disease. The detection may be qualitative or quantitative, and may be performed in comparison with monitoring the complex formation in a control sample of known normal tissue cells of the same cell type. A larger quantity of complexes formed in the test sample indicates the presence or absence of an immune disease in the mammal from which the test tissue cells were obtained. The antibody preferably carries a detectable label. Complex formation can be monitored, for example, by light microscopy, flow cytometry, fluorimetry, or other techniques known in the art. The test sample is usually obtained from an individual suspected of having a deficiency or abnormality of the immune system.

In another embodiment, the invention provides a method for determining the presence of a PRO polypeptide in a sample comprising exposing a test sample of cells suspected of containing the PRO polypeptide to an anti-PRO antibody and determining the binding of said antibody to said cell sample. In a specific aspect, the sample comprises a cell suspected of containing the PRO polypeptide and the antibody binds to the cell. The antibody is preferably detectably labeled and/or bound to a solid support.

In another embodiment, the present invention concerns an immune-related disease diagnostic kit, comprising an anti-PRO antibody and a carrier in suitable packaging. The kit preferably contains

instructions for using the antibody to detect the presence of the PRO polypeptide. Preferably the carrier is pharmaceutically acceptable.

In another embodiment, the present invention concerns a diagnostic kit, containing an anti-PRO antibody in suitable packaging. The kit preferably contains instructions for using the antibody to detect the PRO polypeptide.

In another embodiment, the invention provides a method of diagnosing an immune-related disease in a mammal which comprises detecting the presence or absence or a PRO polypeptide in a test sample of tissue cells obtained from said mammal, wherein the presence or absence of the PRO polypeptide in said test sample is indicative of the presence of an immune-related disease in said mammal.

In another embodiment, the present invention concerns a method for identifying an agonist of a PRO polypeptide comprising:

(a) contacting cells and a test compound to be screened under conditions suitable for the induction of a cellular response normally induced by a PRO polypeptide; and

(b) determining the induction of said cellular response to determine if the test compound is an effective agonist, wherein the induction of said cellular response is indicative of said test compound being an effective agonist.

In another embodiment, the invention concerns a method for identifying a compound capable of inhibiting the activity of a PRO polypeptide comprising contacting a candidate compound with a PRO polypeptide under conditions and for a time sufficient to allow these two components to interact and determining whether the activity of the PRO polypeptide is inhibited. In a specific aspect, either the candidate compound or the PRO polypeptide is immobilized on a solid support. In another aspect, the non-immobilized component carries a detectable label. In a preferred aspect, this method comprises the steps of:

(a) contacting cells and a test compound to be screened in the presence of a PRO polypeptide under conditions suitable for the induction of a cellular response normally induced by a PRO polypeptide; and

(b) determining the induction of said cellular response to determine if the test compound is an effective antagonist.

In another embodiment, the invention provides a method for identifying a compound that inhibits the expression of a PRO polypeptide in cells that normally express the polypeptide, wherein the method comprises contacting the cells with a test compound and determining whether the expression of the PRO polypeptide is inhibited. In a preferred aspect, this method comprises the steps of:

(a) contacting cells and a test compound to be screened under conditions suitable for allowing expression of the PRO polypeptide; and

(b) determining the inhibition of expression of said polypeptide.

In yet another embodiment, the present invention concerns a method for treating an immune-related disorder in a mammal that suffers therefrom comprising administering to the mammal a nucleic acid molecule that codes for either (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide or (c) an antagonist of a PRO polypeptide, wherein said agonist or antagonist may be an anti-PRO antibody. In a preferred embodiment, the mammal is human. In another preferred embodiment, the nucleic acid is administered via *ex vivo* gene therapy. In a further preferred embodiment, the nucleic acid is comprised within a vector, more preferably an adenoviral, adeno-associated viral, lentiviral or retroviral vector.

In yet another aspect, the invention provides a recombinant viral particle comprising a viral vector consisting essentially of a promoter, nucleic acid encoding (a) a PRO polypeptide, (b) an agonist polypeptide of a PRO polypeptide, or (c) an antagonist polypeptide of a PRO polypeptide, and a signal sequence for cellular secretion of the polypeptide, wherein the viral vector is in association with viral structural proteins. Preferably, the signal sequence is from a mammal, such as from a native PRO polypeptide.

In a still further embodiment, the invention concerns an *ex vivo* producer cell comprising a nucleic acid construct that expresses retroviral structural proteins and also comprises a retroviral vector consisting essentially of a promoter, nucleic acid encoding (a) a PRO polypeptide, (b) an agonist polypeptide of a PRO polypeptide or (c) an antagonist polypeptide of a PRO polypeptide, and a signal sequence for cellular secretion of the polypeptide, wherein said producer cell packages the retroviral vector in association with the structural proteins to produce recombinant retroviral particles.

In a still further embodiment, the invention provides a method of increasing the activity of monocytes/macrophages in a mammal comprising administering to said mammal (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide, or (c) an antagonist of a PRO polypeptide, wherein the activity of monocytes/macrophages in the mammal is increased.

In a still further embodiment, the invention provides a method of decreasing the activity of monocytes/macrophages in a mammal comprising administering to said mammal (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide, or (c) an antagonist of a PRO polypeptide, wherein the activity of monocytes/macrophages in the mammal is decreased.

In a still further embodiment, the invention provides a method of increasing the proliferation of monocytes/macrophages in a mammal comprising administering to said mammal (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide, or (c) an antagonist of a PRO polypeptide, wherein the proliferation of monocytes/macrophages in the mammal is increased.

In a still further embodiment, the invention provides a method of decreasing the proliferation of monocytes/macrophages in a mammal comprising administering to said mammal (a) a PRO polypeptide, (b) an agonist of a PRO polypeptide, or (c) an antagonist of a PRO polypeptide, wherein the proliferation of monocytes/macrophages in the mammal is decreased.

B. Additional Embodiments

In other embodiments of the present invention, the invention provides vectors comprising DNA encoding any of the herein described polypeptides. Host cell comprising any such vector are also provided. By way of example, the host cells may be CHO cells, *E. coli*, or yeast. A process for producing any of the herein described polypeptides is further provided and comprises culturing host cells under conditions suitable for expression of the desired polypeptide and recovering the desired polypeptide from the cell culture.

In other embodiments, the invention provides chimeric molecules comprising any of the herein described polypeptides fused to a heterologous polypeptide or amino acid sequence. Example of such chimeric molecules comprise any of the herein described polypeptides fused to an epitope tag sequence or a Fc region of an immunoglobulin.

In another embodiment, the invention provides an antibody which specifically binds to any of the above or below described polypeptides. Optionally, the antibody is a monoclonal antibody, humanized antibody, antibody fragment or single-chain antibody.

In yet other embodiments, the invention provides oligonucleotide probes useful for isolating genomic and cDNA nucleotide sequences or as antisense probes, wherein those probes may be derived from any of the above or below described nucleotide sequences.

In other embodiments, the invention provides an isolated nucleic acid molecule comprising a nucleotide sequence that encodes a PRO polypeptide.

In one aspect, the isolated nucleic acid molecule comprises a nucleotide sequence having at least about 80% nucleic acid sequence identity, alternatively at least about 81% nucleic acid sequence identity, alternatively at least about 82% nucleic acid sequence identity, alternatively at least about 83% nucleic acid sequence identity, alternatively at least about 84% nucleic acid sequence identity, alternatively at least about 85% nucleic acid sequence identity, alternatively at least about 86% nucleic acid sequence identity, alternatively at least about 87% nucleic acid sequence identity, alternatively at least about 88% nucleic acid sequence identity, alternatively at least about 89% nucleic acid sequence identity, alternatively at least about 90% nucleic acid sequence identity, alternatively at least about 91% nucleic acid sequence identity, alternatively at least about 92% nucleic acid sequence identity, alternatively at least about 93% nucleic acid sequence identity, alternatively at least about 94% nucleic acid sequence identity, alternatively at least about 95% nucleic acid sequence identity, alternatively at least about 96% nucleic acid sequence identity, alternatively at least about 97% nucleic acid sequence identity, alternatively at least about 98% nucleic acid sequence identity and alternatively at least about 99% nucleic acid sequence identity to (a) a DNA molecule encoding a PRO polypeptide having a full-length amino acid sequence as disclosed herein, an amino acid sequence lacking the signal peptide as disclosed herein, an extracellular domain of a transmembrane protein, with or without the signal peptide, as disclosed herein or any other specifically defined fragment of the full-length amino acid sequence as disclosed herein, or (b) the complement of the DNA molecule of (a).

In other aspects, the isolated nucleic acid molecule comprises a nucleotide sequence having at least about 80% nucleic acid sequence identity, alternatively at least about 81% nucleic acid sequence identity, alternatively at least about 82% nucleic acid sequence identity, alternatively at least about 83% nucleic acid sequence identity, alternatively at least about 84% nucleic acid sequence identity, alternatively at least about 85% nucleic acid sequence identity, alternatively at least about 86% nucleic acid sequence identity, alternatively at least about 87% nucleic acid sequence identity, alternatively at least about 88% nucleic acid sequence identity, alternatively at least about 89% nucleic acid sequence identity, alternatively at least about 90% nucleic acid sequence identity, alternatively at least about 91% nucleic acid sequence identity, alternatively at least about 92% nucleic acid sequence identity, alternatively at least about 93% nucleic acid sequence identity, alternatively at least about 94% nucleic acid sequence identity, alternatively at least about 95% nucleic acid sequence identity, alternatively at least about 96% nucleic acid sequence identity, alternatively at least about 97% nucleic acid sequence identity, alternatively at least about 98% nucleic acid sequence identity and alternatively at least about 99% nucleic acid sequence identity to (a) a DNA molecule comprising the coding sequence of a full-length PRO polypeptide cDNA as disclosed herein, the coding sequence of a PRO polypeptide lacking the signal peptide as disclosed herein, the coding sequence of an

extracellular domain of a transmembrane PRO polypeptide, with or without the signal peptide, as disclosed herein or the coding sequence of any other specifically defined fragment of the full-length amino acid sequence as disclosed herein, or (b) the complement of the DNA molecule of (a).

In a further aspect, the invention concerns an isolated nucleic acid molecule comprising a nucleotide sequence having at least about 80% nucleic acid sequence identity, alternatively at least about 81% nucleic acid sequence identity, alternatively at least about 82% nucleic acid sequence identity, alternatively at least about 83% nucleic acid sequence identity, alternatively at least about 84% nucleic acid sequence identity, alternatively at least about 85% nucleic acid sequence identity, alternatively at least about 86% nucleic acid sequence identity, alternatively at least about 87% nucleic acid sequence identity, alternatively at least about 88% nucleic acid sequence identity, alternatively at least about 89% nucleic acid sequence identity, alternatively at least about 90% nucleic acid sequence identity, alternatively at least about 91% nucleic acid sequence identity, alternatively at least about 92% nucleic acid sequence identity, alternatively at least about 93% nucleic acid sequence identity, alternatively at least about 94% nucleic acid sequence identity, alternatively at least about 95% nucleic acid sequence identity, alternatively at least about 96% nucleic acid sequence identity, alternatively at least about 97% nucleic acid sequence identity, alternatively at least about 98% nucleic acid sequence identity and alternatively at least about 99% nucleic acid sequence identity to (a) a DNA molecule that encodes the same mature polypeptide encoded by any of the human protein cDNAs as disclosed herein, or (b) the complement of the DNA molecule of (a).

Another aspect the invention provides an isolated nucleic acid molecule comprising a nucleotide sequence encoding a PRO polypeptide which is either transmembrane domain-deleted or transmembrane domain-inactivated, or is complementary to such encoding nucleotide sequence, wherein the transmembrane domain(s) of such polypeptide are disclosed herein. Therefore, soluble extracellular domains of the herein described PRO polypeptides are contemplated.

Another embodiment is directed to fragments of a PRO polypeptide coding sequence, or the complement thereof, that may find use as, for example, hybridization probes, for encoding fragments of a PRO polypeptide that may optionally encode a polypeptide comprising a binding site for an anti-PRO antibody or as antisense oligonucleotide probes. Such nucleic acid fragments are usually at least about 20 nucleotides in length, alternatively at least about 30 nucleotides in length, alternatively at least about 40 nucleotides in length, alternatively at least about 50 nucleotides in length, alternatively at least about 60 nucleotides in length, alternatively at least about 70 nucleotides in length, alternatively at least about 80 nucleotides in length, alternatively at least about 90 nucleotides in length, alternatively at least about 100 nucleotides in length, alternatively at least about 110 nucleotides in length, alternatively at least about 120 nucleotides in length, alternatively at least about 130 nucleotides in length, alternatively at least about 140 nucleotides in length, alternatively at least about 150 nucleotides in length, alternatively at least about 160 nucleotides in length, alternatively at least about 170 nucleotides in length, alternatively at least about 180 nucleotides in length, alternatively at least about 190 nucleotides in length, alternatively at least about 200 nucleotides in length, alternatively at least about 250 nucleotides in length, alternatively at least about 300 nucleotides in length, alternatively at least about 350 nucleotides in length, alternatively at least about 400 nucleotides in length, alternatively at least about 450 nucleotides in length, alternatively at least about 500 nucleotides in length, alternatively at least about 600 nucleotides in length, alternatively at least about 700

nucleotides in length, alternatively at least about 800 nucleotides in length, alternatively at least about 900 nucleotides in length and alternatively at least about 1000 nucleotides in length, wherein in this context the term "about" means the referenced nucleotide sequence length plus or minus 10% of that referenced length. It is noted that novel fragments of a PRO polypeptide-encoding nucleotide sequence may be determined in a routine manner by aligning the PRO polypeptide-encoding nucleotide sequence with other known nucleotide sequences using any of a number of well known sequence alignment programs and determining which PRO polypeptide-encoding nucleotide sequence fragment(s) are novel. All of such PRO polypeptide-encoding nucleotide sequences are contemplated herein. Also contemplated are the PRO polypeptide fragments encoded by these nucleotide molecule fragments, preferably those PRO polypeptide fragments that comprise a binding site for an anti-PRO antibody.

In another embodiment, the invention provides isolated PRO polypeptide encoded by any of the isolated nucleic acid sequences herein above identified.

In a certain aspect, the invention concerns an isolated PRO polypeptide, comprising an amino acid sequence having at least about 80% amino acid sequence identity, alternatively at least about 81% amino acid sequence identity, alternatively at least about 82% amino acid sequence identity, alternatively at least about 83% amino acid sequence identity, alternatively at least about 84% amino acid sequence identity, alternatively at least about 85% amino acid sequence identity, alternatively at least about 86% amino acid sequence identity, alternatively at least about 87% amino acid sequence identity, alternatively at least about 88% amino acid sequence identity, alternatively at least about 89% amino acid sequence identity, alternatively at least about 90% amino acid sequence identity, alternatively at least about 91% amino acid sequence identity, alternatively at least about 92% amino acid sequence identity, alternatively at least about 93% amino acid sequence identity, alternatively at least about 94% amino acid sequence identity, alternatively at least about 95% amino acid sequence identity, alternatively at least about 96% amino acid sequence identity, alternatively at least about 97% amino acid sequence identity, alternatively at least about 98% amino acid sequence identity and alternatively at least about 99% amino acid sequence identity to a PRO polypeptide having a full-length amino acid sequence as disclosed herein, an amino acid sequence lacking the signal peptide as disclosed herein, an extracellular domain of a transmembrane protein, with or without the signal peptide, as disclosed herein or any other specifically defined fragment of the full-length amino acid sequence as disclosed herein.

In a further aspect, the invention concerns an isolated PRO polypeptide comprising an amino acid sequence having at least about 80% amino acid sequence identity, alternatively at least about 81% amino acid sequence identity, alternatively at least about 82% amino acid sequence identity, alternatively at least about 83% amino acid sequence identity, alternatively at least about 84% amino acid sequence identity, alternatively at least about 85% amino acid sequence identity, alternatively at least about 86% amino acid sequence identity, alternatively at least about 87% amino acid sequence identity, alternatively at least about 88% amino acid sequence identity, alternatively at least about 89% amino acid sequence identity, alternatively at least about 90% amino acid sequence identity, alternatively at least about 91% amino acid sequence identity, alternatively at least about 92% amino acid sequence identity, alternatively at least about 93% amino acid sequence identity, alternatively at least about 94% amino acid sequence identity, alternatively at least about 95% amino acid sequence identity, alternatively at least about 96% amino acid

sequence identity, alternatively at least about 97% amino acid sequence identity, alternatively at least about 98% amino acid sequence identity and alternatively at least about 99% amino acid sequence identity to an amino acid sequence encoded by any of the human protein cDNAs as disclosed herein.

In a specific aspect, the invention provides an isolated PRO polypeptide without the N-terminal signal sequence and/or the initiating methionine and is encoded by a nucleotide sequence that encodes such an amino acid sequence as herein before described. Processes for producing the same are also herein described, wherein those processes comprise culturing a host cell comprising a vector which comprises the appropriate encoding nucleic acid molecule under conditions suitable for expression of the PRO polypeptide and recovering the PRO polypeptide from the cell culture.

Another aspect the invention provides an isolated PRO polypeptide which is either transmembrane domain-deleted or transmembrane domain-inactivated. Processes for producing the same are also herein described, wherein those processes comprise culturing a host cell comprising a vector which comprises the appropriate encoding nucleic acid molecule under conditions suitable for expression of the PRO polypeptide and recovering the PRO polypeptide from the cell culture.

In yet another embodiment, the invention concerns agonists and antagonists of a native PRO polypeptide as defined herein. In a particular embodiment, the agonist or antagonist is an anti-PRO antibody or a small molecule.

In a further embodiment, the invention concerns a method of identifying agonists or antagonists to a PRO polypeptide which comprise contacting the PRO polypeptide with a candidate molecule and monitoring a biological activity mediated by said PRO polypeptide. Preferably, the PRO polypeptide is a native PRO polypeptide.

In a still further embodiment, the invention concerns a composition of matter comprising a PRO polypeptide, or an agonist or antagonist of a PRO polypeptide as herein described, or an anti-PRO antibody, in combination with a carrier. Optionally, the carrier is a pharmaceutically acceptable carrier.

Another embodiment of the present invention is directed to the use of a PRO polypeptide, or an agonist or antagonist thereof as herein before described, or an anti-PRO antibody, for the preparation of a medicament useful in the treatment of a condition which is responsive to the PRO polypeptide, an agonist or antagonist thereof or an anti-PRO antibody.

BRIEF DESCRIPTION OF THE DRAWINGS

In the list of figures for the present application, specific cDNA sequences which are differentially expressed in differentiated macrophages as compared to normal undifferentiated monocytes are individually identified with a specific alphanumerical designation. These cDNA sequences are differentially expressed in monocytes that are specifically treated as described in Example 1 below. If start and/or stop codons have been identified in a cDNA sequence shown in the attached figures, they are shown in bold and underlined font, and the encoded polypeptide is shown in the next consecutive figure.

The Figures 1-2517 show the nucleic acids of the invention and their encoded PRO polypeptides. Also included, for convenience is a List of Figures attached hereto as Appendix A, which gives the figure number and the corresponding DNA or PRO number.

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Figure 39: DNA53531, NP_001936.1, 38037_at
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Figure 59: DNA328362, NP_060312.1, 48106_at
Figure 60: PRO84222
Figure 61: DNA328363, DNA328363, 52651_at
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Figure 82: DNA323806, NP_075385.1, 200644_at
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Figure 85: PRO71134
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Figure 102: DNA328373, AB034747, 200704_at
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Figure 104: DNA328374, NP_004853.1, 200706_s_at
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Figure 106: DNA328375, NP_002071.1, 200708_at
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Figure 108: DNA328376, NP_001210.1, 200755_s_at
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Figure 136: DNA323982, NP_004896.1, 200844_s_at
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Figure 148: DNA226028, NP_002346.1, 200900_s_at
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Figure 150: DNA326819, NP_000678.1, 200903_s_at
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Figure 176: PRO4918
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Figure 183: DNA103593, NP_000174.1, 201007_at
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Figure 294: DNA328413, NP_004823.1, 201470_at
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Figure 320: DNA328419, NP_002779.1, 201532_at
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Figure 322: DNA328420, BC002682, 201537_s_at
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Figure 383: PRO80735
Figure 384: DNA150650, NP_057086.1, 201825_s_at
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Figure 404: DNA254147, NP_000512.1, 201944_at
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Figure 2065: PRO82111
Figure 2066: DNA227498, NP_002125.3, 218120_s_at
Figure 2067: PRO37961
Figure 2068: DNA328845, NP_060615.1, 218126_at
Figure 2069: PRO10274
Figure 2070: DNA227264, LOC51312, 218136_s_at
Figure 2071: PRO37727
Figure 2072: DNA327857, NP_057386.1, 218142_s_at
Figure 2073: PRO83799
Figure 2074: DNA325852, NP_078813.1, 218153_at
Figure 2075: PRO82314
Figure 2076: DNA328846, NP_060522.2, 218169_at
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Figure 2078: DNA228094, NP_079416.1, 218175_at
Figure 2079: PRO38557
Figure 2080: DNA328847, NP_056338.1, 218194_at
Figure 2081: PRO84579
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Figure 2083: PRO12353
Figure 2084: DNA256555, NP_060042.1, 218205_s_at
Figure 2085: PRO51586
Figure 2086: DNA328848, NP_004522.1, 218212_s_at
Figure 2087: PRO84580
Figure 2088: DNA271622, NP_006020.3, 218224_at
Figure 2089: PRO59909
Figure 2090: DNA324353, NP_004538.2, 218226_s_at
Figure 2091: PRO81026
Figure 2092: DNA328849, NP_057075.1, 218232_at
Figure 2093: PRO4382
Figure 2094: DNA328850, NP_057187.1, 218254_s_at
Figure 2095: PRO84581
Figure 2096: DNA273230, NP_060914.1, 218273_s_at
Figure 2097: PRO61257
Figure 2098: DNA328851, NP_068590.1, 218276_s_at
Figure 2099: PRO84582

Figure 2100: DNA323953, NP_003507.1, 218280_x_at
Figure 2101: PRO80685
Figure 2102: DNA254824, AF267865, 218294_s_at
Figure 2103: PRO49920
Figure 2104A-B: DNA328852, NP_003609.2, 218311_at
Figure 2105: PRO84583
Figure 2106A-B: DNA328853, NP_065702.2, 218319_at
Figure 2107: PRO84584
Figure 2108: DNA328854, NP_056979.1, 218350_s_at
Figure 2109: PRO84585
Figure 2110: DNA328855, NP_076952.1, 218375_at
Figure 2111: PRO9771
Figure 2112: DNA328856, NP_068376.1, 218380_at
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Figure 2119: PRO50149
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Figure 2124: DNA328858, HEBP1, 218450_at
Figure 2125: PRO84588
Figure 2126: DNA327942, NP_060596.1, 218465_at
Figure 2127: PRO83870
Figure 2128: DNA328859, AF154054, 218468_s_at
Figure 2129: PRO1608
Figure 2130A-B: DNA328860, NP_037504.1, 218469_at
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Figure 2132: DNA328861, NP_057030.2, 218472_s_at
Figure 2133: PRO84589
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Figure 2139: PRO84592
Figure 2140: DNA255432, NP_060283.1, 218516_s_at
Figure 2141: PRO50499
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Figure 2143: PRO23708
Figure 2144: DNA328865, NP_064587.1, 218557_at
Figure 2145: PRO84593
Figure 2146: DNA328866, NP_005691.1, 218567_x_at
Figure 2147: PRO69644
Figure 2148: DNA328867, NP_085053.1, 218600_at
Figure 2149: PRO84594
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Figure 2151: PRO84595
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Figure 2153: PRO84596
Figure 2154: DNA328870, NP_060639.1, 218614_at
Figure 2155: PRO84597
Figure 2156: DNA256870, NP_073600.1, 218618_s_at
Figure 2157: PRO51800
Figure 2158: DNA254898, NP_060840.1, 218627_at
Figure 2159: PRO49988
Figure 2160: DNA328871, NP_068378.1, 218631_at
Figure 2161: PRO84598
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Figure 2163: PRO84599
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Figure 2177: PRO84605
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Figure 2198: DNA227194, FLJ11000, 218999_at
Figure 2199: PRO37657
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Figure 2201: PRO84609
Figure 2202: DNA227187, NP_057703.1, 219014_at
Figure 2203: PRO37650
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Figure 2205: PRO50294
Figure 2206A-B: DNA255239, NP_004832.1, 219026_s_at

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Figure 2219: PRO83816
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Figure 2230: DNA225594, NP_037404.1, 219229_at
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Figure 2232: DNA328894, NP_060796.1, 219243_at
Figure 2233: PRO84617
Figure 2234: DNA328895, NP_071762.2, 219259_at
Figure 2235: PRO1317
Figure 2236: DNA328896, NP_079037.1, 219265_at
Figure 2237: PRO84618
Figure 2238: DNA328897, TRPV2, 219282_s_at
Figure 2239: PRO12382
Figure 2240: DNA273489, NP_055210.1, 219290_x_at
Figure 2241: PRO61472
Figure 2242A-B: DNA328898, NP_060261.1, 219316_s_at
Figure 2243: PRO84619
Figure 2244: DNA328899, NP_061024.1, 219326_s_at
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Figure 2250: DNA254518, NP_057354.1, 219371_s_at
Figure 2251: PRO49625
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Figure 2253: PRO21718
Figure 2254: DNA256417, NP_077271.1, 219402_s_at
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Figure 2256A-B: DNA327887, NP_006656.1, 219403_s_at
Figure 2257: PRO83823
Figure 2258: DNA327888, NP_071732.1, 219412_at
Figure 2259: PRO83824
Figure 2260: DNA328901, FLJ20533, 219449_s_at
Figure 2261: PRO84622
Figure 2262: DNA328902, NP_071750.1, 219452_at
Figure 2263: PRO84623
Figure 2264: DNA328903, NP_002805.1, 219485_s_at
Figure 2265: PRO84624
Figure 2266: DNA328904, NP_076941.1, 219491_at
Figure 2267: PRO84625
Figure 2268A-B: DNA328905, NP_075392.1, 219496_at
Figure 2269: PRO84626
Figure 2270: DNA328906, NP_078855.1, 219506_at
Figure 2271: PRO84627
Figure 2272: DNA328907, NP_000067.1, 219534_x_at
Figure 2273: PRO84628
Figure 2274: DNA328908, 7691567.2, 219540_at
Figure 2275: PRO84629
Figure 2276: DNA225636, NP_065696.1, 219557_s_at
Figure 2277: PRO36099
Figure 2278A-B: DNA328909, NP_078800.2, 219558_at
Figure 2279: PRO84630
Figure 2280: DNA328910, NP_057666.1, 219593_at
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Figure 2283: PRO84631
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Figure 2285: PRO84632
Figure 2286: DNA328913, NP_079213.1, 219631_at
Figure 2287: PRO84633
Figure 2288: DNA328914, NP_060883.1, 219634_at
Figure 2289: PRO36664
Figure 2290: DNA327892, NP_060470.1, 219648_at
Figure 2291: PRO83828
Figure 2292: DNA328915, NP_055056.2, 219654_at
Figure 2293: PRO84634
Figure 2294: DNA228002, NP_071744.1, 219666_at
Figure 2295: PRO38465
Figure 2296: DNA328916, NP_071932.1, 219678_x_at
Figure 2297: PRO84635
Figure 2298: DNA287206, NP_060124.1, 219691_at
Figure 2299: PRO69488
Figure 2300: DNA328917, NP_061838.1, 219725_at
Figure 2301: PRO7306
Figure 2302: DNA328918, NP_078935.1, 219770_at
Figure 2303: PRO84636
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Figure 2305: PRO84637
Figure 2306: DNA227152, NP_038467.1, 219788_at
Figure 2307: PRO37615
Figure 2308: DNA328920, NP_061129.1, 219837_s_at
Figure 2309: PRO4425
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Figure 2311: PRO51081
Figure 2312: DNA254838, NP_078904.1, 219874_at

Figure 2313: PRO49933
Figure 2314: DNA328921, NP_057079.1, 219878_s_at
Figure 2315: PRO84638
Figure 2316: DNA256325, NP_005470.1, 219889_at
Figure 2317: PRO51367
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Figure 2319: PRO84639
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Figure 2321: PRO84640
Figure 2322: DNA256608, NP_060408.1, 219895_at
Figure 2323: PRO51611
Figure 2324: DNA328924, NP_057150.2, 219933_at
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Figure 2327: PRO50523
Figure 2328: DNA227804, NP_065394.1, 219952_s_at
Figure 2329: PRO38267
Figure 2330: DNA328925, NP_076403.1, 220005_at
Figure 2331: PRO84642
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Figure 2335: PRO70613
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Figure 2337: PRO20142
Figure 2338: DNA328926, NP_064703.1, 220046_s_at
Figure 2339: PRO84643
Figure 2340A-B: DNA221079, NP_071445.1, 220066_at
Figure 2341: PRO34753
Figure 2342: DNA256091, NP_071385.1, 220094_s_at
Figure 2343: PRO51141
Figure 2344: DNA328927, NP_078993.2, 220122_at
Figure 2345: PRO84644
Figure 2346: DNA328928, NP_068377.1, 220178_at
Figure 2347: PRO84645
Figure 2348: DNA324716, NP_463459.1, 220189_s_at
Figure 2349: PRO81347
Figure 2350: DNA228059, NP_073742.1, 220199_s_at
Figure 2351: PRO38522
Figure 2352: DNA328929, NP_060375.1, 220240_s_at
Figure 2353: PRO84646
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Figure 2355: PRO23525
Figure 2356: DNA328931, NP_004226.1, 220266_s_at
Figure 2357: PRO84647
Figure 2358: DNA328932, NP_079057.1, 220301_at
Figure 2359: PRO84648
Figure 2360: DNA328933, NP_057466.1, 220307_at
Figure 2361: PRO9891
Figure 2362: DNA256735, NP_060175.1, 220333_at
Figure 2363: PRO51669
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Figure 2365: PRO84649
Figure 2366: DNA328935, NP_009002.1, 220387_s_at
Figure 2367: PRO84650
Figure 2368: DNA254861, MCOLN3, 220484_at
Figure 2369: PRO49953
Figure 2370: DNA328936, NP_066998.1, 220491_at
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Figure 2372: DNA328937, PHEMX, 220558_x_at
Figure 2373: PRO12380
Figure 2374: DNA328938, NP_060617.1, 220643_s_at
Figure 2375: PRO84651
Figure 2376: DNA323756, NP_057267.2, 220688_s_at
Figure 2377: PRO80512
Figure 2378: DNA328939, NP_008834.1, 220741_s_at
Figure 2379: PRO84652
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Figure 2382: DNA328940, NP_078893.1, 220933_s_at
Figure 2383: PRO84653
Figure 2384: DNA328941, NP_055218.2, 220937_s_at
Figure 2385: PRO84654
Figure 2386: DNA327953, NP_055182.2, 220942_x_at
Figure 2387: PRO83878
Figure 2388A-B: DNA323882, NP_000692.2, 220948_s_at
Figure 2389: PRO80625
Figure 2390: DNA327917, NP_112240.1, 220966_x_at
Figure 2391: PRO83852
Figure 2392: DNA328942, NP_112216.2, 220985_s_at
Figure 2393: PRO84655
Figure 2394: DNA328943, NP_036566.1, 221041_s_at
Figure 2395: PRO51680
Figure 2396: DNA328944, NP_060554.1, 221078_s_at
Figure 2397: PRO84656
Figure 2398: DNA328945, NP_079177.2, 221081_s_at
Figure 2399: PRO84657
Figure 2400: DNA328946, NP_055164.1, 221087_s_at
Figure 2401: PRO12343
Figure 2402: DNA328947, NP_055245.1, 221188_s_at
Figure 2403: PRO84658
Figure 2404: DNA257293, NP_110396.1, 221210_s_at
Figure 2405: PRO51888
Figure 2406: DNA327920, NP_110431.1, 221245_s_at
Figure 2407: PRO83855
Figure 2408A-C: DNA328287, NP_072174.2, 221246_x_at
Figure 2409: PRO84163
Figure 2410: DNA328948, NP_110437.1, 221253_s_at
Figure 2411: PRO84659
Figure 2412: DNA256432, NP_110415.1, 221266_s_at
Figure 2413: PRO51471
Figure 2414: DNA328027, NP_112570.2, 221437_s_at
Figure 2415: PRO83944
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Figure 2417: PRO60289
Figure 2418: DNA328949, AF157510, 221487_s_at

Figure 2419: PRO84660
Figure 2420: DNA328950, NP_057025.1, 221504_s_at
Figure 2421: PRO84661
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Figure 2423: PRO84662
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Figure 2425: PRO84663
Figure 2426A-B: DNA273901, NP_110389.1, 221530_s_at
Figure 2427: PRO61855
Figure 2428: DNA274676, DKFZp564A176Homo, 221538_s_at
Figure 2429: DNA328953, NP_004086.1, 221539_at
Figure 2430: PRO70296
Figure 2431A-B: DNA328954, NP_113664.1, 221541_at
Figure 2432: PRO9851
Figure 2433A-B: DNA269992, HUMACYLCOA, 221561_at
Figure 2434: PRO58388
Figure 2435: DNA328955, NP_054887.1, 221570_s_at
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Figure 2438: DNA188321, NP_004855.1, 221577_x_at
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Figure 2441: PRO23859
Figure 2442: DNA328958, BC001663, 221593_s_at
Figure 2443: PRO84665
Figure 2444: DNA328959, NP_077027.1, 221620_s_at
Figure 2445: PRO4302
Figure 2446: DNA254777, NP_055140.1, 221676_s_at
Figure 2447: PRO49875
Figure 2448: DNA327526, NP_065727.2, 221679_s_at
Figure 2449: PRO83574
Figure 2450: DNA328960, NP_076426.1, 221692_s_at
Figure 2451: PRO84666
Figure 2452: DNA327929, AK001785, 221748_s_at
Figure 2453: PRO83861
Figure 2454: DNA328961, NP_443112.1, 221756_at
Figure 2455: PRO84667
Figure 2456: DNA328962, BC021574, 221759_at
Figure 2457: PRO82746
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Figure 2459: PRO84668
Figure 2460A-B: DNA327930, 1455324.9, 221765_at
Figure 2461: PRO83862
Figure 2462: DNA328964, AK056028, 221770_at
Figure 2463: PRO84669
Figure 2464A-C: DNA328965, AB051505, 221778_at
Figure 2465A-B: DNA328966, BAB14908.1, 221790_s_at
Figure 2466: PRO84670
Figure 2467: DNA328967, BC017905, 221815_at
Figure 2468: PRO84671
Figure 2469: DNA274058, NP_057203.1, 221816_s_at
Figure 2470: PRO61999
Figure 2471A-B: DNA328968, 1322249.6, 221830_at
Figure 2472: PRO62511
Figure 2473: DNA272419, AF105036, 221841_s_at
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Figure 2475: DNA299882, DNA299882, 221872_at
Figure 2476: PRO70856
Figure 2477: DNA328969, 334394.2, 221878_at
Figure 2478: PRO84672
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Figure 2480: PRO83865
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Figure 2483: DNA328971, AK000472, 221923_s_at
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Figure 2485: DNA254787, AK023140, 221935_s_at
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Figure 2490: DNA328973, NP_115538.1, 222024_s_at
Figure 2491: PRO82497
Figure 2492: DNA119482, DNA119482, 222108_at
Figure 2493: PRO9850
Figure 2494: DNA328974, NP_061893.1, 222116_s_at
Figure 2495: PRO84676
Figure 2496: DNA287209, NP_056350.1, 222154_s_at
Figure 2497: PRO69490
Figure 2498: DNA328975, NP_078807.1, 222155_s_at
Figure 2499: PRO47688
Figure 2500: DNA328976, BC019091, 222206_s_at
Figure 2501: PRO84677
Figure 2502: DNA256784, NP_075069.1, 222209_s_at
Figure 2503: PRO51716
Figure 2504: DNA328977, NP_071344.1, 222216_s_at
Figure 2505: PRO84678
Figure 2506: DNA328978, NP_060373.1, 222244_s_at
Figure 2507: PRO84679
Figure 2508A-B: DNA328979, 006242.19, 222266_at
Figure 2509: PRO84680
Figure 2510: DNA328980, 7692031.1, 222273_at
Figure 2511: PRO84681
Figure 2512: DNA328981, AF443871, 222294_s_at
Figure 2513: PRO24633
Figure 2514: DNA328982, 154391.1, 222313_at
Figure 2515: PRO84682
Figure 2516: DNA328983, 206335.1, 222366_at
Figure 2517: PRO84683

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

I. Definitions

The terms "PRO polypeptide" and "PRO" as used herein and when immediately followed by a numerical designation refer to various polypeptides, wherein the complete designation (i.e., PRO/number) refers to specific polypeptide sequences as described herein. The terms "PRO/number polypeptide" and "PRO/number" wherein the term "number" is provided as an actual numerical designation as used herein encompass native sequence polypeptides and polypeptide variants (which are further defined herein). The PRO polypeptides described herein may be isolated from a variety of sources, such as from human tissue types or from another source, or prepared by recombinant or synthetic methods. The term "PRO polypeptide" refers to each individual PRO/number polypeptide disclosed herein. All disclosures in this specification which refer to the "PRO polypeptide" refer to each of the polypeptides individually as well as jointly. For example, descriptions of the preparation of, purification of, derivation of, formation of antibodies to or against, administration of, compositions containing, treatment of a disease with, etc., pertain to each polypeptide of the invention individually. The term "PRO polypeptide" also includes variants of the PRO/number polypeptides disclosed herein.

A "native sequence PRO polypeptide" comprises a polypeptide having the same amino acid sequence as the corresponding PRO polypeptide derived from nature. Such native sequence PRO polypeptides can be isolated from nature or can be produced by recombinant or synthetic means. The term "native sequence PRO polypeptide" specifically encompasses naturally-occurring truncated or secreted forms of the specific PRO polypeptide (*e.g.*, an extracellular domain sequence), naturally-occurring variant forms (*e.g.*, alternatively spliced forms) and naturally-occurring allelic variants of the polypeptide. In various embodiments of the invention, the native sequence PRO polypeptides disclosed herein are mature or full-length native sequence polypeptides comprising the full-length amino acids sequences shown in the accompanying figures. Start and stop codons are shown in bold font and underlined in the figures. However, while the PRO polypeptide disclosed in the accompanying figures are shown to begin with methionine residues designated herein as amino acid position 1 in the figures, it is conceivable and possible that other methionine residues located either upstream or downstream from the amino acid position 1 in the figures may be employed as the starting amino acid residue for the PRO polypeptides.

The PRO polypeptide "extracellular domain" or "ECD" refers to a form of the PRO polypeptide which is essentially free of the transmembrane and cytoplasmic domains. Ordinarily, a PRO polypeptide ECD will have less than 1% of such transmembrane and/or cytoplasmic domains and preferably, will have less than 0.5% of such domains. It will be understood that any transmembrane domains identified for the PRO polypeptides of the present invention are identified pursuant to criteria routinely employed in the art for identifying that type of hydrophobic domain. The exact boundaries of a transmembrane domain may vary but most likely by no more than about 5 amino acids at either end of the domain as initially identified herein. Optionally, therefore, an extracellular domain of a PRO polypeptide may contain from about 5 or fewer amino acids on either side of the transmembrane domain/extracellular domain boundary as identified in the Examples or specification and such polypeptides, with or without the associated signal peptide, and nucleic acid encoding them, are contemplated by the present invention.

The approximate location of the "signal peptides" of the various PRO polypeptides disclosed herein are shown in the present specification and/or the accompanying figures. It is noted, however, that the C-terminal boundary of a signal peptide may vary, but most likely by no more than about 5 amino acids on either side of the signal peptide C-terminal boundary as initially identified herein, wherein the C-terminal boundary of the signal peptide may be identified pursuant to criteria routinely employed in the art for identifying that type of amino acid sequence element (e.g., Nielsen et al., Prot. Eng. 10:1-6 (1997) and von Heinje et al., Nucl. Acids. Res. 14:4683-4690 (1986)). Moreover, it is also recognized that, in some cases, cleavage of a signal sequence from a secreted polypeptide is not entirely uniform, resulting in more than one secreted species. These mature polypeptides, where the signal peptide is cleaved within no more than about 5 amino acids on either side of the C-terminal boundary of the signal peptide as identified herein, and the polynucleotides encoding them, are contemplated by the present invention.

"PRO polypeptide variant" means an active PRO polypeptide as defined above or below having at least about 80% amino acid sequence identity with a full-length native sequence PRO polypeptide sequence as disclosed herein, a PRO polypeptide sequence lacking the signal peptide as disclosed herein, an extracellular domain of a PRO polypeptide, with or without the signal peptide, as disclosed herein or any other fragment of a full-length PRO polypeptide sequence as disclosed herein. Such PRO polypeptide variants include, for instance, PRO polypeptides wherein one or more amino acid residues are added, or deleted, at the N- or C-terminus of the full-length native amino acid sequence. Ordinarily, a PRO polypeptide variant will have at least about 80% amino acid sequence identity, alternatively at least about 81% amino acid sequence identity, alternatively at least about 82% amino acid sequence identity, alternatively at least about 83% amino acid sequence identity, alternatively at least about 84% amino acid sequence identity, alternatively at least about 85% amino acid sequence identity, alternatively at least about 86% amino acid sequence identity, alternatively at least about 87% amino acid sequence identity, alternatively at least about 88% amino acid sequence identity, alternatively at least about 89% amino acid sequence identity, alternatively at least about 90% amino acid sequence identity, alternatively at least about 91% amino acid sequence identity, alternatively at least about 92% amino acid sequence identity, alternatively at least about 93% amino acid sequence identity, alternatively at least about 94% amino acid sequence identity, alternatively at least about 95% amino acid sequence identity, alternatively at least about 96% amino acid sequence identity, alternatively at least about 97% amino acid sequence identity, alternatively at least about 98% amino acid sequence identity and alternatively at least about 99% amino acid sequence identity to a full-length native sequence PRO polypeptide sequence as disclosed herein, a PRO polypeptide sequence lacking the signal peptide as disclosed herein, an extracellular domain of a PRO polypeptide, with or without the signal peptide, as disclosed herein or any other specifically defined fragment of a full-length PRO polypeptide sequence as disclosed herein. Ordinarily, PRO variant polypeptides are at least about 10 amino acids in length, alternatively at least about 20 amino acids in length, alternatively at least about 30 amino acids in length, alternatively at least about 40 amino acids in length, alternatively at least about 50 amino acids in length, alternatively at least about 60 amino acids in length, alternatively at least about 70 amino acids in length, alternatively at least about 80 amino acids in length, alternatively at least about 90 amino acids in length, alternatively at least about 100 amino acids in length,

alternatively at least about 150 amino acids in length, alternatively at least about 200 amino acids in length, alternatively at least about 300 amino acids in length, or more.

"Percent (%) amino acid sequence identity" with respect to the PRO polypeptide sequences identified herein is defined as the percentage of amino acid residues in a candidate sequence that are identical with the amino acid residues in the specific PRO polypeptide sequence, after aligning the sequences and introducing gaps, if necessary, to achieve the maximum percent sequence identity, and not considering any conservative substitutions as part of the sequence identity. Alignment for purposes of determining percent amino acid sequence identity can be achieved in various ways that are within the skill in the art, for instance, using publicly available computer software such as BLAST, BLAST-2, ALIGN or Megalign (DNASTAR) software. Those skilled in the art can determine appropriate parameters for measuring alignment, including any algorithms needed to achieve maximal alignment over the full length of the sequences being compared. For purposes herein, however, % amino acid sequence identity values are generated using the sequence comparison computer program ALIGN-2, wherein the complete source code for the ALIGN-2 program is provided in Table 1 below. The ALIGN-2 sequence comparison computer program was authored by Genentech, Inc. and the source code shown in Table 1 below has been filed with user documentation in the U.S. Copyright Office, Washington D.C., 20559, where it is registered under U.S. Copyright Registration No. TXU510087. The ALIGN-2 program is publicly available through Genentech, Inc., South San Francisco, California or may be compiled from the source code provided in Table 1 below. The ALIGN-2 program should be compiled for use on a UNIX operating system, preferably digital UNIX V4.0D. All sequence comparison parameters are set by the ALIGN-2 program and do not vary.

In situations where ALIGN-2 is employed for amino acid sequence comparisons, the % amino acid sequence identity of a given amino acid sequence A to, with, or against a given amino acid sequence B (which can alternatively be phrased as a given amino acid sequence A that has or comprises a certain % amino acid sequence identity to, with, or against a given amino acid sequence B) is calculated as follows:

100 times the fraction X/Y

where X is the number of amino acid residues scored as identical matches by the sequence alignment program ALIGN-2 in that program's alignment of A and B, and where Y is the total number of amino acid residues in B. It will be appreciated that where the length of amino acid sequence A is not equal to the length of amino acid sequence B, the % amino acid sequence identity of A to B will not equal the % amino acid sequence identity of B to A. As examples of % amino acid sequence identity calculations using this method, Tables 2 and 3 demonstrate how to calculate the % amino acid sequence identity of the amino acid sequence designated "Comparison Protein" to the amino acid sequence designated "PRO", wherein "PRO" represents the amino acid sequence of a hypothetical PRO polypeptide of interest, "Comparison Protein" represents the amino acid sequence of a polypeptide against which the "PRO" polypeptide of interest is being compared, and "X, "Y" and "Z" each represent different hypothetical amino acid residues.

Unless specifically stated otherwise, all % amino acid sequence identity values used herein are obtained as described in the immediately preceding paragraph using the ALIGN-2 computer program. However, % amino acid sequence identity values may also be obtained as described below by using the WU-

BLAST-2 computer program (Altschul et al., Methods in Enzymology 266:460-480 (1996)). Most of the WU-BLAST-2 search parameters are set to the default values. Those not set to default values, i.e., the adjustable parameters, are set with the following values: overlap span = 1, overlap fraction = 0.125, word threshold (T) = 11, and scoring matrix = BLOSUM62. When WU-BLAST-2 is employed, a % amino acid sequence identity value is determined by dividing (a) the number of matching identical amino acid residues between the amino acid sequence of the PRO polypeptide of interest having a sequence derived from the native PRO polypeptide and the comparison amino acid sequence of interest (i.e., the sequence against which the PRO polypeptide of interest is being compared which may be a PRO variant polypeptide) as determined by WU-BLAST-2 by (b) the total number of amino acid residues of the PRO polypeptide of interest. For example, in the statement "a polypeptide comprising an the amino acid sequence A which has or having at least 80% amino acid sequence identity to the amino acid sequence B", the amino acid sequence A is the comparison amino acid sequence of interest and the amino acid sequence B is the amino acid sequence of the PRO polypeptide of interest.

Percent amino acid sequence identity may also be determined using the sequence comparison program NCBI-BLAST2 (Altschul et al., Nucleic Acids Res. 25:3389-3402 (1997)). The NCBI-BLAST2 sequence comparison program may be downloaded from http://www.ncbi.nlm.nih.gov or otherwise obtained from the National Institute of Health, Bethesda, MD. NCBI-BLAST2 uses several search parameters, wherein all of those search parameters are set to default values including, for example, unmask = yes, strand = all, expected occurrences = 10, minimum low complexity length = 15/5, multi-pass e-value = 0.01, constant for multi-pass = 25, dropoff for final gapped alignment = 25 and scoring matrix = BLOSUM62.

In situations where NCBI-BLAST2 is employed for amino acid sequence comparisons, the % amino acid sequence identity of a given amino acid sequence A to, with, or against a given amino acid sequence B (which can alternatively be phrased as a given amino acid sequence A that has or comprises a certain % amino acid sequence identity to, with, or against a given amino acid sequence B) is calculated as follows:

100 times the fraction X/Y

where X is the number of amino acid residues scored as identical matches by the sequence alignment program NCBI-BLAST2 in that program's alignment of A and B, and where Y is the total number of amino acid residues in B. It will be appreciated that where the length of amino acid sequence A is not equal to the length of amino acid sequence B, the % amino acid sequence identity of A to B will not equal the % amino acid sequence identity of B to A.

"PRO variant polynucleotide" or "PRO variant nucleic acid sequence" means a nucleic acid molecule which encodes an active PRO polypeptide as defined below and which has at least about 80% nucleic acid sequence identity with a nucleotide acid sequence encoding a full-length native sequence PRO polypeptide sequence as disclosed herein, a full-length native sequence PRO polypeptide sequence lacking the signal peptide as disclosed herein, an extracellular domain of a PRO polypeptide, with or without the signal peptide, as disclosed herein or any other fragment of a full-length PRO polypeptide sequence as disclosed herein. Ordinarily, a PRO variant polynucleotide will have at least about 80% nucleic acid

sequence identity, alternatively at least about 81% nucleic acid sequence identity, alternatively at least about 82% nucleic acid sequence identity, alternatively at least about 83% nucleic acid sequence identity, alternatively at least about 84% nucleic acid sequence identity, alternatively at least about 85% nucleic acid sequence identity, alternatively at least about 86% nucleic acid sequence identity, alternatively at least about 87% nucleic acid sequence identity, alternatively at least about 88% nucleic acid sequence identity, alternatively at least about 89% nucleic acid sequence identity, alternatively at least about 90% nucleic acid sequence identity, alternatively at least about 91% nucleic acid sequence identity, alternatively at least about 92% nucleic acid sequence identity, alternatively at least about 93% nucleic acid sequence identity, alternatively at least about 94% nucleic acid sequence identity, alternatively at least about 95% nucleic acid sequence identity, alternatively at least about 96% nucleic acid sequence identity, alternatively at least about 97% nucleic acid sequence identity, alternatively at least about 98% nucleic acid sequence identity and alternatively at least about 99% nucleic acid sequence identity with a nucleic acid sequence encoding a full-length native sequence PRO polypeptide sequence as disclosed herein, a full-length native sequence PRO polypeptide sequence lacking the signal peptide as disclosed herein, an extracellular domain of a PRO polypeptide, with or without the signal sequence, as disclosed herein or any other fragment of a full-length PRO polypeptide sequence as disclosed herein. Variants do not encompass the native nucleotide sequence.

Ordinarily, PRO variant polynucleotides are at least about 30 nucleotides in length, alternatively at least about 60 nucleotides in length, alternatively at least about 90 nucleotides in length, alternatively at least about 120 nucleotides in length, alternatively at least about 150 nucleotides in length, alternatively at least about 180 nucleotides in length, alternatively at least about 210 nucleotides in length, alternatively at least about 240 nucleotides in length, alternatively at least about 270 nucleotides in length, alternatively at least about 300 nucleotides in length, alternatively at least about 450 nucleotides in length, alternatively at least about 600 nucleotides in length, alternatively at least about 900 nucleotides in length, or more.

"Percent (%) nucleic acid sequence identity" with respect to PRO-encoding nucleic acid sequences identified herein is defined as the percentage of nucleotides in a candidate sequence that are identical with the nucleotides in the PRO nucleic acid sequence of interest, after aligning the sequences and introducing gaps, if necessary, to achieve the maximum percent sequence identity. Alignment for purposes of determining percent nucleic acid sequence identity can be achieved in various ways that are within the skill in the art, for instance, using publicly available computer software such as BLAST, BLAST-2, ALIGN or Megalign (DNASTAR) software. For purposes herein, however, % nucleic acid sequence identity values are generated using the sequence comparison computer program ALIGN-2, wherein the complete source code for the ALIGN-2 program is provided in Table 1 below. The ALIGN-2 sequence comparison computer program was authored by Genentech, Inc. and the source code shown in Table 1 below has been filed with user documentation in the U.S. Copyright Office, Washington D.C., 20559, where it is registered under U.S. Copyright Registration No. TXU510087. The ALIGN-2 program is publicly available through Genentech, Inc., South San Francisco, California or may be compiled from the source code provided in Table 1 below. The ALIGN-2 program should be compiled for use on a UNIX operating system, preferably digital UNIX V4.0D. All sequence comparison parameters are set by the ALIGN-2 program and do not vary.

In situations where ALIGN-2 is employed for nucleic acid sequence comparisons, the % nucleic acid sequence identity of a given nucleic acid sequence C to, with, or against a given nucleic acid sequence

D (which can alternatively be phrased as a given nucleic acid sequence C that has or comprises a certain % nucleic acid sequence identity to, with, or against a given nucleic acid sequence D) is calculated as follows:

100 times the fraction W/Z

where W is the number of nucleotides scored as identical matches by the sequence alignment program ALIGN-2 in that program's alignment of C and D, and where Z is the total number of nucleotides in D. It will be appreciated that where the length of nucleic acid sequence C is not equal to the length of nucleic acid sequence D, the % nucleic acid sequence identity of C to D will not equal the % nucleic acid sequence identity of D to C. As examples of % nucleic acid sequence identity calculations, Tables 4 and 5, demonstrate how to calculate the % nucleic acid sequence identity of the nucleic acid sequence designated "Comparison DNA" to the nucleic acid sequence designated "PRO-DNA", wherein "PRO-DNA" represents a hypothetical PRO-encoding nucleic acid sequence of interest, "Comparison DNA" represents the nucleotide sequence of a nucleic acid molecule against which the "PRO-DNA" nucleic acid molecule of interest is being compared, and "N", "L" and "V" each represent different hypothetical nucleotides.

Unless specifically stated otherwise, all % nucleic acid sequence identity values used herein are obtained as described in the immediately preceding paragraph using the ALIGN-2 computer program. However, % nucleic acid sequence identity values may also be obtained as described below by using the WU-BLAST-2 computer program (Altschul et al., Methods in Enzymology 266:460-480 (1996)). Most of the WU-BLAST-2 search parameters are set to the default values. Those not set to default values, i.e., the adjustable parameters, are set with the following values: overlap span = 1, overlap fraction = 0.125, word threshold (T) = 11, and scoring matrix = BLOSUM62. When WU-BLAST-2 is employed, a % nucleic acid sequence identity value is determined by dividing (a) the number of matching identical nucleotides between the nucleic acid sequence of the PRO polypeptide-encoding nucleic acid molecule of interest having a sequence derived from the native sequence PRO polypeptide-encoding nucleic acid and the comparison nucleic acid molecule of interest (i.e., the sequence against which the PRO polypeptide-encoding nucleic acid molecule of interest is being compared which may be a variant PRO polynucleotide) as determined by WU-BLAST-2 by (b) the total number of nucleotides of the PRO polypeptide-encoding nucleic acid molecule of interest. For example, in the statement "an isolated nucleic acid molecule comprising a nucleic acid sequence A which has or having at least 80% nucleic acid sequence identity to the nucleic acid sequence B", the nucleic acid sequence A is the comparison nucleic acid molecule of interest and the nucleic acid sequence B is the nucleic acid sequence of the PRO polypeptide-encoding nucleic acid molecule of interest.

Percent nucleic acid sequence identity may also be determined using the sequence comparison program NCBI-BLAST2 (Altschul et al., Nucleic Acids Res. 25:3389-3402 (1997)). The NCBI-BLAST2 sequence comparison program may be downloaded from http://www.ncbi.nlm.nih.gov or otherwise obtained from the National Institute of Health, Bethesda, MD. NCBI-BLAST2 uses several search parameters, wherein all of those search parameters are set to default values including, for example, unmask = yes, strand = all, expected occurrences = 10, minimum low complexity length = 15/5, multi-pass e-value = 0.01, constant for multi-pass = 25, dropoff for final gapped alignment = 25 and scoring matrix = BLOSUM62.

In situations where NCBI-BLAST2 is employed for sequence comparisons, the % nucleic acid sequence identity of a given nucleic acid sequence C to, with, or against a given nucleic acid sequence D (which can alternatively be phrased as a given nucleic acid sequence C that has or comprises a certain % nucleic acid sequence identity to, with, or against a given nucleic acid sequence D) is calculated as follows:

100 times the fraction W/Z

where W is the number of nucleotides scored as identical matches by the sequence alignment program NCBI-BLAST2 in that program's alignment of C and D, and where Z is the total number of nucleotides in D. It will be appreciated that where the length of nucleic acid sequence C is not equal to the length of nucleic acid sequence D, the % nucleic acid sequence identity of C to D will not equal the % nucleic acid sequence identity of D to C.

In other embodiments, PRO variant polynucleotides are nucleic acid molecules that encode an active PRO polypeptide and which are capable of hybridizing, preferably under stringent hybridization and wash conditions, to nucleotide sequences encoding a full-length PRO polypeptide as disclosed herein. PRO variant polypeptides may be those that are encoded by a PRO variant polynucleotide.

"Isolated," when used to describe the various polypeptides disclosed herein, means polypeptide that has been identified and separated and/or recovered from a component of its natural environment. Contaminant components of its natural environment are materials that would typically interfere with diagnostic or therapeutic uses for the polypeptide, and may include enzymes, hormones, and other proteinaceous or non-proteinaceous solutes. In preferred embodiments, the polypeptide will be purified (1) to a degree sufficient to obtain at least 15 residues of N-terminal or internal amino acid sequence by use of a spinning cup sequenator, or (2) to homogeneity by SDS-PAGE under non-reducing or reducing conditions using Coomassie blue or, preferably, silver stain. Isolated polypeptide includes polypeptide *in situ* within recombinant cells, since at least one component of the PRO polypeptide natural environment will not be present. Ordinarily, however, isolated polypeptide will be prepared by at least one purification step.

An "isolated" PRO polypeptide-encoding nucleic acid or other polypeptide-encoding nucleic acid is a nucleic acid molecule that is identified and separated from at least one contaminant nucleic acid molecule with which it is ordinarily associated in the natural source of the polypeptide-encoding nucleic acid. An isolated polypeptide-encoding nucleic acid molecule is other than in the form or setting in which it is found in nature. Isolated polypeptide-encoding nucleic acid molecules therefore are distinguished from the specific polypeptide-encoding nucleic acid molecule as it exists in natural cells. However, an isolated polypeptide-encoding nucleic acid molecule includes polypeptide-encoding nucleic acid molecules contained in cells that ordinarily express the polypeptide where, for example, the nucleic acid molecule is in a chromosomal location different from that of natural cells.

The term "control sequences" refers to DNA sequences necessary for the expression of an operably linked coding sequence in a particular host organism. The control sequences that are suitable for prokaryotes, for example, include a promoter, optionally an operator sequence, and a ribosome binding site. Eukaryotic cells are known to utilize promoters, polyadenylation signals, and enhancers.

Nucleic acid is "operably linked" when it is placed into a functional relationship with another nucleic acid sequence. For example, DNA for a presequence or secretory leader is operably linked to DNA for a polypeptide if it is expressed as a preprotein that participates in the secretion of the polypeptide; a promoter or enhancer is operably linked to a coding sequence if it affects the transcription of the sequence; or a ribosome binding site is operably linked to a coding sequence if it is positioned so as to facilitate translation. Generally, "operably linked" means that the DNA sequences being linked are contiguous, and, in the case of a secretory leader, contiguous and in reading phase. However, enhancers do not have to be contiguous. Linking is accomplished by ligation at convenient restriction sites. If such sites do not exist, the synthetic oligonucleotide adaptors or linkers are used in accordance with conventional practice.

The term "antibody" is used in the broadest sense and specifically covers, for example, single anti-PRO monoclonal antibodies (including agonist, antagonist, and neutralizing antibodies), anti-PRO antibody compositions with polyepitopic specificity, single chain anti-PRO antibodies, and fragments of anti-PRO antibodies (see below). The term "monoclonal antibody" as used herein refers to an antibody obtained from a population of substantially homogeneous antibodies, i.e., the individual antibodies comprising the population are identical except for possible naturally-occurring mutations that may be present in minor amounts.

"Stringency" of hybridization reactions is readily determinable by one of ordinary skill in the art, and generally is an empirical calculation dependent upon probe length, washing temperature, and salt concentration. In general, longer probes require higher temperatures for proper annealing, while shorter probes need lower temperatures. Hybridization generally depends on the ability of denatured DNA to reanneal when complementary strands are present in an environment below their melting temperature. The higher the degree of desired homology between the probe and hybridizable sequence, the higher the relative temperature which can be used. As a result, it follows that higher relative temperatures would tend to make the reaction conditions more stringent, while lower temperatures less so. For additional details and explanation of stringency of hybridization reactions, see Ausubel et al., Current Protocols in Molecular Biology, Wiley Interscience Publishers, (1995).

"Stringent conditions" or "high stringency conditions", as defined herein, may be identified by those that: (1) employ low ionic strength and high temperature for washing, for example 0.015 M sodium chloride/0.0015 M sodium citrate/0.1% sodium dodecyl sulfate at 50°C; (2) employ during hybridization a denaturing agent, such as formamide, for example, 50% (v/v) formamide with 0.1% bovine serum albumin/0.1% Ficoll/0.1% polyvinylpyrrolidone/50mM sodium phosphate buffer at pH 6.5 with 750 mM sodium chloride, 75 mM sodium citrate at 42°C; or (3) employ 50% formamide, 5 x SSC (0.75 M NaCl, 0.075 M sodium citrate), 50 mM sodium phosphate (pH 6.8), 0.1% sodium pyrophosphate, 5 x Denhardt's solution, sonicated salmon sperm DNA (50 μg/ml), 0.1% SDS, and 10% dextran sulfate at 42°C, with washes at 42°C in 0.2 x SSC (sodium chloride/sodium citrate) and 50% formamide at 55°C, followed by a high-stringency wash consisting of 0.1 x SSC containing EDTA at 55°C.

"Moderately stringent conditions" may be identified as described by Sambrook et al., Molecular Cloning: A Laboratory Manual, New York: Cold Spring Harbor Press, 1989, and include the use of washing solution and hybridization conditions (e.g., temperature, ionic strength and %SDS) less stringent that those described above. An example of moderately stringent conditions is overnight incubation at 37°C in a

solution comprising: 20% formamide, 5 x SSC (150 mM NaCl, 15 mM trisodium citrate), 50 mM sodium phosphate (pH 7.6), 5 x Denhardt's solution, 10% dextran sulfate, and 20 mg/ml denatured sheared salmon sperm DNA, followed by washing the filters in 1 x SSC at about 37-50°C. The skilled artisan will recognize how to adjust the temperature, ionic strength, etc. as necessary to accommodate factors such as probe length and the like.

The term "epitope tagged" when used herein refers to a chimeric polypeptide comprising a PRO polypeptide fused to a "tag polypeptide". The tag polypeptide has enough residues to provide an epitope against which an antibody can be made, yet is short enough such that it does not interfere with activity of the polypeptide to which it is fused. The tag polypeptide preferably also is fairly unique so that the antibody does not substantially cross-react with other epitopes. Suitable tag polypeptides generally have at least six amino acid residues and usually between about 8 and 50 amino acid residues (preferably, between about 10 and 20 amino acid residues).

As used herein, the term "immunoadhesin" designates antibody-like molecules which combine the binding specificity of a heterologous protein (an "adhesin") with the effector functions of immunoglobulin constant domains. Structurally, the immunoadhesins comprise a fusion of an amino acid sequence with the desired binding specificity which is other than the antigen recognition and binding site of an antibody (i.e., is "heterologous"), and an immunoglobulin constant domain sequence. The adhesin part of an immunoadhesin molecule typically is a contiguous amino acid sequence comprising at least the binding site of a receptor or a ligand. The immunoglobulin constant domain sequence in the immunoadhesin may be obtained from any immunoglobulin, such as IgG-1, IgG-2, IgG-3, or IgG-4 subtypes, IgA (including IgA-1 and IgA-2), IgE, IgD or IgM.

"Active" or "activity" for the purposes herein refers to form(s) of a PRO polypeptide which retain a biological and/or an immunological activity of native or naturally-occurring PRO, wherein "biological" activity refers to a biological function (either inhibitory or stimulatory) caused by a native or naturally-occurring PRO other than the ability to induce the production of an antibody against an antigenic epitope possessed by a native or naturally-occurring PRO and an "immunological" activity refers to the ability to induce the production of an antibody against an antigenic epitope possessed by a native or naturally-occurring PRO.

The term "antagonist" is used in the broadest sense, and includes any molecule that partially or fully blocks, inhibits, or neutralizes a biological activity of a native PRO polypeptide disclosed herein. In a similar manner, the term "agonist" is used in the broadest sense and includes any molecule that mimics a biological activity of a native PRO polypeptide disclosed herein. Suitable agonist or antagonist molecules specifically include agonist or antagonist antibodies or antibody fragments, fragments or amino acid sequence variants of native PRO polypeptides, peptides, antisense oligonucleotides, small organic molecules, etc. Methods for identifying agonists or antagonists of a PRO polypeptide may comprise contacting a PRO polypeptide with a candidate agonist or antagonist molecule and measuring a detectable change in one or more biological activities normally associated with the PRO polypeptide.

"Treatment" refers to both therapeutic treatment and prophylactic or preventative measures, wherein the object is to prevent or slow down (lessen) the targeted pathologic condition or disorder. Those

in need of treatment include those already with the disorder as well as those prone to have the disorder or those in whom the disorder is to be prevented.

"Chronic" administration refers to administration of the agent(s) in a continuous mode as opposed to an acute mode, so as to maintain the initial therapeutic effect (activity) for an extended period of time. "Intermittent" administration is treatment that is not consecutively done without interruption, but rather is cyclic in nature.

"Mammal" for purposes of treatment refers to any animal classified as a mammal, including humans, domestic and farm animals, and zoo, sports, or pet animals, such as dogs, cats, cattle, horses, sheep, pigs, goats, rabbits, etc. Preferably, the mammal is human.

Administration "in combination with" one or more further therapeutic agents includes simultaneous (concurrent) and consecutive administration in any order.

"Carriers" as used herein include pharmaceutically acceptable carriers, excipients, or stabilizers which are nontoxic to the cell or mammal being exposed thereto at the dosages and concentrations employed. Often the physiologically acceptable carrier is an aqueous pH buffered solution. Examples of physiologically acceptable carriers include buffers such as phosphate, citrate, and other organic acids; antioxidants including ascorbic acid; low molecular weight (less than about 10 residues) polypeptide; proteins, such as serum albumin, gelatin, or immunoglobulins; hydrophilic polymers such as polyvinylpyrrolidone; amino acids such as glycine, glutamine, asparagine, arginine or lysine; monosaccharides, disaccharides, and other carbohydrates including glucose, mannose, or dextrins; chelating agents such as EDTA; sugar alcohols such as mannitol or sorbitol; salt-forming counterions such as sodium; and/or nonionic surfactants such as TWEEN™, polyethylene glycol (PEG), and PLURONICS™.

"Antibody fragments" comprise a portion of an intact antibody, preferably the antigen binding or variable region of the intact antibody. Examples of antibody fragments include Fab, Fab', $F(ab')_2$, and Fv fragments; diabodies; linear antibodies (Zapata et al., Protein Eng. 8(10): 1057-1062 [1995]); single-chain antibody molecules; and multispecific antibodies formed from antibody fragments.

Papain digestion of antibodies produces two identical antigen-binding fragments, called "Fab" fragments, each with a single antigen-binding site, and a residual "Fc" fragment, a designation reflecting the ability to crystallize readily. Pepsin treatment yields an $F(ab')_2$ fragment that has two antigen-combining sites and is still capable of cross-linking antigen.

"Fv" is the minimum antibody fragment which contains a complete antigen-recognition and -binding site. This region consists of a dimer of one heavy- and one light-chain variable domain in tight, non-covalent association. It is in this configuration that the three CDRs of each variable domain interact to define an antigen-binding site on the surface of the V_H-V_L dimer. Collectively, the six CDRs confer antigen-binding specificity to the antibody. However, even a single variable domain (or half of an Fv comprising only three CDRs specific for an antigen) has the ability to recognize and bind antigen, although at a lower affinity than the entire binding site.

The Fab fragment also contains the constant domain of the light chain and the first constant domain (CH1) of the heavy chain. Fab fragments differ from Fab' fragments by the addition of a few residues at the carboxy terminus of the heavy chain CH1 domain including one or more cysteines from the antibody hinge region. Fab'-SH is the designation herein for Fab' in which the cysteine residue(s) of the constant domains

bear a free thiol group. $F(ab')_2$ antibody fragments originally were produced as pairs of Fab' fragments which have hinge cysteines between them. Other chemical couplings of antibody fragments are also known.

The "light chains" of antibodies (immunoglobulins) from any vertebrate species can be assigned to one of two clearly distinct types, called kappa and lambda, based on the amino acid sequences of their constant domains.

Depending on the amino acid sequence of the constant domain of their heavy chains, immunoglobulins can be assigned to different classes. There are five major classes of immunoglobulins: IgA, IgD, IgE, IgG, and IgM, and several of these may be further divided into subclasses (isotypes), e.g., IgG1, IgG2, IgG3, IgG4, IgA, and IgA2.

"Single-chain Fv" or "sFv" antibody fragments comprise the V_H and V_L domains of antibody, wherein these domains are present in a single polypeptide chain. Preferably, the Fv polypeptide further comprises a polypeptide linker between the V_H and V_L domains which enables the sFv to form the desired structure for antigen binding. For a review of sFv, see Pluckthun in The Pharmacology of Monoclonal Antibodies, vol. 113, Rosenburg and Moore eds., Springer-Verlag, New York, pp. 269-315 (1994).

The term "diabodies" refers to small antibody fragments with two antigen-binding sites, which fragments comprise a heavy-chain variable domain (V_H) connected to a light-chain variable domain (V_L) in the same polypeptide chain (V_H-V_L). By using a linker that is too short to allow pairing between the two domains on the same chain, the domains are forced to pair with the complementary domains of another chain and create two antigen-binding sites. Diabodies are described more fully in, for example, EP 404,097; WO 93/11161; and Hollinger et al., Proc. Natl. Acad. Sci. USA, 90:6444-6448 (1993).

An "isolated" antibody is one which has been identified and separated and/or recovered from a component of its natural environment. Contaminant components of its natural environment are materials which would interfere with diagnostic or therapeutic uses for the antibody, and may include enzymes, hormones, and other proteinaceous or nonproteinaceous solutes. In preferred embodiments, the antibody will be purified (1) to greater than 95% by weight of antibody as determined by the Lowry method, and most preferably more than 99% by weight, (2) to a degree sufficient to obtain at least 15 residues of N-terminal or internal amino acid sequence by use of a spinning cup sequenator, or (3) to homogeneity by SDS-PAGE under reducing or nonreducing conditions using Coomassie blue or, preferably, silver stain. Isolated antibody includes the antibody in situ within recombinant cells since at least one component of the antibody's natural environment will not be present. Ordinarily, however, isolated antibody will be prepared by at least one purification step.

An antibody that "specifically binds to" or is "specific for" a particular polypeptide or an epitope on a particular polypeptide is one that binds to that particular polypeptide or epitope on a particular polypeptide without substantially binding to any other polypeptide or polypeptide epitope.

The word "label" when used herein refers to a detectable compound or composition which is conjugated directly or indirectly to the antibody so as to generate a "labeled" antibody. The label may be detectable by itself (e.g. radioisotope labels or fluorescent labels) or, in the case of an enzymatic label, may catalyze chemical alteration of a substrate compound or composition which is detectable.

By "solid phase" is meant a non-aqueous matrix to which the antibody of the present invention can adhere. Examples of solid phases encompassed herein include those formed partially or entirely of glass

(e.g., controlled pore glass), polysaccharides (e.g., agarose), polyacrylamides, polystyrene, polyvinyl alcohol and silicones. In certain embodiments, depending on the context, the solid phase can comprise the well of an assay plate; in others it is a purification column (e.g., an affinity chromatography column). This term also includes a discontinuous solid phase of discrete particles, such as those described in U.S. Patent No. 4,275,149.

A "liposome" is a small vesicle composed of various types of lipids, phospholipids and/or surfactant which is useful for delivery of a drug (such as a PRO polypeptide or antibody thereto) to a mammal. The components of the liposome are commonly arranged in a bilayer formation, similar to the lipid arrangement of biological membranes.

A "small molecule" is defined herein to have a molecular weight below about 500 Daltons.

The term "immune related disease" means a disease in which a component of the immune system of a mammal causes, mediates or otherwise contributes to a morbidity in the mammal. Also included are diseases in which stimulation or intervention of the immune response has an ameliorative effect on progression of the disease. Included within this term are immune-mediated inflammatory diseases, non-immune-mediated inflammatory diseases, infectious diseases, immunodeficiency diseases, neoplasia, *etc.*

The term "monocyte/macrophage mediated disease" means a disease in which monocytes/macrophages directly or indirectly mediate or otherwise contribute to a morbidity in a mammal. The monocyte/macrophage mediated disease may be associated with cell mediated effects, lymphokine mediated effects, *etc.*, and even effects associated with other immune cells if the cells are stimulated, for example, by the lymphokines secreted by monocytes/macrophages.

Examples of immune-related and inflammatory diseases, some of which are immune mediated, which can be treated according to the invention include systemic lupus erythematosis, rheumatoid arthritis, juvenile chronic arthritis, spondyloarthropathies, systemic sclerosis (scleroderma), idiopathic inflammatory myopathies (dermatomyositis, polymyositis), Sjögren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia (immune pancytopenia, paroxysmal nocturnal hemoglobinuria), autoimmune thrombocytopenia (idiopathic thrombocytopenic purpura, immune-mediated thrombocytopenia), thyroiditis (Grave's disease, Hashimoto's thyroiditis, juvenile lymphocytic thyroiditis, atrophic thyroiditis), diabetes mellitus, immune-mediated renal disease (glomerulonephritis, tubulointerstitial nephritis), demyelinating diseases of the central and peripheral nervous systems such as multiple sclerosis, idiopathic demyelinating polyneuropathy or Guillain-Barré syndrome, and chronic inflammatory demyelinating polyneuropathy, hepatobiliary diseases such as infectious hepatitis (hepatitis A, B, C, D, E and other non-hepatotropic viruses), autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis, and sclerosing cholangitis, inflammatory bowel disease (ulcerative colitis: Crohn's disease), gluten-sensitive enteropathy, and Whipple's disease, autoimmune or immune-mediated skin diseases including bullous skin diseases, erythema multiforme and contact dermatitis, psoriasis, allergic diseases such as asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity and urticaria, immunologic diseases of the lung such as eosinophilic pneumonias, idiopathic pulmonary fibrosis and hypersensitivity pneumonitis, transplantation associated diseases including graft rejection and graft -versus-host-disease. Infectious diseases including viral diseases such as AIDS (HIV infection), hepatitis A, B, C, D, and E, herpes, *etc.*, bacterial infections, fungal infections, protozoal infections and parasitic infections.

The term "effective amount" is a concentration or amount of a PRO polypeptide and/or agonist/antagonist which results in achieving a particular stated purpose. An "effective amount" of a PRO polypeptide or agonist or antagonist thereof may be determined empirically. Furthermore, a "therapeutically effective amount" is a concentration or amount of a PRO polypeptide and/or agonist/antagonist which is effective for achieving a stated therapeutic effect. This amount may also be determined empirically.

The term "cytotoxic agent" as used herein refers to a substance that inhibits or prevents the function of cells and/or causes destruction of cells. The term is intended to include radioactive isotopes (*e.g.*, I^{131}, I^{125}, Y^{90} and Re^{186}), chemotherapeutic agents, and toxins such as enzymatically active toxins of bacterial, fungal, plant or animal origin, or fragments thereof.

A "chemotherapeutic agent" is a chemical compound useful in the treatment of cancer. Examples of chemotherapeutic agents include adriamycin, doxorubicin, epirubicin, 5-fluorouracil, cytosine arabinoside ("Ara-C"), cyclophosphamide, thiotepa, busulfan, cytoxin, taxoids, *e.g.*, paclitaxel (Taxol, Bristol-Myers Squibb Oncology, Princeton, NJ), and doxetaxel (Taxotere, Rhône-Poulenc Rorer, Antony, France), toxotere, methotrexate, cisplatin, melphalan, vinblastine, bleomycin, etoposide, ifosfamide, mitomycin C, mitoxantrone, vincristine, vinorelbine, carboplatin, teniposide, daunomycin, carminomycin, aminopterin, dactinomycin, mitomycins, esperamicins (see U.S. Pat. No. 4,675,187), melphalan and other related nitrogen mustards. Also included in this definition are hormonal agents that act to regulate or inhibit hormone action on tumors such as tamoxifen and onapristone.

A "growth inhibitory agent" when used herein refers to a compound or composition which inhibits growth of a cell, especially cancer cell overexpressing any of the genes identified herein, either *in vitro* or *in vivo*. Thus, the growth inhibitory agent is one which significantly reduces the percentage of cells overexpressing such genes in S phase. Examples of growth inhibitory agents include agents that block cell cycle progression (at a place other than S phase), such as agents that induce G1 arrest and M-phase arrest. Classical M-phase blockers include the vincas (vincristine and vinblastine), taxol, and topo II inhibitors such as doxorubicin, epirubicin, daunorubicin, etoposide, and bleomycin. Those agents that arrest G1 also spill over into S-phase arrest, for example, DNA alkylating agents such as tamoxifen, prednisone, dacarbazine, mechlorethamine, cisplatin, methotrexate, 5-fluorouracil, and ara-C. Further information can be found in *The Molecular Basis of Cancer*, Mendelsohn and Israel, eds., Chapter 1, entitled "Cell cycle regulation, oncogens, and antineoplastic drugs" by Murakami *et al.* (WB Saunders: Philadelphia, 1995), especially p. 13.

The term "cytokine" is a generic term for proteins released by one cell population which act on another cell as intercellular mediators. Examples of such cytokines are lymphokines, monokines, and traditional polypeptide hormones. Included among the cytokines are growth hormone such as human growth hormone, N-methionyl human growth hormone, and bovine growth hormone; parathyroid hormone; thyroxine; insulin; proinsulin; relaxin; prorelaxin; glycoprotein hormones such as follicle stimulating hormone (FSH), thyroid stimulating hormone (TSH), and luteinizing hormone (LH); hepatic growth factor; fibroblast growth factor; prolactin; placental lactogen; tumor necrosis factor-α and -β; mullerian-inhibiting substance; mouse gonadotropin-associated peptide; inhibin; activin; vascular endothelial growth factor; integrin; thrombopoietin (TPO); nerve growth factors such as NGF-β; platelet-growth factor; transforming growth factors (TGFs) such as TGF-α and TGF-β; insulin-like growth factor-I and -II; erythropoietin (EPO);

osteoinductive factors; interferons such as interferon-α, -β, and -γ; colony stimulating factors (CSFs) such as macrophage-CSF (M-CSF); granulocyte-macrophage-CSF (GM-CSF); and granulocyte-CSF (G-CSF); interleukins (ILs) such as IL-1, IL-1α, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-11, IL-12; a tumor necrosis factor such as TNF-α or TNF-β; and other polypeptide factors including LIF and kit ligand (KL). As used herein, the term cytokine includes proteins from natural sources or from recombinant cell culture and biologically active equivalents of the native sequence cytokines.

As used herein, the term "immunoadhesin" designates antibody-like molecules which combine the binding specificity of a heterologous protein (an "adhesin") with the effector functions of immunoglobulin constant domains. Structurally, the immunoadhesins comprise a fusion of an amino acid sequence with the desired binding specificity which is other than the antigen recognition and binding site of an antibody (*i.e.*, is "heterologous"), and an immunoglobulin constant domain sequence. The adhesin part of an immunoadhesin molecule typically is a contiguous amino acid sequence comprising at least the binding site of a receptor or a ligand. The immunoglobulin constant domain sequence in the immunoadhesin may be obtained from any immunoglobulin, such as IgG-1, IgG-2, IgG-3, or IgG-4 subtypes, IgA (including IgA-1 and IgA-2), IgE, IgD or IgM.

Table 1

```
/*
 *
 * C-C increased from 12 to 15
 * Z is average of EQ
 * B is average of ND
 * match with stop is _M; stop-stop = 0; J (joker) match = 0
 */
#define  _M      -8      /* value of a match with a stop */

int      _day[26][26] = {
/*      A  B  C  D  E  F  G  H  I  J  K  L  M  N  O  P  Q  R  S  T  U  V  W  X  Y  Z */
/* A */   { 2, 0,-2, 0, 0,-4, 1,-1,-1, 0,-1,-2,-1, 0,_M, 1, 0,-2, 1, 1, 0, 0,-6, 0,-3, 0},
/* B */   { 0, 3,-4, 3, 2,-5, 0, 1,-2, 0, 0,-3,-2, 2,_M,-1, 1, 0, 0, 0, 0,-2,-5, 0,-3, 1},
/* C */   {-2,-4,15,-5,-5,-4,-3,-3,-2, 0,-5,-6,-5,-4,_M,-3,-5,-4, 0,-2, 0,-2,-8, 0, 0,-5},
/* D */   { 0, 3,-5, 4, 3,-6, 1, 1,-2, 0, 0,-4,-3, 2,_M,-1, 2,-1, 0, 0, 0,-2,-7, 0,-4, 2},
/* E */   { 0, 2,-5, 3, 4,-5, 0, 1,-2, 0, 0,-3,-2, 1,_M,-1, 2,-1, 0, 0, 0,-2,-7, 0,-4, 3},
/* F */   {-4,-5,-4,-6,-5, 9,-5,-2, 1, 0,-5, 2, 0,-4,_M,-5,-5,-4,-3,-3, 0,-1, 0, 0, 7,-5},
/* G */   { 1, 0,-3, 1, 0,-5, 5,-2,-3, 0,-2,-4,-3, 0,_M,-1,-1,-3, 1, 0, 0,-1,-7, 0,-5, 0},
/* H */   {-1, 1,-3, 1, 1,-2,-2, 6,-2, 0, 0,-2,-2, 2,_M, 0, 3, 2,-1,-1, 0,-2,-3, 0, 0, 2},
/* I */   {-1,-2,-2,-2,-2, 1,-3,-2, 5, 0,-2, 2, 2,-2,_M,-2,-2,-2,-1, 0, 0, 4,-5, 0,-1,-2},
/* J */   { 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,_M, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
/* K */   {-1, 0,-5, 0, 0,-5,-2, 0,-2, 0, 5,-3, 0, 1,_M,-1, 1, 3, 0, 0, 0,-2,-3, 0,-4, 0},
/* L */   {-2,-3,-6,-4,-3, 2,-4,-2, 2, 0,-3, 6, 4,-3,_M,-3,-2,-3,-3,-1, 0, 2,-2, 0,-1,-2},
/* M */   {-1,-2,-5,-3,-2, 0,-3,-2, 2, 0, 0, 4, 6,-2,_M,-2,-1, 0,-2,-1, 0, 2,-4, 0,-2,-1},
/* N */   { 0, 2,-4, 2, 1,-4, 0, 2,-2, 0, 1,-3,-2, 2,_M,-1, 1, 0, 1, 0, 0,-2,-4, 0,-2, 1},
/* O */   {_M,_M,_M,_M,_M,_M,_M,_M,_M,_M,_M,_M,_M,_M,
0,_M,_M,_M,_M,_M,_M,_M,_M,_M,_M,_M},
/* P */   { 1,-1,-3,-1,-1,-5,-1, 0,-2, 0,-1,-3,-2,-1,_M, 6, 0, 0, 1, 0, 0,-1,-6, 0,-5, 0},
/* Q */   { 0, 1,-5, 2, 2,-5,-1, 3,-2, 0, 1,-2,-1, 1,_M, 0, 4, 1,-1,-1, 0,-2,-5, 0,-4, 3},
/* R */   {-2, 0,-4,-1,-1,-4,-3, 2,-2, 0, 3,-3, 0, 0,_M, 0, 1, 6, 0,-1, 0,-2, 2, 0,-4, 0},
/* S */   { 1, 0, 0, 0, 0,-3, 1,-1,-1, 0, 0,-3,-2, 1,_M, 1,-1, 0, 2, 1, 0,-1,-2, 0,-3, 0},
/* T */   { 1, 0,-2, 0, 0,-3, 0,-1, 0, 0, 0,-1,-1, 0,_M, 0,-1,-1, 1, 3, 0, 0,-5, 0,-3, 0},
/* U */   { 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,_M, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
/* V */   { 0,-2,-2,-2,-2,-1,-1,-2, 4, 0,-2, 2, 2,-2,_M,-1,-2,-2,-1, 0, 0, 4,-6, 0,-2,-2},
/* W */   {-6,-5,-8,-7,-7, 0,-7,-3,-5, 0,-3,-2,-4,-4,_M,-6,-5, 2,-2,-5, 0,-6,17, 0, 0,-6},
/* X */   { 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,_M, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
/* Y */   {-3,-3, 0,-4,-4, 7,-5, 0,-1, 0,-4,-1,-2,-2,_M,-5,-4,-4,-3,-3, 0,-2, 0, 0,10,-4},
/* Z */   { 0, 1,-5, 2, 3,-5, 0, 2,-2, 0, 0,-2,-1, 1,_M, 0, 3, 0, 0, 0, 0,-2,-6, 0,-4, 4}
};
```

Table 1 (cont')

```
/*
 */
#include <stdio.h>
#include <ctype.h>

#define  MAXJMP      16      /* max jumps in a diag */
#define  MAXGAP      24      /* don't continue to penalize gaps larger than this */
#define  JMPS        1024    /* max jmps in an path */
#define  MX          4       /* save if there's at least MX-1 bases since last jmp */

#define  DMAT        3       /* value of matching bases */
#define  DMIS        0       /* penalty for mismatched bases */
#define  DINS0       8       /* penalty for a gap */
#define  DINS1       1       /* penalty per base */
#define  PINS0       8       /* penalty for a gap */
#define  PINS1       4       /* penalty per residue */

struct jmp {
        short           n[MAXJMP];      /* size of jmp (neg for dely) */
        unsigned short  x[MAXJMP];      /* base no. of jmp in seq x */
};                                      /* limits seq to 2^16 -1 */

struct diag {
        int             score;          /* score at last jmp */
        long            offset;         /* offset of prev block */
        short           ijmp;           /* current jmp index */
        struct jmp      jp;             /* list of jmps */
};

struct path {
        int     spc;            /* number of leading spaces */
        short   n[JMPS];/* size of jmp (gap) */
        int     x[JMPS];/* loc of jmp (last elem before gap) */
};

char            *ofile;         /* output file name */
char            *namex[2];      /* seq names: getseqs() */
char            *prog;          /* prog name for err msgs */
char            *seqx[2];       /* seqs: getseqs() */
int             dmax;           /* best diag: nw() */
int             dmax0;          /* final diag */
int             dna;            /* set if dna: main() */
int             endgaps;        /* set if penalizing end gaps */
int             gapx, gapy;     /* total gaps in seqs */
int             len0, len1;     /* seq lens */
int             ngapx, ngapy;   /* total size of gaps */
int             smax;           /* max score: nw() */
int             *xbm;           /* bitmap for matching */
long            offset;         /* current offset in jmp file */
struct  diag    *dx;            /* holds diagonals */
struct  path    pp[2];          /* holds path for seqs */

char            *calloc(), *malloc(), *index(), *strcpy();
char            *getseq(), *g_calloc();
```

Table 1 (cont')

```
/* Needleman-Wunsch alignment program
 *
 * usage: progs file1 file2
 *   where file1 and file2 are two dna or two protein sequences.
 *   The sequences can be in upper- or lower-case an may contain ambiguity
 *   Any lines beginning with ';', '>' or '<' are ignored
 *   Max file length is 65535 (limited by unsigned short x in the jmp struct)
 *   A sequence with 1/3 or more of its elements ACGTU is assumed to be DNA
 *   Output is in the file "align.out"
 *
 * The program may create a tmp file in /tmp to hold info about traceback.
 * Original version developed under BSD 4.3 on a vax 8650
 */
#include "nw.h"
#include "day.h"

static    _dbval[26] = {
          1,14,2,13,0,0,4,11,0,0,12,0,3,15,0,0,0,5,6,8,8,7,9,0,10,0
};

static    _pbval[26] = {
          1, 2|(1<<('D'-'A'))|(1<<('N'-'A')), 4, 8, 16, 32, 64,
          128, 256, 0xFFFFFFF, 1<<10, 1<<11, 1<<12, 1<<13, 1<<14,
          1<<15, 1<<16, 1<<17, 1<<18, 1<<19, 1<<20, 1<<21, 1<<22,
          1<<23, 1<<24, 1<<25|(1<<('E'-'A'))|(1<<('Q'-'A'))
};

main(ac, av)
main
          int       ac;
          char      *av[ ];
{
          prog = av[0];
          if (ac != 3) {
                    fprintf(stderr,"usage: %s file1 file2\n", prog);
                    fprintf(stderr,"where file1 and file2 are two dna or two protein sequences.\n");
                    fprintf(stderr,"The sequences can be in upper- or lower-case\n");
                    fprintf(stderr,"Any lines beginning with ';' or '<' are ignored\n");
                    fprintf(stderr,"Output is in the file \"align.out\"\n");
                    exit(1);
          }
          namex[0] = av[1];
          namex[1] = av[2];
          seqx[0] = getseq(namex[0], &len0);
          seqx[1] = getseq(namex[1], &len1);
          xbm = (dna)? _dbval : _pbval;

          endgaps = 0;                    /* 1 to penalize endgaps */
          ofile = "align.out";            /* output file */

          nw();             /* fill in the matrix, get the possible jmps */
          readjmps();       /* get the actual jmps */
          print();          /* print stats, alignment */

          cleanup(0);       /* unlink any tmp files */
}
```

Table 1 (cont')

```
/* do the alignment, return best score: main()
 * dna: values in Fitch and Smith, PNAS, 80, 1382-1386, 1983
 * pro: PAM 250 values
 * When scores are equal, we prefer mismatches to any gap, prefer
 * a new gap to extending an ongoing gap, and prefer a gap in seqx
 * to a gap in seq y.
 */
nw()
        nw
{
        char            *px, *py;       /* seqs and ptrs */
        int             *ndely, *dely;  /* keep track of dely */
        int             ndelx, delx;    /* keep track of delx */
        int             *tmp;           /* for swapping row0, row1 */
        int             mis;            /* score for each type */
        int             ins0, ins1;     /* insertion penalties */
        register        id;             /* diagonal index */
        register        ij;             /* jmp index */
        register        *col0, *col1;   /* score for curr, last row */
        register        xx, yy;         /* index into seqs */

        dx = (struct diag *)g_calloc("to get diags", len0+len1+1, sizeof(struct diag));

        ndely = (int *)g_calloc("to get ndely", len1+1, sizeof(int));
        dely = (int *)g_calloc("to get dely", len1+1, sizeof(int));
        col0 = (int *)g_calloc("to get col0", len1+1, sizeof(int));
        col1 = (int *)g_calloc("to get col1", len1+1, sizeof(int));
        ins0 = (dna)? DINS0 : PINS0;
        ins1 = (dna)? DINS1 : PINS1;

        smax = -10000;
        if (endgaps) {
                for (col0[0] = dely[0] = -ins0, yy = 1; yy <= len1; yy++) {
                        col0[yy] = dely[yy] = col0[yy-1] - ins1;
                        ndely[yy] = yy;
                }
                col0[0] = 0;            /* Waterman Bull Math Biol 84 */
        }
        else
                for (yy = 1; yy <= len1; yy++)
                        dely[yy] = -ins0;

        /* fill in match matrix
         */
        for (px = seqx[0], xx = 1; xx <= len0; px++, xx++) {
                /* initialize first entry in col
                 */
                if (endgaps) {
                        if (xx == 1)
                                col1[0] = delx = -(ins0+ins1);
                        else
                                col1[0] = delx = col0[0] - ins1;
                        ndelx = xx;
                }
                else {
                        col1[0] = 0;
                        delx = -ins0;
                        ndelx = 0;
                }
```

Table 1 (cont')

...nw

```
for (py = seqx[1], yy = 1; yy <= len1; py++, yy++) {
        mis = col0[yy-1];
        if (dna)
                mis += (xbm[*px-'A']&xbm[*py-'A'])? DMAT : DMIS;
        else
                mis += _day[*px-'A'][*py-'A'];

        /* update penalty for del in x seq;
         * favor new del over ongong del
         * ignore MAXGAP if weighting endgaps
         */
        if (endgaps || ndely[yy] < MAXGAP) {
                if (col0[yy] - ins0 >= dely[yy]) {
                        dely[yy] = col0[yy] - (ins0+ins1);
                        ndely[yy] = 1;
                } else {
                        dely[yy] -= ins1;
                        ndely[yy]++;
                }
        } else {
                if (col0[yy] - (ins0+ins1) >= dely[yy]) {
                        dely[yy] = col0[yy] - (ins0+ins1);
                        ndely[yy] = 1;
                } else
                        ndely[yy]++;
        }

        /* update penalty for del in y seq;
         * favor new del over ongong del
         */
        if (endgaps || ndelx < MAXGAP) {
                if (col1[yy-1] - ins0 >= delx) {
                        delx = col1[yy-1] - (ins0+ins1);
                        ndelx = 1;
                } else {
                        delx -= ins1;
                        ndelx++;
                }
        } else {
                if (col1[yy-1] - (ins0+ins1) >= delx) {
                        delx = col1[yy-1] - (ins0+ins1);
                        ndelx = 1;
                } else
                        ndelx++;
        }

        /* pick the maximum score; we're favoring
         * mis over any del and delx over dely
         */
```

Table 1 (cont')

...nw

```
                id = xx - yy + len1 - 1;
                if (mis >= delx && mis >= dely[yy])
                        col1[yy] = mis;
                else if (delx >= dely[yy]) {
                        col1[yy] = delx;
                        ij = dx[id].ijmp;
                        if (dx[id].jp.n[0] && (!dna || (ndelx >= MAXJMP
                        && xx > dx[id].jp.x[ij]+MX) || mis > dx[id].score+DINS0)) {
                                dx[id].ijmp++;
                                if (++ij >= MAXJMP) {
                                        writejmps(id);
                                        ij = dx[id].ijmp = 0;
                                        dx[id].offset = offset;
                                        offset += sizeof(struct jmp) + sizeof(offset);
                                }
                        }
                        dx[id].jp.n[ij] = ndelx;
                        dx[id].jp.x[ij] = xx;
                        dx[id].score = delx;
                }
                else {
                        col1[yy] = dely[yy];
                        ij = dx[id].ijmp;
        if (dx[id].jp.n[0] && (!dna || (ndely[yy] >= MAXJMP
                        && xx > dx[id].jp.x[ij]+MX) || mis > dx[id].score+DINS0)) {
                                dx[id].ijmp++;
                                if (++ij >= MAXJMP) {
                                        writejmps(id);
                                        ij = dx[id].ijmp = 0;
                                        dx[id].offset = offset;
                                        offset += sizeof(struct jmp) + sizeof(offset);
                                }
                        }
                        dx[id].jp.n[ij] = -ndely[yy];
                        dx[id].jp.x[ij] = xx;
                        dx[id].score = dely[yy];
                }
                if (xx == len0 && yy < len1) {
                        /* last col
                         */
                        if (endgaps)
                                col1[yy] -= ins0+ins1*(len1-yy);
                        if (col1[yy] > smax) {
                                smax = col1[yy];
                                dmax = id;
                        }
                }
        }
        if (endgaps && xx < len0)
                col1[yy-1] -= ins0+ins1*(len0-xx);
        if (col1[yy-1] > smax) {
                smax = col1[yy-1];
                dmax = id;
        }
        tmp = col0; col0 = col1; col1 = tmp;
}
(void) free((char *)ndely);
(void) free((char *)dely);
(void) free((char *)col0);
(void) free((char *)col1);                      }
```

Table 1 (cont')

```
/*
 *
 * print() -- only routine visible outside this module
 *
 * static:
 * getmat() -- trace back best path, count matches: print()
 * pr_align() -- print alignment of described in array p[ ]: print()
 * dumpblock() -- dump a block of lines with numbers, stars: pr_align()
 * nums() -- put out a number line: dumpblock()
 * putline() -- put out a line (name, [num], seq, [num]): dumpblock()
 * stars() - -put a line of stars: dumpblock()
 * stripname() -- strip any path and prefix from a seqname
 */

#include "nw.h"

#define SPC     3
#define P_LINE  256     /* maximum output line */
#define P_SPC   3       /* space between name or num and seq */

extern  _day[26][26];
int     olen;           /* set output line length */
FILE    *fx;            /* output file */

print()
        print
{
        int     lx, ly, firstgap, lastgap;      /* overlap */

        if ((fx = fopen(ofile, "w")) == 0) {
                fprintf(stderr,"%s: can't write %s\n", prog, ofile);
                cleanup(1);
        }
        fprintf(fx, "<first sequence: %s (length = %d)\n", namex[0], len0);
        fprintf(fx, "<second sequence: %s (length = %d)\n", namex[1], len1);
        olen = 60;
        lx = len0;
        ly = len1;
        firstgap = lastgap = 0;
        if (dmax < len1 - 1) {      /* leading gap in x */
                pp[0].spc = firstgap = len1 - dmax - 1;
                ly -= pp[0].spc;
        }
        else if (dmax > len1 - 1) {  /* leading gap in y */
                pp[1].spc = firstgap = dmax - (len1 - 1);
                lx -= pp[1].spc;
        }
        if (dmax0 < len0 - 1) {     /* trailing gap in x */
                lastgap = len0 - dmax0 -1;
                lx -= lastgap;
        }
        else if (dmax0 > len0 - 1) { /* trailing gap in y */
                lastgap = dmax0 - (len0 - 1);
                ly -= lastgap;
        }
        getmat(lx, ly, firstgap, lastgap);
        pr_align();
}
```

Table 1 (cont')

```
/*
 * trace back the best path, count matches
 */
static
getmat(lx, ly, firstgap, lastgap)                                    getmat
        int     lx, ly;                 /* "core" (minus endgaps) */
        int     firstgap, lastgap;      /* leading trailing overlap */
{
        int             nm, i0, i1, siz0, siz1;
        char            outx[32];
        double          pct;
        register        n0, n1;
        register char   *p0, *p1;

        /* get total matches, score
         */
        i0 = i1 = siz0 = siz1 = 0;
        p0 = seqx[0] + pp[1].spc;
        p1 = seqx[1] + pp[0].spc;
        n0 = pp[1].spc + 1;
        n1 = pp[0].spc + 1;

        nm = 0;
        while ( *p0 && *p1 ) {
                if (siz0) {
                        p1++;
                        n1++;
                        siz0--;
                }
                else if (siz1) {
                        p0++;
                        n0++;
                        siz1--;
                }
                else {
                        if (xbm[*p0-'A']&xbm[*p1-'A'])
                                nm++;
                        if (n0++ == pp[0].x[i0])
                                siz0 = pp[0].n[i0++];
                        if (n1++ == pp[1].x[i1])
                                siz1 = pp[1].n[i1++];
                        p0++;
                        p1++;
                }
        }

        /* pct homology:
         * if penalizing endgaps, base is the shorter seq
         * else, knock off overhangs and take shorter core
         */
        if (endgaps)
                lx = (len0 < len1)? len0 : len1;
        else
                lx = (lx < ly)? lx : ly;
        pct = 100.*(double)nm/(double)lx;
        fprintf(fx, "\n");
        fprintf(fx, "< %d match%s in an overlap of %d: %.2f percent similarity\n",
                nm, (nm == 1)? "" : "es", lx, pct);
```

Table 1 (cont')

```
        fprintf(fx, "<gaps in first sequence: %d", gapx);
        ...getmat
        if (gapx) {
                (void) sprintf(outx, " (%d %s%s)",
                        ngapx, (dna)? "base":"residue", (ngapx == 1)? "":"s");
                fprintf(fx,"%s", outx);

        fprintf(fx, ", gaps in second sequence: %d", gapy);
        if (gapy) {
                (void) sprintf(outx, " (%d %s%s)",
                        ngapy, (dna)? "base":"residue", (ngapy == 1)? "":"s");
                fprintf(fx,"%s", outx);
        }
        if (dna)
                fprintf(fx,
                "\n<score: %d (match = %d, mismatch = %d, gap penalty = %d + %d per base)\n",
                smax, DMAT, DMIS, DINS0, DINS1);
        else
                fprintf(fx,
                "\n<score: %d (Dayhoff PAM 250 matrix, gap penalty = %d + %d per residue)\n",
                smax, PINS0, PINS1);
        if (endgaps)
                fprintf(fx,
                "<endgaps penalized. left endgap: %d %s%s, right endgap: %d %s%s\n",
                firstgap, (dna)? "base" : "residue", (firstgap == 1)? "" : "s",
                lastgap, (dna)? "base" : "residue", (lastgap == 1)? "" : "s");
        else
                fprintf(fx, "<endgaps not penalized\n");
}
static          nm;             /* matches in core -- for checking */
static          lmax;           /* lengths of stripped file names */
static          ij[2];          /* jmp index for a path */
static          nc[2];          /* number at start of current line */
static          ni[2];          /* current elem number -- for gapping */
static          siz[2];
static char     *ps[2];         /* ptr to current element */
static char     *po[2];         /* ptr to next output char slot */
static char     out[2][P_LINE]; /* output line */
static char     star[P_LINE];   /* set by stars() */

/*
 * print alignment of described in struct path pp[ ]
 */
static
pr_align()
        pr_align
{
        int             nn;     /* char count */
        int             more;
        register        i;

        for (i =  0, lmax = 0; i < 2; i++) {
                nn = stripname(namex[i]);
                if (nn > lmax)
                        lmax = nn;

                nc[i] = 1;
                ni[i] = 1;
                siz[i] = ij[i] = 0;
                ps[i] = seqx[i];
                po[i] = out[i];                 }
```

Table 1 (cont')

```
        for (nn = nm = 0, more = 1; more; ) {
        ...pr_align
                for (i = more = 0; i < 2; i++) {
                        /*
                         * do we have more of this sequence?
                         */
                        if (!*ps[i])
                                continue;

                        more++;

                        if (pp[i].spc) {        /* leading space */
                                *po[i]++ = ' ';
                                pp[i].spc--;
                        }
                        else if (siz[i]) {      /* in a gap */
                                *po[i]++ = '-';
                                siz[i]--;
                        }
                        else {                  /* we're putting a seq element
                                                 */
                                *po[i] = *ps[i];
                                if (islower(*ps[i]))
                                        *ps[i] = toupper(*ps[i]);
                                po[i]++;
                                ps[i]++;

                                /*
                                 * are we at next gap for this seq?
                                 */
                                if (ni[i] == pp[i].x[ij[i]]) {
                                        /*
                                         * we need to merge all gaps
                                         * at this location
                                         */
                                        siz[i] = pp[i].n[ij[i]++];
                                        while (ni[i] == pp[i].x[ij[i]])
                                                siz[i] += pp[i].n[ij[i]++];
                                }
                                ni[i]++;
                        }
                }
                if (++nn == olen || !more && nn) {
                        dumpblock();
                        for (i = 0; i < 2; i++)
                                po[i] = out[i];
                        nn = 0;
                }
        }
}

/*
 * dump a block of lines, including numbers, stars: pr_align()
 */
static
dumpblock()
        dumpblock
{
        register  i;
        for (i = 0; i < 2; i++)
                *po[i]-- = '\0';
```

Table 1 (cont')

...dumpblock

```
        (void) putc('\n', fx);
        for (i = 0; i < 2; i++) {
                if (*out[i] && (*out[i] != ' ' || *(po[i]) != ' ')) {
                        if (i == 0)
                                nums(i);
                        if (i == 0 && *out[1])
                                stars();
                        putline(i);
                        if (i == 0 && *out[1])
                                fprintf(fx, star);
                        if (i == 1)
                                nums(i);
                }
        }
}

/*
 * put out a number line: dumpblock()
 */
static
nums(ix)                                                        nums
        int     ix;     /* index in out[ ] holding seq line */
{
        char            nline[P_LINE];
        register        i, j;
        register char   *pn, *px, *py;

        for (pn = nline, i = 0; i < lmax+P_SPC; i++, pn++)
                *pn = ' ';
        for (i = nc[ix], py = out[ix]; *py; py++, pn++) {
                if (*py == ' ' || *py == '-')
                        *pn = ' ';
                else {
                        if (i%10 == 0 || (i == 1 && nc[ix] != 1)) {
                                j = (i < 0)? -i : i;
                                for (px = pn; j; j /= 10, px--)
                                        *px = j%10 + '0';
                                if (i < 0)
                                        *px = '-';
                        }
                        else
                                *pn = ' ';
                        i++;
                }
        }
        *pn = '\0';
        nc[ix] = i;
        for (pn = nline; *pn; pn++)
                (void) putc(*pn, fx);
        (void) putc('\n', fx);
}

/*
 * put out a line (name, [num], seq, [num]): dumpblock()
 */
static
putline(ix)                                                     putline
        int     ix;                     {
```

Table 1 (cont')

...putline

```
        int             i;
        register char   *px;

        for (px = namex[ix], i = 0; *px && *px != ':'; px++, i++)
                (void) putc(*px, fx);
        for (; i < lmax+P_SPC; i++)
                (void) putc(' ', fx);

        /* these count from 1:
         * ni[ ] is current element (from 1)
         * nc[ ] is number at start of current line
         */
        for (px = out[ix]; *px; px++)
                (void) putc(*px&0x7F, fx);
        (void) putc('\n', fx);
}

/*
 * put a line of stars (seqs always in out[0], out[1]): dumpblock()
 */
static
stars()
        stars
{
        int             i;
        register char   *p0, *p1, cx, *px;

        if (!*out[0] || (*out[0] == ' ' && *(po[0]) == ' ') ||
           !*out[1] || (*out[1] == ' ' && *(po[1]) == ' '))
                return;
        px = star;
        for (i = lmax+P_SPC; i; i--)
                *px++ = ' ';

        for (p0 = out[0], p1 = out[1]; *p0 && *p1; p0++, p1++) {
                if (isalpha(*p0) && isalpha(*p1)) {

                        if (xbm[*p0-'A']&xbm[*p1-'A']) {
                                cx = '*';
                                nm++;
                        }
                        else if (!dna && _day[*p0-'A'][*p1-'A'] > 0)
                                cx = '.';
                        else
                                cx = ' ';
                }
                else
                        cx = ' ';
                *px++ = cx;
        }
        *px++ = '\n';
        *px = '\0';
}
```

Table 1 (cont')

```
/*
 * strip path or prefix from pn, return len: pr_align()
 */
static
stripname(pn)
        stripname
        char    *pn;    /* file name (may be path) */
{
        register char   *px, *py;

        py = 0;
        for (px = pn; *px; px++)
                if (*px == '/')
                        py = px + 1;
        if (py)
                (void) strcpy(pn, py);
        return(strlen(pn));

}
```

Table 1 (cont')

```
/*
 * cleanup() -- cleanup any tmp file
 * getseq() -- read in seq, set dna, len, maxlen
 * g_calloc() -- calloc() with error checkin
 * readjmps() -- get the good jmps, from tmp file if necessary
 * writejmps() -- write a filled array of jmps to a tmp file: nw()
 */
#include "nw.h"
#include <sys/file.h>

char    *jname = "/tmp/homgXXXXXX";             /* tmp file for jmps */
FILE    *fj;

int     cleanup();                              /* cleanup tmp file */
long    lseek();

/*
 * remove any tmp file if we blow
 */
cleanup(i)                                                          cleanup
        int     i;
{
        if (fj)
                (void) unlink(jname);
        exit(i);
}

/*
 * read, return ptr to seq, set dna, len, maxlen
 * skip lines starting with ';', '<', or '>'
 * seq in upper or lower case
 */
char    *
getseq(file, len)                                                   getseq
        char    *file;  /* file name */
        int     *len;   /* seq len */
{
        char            line[1024], *pseq;
        register char   *px, *py;
        int             natgc, tlen;
        FILE            *fp;

        if ((fp = fopen(file,"r")) == 0) {
                fprintf(stderr,"%s: can't read %s\n", prog, file);
                exit(1);
        }
        tlen = natgc = 0;
        while (fgets(line, 1024, fp)) {
                if (*line == ';' || *line == '<' || *line == '>')
                        continue;
                for (px = line; *px != '\n'; px++)
                        if (isupper(*px) || islower(*px))
                                tlen++;
        }
        if ((pseq = malloc((unsigned)(tlen+6))) == 0) {
                fprintf(stderr,"%s: malloc() failed to get %d bytes for %s\n", prog, tlen+6, file);
                exit(1);
        }
        pseq[0] = pseq[1] = pseq[2] = pseq[3] = '\0';
```

Table 1 (cont')

...getseq

```
        py = pseq + 4;
        *len = tlen;
        rewind(fp);

        while (fgets(line, 1024, fp)) {
                if (*line == ';' || *line == '<' || *line == '>')
                        continue;
                for (px = line; *px != '\n'; px++) {
                        if (isupper(*px))
                                *py++ = *px;
                        else if (islower(*px))
                                *py++ = toupper(*px);
                        if (index("ATGCU",*(py-1)))
                                natgc++;
                }
        }
        *py++ = '\0';
        *py = '\0';
        (void) fclose(fp);
        dna = natgc > (tlen/3);
        return(pseq+4);
}

char    *
g_calloc(msg, nx, sz)                                                    g_calloc
        char    *msg;           /* program, calling routine */
        int     nx, sz;         /* number and size of elements */
{
        char            *px, *calloc();

        if ((px = calloc((unsigned)nx, (unsigned)sz)) == 0) {
                if (*msg) {
                        fprintf(stderr, "%s: g_calloc() failed %s (n=%d, sz=%d)\n", prog, msg, nx, sz);
                        exit(1);
                }
        }
        return(px);
}

/*
 * get final jmps from dx[ ] or tmp file, set pp[ ], reset dmax: main()
 */
readjmps()
        readjmps
{
        int             fd = -1;
        int             siz, i0, i1;
        register  i, j, xx;

        if (fj) {
                (void) fclose(fj);
                if ((fd = open(jname, O_RDONLY, 0)) < 0) {
                        fprintf(stderr, "%s: can't open() %s\n", prog, jname);
                        cleanup(1);
                }
        }
        for (i = i0 = i1 = 0, dmax0 = dmax, xx = len0; ; i++) {
                while (1) {
                        for (j = dx[dmax].ijmp; j >= 0 && dx[dmax].jp.x[j] >= xx; j--)
                                ;
```

Table 1 (cont')

...readjmps

```
                        if (j < 0 && dx[dmax].offset && fj) {
                                (void) lseek(fd, dx[dmax].offset, 0);
                                (void) read(fd, (char *)&dx[dmax].jp, sizeof(struct jmp));
                                (void) read(fd, (char *)&dx[dmax].offset, sizeof(dx[dmax].offset));
                                dx[dmax].ijmp = MAXJMP-1;
                        }
                        else
                                break;
                }
                if (i >= JMPS) {
                        fprintf(stderr, "%s: too many gaps in alignment\n", prog);
                        cleanup(1);
                }
                if (j >= 0) {
                        siz = dx[dmax].jp.n[j];
                        xx = dx[dmax].jp.x[j];
                        dmax += siz;
                        if (siz < 0) {                  /* gap in second seq */
                                pp[1].n[i1] = -siz;
                                xx += siz;
                                /* id = xx - yy + len1 - 1
                                 */
                                pp[1].x[i1] = xx - dmax + len1 - 1;
                                gapy++;
                                ngapy -= siz;
/* ignore MAXGAP when doing endgaps */
                                siz = (-siz < MAXGAP || endgaps)? -siz : MAXGAP;
                                i1++;
                        }
                        else if (siz > 0) {  /* gap in first seq */
                                pp[0].n[i0] = siz;
                                pp[0].x[i0] = xx;
                                gapx++;
                                ngapx += siz;
/* ignore MAXGAP when doing endgaps */
                                siz = (siz < MAXGAP || endgaps)? siz : MAXGAP;
                                i0++;
                        }
                }
                else
                        break;
        }

        /* reverse the order of jmps
         */
        for (j = 0, i0--; j < i0; j++, i0--) {
                i = pp[0].n[j]; pp[0].n[j] = pp[0].n[i0]; pp[0].n[i0] = i;
                i = pp[0].x[j]; pp[0].x[j] = pp[0].x[i0]; pp[0].x[i0] = i;
        }
        for (j = 0, i1--; j < i1; j++, i1--) {
                i = pp[1].n[j]; pp[1].n[j] = pp[1].n[i1]; pp[1].n[i1] = i;
                i = pp[1].x[j]; pp[1].x[j] = pp[1].x[i1]; pp[1].x[i1] = i;
        }
        if (fd >= 0)
                (void) close(fd);
        if (fj) {
                (void) unlink(jname);
                fj = 0;
                offset = 0;
        }                                       }
```

Table 1 (cont')

```
/*
 * write a filled jmp struct offset of the prev one (if any): nw()
 */
writejmps(ix)
        writejmps
        int     ix;
{
        char    *mktemp();

        if (!fj) {
                if (mktemp(jname) < 0) {
                        fprintf(stderr, "%s: can't mktemp() %s\n", prog, jname);
                        cleanup(1);
                }
                if ((fj = fopen(jname, "w")) == 0) {
                        fprintf(stderr, "%s: can't write %s\n", prog, jname);
                        exit(1);
                }
        }
        (void) fwrite((char *)&dx[ix].jp, sizeof(struct jmp), 1, fj);
        (void) fwrite((char *)&dx[ix].offset, sizeof(dx[ix].offset), 1, fj);
        }
```

Table 2

PRO	XXXXXXXXXXXXXXX	(Length = 15 amino acids)	
Comparison Protein	XXXXXYYYYYYY	(Length = 12 amino acids)	

% amino acid sequence identity =

(the number of identically matching amino acid residues between the two polypeptide sequences as determined by ALIGN-2) divided by (the total number of amino acid residues of the PRO polypeptide) = 5 divided by 15 = 33.3%

Table 3

PRO	XXXXXXXXXX	(Length = 10 amino acids)	
Comparison Protein	XXXXXYYYYYYZZYZ	(Length = 15 amino acids)	

% amino acid sequence identity =

(the number of identically matching amino acid residues between the two polypeptide sequences as determined by ALIGN-2) divided by (the total number of amino acid residues of the PRO polypeptide) = 5 divided by 10 = 50%

Table 4

PRO-DNA	NNNNNNNNNNNNNN	(Length = 14 nucleotides)	
Comparison DNA	NNNNNNLLLLLLLLL	(Length = 16 nucleotides)	

% nucleic acid sequence identity =

(the number of identically matching nucleotides between the two nucleic acid sequences as determined by ALIGN-2) divided by (the total number of nucleotides of the PRO-DNA nucleic acid sequence) = 6 divided by 14 = 42.9%

Table 5

PRO-DNA	NNNNNNNNNNNN	(Length = 12 nucleotides)	
Comparison DNA	NNNNLLLVV	(Length = 9 nucleotides)	

% nucleic acid sequence identity =

(the number of identically matching nucleotides between the two nucleic acid sequences as determined by ALIGN-2) divided by (the total number of nucleotides of the PRO-DNA nucleic acid sequence) = 4 divided by 12 = 33.3%

II. Compositions and Methods of the Invention

A. Full-Length PRO Polypeptides

The present invention provides newly identified and isolated nucleotide sequences encoding polypeptides referred to in the present application as PRO polypeptides. In particular, cDNAs encoding various PRO polypeptides have been identified and isolated, as disclosed in further detail in the Examples below. However, for sake of simplicity, in the present specification the protein encoded by the full length native nucleic acid molecules disclosed herein as well as all further native homologues and variants included in the foregoing definition of PRO, will be referred to as "PRO/number", regardless of their origin or mode of preparation.

As disclosed in the Examples below, various cDNA clones have been disclosed. The predicted amino acid sequence can be determined from the nucleotide sequence using routine skill. For the PRO polypeptides and encoding nucleic acids described herein, Applicants have identified what is believed to be the reading frame best identifiable with the sequence information available at the time.

B. PRO Polypeptide Variants

In addition to the full-length native sequence PRO polypeptides described herein, it is contemplated that PRO variants can be prepared. PRO variants can be prepared by introducing appropriate nucleotide changes into the PRO DNA, and/or by synthesis of the desired PRO polypeptide. Those skilled in the art will appreciate that amino acid changes may alter post-translational processes of the PRO, such as changing the number or position of glycosylation sites or altering the membrane anchoring characteristics.

Variations in the native full-length sequence PRO or in various domains of the PRO described herein, can be made, for example, using any of the techniques and guidelines for conservative and non-conservative mutations set forth, for instance, in U.S. Patent No. 5,364,934. Variations may be a substitution, deletion or insertion of one or more codons encoding the PRO that results in a change in the amino acid sequence of the PRO as compared with the native sequence PRO. Optionally, the variation is by substitution of at least one amino acid with any other amino acid in one or more of the domains of the PRO. Guidance in determining which amino acid residue may be inserted, substituted or deleted without adversely affecting the desired activity may be found by comparing the sequence of the PRO with that of homologous known protein molecules and minimizing the number of amino acid sequence changes made in regions of high homology. Amino acid substitutions can be the result of replacing one amino acid with another amino acid having similar structural and/or chemical properties, such as the replacement of a leucine with a serine, i.e., conservative amino acid replacements. Insertions or deletions may optionally

be in the range of about 1 to 5 amino acids. The variation allowed may be determined by systematically making insertions, deletions or substitutions of amino acids in the sequence and testing the resulting variants for activity exhibited by the full-length or mature native sequence.

PRO polypeptide fragments are provided herein. Such fragments may be truncated at the N-terminus or C-terminus, or may lack internal residues, for example, when compared with a full length native protein. Certain fragments lack amino acid residues that are not essential for a desired biological activity of the PRO polypeptide.

PRO fragments may be prepared by any of a number of conventional techniques. Desired peptide fragments may be chemically synthesized. An alternative approach involves generating PRO fragments by enzymatic digestion, e.g., by treating the protein with an enzyme known to cleave proteins at sites defined by particular amino acid residues, or by digesting the DNA with suitable restriction enzymes and isolating the desired fragment. Yet another suitable technique involves isolating and amplifying a DNA fragment encoding a desired polypeptide fragment, by polymerase chain reaction (PCR). Oligonucleotides that define the desired termini of the DNA fragment are employed at the 5' and 3' primers in the PCR. Preferably, PRO polypeptide fragments share at least one biological and/or immunological activity with the native PRO polypeptide disclosed herein.

In particular embodiments, conservative substitutions of interest are shown in Table 6 under the heading of preferred substitutions. If such substitutions result in a change in biological activity, then more substantial changes, denominated exemplary substitutions in Table 6, or as further described below in reference to amino acid classes, are introduced and the products screened.

Table 6

Original Residue	Exemplary Substitutions	Preferred Substitutions
Ala (A)	val; leu; ile	val
Arg (R)	lys; gln; asn	lys
Asn (N)	gln; his; lys; arg	gln
Asp (D)	glu	glu
Cys (C)	ser	ser
Gln (Q)	asn	asn
Glu (E)	asp	asp
Gly (G)	pro; ala	ala
His (H)	asn; gln; lys; arg	arg
Ile (I)	leu; val; met; ala; phe; norleucine	leu
Leu (L)	norleucine; ile; val; met; ala; phe	ile
Lys (K)	arg; gln; asn	arg
Met (M)	leu; phe; ile	leu
Phe (F)	leu; val; ile; ala; tyr	leu
Pro (P)	ala	ala
Ser (S)	thr	thr
Thr (T)	ser	ser
Trp (W)	tyr; phe	tyr
Tyr (Y)	trp; phe; thr; ser	phe
Val (V)	ile; leu; met; phe; ala; norleucine	leu

Substantial modifications in function or immunological identity of the PRO polypeptide are accomplished by selecting substitutions that differ significantly in their effect on maintaining (a) the structure of the polypeptide backbone in the area of the substitution, for example, as a sheet or helical conformation, (b) the charge or hydrophobicity of the molecule at the target site, or (c) the bulk of the side chain. Naturally occurring residues are divided into groups based on common side-chain properties:

(1) hydrophobic: norleucine, met, ala, val, leu, ile;

(2) neutral hydrophilic: cys, ser, thr;

(3) acidic: asp, glu;

(4) basic: asn, gln, his, lys, arg;

(5) residues that influence chain orientation: gly, pro; and

(6) aromatic: trp, tyr, phe.

Non-conservative substitutions will entail exchanging a member of one of these classes for another class. Such substituted residues also may be introduced into the conservative substitution sites or, more preferably, into the remaining (non-conserved) sites.

The variations can be made using methods known in the art such as oligonucleotide-mediated (site-directed) mutagenesis, alanine scanning, and PCR mutagenesis. Site-directed mutagenesis [Carter et al., Nucl. Acids Res., 13:4331 (1986); Zoller et al., Nucl. Acids Res., 10:6487 (1987)], cassette mutagenesis [Wells et al., Gene, 34:315 (1985)], restriction selection mutagenesis [Wells et al., Philos.

Trans. R. Soc. London SerA, 317:415 (1986)] or other known techniques can be performed on the cloned DNA to produce the PRO variant DNA.

Scanning amino acid analysis can also be employed to identify one or more amino acids along a contiguous sequence. Among the preferred scanning amino acids are relatively small, neutral amino acids. Such amino acids include alanine, glycine, serine, and cysteine. Alanine is typically a preferred scanning amino acid among this group because it eliminates the side-chain beyond the beta-carbon and is less likely to alter the main-chain conformation of the variant [Cunningham and Wells, Science, 244: 1081-1085 (1989)]. Alanine is also typically preferred because it is the most common amino acid. Further, it is frequently found in both buried and exposed positions [Creighton, The Proteins, (W.H. Freeman & Co., N.Y.); Chothia, J. Mol. Biol., 150:1 (1976)]. If alanine substitution does not yield adequate amounts of variant, an isoteric amino acid can be used.

C. Modifications of PRO

Covalent modifications of PRO are included within the scope of this invention. One type of covalent modification includes reacting targeted amino acid residues of a PRO polypeptide with an organic derivatizing agent that is capable of reacting with selected side chains or the N- or C- terminal residues of the PRO. Derivatization with bifunctional agents is useful, for instance, for crosslinking PRO to a water-insoluble support matrix or surface for use in the method for purifying anti-PRO antibodies, and vice-versa. Commonly used crosslinking agents include, e.g., 1,1-bis(diazoacetyl)-2-phenylethane, glutaraldehyde, N-hydroxysuccinimide esters, for example, esters with 4-azidosalicylic acid, homobifunctional imidoesters, including disuccinimidyl esters such as 3,3'-dithiobis(succinimidylpropionate), bifunctional maleimides such as bis-N-maleimido-1,8-octane and agents such as methyl-3-[(p-azidophenyl)dithio]propioimidate.

Other modifications include deamidation of glutaminyl and asparaginyl residues to the corresponding glutamyl and aspartyl residues, respectively, hydroxylation of proline and lysine, phosphorylation of hydroxyl groups of seryl or threonyl residues, methylation of the α-amino groups of lysine, arginine, and histidine side chains [T.E. Creighton, Proteins: Structure and Molecular Properties, W.H. Freeman & Co., San Francisco, pp. 79-86 (1983)], acetylation of the N-terminal amine, and amidation of any C-terminal carboxyl group.

Another type of covalent modification of the PRO polypeptide included within the scope of this invention comprises altering the native glycosylation pattern of the polypeptide. "Altering the native glycosylation pattern" is intended for purposes herein to mean deleting one or more carbohydrate moieties found in native sequence PRO (either by removing the underlying glycosylation site or by deleting the glycosylation by chemical and/or enzymatic means), and/or adding one or more glycosylation sites that are not present in the native sequence PRO. In addition, the phrase includes qualitative changes in the glycosylation of the native proteins, involving a change in the nature and proportions of the various carbohydrate moieties present.

Addition of glycosylation sites to the PRO polypeptide may be accomplished by altering the amino acid sequence. The alteration may be made, for example, by the addition of, or substitution by,

one or more serine or threonine residues to the native sequence PRO (for O-linked glycosylation sites). The PRO amino acid sequence may optionally be altered through changes at the DNA level, particularly by mutating the DNA encoding the PRO polypeptide at preselected bases such that codons are generated that will translate into the desired amino acids.

Another means of increasing the number of carbohydrate moieties on the PRO polypeptide is by chemical or enzymatic coupling of glycosides to the polypeptide. Such methods are described in the art, e.g., in WO 87/05330 published 11 September 1987, and in Aplin and Wriston, CRC Crit. Rev. Biochem., pp. 259-306 (1981).

Removal of carbohydrate moieties present on the PRO polypeptide may be accomplished chemically or enzymatically or by mutational substitution of codons encoding for amino acid residues that serve as targets for glycosylation. Chemical deglycosylation techniques are known in the art and described, for instance, by Hakimuddin, et al., Arch. Biochem. Biophys., 259:52 (1987) and by Edge et al., Anal. Biochem., 118:131 (1981). Enzymatic cleavage of carbohydrate moieties on polypeptides can be achieved by the use of a variety of endo- and exo-glycosidases as described by Thotakura et al., Meth. Enzymol., 138:350 (1987).

Another type of covalent modification of PRO comprises linking the PRO polypeptide to one of a variety of nonproteinaceous polymers, e.g., polyethylene glycol (PEG), polypropylene glycol, or polyoxyalkylenes, in the manner set forth in U.S. Patent Nos. 4,640,835; 4,496,689; 4,301,144; 4,670,417; 4,791,192 or 4,179,337.

The PRO of the present invention may also be modified in a way to form a chimeric molecule comprising PRO fused to another, heterologous polypeptide or amino acid sequence.

In one embodiment, such a chimeric molecule comprises a fusion of the PRO with a tag polypeptide which provides an epitope to which an anti-tag antibody can selectively bind. The epitope tag is generally placed at the amino- or carboxyl- terminus of the PRO. The presence of such epitope-tagged forms of the PRO can be detected using an antibody against the tag polypeptide. Also, provision of the epitope tag enables the PRO to be readily purified by affinity purification using an anti-tag antibody or another type of affinity matrix that binds to the epitope tag. Various tag polypeptides and their respective antibodies are well known in the art. Examples include poly-histidine (poly-his) or poly-histidine-glycine (poly-his-gly) tags; the flu HA tag polypeptide and its antibody 12CA5 [Field et al., Mol. Cell. Biol., 8:2159-2165 (1988)]; the c-myc tag and the 8F9, 3C7, 6E10, G4, B7 and 9E10 antibodies thereto [Evan et al., Molecular and Cellular Biology, 5:3610-3616 (1985)]; and the Herpes Simplex virus glycoprotein D (gD) tag and its antibody [Paborsky et al., Protein Engineering, 3(6):547-553 (1990)]. Other tag polypeptides include the Flag-peptide [Hopp et al., BioTechnology, 6:1204-1210 (1988)]; the KT3 epitope peptide [Martin et al., Science, 255:192-194 (1992)]; an alpha-tubulin epitope peptide [Skinner et al., J. Biol. Chem., 266:15163-15166 (1991)]; and the T7 gene 10 protein peptide tag [Lutz-Freyermuth et al., Proc. Natl. Acad. Sci. USA, 87:6393-6397 (1990)].

In an alternative embodiment, the chimeric molecule may comprise a fusion of the PRO with an immunoglobulin or a particular region of an immunoglobulin. For a bivalent form of the chimeric

molecule (also referred to as an "immunoadhesin"), such a fusion could be to the Fc region of an IgG molecule. The Ig fusions preferably include the substitution of a soluble (transmembrane domain deleted or inactivated) form of a PRO polypeptide in place of at least one variable region within an Ig molecule. In a particularly preferred embodiment, the immunoglobulin fusion includes the hinge, CH2 and CH3, or the hinge, CH1, CH2 and CH3 regions of an IgG1 molecule. For the production of immunoglobulin fusions see also US Patent No. 5,428,130 issued June 27, 1995.

D. Preparation of PRO

The description below relates primarily to production of PRO by culturing cells transformed or transfected with a vector containing PRO nucleic acid. It is, of course, contemplated that alternative methods, which are well known in the art, may be employed to prepare PRO. For instance, the PRO sequence, or portions thereof, may be produced by direct peptide synthesis using solid-phase techniques [see, e.g., Stewart et al., Solid-Phase Peptide Synthesis, W.H. Freeman Co., San Francisco, CA (1969); Merrifield, J. Am. Chem. Soc., 85:2149-2154 (1963)]. *In vitro* protein synthesis may be performed using manual techniques or by automation. Automated synthesis may be accomplished, for instance, using an Applied Biosystems Peptide Synthesizer (Foster City, CA) using manufacturer's instructions. Various portions of the PRO may be chemically synthesized separately and combined using chemical or enzymatic methods to produce the full-length PRO.

1. Isolation of DNA Encoding PRO

DNA encoding PRO may be obtained from a cDNA library prepared from tissue believed to possess the PRO mRNA and to express it at a detectable level. Accordingly, human PRO DNA can be conveniently obtained from a cDNA library prepared from human tissue, such as described in the Examples. The PRO-encoding gene may also be obtained from a genomic library or by known synthetic procedures (e.g., automated nucleic acid synthesis).

Libraries can be screened with probes (such as antibodies to the PRO or oligonucleotides of at least about 20-80 bases) designed to identify the gene of interest or the protein encoded by it. Screening the cDNA or genomic library with the selected probe may be conducted using standard procedures, such as described in Sambrook et al., Molecular Cloning: A Laboratory Manual (New York: Cold Spring Harbor Laboratory Press, 1989). An alternative means to isolate the gene encoding PRO is to use PCR methodology [Sambrook et al., supra; Dieffenbach et al., PCR Primer: A Laboratory Manual (Cold Spring Harbor Laboratory Press, 1995)].

The Examples below describe techniques for screening a cDNA library. The oligonucleotide sequences selected as probes should be of sufficient length and sufficiently unambiguous that false positives are minimized. The oligonucleotide is preferably labeled such that it can be detected upon hybridization to DNA in the library being screened. Methods of labeling are well known in the art, and include the use of radiolabels like ^{32}P-labeled ATP, biotinylation or enzyme labeling. Hybridization conditions, including moderate stringency and high stringency, are provided in Sambrook et al., supra.

Sequences identified in such library screening methods can be compared and aligned to other known sequences deposited and available in public databases such as GenBank or other private sequence

databases. Sequence identity (at either the amino acid or nucleotide level) within defined regions of the molecule or across the full-length sequence can be determined using methods known in the art and as described herein.

Nucleic acid having protein coding sequence may be obtained by screening selected cDNA or genomic libraries using the deduced amino acid sequence disclosed herein for the first time, and, if necessary, using conventional primer extension procedures as described in Sambrook et al., supra, to detect precursors and processing intermediates of mRNA that may not have been reverse-transcribed into cDNA.

2. Selection and Transformation of Host Cells

Host cells are transfected or transformed with expression or cloning vectors described herein for PRO production and cultured in conventional nutrient media modified as appropriate for inducing promoters, selecting transformants, or amplifying the genes encoding the desired sequences. The culture conditions, such as media, temperature, pH and the like, can be selected by the skilled artisan without undue experimentation. In general, principles, protocols, and practical techniques for maximizing the productivity of cell cultures can be found in Mammalian Cell Biotechnology: a Practical Approach, M. Butler, ed. (IRL Press, 1991) and Sambrook et al., supra.

Methods of eukaryotic cell transfection and prokaryotic cell transformation are known to the ordinarily skilled artisan, for example, $CaCl_2$, $CaPO_4$, liposome-mediated and electroporation. Depending on the host cell used, transformation is performed using standard techniques appropriate to such cells. The calcium treatment employing calcium chloride, as described in Sambrook et al., supra, or electroporation is generally used for prokaryotes. Infection with *Agrobacterium tumefaciens* is used for transformation of certain plant cells, as described by Shaw et al., Gene, 23:315 (1983) and WO 89/05859 published 29 June 1989. For mammalian cells without such cell walls, the calcium phosphate precipitation method of Graham and van der Eb, Virology, 52:456-457 (1978) can be employed. General aspects of mammalian cell host system transfections have been described in U.S. Patent No. 4,399,216. Transformations into yeast are typically carried out according to the method of Van Solingen et al., J. Bact., 130:946 (1977) and Hsiao et al., Proc. Natl. Acad. Sci. (USA), 76:3829 (1979). However, other methods for introducing DNA into cells, such as by nuclear microinjection, electroporation, bacterial protoplast fusion with intact cells, or polycations, e.g., polybrene, polyornithine, may also be used. For various techniques for transforming mammalian cells, see Keown et al., Methods in Enzymology, 185:527-537 (1990) and Mansour et al., Nature, 336:348-352 (1988).

Suitable host cells for cloning or expressing the DNA in the vectors herein include prokaryote, yeast, or higher eukaryote cells. Suitable prokaryotes include but are not limited to eubacteria, such as Gram-negative or Gram-positive organisms, for example, Enterobacteriaceae such as *E. coli*. Various *E. coli* strains are publicly available, such as *E. coli* K12 strain MM294 (ATCC 31,446); *E. coli* X1776 (ATCC 31,537); *E. coli* strain W3110 (ATCC 27,325) and K5 772 (ATCC 53,635). Other suitable prokaryotic host cells include Enterobacteriaceae such as *Escherichia*, e.g., *E. coli*, *Enterobacter*,

Erwinia, *Klebsiella*, *Proteus*, *Salmonella*, e.g., *Salmonella typhimurium*, *Serratia*, e.g., *Serratia marcescans*, and *Shigella*, as well as *Bacilli* such as *B. subtilis* and *B. licheniformis* (e.g., *B. licheniformis* 41P disclosed in DD 266,710 published 12 April 1989), *Pseudomonas* such as *P. aeruginosa*, and *Streptomyces*. These examples are illustrative rather than limiting. Strain W3110 is one particularly preferred host or parent host because it is a common host strain for recombinant DNA product fermentations. Preferably, the host cell secretes minimal amounts of proteolytic enzymes. For example, strain W3110 may be modified to effect a genetic mutation in the genes encoding proteins endogenous to the host, with examples of such hosts including *E. coli* W3110 strain 1A2, which has the complete genotype *tonA* ; *E. coli* W3110 strain 9E4, which has the complete genotype *tonA ptr3*; *E. coli* W3110 strain 27C7 (ATCC 55,244), which has the complete genotype *tonA ptr3 phoA E15 (argF-lac)169 degP ompT kan*^{r}; *E. coli* W3110 strain 37D6, which has the complete genotype *tonA ptr3 phoA E15 (argF-lac)169 degP ompT rbs7 ilvG kan*^{r}; *E. coli* W3110 strain 40B4, which is strain 37D6 with a non-kanamycin resistant *degP* deletion mutation; and an *E. coli* strain having mutant periplasmic protease disclosed in U.S. Patent No. 4,946,783 issued 7 August 1990. Alternatively, *in vitro* methods of cloning, e.g., PCR or other nucleic acid polymerase reactions, are suitable.

In addition to prokaryotes, eukaryotic microbes such as filamentous fungi or yeast are suitable cloning or expression hosts for PRO-encoding vectors. *Saccharomyces cerevisiae* is a commonly used lower eukaryotic host microorganism. Others include *Schizosaccharomyces pombe* (Beach and Nurse, Nature, 290: 140 [1981]; EP 139,383 published 2 May 1985); *Kluyveromyces* hosts (U.S. Patent No. 4,943,529; Fleer et al., Bio/Technology, 9:968-975 (1991)) such as, e.g., *K. lactis* (MW98-8C, CBS683, CBS4574; Louvencourt et al., J. Bacteriol., 154(2):737-742 [1983]), *K. fragilis* (ATCC 12,424), *K. bulgaricus* (ATCC 16,045), *K. wickeramii* (ATCC 24,178), *K. waltii* (ATCC 56,500), *K. drosophilarum* (ATCC 36,906; Van den Berg et al., Bio/Technology, 8:135 (1990)), *K. thermotolerans*, and *K. marxianus; yarrowia* (EP 402,226); *Pichia pastoris* (EP 183,070; Sreekrishna et al., J. Basic Microbiol., 28:265-278 [1988]); *Candida; Trichoderma reesia* (EP 244,234); *Neurospora crassa* (Case et al., Proc. Natl. Acad. Sci. USA, 76:5259-5263 [1979]); *Schwanniomyces* such as *Schwanniomyces occidentalis* (EP 394,538 published 31 October 1990); and filamentous fungi such as, e.g., *Neurospora, Penicillium, Tolypocladium* (WO 91/00357 published 10 January 1991), and *Aspergillus* hosts such as *A. nidulans* (Ballance et al., Biochem. Biophys. Res. Commun., 112:284-289 [1983]; Tilburn et al., Gene, 26:205-221 [1983]; Yelton et al., Proc. Natl. Acad. Sci. USA, 81: 1470-1474 [1984]) and *A. niger* (Kelly and Hynes, EMBO J., 4:475-479 [1985]). Methylotropic yeasts are suitable herein and include, but are not limited to, yeast capable of growth on methanol selected from the genera consisting of *Hansenula, Candida, Kloeckera, Pichia, Saccharomyces, Torulopsis,* and *Rhodotorula*. A list of specific species that are exemplary of this class of yeasts may be found in C. Anthony, The Biochemistry of Methylotrophs, 269 (1982).

Suitable host cells for the expression of glycosylated PRO are derived from multicellular organisms. Examples of invertebrate cells include insect cells such as Drosophila S2 and Spodoptera Sf9, as well as plant cells. Examples of useful mammalian host cell lines include Chinese hamster ovary

(CHO) and COS cells. More specific examples include monkey kidney CV1 line transformed by SV40 (COS-7, ATCC CRL 1651); human embryonic kidney line (293 or 293 cells subcloned for growth in suspension culture, Graham et al., J. Gen Virol., 36:59 (1977)); Chinese hamster ovary cells/-DHFR (CHO, Urlaub and Chasin, Proc. Natl. Acad. Sci. USA, 77:4216 (1980)); mouse sertoli cells (TM4, Mather, Biol. Reprod., 23:243-251 (1980)); human lung cells (W138, ATCC CCL 75); human liver cells (Hep G2, HB 8065); and mouse mammary tumor (MMT 060562, ATCC CCL51). The selection of the appropriate host cell is deemed to be within the skill in the art.

3. Selection and Use of a Replicable Vector

The nucleic acid (e.g., cDNA or genomic DNA) encoding PRO may be inserted into a replicable vector for cloning (amplification of the DNA) or for expression. Various vectors are publicly available. The vector may, for example, be in the form of a plasmid, cosmid, viral particle, or phage. The appropriate nucleic acid sequence may be inserted into the vector by a variety of procedures. In general, DNA is inserted into an appropriate restriction endonuclease site(s) using techniques known in the art. Vector components generally include, but are not limited to, one or more of a signal sequence, an origin of replication, one or more marker genes, an enhancer element, a promoter, and a transcription termination sequence. Construction of suitable vectors containing one or more of these components employs standard ligation techniques which are known to the skilled artisan.

The PRO may be produced recombinantly not only directly, but also as a fusion polypeptide with a heterologous polypeptide, which may be a signal sequence or other polypeptide having a specific cleavage site at the N-terminus of the mature protein or polypeptide. In general, the signal sequence may be a component of the vector, or it may be a part of the PRO-encoding DNA that is inserted into the vector. The signal sequence may be a prokaryotic signal sequence selected, for example, from the group of the alkaline phosphatase, penicillinase, lpp, or heat-stable enterotoxin II leaders. For yeast secretion the signal sequence may be, e.g., the yeast invertase leader, alpha factor leader (including *Saccharomyces* and *Kluyveromyces* α-factor leaders, the latter described in U.S. Patent No. 5,010,182), or acid phosphatase leader, the *C. albicans* glucoamylase leader (EP 362,179 published 4 April 1990), or the signal described in WO 90/13646 published 15 November 1990. In mammalian cell expression, mammalian signal sequences may be used to direct secretion of the protein, such as signal sequences from secreted polypeptides of the same or related species, as well as viral secretory leaders.

Both expression and cloning vectors contain a nucleic acid sequence that enables the vector to replicate in one or more selected host cells. Such sequences are well known for a variety of bacteria, yeast, and viruses. The origin of replication from the plasmid pBR322 is suitable for most Gram-negative bacteria, the 2μ plasmid origin is suitable for yeast, and various viral origins (SV40, polyoma, adenovirus, VSV or BPV) are useful for cloning vectors in mammalian cells.

Expression and cloning vectors will typically contain a selection gene, also termed a selectable marker. Typical selection genes encode proteins that (a) confer resistance to antibiotics or other toxins, e.g., ampicillin, neomycin, methotrexate, or tetracycline, (b) complement auxotrophic deficiencies, or (c)

supply critical nutrients not available from complex media, e.g., the gene encoding D-alanine racemase for *Bacilli*.

An example of suitable selectable markers for mammalian cells are those that enable the identification of cells competent to take up the PRO-encoding nucleic acid, such as DHFR or thymidine kinase. An appropriate host cell when wild-type DHFR is employed is the CHO cell line deficient in DHFR activity, prepared and propagated as described by Urlaub et al., Proc. Natl. Acad. Sci. USA, 77:4216 (1980). A suitable selection gene for use in yeast is the *trp*1 gene present in the yeast plasmid YRp7 [Stinchcomb et al., Nature, 282:39 (1979); Kingsman et al., Gene, 7:141 (1979); Tschemper et al., Gene, 10:157 (1980)]. The *trp*1 gene provides a selection marker for a mutant strain of yeast lacking the ability to grow in tryptophan, for example, ATCC No. 44076 or PEP4-1 [Jones, Genetics, 85:12 (1977)].

Expression and cloning vectors usually contain a promoter operably linked to the PRO-encoding nucleic acid sequence to direct mRNA synthesis. Promoters recognized by a variety of potential host cells are well known. Promoters suitable for use with prokaryotic hosts include the β-lactamase and lactose promoter systems [Chang et al., Nature, 275:615 (1978); Goeddel et al., Nature, 281:544 (1979)], alkaline phosphatase, a tryptophan (trp) promoter system [Goeddel, Nucleic Acids Res., 8:4057 (1980); EP 36,776], and hybrid promoters such as the tac promoter [deBoer et al., Proc. Natl. Acad. Sci. USA, 80:21-25 (1983)]. Promoters for use in bacterial systems also will contain a Shine-Dalgarno (S.D.) sequence operably linked to the DNA encoding PRO.

Examples of suitable promoting sequences for use with yeast hosts include the promoters for 3-phosphoglycerate kinase [Hitzeman et al., J. Biol. Chem., 255:2073 (1980)] or other glycolytic enzymes [Hess et al., J. Adv. Enzyme Reg., 7:149 (1968); Holland, Biochemistry, 17:4900 (1978)], such as enolase, glyceraldehyde-3-phosphate dehydrogenase, hexokinase, pyruvate decarboxylase, phosphofructokinase, glucose-6-phosphate isomerase, 3-phosphoglycerate mutase, pyruvate kinase, triosephosphate isomerase, phosphoglucose isomerase, and glucokinase.

Other yeast promoters, which are inducible promoters having the additional advantage of transcription controlled by growth conditions, are the promoter regions for alcohol dehydrogenase 2, isocytochrome C, acid phosphatase, degradative enzymes associated with nitrogen metabolism, metallothionein, glyceraldehyde-3-phosphate dehydrogenase, and enzymes responsible for maltose and galactose utilization. Suitable vectors and promoters for use in yeast expression are further described in EP 73,657.

PRO transcription from vectors in mammalian host cells is controlled, for example, by promoters obtained from the genomes of viruses such as polyoma virus, fowlpox virus (UK 2,211,504 published 5 July 1989), adenovirus (such as Adenovirus 2), bovine papilloma virus, avian sarcoma virus, cytomegalovirus, a retrovirus, hepatitis-B virus and Simian Virus 40 (SV40), from heterologous mammalian promoters, e.g., the actin promoter or an immunoglobulin promoter, and from heat-shock promoters, provided such promoters are compatible with the host cell systems.

Transcription of a DNA encoding the PRO by higher eukaryotes may be increased by inserting an enhancer sequence into the vector. Enhancers are cis-acting elements of DNA, usually about from 10 to

300 bp, that act on a promoter to increase its transcription. Many enhancer sequences are now known from mammalian genes (globin, elastase, albumin, α-fetoprotein, and insulin). Typically, however, one will use an enhancer from a eukaryotic cell virus. Examples include the SV40 enhancer on the late side of the replication origin (bp 100-270), the cytomegalovirus early promoter enhancer, the polyoma enhancer on the late side of the replication origin, and adenovirus enhancers. The enhancer may be spliced into the vector at a position 5' or 3' to the PRO coding sequence, but is preferably located at a site 5' from the promoter.

Expression vectors used in eukaryotic host cells (yeast, fungi, insect, plant, animal, human, or nucleated cells from other multicellular organisms) will also contain sequences necessary for the termination of transcription and for stabilizing the mRNA. Such sequences are commonly available from the 5' and, occasionally 3', untranslated regions of eukaryotic or viral DNAs or cDNAs. These regions contain nucleotide segments transcribed as polyadenylated fragments in the untranslated portion of the mRNA encoding PRO.

Still other methods, vectors, and host cells suitable for adaptation to the synthesis of PRO in recombinant vertebrate cell culture are described in Gething et al., Nature, 293:620-625 (1981); Mantei et al., Nature, 281:40-46 (1979); EP 117,060; and EP 117,058.

4. Detecting Gene Amplification/Expression

Gene amplification and/or expression may be measured in a sample directly, for example, by conventional Southern blotting, Northern blotting to quantitate the transcription of mRNA [Thomas, Proc. Natl. Acad. Sci. USA, 77:5201-5205 (1980)], dot blotting (DNA analysis), or *in situ* hybridization, using an appropriately labeled probe, based on the sequences provided herein. Alternatively, antibodies may be employed that can recognize specific duplexes, including DNA duplexes, RNA duplexes, and DNA-RNA hybrid duplexes or DNA-protein duplexes. The antibodies in turn may be labeled and the assay may be carried out where the duplex is bound to a surface, so that upon the formation of duplex on the surface, the presence of antibody bound to the duplex can be detected.

Gene expression, alternatively, may be measured by immunological methods, such as immunohistochemical staining of cells or tissue sections and assay of cell culture or body fluids, to quantitate directly the expression of gene product. Antibodies useful for immunohistochemical staining and/or assay of sample fluids may be either monoclonal or polyclonal, and may be prepared in any mammal. Conveniently, the antibodies may be prepared against a native sequence PRO polypeptide or against a synthetic peptide based on the DNA sequences provided herein or against exogenous sequence fused to PRO DNA and encoding a specific antibody epitope.

5. Purification of Polypeptide

Forms of PRO may be recovered from culture medium or from host cell lysates. If membrane-bound, it can be released from the membrane using a suitable detergent solution (e.g. Triton-X 100) or by enzymatic cleavage. Cells employed in expression of PRO can be disrupted by various physical or chemical means, such as freeze-thaw cycling, sonication, mechanical disruption, or cell lysing agents.

It may be desired to purify PRO from recombinant cell proteins or polypeptides. The following procedures are exemplary of suitable purification procedures: by fractionation on an ion-exchange column; ethanol precipitation; reverse phase HPLC; chromatography on silica or on a cation-exchange resin such as DEAE; chromatofocusing; SDS-PAGE; ammonium sulfate precipitation; gel filtration using, for example, Sephadex G-75; protein A Sepharose columns to remove contaminants such as IgG; and metal chelating columns to bind epitope-tagged forms of the PRO. Various methods of protein purification may be employed and such methods are known in the art and described for example in Deutscher, Methods in Enzymology, 182 (1990); Scopes, Protein Purification: Principles and Practice, Springer-Verlag, New York (1982). The purification step(s) selected will depend, for example, on the nature of the production process used and the particular PRO produced.

E. Tissue Distribution

The location of tissues expressing the PRO can be identified by determining mRNA expression in various human tissues. The location of such genes provides information about which tissues are most likely to be affected by the stimulating and inhibiting activities of the PRO polypeptides. The location of a gene in a specific tissue also provides sample tissue for the activity blocking assays discussed below.

As noted before, gene expression in various tissues may be measured by conventional Southern blotting, Northern blotting to quantitate the transcription of mRNA (Thomas, *Proc. Natl. Acad. Sci. USA*, 77:5201-5205 [1980]), dot blotting (DNA analysis), or *in situ* hybridization, using an appropriately labeled probe, based on the sequences provided herein. Alternatively, antibodies may be employed that can recognize specific duplexes, including DNA duplexes, RNA duplexes, and DNA-RNA hybrid duplexes or DNA-protein duplexes.

Gene expression in various tissues, alternatively, may be measured by immunological methods, such as immunohistochemical staining of tissue sections and assay of cell culture or body fluids, to quantitate directly the expression of gene product. Antibodies useful for immunohistochemical staining and/or assay of sample fluids may be either monoclonal or polyclonal, and may be prepared in any mammal. Conveniently, the antibodies may be prepared against a native sequence of a PRO polypeptide or against a synthetic peptide based on the DNA sequences encoding the PRO polypeptide or against an exogenous sequence fused to a DNA encoding a PRO polypeptide and encoding a specific antibody epitope. General techniques for generating antibodies, and special protocols for Northern blotting and *in situ* hybridization are provided below.

F. Antibody Binding Studies

The activity of the PRO polypeptides can be further verified by antibody binding studies, in which the ability of anti-PRO antibodies to inhibit the effect of the PRO polypeptides, respectively, on tissue cells is tested. Exemplary antibodies include polyclonal, monoclonal, humanized, bispecific, and heteroconjugate antibodies, the preparation of which will be described hereinbelow.

Antibody binding studies may be carried out in any known assay method, such as competitive binding assays, direct and indirect sandwich assays, and immunoprecipitation assays. Zola, *Monoclonal Antibodies: A Manual of Techniques*, pp.147-158 (CRC Press, Inc., 1987).

Competitive binding assays rely on the ability of a labeled standard to compete with the test sample analyte for binding with a limited amount of antibody. The amount of target protein in the test sample is inversely proportional to the amount of standard that becomes bound to the antibodies. To facilitate determining the amount of standard that becomes bound, the antibodies preferably are insolubilized before or after the competition, so that the standard and analyte that are bound to the antibodies may conveniently be separated from the standard and analyte which remain unbound.

Sandwich assays involve the use of two antibodies, each capable of binding to a different immunogenic portion, or epitope, of the protein to be detected. In a sandwich assay, the test sample analyte is bound by a first antibody which is immobilized on a solid support, and thereafter a second antibody binds to the analyte, thus forming an insoluble three-part complex. See, *e.g.*, US Pat No. 4,376,110. The second antibody may itself be labeled with a detectable moiety (direct sandwich assays) or may be measured using an anti-immunoglobulin antibody that is labeled with a detectable moiety (indirect sandwich assay). For example, one type of sandwich assay is an ELISA assay, in which case the detectable moiety is an enzyme.

For immunohistochemistry, the tissue sample may be fresh or frozen or may be embedded in paraffin and fixed with a preservative such as formalin, for example.

G. Cell-Based Assays

Cell-based assays and animal models for immune related diseases can be used to further understand the relationship between the genes and polypeptides identified herein and the development and pathogenesis of immune related disease.

In a different approach, cells of a cell type known to be involved in a particular immune related disease are transfected with the cDNAs described herein, and the ability of these cDNAs to stimulate or inhibit immune function is analyzed. Suitable cells can be transfected with the desired gene, and monitored for immune function activity. Such transfected cell lines can then be used to test the ability of poly- or monoclonal antibodies or antibody compositions to inhibit or stimulate immune function, for example to modulate monocyte/macrophage proliferation or inflammatory cell infiltration. Cells transfected with the coding sequences of the genes identified herein can further be used to identify drug candidates for the treatment of immune related diseases.

In addition, primary cultures derived from transgenic animals (as described below) can be used in the cell-based assays herein, although stable cell lines are preferred. Techniques to derive continuous cell lines from transgenic animals are well known in the art (see, *e.g.*, Small *et al., Mol. Cell. Biol.* 5: 642-648 [1985]).

The use of an agonist stimulating compound has also been validated experimentally. Activation of 4-1BB by treatment with an agonist anti-4-1BB antibody enhances eradication of tumors. Hellstrom, I. and Hellstrom, K. E., *Crit. Rev. Immunol.* (1998) 18:1. Immunoadjuvant therapy for treatment of tumors, described in more detail below, is another example of the use of the stimulating compounds of the invention.

Alternatively, an immune stimulating or enhancing effect can also be achieved by administration of a PRO which has vascular permeability enhancing properties. Enhanced vascular permeability would be beneficial to disorders which can be attenuated by local infiltration of immune cells (*e.g.*, monocytes/macrophages, eosinophils, PMNs) and inflammation.

On the other hand, PRO polypeptides, as well as other compounds of the invention, which are direct inhibitors of monocyte/macrophage proliferation/activation, lymphokine secretion, and/or vascular permeability can be directly used to suppress the immune response. These compounds are useful to reduce the degree of the immune response and to treat immune related diseases characterized by a hyperactive, superoptimal, or autoimmune response. The use of compound which suppress vascular permeability would be expected to reduce inflammation. Such uses would be beneficial in treating conditions associated with excessive inflammation.

Alternatively, compounds, *e.g.*, antibodies, which bind to stimulating PRO polypeptides and block the stimulating effect of these molecules produce a net inhibitory effect and can be used to suppress the monocyte/macrophage mediated immune response by inhibiting monocyte/macrophage proliferation/activation and/or lymphokine secretion. Blocking the stimulating effect of the polypeptides suppresses the immune response of the mammal.

H. Animal Models

The results of the cell based in vitro assays can be further verified using *in vivo* animal models and assays for monocyte/macrophage function. A variety of well known animal models can be used to further understand the role of the genes identified herein in the development and pathogenesis of immune related disease, and to test the efficacy of candidate therapeutic agents, including antibodies, and other antagonists of the native polypeptides, including small molecule antagonists. The *in vivo* nature of such models makes them predictive of responses in human patients. Animal models of immune related diseases include both non-recombinant and recombinant (transgenic) animals. Non-recombinant animal models include, for example, rodent, *e.g.*, murine models. Such models can be generated by introducing cells into syngeneic mice using standard techniques, *e.g.*, subcutaneous injection, tail vein injection, spleen implantation, intraperitoneal implantation, implantation under the renal capsule, *etc.*

Graft-versus-host disease occurs when immunocompetent cells are transplanted into immunosuppressed or tolerant patients. The donor cells recognize and respond to host antigens. The response can vary from life threatening severe inflammation to mild cases of diarrhea and weight loss. Graft-versus-host disease models provide a means of assessing monocyte/macrophage reactivity against MHC antigens and minor transplant antigens. A suitable procedure is described in detail in Current Protocols in Immunology, above, unit 4.3.

Animal models for delayed type hypersensitivity provides an assay of cell mediated immune function as well. In chronic Delayed type hypersensitivity (DTH) reactions, monocytes that have differentiated into macrophages lead to the destruction of host tissue which is replaced by fibrous tissue (fibrosis).

Contact hypersensitivity is a simple delayed type hypersensitivity *in vivo* assay of cell mediated immune function. In this procedure, cutaneous exposure to exogenous haptens which gives rise to a delayed type hypersensitivity reaction which is measured and quantitated. Contact sensitivity involves an initial sensitizing phase followed by an elicitation phase. The elicitation phase occurs when the T lymphocytes encounter an antigen to which they have had previous contact. Swelling and inflammation occur, making this an excellent model of human allergic contact dermatitis. At this point, monocytes leave the blood and differentiate in to macrophages. A suitable procedure is described in detail in *Current Protocols in Immunology*, Eds. J. E. Cologan, A. M. Kruisbeek, D. H. Margulies, E. M. Shevach and W. Strober, John Wiley & Sons, Inc., 1994, unit 4.2. See also Grabbe, S. and Schwarz, T, *Immun. Today* 19 (1): 37-44 (1998)

Recombinant (transgenic) animal models can be engineered by introducing the coding portion of the genes identified herein into the genome of animals of interest, using standard techniques for producing transgenic animals. Animals that can serve as a target for transgenic manipulation include, without limitation, mice, rats, rabbits, guinea pigs, sheep, goats, pigs, and non-human primates, *e.g.*, baboons, chimpanzees and monkeys. Techniques known in the art to introduce a transgene into such animals include pronucleic microinjection (Hoppe and Wanger, U.S. Patent No. 4,873,191); retrovirus-mediated gene transfer into germ lines (*e.g.*, Van der Putten *et al.*, *Proc. Natl. Acad. Sci. USA* 82, 6148-615 [1985]); gene targeting in embryonic stem cells (Thompson *et al.*, *Cell* 56, 313-321 [1989]); electroporation of embryos (Lo, *Mol. Cel. Biol.* 3, 1803-1814 [1983]); sperm-mediated gene transfer (Lavitrano *et al.*, *Cell* 57, 717-73 [1989]). For review, see, for example, U.S. Patent No. 4,736,866.

For the purpose of the present invention, transgenic animals include those that carry the transgene only in part of their cells ("mosaic animals"). The transgene can be integrated either as a single transgene, or in concatamers, *e.g.*, head-to-head or head-to-tail tandems. Selective introduction of a transgene into a particular cell type is also possible by following, for example, the technique of Lasko *et al.*, *Proc. Natl. Acad. Sci. USA* 89, 6232-636 (1992).

The expression of the transgene in transgenic animals can be monitored by standard techniques. For example, Southern blot analysis or PCR amplification can be used to verify the integration of the transgene. The level of mRNA expression can then be analyzed using techniques such as *in situ* hybridization, Northern blot analysis, PCR, or immunocytochemistry.

The animals may be further examined for signs of immune disease pathology, for example by histological examination to determine infiltration of immune cells into specific tissues. Blocking experiments can also be performed in which the transgenic animals are treated with the compounds of the invention to determine the extent of the monocytes/macrophage proliferation stimulation or inhibition of the compounds. In these experiments, blocking antibodies which bind to the PRO polypeptide, prepared as described above, are administered to the animal and the effect on immune function is determined.

Alternatively, "knock out" animals can be constructed which have a defective or altered gene encoding a polypeptide identified herein, as a result of homologous recombination between the endogenous gene encoding the polypeptide and altered genomic DNA encoding the same polypeptide introduced into

an embryonic cell of the animal. For example, cDNA encoding a particular polypeptide can be used to clone genomic DNA encoding that polypeptide in accordance with established techniques. A portion of the genomic DNA encoding a particular polypeptide can be deleted or replaced with another gene, such as a gene encoding a selectable marker which can be used to monitor integration. Typically, several kilobases of unaltered flanking DNA (both at the 5' and 3' ends) are included in the vector [see *e.g.*, Thomas and Capecchi, *Cell*, 51:503 (1987) for a description of homologous recombination vectors]. The vector is introduced into an embryonic stem cell line (*e.g.*, by electroporation) and cells in which the introduced DNA has homologously recombined with the endogenous DNA are selected [see *e.g.*, Li *et al.*, *Cell*, 69:915 (1992)]. The selected cells are then injected into a blastocyst of an animal (*e.g.*, a mouse or rat) to form aggregation chimeras [see *e.g.*, Bradley, in *Teratocarcinomas and Embryonic Stem Cells: A Practical Approach*, E. J. Robertson, ed. (IRL, Oxford, 1987), pp. 113-152]. A chimeric embryo can then be implanted into a suitable pseudopregnant female foster animal and the embryo brought to term to create a "knock out" animal. Progeny harboring the homologously recombined DNA in their germ cells can be identified by standard techniques and used to breed animals in which all cells of the animal contain the homologously recombined DNA. Knockout animals can be characterized for instance, for their ability to defend against certain pathological conditions and for their development of pathological conditions due to absence of the polypeptide.

I. ImmunoAdjuvant Therapy

In one embodiment, the immunostimulating compounds of the invention can be used in immunoadjuvant therapy for the treatment of tumors (cancer). It is now well established that monocytes/macrophages recognize human tumor specific antigens. One group of tumor antigens, encoded by the MAGE, BAGE and GAGE families of genes, are silent in all adult normal tissues , but are expressed in significant amounts in tumors, such as melanomas, lung tumors, head and neck tumors, and bladder carcinomas. DeSmet, C. *et al.*, (1996) *Proc. Natl. Acad. Sci. USA*, 93:7149. It has been shown that stimulation of immune cells induces tumor regression and an antitumor response both *in vitro* and *in vivo*. Melero, I. *et al.*, *Nature Medicine* (1997) 3:682; Kwon, E. D. *et al.*, *Proc. Natl. Acad. Sci. USA* (1997) 94: 8099; Lynch, D. H. *et al, Nature Medicine* (1997) 3:625; Finn, O. J. and Lotze, M. T., *J. Immunol.* (1998) 21:114. The stimulatory compounds of the invention can be administered as adjuvants, alone or together with a growth regulating agent, cytotoxic agent or chemotherapeutic agent, to stimulate monocyte/macrophage proliferation/activation and an antitumor response to tumor antigens. The growth regulating, cytotoxic, or chemotherapeutic agent may be administered in conventional amounts using known administration regimes. Immunostimulating activity by the compounds of the invention allows reduced amounts of the growth regulating, cytotoxic, or chemotherapeutic agents thereby potentially lowering the toxicity to the patient.

J. Screening Assays for Drug Candidates

Screening assays for drug candidates are designed to identify compounds that bind to or complex with the polypeptides encoded by the genes identified herein or a biologically active fragment thereof, or otherwise interfere with the interaction of the encoded polypeptides with other cellular proteins. Such

screening assays will include assays amenable to high-throughput screening of chemical libraries, making them particularly suitable for identifying small molecule drug candidates. Small molecules contemplated include synthetic organic or inorganic compounds, including peptides, preferably soluble peptides, (poly)peptide-immunoglobulin fusions, and, in particular, antibodies including, without limitation, poly- and monoclonal antibodies and antibody fragments, single-chain antibodies, anti-idiotypic antibodies, and chimeric or humanized versions of such antibodies or fragments, as well as human antibodies and antibody fragments. The assays can be performed in a variety of formats, including protein-protein binding assays, biochemical screening assays, immunoassays and cell based assays, which are well characterized in the art. All assays are common in that they call for contacting the drug candidate with a polypeptide encoded by a nucleic acid identified herein under conditions and for a time sufficient to allow these two components to interact.

In binding assays, the interaction is binding and the complex formed can be isolated or detected in the reaction mixture. In a particular embodiment, the polypeptide encoded by the gene identified herein or the drug candidate is immobilized on a solid phase, *e.g.*, on a microtiter plate, by covalent or non-covalent attachments. Non-covalent attachment generally is accomplished by coating the solid surface with a solution of the polypeptide and drying. Alternatively, an immobilized antibody, *e.g.*, a monoclonal antibody, specific for the polypeptide to be immobilized can be used to anchor it to a solid surface. The assay is performed by adding the non-immobilized component, which may be labeled by a detectable label, to the immobilized component, *e.g.*, the coated surface containing the anchored component. When the reaction is complete, the non-reacted components are removed, *e.g.*, by washing, and complexes anchored on the solid surface are detected. When the originally non-immobilized component carries a detectable label, the detection of label immobilized on the surface indicates that complexing occurred. Where the originally non-immobilized component does not carry a label, complexing can be detected, for example, by using a labelled antibody specifically binding the immobilized complex.

If the candidate compound interacts with but does not bind to a particular protein encoded by a gene identified herein, its interaction with that protein can be assayed by methods well known for detecting protein-protein interactions. Such assays include traditional approaches, such as, cross-linking, co-immunoprecipitation, and co-purification through gradients or chromatographic columns. In addition, protein-protein interactions can be monitored by using a yeast-based genetic system described by Fields and co-workers [Fields and Song, *Nature (London)* 340, 245-246 (1989); Chien *et al.*, *Proc. Natl. Acad. Sci. USA* 88, 9578-9582 (1991)] as disclosed by Chevray and Nathans, *Proc. Natl. Acad. Sci. USA* 89, 5789-5793 (1991). Many transcriptional activators, such as yeast GAL4, consist of two physically discrete modular domains, one acting as the DNA-binding domain, while the other one functioning as the transcription activation domain. The yeast expression system described in the foregoing publications (generally referred to as the "two-hybrid system") takes advantage of this property, and employs two hybrid proteins, one in which the target protein is fused to the DNA-binding domain of GAL4, and another, in which candidate activating proteins are fused to the activation domain. The expression of a GAL1-*lacZ* reporter gene under control of a GAL4-activated promoter depends on reconstitution of GAL4

activity via protein-protein interaction. Colonies containing interacting polypeptides are detected with a chromogenic substrate for β-galactosidase. A complete kit (MATCHMAKER™) for identifying protein-protein interactions between two specific proteins using the two-hybrid technique is commercially available from Clontech. This system can also be extended to map protein domains involved in specific protein interactions as well as to pinpoint amino acid residues that are crucial for these interactions.

In order to find compounds that interfere with the interaction of a gene identified herein and other intra- or extracellular components can be tested, a reaction mixture is usually prepared containing the product of the gene and the intra- or extracellular component under conditions and for a time allowing for the interaction and binding of the two products. To test the ability of a test compound to inhibit binding, the reaction is run in the absence and in the presence of the test compound. In addition, a placebo may be added to a third reaction mixture, to serve as positive control. The binding (complex formation) between the test compound and the intra- or extracellular component present in the mixture is monitored as described above. The formation of a complex in the control reaction(s) but not in the reaction mixture containing the test compound indicates that the test compound interferes with the interaction of the test compound and its reaction partner.

K. Compositions and Methods for the Treatment of Immune Related Diseases

The compositions useful in the treatment of immune related diseases include, without limitation, proteins, antibodies, small organic molecules, peptides, phosphopeptides, antisense and ribozyme molecules, triple helix molecules, *etc.* that inhibit or stimulate immune function, for example, monocyte proliferation/activation, lymphokine release, or immune cell infiltration.

For example, antisense RNA and RNA molecules act to directly block the translation of mRNA by hybridizing to targeted mRNA and preventing protein translation. When antisense DNA is used, oligodeoxyribonucleotides derived from the translation initiation site, *e.g.*, between about -10 and +10 positions of the target gene nucleotide sequence, are preferred.

Ribozymes are enzymatic RNA molecules capable of catalyzing the specific cleavage of RNA. Ribozymes act by sequence-specific hybridization to the complementary target RNA, followed by endonucleolytic cleavage. Specific ribozyme cleavage sites within a potential RNA target can be identified by known techniques. For further details see, *e.g.*, Rossi, *Current Biology* 4, 469-471 (1994), and PCT publication No. WO 97/33551 (published September 18, 1997).

Nucleic acid molecules in triple helix formation used to inhibit transcription should be single-stranded and composed of deoxynucleotides. The base composition of these oligonucleotides is designed such that it promotes triple helix formation via Hoogsteen base pairing rules, which generally require sizeable stretches of purines or pyrimidines on one strand of a duplex. For further details see, *e.g.*, PCT publication No. WO 97/33551, *supra*.

These molecules can be identified by any or any combination of the screening assays discussed above and/or by any other screening techniques well known for those skilled in the art.

L. Anti-PRO Antibodies

The present invention further provides anti-PRO antibodies. Exemplary antibodies include polyclonal, monoclonal, humanized, bispecific, and heteroconjugate antibodies.

1. Polyclonal Antibodies

The anti-PRO antibodies may comprise polyclonal antibodies. Methods of preparing polyclonal antibodies are known to the skilled artisan. Polyclonal antibodies can be raised in a mammal, for example, by one or more injections of an immunizing agent and, if desired, an adjuvant. Typically, the immunizing agent and/or adjuvant will be injected in the mammal by multiple subcutaneous or intraperitoneal injections. The immunizing agent may include the PRO polypeptide or a fusion protein thereof. It may be useful to conjugate the immunizing agent to a protein known to be immunogenic in the mammal being immunized. Examples of such immunogenic proteins include but are not limited to keyhole limpet hemocyanin, serum albumin, bovine thyroglobulin, and soybean trypsin inhibitor. Examples of adjuvants which may be employed include Freund's complete adjuvant and MPL-TDM adjuvant (monophosphoryl Lipid A, synthetic trehalose dicorynomycolate). The immunization protocol may be selected by one skilled in the art without undue experimentation.

2. Monoclonal Antibodies

The anti-PRO antibodies may, alternatively, be monoclonal antibodies. Monoclonal antibodies may be prepared using hybridoma methods, such as those described by Kohler and Milstein, Nature, 256:495 (1975). In a hybridoma method, a mouse, hamster, or other appropriate host animal, is typically immunized with an immunizing agent to elicit lymphocytes that produce or are capable of producing antibodies that will specifically bind to the immunizing agent. Alternatively, the lymphocytes may be immunized *in vitro*.

The immunizing agent will typically include the PRO polypeptide or a fusion protein thereof. Generally, either peripheral blood lymphocytes ("PBLs") are used if cells of human origin are desired, or spleen cells or lymph node cells are used if non-human mammalian sources are desired. The lymphocytes are then fused with an immortalized cell line using a suitable fusing agent, such as polyethylene glycol, to form a hybridoma cell [Goding, Monoclonal Antibodies: Principles and Practice, Academic Press, (1986) pp. 59-103]. Immortalized cell lines are usually transformed mammalian cells, particularly myeloma cells of rodent, bovine and human origin. Usually, rat or mouse myeloma cell lines are employed. The hybridoma cells may be cultured in a suitable culture medium that preferably contains one or more substances that inhibit the growth or survival of the unfused, immortalized cells. For example, if the parental cells lack the enzyme hypoxanthine guanine phosphoribosyl transferase (HGPRT or HPRT), the culture medium for the hybridomas typically will include hypoxanthine, aminopterin, and thymidine ("HAT medium"), which substances prevent the growth of HGPRT-deficient cells.

Preferred immortalized cell lines are those that fuse efficiently, support stable high level expression of antibody by the selected antibody-producing cells, and are sensitive to a medium such as HAT medium. More preferred immortalized cell lines are murine myeloma lines, which can be obtained,

for instance, from the Salk Institute Cell Distribution Center, San Diego, California and the American Type Culture Collection, Manassas, Virginia. Human myeloma and mouse-human heteromyeloma cell lines also have been described for the production of human monoclonal antibodies [Kozbor, J. Immunol., 133:3001 (1984); Brodeur et al., Monoclonal Antibody Production Techniques and Applications, Marcel Dekker, Inc., New York, (1987) pp. 51-63].

The culture medium in which the hybridoma cells are cultured can then be assayed for the presence of monoclonal antibodies directed against PRO. Preferably, the binding specificity of monoclonal antibodies produced by the hybridoma cells is determined by immunoprecipitation or by an *in vitro* binding assay, such as radioimmunoassay (RIA) or enzyme-linked immunoabsorbent assay (ELISA). Such techniques and assays are known in the art. The binding affinity of the monoclonal antibody can, for example, be determined by the Scatchard analysis of Munson and Pollard, Anal. Biochem., 107:220 (1980).

After the desired hybridoma cells are identified, the clones may be subcloned by limiting dilution procedures and grown by standard methods [Goding, supra]. Suitable culture media for this purpose include, for example, Dulbecco's Modified Eagle's Medium and RPMI-1640 medium. Alternatively, the hybridoma cells may be grown *in vivo* as ascites in a mammal.

The monoclonal antibodies secreted by the subclones may be isolated or purified from the culture medium or ascites fluid by conventional immunoglobulin purification procedures such as, for example, protein A-Sepharose, hydroxylapatite chromatography, gel electrophoresis, dialysis, or affinity chromatography.

The monoclonal antibodies may also be made by recombinant DNA methods, such as those described in U.S. Patent No. 4,816,567. DNA encoding the monoclonal antibodies of the invention can be readily isolated and sequenced using conventional procedures (e.g., by using oligonucleotide probes that are capable of binding specifically to genes encoding the heavy and light chains of murine antibodies). The hybridoma cells of the invention serve as a preferred source of such DNA. Once isolated, the DNA may be placed into expression vectors, which are then transfected into host cells such as simian COS cells, Chinese hamster ovary (CHO) cells, or myeloma cells that do not otherwise produce immunoglobulin protein, to obtain the synthesis of monoclonal antibodies in the recombinant host cells. The DNA also may be modified, for example, by substituting the coding sequence for human heavy and light chain constant domains in place of the homologous murine sequences [U.S. Patent No. 4,816,567; Morrison et al., supra] or by covalently joining to the immunoglobulin coding sequence all or part of the coding sequence for a non-immunoglobulin polypeptide. Such a non-immunoglobulin polypeptide can be substituted for the constant domains of an antibody of the invention, or can be substituted for the variable domains of one antigen-combining site of an antibody of the invention to create a chimeric bivalent antibody.

The antibodies may be monovalent antibodies. Methods for preparing monovalent antibodies are well known in the art. For example, one method involves recombinant expression of immunoglobulin light chain and modified heavy chain. The heavy chain is truncated generally at any point in the Fc region

so as to prevent heavy chain crosslinking. Alternatively, the relevant cysteine residues are substituted with another amino acid residue or are deleted so as to prevent crosslinking.

In vitro methods are also suitable for preparing monovalent antibodies. Digestion of antibodies to produce fragments thereof, particularly, Fab fragments, can be accomplished using routine techniques known in the art.

3. Human and Humanized Antibodies

The anti-PRO antibodies of the invention may further comprise humanized antibodies or human antibodies. Humanized forms of non-human (e.g., murine) antibodies are chimeric immunoglobulins, immunoglobulin chains or fragments thereof (such as Fv, Fab, Fab', $F(ab')_2$ or other antigen-binding subsequences of antibodies) which contain minimal sequence derived from non-human immunoglobulin. Humanized antibodies include human immunoglobulins (recipient antibody) in which residues from a complementary determining region (CDR) of the recipient are replaced by residues from a CDR of a non-human species (donor antibody) such as mouse, rat or rabbit having the desired specificity, affinity and capacity. In some instances, Fv framework residues of the human immunoglobulin are replaced by corresponding non-human residues. Humanized antibodies may also comprise residues which are found neither in the recipient antibody nor in the imported CDR or framework sequences. In general, the humanized antibody will comprise substantially all of at least one, and typically two, variable domains, in which all or substantially all of the CDR regions correspond to those of a non-human immunoglobulin and all or substantially all of the FR regions are those of a human immunoglobulin consensus sequence. The humanized antibody optimally also will comprise at least a portion of an immunoglobulin constant region (Fc), typically that of a human immunoglobulin [Jones et al., Nature, 321:522-525 (1986); Riechmann et al., Nature, 332:323-329 (1988); and Presta, Curr. Op. Struct. Biol., 2:593-596 (1992)].

Methods for humanizing non-human antibodies are well known in the art. Generally, a humanized antibody has one or more amino acid residues introduced into it from a source which is non-human. These non-human amino acid residues are often referred to as "import" residues, which are typically taken from an "import" variable domain. Humanization can be essentially performed following the method of Winter and co-workers [Jones et al., Nature, 321:522-525 (1986); Riechmann et al., Nature, 332:323-327 (1988); Verhoeyen et al., Science, 239:1534-1536 (1988)], by substituting rodent CDRs or CDR sequences for the corresponding sequences of a human antibody. Accordingly, such "humanized" antibodies are chimeric antibodies (U.S. Patent No. 4,816,567), wherein substantially less than an intact human variable domain has been substituted by the corresponding sequence from a non-human species. In practice, humanized antibodies are typically human antibodies in which some CDR residues and possibly some FR residues are substituted by residues from analogous sites in rodent antibodies.

Human antibodies can also be produced using various techniques known in the art, including phage display libraries [Hoogenboom and Winter, J. Mol. Biol., 227:381 (1991); Marks et al., J. Mol. Biol., 222:581 (1991)]. The techniques of Cole et al. and Boerner et al. are also available for the preparation of human monoclonal antibodies (Cole et al., Monoclonal Antibodies and Cancer Therapy,

Alan R. Liss, p. 77 (1985) and Boerner et al., J. Immunol., 147(1):86-95 (1991)]. Similarly, human antibodies can be made by introducing of human immunoglobulin loci into transgenic animals, e.g., mice in which the endogenous immunoglobulin genes have been partially or completely inactivated. Upon challenge, human antibody production is observed, which closely resembles that seen in humans in all respects, including gene rearrangement, assembly, and antibody repertoire. This approach is described, for example, in U.S. Patent Nos. 5,545,807; 5,545,806; 5,569,825; 5,625,126; 5,633,425; 5,661,016, and in the following scientific publications: Marks *et al.*, Bio/Technology 10, 779-783 (1992); Lonberg *et al.*, Nature 368 856-859 (1994); Morrison, Nature 368, 812-13 (1994); Fishwild *et al.*, Nature Biotechnology 14, 845-51 (1996); Neuberger, Nature Biotechnology 14, 826 (1996); Lonberg and Huszar, Intern. Rev. Immunol. 13 65-93 (1995).

The antibodies may also be affinity matured using known selection and/or mutagenesis methods as described above. Preferred affinity matured antibodies have an affinity which is five times, more preferably 10 times, even more preferably 20 or 30 times greater than the starting antibody (generally murine, humanized or human) from which the matured antibody is prepared.

4. Bispecific Antibodies

Bispecific antibodies are monoclonal, preferably human or humanized, antibodies that have binding specificities for at least two different antigens. In the present case, one of the binding specificities is for the PRO, the other one is for any other antigen, and preferably for a cell-surface protein or receptor or receptor subunit.

Methods for making bispecific antibodies are known in the art. Traditionally, the recombinant production of bispecific antibodies is based on the co-expression of two immunoglobulin heavy-chain/light-chain pairs, where the two heavy chains have different specificities [Milstein and Cuello, Nature, 305:537-539 (1983)]. Because of the random assortment of immunoglobulin heavy and light chains, these hybridomas (quadromas) produce a potential mixture of ten different antibody molecules, of which only one has the correct bispecific structure. The purification of the correct molecule is usually accomplished by affinity chromatography steps. Similar procedures are disclosed in WO 93/08829, published 13 May 1993, and in Traunecker et al., EMBO J., 10:3655-3659 (1991).

Antibody variable domains with the desired binding specificities (antibody-antigen combining sites) can be fused to immunoglobulin constant domain sequences. The fusion preferably is with an immunoglobulin heavy-chain constant domain, comprising at least part of the hinge, CH2, and CH3 regions. It is preferred to have the first heavy-chain constant region (CH1) containing the site necessary for light-chain binding present in at least one of the fusions. DNAs encoding the immunoglobulin heavy-chain fusions and, if desired, the immunoglobulin light chain, are inserted into separate expression vectors, and are co-transfected into a suitable host organism. For further details of generating bispecific antibodies see, for example, Suresh et al., Methods in Enzymology, 121:210 (1986).

According to another approach described in WO 96/27011, the interface between a pair of antibody molecules can be engineered to maximize the percentage of heterodimers which are recovered

from recombinant cell culture. The preferred interface comprises at least a part of the CH3 region of an antibody constant domain. In this method, one or more small amino acid side chains from the interface of the first antibody molecule are replaced with larger side chains (e.g. tyrosine or tryptophan). Compensatory "cavities" of identical or similar size to the large side chain(s) are created on the interface of the second antibody molecule by replacing large amino acid side chains with smaller ones (e.g. alanine or threonine). This provides a mechanism for increasing the yield of the heterodimer over other unwanted end-products such as homodimers.

Bispecific antibodies can be prepared as full length antibodies or antibody fragments (e.g. $F(ab')_2$ bispecific antibodies). Techniques for generating bispecific antibodies from antibody fragments have been described in the literature. For example, bispecific antibodies can be prepared can be prepared using chemical linkage. Brennan *et al.*, Science 229:81 (1985) describe a procedure wherein intact antibodies are proteolytically cleaved to generate $F(ab')_2$ fragments. These fragments are reduced in the presence of the dithiol complexing agent sodium arsenite to stabilize vicinal dithiols and prevent intermolecular disulfide formation. The Fab' fragments generated are then converted to thionitrobenzoate (TNB) derivatives. One of the Fab'-TNB derivatives is then reconverted to the Fab'-thiol by reduction with mercaptoethylamine and is mixed with an equimolar amount of the other Fab'-TNB derivative to form the bispecific antibody. The bispecific antibodies produced can be used as agents for the selective immobilization of enzymes.

Fab' fragments may be directly recovered from *E. coli* and chemically coupled to form bispecific antibodies. Shalaby *et al.*, J. Exp. Med. 175:217-225 (1992) describe the production of a fully humanized bispecific antibody $F(ab')_2$ molecule. Each Fab' fragment was separately secreted from *E. coli* and subjected to directed chemical coupling *in vitro* to form the bispecific antibody. The bispecific antibody thus formed was able to bind to cells overexpressing the ErbB2 receptor and normal human T cells, as well as trigger the lytic activity of human cytotoxic lymphocytes against human breast tumor targets.

Various technique for making and isolating bispecific antibody fragments directly from recombinant cell culture have also been described. For example, bispecific antibodies have been produced using leucine zippers. Kostelny *et al.*, J. Immunol. 148(5):1547-1553 (1992). The leucine zipper peptides from the Fos and Jun proteins were linked to the Fab' portions of two different antibodies by gene fusion. The antibody homodimers were reduced at the hinge region to form monomers and then re-oxidized to form the antibody heterodimers. This method can also be utilized for the production of antibody homodimers. The "diabody" technology described by Hollinger *et al.*, Proc. Natl. Acad. Sci. USA 90:6444-6448 (1993) has provided an alternative mechanism for making bispecific antibody fragments. The fragments comprise a heavy-chain variable domain (V_H) connected to a light-chain variable domain (V_L) by a linker which is too short to allow pairing between the two domains on the same chain. Accordingly, the V_H and V_L domains of one fragment are forced to pair with the complementary V_L and V_H domains of another fragment, thereby forming two antigen-binding sites. Another strategy for making bispecific antibody fragments by the use of single-chain Fv (sFv) dimers has also been reported. See, Gruber *et al.*, J. Immunol. 152:5368 (1994).

Antibodies with more than two valencies are contemplated. For example, trispecific antibodies can be prepared. Tutt *et al.*, J. Immunol. 147:60 (1991).

Exemplary bispecific antibodies may bind to two different epitopes on a given PRO polypeptide herein. Alternatively, an anti-PRO polypeptide arm may be combined with an arm which binds to a triggering molecule on a leukocyte such as a T-cell receptor molecule (e.g. CD2, CD3, CD28, or B7), or Fc receptors for IgG (FcγR), such as FcγRI (CD64), FcγRII (CD32) and FcγRIII (CD16) so as to focus cellular defense mechanisms to the cell expressing the particular PRO polypeptide. Bispecific antibodies may also be used to localize cytotoxic agents to cells which express a particular PRO polypeptide. These antibodies possess a PRO-binding arm and an arm which binds a cytotoxic agent or a radionuclide chelator, such as EOTUBE, DPTA, DOTA, or TETA. Another bispecific antibody of interest binds the PRO polypeptide and further binds tissue factor (TF).

5. Heteroconjugate Antibodies

Heteroconjugate antibodies are also within the scope of the present invention. Heteroconjugate antibodies are composed of two covalently joined antibodies. Such antibodies have, for example, been proposed to target immune system cells to unwanted cells [U.S. Patent No. 4,676,980], and for treatment of HIV infection [WO 91/00360; WO 92/200373; EP 03089]. It is contemplated that the antibodies may be prepared *in vitro* using known methods in synthetic protein chemistry, including those involving crosslinking agents. For example, immunotoxins may be constructed using a disulfide exchange reaction or by forming a thioether bond. Examples of suitable reagents for this purpose include iminothiolate and methyl-4-mercaptobutyrimidate and those disclosed, for example, in U.S. Patent No. 4,676,980.

6. Effector Function Engineering

It may be desirable to modify the antibody of the invention with respect to effector function, so as to enhance, *e.g.*, the effectiveness of the antibody in treating cancer. For example, cysteine residue(s) may be introduced into the Fc region, thereby allowing interchain disulfide bond formation in this region. The homodimeric antibody thus generated may have improved internalization capability and/or increased complement-mediated cell killing and antibody-dependent cellular cytotoxicity (ADCC). See Caron *et al.*, J. Exp Med., 176: 1191-1195 (1992) and Shopes, J. Immunol., 148: 2918-2922 (1992). Homodimeric antibodies with enhanced anti-tumor activity may also be prepared using heterobifunctional cross-linkers as described in Wolff *et al.* Cancer Research, 53: 2560-2565 (1993). Alternatively, an antibody can be engineered that has dual Fc regions and may thereby have enhanced complement lysis and ADCC capabilities. See Stevenson *et al.*, Anti-Cancer Drug Design, 3: 219-230 (1989).

7. Immunoconjugates

The invention also pertains to immunoconjugates comprising an antibody conjugated to a cytotoxic agent such as a chemotherapeutic agent, toxin (*e.g.*, an enzymatically active toxin of bacterial, fungal, plant, or animal origin, or fragments thereof), or a radioactive isotope (*i.e.*, a radioconjugate).

Chemotherapeutic agents useful in the generation of such immunoconjugates have been described above. Enzymatically active toxins and fragments thereof that can be used include diphtheria A chain,

nonbinding active fragments of diphtheria toxin, exotoxin A chain (from *Pseudomonas aeruginosa*), ricin A chain, abrin A chain, modeccin A chain, alpha-sarcin, *Aleurites fordii* proteins, dianthin proteins, *Phytolaca americana* proteins (PAPI, PAPII, and PAP-S), momordica charantia inhibitor, curcin, crotin, sapaonaria officinalis inhibitor, gelonin, mitogellin, restrictocin, phenomycin, enomycin, and the tricothecenes. A variety of radionuclides are available for the production of radioconjugated antibodies. Examples include ^{212}Bi, ^{131}I, ^{131}In, ^{90}Y, and ^{186}Re.

Conjugates of the antibody and cytotoxic agent are made using a variety of bifunctional protein-coupling agents such as N-succinimidyl-3-(2-pyridyldithiol) propionate (SPDP), iminothiolane (IT), bifunctional derivatives of imidoesters (such as dimethyl adipimidate HCL), active esters (such as disuccinimidyl suberate), aldehydes (such as glutareldehyde), bis-azido compounds (such as bis (p-azidobenzoyl) hexanediamine), bis-diazonium derivatives (such as bis-(p-diazoniumbenzoyl)-ethylenediamine), diisocyanates (such as tolyene 2,6-diisocyanate), and bis-active fluorine compounds (such as 1,5-difluoro-2,4-dinitrobenzene). For example, a ricin immunotoxin can be prepared as described in Vitetta *et al.*, Science, 238: 1098 (1987). Carbon-14-labeled 1-isothiocyanatobenzyl-3-methyldiethylene triaminepentaacetic acid (MX-DTPA) is an exemplary chelating agent for conjugation of radionucleotide to the antibody. See WO94/11026.

In another embodiment, the antibody may be conjugated to a "receptor" (such streptavidin) for utilization in tumor pretargeting wherein the antibody-receptor conjugate is administered to the patient, followed by removal of unbound conjugate from the circulation using a clearing agent and then administration of a "ligand" (*e.g.,* avidin) that is conjugated to a cytotoxic agent (*e.g.,* a radionucleotide).

8. Immunoliposomes

The antibodies disclosed herein may also be formulated as immunoliposomes. Liposomes containing the antibody are prepared by methods known in the art, such as described in Epstein *et al.,* Proc. Natl. Acad. Sci. USA, 82: 3688 (1985); Hwang *et al.,* Proc. Natl Acad. Sci. USA, 77: 4030 (1980); and U.S. Pat. Nos. 4,485,045 and 4,544,545. Liposomes with enhanced circulation time are disclosed in U.S. Patent No. 5,013,556.

Particularly useful liposomes can be generated by the reverse-phase evaporation method with a lipid composition comprising phosphatidylcholine, cholesterol, and PEG-derivatized phosphatidylethanolamine (PEG-PE). Liposomes are extruded through filters of defined pore size to yield liposomes with the desired diameter. Fab' fragments of the antibody of the present invention can be conjugated to the liposomes as described in Martin *et al .,* J. Biol. Chem., 257: 286-288 (1982) via a disulfide-interchange reaction. A chemotherapeutic agent (such as Doxorubicin) is optionally contained within the liposome. See Gabizon *et al.*, J. National Cancer Inst., 81(19): 1484 (1989).

M. Pharmaceutical Compositions

The active PRO molecules of the invention (*e.g.*, PRO polypeptides, anti-PRO antibodies, and/or variants of each) as well as other molecules identified by the screening assays disclosed above, can be administered for the treatment of immune related diseases, in the form of pharmaceutical compositions.

Therapeutic formulations of the active PRO molecule, preferably a polypeptide or antibody of the invention, are prepared for storage by mixing the active molecule having the desired degree of purity with optional pharmaceutically acceptable carriers, excipients or stabilizers (*Remington's Pharmaceutical Sciences* 16th edition, Osol, A. Ed. [1980]), in the form of lyophilized formulations or aqueous solutions. Acceptable carriers, excipients, or stabilizers are nontoxic to recipients at the dosages and concentrations employed, and include buffers such as phosphate, citrate, and other organic acids; antioxidants including ascorbic acid and methionine; preservatives (such as octadecyldimethylbenzyl ammonium chloride; hexamethonium chloride; benzalkonium chloride, benzethonium chloride; phenol, butyl or benzyl alcohol; alkyl parabens such as methyl or propyl paraben; catechol; resorcinol; cyclohexanol; 3-pentanol; and m-cresol); low molecular weight (less than about 10 residues) polypeptides; proteins, such as serum albumin, gelatin, or immunoglobulins; hydrophilic polymers such as polyvinylpyrrolidone; amino acids such as glycine, glutamine, asparagine, histidine, arginine, or lysine; monosaccharides, disaccharides, and other carbohydrates including glucose, mannose, or dextrins; chelating agents such as EDTA; sugars such as sucrose, mannitol, trehalose or sorbitol; salt-forming counter-ions such as sodium; metal complexes (*e.g.*, Zn-protein complexes); and/or non-ionic surfactants such as TWEEN™, PLURONICS™ or polyethylene glycol (PEG).

Compounds identified by the screening assays disclosed herein can be formulated in an analogous manner, using standard techniques well known in the art.

Lipofections or liposomes can also be used to deliver the PRO molecule into cells. Where antibody fragments are used, the smallest inhibitory fragment which specifically binds to the binding domain of the target protein is preferred. For example, based upon the variable region sequences of an antibody, peptide molecules can be designed which retain the ability to bind the target protein sequence. Such peptides can be synthesized chemically and/or produced by recombinant DNA technology (see, *e.g.*, Marasco *et al., Proc. Natl. Acad. Sci. USA* 90, 7889-7893 [1993]).

The formulation herein may also contain more than one active compound as necessary for the particular indication being treated, preferably those with complementary activities that do not adversely affect each other. Alternatively, or in addition, the composition may comprise a cytotoxic agent, cytokine or growth inhibitory agent. Such molecules are suitably present in combination in amounts that are effective for the purpose intended.

The active PRO molecules may also be entrapped in microcapsules prepared, for example, by coacervation techniques or by interfacial polymerization, for example, hydroxymethylcellulose or gelatin-microcapsules and poly-(methylmethacylate) microcapsules, respectively, in colloidal drug delivery systems (for example, liposomes, albumin microspheres, microemulsions, nano-particles and nanocapsules) or in macroemulsions. Such techniques are disclosed in *Remington's Pharmaceutical Sciences* 16th edition, Osol, A. Ed. (1980).

The formulations to be used for *in vivo* administration must be sterile. This is readily accomplished by filtration through sterile filtration membranes.

Sustained-release preparations or the PRO molecules may be prepared. Suitable examples of sustained-release preparations include semipermeable matrices of solid hydrophobic polymers containing the antibody, which matrices are in the form of shaped articles, *e.g.*, films, or microcapsules. Examples of sustained-release matrices include polyesters, hydrogels (for example, poly(2-hydroxyethyl-methacrylate), or poly(vinylalcohol)), polylactides (U.S. Pat. No. 3,773,919), copolymers of L-glutamic acid and γ-ethyl-L-glutamate, non-degradable ethylene-vinyl acetate, degradable lactic acid-glycolic acid copolymers such as the LUPRON DEPOT™ (injectable microspheres composed of lactic acid-glycolic acid copolymer and leuprolide acetate), and poly-D-(-)-3-hydroxybutyric acid. While polymers such as ethylene-vinyl acetate and lactic acid-glycolic acid enable release of molecules for over 100 days, certain hydrogels release proteins for shorter time periods. When encapsulated antibodies remain in the body for a long time, they may denature or aggregate as a result of exposure to moisture at 37°C, resulting in a loss of biological activity and possible changes in immunogenicity. Rational strategies can be devised for stabilization depending on the mechanism involved. For example, if the aggregation mechanism is discovered to be intermolecular S-S bond formation through thio-disulfide interchange, stabilization may be achieved by modifying sulfhydryl residues, lyophilizing from acidic solutions, controlling moisture content, using appropriate additives, and developing specific polymer matrix compositions.

N. Methods of Treatment

It is contemplated that the polypeptides, antibodies and other active compounds of the present invention may be used to treat various immune related diseases and conditions, such as monocyte/macrophage diseases, including those characterized by infiltration of inflammatory cells into a tissue, stimulation of monocyte/macrophages, inhibition of monocytes/macrophages, increased or decreased vascular permeability or the inhibition thereof.

Exemplary conditions or disorders to be treated with the polypeptides, antibodies and other compounds of the invention, include, but are not limited to systemic lupus erythematosis, rheumatoid arthritis, juvenile chronic arthritis, osteoarthritis, spondyloarthropathies, systemic sclerosis (scleroderma), idiopathic inflammatory myopathies (dermatomyositis, polymyositis), Sjögren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia (immune pancytopenia, paroxysmal nocturnal hemoglobinuria), autoimmune thrombocytopenia (idiopathic thrombocytopenic purpura, immune-mediated thrombocytopenia), thyroiditis (Grave's disease, Hashimoto's thyroiditis, juvenile lymphocytic thyroiditis, atrophic thyroiditis), diabetes mellitus, immune-mediated renal disease (glomerulonephritis, tubulointerstitial nephritis), demyelinating diseases of the central and peripheral nervous systems such as multiple sclerosis, idiopathic demyelinating polyneuropathy or Guillain-Barré syndrome, and chronic inflammatory demyelinating polyneuropathy, hepatobiliary diseases such as infectious hepatitis (hepatitis A, B, C, D, E and other non-hepatotropic viruses), autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis, and sclerosing cholangitis, inflammatory bowel disease (ulcerative colitis: Crohn's disease), gluten-sensitive enteropathy, and Whipple's disease, autoimmune or immune-mediated skin diseases including bullous skin diseases, erythema multiforme and contact dermatitis, psoriasis, allergic diseases such as asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity and

urticaria, immunologic diseases of the lung such as eosinophilic pneumonias, idiopathic pulmonary fibrosis and hypersensitivity pneumonitis, transplantation associated diseases including graft rejection and graft - versus-host-disease.

Rheumatoid arthritis (RA) is a chronic systemic autoimmune inflammatory disease that mainly involves the synovial membrane of multiple joints with resultant injury to the articular cartilage. The pathogenesis is T lymphocyte dependent and is associated with the production of rheumatoid factors, auto-antibodies directed against self IgG, with the resultant formation of immune complexes that attain high levels in joint fluid and blood. These complexes in the joint may induce the marked infiltrate of lymphocytes and monocytes/macrophages into the synovium and subsequent marked synovial changes; the joint space/fluid if infiltrated by similar cells with the addition of numerous neutrophils. Tissues affected are primarily the joints, often in symmetrical pattern. However, extra-articular disease also occurs in two major forms. One form is the development of extra-articular lesions with ongoing progressive joint disease and typical lesions of pulmonary fibrosis, vasculitis, and cutaneous ulcers. The second form of extra-articular disease is the so called Felty's syndrome which occurs late in the RA disease course, sometimes after joint disease has become quiescent, and involves the presence of neutropenia, thrombocytopenia and splenomegaly. This can be accompanied by vasculitis in multiple organs with formations of infarcts, skin ulcers and gangrene. Patients often also develop rheumatoid nodules in the subcutis tissue overlying affected joints; the nodules late stage have necrotic centers surrounded by a mixed inflammatory cell infiltrate. Other manifestations which can occur in RA include: pericarditis, pleuritis, coronary arteritis, intestitial pneumonitis with pulmonary fibrosis, keratoconjunctivitis sicca, and rheumatoid nodules. The number and activation state of macrophages in the inflamed synovius correlates with the significance of RA (Kinne et al., 2000 Arthritis Res. 2: 189-202). As described above, macrophages are not believed to be involved in the early events of RA, but monocytes/macrophages have tissue destructive and tissue remodeling properties which may contribute to both acute and chronic RA.

Juvenile chronic arthritis is a chronic idiopathic inflammatory disease which begins often at less than 16 years of age. Its phenotype has some similarities to RA; some patients which are rhematoid factor positive are classified as juvenile rheumatoid arthritis. The disease is sub-classified into three major categories: pauciarticular, polyarticular, and systemic. The arthritis can be severe and is typically destructive and leads to joint ankylosis and retarded growth. Other manifestations can include chronic anterior uveitis and systemic amyloidosis.

Spondyloarthropathies are a group of disorders with some common clinical features and the common association with the expression of HLA-B27 gene product. The disorders include: ankylosing sponylitis, Reiter's syndrome (reactive arthritis), arthritis associated with inflammatory bowel disease, spondylitis associated with psoriasis, juvenile onset spondyloarthropathy and undifferentiated spondyloarthropathy. Distinguishing features include sacroileitis with or without spondylitis; inflammatory asymmetric arthritis; association with HLA-B27 (a serologically defined allele of the HLA-B locus of class I MHC); ocular inflammation, and absence of autoantibodies associated with other rheumatoid disease. It was shown that CD163+ macrophages were increased in the synovial lining and

colonic mucosa in Spondyloarthropathy and correlates with the expression of HLA-DR and the production of TNF-alpha (Baeten et al., 2002 J Pathol 196(3):343-350).

Systemic sclerosis (scleroderma) has an unknown etiology. A hallmark of the disease is induration of the skin; likely this is induced by an active inflammatory process. Scleroderma can be localized or systemic; vascular lesions are common and endothelial cell injury in the microvasculature is an early and important event in the development of systemic sclerosis; the vascular injury may be immune mediated. An immunologic basis is implied by the presence of mononuclear cell infiltrates in the cutaneous lesions and the presence of anti-nuclear antibodies in many patients. ICAM-1 is often upregulated on the cell surface of fibroblasts in skin lesions suggesting that T cell interaction with these cells may have a role in the pathogenesis of the disease. As well as T cells, monocytes/macrophages are proposed to play a role in the progression of scleroderma by secreting fibrogenic cytokines (Yamamoto et al., 2001 J Dermatol Sci 26(2): 133-139). Other organs involved include: the gastrointestinal tract: smooth muscle atrophy and fibrosis resulting in abnormal peristalsis/motility; kidney: concentric subendothelial intimal proliferation affecting small arcuate and interlobular arteries with resultant reduced renal cortical blood flow, results in proteinuria, azotemia and hypertension; skeletal muscle: atrophy, interstitial fibrosis; inflammation; lung: interstitial pneumonitis and interstitial fibrosis; and heart: contraction band necrosis, scarring/fibrosis.

Idiopathic inflammatory myopathies including dermatomyositis, polymyositis and others are disorders of chronic muscle inflammation of unknown etiology resulting in muscle weakness. Muscle injury/inflammation is often symmetric and progressive. Autoantibodies are associated with most forms. These myositis-specific autoantibodies are directed against and inhibit the function of components, proteins and RNA's, involved in protein synthesis.

Sjögren's syndrome is due to immune-mediated inflammation and subsequent functional destruction of the tear glands and salivary glands. The disease can be associated with or accompanied by inflammatory connective tissue diseases. The disease is associated with autoantibody production against Ro and La antigens, both of which are small RNA-protein complexes. Lesions result in keratoconjunctivitis sicca, xerostomia, with other manifestations or associations including bilary cirrhosis, peripheral or sensory neuropathy, and palpable purpura.

Systemic vasculitis are diseases in which the primary lesion is inflammation and subsequent damage to blood vessels which results in ischemia/necrosis/degeneration to tissues supplied by the affected vessels and eventual end-organ dysfunction in some cases. Vasculitis can also occur as a secondary lesion or sequelae to other immune-inflammatory mediated diseases such as rheumatoid arthritis, systemic sclerosis, *etc.*, particularly in diseases also associated with the formation of immune complexes. Diseases in the primary systemic vasculitis group include: systemic necrotizing vasculitis: polyarteritis nodosa, allergic angiitis and granulomatosis, polyangiitis; Wegener's granulomatosis; lymphomatoid granulomatosis; and giant cell arteritis. Miscellaneous vasculitides include: mucocutaneous lymph node syndrome (MLNS or Kawasaki's disease), isolated CNS vasculitis, Behet's disease, thromboangiitis obliterans (Buerger's disease) and cutaneous necrotizing venulitis. The pathogenic mechanism of most of

the types of vasculitis listed is believed to be primarily due to the deposition of immunoglobulin complexes in the vessel wall and subsequent induction of an inflammatory response either via ADCC, complement activation, or both.

Sarcoidosis is a condition of unknown etiology which is characterized by the presence of epithelioid granulomas in nearly any tissue in the body; involvement of the lung is most common. The pathogenesis involves the persistence of activated macrophages and lymphoid cells at sites of the disease with subsequent chronic sequelae resultant from the release of locally and systemically active products released by these cell types.

Autoimmune hemolytic anemia including autoimmune hemolytic anemia, immune pancytopenia, and paroxysmal noctural hemoglobinuria is a result of production of antibodies that react with antigens expressed on the surface of red blood cells (and in some cases other blood cells including platelets as well) and is a reflection of the removal of those antibody coated cells via complement mediated lysis and/or ADCC/Fc-receptor-mediated mechanisms.

Thyroiditis including Grave's disease, Hashimoto's thyroiditis, juvenile lymphocytic thyroiditis, and atrophic thyroiditis, are the result of an autoimmune response against thyroid antigens with production of antibodies that react with proteins present in and often specific for the thyroid gland. Experimental models exist including spontaneous models: rats (BUF and BB rats) and chickens (obese chicken strain); inducible models: immunization of animals with either thyroglobulin, thyroid microsomal antigen (thyroid peroxidase).

Inflammatory and Fibrotic Lung Disease, including Eosinophilic Pneumonias; Idiopathic Pulmonary Fibrosis, and Hypersensitivity Pneumonitis may involve a disregulated immune-inflammatory response. Inhibition of that response would be of therapeutic benefit.

Psoriasis is a T lymphocyte-mediated inflammatory disease. Lesions contain infiltrates of T lymphocytes, macrophages and antigen processing cells, and some neutrophils.

Other diseases in which intervention of the immune and/or inflammatory response have benefit are infectious disease including but not limited to viral infection (including but not limited to AIDS, hepatitis A, B, C, D, E and herpes) bacterial infection, fungal infections, and protozoal and parasitic infections. Molecules (or derivatives/agonists) which stimulate the immune reaction can be utilized therapeutically to enhance the immune response to infectious agents), diseases of immunodeficiency (molecules/derivatives/agonists) which stimulate the immune reaction can be utilized therapeutically to enhance the immune response for conditions of inherited, acquired, infectious induced (as in HIV infection), or iatrogenic (*i.e.,* as from chemotherapy) immunodeficiency, and neoplasia.

It has been demonstrated that some human cancer patients develop an antibody and/or monocyte/macrophage response to antigens on neoplastic cells. It has also been shown in animal models of neoplasia that enhancement of the immune response can result in rejection or regression of that particular neoplasm. Molecules that enhance the monocyte/macrophage response have utility *in vivo* in enhancing the immune response against neoplasia. Molecules which enhance the monocyte/macrophage proliferative response (or small molecule agonists or antibodies that affected the same receptor in an

agonistic fashion) can be used therapeutically to treat cancer. Molecules that inhibit the monocyte/macrophage response also function *in vivo* during neoplasia to suppress the immune response to a neoplasm; such molecules can either be expressed by the neoplastic cells themselves or their expression can be induced by the neoplasm in other cells. Antagonism of such inhibitory molecules (either with antibody, small molecule antagonists or other means) enhances immune-mediated tumor rejection.

Additionally, inhibition of molecules with proinflammatory properties may have therapeutic benefit in reperfusion injury; stroke; myocardial infarction; atherosclerosis; acute lung injury; hemorrhagic shock; burn; sepsis/septic shock; acute tubular necrosis; endometriosis; degenerative joint disease and pancreatis.

The compounds of the present invention, *e.g.*, polypeptides or antibodies, are administered to a mammal, preferably a human, in accord with known methods, such as intravenous administration as a bolus or by continuous infusion over a period of time, by intramuscular, intraperitoneal, intracerobrospinal, subcutaneous, intra-articular, intrasynovial, intrathecal, oral, topical, or inhalation (intranasal, intrapulmonary) routes. Intravenous or inhaled administration of polypeptides and antibodies is preferred.

In immunoadjuvant therapy, other therapeutic regimens, such administration of an anti-cancer agent, may be combined with the administration of the proteins, antibodies or compounds of the instant invention. For example, the patient to be treated with a the immunoadjuvant of the invention may also receive an anti-cancer agent (chemotherapeutic agent) or radiation therapy. Preparation and dosing schedules for such chemotherapeutic agents may be used according to manufacturers' instructions or as determined empirically by the skilled practitioner. Preparation and dosing schedules for such chemotherapy are also described in *Chemotherapy Service* Ed., M.C. Perry, Williams & Wilkins, Baltimore, MD (1992). The chemotherapeutic agent may precede, or follow administration of the immunoadjuvant or may be given simultaneously therewith. Additionally, an anti-estrogen compound such as tamoxifen or an anti-progesterone such as onapristone (see, EP 616812) may be given in dosages known for such molecules.

It may be desirable to also administer antibodies against other immune disease associated or tumor associated antigens, such as antibodies which bind to CD20, CD11a, CD18, ErbB2, EGFR, ErbB3, ErbB4, or vascular endothelial factor (VEGF). Alternatively, or in addition, two or more antibodies binding the same or two or more different antigens disclosed herein may be coadministered to the patient. Sometimes, it may be beneficial to also administer one or more cytokines to the patient. In one embodiment, the PRO polypeptides are coadministered with a growth inhibitory agent. For example, the growth inhibitory agent may be administered first, followed by a PRO polypeptide. However, simultaneous administration or administration first is also contemplated. Suitable dosages for the growth inhibitory agent are those presently used and may be lowered due to the combined action (synergy) of the growth inhibitory agent and the PRO polypeptide.

For the treatment or reduction in the severity of immune related disease, the appropriate dosage of an a compound of the invention will depend on the type of disease to be treated, as defined above, the

severity and course of the disease, whether the agent is administered for preventive or therapeutic purposes, previous therapy, the patient's clinical history and response to the compound, and the discretion of the attending physician. The compound is suitably administered to the patient at one time or over a series of treatments.

For example, depending on the type and severity of the disease, about 1 μg/kg to 15 mg/kg (*e.g.*, 0.1-20 mg/kg) of polypeptide or antibody is an initial candidate dosage for administration to the patient, whether, for example, by one or more separate administrations, or by continuous infusion. A typical daily dosage might range from about 1 μg/kg to 100 mg/kg or more, depending on the factors mentioned above. For repeated administrations over several days or longer, depending on the condition, the treatment is sustained until a desired suppression of disease symptoms occurs. However, other dosage regimens may be useful. The progress of this therapy is easily monitored by conventional techniques and assays.

O. Articles of Manufacture

In another embodiment of the invention, an article of manufacture containing materials (*e.g.*, comprising a PRO molecule) useful for the diagnosis or treatment of the disorders described above is provided. The article of manufacture comprises a container and an instruction. Suitable containers include, for example, bottles, vials, syringes, and test tubes. The containers may be formed from a variety of materials such as glass or plastic. The container holds a composition which is effective for diagnosing or treating the condition and may have a sterile access port (for example the container may be an intravenous solution bag or a vial having a stopper pierceable by a hypodermic injection needle). The active agent in the composition is usually a polypeptide or an antibody of the invention. An instruction or label on, or associated with, the container indicates that the composition is used for diagnosing or treating the condition of choice. The article of manufacture may further comprise a second container comprising a pharmaceutically-acceptable buffer, such as phosphate-buffered saline, Ringer's solution and dextrose solution. It may further include other materials desirable from a commercial and user standpoint, including other buffers, diluents, filters, needles, syringes, and package inserts with instructions for use.

P. Diagnosis and Prognosis of Immune Related Disease

Cell surface proteins, such as proteins which are overexpressed in certain immune related diseases, are excellent targets for drug candidates or disease treatment. The same proteins along with secreted proteins encoded by the genes amplified in immune related disease states find additional use in the diagnosis and prognosis of these diseases. For example, antibodies directed against the protein products of genes amplified in multiple sclerosis, rheumatoid arthritis, or another immune related disease, can be used as diagnostics or prognostics.

For example, antibodies, including antibody fragments, can be used to qualitatively or quantitatively detect the expression of proteins encoded by amplified or overexpressed genes ("marker gene products"). The antibody preferably is equipped with a detectable, *e.g.*, fluorescent label, and binding can be monitored by light microscopy, flow cytometry, fluorimetry, or other techniques known in the art. These techniques are particularly suitable, if the overexpressed gene encodes a cell surface protein Such binding assays are performed essentially as described above.

In situ detection of antibody binding to the marker gene products can be performed, for example, by immunofluorescence or immunoelectron microscopy. For this purpose, a histological specimen is removed from the patient, and a labeled antibody is applied to it, preferably by overlaying the antibody on a biological sample. This procedure also allows for determining the distribution of the marker gene product in the tissue examined. It will be apparent for those skilled in the art that a wide variety of histological methods are readily available for *in situ* detection.

The following examples are offered for illustrative purposes only, and are not intended to limit the scope of the present invention in any way.

All patent and literature references cited in the present specification are hereby incorporated by reference in their entirety.

EXAMPLES

Commercially available reagents referred to in the examples were used according to manufacturer's instructions unless otherwise indicated. The source of those cells identified in the following examples, and throughout the specification, by ATCC accession numbers is the American Type Culture Collection, Manassas, VA.

EXAMPLE 1: Microarray analysis of monocyte/macrophages.

Nucleic acid microarrays, often containing thousands of gene sequences, are useful for identifying differentially expressed genes in diseased tissues as compared to their normal counterparts. Using nucleic acid microarrays, test and control mRNA samples from test and control tissue samples are reverse transcribed and labeled to generate cDNA probes. The cDNA probes are then hybridized to an array of nucleic acids immobilized on a solid support. The array is configured such that the sequence and position of each member of the array is known. For example, a selection of genes known to be expressed in certain disease states may be arrayed on a solid support. Hybridization of a labeled probe with a particular array member indicates that the sample from which the probe was derived expresses that gene. If the hybridization signal of a probe from a test (in this instance, differentiated macrophages) sample is greater than hybridization signal of a probe from a control (in this instance, non-differentiated monocytes) sample, the gene or genes expressed in the test tissue are identified. The implication of this result is that an overexpressed protein in a test tissue is useful not only as a diagnostic marker for the presence of the disease condition, but also as a therapeutic target for treatment of the disease condition.

The methodology of hybridization of nucleic acids and microarray technology is well known in the art. In one example, the specific preparation of nucleic acids for hybridization and probes, slides, and hybridization conditions are all detailed in PCT Patent Application Serial No. PCT/US01/10482, filed on March 30, 2001 and which is herein incorporated by reference.

In this experiment, CD14+ monocytes are selected by positive selection according to Miltenyi MACS™ protocol. Lymphocytes in 100 ml heparinized blood are separated using Ficoll Paque™. Cells are washed twice in PBS/0.5% BSA/2 mM EDTA. In final wash, all gradients are pooled and volume is brought to approximately 10 ml. The cells are centrifuged, the supernatant is removed and the cell pellet

is resuspended in buffer in a total volume of 10e7 cells per 80 µl buffer. Add 20 µl CD14 microbeads per 10e7 total cells, mix and incubate 15 minutes at 6-12 C. Wash the cells by adding 20x labeling volume of buffer, spin pellet and resuspend in 500 ul buffer per 10e8 cells. Separate cells with MACS™ depletion column type D and check purity of cells by labeling with anti-CD45 and anti-CD14 antibodies (cell purity at this point is >95%). Lyse cells in RNA lysis buffer to obtain a timepoint of Day 0 monocytes, then plate remaining cells in 6 well plates in macrophage differentiation medium: DMEM 4.5 ug/ml glucose, Pen-Strep, L-glutamine, 20% FBS and 10% Human AB serum (Gemini, Cat # 100-512). Seed cells at 1.5 x 10e6 per well (6 well Costar cell culture plates) and grow at 37 C, 7% CO2. After 24 hours in culture, the cells were harvested and lysed in RNA lysis buffer to obtain mRNA for the Day 1 timepoint. The remaining cells were kept in culture and until Day 7. After 7 days in culture, the cells were lysed in RNA lysis buffer to obtain Day 7 timepoint at which time the cells displayed gross macrophage morphology.

The mRNA was isolated by Qiagen miniprep and analysis run on Affimax™ (Affymetrix Inc. Santa Clara, CA) microarray chips and proprietary Genentech microarrays. The cells harvested at Day 0 timepoint, the Day 1 timepoint, and the Day 7 timepoint were subjected to the same analysis. Genes were compared whose expression was upregulated at Day 7 as compared to Day 0 and Day 1.

Below are the results of these experiments, demonstrating that various PRO polypeptides of the present invention are differentially expressed in differentiated macrophages at Day 7 as compared to non-differentiated monocytes at Day 0 and at Day 1. As described above, these data demonstrate that the PRO polypeptides of the present invention are useful not only as diagnostic markers for the presence of one or more immune disorders, but also serve as therapeutic targets for the treatment of those immune disorders. Specifically, the cDNAs shown Figures 592, Figure 708, Figure 724, Figure 888, Figure 1095, Figure 1109, Figure 1456 and Figure 2331 are significantly overexpressed in differentiated macrophages as compared to non-differentiated monocytes at Day 0 and Day 1.

The Figures 1-2517 show the nucleic acids of the invention and their encoded PRO polypeptides that are differentially expressed in differentiated macrophages at Day 7 as compared to non-differentiated monocytes at Day 0 and at Day 1.

EXAMPLE 2: Use of PRO as a hybridization probe

The following method describes use of a nucleotide sequence encoding PRO as a hybridization probe.

DNA comprising the coding sequence of full-length or mature PRO as disclosed herein is employed as a probe to screen for homologous DNAs (such as those encoding naturally-occurring variants of PRO) in human tissue cDNA libraries or human tissue genomic libraries.

Hybridization and washing of filters containing either library DNAs is performed under the following high stringency conditions. Hybridization of radiolabeled PRO-derived probe to the filters is performed in a solution of 50% formamide, 5x SSC, 0.1% SDS, 0.1% sodium pyrophosphate, 50 mM sodium phosphate, pH 6.8, 2x Denhardt's solution, and 10% dextran sulfate at 42°C for 20 hours. Washing of the filters is performed in an aqueous solution of 0.1x SSC and 0.1% SDS at 42°C.

DNAs having a desired sequence identity with the DNA encoding full-length native sequence PRO can then be identified using standard techniques known in the art.

EXAMPLE 3: Expression of PRO in *E. coli*

This example illustrates preparation of an unglycosylated form of PRO by recombinant expression in *E. coli*.

The DNA sequence encoding PRO is initially amplified using selected PCR primers. The primers should contain restriction enzyme sites which correspond to the restriction enzyme sites on the selected expression vector. A variety of expression vectors may be employed. An example of a suitable vector is pBR322 (derived from *E. coli*; see Bolivar et al., Gene, 2:95 (1977)) which contains genes for ampicillin and tetracycline resistance. The vector is digested with restriction enzyme and dephosphorylated. The PCR amplified sequences are then ligated into the vector. The vector will preferably include sequences which encode for an antibiotic resistance gene, a trp promoter, a polyhis leader (including the first six STII codons, polyhis sequence, and enterokinase cleavage site), the PRO coding region, lambda transcriptional terminator, and an argU gene.

The ligation mixture is then used to transform a selected *E. coli* strain using the methods described in Sambrook et al., supra. Transformants are identified by their ability to grow on LB plates and antibiotic resistant colonies are then selected. Plasmid DNA can be isolated and confirmed by restriction analysis and DNA sequencing.

Selected clones can be grown overnight in liquid culture medium such as LB broth supplemented with antibiotics. The overnight culture may subsequently be used to inoculate a larger scale culture. The cells are then grown to a desired optical density, during which the expression promoter is turned on.

After culturing the cells for several more hours, the cells can be harvested by centrifugation. The cell pellet obtained by the centrifugation can be solubilized using various agents known in the art, and the solubilized PRO protein can then be purified using a metal chelating column under conditions that allow tight binding of the protein.

PRO may be expressed in *E. coli* in a poly-His tagged form, using the following procedure. The DNA encoding PRO is initially amplified using selected PCR primers. The primers will contain restriction enzyme sites which correspond to the restriction enzyme sites on the selected expression vector, and other useful sequences providing for efficient and reliable translation initiation, rapid purification on a metal chelation column, and proteolytic removal with enterokinase. The PCR-amplified, poly-His tagged sequences are then ligated into an expression vector, which is used to transform an *E. coli* host based on strain 52 (W3110 fuhA(tonA) lon galE rpoHts(htpRts) clpP(lacIq). Transformants are first grown in LB containing 50 mg/ml carbenicillin at 30°C with shaking until an O.D.600 of 3-5 is reached. Cultures are then diluted 50-100 fold into CRAP media (prepared by mixing 3.57 g $(NH_4)_2SO_4$, 0.71 g sodium citrate•2H2O, 1.07 g KCl, 5 .36 g Difco yeast extract, 5.36 g Sheffield hycase SF in 500 mL water, as well as 110 mM MPOS, pH 7.3, 0.55% (w/v) glucose and 7 mM $MgSO_4$) and grown for approximately

20-30 hours at 30°C with shaking. Samples are removed to verify expression by SDS-PAGE analysis, and the bulk culture is centrifuged to pellet the cells. Cell pellets are frozen until purification and refolding.

E. coli paste from 0.5 to 1 L fermentations (6-10 g pellets) is resuspended in 10 volumes (w/v) in 7 M guanidine, 20 mM Tris, pH 8 buffer. Solid sodium sulfite and sodium tetrathionate is added to make final concentrations of 0.1M and 0.02 M, respectively, and the solution is stirred overnight at 4°C. This step results in a denatured protein with all cysteine residues blocked by sulfitolization. The solution is centrifuged at 40,000 rpm in a Beckman Ultracentifuge for 30 min. The supernatant is diluted with 3-5 volumes of metal chelate column buffer (6 M guanidine, 20 mM Tris, pH 7.4) and filtered through 0.22 micron filters to clarify. The clarified extract is loaded onto a 5 ml Qiagen Ni-NTA metal chelate column equilibrated in the metal chelate column buffer. The column is washed with additional buffer containing 50 mM imidazole (Calbiochem, Utrol grade), pH 7.4. The protein is eluted with buffer containing 250 mM imidazole. Fractions containing the desired protein are pooled and stored at 4°C. Protein concentration is estimated by its absorbance at 280 nm using the calculated extinction coefficient based on its amino acid sequence.

The proteins are refolded by diluting the sample slowly into freshly prepared refolding buffer consisting of: 20 mM Tris, pH 8.6, 0.3 M NaCl, 2.5 M urea, 5 mM cysteine, 20 mM glycine and 1 mM EDTA. Refolding volumes are chosen so that the final protein concentration is between 50 to 100 micrograms/ml. The refolding solution is stirred gently at 4°C for 12-36 hours. The refolding reaction is quenched by the addition of TFA to a final concentration of 0.4% (pH of approximately 3). Before further purification of the protein, the solution is filtered through a 0.22 micron filter and acetonitrile is added to 2-10% final concentration. The refolded protein is chromatographed on a Poros R1/H reversed phase column using a mobile buffer of 0.1% TFA with elution with a gradient of acetonitrile from 10 to 80%. Aliquots of fractions with A280 absorbance are analyzed on SDS polyacrylamide gels and fractions containing homogeneous refolded protein are pooled. Generally, the properly refolded species of most proteins are eluted at the lowest concentrations of acetonitrile since those species are the most compact with their hydrophobic interiors shielded from interaction with the reversed phase resin. Aggregated species are usually eluted at higher acetonitrile concentrations. In addition to resolving misfolded forms of proteins from the desired form, the reversed phase step also removes endotoxin from the samples.

Fractions containing the desired folded PRO polypeptide are pooled and the acetonitrile removed using a gentle stream of nitrogen directed at the solution. Proteins are formulated into 20 mM Hepes, pH 6.8 with 0.14 M sodium chloride and 4% mannitol by dialysis or by gel filtration using G25 Superfine (Pharmacia) resins equilibrated in the formulation buffer and sterile filtered.

Many of the PRO polypeptides disclosed herein were successfully expressed as described above.

EXAMPLE 4: Expression of PRO in mammalian cells

This example illustrates preparation of a potentially glycosylated form of PRO by recombinant expression in mammalian cells.

The vector, pRK5 (see EP 307,247, published March 15, 1989), is employed as the expression vector. Optionally, the PRO DNA is ligated into pRK5 with selected restriction enzymes to allow insertion of the PRO DNA using ligation methods such as described in Sambrook et al., supra. The resulting vector is called pRK5-PRO.

In one embodiment, the selected host cells may be 293 cells. Human 293 cells (ATCC CCL 1573) are grown to confluence in tissue culture plates in medium such as DMEM supplemented with fetal calf serum and optionally, nutrient components and/or antibiotics. About 10 μg pRK5-PRO DNA is mixed with about 1 μg DNA encoding the VA RNA gene [Thimmappaya et al., Cell, 31:543 (1982)] and dissolved in 500 μl of 1 mM Tris-HCl, 0.1 mM EDTA, 0.227 M $CaCl_2$. To this mixture is added, dropwise, 500 μl of 50 mM HEPES (pH 7.35), 280 mM NaCl, 1.5 mM $NaPO_4$, and a precipitate is allowed to form for 10 minutes at 25°C. The precipitate is suspended and added to the 293 cells and allowed to settle for about four hours at 37°C. The culture medium is aspirated off and 2 ml of 20% glycerol in PBS is added for 30 seconds. The 293 cells are then washed with serum free medium, fresh medium is added and the cells are incubated for about 5 days.

Approximately 24 hours after the transfections, the culture medium is removed and replaced with culture medium (alone) or culture medium containing 200 μCi/ml ^{35}S-cysteine and 200 μCi/ml ^{35}S-methionine. After a 12 hour incubation, the conditioned medium is collected, concentrated on a spin filter, and loaded onto a 15% SDS gel. The processed gel may be dried and exposed to film for a selected period of time to reveal the presence of PRO polypeptide. The cultures containing transfected cells may undergo further incubation (in serum free medium) and the medium is tested in selected bioassays.

In an alternative technique, PRO may be introduced into 293 cells transiently using the dextran sulfate method described by Somparyrac et al., Proc. Natl. Acad. Sci., 12:7575 (1981). 293 cells are grown to maximal density in a spinner flask and 700 μg pRK5-PRO DNA is added. The cells are first concentrated from the spinner flask by centrifugation and washed with PBS. The DNA-dextran precipitate is incubated on the cell pellet for four hours. The cells are treated with 20% glycerol for 90 seconds, washed with tissue culture medium, and re-introduced into the spinner flask containing tissue culture medium, 5 μg/ml bovine insulin and 0.1 μg/ml bovine transferrin. After about four days, the conditioned media is centrifuged and filtered to remove cells and debris. The sample containing expressed PRO can then be concentrated and purified by any selected method, such as dialysis and/or column chromatography.

In another embodiment, PRO can be expressed in CHO cells. The pRK5-PRO can be transfected into CHO cells using known reagents such as $CaPO_4$ or DEAE-dextran. As described above, the cell cultures can be incubated, and the medium replaced with culture medium (alone) or medium containing a radiolabel such as ^{35}S-methionine. After determining the presence of PRO polypeptide, the culture medium may be replaced with serum free medium. Preferably, the cultures are incubated for about 6 days, and then the conditioned medium is harvested. The medium containing the expressed PRO can then be concentrated and purified by any selected method.

Epitope-tagged PRO may also be expressed in host CHO cells. The PRO may be subcloned out of the pRK5 vector. The subclone insert can undergo PCR to fuse in frame with a selected epitope tag such as a poly-his tag into a Baculovirus expression vector. The poly-his tagged PRO insert can then be subcloned into a SV40 promoter/enhancer containing vector containing a selection marker such as DHFR for selection of stable clones. Finally, the CHO cells can be transfected (as described above) with the SV40 promoter/enhancer containing vector. Labeling may be performed, as described above, to verify expression. The culture medium containing the expressed poly-His tagged PRO can then be concentrated and purified by any selected method, such as by Ni^{2+}-chelate affinity chromatography.

PRO may also be expressed in CHO and/or COS cells by a transient expression procedure or in CHO cells by another stable expression procedure.

Stable expression in CHO cells is performed using the following procedure. The proteins are expressed as an IgG construct (immunoadhesin), in which the coding sequences for the soluble forms (e.g. extracellular domains) of the respective proteins are fused to an IgG1 constant region sequence containing the hinge, CH2 and CH2 domains and/or is a poly-His tagged form.

Following PCR amplification, the respective DNAs are subcloned in a CHO expression vector using standard techniques as described in Ausubel et al., Current Protocols of Molecular Biology, Unit 3.16, John Wiley and Sons (1997). CHO expression vectors are constructed to have compatible restriction sites 5' and 3' of the DNA of interest to allow the convenient shuttling of cDNA's. The vector used expression in CHO cells is as described in Lucas et al., Nucl. Acids Res. 24:9 (1774-1779 (1996), and uses the SV40 early promoter/enhancer to drive expression of the cDNA of interest and dihydrofolate reductase (DHFR). DHFR expression permits selection for stable maintenance of the plasmid following transfection.

Twelve micrograms of the desired plasmid DNA is introduced into approximately 10 million CHO cells using commercially available transfection reagents Superfect® (Quiagen), Dosper® or Fugene ® (Boehringer Mannheim). The cells are grown as described in Lucas et al., supra. Approximately 3 x 10^{-7} cells are frozen in an ampule for further growth and production as described below.

The ampules containing the plasmid DNA are thawed by placement into water bath and mixed by vortexing. The contents are pipetted into a centrifuge tube containing 10 mL of media and centrifuged at 1000 rpm for 5 minutes. The supernatant is aspirated and the cells are resuspended in 10 mL of selective media (0.2 μm filtered PS20 with 5% 0.2 μm diafiltered fetal bovine serum). The cells are then aliquoted into a 100 mL spinner containing 90 mL of selective media. After 1-2 days, the cells are transferred into a 250 mL spinner filled with 150 mL selective growth medium and incubated at 37°C. After another 2-3 days, 250 mL, 500 mL and 2000 mL spinners are seeded with 3 x 10^5 cells/mL. The cell media is exchanged with fresh media by centrifugation and resuspension in production medium. Although any suitable CHO media may be employed, a production medium described in U.S. Patent No. 5,122,469, issued June 16, 1992 may actually be used. A 3L production spinner is seeded at 1.2 x 10^6 cells/mL. On day 0, pH is determined. On day 1, the spinner is sampled and sparging with filtered air is commenced. On day 2, the spinner is sampled, the temperature shifted to 33°C, and 30 mL of 500 g/L glucose and 0.6

mL of 10% antifoam (e.g., 35% polydimethylsiloxane emulsion, Dow Corning 365 Medical Grade Emulsion) taken. Throughout the production, the pH is adjusted as necessary to keep it at around 7.2. After 10 days, or until the viability dropped below 70%, the cell culture is harvested by centrifugation and filtering through a 0.22 μm filter. The filtrate was either stored at 4°C or immediately loaded onto columns for purification.

For the poly-His tagged constructs, the proteins are purified using a Ni-NTA column (Qiagen). Before purification, imidazole is added to the conditioned media to a concentration of 5 mM. The conditioned media is pumped onto a 6 ml Ni-NTA column equilibrated in 20 mM Hepes, pH 7.4, buffer containing 0.3 M NaCl and 5 mM imidazole at a flow rate of 4-5 ml/min. at 4°C. After loading, the column is washed with additional equilibration buffer and the protein eluted with equilibration buffer containing 0.25 M imidazole. The highly purified protein is subsequently desalted into a storage buffer containing 10 mM Hepes, 0.14 M NaCl and 4% mannitol, pH 6.8, with a 25 ml G25 Superfine (Pharmacia) column and stored at -80°C.

Immunoadhesin (Fc-containing) constructs are purified from the conditioned media as follows. The conditioned medium is pumped onto a 5 ml Protein A column (Pharmacia) which had been equilibrated in 20 mM Na phosphate buffer, pH 6.8. After loading, the column is washed extensively with equilibration buffer before elution with 100 mM citric acid, pH 3.5. The eluted protein is immediately neutralized by collecting 1 ml fractions into tubes containing 275 μl of 1 M Tris buffer, pH 9. The highly purified protein is subsequently desalted into storage buffer as described above for the poly-His tagged proteins. The homogeneity is assessed by SDS polyacrylamide gels and by N-terminal amino acid sequencing by Edman degradation.

Many of the PRO polypeptides disclosed herein were successfully expressed as described above.

EXAMPLE 5: Expression of PRO in Yeast

The following method describes recombinant expression of PRO in yeast.

First, yeast expression vectors are constructed for intracellular production or secretion of PRO from the ADH2/GAPDH promoter. DNA encoding PRO and the promoter is inserted into suitable restriction enzyme sites in the selected plasmid to direct intracellular expression of PRO. For secretion, DNA encoding PRO can be cloned into the selected plasmid, together with DNA encoding the ADH2/GAPDH promoter, a native PRO signal peptide or other mammalian signal peptide, or, for example, a yeast alpha-factor or invertase secretory signal/leader sequence, and linker sequences (if needed) for expression of PRO.

Yeast cells, such as yeast strain AB110, can then be transformed with the expression plasmids described above and cultured in selected fermentation media. The transformed yeast supernatants can be analyzed by precipitation with 10% trichloroacetic acid and separation by SDS-PAGE, followed by staining of the gels with Coomassie Blue stain.

Recombinant PRO can subsequently be isolated and purified by removing the yeast cells from the fermentation medium by centrifugation and then concentrating the medium using selected cartridge filters. The concentrate containing PRO may further be purified using selected column chromatography resins.

Many of the PRO polypeptides disclosed herein were successfully expressed as described above.

EXAMPLE 6: Expression of PRO in Baculovirus-Infected Insect Cells

The following method describes recombinant expression of PRO in Baculovirus-infected insect cells.

The sequence coding for PRO is fused upstream of an epitope tag contained within a baculovirus expression vector. Such epitope tags include poly-his tags and immunoglobulin tags (like Fc regions of IgG). A variety of plasmids may be employed, including plasmids derived from commercially available plasmids such as pVL1393 (Novagen). Briefly, the sequence encoding PRO or the desired portion of the coding sequence of PRO such as the sequence encoding the extracellular domain of a transmembrane protein or the sequence encoding the mature protein if the protein is extracellular is amplified by PCR with primers complementary to the 5' and 3' regions. The 5' primer may incorporate flanking (selected) restriction enzyme sites. The product is then digested with those selected restriction enzymes and subcloned into the expression vector.

Recombinant baculovirus is generated by co-transfecting the above plasmid and BaculoGold™ virus DNA (Pharmingen) into *Spodoptera frugiperda* ("Sf9") cells (ATCC CRL 1711) using lipofectin (commercially available from GIBCO-BRL). After 4 - 5 days of incubation at 28°C, the released viruses are harvested and used for further amplifications. Viral infection and protein expression are performed as described by O'Reilley et al., Baculovirus expression vectors: A Laboratory Manual, Oxford: Oxford University Press (1994).

Expressed poly-his tagged PRO can then be purified, for example, by Ni^{2+}-chelate affinity chromatography as follows. Extracts are prepared from recombinant virus-infected Sf9 cells as described by Rupert et al., Nature, 362:175-179 (1993). Briefly, Sf9 cells are washed, resuspended in sonication buffer (25 mL Hepes, pH 7.9; 12.5 mM $MgCl_2$; 0.1 mM EDTA; 10% glycerol; 0.1% NP-40; 0.4 M KCl), and sonicated twice for 20 seconds on ice. The sonicates are cleared by centrifugation, and the supernatant is diluted 50-fold in loading buffer (50 mM phosphate, 300 mM NaCl, 10% glycerol, pH 7.8) and filtered through a 0.45 μm filter. A Ni^{2+}-NTA agarose column (commercially available from Qiagen) is prepared with a bed volume of 5 mL, washed with 25 mL of water and equilibrated with 25 mL of loading buffer. The filtered cell extract is loaded onto the column at 0.5 mL per minute. The column is washed to baseline A_{280} with loading buffer, at which point fraction collection is started. Next, the column is washed with a secondary wash buffer (50 mM phosphate; 300 mM NaCl, 10% glycerol, pH 6.0), which elutes nonspecifically bound protein. After reaching A_{280} baseline again, the column is developed with a 0 to 500 mM Imidazole gradient in the secondary wash buffer. One mL fractions are collected and analyzed by SDS-PAGE and silver staining or Western blot with Ni^{2+}-NTA-conjugated to alkaline phosphatase

(Qiagen). Fractions containing the eluted His_{10}-tagged PRO are pooled and dialyzed against loading buffer.

Alternatively, purification of the IgG tagged (or Fc tagged) PRO can be performed using known chromatography techniques, including for instance, Protein A or protein G column chromatography.

Many of the PRO polypeptides disclosed herein were successfully expressed as described above.

EXAMPLE 7: Preparation of Antibodies that Bind PRO

This example illustrates preparation of monoclonal antibodies which can specifically bind PRO.

Techniques for producing the monoclonal antibodies are known in the art and are described, for instance, in Goding, supra. Immunogens that may be employed include purified PRO, fusion proteins containing PRO, and cells expressing recombinant PRO on the cell surface. Selection of the immunogen can be made by the skilled artisan without undue experimentation.

Mice, such as Balb/c, are immunized with the PRO immunogen emulsified in complete Freund's adjuvant and injected subcutaneously or intraperitoneally in an amount from 1-100 micrograms. Alternatively, the immunogen is emulsified in MPL-TDM adjuvant (Ribi Immunochemical Research, Hamilton, MT) and injected into the animal's hind foot pads. The immunized mice are then boosted 10 to 12 days later with additional immunogen emulsified in the selected adjuvant. Thereafter, for several weeks, the mice may also be boosted with additional immunization injections. Serum samples may be periodically obtained from the mice by retro-orbital bleeding for testing in ELISA assays to detect anti-PRO antibodies.

After a suitable antibody titer has been detected, the animals "positive" for antibodies can be injected with a final intravenous injection of PRO. Three to four days later, the mice are sacrificed and the spleen cells are harvested. The spleen cells are then fused (using 35% polyethylene glycol) to a selected murine myeloma cell line such as P3X63AgU.1, available from ATCC, No. CRL 1597. The fusions generate hybridoma cells which can then be plated in 96 well tissue culture plates containing HAT (hypoxanthine, aminopterin, and thymidine) medium to inhibit proliferation of non-fused cells, myeloma hybrids, and spleen cell hybrids.

The hybridoma cells will be screened in an ELISA for reactivity against PRO. Determination of "positive" hybridoma cells secreting the desired monoclonal antibodies against PRO is within the skill in the art.

The positive hybridoma cells can be injected intraperitoneally into syngeneic Balb/c mice to produce ascites containing the anti-PRO monoclonal antibodies. Alternatively, the hybridoma cells can be grown in tissue culture flasks or roller bottles. Purification of the monoclonal antibodies produced in the ascites can be accomplished using ammonium sulfate precipitation, followed by gel exclusion chromatography. Alternatively, affinity chromatography based upon binding of antibody to protein A or protein G can be employed.

EXAMPLE 8: Purification of PRO Polypeptides Using Specific Antibodies

Native or recombinant PRO polypeptides may be purified by a variety of standard techniques in the art of protein purification. For example, pro-PRO polypeptide, mature PRO polypeptide, or pre-PRO polypeptide is purified by immunoaffinity chromatography using antibodies specific for the PRO polypeptide of interest. In general, an immunoaffinity column is constructed by covalently coupling the anti-PRO polypeptide antibody to an activated chromatographic resin.

Polyclonal immunoglobulins are prepared from immune sera either by precipitation with ammonium sulfate or by purification on immobilized Protein A (Pharmacia LKB Biotechnology, Piscataway, N.J.). Likewise, monoclonal antibodies are prepared from mouse ascites fluid by ammonium sulfate precipitation or chromatography on immobilized Protein A. Partially purified immunoglobulin is covalently attached to a chromatographic resin such as CnBr-activated SEPHAROSE™ (Pharmacia LKB Biotechnology). The antibody is coupled to the resin, the resin is blocked, and the derivative resin is washed according to the manufacturer's instructions.

Such an immunoaffinity column is utilized in the purification of PRO polypeptide by preparing a fraction from cells containing PRO polypeptide in a soluble form. This preparation is derived by solubilization of the whole cell or of a subcellular fraction obtained via differential centrifugation by the addition of detergent or by other methods well known in the art. Alternatively, soluble PRO polypeptide containing a signal sequence may be secreted in useful quantity into the medium in which the cells are grown.

A soluble PRO polypeptide-containing preparation is passed over the immunoaffinity column, and the column is washed under conditions that allow the preferential absorbance of PRO polypeptide (*e.g.*, high ionic strength buffers in the presence of detergent). Then, the column is eluted under conditions that disrupt antibody/PRO polypeptide binding (*e.g.*, a low pH buffer such as approximately pH 2-3, or a high concentration of a chaotrope such as urea or thiocyanate ion), and PRO polypeptide is collected.

EXAMPLE 9: Drug Screening

This invention is particularly useful for screening compounds by using PRO polypeptides or binding fragment thereof in any of a variety of drug screening techniques. The PRO polypeptide or fragment employed in such a test may either be free in solution, affixed to a solid support, borne on a cell surface, or located intracellularly. One method of drug screening utilizes eukaryotic or prokaryotic host cells which are stably transformed with recombinant nucleic acids expressing the PRO polypeptide or fragment. Drugs are screened against such transformed cells in competitive binding assays. Such cells, either in viable or fixed form, can be used for standard binding assays. One may measure, for example, the formation of complexes between PRO polypeptide or a fragment and the agent being tested. Alternatively, one can examine the diminution in complex formation between the PRO polypeptide and its target cell or target receptors caused by the agent being tested.

Thus, the present invention provides methods of screening for drugs or any other agents which can affect a PRO polypeptide-associated disease or disorder. These methods comprise contacting such an

agent with an PRO polypeptide or fragment thereof and assaying (I) for the presence of a complex between the agent and the PRO polypeptide or fragment, or (ii) for the presence of a complex between the PRO polypeptide or fragment and the cell, by methods well known in the art. In such competitive binding assays, the PRO polypeptide or fragment is typically labeled. After suitable incubation, free PRO polypeptide or fragment is separated from that present in bound form, and the amount of free or uncomplexed label is a measure of the ability of the particular agent to bind to PRO polypeptide or to interfere with the PRO polypeptide/cell complex.

Another technique for drug screening provides high throughput screening for compounds having suitable binding affinity to a polypeptide and is described in detail in WO 84/03564, published on September 13, 1984. Briefly stated, large numbers of different small peptide test compounds are synthesized on a solid substrate, such as plastic pins or some other surface. As applied to a PRO polypeptide, the peptide test compounds are reacted with PRO polypeptide and washed. Bound PRO polypeptide is detected by methods well known in the art. Purified PRO polypeptide can also be coated directly onto plates for use in the aforementioned drug screening techniques. In addition, non-neutralizing antibodies can be used to capture the peptide and immobilize it on the solid support.

This invention also contemplates the use of competitive drug screening assays in which neutralizing antibodies capable of binding PRO polypeptide specifically compete with a test compound for binding to PRO polypeptide or fragments thereof. In this manner, the antibodies can be used to detect the presence of any peptide which shares one or more antigenic determinants with PRO polypeptide.

EXAMPLE 10: Rational Drug Design

The goal of rational drug design is to produce structural analogs of biologically active polypeptide of interest (*i.e.*, a PRO polypeptide) or of small molecules with which they interact, *e.g.*, agonists, antagonists, or inhibitors. Any of these examples can be used to fashion drugs which are more active or stable forms of the PRO polypeptide or which enhance or interfere with the function of the PRO polypeptide *in vivo* (*c.f.*, Hodgson, Bio/Technology, 9: 19-21 (1991)).

In one approach, the three-dimensional structure of the PRO polypeptide, or of a PRO polypeptide-inhibitor complex, is determined by x-ray crystallography, by computer modeling or, most typically, by a combination of the two approaches. Both the shape and charges of the PRO polypeptide must be ascertained to elucidate the structure and to determine active site(s) of the molecule. Less often, useful information regarding the structure of the PRO polypeptide may be gained by modeling based on the structure of homologous proteins. In both cases, relevant structural information is used to design analogous PRO polypeptide-like molecules or to identify efficient inhibitors. Useful examples of rational drug design may include molecules which have improved activity or stability as shown by Braxton and Wells, Biochemistry, 31:7796-7801 (1992) or which act as inhibitors, agonists, or antagonists of native peptides as shown by Athauda *et al.*, J. Biochem., 113:742-746 (1993).

It is also possible to isolate a target-specific antibody, selected by functional assay, as described above, and then to solve its crystal structure. This approach, in principle, yields a pharmacore upon

which subsequent drug design can be based. It is possible to bypass protein crystallography altogether by generating anti-idiotypic antibodies (anti-ids) to a functional, pharmacologically active antibody. As a mirror image of a mirror image, the binding site of the anti-ids would be expected to be an analog of the original receptor. The anti-id could then be used to identify and isolate peptides from banks of chemically or biologically produced peptides. The isolated peptides would then act as the pharmacore.

By virtue of the present invention, sufficient amounts of the PRO polypeptide may be made available to perform such analytical studies as X-ray crystallography. In addition, knowledge of the PRO polypeptide amino acid sequence provided herein will provide guidance to those employing computer modeling techniques in place of or in addition to x-ray crystallography.

The foregoing written specification is considered to be sufficient to enable one skilled in the art to practice the invention. The present invention is not to be limited in scope by the construct deposited, since the deposited embodiment is intended as a single illustration of certain aspects of the invention and any constructs that are functionally equivalent are within the scope of this invention. The deposit of material herein does not constitute an admission that the written description herein contained is inadequate to enable the practice of any aspect of the invention, including the best mode thereof, nor is it to be construed as limiting the scope of the claims to the specific illustrations that it represents. Indeed, various modifications of the invention in addition to those shown and described herein will become apparent to those skilled in the art from the foregoing description and fall within the scope of the appended claims.

What is claimed:

1. Isolated nucleic acid having at least 80% nucleic acid sequence identity to a nucleotide sequence identity to:
   (a) the nucleotide sequence shown in any one of the Figures 1-2517 (SEQ ID NOS: 1-2517); or
   (b) the nucleotide sequence encoding the polypeptide shown in any one of the Figures 1-2517 (SEQ ID NOS: 1-2517).

2. A vector comprising the nucleic acid of Claim 1.

3. The vector of Claim 2 operably linked to control sequences recognized by a host cell transformed with the vector.

4. A host cell comprising the vector of Claim 2.

5. The host cell of Claim 4, wherein said cell is a CHO cell, an *E.coli* cell or a yeast cell.

6. A process for producing a PRO polypeptide comprising culturing the host cell of Claim 5 under conditions suitable for expression of said PRO polypeptide and recovering said PRO polypeptide from the cell culture.

7. An isolated polypeptide having at least 80% amino acid sequence identity to:
   (a) a polypeptide shown in any one of Figures 1-2517 (SEQ ID NOS: 1-2517); or
   (b) a polypeptide encoded by the full length coding region of the nucleotide sequence shown in any one of Figures 1-2517 (SEQ ID NOS: 1-2517).

8. A chimeric molecule comprising a polypeptide according to Claim 7 fused to a heterologous amino acid sequence.

9. The chimeric molecule of Claim 8, wherein said heterologous amino acid sequence is an epitope tag sequence or an Fc region of an immunoglobulin.

10. An antibody which specifically binds to a polypeptide according to Claim 7.

11. The antibody of Claim 10, wherein said antibody is a monoclonal antibody, a humanized antibody or a single-chain antibody.

12. A composition of matter comprising (a) a polypeptide of Claim 7, (b) an agonist of said polypeptide, (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide, in combination with a carrier.

13. The composition of matter of Claim 12, wherein said carrier is a pharmaceutically acceptable carrier.

14. The composition of matter of Claim 13 comprising a therapeutically effective amount of (a), (b), (c) or (d).

15. An article of manufacture, comprising:

a container;

a label on said container; and

a composition of matter comprising (a) a polypeptide of Claim 7, (b) an agonist of said polypeptide, (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide, contained within said container, wherein label on said container indicates that said composition of matter can be used for treating an immune related disease.

16. A method of treating an immune related disorder in a mammal in need thereof comprising administering to said mammal a therapeutically effective amount of (a) a polypeptide of Claim 7, (b) an agonist of said polypeptide, (c) an antagonist of said polypeptide, or (d) an antibody that binds to said polypeptide.

17. The method of Claim 16, wherein the immune related disorder is systemic lupus erythematosis, rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, a spondyloarthropathy, systemic sclerosis, an idiopathic inflammatory myopathy, Sjögren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia, autoimmune thrombocytopenia, thyroiditis, diabetes mellitus, immune-mediated renal disease, a demyelinating disease of the central or peripheral nervous system, idiopathic demyelinating polyneuropathy, Guillain-Barré syndrome, a chronic inflammatory demyelinating polyneuropathy, a hepatobiliary disease, infectious or autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis, sclerosing cholangitis, inflammatory bowel disease, gluten-sensitive enteropathy, Whipple's disease, an autoimmune or immune-mediated skin disease, a bullous skin disease, erythema multiforme, contact dermatitis, psoriasis, an allergic disease, asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity, urticaria, an immunologic disease of the lung, eosinophilic pneumonias, idiopathic pulmonary fibrosis, hypersensitivity pneumonitis, a transplantation associated disease, graft rejection or graft-versus-host-disease.

18. A method for determining the presence of a PRO polypeptide of the invention as described in Figures 1-2517 (SEQ ID NOS: 1-2517), in a sample suspected of containing said polypeptide, said method comprising exposing said sample to an anti-PRO antibody, where the and determining binding of said antibody to a component of said sample.

19. A method of diagnosing an immune related disease in a mammal, said method comprising detecting the level of expression of a gene encoding a PRO polypeptide of the invention as described in Figures 1-2517 (SEQ ID NOS: 1-2517), (a) in a test sample of tissue cells obtained from the mammal, and (b) in a control sample of known normal tissue cells of the same cell type, wherein a higher or lower level of expression of said gene in the test sample as compared to the control sample is indicative of the presence of an immune related disease in the mammal from which the test tissue cells were obtained.

20. A method of diagnosing an immune related disease in a mammal, said method comprising (a) contacting a PRO polypeptide of the invention as described in Figures 1-2517 (SEQ ID NOS: 1-2517), anti-PRO antibody with a test sample of tissue cells obtained from said mammal and (b) detecting the formation of a complex between the antibody and the polypeptide in the test sample, wherein formation of said complex is indicative of the presence of an immune related disease in the mammal from which the test tissue cells were obtained.

21. A method of identifying a compound that inhibits the activity of a PRO polypeptide of the invention as described in Figures 1-2517 (SEQ ID NOS: 1-2517), said method comprising contacting cells which normally respond to said polypeptide with (a) said polypeptide and (b) a candidate compound, and determining the lack responsiveness by said cell to (a).

22. A method of identifying a compound that inhibits the expression of a gene encoding a PRO polypeptide of the invention as described in Figures 1-2517 (SEQ ID NOS: 1-2517), said method comprising contacting cells which normally express said polypeptide with a candidate compound, and determining the lack of expression said gene.

23. The method of Claim 22, wherein said candidate compound is an antisense nucleic acid.

24. A method of identifying a compound that mimics the activity of a PRO polypeptide of the invention as described in any one of Figures 1-2517 (SEQ ID NOS: 1-2517), said method comprising contacting cells which normally respond to said polypeptide with a candidate compound, and determining the responsiveness by said cell to said candidate compound.

25. A method of stimulating the immune response in a mammal, said method comprising administering to said mammal an effective amount of a PRO polypeptide of the invention as described in any one of Figures 1-2517 (SEQ ID NOS: 1-2517), antagonist, wherein said immune response is stimulated.

26. A method of diagnosing an inflammatory immune response in a mammal, said method comprising detecting the level of expression of a gene encoding a PRO polypeptide of the invention as described in any one of Figures 1-2517 (SEQ ID NOS: 1-2517), (a) in a test sample of tissue cells obtained from the mammal, and (b) in a control sample of known normal tissue cells of the same cell type, wherein a higher or lower level of expression of said gene in the test sample as compared to the control sample is indicative of the presence of an inflammatory immune response in the mammal from which the test tissue cells were obtained.

27. A method of differentiating monocytes comprising;

(a) isolating a population of monocytes;

(b) contacting the monocytes with an effective amount of a PRO polypeptide of the invention as described in any of of Figures 1-2517 (SEQ ID NOS: 1-2517); and

(c) determining the differentiation of said monocytes to said PRO polypeptide.

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FIGURE 1

CATCCGGTGTGGTCGACGGGTCCTCCAAGAGTTTGGGGCGCGGACCGGAGTACCTTGCGTGCAGTT**ATG**TCGGCG
TCGGTAGTGTCTGTCATTTCGCGGTTCTTAGAAGAGTACTTGAGCTCCACTCCGCAGCGTCTGAAGTTGCTGGAC
GCGTACCTGCTGTATATACTGCTGACCGGGGCGCTGCAGTTCGGTTACTGTCTCCTCGTGGGGACCTTCCCCTTC
AACTCTTTTCTCTCGGGCTTCATCTCTTGTGTGGGGAGTTTCATCCTAGCGGTTTGCCTGAGAATACAGATCAAC
CCACAGAACAAAGCGGATTTCCAAGGCATCTCCCCAGAGCGAGCCTTTGCTGATTTTCTCTTTGCCAGCACCATC
CTGCACCTTGTTGTCATGAACTTTGTTGGC**TGA**ATCATTCTCATTTACTTAATTGAGGAGTAGGAGACTAAAAGA
ATGTTCACTCTTTGAATTTCCTGGATAAGAGTTCTGGAGATGGCAGCTTATTGGACACATGGATTTTCTTCAGAT
TTGACACTTACTGCTAGCTCTGCTTTTTATGACAGGAGAAAAGCCCAGAGTTCACTGTGTGTCAGAACAACTTTC
TAACAAACATTTATTAATCCAGCCTCTGCCTTTCATTAAATGTAACCTTTTGCTTTCCAAATTAAAGAACTCCAT
GCCACTCCTCAAAAAAAAAAAAAA

FIGURE 2

MSASVVSVISRFLEEYLSSTPQRLKLLDAYLLYILLTGALQFGYCLLVGTFPFNSFLSGFISCVGSFILAVCLRI
QINPQNKADFQGISPERAFADFLFASTILHLVVMNFVG

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FIGURE 3

CTCCGGCGCAGTGTTGGGACTGTCTGGGTATCGGAAAGCAAGCCTACGTTGCTCACTATTACGTATAATCCTTTT
CTTTTCAAG**ATG**CCTGAGGAAGTGCACCATGGAGAGGAGGAGGTGGAGACTTTTGCCTTTCAGGCAGAAATTGCC
CAACTCATGTCCCTCATCATCAATACCTTCTATTCCAACAAGGAGATTTTCCTTCGGGAGTTGATCTCTAATGCT
TCTGATGCCTTGGACAAGATTCGCTATGAGAGCCTGACAGACCCTTCGAAGTTGGACAGTGGTAAAGAGCTGAAA
ATTGACATCATCCCCAACCCTCAGGAACGTACCCTGACTTTGGTAGACACAGGCATTGGCATGACCAAAGCTGAT
CTCATAAATAATTTGGGAACCATTGCCAAGTCTGGTACTAAAGCATTCATGGAGGCTCTTCAGGCTGGTGCAGAC
ATCTCCATGATTGGGCAGTTTGGTGTTGGCTTTTATTCTGCCTACTTGGTGGCAGAGAAAGTGGTTGTGATCACA
AAGCACAACGATGATGAACAGTATGCTTGGGAGTCTTCTGCTGGAGGTTCCTTCACTGTGCGTGCTGACCATGGT
GAGCCCATTGGCAGGGGTACCAAAGTGATCCTCCATCTTAAAGAAGATCAGACAGAGTACCTAGAAGAGAGGCGG
GTCAAAGAAGTAGTGAAGAAGCATTCTCAGTTCATAGGCTATCCCATCACCCTTTATTTGGAGAAGGAACGAGAG
AAGGAAATTAGTGATGATGAGGCAGAGGAAGAGAAAGGTGAGAAAGAAGAGGAAGATAAAGATGATGAAGAAAAA
CCCAAGATCGAAGATGTGGGTTCAGATGAGGAGGATGACAGCGGTAAGGATAAGAAGAAGAAAACTAAGAAGATC
AAAGAGAAATACATTGATCAGGAAGAACTAAACAAGACCAAGCCTATTTGGACCAGAAACCCTGATGACATCACC
CAAGAGGAGTATGGAGAATTCTACAAGAGCCTCACTAATGACTGGGAAGACCACTTGGCAGTCAAGCACTTTTCT
GTAGAAGGTCAGTTGGAATTCAGGGCATTGCTATTTATTCCTCGTCGGGCTCCCTTTGACCTTTTTGAGAACAAG
AAGAAAAAGAACAACATCAAACTCTATGTCCGCCGTGTGTTCATCATGGACAGCTGTGATGAGTTGATACCAGAG
TATCTCAATTTTATCCGTGGTGTGGTTGACTCTGAGGATCTGCCCCTGAACATCTCCCGAGAAATGCTCCAGCAG
AGCAAAATCTTGAAAGTCATTCGCAAAAACATTGTTAAGAAGTGCCTTGAGCTCTTCTCTGAGCTGGCAGAAGAC
AAGGAGAATTACAAGAAATTCTATGAGGCATTCTCTAAAAATCTCAAGCTTGGAATCCACGAAGACTCCACTAAC
CGCCGCCGCCTGTCTGAGCTGCTGCGCTATCATACCTCCCAGTCTGGAGATGAGATGACATCTCTGTCAGAGTAT
GTTTCTCGCATGAAGGAGACACAGAAGTCCATCTATTACATCACTGGTGAGAGCAAAGAGCAGGTGGCCAACTCA
GCTTTTGTGGAGCGAGTGCGGAAACGGGGCTTCGAGGTGGTATATATGACCGAGCCCATTGACGAGTACTGTGTG
CAGCAGCTCAAGGAATTTGATGGGAAGAGCCTGGTCTCAGTTACCAAGGAGGGTCTGGAGCTGCCTGAGGATGAG
GAGGAGAAGAAGAAGATGGAAGAGAGCAAGGCAAAGTTTGAGAACCTCTGCAAGCTCATGAAAGAAATCTTAGAT
AAGAAGGTTGAGAAGGTGACAATCTCCAATAGACTTGTGTCTTCACCTTGCTGCATTGTGACCAGCACCTACGGC
TGGACAGCCAATATGGAGCGGATCATGAAAGCCCAGGCACTTCGGGACAACTCCACCATGGGCTATATGATGGCC
AAAAAGCACCTGGAGATCAACCCTGACCACCCCATTGTGGAGACGCTGCGGCAGAAGGCTGAGGCCGACAAGAAT
GATAAGGCAGTTAAGGACCTGGTGGTGCTGCTGTTTGAAACCGCCCTGCTATCTTCTGGCTTTTCCCTTGAGGAT
CCCCAGACCCACTCCAACCGCATCTATCGCATGATCAAGCTAGGTCTAGGTATTGATGAAGATGAAGTGGCAGCA
GAGGAACCCAATGCTGCAGTTCCTGATGAGATCCCCCCTCTCGAGGGCGATGAGGATGCGTCTCGCATGGAAGAA
GTCGAT**TAG**GTTAGGAGTTCATAGTTGGAAAACTTGTGCCCTTGTATAGTGTCCCCATGGGCTCCCACTGCAGCC
TCGAGTGCCCCTGTCCCACCTGGCTCCCCCTGCTGGTGTCTAGTGTTTTTTTCCCTCTCCTGTCCTTGTGTTGAA
GGCAGTAAACTAAGGGTGTCAAGCCCCATTCCCTCTCTACTCTTGACAGCAGGATTGGATGTTGTGTATTGTGGT
TTATTTTATTTTCTTCATTTTGTTCTGAAATTAAAGTATGCAAAATAAAGAATATGCCGTTTTAAAAAAAAAAAA
AAAAAAAAAAAAAAAA

FIGURE 4

MPEEVHHGEEEVETFAFQAEIAQLMSLIINTFYSNKEIFLRELISNASDALDKIRYESLTDPSKLDSGKELKIDI
IPNPQERTLTLVDTGIGMTKADLINNLGTIAKSGTKAFMEALQAGADISMIGQFGVGFYSAYLVAEKVVVITKHN
DDEQYAWESSAGGSFTVRADHGEPIGRGTKVILHLKEDQTEYLEERRVKEVVKKHSQFIGYPITLYLEKEREKEI
SDDEAEEEKGEKEEEDKDDEEKPKIEDVGSDEEDDSGKDKKKKTKKIKEKYIDQEELNKTKPIWTRNPDDITQEE
YGEFYKSLTNDWEDHLAVKHFSVEGQLEFRALLFIPRRAPFDLFENKKKKNNIKLYVRRVFIMDSCDELIPEYLN
FIRGVVDSEDLPLNISREMLQQSKILKVIRKNIVKKCLELFSELAEDKENYKKFYEAFSKNLKLGIHEDSTNRRR
LSELLRYHTSQSGDEMTSLSEYVSRMKETQKSIYYITGESKEQVANSAFVERVRKRGFEVVYMTEPIDEYCVQQL
KEFDGKSLVSVTKEGLELPEDEEEKKKMEESKAKFENLCKLMKEILDKKVEKVTISNRLVSSPCCIVTSTYGWTA
NMERIMKAQALRDNSTMGYMMAKKHLEINPDHPIVETLRQKAEADKNDKAVKDLVVLLFETALLSSGFSLEDPQT
HSNRIYRMIKLGLGIDEDEVAAEEPNAAVPDEIPPLEGDEDASRMEEVD

FIGURE 5

ATGCAGGCCCCACGGGAGCTCGCGGTGGGCATCGACCTGGGCACCACCTACTCGTGCGTGGGCGTGTTTCAGCAG
GGCCGCGTGGAGATCCTGGCCAACGACCAGGGCAACCGCACCACGCCCAGCTACGTGGCCTTCACCGACACCGAG
CGGCTGGTCGGGGACGCGGCCAAGAGCCAGGCGGCCCTGAACCCCCACAACACCGTGTTCGATGCCAAGCGGCTG
ATCGGGCGCAAGTTCGCGGACACCACGGTGCAGTCGGACATGAAGCACTGGCCCTTCCGGGTGGTGAGCGAGGGC
GGCAAGCCCAAGGTGCCGGTATCGTACCGCGGGGAGGACAAGACGTTCTACCCCGAGGAGATCTCGTCCATGGTG
CTGAGCAAGATGAAGGAGACGGCCGAGGCGTACCTGGGCCAGCCCGTGAAGCACGCAGTGATCACCGTGCCCGCC
TATTTCAATGACTCGCAGCGCCAGGCCACCAAGGACGCGGGGGCCATCGCGGGGCTCAACGTGTTGCGGATCATC
AATGAGCCCACGGCAGCTGCCATCGCCTATGGGCTGGACCGGCGGGGCGCGGGAGAGCGCAACGTGCTCATTTTT
GACCTGGGTGGGGGCACCTTCGATGTGTCGGTTCTCTCCATTGACGCTGGTGTCTTTGAGGTGAAAGCCACTGCT
GGAGATACCCACCTGGGAGGAGAGGACTTCGACAACCGGCTCGTGAACCACTTCATGGAAGAATTCCGGCGGAAG
CATGGGAAGGACCTGAGCGGGAACAAGCGTGCCCTCGGCAGGCTGCGCACAGCCTGTGAGCGCGCCAAGCGCACC
CTGTCCTCCAGCACCCAGGCCACCCTGGAGATAGACTCCCTGTTCGAGGGCGTGGACTTCTACACGTCCATCACT
CGTGCCCGCTTTGAGGAACTGTGCTCAGACCTCTTCCGCAGCACCCTGGAGCCGGTGGAGAAGGCCCTGCGGGAT
GCCAAGCTGGACAAGGCCCAGATTCATGACGTCGTCCTGGTGGGGGGCTCCACTCGCATCCCCAAGGTGCAGAAG
TTGCTGCAGGACTTCTTCAACGGCAAGGAGCTGAACAAGAGCATCAACCCTGATGAGGCTGTGGCCTATGGGGCT
GCTGTGCAGGCGGCCGTGTTGATGGGGGACAAATGTGAGAAAGTGCAGGATCTCCTGCTGCTGGATGTGGCTCCC
CTGTCTCTGGGGCTGGAGACAGCAGGTGGGGTGATGACCACGCTGATCCAGAGGAACGCCACTATCCCCACCAAG
CAGACCCAGACTTTCACCACCTACTCGGACAACCAGCCTGGGGTCTTCATCCAGGTGTATGAGGGTGAGAGGGCC
ATGACCAAGGACAACAACCTGCTGGGGCGTTTTGAACTCAGTGGCATCCCTCCTGCCCCACGTGGAGTCCCCCAG
ATAGAGGTGACCTTTGACATTGATGCTAATGGCATCCTGAGCGTGACAGCCACTGACAGGAGCACAGGTAAGGCT
AACAAGATCACCATCACCAATGACAAGGGCCGGCTGAGCAAGGAGGAGGTGGAGAGGATGGTTCATGAAGCCGAG
CAGTACAAGGCTGAGGATGAGGCCCAGAGGGACAGAGTGGCTGCCAAAAACTCGCTGGAGGCCCATGTCTTCCAT
GTGAAAGGTTCTTTGCAAGAGGAAAGCCTTAGGGACAAGATTCCCGAAGAGGACAGGCGCAAAATGCAAGACAAG
TGTCGGGAAGTCCTTGCCTGGCTGGAGCACAACCAGCTGGCAGAGAAGGAGGAGTATGAGCATCAGAAGAGGGAG
CTGGAGCAAATCTGTCGCCCCATCTTCTCCAGGCTCTATGGGGGGCCTGGTGTCCCTGGGGGCAGCAGTTGTGGC
ACTCAAGCCCGCCAGGGGGACCCCAGCACCGGCCCCATCATTGAGGAGGTTGAT**TGA**

FIGURE 6

MQAPRELAVGIDLGTTYSCVGVFQQGRVEILANDQGNRTTPSYVAFTDTERLVGDAAKSQAALNPHNTVFDAKRL
IGRKFADTTVQSDMKHWPFRVVSEGGKPKVPVSYRGEDKTFYPEEISSMVLSKMKETAEAYLGQPVKHAVITVPA
YFNDSQRQATKDAGAIAGLNVLRIINEPTAAAIAYGLDRRGAGERNVLIFDLGGGTFDVSVLSIDAGVFEVKATA
GDTHLGGEDFDNRLVNHFMEEFRRKHGKDLSGNKRALGRLRTACERAKRTLSSSTQATLEIDSLFEGVDFYTSIT
RARFEELCSDLFRSTLEPVEKALRDAKLDKAQIHDVVLVGGSTRIPKVQKLLQDFFNGKELNKSINPDEAVAYGA
AVQAAVLMGDKCEKVQDLLLLDVAPLSLGLETAGGVMTTLIQRNATIPTKQTQTFTTYSDNQPGVFIQVYEGERA
MTKDNNLLGRFELSGIPPAPRGVPQIEVTFDIDANGILSVTATDRSTGKANKITITNDKGRLSKEEVERMVHEAE
QYKAEDEAQRDRVAAKNSLEAHVFHVKGSLQEESLRDKIPEEDRRKMQDKCREVLAWLEHNQLAEKEEYEHQKRE
LEQICRPIFSRLYGGPGVPGGSSCGTQARQGDPSTGPIIEEVD

FIGURE 7A

TGCGACCGCCTCCCTGCGCCCCGCCCCTCCGGCTAGCTCGCTGGCTCCCGGCTCCTCCCGACGTCTCCTACCTCC
TCACGGCTCTTCCCGGCGCTCTCCTGGCTCCCTTCTGCCCCAGCTCCGTCTCGGCGGCGGCGGGCAGTTGCAGTG
GTGCAGA**ATG**GCTGACCTCAGTCTTGCAGATGCATTAACAGAACCATCTCCAGACATTGAGGGAGAGATAAAGCG
GGACTTCATTGCCACACTAGAGGCAGAGGCCTTTGATGATGTTGTGGGAGAAACTGTTGGAAAAACAGACTATAT
TCCTCTCCTGGATGTTGATGAGAAAACCGGGAACTCAGAGTCAAAGAAGAAACCGTGCTCAGAAACTAGCCAGAT
TGAAGATACTCCATCTTCTAAACCAACACTCCTAGCCAATGGTGGTCATGGAGTAGAAGGGAGCGATACTACAGG
GTCTCCAACTGAATTCCTTGAAGAGAAAATGGCCTACCAGGAATACCCAAATAGCCAGAACTGGCCAGAAGATAC
CAACTTTTGTTTCCAACCTGAGCAAGTGGTCGATCCTATCCAGACTGATCCCTTTAAGATGTACCATGATGATGA
CCTGGCAGATTTGGTCTTTCCCTCCAGTGCGACAGCTGATACTTCAATATTTGCAGGACAAAATGATCCCTTGAA
AGACAGTTACGGTATGTCTCCCTGCAACACAGCTGTTGTACCTCAGGGGTGGTCTGTGGAAGCCTTAAACTCTCC
ACACTCAGAGTCCTTTGTTTCCCCAGAGGCTGTTGCAGAACCTCCTCAGCCAACGGCAGTTCCCTTAGAGCTAGC
CAAGGAGATAGAAATGGCATCAGAAGAGAGGCCACCAGCACAAGCATTGGAAATAATGATGGGACTGAAGACTAC
TGACATGGCACCATCTAAAGAAACAGAGATGGCCCTCGCCAAGGACATGGCACTAGCTACAAAAACCGAGGTGGC
ATTGGCTAAAGATATGGAATCACCCACCAAATTAGATGTGACACTGGCCAAGGACATGCAGCCATCCATGGAATC
AGATATGGCCCTAGTCAAGGACATGGAACTACCCACAGAAAAAGAAGTGGCCCTGGTTAAGGATGTCAGATGGCC
CACAGAAACAGATGTATCTTCAGCCAAGAATGTGGTACTGCCCACAGAAACAGAGGTAGCCCCAGCCAAGGATGT
GACACTGTTGAAAGAAACAGAGAGGGCATCTCCTATAAAAATGGACTTAGCCCCTTCCAAGGACATGGGACCACC
CAAAGAAAACAAGAAAGAAACAGAGAGGGCATCTCCTATAAAAATGGACTTGGCTCCTTCCAAGGACATGGGACC
ACCCAAAGAAAACAAGATAGTCCCAGCCAAGGATTTGGTATTACTCTCAGAAATAGAGGTGGCACAGGCTAATGA
CATTATATCATCCACAGAAATATCCTCTGCTGAGAAGGTGGCTTTGTCCTCAGAAACAGAGGTAGCCCTGGCCAG
GGACATGACACTGCCCCCGGAAACCAACGTGATCTTGACCAAGGATAAAGCACTACCTTTAGAAGCAGAGGTGGC
CCCAGTCAAGGACATGGCTCAACTCCCAGAAACAGAAATAGCCCCGGCCAAGGATGTGGCTCCGTCCACAGTAAA
AGAAGTGGGCTTGTTGAAGGACATGTCTCCACTATCAGAAACAGAAATGGCTCTGGGCAAGGATGTGACTCCACC
TCCAGAAACAGAAGTAGTTCTCATCAAGAACGTATGTCTGCCTCCAGAAATGGAGGTGGCCCTGACTGAGGATCA
GGTCCCAGCCCTCAAAACAGAAGCACCCCTGGCTAAGGATGGGGTTCTGACCCTGGCCAACAATGTGACTCCAGC
CAAAGATGTTCCACCACTCTCAGAAACAGAGGCAACACCAGTTCCAATTAAAGACATGGAAATTGCACAAACACA
AAAAGGAATAAGTGAGGATTCCCATTTAGAATCTCTGCAGGATGTGGGGCAGTCAGCTGCACCTACTTTCATGAT
TTCACCAGAAACCATCACAGGAACGGGGAAAAAGTGCAGCTTGCCGGCCGAGGAGGATTCTGTGTTAGAAAAACT
AGGGGAAAGGAAACCATGCAACAGTCAACCTTCTGAGCTTTCTTCAGAGACCTCAGGAATAGCCAGGCCAGAAGA
AGGAAGGCCTGTGGTGAGTGGGACAGGAAATGACATCACCACCCCACCGAACAAGGAGCTCCCACCAAGCCCAGA
GAAGAAAACAAAGCCTTTGGCCACCACTCAACCTGCAAAGACTTCAACATCGAAAGCCAAAACACAGCCCACTTC
TCTCCCTAAGCAGCCAGCTCCCACCACCATTGGTGGGTTGAATAAAAAACCCATGAGCCTTGCTTCAGGCTTAGT
GCCAGCTGCCCCACCCAAACGCCCTGCCGTCGCCTCTGCCAGGCCTTCCATCTTACCTTCAAAAGACGTGAAGCC
AAAGCCCATTGCAGATGCAAAGGCTCCTGAGAAGCGGGCCTCACCATCCAAGCCAGCTTCTGCCCCAGCCTCCAG
ATCTGGGTCCAAGAGCACTCAGACTGTTGCAAAAACCACAACAGCTGCTGCTGTTGCCTCAACTGGCCCAAGCAG
TAGGAGCCCCTCCACGCTCCTGCCCAAGAAGCCCACTGCCATTAAGACTGAGGGAAAACCTGCAGAAGTCAAGAA
GATGACTGCAAAGTCTGTACCAGCTGACTTGAGTCGCCCAAAGAGCACCTCCACCAGTTCCATGAAGAAAACCAC
CACTCTCAGTGGGACAGCCCCCGCTGCAGGGGTGGTTCCCAGCCGAGTCAAGGCCACACCCATGCCCTCCCGGCC
CTCCACAACTCCTTTCATAGACAAGAAGCCCACCTCGGCCAAACCCAGCTCCACCACCCCCCGGCTCAGCCGCCT
GGCCACCAATACTTCTGCTCCTGATCTGAAGAATGTCCGCTCCAAGGTTGGCTCCACGGAAAACATCAAGCATCA
GCCTGGAGGAGGCCGGGCCAAAGTAGAGAAAAAAACAGAGGCAGCTGCTACAACCCGAAAGCCTGAATCTAATGC
AGTCACTAAAACAGCCGGCCCAATTGCAAGTGCACAGAAACAACCTGCGGGGAAAGTCCAGATAGTCTCCAAAAA
AGTGAGCTACAGCCATATTCAGTCCAAGTGTGGTTCCAAGGACAATATTAAGCATGTCCCTGGAGGTGGTAATGT
TCAGATTCAGAACAAGAAAGTGGACATCTCTAAGGTCTCCTCCAAGTGTGGGTCTAAGGCTAACATCAAGCACAA
GCCTGGTGGAGGAGATGTCAAGATTGAAAGTCAGAAGTTGAACTTCAAGGAGAAGGCCCAGGCCAAGGTGGGATC
CCTCGATAATGTGGGCCACCTACCTGCAGGAGGTGCTGTGAAGACTGAGGGCGGTGGCAGCGAGGCTCCTCTGTG
TCCGGGTCCCCCTGCTGGGGAGGAGCCGGCCATCTCTGAGGCAGCGCCTGAAGCTGGCGCCCCCACTTCAGCCAG
TGGCCTCAATGGCCACCCCACCCTGTCAGGGGGTGGTGACCAAAGGGAGGCCCAGACCTTGGACAGCCAGATCCA

FIGURE 7B

GGAGACAAGCATC**TAA**TGATGACATTCTGGTCTCGTCTTCCGTCTCCCCCGTGTTCCCCTCTTGTCTCCCCTGTT
CCCCTCTCCCTTCCCTCCTCCCATGTCACTGCAGATTGAGACCTACAGGCTGACGTTCCGGGCAAATGCCAGGGC
CCGCACCGACCACGGGGCCGACATTGTCTCCCGCCCCCCACACTTCCCTGGCGGCCCCAACTCGGGCTCCCGGGT
CCTTGGCCCCCTTTCCCGGGCTGTCCACTAGACCAGTGAGCGCTTGGGCGCCGTGCTGGGCAGCCCGCTAGGCTC
GCCTTCCCTCCTGCTTTGCGTGCCCGGGGCAGCAGCAGCCCTGCCCCACACCTCCTCTCACTCCCCAGCCTGGGC
CCATCTCCCTGCTTTGGTCTTGCCCCATCACTGCGCCACTGCTCCGTGGAGGAGGTTGGGAGGGGGTTGGGGTGG
TTGAGGCTAAGTTGGGATCTAGGAGAGGAGAACCAGATTCTATCCTCATCTTTTTTTGGTTCTTTGGTCCAAACC
CAAAAGAAACTGACATGCCCTCCCTTCTCCCTGGATCTACCTGGAGGGAAGAGTGGAGGTGGATTCCGAGTGGTG
ACAGGACGCTGACCGTGGAGCTTAAGCCACTGCCTCTCCCTCTGGTCCCACAAATGGGCGCCCCCCCCTCCCCAT
GCAGGTGGTGTCGGGCCCTTCTTGCTGCCCTGCCCCAAGTTGGGGGTCAGTGCTGCCTGTCCCCATGCTTAACAT
ACCCGCCTAGCTGCTGTCACATTTTTCTTGTTTTGTCCTTTTATTTTTTTCTAATAACCTAAAAACTGGCAAAAT
AGTTCTGCAGGTTGAAGCCATGTCTACATGAAAGTCCTCAGTAAGTGTTAGAGGGAACAGGGCGGAGATATCCTT
ATGCCACCCCCGCTGGAGGATGTGGGCAGCTTAGGGCCCTGGAGGCGGTGCGGCAGGGAAGAGGGGTGCAGAGGC
TGTGGCTGGTGAGCCGGTCAGGCACACAAGGGGCCCTTGGAGCGTGGACTGGTTGGTTTTGCCATTTTGTTGTGT
GTATGCTGCTTTTCTTTTCTAACCAAGAGGCTGGTTTTGGCATCTCTGTCCCATTCCCTGGGATCTGGTGGTCAG
CCCTAGGATAAAAAGCCAGGGCTGGAGAACAAGAAAGGGCCAGGAGATGAATTC

FIGURE 8

MADLSLADALTEPSPDIEGEIKRDFIATLEAEAFDDVVGETVGKTDYIPLLDVDEKTGNSESKKKPCSETSQIED
TPSSKPTLLANGGHGVEGSDTTGSPTEFLEEKMAYQEYPNSQNWPEDTNFCFQPEQVVDPIQTDPFKMYHDDDLA
DLVFPSSATADTSIFAGQNDPLKDSYGMSPCNTAVVPQGWSVEALNSPHSESFVSPEAVAEPPQPTAVPLELAKE
IEMASEERPPAQALEIMMGLKTTDMAPSKETEMALAKDMALATKTEVALAKDMESPTKLDVTLAKDMQPSMESDM
ALVKDMELPTEKEVALVKDVRWPTETDVSSAKNVVLPTETEVAPAKDVTLLKETERASPIKMDLAPSKDMGPPKE
NKKETERASPIKMDLAPSKDMGPPKENKIVPAKDLVLLSEIEVAQANDIISSTEISSAEKVALSSETEVALARDM
TLPPETNVILTKDKALPLEAEVAPVKDMAQLPETEIAPAKDVAPSTVKEVGLLKDMSPLSETEMALGKDVTPPPE
TEVVLIKNVCLPPEMEVALTEDQVPALKTEAPLAKDGVLTLANNVTPAKDVPPLSETEATPVPIKDMEIAQTQKG
ISEDSHLESLQDVGQSAAPTFMISPETITGTGKKCSLPAEEDSVLEKLGERKPCNSQPSELSSETSGIARPEEGR
PVVSGTGNDITTPPNKELPPSPEKKTKPLATTQPAKTSTSKAKTQPTSLPKQPAPTTIGGLNKKPMSLASGLVPA
APPKRPAVASARPSILPSKDVKPKPIADAKAPEKRASPSKPASAPASRSGSKSTQTVAKTTTAAAVASTGPSSRS
PSTLLPKKPTAIKTEGKPAEVKKMTAKSVPADLSRPKSTSTSSMKKTTTLSGTAPAAGVVPSRVKATPMPSRPST
TPFIDKKPTSAKPSSTTPRLSRLATNTSAPDLKNVRSKVGSTENIKHQPGGGRAKVEKKTEAAATTRKPESNAVT
KTAGPIASAQKQPAGKVQIVSKKVSYSHIQSKCGSKDNIKHVPGGGNVQIQNKKVDISKVSSKCGSKANIKHKPG
GGDVKIESQKLNFKEKAQAKVGSLDNVGHLPAGGAVKTEGGGSEAPLCPGPPAGEEPAISEAAPEAGAPTSASGL
NGHPTLSGGGDQREAQTLDSQIQETSI

FIGURE 9

CCGGCACGAGAGGAGTTGTGAGTTTCCAAGCCCCAGCTCACTCTGACCACTTCTCTGCCTGCCCAGCATC**ATG**AA
GGGCCTTGCAGCTGCCCTCCTTGTCCTCGTCTGCACCATGGCCCTCTGCTCCTGTGCACAAGTTGGTACCAACAA
AGAGCTCTGCTGCCTCGTCTATACCTCCTGGCAGATTCCACAAAAGTTCATAGTTGACTATTCTGAAACCAGCCC
CCAGTGCCCCAAGCCAGGTGTCATCCTCCTAACCAAGAGAGGCCGGCAGATCTGTGCTGACCCCAATAAGAAGTG
GGTCCAGAAATACATCAGCGACCTGAAGCTGAATGCC**TGA**GGGGCCTGGAAGCTGCGAGGGCCCAGTGAACTTGG
TGGGCCCAGGAGGGAACAGGAGCCTGAGCCAGGGCAATGGCCCTGCCACCCTGGAGGCCACCTCTTCTAAGAGTC
CCATCTGCTATGCCCAGCCACATTAACTAACTTTAATCTTAGTTTATGCATCATATTTCATTTTGAAATTGATTT
CTATTGTTGAGCTGCATTATGAAATTAGTATTTTCTCTGACATCTCATGACATTGTCTTTATCATCCTTTCCCCT
TTCCCTTCAACTCTTCGTACATTCAATGCATGGATCAATCAGTGTGATTAGCTTTCTCAGCAGACATTGTGCCAT
ATGTATCAAATGACAAATCTTTATTGAATGGTTTTGCTCAGCACCACCTTTTAATATATTGGCAGTACTTATTAT
ATAAAAGGTAAACCAGCATTCTCACTGTGAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 10

MKGLAAALLVLVCTMALCSCAQVGTNKELCCLVYTSWQIPQKFIVDYSETSPQCPKPGVILLTKRGRQICADPNK
KWVQKYISDLKLNA

FIGURE 11

ATTCCGCTCTTGCTTTCCGGCAGGTGATGGCGCCCCCCGCGGCCTAGAGGTCCAGCGCCCGCCGCGAGCAGCGGA
CAGTCCTCCTGTTGTGTCCGACCGAGAGTCCTGGTGACTTTGAAC**ATG**CTGGTGCCGCTAGCCAAGCTGTCCTGC
CTGGCATATCAGTGCTTTCATGCCTTAAAAATTAAGAAAAATTATCTACCTCTATGTGCTATAAGATGGTCTTCA
ACTTCTACTGTGCCTCGAATTACTACCCATTATACTATTTATCCCCGGGATAAGGACAAGAGATGGGAAGGAGTG
AACATGGAAAGGTTTGCAGAAGAAGCAGATGTTGTAATAGTTGGTGCAGGCCCTGCAGGGCTCTCTGCAGCTGTT
CGTCTAAAACAGTTGGCTGTGGCACATGAAAAGGACATCCGTGTGTGTCTAGTGGAGAAAGCTGCCCAGATAGGA
GCTCATACTCTCTCAGGGGCTTGCCTTGATCCAGGTGCTTTTAAAGAACTCTTCCCAGACTGGAAAGAGAAGGGG
GCTCCACTTAACACTCCTGTAACAGAAGACAGATTTGGAATTTTAACAGAGAAATACAGAATTCCTGTGCCAATT
CTTCCAGGGCTTCCAATGAATAATCATGGCAATTACATTGTACGCTTGGGACATTTAGTGAGCTGGATGGGCGAA
CAAGCAGAAGCCCTTGGTGTTGAAGTATACCCTGGTTATGCAGCTGCTGAGGTCCTTTTTCATGATGATGGTAGT
GTAAAAGGAATTGCCACTAACGATGTAGGGATACAAAAGGATGGTGCACCAAAGGCAACATTTGAGAGAGGACTG
GAACTACATGCTAAAGTCACAATTTTTGCAGAAGGTTGCCATGGACATCTAGCCAAGCAACTATATAAGAAGTTT
GATTTGAGAGCAAATTGTGAACCTCAAACCTACGGGATTGGACTGAAGGAGTTATGGGTTATTGATGAAAAGAAC
TGGAAACCTGGGAGAGTAGATCACACTGTTGGTTGGCCCTTGGACAGACATACCTATGGAGGATCTTTCCTCTAT
CATTTGAATGAAGGTGAACCCCTAGTAGCTCTTGGTCTTGTGGTTGGTCTAGACTATCAGAATCCATACCTGAGT
CCATTTAGAGAGTTCCAAAGGTGGAAACACCATCCTAGCATTCGGCCAACCTTGGAAGGTGGAAAAAGGATTGCA
TACGGAGCCAGAGCTCTCAATGAAGGTGGCTTTCAGTCTATACCAAAACTCACCTTTCCTGGTGGTTTACTAATT
GGTTGTAGTCCTGGTTTTATGAATGTTCCCAAGATCAAAGGTACTCACACAGCAATGAAAAGTGGAATTTTAGCA
GCAGAATCTATTTTTAATCAACTAACTAGTGAAAATCTCCAATCAAAGACAATAGGACTCCATGTAACTGAATAT
GAGGACAATTTGAAGAACTCATGGGTATGGAAAGAGCTATATTCTGTTAGAAATATAAGACCGTCCTGCCACGGA
GTACTGGGTGTATATGGAGGGATGATTTACACTGGAATCTTTTACTGGATATTGAGAGGAATGGAGCCGTGGACT
CTGAAACATAAAGGTTCTGACTTTGAACGGCTCAAGCCAGCCAAGGATTGCACACCTATTGAGTATCCAAAACCC
GATGGACAGATCAGTTTTGACCTCTTGTCATCTGTGGCTCTGAGTGGTACTAATCATGAACATGACCAGCCGGCA
CACTTAACCTTAAGGGATGACAGTATACCTGTAAATAGAAATCTGTCGATATATGATGGGCCCGAGCAGCGATTC
TGTCCTGCAGGAGTTTATGAATTTGTACCTGTGGAACAAGGTGATGGATTTCGGTTACAGATAAATGCTCAGAAC
TGTGTACATTGTAAAACATGTGATATTAAAGATCCAAGTCAGAATATTAACTGGGTGGTACCTGAAGGTGGAGGA
GGACCTGCTTACAATGGAATG**TAA**ACTGCAGCTAGCCAGTTTCTTTCAAGTATGGCAAGCTAACGTTAAAATGTT
TAGAGATTAACAGATTTCAGAATGTCTTTCTGCATATTACTGAACAGAATAGTCACAAAATGATTATCAAATAAA
AATTTTATACTATAAAAAAAAAAA

FIGURE 12

MLVPLAKLSCLAYQCFHALKIKKNYLPLCAIRWSSTSTVPRITTHYTIYPRDKDKRWEGVNMERFAEEADVVIVG
AGPAGLSAAVRLKQLAVAHEKDIRVCLVEKAAQIGAHTLSGACLDPGAFKELFPDWKEKGAPLNTPVTEDRFGIL
TEKYRIPVPILPGLPMNNHGNYIVRLGHLVSWMGEQAEALGVEVYPGYAAAEVLFHDDGSVKGIATNDVGIQKDG
APKATFERGLELHAKVTIFAEGCHGHLAKQLYKKFDLRANCEPQTYGIGLKELWVIDEKNWKPGRVDHTVGWPLD
RHTYGGSFLYHLNEGEPLVALGLVVGLDYQNPYLSPFREFQRWKHHPSIRPTLEGGKRIAYGARALNEGGFQSIP
KLTFPGGLLIGCSPGFMNVPKIKGTHTAMKSGILAAESIFNQLTSENLQSKTIGLHVTEYEDNLKNSWVWKELYS
VRNIRPSCHGVLGVYGGMIYTGIFYWILRGMEPWTLKHKGSDFERLKPAKDCTPIEYPKPDGQISFDLLSSVALS
GTNHEHDQPAHLTLRDDSIPVNRNLSIYDGPEQRFCPAGVYEFVPVEQGDGFRLQINAQNCVHCKTCDIKDPSQN
INWVVPEGGGGPAYNGM

FIGURE 13

CTCAGCTTCTTTGCGTAACCAATACTGGAAGGCATTTAAAGGACCTCTGCCGCCTCAGACCTTGCAGTTAACTCC
GCCCTGACCCACCCTTCCCG**ATG**CAGTCCCTGATGCAGGCTCCCCTCCTGATCGCCCTGGGCTTGCTTCTCGCGA
CCCCTGCGCAAGCCCACCTGAAAAAGCCATCCCAGCTCAGTAGCTTTTCCTGGGATAACTGTGATGAAGGGAAGG
ACCCTGCGGTGATCAGAAGCCTGACTCTGGAGCCTGACCCCATCGTCGTTCCTGGAAATGTGACCCTCAGTGTCG
TGGGCAGCACCAGTGTCCCCCTGAGTTCTCCTCTGAAGGTGGATTTAGTTTTGGAGAAGGAGGTGGCTGGCCTCT
GGATCAAGATCCCATGCACAGACTACATTGGCAGCTGTACCTTTGAACACTTCTGTGATGTGCTTGACATGTTAA
TTCCTACTGGGGAGCCCTGCCCAGAGCCCCTGCGTACCTATGGGCTTCCTTGCCACTGTCCCTTCAAAGAAGGAA
CCTACTCACTGCCCAAGAGCGAATTCGTTGTGCCTGACCTGGAGCTGCCCAGTTGGCTCACCACCGGGAACTACC
GCATAGAGAGCGTCCTGAGCAGCAGTGGGAAGCGTCTGGGCTGCATCAAGATCGCTGCCTCTCTAAAGGGCATA**T**
AGCATGGCATCTGCCACAGCAGAATGGAGCGGTGTGAGGAAGGTCCCTTTTCCTCTGTTTTGTGTTTGCCAAGGC
CAAACTCCCACTCTCTGCCCCCCTTTAATCCCCTTTCTACAGTGAGTCCACTACCCTCACTGAAAATCATTTTGT
ACCACTTACATTTTAGGCTGGGGCAAGCAGCCCTGACCTAAGGGAGAATGAGTTGGACAGTTCTTGATAGCCCAG
GGCATCTGCTGGGCTGACCACGTTACTCATCCCCGTTAACATTCTCTCTAAAGAGCCTCGTTCATTTCCAAAGCA
GTTAAGGAATGGGAACAGAGTGTTTTAGGACCTGAAGAATCTTTATGACTCTCTCTCTTTCTCTCTTTTTTTTTT
TGTCACTAAGTTAAAAGCGAAGTGAGAGTATTAACGTTTTTGTTCTCCTCCGGCCCCCTGTTACAATGAAGGGGC
AAAAGTATTTGCTCTTAGTCTATTCCTCCCTTAACTTCTGTGACTAATTTTTATTTCCTTTCTAGATTTGCCCAA
TTAATACTAGGGTGCAGTGTATCCTGGAGAGGTAGGGTGTGTGGGGGAGGAATCCCTTGGGGGAGATATTAGGAG
TGCTCTGTTGTTTACAAACTCAGGTACCCGCAGGGCCTAGCAAGAGACTTAAATGACTGATAAGAACCGTGAGAA
ACATGTTGCTTCCAGGCTTGATTTCGATTTTTCGCTTTTTTTTTTTGGGACGGAGTCTCGCTTTGTCACCAGGCT
GGAGTGCAGTGGTGCAATCTCACCTCACTGCAACCTCCGCCTCCTGGGTTCAAGCAATTCTCCTGCCTCAGCCTC
CCAAGTAGCTTGGACTACAGGCCCTGCCACCACGCCCGGCTAATTTGTGTATTTTTAGTAGAGATGGGGTTTCAC
CATGTTGGCCAGGATGGTCTCGATCTCTTGACCTCGTGATCCGTCCACCTTGGCCTTGCAAAGCGCTGGATTACA
GGCATGAGCCACTACACCCAGCCGATTTTTCCTTTTTGATTAAAGATGCTATTACAATGTAAATATTTCTTACAC
AGAAAGTCACAGCACATGTGCCCATTGATACAAGGCTGCTGAGGCCTGGTCTCCAGTTGGAAATATAATTAAGGG
TGGCAGGGACTGGAGTCAGTTGGAGAGTGCATAGCCAGTCTGTGAAGACAACTGCCAGATACTGGCAATACTCCA
GCCTGGTGACAGAGTGAGACTCTGTCTCAAAAAAAAAAGTTTCAATGTTTACTCCTAGAGAAGCCAAAAATCCAGA
TTTGTATATGAAATCTTACCATTTTAAAAGATTGGCAGCTAATTATTTTTTTAAAAAGCTGTGCAGTGTGATGTG
TCCCAAACGGACTGGCTCATGGGTGGCCACGTCACAACCTCTGATCTCAGACCGTGCATGCCTTGTCCTCTTAAG
ACAACTCCTGTGGCACCGTTTCTCCCTCCACAGGGCCAAAGCCATAGTGTCCGGTCCCAAGGACAAGGCTCTTCC
AGTGCTAGGAGAGGTATGAGCAGCCTCTCACCTGTGAGCTGTGGGGATCACAAGGCTGCCTGCCTCAGTCTTGGA
GTCCTGTTGGGTGAATGAGGCAGATGGGAAAGAGCCTCACCAGCAGCTGCTTTTGGAGCAGGGGTCCAAGGAAGA
GAGGGTGGCCTCGACATCAAACTGCCTGGATTTTTCTACCACCCTGTTACATCATAACAACTTCTGAAACACACA
CCAGCCCTGAGTTCTGGGCTCATTTGAAGCCTGGAATAGCAATAAATCTTTTTAACTTGCAAAAAAAAAAAAAAA
AAA

FIGURE 14

MQSLMQAPLLIALGLLLATPAQAHLKKPSQLSSFSWDNCDEGKDPAVIRSLTLEPDPIVVPGNVTLSVVGSTSVP
LSSPLKVDLVLEKEVAGLWIKIPCTDYIGSCTFEHFCDVLDMLIPTGEPCPEPLRTYGLPCHCPFKEGTYSLPKS
EFVVPDLELPSWLTTGNYRIESVLSSSGKRLGCIKIAASLKGI

FIGURE 15

GAAAG**ATG**GCGTCCTCGGAGCAGGCAGAGCAGCCGAGCCAGCCAAGCTCTACTCCAGGAAGTGAAAATGTGCTGC
CTCGAGAGCCGCTGATTGCCACGGCAGTGAAGTTTCTACAGAATTCCCGGGTCCGCCAGAGCCCACTTGCAACCA
GGAGAGCATTTCTAAAGAAGAAAGGGCTGACAGATGAAGAGATTGATATGGCCTTCCAGCAGTCGGGCACTGCTG
CCGATGAGCCTTCGTCCTTGGGCCCAGCCACACAGGTGGTTCCTGTCCAGCCCCCTCACCTCATATCTCAGCCAT
ACAGTCCCGCAGGCTCCCGATGGCGAGATTACGGCGCCCTGGCCATCATCATGGCAGGCATTGCATTTGGCTTTC
ACCAGCTCTACAAGAAATACCTGCTCCCCCTCATCCTGGGCGGCCGAGAGGACAGAAAGCAGCTGGAGAGGATGG
AGGCCGGTCTCTCTGAGCTGAGTGGCAGCGTGGCCCAGACAGTGACTCAGTTACAGACGACCCTCGCCTCCGTCC
AGGAGCTGCTGATTCAGCAGCAGCAGAAGATCCAGGAGCTTGCCCACGAGCTGGCCGCTGCCAAGGCCACCACAT
CCACCAACTGGATCCTGGAGTCCCAGAATATCAACGAACTCAAGTCCGAAATTAACTCCTTGAAAGGGCTTCTTT
TAAATCGGAGGCAGTTCCCTCCATCCCCATCAGCCCCGAAGATCCCCTCCTGGCAGATCCCAGTCAAGTCACCGT
CACCCTCCAGCCCTGCGGCCGTGAACCACCACAGCAGCAGCGACATCTCACCTGTCAGCAACGAGTCCACGTCGT
CCTCGCCTGGGAAGGAGGGCCACAGCCCCGAGGGCTCCACGGTCACCTACCACTTGCTGGGCCCCCAGGAGGAAG
GCGAGGGGGTGGTGGACGTCAAGGGCCAGGTGCGGATGGAGGTGCAAGGCGAGGAGGAGAAGAGGGAGGACAAGG
AGGACGAGGAGGATGAGGAGGATGATGATGTGAGCCATGTGGACGAGGAGGACTGCCTGGGGGTGCAGAGGGAGG
ACCGCCGGGGCGGGGATGGGCAGATCAACGAGCAGGTGGAGAAGCTGCGGCGGCCCGAGGGCGCCAGCAACGAGA
GTGAGCGGGAC**TAG**GGCTGCGCCTGCTGCCTCCAGCCCTGAGGATGGCATCTAGTGTGCCCGTGCGTGGCCATAC
CCTGCCTCCCTCTCTGGCCCTGGGAGGGCAGCTTGGAGCCCAGGTAGGGGGCAGAGCTGTCCTCAGCTGCACTGC
GGCCTGGTGGCAGTGTGGGGAGTCACACTTCTGTCCACCTGGCCTCCTCTCGCCTGGCCGCCAGCCCCAGCCCCA
GCCCCAGCCCCAGGCCCAGCTGCCTTTGGCTTTGATCTCAAGTCAGGCTGAAGGCAGCGAAGCCTCGGGGCCCAA
GCCCCTCCCCAGCCCCCTCTCCCGGACAGACGCCTTGCCCAGGGTGTGTTTGCTGAGTGTCTTGACTACCGTGAC
ACCACGCATGGCCAGAGCTAGCGTCCCTACTGCCTCCCGACTCCTCAGTGGAGGAGGAGCTGCGGTCCCTCTGGT
GTCTGCCATCCCCCTCCCTCCCTGGGCCCGGCCCTGGACCCGTCAGGTGCCTGTCCCCAGCCCCAACCCCACTCA
TGCCCCGTCGTCCTCCCAGACAAATGAAACCACGCTGCGCTTCCGATGCCCCCGCTTGCCGTGTAATGGTTCAGC
TAATCCCATGGCGAGATGGGGGCTCATTCCGGAGGAGGAGCCAGGCAGCAGGGCCTTCCTGACCAACAGCCAGTT
TTGTCCTTCCCCCCAGGAAAAAAATGTTCATTTGTGTGATCATGTATAGACCTCAGAACGGAAGATAGGACTGTA
TATAATTGTAATAAATACCAGTTGCCACTATTT

FIGURE 16

MASSEQAEQPSQPSSTPGSENVLPREPLIATAVKFLQNSRVRQSPLATRRAFLKKKGLTDEEIDMAFQQSGTAAD
EPSSLGPATQVVPVQPPHLISQPYSPAGSRWRDYGALAIIMAGIAFGFHQLYKKYLLPLILGGREDRKQLERMEA
GLSELSGSVAQTVTQLQTTLASVQELLIQQQQKIQELAHELAAAKATTSTNWILESQNINELKSEINSLKGLLLN
RRQFPPSPSAPKIPSWQIPVKSPSPSSPAAVNHHSSSDISPVSNESTSSSPGKEGHSPEGSTVTYHLLGPQEEGE
GVVDVKGQVRMEVQGEEEKREDKEDEEDEEDDDVSHVDEEDCLGVQREDRRGGDGQINEQVEKLRRPEGASNESE
RD

FIGURE 17A

GCTGTTTTGACAACATGGCGGCGCCCATGGTCCGTGGCCCGGCAGTGCTCGCCTAAAGGTGGAGAACGAGGAGTA
GAGGAGGCCGCAGCCAGAGCCTGTGAGCAGATCCAGACCTACAGATAAAAAACATTATTTAATCTATCTGGGATT
TACTCCGGCTTATGATTTGAGGGCCTTCTCACCTTCTGAAGA**ATG**GCTTCTGTTTGGCAGAGATTGGGTTTTTAT
GCCTCTCTTCTGAAAAGACAGCTAAATGGTGGGCCAGATGTCATCAAGTGGGAAAGGAGAGTAATTCCCGGATGT
ACCAGAAGCATCTACAGTGCCACGGGAAAGTGGACAAAAGAGTATACATTGCAGACAAGAAAGGATGTTGAGAAA
TGGTGGCATCAACGAATAAAAGAACAGGCCTCCAAAATTTCAGAAGCTGATAAATCGAAGCCAAAATTTTACGTG
CTTTCCATGTTCCCTTATCCTTCTGGTAAGCTGCACATGGGCCATGTGCGTGTCTACACCATCAGCGACACCATA
GCACGGTTCCAGAAGATGAGAGGGATGCAGGTCATCAACCCCATGGGATGGGATGCTTTTGGATTGCCTGCTGAA
AATGCCGCAGTCGAGAGGAATCTACATCCACAAAGTTGGACACAAAGTAATATTAAACACATGAGGAAACAGCTT
GATCGTCTGGGCCTGTGTTTCAGCTGGGATAGGGAAATAACTACGTGTTTGCCAGATTACTACAAGTGGACTCAG
TATCTCTTTATTAAACTGTATGAGGCTGGGCTGGCCTATCAAAAGGAGGCCCTGGTTAACTGGGACCCAGTGGAT
CAAACAGTGCTTGCCAATGAGCAGGTGGATGAACATGGCTGTTCATGGCGTTCTGGAGCAAAGGTGGAACAGAAG
TACCTCAGACAATGGTTTATTAAGACAACCGCTTATGCAAAGGCCATGCAGGACGCGTTGGCAGACCTTCCAGAA
TGGTATGGAATAAAAGGCATGCAAGCCCACTGGATTGGGGACTGTGTGGGCTGCCACCTGGACTTCACATTAAAG
GTTCATGGGCAAGCCACGGGCGAAAAGCTGACTGCCTATACGGCCACCCCTGAAGCCATTTATGGCACCTCCCAC
GTGGCCATCTCGCCCAGCCACAGACTCCTACATGGGCACAGCTCTCTGAAGGAAGCCTTGAGGATGGCCCTTGTC
CCTGGCAAAGATTGCCTCACGCCTGTAATGGCTGTGAACATGCTTACCCAGCAGGAGGTCCCTGTCGTTATTTTG
GCCAAAGCTGACTTGGAAGGCTCTCTGGATTCAAAAATAGGAATTCCCAGTACTAGCTCAGAGGACACCATCTTA
GCCCAAACCCTGGGCCTGGCCTACTCTGAAGTCATTGAAACTTTGCCAGATGGCACAGAGAGACTGAGCAGCTCT
GCTGAGTTCACAGGTATGACCCGGCAGGATGCTTTTCTAGCCCTGACTCAGAAAGCCCGGGGGGAAGAGAGTGGGT
GGAGACGTGACAAGTGATAAACTGAAAGACTGGCTGATTTCACGGCAGCGGTACTGGGGCACACCAATCCCCATT
GTCCACTGCCCAGTCTGTGGCCCCACACCTGTGCCCCTGGAGGACTTGCCTGTGACCCTGCCCAACATCGCGTCT
TTCACTGGCAAGGGAGGCCCCCCACTGGCCATGGCTTCAGAGTGGGTGAACTGCTCCTGCCCAAGGTGCAAGGGA
GCAGCCAAGAGAGAGACAGACACGATGGATACCTTTGTTGATTCTGCTTGGTACTACTTCAGATACACTGACCCT
CATAATCCACACAGCCCTTTTAACACAGCAGTGGCCGATTACTGGATGCCTGTGGATTTGTACATTGGAGGGAAA
GAACATGCCGTCATGCACTTGTTCTATGCAAGATTCTTTAGTCATTTTTGCCATGATCAAAAAATGGTTAAACAT
AGGGAGCCTTTTCATAAGCTGCTGGCCCAAGGCCTTATCAAGGGGCAGACATTCCGCCTACCATCTGGACAGTAT
CTACAGAGAGAGGAAGTGGATCTCACAGGTTCCGTTCCTGTTCATGCAAAAACGAAAGAGAAGTTAGAGGTGACG
TGGGAGAAGATGAGTAAGTCCAAACACAACGGGGTGGACCCAGAGGAAGTTGTGGAGCAGTATGGGATCGACACG
ATTCGGCTCTACATCCTTTTTGCTGCCCCTCCTGAGAAGGATATCTTGTGGGATGTGAAAACTGATGCTCTCCCT
GGGGTGCTGAGATGGCAACAACGACTGTGGACCTTGACAACTCGGTTTATTGAGGCCAGGGCTTCTGGGAAGTCT
CCCCAGCCTCAGCTGCTGAGTAACAAGGAGAAAGCTGAGGCCAGGAAGCTCTGGGAGTACAAGAACTCCGTCATC
TCTCAGGTGACCACCCATTTCACAGAGGACTTCTCACTGAATTCTGCAATTTCTCAGCTGATGGGACTCAGCAAT
GCCCTCTCGCAAGCCTCTCAGAGCGTCATTCTCCACAGCCCCGAGTTTGAGGATGCTTTGTGTGCCCTGATGGTA
ATGGCTGCTCCACTGGCCCCTCATGTAACCTCAGAGATCTGGGCAGGCCTGGCGCTGGTGCCGAGGAAGCTCTGT
GCCCACTACACTTGGGATGCCAGTGTGCTGCTCCAGGCATGGCCTGCTGTGGACCCGGAGTTCCTGCAGCAGCCT
GAGGTTGTCCAGATGGCAGTTCTGATCAACAATAAAGCTTGTGGCAAAATTCCTGTGCCCCAACAAGTTGCCCGG
GACCAGGACAAAGTCCACGAATTTGTTCTTCAAAGCGAGCTGGGTGTCAGGCTTTTGCAAGGACGAAGCATCAAG
AAGTCCTTCCTTTCCCCGAGAACTGCCCTCATCAACTTCCTGGTGCAAGAT**TGA**CAGCCAGGAGGCTGCAGCTAC
CACGAGGGCCTCTGAGGAACCTCCTTCCAGGCCTGGGATGAGGGGGCGATGTCTGCTGGCCCAGGGGAAGGGAAA
AGACAAATGTCTTGACTGTTGACCTCGGTCCTGTGGCAGACTGCAGTCAACAGTGTGCCTCTGTAGTGTGGCCTG
GTGCTGGGGGTGAAGGTGAGCTGGGCAAAGGAGAAATATGAGCTACTGAGGAGGGGGTTGGACATCCTGCCCCTCA
CCCCCCACCCACACTGCAGGTAGAGGAGGCCATCTGATCCCATGGGAAGCCATCAGAGACACTGCTGGTGGGAGC
AGGAAGGAGCAGTGCCCCTCGAGCAGCCAGGAAGCCTGCGGATCTGGGAAATGGCTCTGCCTTAGGCACTTCTCG
GGAATTTGAGGCCAGCCTGAGGAACTGCAGGACTCAGGTGCAATGTGCCAGCCACTTGGAACTGCTAACTGAGCC
TCCAGATGGTAGTGAATGGTCTCTTTGCCTTCAGGCTGGATGAGGAAGTCATTTAGGAAATGTTCAAATAACCAA
TATGTGGAAATGGACACAGGGATCTTCTGAAGTTGCTTTGAATCAAAAGGCAGGCAGTGCTGGTTCCTCTGCCTG
TGTCCCCACCACTCCCCAGCTCTGTCATGCAGGCCTGTCCTCCCCAACCCCAGCTGGATGTGCCTCCCAGGCCTG

FIGURE 17B

CTGTGGTTCTGACACACAGGATCCCAGGCAAGGCACCACTTCCTCACATGAATGAGGAGCAGCAAGTCATAACCA
CTCCCTTGGGTATACAATTTGCTGTGTAGTGAAGTGGAACCAGGCTCAGGCTGCTGGTCCCAACCTCAGAGCCCC
ACCGCAGCCCAGTAGGGATGCAGCACGCCCCAGAGGGCTCATGTGGGCCCCAGATGGCAATGCCACCATTGTTGA
TGTGACTCCAGAGCCAGTTATTAGGAAGAGCAAGCTCACCACAGAGGAGTGGAACTGAGGCCCCCCAGATGTTGC
CTCCGGTGTCCAAGCCACAGCGGTCTGGCTGTTGGGAAGATGGCCAGGAATGGACTCATACCATTGGCACATTAG
GCTAATCCTGGTTTTATGTGAAGTCAGCAATTAAGTGTTCCCACTAGAACTGACCTAAGCCACTGATTAATATTT
AATGAGGGAAGGTAGGGGAGAATCTAGCCATTTTATAATGCCAGAAATCTATATATGTTATCTGATGCCATTTTT
CTGAAGTAGCCTCACATGTGGTCCCCCTGCAGTTCAGCAGTTAACAGATGACTTTTTTAGTGTAATAAAATGTTT
ATCATCTATG

FIGURE 18

MASVWQRLGFYASLLKRQLNGGPDVIKWERRVIPGCTRSIYSATGKWTKEYTLQTRKDVEKWWHQRIKEQASKIS
EADKSKPKFYVLSMFPYPSGKLHMGHVRVYTISDTIARFQKMRGMQVINPMGWDAFGLPAENAAVERNLHPQSWT
QSNIKHMRKQLDRLGLCFSWDREITTCLPDYYKWTQYLFIKLYEAGLAYQKEALVNWDPVDQTVLANEQVDEHGC
SWRSGAKVEQKYLRQWFIKTTAYAKAMQDALADLPEWYGIKGMQAHWIGDCVGCHLDFTLKVHGQATGEKLTAYT
ATPEAIYGTSHVAISPSHRLLHGHSSLKEALRMALVPGKDCLTPVMAVNMLTQQEVPVVILAKADLEGSLDSKIG
IPSTSSEDTILAQTLGLAYSEVIETLPDGTERLSSSAEFTGMTRQDAFLALTQKARGKRVGGDVTSDKLKDWLIS
RQRYWGTPIPIVHCPVCGPTPVPLEDLPVTLPNIASFTGKGGPPLAMASEWVNCSCPRCKGAAKRETDTMDTFVD
SAWYYFRYTDPHNPHSPFNTAVADYWMPVDLYIGGKEHAVMHLFYARFFSHFCHDQKMVKHREPFHKLLAQGLIK
GQTFRLPSGQYLQREEVDLTGSVPVHAKTKEKLEVTWEKMSKSKHNGVDPEEVVEQYGIDTIRLYILFAAPPEKD
ILWDVKTDALPGVLRWQQRLWTLTTRFIEARASGKSPQPQLLSNKEKAEARKLWEYKNSVISQVTTHFTEDFSLN
SAISQLMGLSNALSQASQSVILHSPEFEDALCALMVMAAPLAPHVTSEIWAGLALVPRKLCAHYTWDASVLLQAW
PAVDPEFLQQPEVVQMAVLINNKACGKIPVPQQVARDQDKVHEFVLQSELGVRLLQGRSIKKSFLSPRTALINFL
VQD

FIGURE 19

TATATTGGCAGTTATTGAGGGTAAAGCAATATATTGTAACAGAATGTATAAATATTTTTGATAAAACAGTCTATA
TTTTATTAAAAAATGAATTATAACCCATTTTCAGTTTTGCCTGCATCATAAGAGTGAGCACTCCATTGCTTTCTT
TCCTGGCCACACTGCTACAATCCAGCACTAACTATCCATGTCCAGGGTAAGGATCGAGATCGAGAAGCCCACACT
GCCAGTGAAAAAGCTACGTCTTTACTGCATAAATTAGAGGAAGCAATTTCGGAACAACGGAACCTTCAAACTATA
AATACTGAATTATCGAACACTTGCCAGGCACTTCAGCAGAAGACAAGGAAACTGAAGAAGCTTTTTAGATGAGGA
ATTTCCTCACTATGATTCCCTGTCCTGCGCAGATGCAATTCAACAACCTCTTCAAGAAAAATTGAAGCAGTGTTG
CCACAAACTATATGGTGGTCAAGAAGCAAGAATACATCAGACACCCCTGACCTTGAAACATACGTGCTGGTACAC
ACCTCTGCTGG**ATG**CCTTATCTCTGGATAGTTTTACAGCAGTTCCAACCCTGGAATCAACACCTTTCTCAGGTGT
AGCCAACCAAATCCACACTCTGTGTGAAAGGCCCACATATGGAGAAGTAAAGGATGGTGCTTTGGATGTAAAAAG
ACAACACAAGTGCCCAGGCCCCACAAGTGGCCCCAGCCCAGGAACGAATCTCTCAGGCTGCATCAGGATGAATGA
TGACCCAAGTATGGAAGAGAATGGTGTTGAACGCGTGTGTCCTGAGAGCCTGCTGCAGTCCAGGGGATATTCCTC
ACTACCATTACCCAGACACACTTCATCGACAGACGGTACTATAACTTCAAGTGATCCTGGATTAGAAATTCTGAA
TATGGCTTCTTGTGACCTTGACAGAAACTCGCTCTGTAAGAAAGAGGAGGATACAAGATCAGCTTCTCCCACGAT
AGAGGCCCAAGGCACAAGTCCAGCTCATGATAATATTGCATTCCAAGACTCTACGAGTAAGGATAAAACCATATT
AAATCTGGAAGCCAAAGAGGAACCAGAAACAATAGAAGAACATAAAAAAGAACATGCTTCAGGAGACTCTGTGGT
TTCCCCTCTTCCTGTAACCACTGTGAAATCGGTTAACGTTAGACAAAGTGAGAACACTTCTGCTAATGAGAAGGA
GGTGGAGGCAGAATTTCTCAGATTATCTTTGGGATTTAAGTGTGACTGGTTTACCTTGGAGAAGAGAGTGAAGCT
TGAAGAGAGGTCCCGTGACTGGGCAGAAGAAAATTTGAAGAAAGAAATCACTAACTCTTTAAAACTATTAGAGTC
TTTAACACCTCTGTGTGAAGATGACAACCAGGCACAGGAAATCATTAAGAAGCTGGAGAAGAGTATAAAGTTTCT
TAGCCAGTGTGCAGCACGAGTGGCCAGTAGGGCTGAGATGTTGGGAGCCATCAATCAGGAAAGCCGGGTTAGTAA
AGCAGTTGAAGTGATGATTCAGCACGTAGAAAACTTGAAGAGGATGTATGCCAAAGAGCACGCTGAATTAGAAGA
ACTGAAACAGGTTCTTCTGCAGAATGAAAGGTCTTTCAATCCTCTTGAAGATGATGATGACTGCCAAATTAAAAA
ACGTTCAGCTTCTCTAAACTCCAAGCCATCTTCTCTACGAAGAGTGACTATTGCCTCTTTACCCAGAAATATTGG
AAATGCAGGAATGGTGGCTGGGATGGAAAATAATGATCGATTCAGTAGAAGGTCAAGCAGTTGGCGTATTTTGGG
GTCAAAGCAGAGTGAACACCGTCCCTCATTACCTCGATTTATTAGCACCTATTCCTGGGCAGATGCTGAAGAAGA
AAAATGTGAACTAAAAACTAAAGATGACTCAGAGCCATCTGGAGAAGAAACAGTAGAAAGGACAAGGAAGCCAAG
TCTTTCTGAAAAGAAAAATAATCCATCAAAGTGGGATGTCTCTTCAGTTTATGACACAATAGCTTCCTGGGCAAC
AAATCTCAAGTCCTCCATCAGAAAGGCTAATAAGGCCCTCTGGCTCTCTATTGCATTCATTGTACTGTTTGCAGC
TTTGATGAGCTTCCTCACAGGCCAATTATTCCAGAAGTCTGTGGATGCCGCTCCCACACAGCAAGAGGACTCATG
GACGTCTCTAGAACATATCTTGTGGCCATTTACCAGACTCCGACACAATGGGCCACCACCAGTG**TGA**CAGCAGGA
CATCCTAATATATGGATCTTGATTTTTAAGTTTCAGTATCTGAACTTCGTAAATTAGTAACTTTTAGCTGGGAAA
GTATAGCATGAAACCAGAGGTTCTCAGAATGACCGTAAGATAGCTTACATTTCCTCTTTTTGCCTTTATCTCCCC
AACTAAAATACAATGGG

FIGURE 20

MESTPFSGVANQIHTLCERPTYGEVKDGALDVKRQHKCPGPTSGPSPGTNLSGCIRMNDDPSMEENGVERVCPES
LLQSRGYSSLPLPRHTSSTDGTITSSDPGLEILNMASCDLDRNSLCKKEEDTRSASPTIEAQGTSPAHDNIAFQD
STSKDKTILNLEAKEEPETIEEHKKEHASGDSVVSPLPVTTVKSVNVRQSENTSANEKEVEAEFLRLSLGFKCDW
FTLEKRVKLEERSRDWAEENLKKEITNSLKLLESLTPLCEDDNQAQEIIKKLEKSIKFLSQCAARVASRAEMLGA
INQESRVSKAVEVMIQHVENLKRMYAKEHAELEELKQVLLQNERSFNPLEDDDDCQIKKRSASLNSKPSSLRRVT
IASLPRNIGNAGMVAGMENNDRFSRRSSSWRILGSKQSEHRPSLPRFISTYSWADAEEEKCELKTKDDSEPSGEE
TVERTRKPSLSEKKNNPSKWDVSSVYDTIASWATNLKSSIRKANKALWLSIAFIVLFAALMSFLTGQLFQKSVDA
APTQQEDSWTSLEHILWPFTRLRHNGPPPV

FIGURE 21

ATGGTGCTGTGCCCGGTGATTGGGAAGCTGCTGCACAAGCGCGTGGTGCTGGCCAGCGCCTCCCCACGCCGTCAG
GAGATCCTCAGCAACGCGGGTCTCAGGTTTGAGGTGGTCCCCTCCAAGTTTAAAGAGAAGCTGGACAAAGCCTCC
TTCGCTACTCCGTATGGGTACGCCATGGAGACCGCCAAGCAGAAGGCCCTGGAGGTGGCCAACCGGCTATACCAG
AAAGACCTGCGGGCCCCCGACGTGGTCATTGGAGCGGACACGATCGTGACGGTCGGGGGGCTGATTCTGGAGAAG
CCGGTGGACAAGCAGGACGCCTACAGGATGCTGTCCCGGTTGAGTGGGAGAGAACACAGCGTGTTCACAGGTGTC
GCGATCGTCCACTGCTCCAGCAAAGACCATCAGCTGGACACCAGGGTCTCGGAATTCTACGAGGAAACGAAGGTG
AAGTTCTCGGAGCTGTCCGAGGAGCTGCTCTGGGAATACGTCCACAGCGGGGAGCCCATGGACAAAGCTGGCGGC
TACGGTATCCAGGCCCTGGGCGGCATGCTGGTGGAGTCCGTACACGGGGACTTTCTGAACGTGGTGGGATTCCCG
CTGAACCACTTCTGCAAGCAGCTGGTGAAGCTCTACTACCCGCCCCGTCCGGAGGACCTGCGGCGGAGTGTCAAG
CACGACTCCATCCCGGCCGCGGACACCTTCGAAGACCTCAGTGACGTGGAGGGGGGCGGCTCGGAGCCCACTCAG
AGGGACGCGGGCAGCCGCGATGAGAAGGCCGAGGCGGGAGAGGCGGGACAGGCCACGGCAGAGGCTGAGTGTCAC
AGGACTCGGGAGACCCTGCCTCCGTTCCCGACACGCCTCCTGGAGCTGATTGAGGGCTTTATGCTATCCAAGGGC
CTGCTCACCGCTTGCAAACTGAAGGTGTTCGATTTATTAAAAGATGAAGCACCCCAGAAGGCTGCGGATATTGCC
AGCAAAGTGGACGCCTCTGCGTGTGGAATGGAGAGGCTTCTGGACATCTGTGCTGCCATGGGGCTCCTGGAGAAG
ACAGAGCAAGGTTACAGTAACACAGAGACAGCGAACGTCTACCTGGCATCGGATGGCGAATACTCTCTGCACGGC
TTCATCATGCACAATAATGACCTCACATGGAACCTCTTTACATACCTGGAGTTTGCCATCCGAGAGGGAACAAAC
CAGCACCACAGGGCGTTGGGGAAGAAGGCGGAAGATCTGTTCCAGGATGCGTACTACCAGAGCCCGGAGACGCGG
CTGAGGTTCATGCGGGCCATGCACGGCATGACGAAGCTGACTGCGTGCCAGGTGGCCACGGCCTTCAATCTGTCC
CGCTTCTCCTCCGCCTGCGACGTGGGAGGCTGCACGGGTGCACTGGCCCGAGAGCTGGCCCGTGAGTACCCTCGT
ATGCAGGTGACTGTGTTTGACCTCCCAGACATTATCGAGCTGGCCGCCCACTTCCAACCCCCCGGACCGCAGGCA
GTGCAGATCCACTTCGCAGCAGGTGACTTTTTCAGGGACCCCCTCCCCAGCGCTGAGCTGTACGTCCTGTGCCGG
ATCCTGCATGACTGGCCAGACGACAAAGTCCACAAGTTACTCAGCAAGGTCGCCGAGAGCTGCAAGCCAGGGGCC
GGCCTGCTGCTGGTGGAGACGCTCCTGGATGAGGAGAAGAGGGTGGCGCAGCGCGCCCTGATGCAGTCACTGAAC
ATGCTGGTGCAGACTGAAGGCAAGGAGCGGAGCCTGGGCGAGTATCAGTGCTTGCTGGAGCTGCACGGCTTCCAC
CAGGTGCAGGTGGTGCACTTGGGGGGTGTCCTGGATGCCATCTTGCCACCAAAGTGGCCCCCTGAAGCCCAGGCA
GCATGTTCATTA**TAG**

FIGURE 22

MVLCPVIGKLLHKRVVLASASPRRQEILSNAGLRFEVVPSKFKEKLDKASFATPYGYAMETAKQKALEVANRLYQ
KDLRAPDVVIGADTIVTVGGLILEKPVDKQDAYRMLSRLSGREHSVFTGVAIVHCSSKDHQLDTRVSEFYEETKV
KFSELSEELLWEYVHSGEPMDKAGGYGIQALGGMLVESVHGDFLNVVGFPLNHFCKQLVKLYYPPRPEDLRRSVK
HDSIPAADTFEDLSDVEGGGSEPTQRDAGSRDEKAEAGEAGQATAEAECHRTRETLPPFPTRLLELIEGFMLSKG
LLTACKLKVFDLLKDEAPQKAADIASKVDASACGMERLLDICAAMGLLEKTEQGYSNTETANVYLASDGEYSLHG
FIMHNNDLTWNLFTYLEFAIREGTNQHHRALGKKAEDLFQDAYYQSPETRLRFMRAMHGMTKLTACQVATAFNLS
RFSSACDVGGCTGALARELAREYPRMQVTVFDLPDIIELAAHFQPPGPQAVQIHFAAGDFFRDPLPSAELYVLCR
ILHDWPDDKVHKLLSKVAESCKPGAGLLLVETLLDEEKRVAQRALMQSLNMLVQTEGKERSLGEYQCLLELHGFH
QVQVVHLGGVLDAILPPKWPPEAQAACSL

FIGURE 23

CGCCTCTCCCAAAGTCTAGCCGGGCAGGGGAACGCGGTGCATTCCTGACCGGCACCTGGCGAGGCTCATGCGTCC
CGTGAGGGCGGTTCCTCGAGCCTGGGGGCGCTCAGATTGCTTTGGAGACGCTGAGAGAACCTTTGCGAGAGCGCC
GGTTGACGTGCGGAGTGCGGGGCTCCGGGGGACTGAGCAGCACGAGACCCCATCCTCCCCTCCGGGTTTTCACAC
TGGGCGAAGGGAGGACTCCTGAGCTCTGCCTCTTCCAGTAACATTGAGGATTACTGTGTTTTGTGAGAGCTCGCT
AGGCGCCCTAAGCAACAGAGTTCTGAGAAATCGAGAAAC**ATG**ATAAGGAATTGGCTGACTATTTTTATCCTTTTT
CCCCTGAAGCTCGTAGAGAAATGTGAGTCAAGCGTCAGCCTCACTGTTCCTCCTGTCGTAAAGCTGGAGAACGGC
AGCTCGACCAACGTCAGCCTCACCCTGCGGCCACCATTAAATGCAACCCTGGTGATCACTTTTGAAATCACATTT
CGTTCCAAAAATATTACTATCCTTGAGCTCCCCGATGAAGTTGTGGTGCCTCCTGGAGTGACAAACTCCTCTTTT
CAAGTGACATCTCAAAATGTTGGACAACTTACTGTTTATCTACATGGAAATCACTCCAATCAGACCGGCCCGAGG
ATACGCTTTCTTGTGATCCGCAGCAGCGCCATTAGCATCATAAACCAGGTGATTGGCTGGATCTACTTTGTGGCC
TGGTCCATCTCCTTCTACCCTCAGGTGATCATGAATTGGAGGCGGAAAAGTGTCATTGGTCTGAGCTTCGACTTC
GTGGCTCTGAACCTGACAGGCTTCGTGGCCTACAGTGTATTCAACATCGGCCTCCTCTGGGTGCCCTACATCAAG
GAGCAGTTTCTCCTCAAATACCCCAACGGAGTGAACCCCGTGAACAGCAACGACGTCTTCTTCAGCCTGCACGCG
GTTGTCCTCACGCTGATCATCATCGTGCAGTGCTGCCTGTATGAGCGCGGTGGCCAGCGCGTGTCCTGGCCTGCC
ATCGGCTTCCTGGTGCTCGCGTGGCTCTTCGCATTTGTCACCATGATCGTGGCTGCAGTGGGAGTGATCACGTGG
CTGCAGTTTCTCTTCTGCTTCTCCTACATCAAGCTCGCAGTCACGCTGGTCAAGTATTTTCCACAGGCCTACATG
AACTTTTACTACAAAAGCACTGAGGGCTGGAGCATTGGCAACGTGCTCCTGGACTTCACCGGGGGCAGCTTCAGC
CTCCTGCAGATGTTCCTCCAGTCCTACAACAACGACCAGTGGACGCTGATCTTCGGAGACCCAACCAAGTTTGGA
CTCGGGGTCTTCTCCATCGTCTTCGACGTCGTCTTCTTCATCCAGCACTTCTGTTTGTACAGAAAGAGACCGGGG
TATGACCAGCTGAAC**TAG**CACCCAGGGACCCAGTGTACCCAGCCTCTGGCCTCGTGCCCTGCTGGGGAAGGCCTC
ACCCAGCGAAGGCCGGAGAAGCGGTTGGGCCCTGGCACACAGGGCTGGCTCAGTGTGCGGACAGAGGAGACCACT
CTGCTCCTGGGGCCAGAGGCCATTCAATAGCCTGCCTTCGTCCGGGCCCCTCCTGGGCCTCCCCGGCCAGGCACG
TGGCACCGTCGCCTTGACACCGCCATCTCTTTTCTTTAAGGCTTCAGGCAGCGCGCACAGGCTCTGGCAGCCGTC
TCAGGCAGGACTGGGCACCAAGCTTGCAGCCGAAGGCCTTGCCCCAAACTACCAGCGTTTCTGCAAGCAGCTTGA
AGGGCTGACCTTGCAGCCGGGTGAGCCAAGGGCACTTTGCTGCCACCGCTGCATTCCCAGAGATCAAGCAGCCCG
GTGCCGTGGCCAGTGAACTCAGAGGTGCTGGTGGACGGGCTAGGACTTTGGGGTTAGGCCATGGGGCTCTTTCTC
TGAAGGCCACTTTCCTGACGTACTCTCTGTACATAACTCAGCGTCCGTGACTGCAGTAACAGCCAGCCCTACCCA
GAGTATTTCTGAGCCATGAGGGGCCCACCAGATTGGTTCTGAATTGGATTCATGCCCAGCGCATTAGCATAGTAA
CTCCTTTCAGATTTTTTGGAGGGACGTTTGGAAGTGGCTTACTCTCTTCTGCCCTCTCTCCTACCTCCACCTTCT
CAGATGAGCCCCATCTGAGCACATCCAGCTGCTCCTTACCCAGCATCTGGAGTACAGGACATAGCTCTCTCCTGC
TACCAGTCTGTGCCTTAGAGGTCGTTAGGCCTGCCAAACGGCGACCAGCTCCCCTGGAGCGAGGGCAGGCCCCTT
CCCTCTCTTTCCCCAGACACCTACTTGAGACTCACCAATTTCTGGCCTGTTCAGGAGCCTCAGATAAGTATTTGT
ACTTGAGACCACCTCACACAATCTGTATGGGCCCAACCCTGATCTCAAACCTCCTTCCCTCTGCCCAAAGCTGTC
CTTCCTATGGCAGGAGGGGTGGGGGTCCCAGGACGTGCCTCATACATGACTTGAGCTTGTCAGTCCACTGAGTTT
CCTTCTACGAGATCAACGCGAGGGGCCTGTATCTTGAATTAAAGCCTACTCGCTTCCTTTC

FIGURE 24

MIRNWLTIFILFPLKLVEKCESSVSLTVPPVVKLENGSSTNVSLTLRPPLNATLVITFEITFRSKNITILELPDE
VVVPPGVTNSSFQVTSQNVGQLTVYLHGNHSNQTGPRIRFLVIRSSAISIINQVIGWIYFVAWSISFYPQVIMNW
RRKSVIGLSFDFVALNLTGFVAYSVFNIGLLWVPYIKEQFLLKYPNGVNPVNSNDVFFSLHAVVLTLIIIVQCCL
YERGGQRVSWPAIGFLVLAWLFAFVTMIVAAVGVITWLQFLFCFSYIKLAVTLVKYFPQAYMNFYYKSTEGWSIG
NVLLDFTGGSFSLLQMFLQSYNNDQWTLIFGDPTKFGLGVFSIVFDVVFFIQHFCLYRKRPGYDQLN

FIGURE 25

CTTACAACTCCGCGCGGCCTCGGCCCCCTGCGCCGCCCGCCCCACAACAAAACTCAGCGCAGCGCTCCCGGGCGC
CCGGTTCAGAGCGACCTGCGGCTCAGAGCGGAGGGGAGACTGACCGGAGCGCGGATCGGGACAGCGGCCGGGACA
GCGGCGAGACGCGCGTGTGTGAGCGCGCCGGACCAAGCGGGCCCAGAAGCGGGTCTGCAGCCCAGAGGGCACCTT
CTGCAAAC**ATG**TCTGTGGATCCCCTATCCAGCAAAGCTCTAAAGATCAAGCGAGAGCTGAGCGAGAACACGCCGC
ACCTGTCGGACGAGGCGCTGATGGGGCTGTCGGTGCGCGAGCTGAACCGGCATCTGCGCGGGCTCTCCGCCGAGG
AGGTGACACGGCTCAAGCAGCGGCGCCGCACACTCAAAAACCGTGGCTACGCCGCCAGCTGCCGCGTGAAGCGCG
TGTGCCAGAAGGAGGAGCTGCAGAAGCAGAAGTCGGAGCTGGAGCGCGAGGTGGACAAGCTGGCGCGCGAGAACG
CCGCCATGCGCCTGGAGCTCGACGCGCTGCGCGGCAAGTGCGAGGCGCTGCAGGGCTTCGCGCGCTCCGTGGCCG
CCGCCCGCGGGCCCGCCACGCTCGTGGCGCCGGCCAGCGTCATCACCATCGTCAAGTCCACCCCGGGCTCGGGGT
CTGGCCCCGCCCACGGCCCGGACCCCGCCCACGGCCCGGCCTCCTGCTCC**TAG**TGCCCGCCCCCGCCATGCCTCA
GCCACGCCCCTCCGGCCTCAGCTCCCTCCCCAAAGTGCCTGAGCGCCGCCTCTGTGCCCAGGTCCCATTTCTCTG
CAGCACTGGCCCCTTGGTGCACACACATTCCCTTCGTGGGCCCTGTCTTCCTCTTGCAGCCCCCCAAACTGGGAC
CGAATGACCCTGGGAAGGGGAAGTTGGGTAGGTTGGGGATGGGGCAGAGGTCTGGATCTGGGATCGCCCTTGGCT
GAAAGTTTAGCCTTTTTAGATTGAGAGATACAGAGCCGGCTTAGAGAACAGCTGTTGGGGGAGAAGAGGGCACCC
CTCATCTTGGAAACTGCTCTTATTGTGCCAATATGCCCTCCAAACCCTCCCAGGATTCAAAGCTAGGTTTGGCTG
TCTGTGACTTACGGGACCGTCCTGCTGAGAAATTGCACTGAAGAGATGCCCCCACCTCTGGTTGGGCCTGGGGGT
GCCTGGCCTTCCGAAACTAAAAGAGTGGGTGGGAAGACTAGTGAAACCCAGTTCACGGATGGGGAAACAGGCCTG
AGGTCACATTTCACTTAGTGGTTGTGTTGGGACCAAAACCTGGGTGTCCTCACTGCTGAGTCCAGCCATGGTTTT
CAGGGGGACAGTGGACAGGGACTCAGAAATGTGGTGGGAGGGCCTCCCTGGCTTGGGAGACCGCTCTCTGCAAGG
GAGGGGGAGAGAAGCAGAGGGAGAGAGAAGGTGACACGGATGGAAGAGTGGGAAGGAGCTGGCCTGGCTCAGCCC
TAGGCTGTCCCTGCAGCCAGGGTGTCCGGGGGCTGGCCAGTCAGAGAAAGGGGGCCATGGACTGCTGTGGCAAAT
AGGGAGACAAGGAGACAGACCCTGCAGTCCTACTACAGTCTGGAGTGGGGTCCTAAGAAGAAGGGTCCCACCTCA
ACCCCTGTCAGTGTCCACTGTGGGGTGGGGGCTGACCCCTGCCTTTGATTGTCATTCTCCTGGGAAGCCCAGTCT
CAGTCCCTCCCCCAACACTGTCCACACTGCCCCTCCCCACTGTTTATTTATTGCACGGATCTAAGTTATTCTCCC
CAGCCAGAGCCCGAGCTCCTGCTCCCTGGGAAAAGTGGCGTATGGCCCTGAGCTGGGCTTTATATTATATATCTG
CAAATAAATCACATTTTATCTTATATTTAGGGAAAGCCGGAGAGCAACAACAAAAAATGTTTAAGCCGGGCGCGG
TGGCTCACATCTGTAATCCCAGCACTTTGGGAGTCCAAGGAGGGGGATCGCTTGAGTCCAGGAGTTTGAGACCAG
CCTGGACAACATGGTGAAACCCCGTCTCTACAAAAAATACAAAAATTAGCCATGCATGGTGGCTCATGCCTGTAG
TCCCAGCTACTTGGGAGGCTGAGGCAGGAGGATCACTTAAGCCCAGAAGGCAGAGGTTGTAGTGAGCTGAGATCG
CACCACTGCACTCCAGCCTGGGCAACATAGCAAAATCCTGTCTCAAAAAAAAAGTTAAAAAATATTGCCCGGCTC
CTAGAATTTATTTATTTCCTGACTTACAGCAAGCGAGTTATCGTCTTCTGTATTTTGTAGACTTTCTAAATAAAG
TCAAATTCTTTCTTTTTCCACAGAAAAAAAA

FIGURE 26

MSVDPLSSKALKIKRELSENTPHLSDEALMGLSVRELNRHLRGLSAEEVTRLKQRRRTLKNRGYAASCRVKRVCQ
KEELQKQKSELEREVDKLARENAAMRLELDALRGKCEALQGFARSVAAARGPATLVAPASVITIVKSTPGSGSGP
AHGPDPAHGPASCS

FIGURE 27

GCGGAGCGCGCGCTCCCAGCGAAAGCAGCAGGGCAGGGATCTGCGTTGGAGGAAGGGACTGCTCTGGTGCTAGAA
TGCTGTGCGTCGGAAGGCTGGGCGGCTTGGGAGCCAGAGCAGCAGCTCTGCCGCCCCGCCGGGCGGGCCGGGGAA
GCCTCGAAGCCGGGATCCGGGCCCGAAGGGTCAGCACCAGCTGGTCTCCCGTGGGCGCCGCCTTCAATGTCAAGC
CCCAGGGCAGCCGCTTGGACCTGTTCGGCGAGCGGGCGCGTCTTTTTGGAGTTCCTGAGCTGAGTGCCCCAGAAG
GATTTCATATTGCACAAGAAAAAGCCTTGAGAAAGACAGAATTGCTTGTGGACCGTGCATGTTCCACCCCACCTG
GGCCCCAGACCGTGCTGATCTTCGATGAGCTCTCGGATTCCTTATGCAGAGTGGCCGACTTGGCTGATTTTGTGA
AAATCGCTCACCCTGAGCCAGCATTCAGAGAAGCTGCGGAAGAAGCTTGTAGAAGTATTGGCACCATGGTAGAGA
AGTTGAACACAAATGTGGATTTATATCAAAGTTTGCAAAAATTACTAGCTGATAAAAAACTTGTGGATTCCCTTG
ATCCAGAAACAAGGCGAGTGGCTGAACTGTTTATGTTTGATTTTGAAATTAGTGGAATCCATCTAGACAAACAAA
AGCGTAAAAGAGCAGTGGACCTCAATGTTAAAATCTTGGATTTGAGTAGTACATTTCTTATGGGAACCAATTTTC
CCAACAAGATTGAGAAGCATCTCTTACCAGAACACATTCGTCGTAACTTTACATCTGCTGGGGATCATATCATAA
TTGATGGTCTCCACGCAGAATCACCAGATGACTTGGTGCGAGAAGCTGCTTATAAAATTTTTCTTTATCCCAATG
CTGGTCAATTGAAATGTTTAGAAGAATTGCTCAGCAGCAGAGATCTTCTGGCAAAGTTGGTGGGGTATTCCACGT
TTTCTCACAGGGCTCTCCAAGGAACGATAGCTAAAAATCCAGAGACTGTCATGCAGTTCCTTGAAAAACTATCTG
ACAAACTTTCTGAAAGAACTCTGAAAGATTTTGAGATGATACGAGGGATGAAAATGAAACTGAATGCTCAAAATT
CCGAAGTAATGCCCTGGGACCCCCCTTACTACAGTGGTGTGATTCGTGCAGAAAGGTATAATATTGAGCCCAGCC
TATATTGCCCGTTTTTCTCTCTTGGAGCATGCATGGAAGGCCTGAATATTTTGCTTAACAGACTGTTGGGGATTT
CATTATATGCAGAGCAGCCTGCAAAAGGAGAGGTGTGGAGCGAAGATGTCCGAAAACTGGCTGTTGTTCATGAAT
CTGAAGGATTGTTGGGGTACATTTACTGTGATTTTTTTCAGCGAGCAGACAAACCACATCAGGATTGCCATTTCA
CTATCCGTGGAGGCAGACTAAAGGAAGATGGAGACTATCAACTCCCACTTGTAGTTCTTATGCTGAATCTTCCCC
GTTCCTCAAGGAGTTCTCCAACTTTGCTAACTCCTGGCATGATGGAAAATCTTTTCCATGAAATGGGACATGCCA
TGCATTCAATGCTAGGACGTACTCGTTACCAACACGTCACTGGGACCAGGTGCCCTACTGATTTTGCTGAGGTTC
CTTCTATTCTGATGGAGTACTTTGCAAATGATTATCGAGTAGTTAACCAATTTGCCAGACATTATCAGACTGGAC
AGCCACTGCCAAAAAATATGGTGTCTCGTCTTTGTGAATCTAAAAAGGTTTGTGCTGCAGCTGATATGCAACTTC
AGGTCTTTTATGCCACTCTGGATCAAATCTACCATGGGAAGCATCCCCTGAGGAATTCAACCACAGACATTCTCA
AGGAAACACAAGAGAAATTCTATGGCCTACCATATGTTCCAAATACTGCCTGGCAGCTGCGATTCAGCCACCTCG
TGGGGTATGGTGCTAGATATTACTCTTACCTCATGTCCAGAGCGGTCGCCTCCATGGTTTGGAAGGAGTGTTTTC
TACAGGATCCTTTCAACAGGGCTGCCGGGGAGCGCTATCGCAGGGAGATGCTGGCCCACGGTGGAGGCAGGGAGC
CCATGCTCATGGTTGAAGGTATGCTTCAGAAGTGTCCTTCTGTTGATGACTTCGTAAGTGCCCTCGTTTCCGACT
TGGATCTGGACTTCGAAACTTTCCTCATGGATTCTGAATAAAAGAAACACTCTACACCTCTAATCAAGGTCATGT
AGTAATGACTTTGTTATAAATGCTACAGCTGTGAGAGCTTGTTTCTGATTGTTTCATTGTTCGCTTCTGTAATTC
TGAAAAACTTTAAACTGGTAGAACTTGGAATAAATAATTTGTTTTAATTAAAAAAAAAAAAAAAAAA

FIGURE 28

MLCVGRLGGLGARAAALPPRRAGRGSLEAGIRARRVSTSWSPVGAAFNVKPQGSRLDLFGERARLFGVPELSAPE
GFHIAQEKALRKTELLVDRACSTPPGPQTVLIFDELSDSLCRVADLADFVKIAHPEPAFREAAEEACRSIGTMVE
KLNTNVDLYQSLQKLLADKKLVDSLDPETRRVAELFMFDFEISGIHLDKQKRKRAVDLNVKILDLSSTFLMGTNF
PNKIEKHLLPEHIRRNFTSAGDHIIIDGLHAESPDDLVREAAYKIFLYPNAGQLKCLEELLSSRDLLAKLVGYST
FSHRALQGTIAKNPETVMQFLEKLSDKLSERTLKDFEMIRGMKMKLNAQNSEVMPWDPPYYSGVIRAERYNIEPS
LYCPFFSLGACMEGLNILLNRLLGISLYAEQPAKGEVWSEDVRKLAVVHESEGLLGYIYCDFFQRADKPHQDCHF
TIRGGRLKEDGDYQLPLVVLMLNLPRSSRSSPTLLTPGMMENLFHEMGHAMHSMLGRTRYQHVTGTRCPTDFAEV
PSILMEYFANDYRVVNQFARHYQTGQPLPKNMVSRLCESKKVCAAADMQLQVFYATLDQIYHGKHPLRNSTTDIL
KETQEKFYGLPYVPNTAWQLRFSHLVGYGARYYSYLMSRAVASMVWKECFLQDPFNRAAGERYRREMLAHGGGRE
PMLMVEGMLQKCPSVDDFVSALVSDLDLDFETFLMDSE

FIGURE 29

TTTGCAAATAGTAACGACAAAGATGATCAAGTTTTAAATTGCCATTTGGCAGTGAAGGTGCTATCCCCGGAAGAT
GGAAAAGCAGATATTGTGAGAGCCGCTCAGGACTTTTGCCAGTTAGTAGCCCAGAAGCAAAGGAGACCCAAAGAT
TTGGATGTAGATATGTTAGTTTACTCAGTTCAAATGGTTGTCCTGATCCTGATT**TAG**TACTGAAGTTCGGTCCTG
TGGACAGCACACGAGGCTTTCTTACCTGGCACATCAGATTGACTGAGACTGTCTCTTTGCCTTCCCATCTAAACA
TCAGTTATGAGGACTTTTTCTCTGCCCTTCGTCATTATGCAGCCTGTGAACAGCGTCTGGGAAAGTCGTGGTCAT
TGGTTGCATAATTCCATTTGAGCTTATGGAGGAAAGGACCAAGTGACTCTGATTTTAGAAAGCACCTATGAAACC
CTGTACACACCTATGAAACCCTGTACACACCTAGTTCATAATCTTCATAATTTATCAACAAACACAAAAAAGTGT
CTTACTTGAGAGTGAGTGTGTGCGTGTGTGCGTGCACACATGTGCACGTTTGTATGTGTGGAAATAAACATAAAT
GGGGACGTGTTGGAGAAGGAAATACATAGACCTACAACTTTGAGCATATAGCAGTGATGTTTTAGGAACTGAAAT
GTCACACTTAATAAAGTCTTCAGCCCAGCTACTTCCCTGTTTTCGTGGGGAGAAGAGGGCCTGATTAGAACTGTT
CTGGTTGTGTTTGGCGGGAGGGGAATAAATTTTGTTCAGTCCTTCTTAGTGACCAAACTTTAATTTTTAAGAATA
ATATATTGACTTACTGAACTGAAGCATTCTGAGTTGAAAGGAGCTCCAGAGGAAAGGAGTTCTGTGTTGCTCACA
TGTTAAAGCTTGCTCACCTTCAGAGCAGAGGAATACCTATCTACAGATATCCGCCCATTTTCATCTCTCTTCATT
ATAGTCAAACAGTGTGACTTGAGAGTGTTG

FIGURE 30

FANSNDKDDQVLNCHLAVKVLSPEDGKADIVRAAQDFCQLVAQKQRRPKDLDVDMLVYSVQMVVLILI

FIGURE 31

GAATTCTGCGGAGCCTGCGGGACGGCGGCGGGTTGGCCCGTAGGCAGCCGGGACAGTGTTGTACAGTGTTTTGGG
CATGCACGTGATACTCACACAGTGGCTTCTGCTCACCAACAGATGAAGACAGATGCACCAACGAGGGTCTGGAAT
GGTCTGGAGTGGTCTGGAAAGCAGGGTCAGATACCCCTGGAAAACTGAAGCCCGTGGAGCAATGATCTCTACAGG
ACTGCTTCAAGGCTGATGGGAACCACCCTGTAGAGGTCCATCTGCGTTCAGACCCAGACGATGCCAGAGCTATGA
CTGGGCCTGCAGGTGTGGCGCCGAGGGGAGATCAGCC**ATG**GAGCAGCCACAGGAGGAAGCCCCTGAGGTCCGGGA
AGAGGAGGAGAAAGAGGAAGTGGCAGAGGCAGAAGGAGCCCCAGAGCTCAATGGGGGACCACAGCATGCACTTCC
TTCCAGCAGCTACACAGACCTCTCCCGGAGCTCCTCGCCACCCTCACTGCTGGACCAACTGCAGATGGGCTGTGA
CGGGGCCTCATGCGGCAGCCTCAACATGGAGTGCCGGGTGTGCGGGGACAAGGCATCGGGCTTCCACTACGGTGT
TCATGCATGTGAGGGGTGCAAGGGCTTCTTCCGTCGTACGATCCGCATGAAGCTGGAGTACGAGAAGTGTGAGCG
CAGCTGCAAGATTCAGAAGAAGAACCGCAACAAGTGCCAGTACTGCCGCTTCCAGAAGTGCCTGGCACTGGGCAT
GTCACACAACGCTATCCGTTTTGGTCGGATGCCGGAGGCTGAGAAGAGGAAGCTGGTGGCAGGGCTGACTGCAAA
CGAGGGGAGCCAGTACAACCCACAGGTGGCCGACCTGAAGGCCTTCTCCAAGCACATCTACAATGCCTACCTGAA
AAACTTCAACATGACCAAAAAGAAGGCCCGCAGCATCCTCACCGGCAAAGCCAGCCACACGGCGCCCTTTGTGAT
CCACGACATCGAGACATTGTGGCAGGCAGAGAAGGGGCTGGTGTGGAAGCAGTTGGTGAATGGCCTGCCTCCCTA
CAAGGAGATCAGCGTGCACGTCTTCTACCGCTGCCAGTGCACCACAGTGGAGACCGTGCGGGAGCTCACTGAGTT
CGCCAAGAGCATCCCCAGCTTCAGCAGCCTCTTCCTCAACGACCAGGTTACCCTTCTCAAGTATGGCGTGCACGA
GGCCATCTTCGCCATGCTGGCCTCTATCGTCAACAAGGACGGGCTGCTGGTAGCCAACGGCAGTGGCTTTGTCAC
CCGTGAGTTCCTGCGCAGCCTCCGCAAACCCTTCAGTGATATCATTGAGCCTAAGTTTGAATTTGCTGTCAAGTT
CAACGCCCTGGAACTTGATGACAGTGACCTGGCCCTATTCATTGCGGCCATCATTCTGTGTGGAGACCGGCCAGG
CCTCATGAACGTTCCACGGGTGGAGGCTATCCAGGACACCATCCTGCGTGCCCTCGAATTCCACCTGCAGGCCAA
CCACCCTGATGCCCAGTACCTCTTCCCCAAGCTGCTGCAGAAGATGGCTGACCTGCGGCAACTGGTCACCGAGCA
CGCCCAGATGATGCAGCGGATCAAGAAGACCGAAACCGAGACCTCGCTGCACCCTCTGCTCCAGGAGATCTACAA
GGACATGTAC**TAA**CGGCGGCACCCAGGCCTCCCTGCAGACTCCAATGGGGCCAGCACTGGAGGGGCCCACCCACA
TGACTTTTCCATTGACCAGCTCTCTTCCTGTCTTTGTTGTCTCCCTCTTTCTCAGTTCCTCTTTCTTTTCTAATT
CCTGTTGCTCTGTTTCTTCCTTTCTGTAGGTTTCTCTCTTCCCTTCTCCCTTCTCCCTTGCCCTCCCTTTCTCTC
TCCTATCCCCACGTCTGTCCTCCTTTCTTATTCTGTGAGATGTTTTGTATTATTTCACCAGCAGCATAGAACAGG
ACCTCTGCTTTTGCACACCTTTTCCCCAGGAGCAGAAGAGAGTGGGCCTGCCCTCTGCCCCATCATTGCACCTGC
AGGCTTAGGTCCTCACTTCTGTCTCCTGTCTTCAGAGCAAAAGACTTGAGCCATCCAAAGAAACACTAAGCTCTC
TGGGCCTGGGTTCCAGGGAAGGCTAAGCATGGCCTGGACTGACTGCAGCCCCCTATAGTCATGGGGTCCCTGCTG
CAAAGGACAGTGGCAGACCCCGGCAGTAGAGCCGAGATGCCTCCCCAAGACTGTCATTGCCCCTCCGATCGTGAG
GCCACCCACTGACCCAATGATCCTCTCCAGCAGCACACCTCAGCCCCACTGACACCCAGTGTCCTTCCATCTTCA
CACTGGTTTGCCAGGCCAATGTTGCTGATGGCCCCTCCAGCACACACACATAAGCACTGAAATCACTTTACCTGC
AGGCACCATGCACCTCCCTTCCCTCCCTGAGGCAGGTGAGAACCCAGAGAGAGGGGCCTGCAGGTGAGCAGGCAG
GGCTGGGCCAGGTCTCCGGGGAGGCAGGGGTCCTGCAGGTCCTGGTGGGTCAGCCCAGCACCTCGCCCAGTGGGA
GCTTCCCGGGATAAACTGAGCCTGTTCATTCTGATGTCCATTTGTCCCAATAGCTCTACTGCCCTCCCCTTCCCC
TTTACTCAGCCCAGCTGGCCACCTAGAAGTCTCCCTGCACAGCCTCTAGTGTCCGGGGACCTTGTGGGACCAGTC
CCACACCGCTGGTCCCTGCCCTCCCCTGCTCCCAGGTTGAGGTGCGCTCACCTCAGAGCAGGGCCAAAGCACAGC
TGGGCATGCCATGTCTGAGCGGCGCAGAGCCCTCCAGGCCTGCAGGGGCAAGGGGCTGGCTGGAGTCTCAGAGCA
CAGAGGTAGGAGAACTGGGGTTCAAGCCCAGGCTTCCTGGGTCCTGCCTGGTCCTCCCTCCCAAGGAGCCATTCT
ATGTGACTCTGGGTGGAAGTGCCCAGCCCCTGCCTGACGGXXXXXXXGATCACTCTCTGCTGGCAGGATTCTTCC
CGCTCCCCACCTACCCAGCTGATGGGGGTTGGGGTGCTTCTTTCAGCCAAGGCTATGAAGGGACAGCTGCTGGGA
CCCACCTCCCCCCTTCCCCGGCCACATGCCGCGTCCCTGCCCCCACCCGGGTCTGGTGCTGAGGATACAGCTCTT
CTCAGTGTCTGAACAATCTCCAAAATTGAAATGTATATTTTTGCTAGGAGCCCCAGCTTCCTGTGTTTTTAATAT
AAATAGTGTACACAGACTGACGAAACTTTAAATAAATGGGAATTAAATATTTAAAAAAAAAAGCGGCCGCGAATT
C

FIGURE 32

MEQPQEEAPEVREEEEKEEVAEAEGAPELNGGPQHALPSSSYTDLSRSSSPPSLLDQLQMGCDGASCGSLNMECR
VCGDKASGFHYGVHACEGCKGFFRRTIRMKLEYEKCERSCKIQKKNRNKCQYCRFQKCLALGMSHNAIRFGRMPE
AEKRKLVAGLTANEGSQYNPQVADLKAFSKHIYNAYLKNFNMTKKKARSILTGKASHTAPFVIHDIETLWQAEKG
LVWKQLVNGLPPYKEISVHVFYRCQCTTVETVRELTEFAKSIPSFSSLFLNDQVTLLKYGVHEAIFAMLASIVNK
DGLLVANGSGFVTREFLRSLRKPFSDIIEPKFEFAVKFNALELDDSDLALFIAAIILCGDRPGLMNVPRVEAIQD
TILRALEFHLQANHPDAQYLFPKLLQKMADLRQLVTEHAQMMQRIKKTETETSLHPLLQEIYKDMY

FIGURE 33A

GGACACGGAGCCGCGAGGAGACAGCTGAGGCCCGCGGAGACCAGGGGGTGAAGCCTGGAGACCCTCTTGCCCTGG
CCTAGCTGCAGGCCCCCGGGATGCTTTGGGC**ATG**TCCTCTGGAGCCCCACAGAAGAGCAGCCCAATGGCCAGTGG
AGCTGAGGAGACCCCAGGCTTCCTGGACACGCTCCTGCAAGACTTCCCAGCCCTGCTGAACCCAGAGGACCCTCT
GCCATGGAAGGCCCCAGGGACGGTGCTCAGCCAGGAGGAGGTGGAGGGCGAGCTGGCTGAGCTGGCCATGGGCTT
TCTGGGCAGCAGGAAGGCCCCGCCACCACTTGCTGCTGCTCTGGCCCACGAAGCAGTTTCACAGCTGCTACAGAC
AGACCTTTCCGAATTCAGGAAGTTGCCCAGGGAGGAAGAAGAAGAGGAGGAGGACGATGACGAGGAGGAAAAGGC
CCCTGTGACCTTGCTGGATGCCCAAAGCCTGGCACAGAGTTTCTTTAACCGCCTTTGGGAAGTCGCCGGCCAGTG
GCAGAAGCAGGTGCCATTGGCTGCCCGGGCCTCACAGCGGCAGTGGCTGGTCTCCATCCACGCCATCCGGAACAC
TCGCCGCAAGATGGAGGACCGGCACGTGTCCCTCCCTTCCTTCAACCAGCTCTTCGGCTTGTCTGACCCTGTGAA
CCGCGCCTACTTTGCTGTGTTTGATGGTCACGGAGGCGTGGATGCTGCGAGGTACGCCGCTGTCCACGTGCACAC
CAACGCTGCCCGCCAGCCAGAGCTGCCCACAGACCCTGAGGGAGCCCTCAGAGAAGCCTTCCGGCGCACCGACCA
GATGTTTCTCAGGAAAGCCAAGCGAGAGCGGCTGCAGAGCGGCACCACAGGTGTGTGTGCGCTCATTGCAGGAGC
GACCCTGCACGTCGCCTGGCTCGGGGATTCCCAGGTCATTTTGGTACAGCAGGGACAGGTGGTGAAGCTGATGGA
GCCACACAGACCAGAACGGCAGGATGAGAAGGCGCGCATTGAAGCATTGGGTGGCTTTGTGTCTCACATGGACTG
CTGGAGAGTCAACGGGACCCTGGCCGTCTCCAGAGCCATCGGGGATGTCTTCCAGAAGCCCTACGTGTCTGGGGA
GGCCGATGCAGCTTCCCGGGCGCTGACGGGCTCCGAGGACTACCTGCTGCTTGCCTGTGATGGCTTCTTTGACGT
CGTACCCCACCAGGAAGTTGTTGGCCTGGTCCAGAGCCACCTGACCAGGCAGCAGGGCAGCGGGCTCCGTGTCGC
CGAGGAGCTGGTGGCTGCGGCCCGGGAGCGGGGCTCCCACGACAACATCACGGTCATGGTGGTCTTCCTCAGGGA
CCCCCAAGAGCTGCTGGAGGGCGGGAACCAGGGAGAAGGGGACCCCCAGGCAGAAGGGAGGAGGCAGGACTTGCC
CTCCAGCCTTCCAGAACCTGAGACCCAGGCTCCACCAAGAAGC**TAG**GTGGTTTCCAGGCCCCTGCCCTCCCCTTC
CTCCCATCCTTGTCCTTCTCTCCCTCAGAAGCCTCAGGACCCAACAGGTGGCAGGCAGTGGACAGGGTGCCCGCC
CCACAGTGCTTTCCCCAGCACCCCAGAGCCAGTCGGGACACCCCCCGCAGCCCGTCCTGGTGGCTGTGGAACTGC
ACTGGGTGGCGGGCAGATGGTGGAAGGCAGCTTAGGAGACCTCACCAAAGAGAAGATGGACCGGCTCTTGCTCCC
AGCTCCTATTAGGCCCGGGGTGGGACCAGAGGTCATAGGTGCCCAACGGCAGCCAAACCAAAGACACTGGTGTGC
ATGGGGCAGCATGGTTGTGCACGTGGGACCCTGGGGCGGACCCAGGAGCCAAACTCTTGAAGCACCCCCTGGGTC
AGGCCCAGCAGCGGAGTGGCCAGCCCCAGTTTCCCATTGCTCCTCTCTGCGGCCAGGGCCAGGTGGGTTCATATT
TACAGATATGCCCAGCCAGTCCTGGTCGGCCACACCAGTGTCCCAAAGAGGAGAGCGCAGCAGAGCCAGGGGTCT
GTTCTGTAGCAGCCACCCCCCTGCCCCCACTCCAGGGCAGCCATGATGTGCTTGGCCCACCAGGGCCTTCCGGGC
TGCTCTCTTCCCTGAGCCCGGAACCGGCGACGCACATGTGTCTTTTGTTGGTGTGTTTGTTTTTTTCCAGGGAGG
TCTAATTCCGAAGCAGTATTCCAGGTTTTCTCTTTGTTTTATCAGTGCCAAGATGACCTGTTGTGTCATATAATT
TAAGCAGAGCTTAGCATTTATTTTATTCTTTAGAAAACTTAAGTATTTACTTTTTTAAAGCTATTTTTCAAGGAA
CCTTTTTTTGCAGTATTATTGAATTTATTTTCTAAATCAGGATTGAAACAGGAACTTTTCCAGGTGGTGTTAATA
AGCCATTCAAGTGCCTTACACAGCTTTGAAGAAACTAGGACTGCAGTGGGCTCGGATAGGCCCATTGAGGTTTTT
AGAAAAGCAGGATTTGTTTTGTTAGGGAGGCATGATTTTGGTGAGATCTTTCTGGAAGAGTTTTCCGCCTCTTTG
TGATGCTGAACACCCCCAAGGTTCTCCCCTCCCCCCGCTGCCCAGGTGACTGGCAGGAGCTGCGACTGCCACGTA
GTGTTGCCTGGGCCCGACAGCGGGGCTCTGGGCATCCCGGGTGACCTTGGCCCATCTGCCTGCATTCCCACCCCC
TTGGGCCTGGCTGGATCCCAGGCAGAGGGACCTTGCTGCTGTGTGATTGGAACATTCCCAAATATCTTGTGAATT
TGTAATCAAATTGGTCTCATTGGGAAAGACTCTTAATTAAGAGGCTCAGGCAAGCACAGAGGCAGCCCGTGGGTC
TCTGTCTCAGTCTGGAGGCAGCAGGGATGCTGCTGGGAGTCCATGGCACAGGCCACAGCCCCTCACCTTGCCGCG
GTGGCTGGCAGCACGCCTGCCTTGCTCTGCCCCATGCCCTGAACAGGCATGAGAGCTCCACGTCCCCTAGTGCAC
CCTGAGAGGGGGCTCACAAGTGACCGATCCTGGGTGCCTCAGGGAGCTCACTGAGGGCGTGCAAAGTTGAAAGTG
GCAAGGCTGGGGGAGGGTGTCGGGTAGAGGGAAGAGGGCAGGGGGCTAGGGGAGGACTCAGAGGCCATCTGCAGG
GCCAAGCCACAGGAAGGGCTGAGCTGGAGGTGGGCAGGGCTGCTCCAGGCAGGTCAGAGCAGTGCAGGGGGAGGA
GAGGAGAAAGGGAGGAAGCTGGGCTGTGTGGTCCCCATGAAGGCATTCAGAGTCCACCTGCAGACAGCGAGAGCC
CCAGGAAGGTTTGCACAGCTGTGCCCCAAGCACCTTGGCCTCCTCTCAGCTCGCCGAGGAGGCACGCTAGAGCCG
CCTTCCCGGTGGGAGCCCTCTGTCCCACAGGGAGCGGGGAGCCAGCTTTGCTGGGGCCCTACCTGCATGCCCAGC
CTTACCCCTCATTCTCACAGCACAGATGAGGTTGAGACCATGCAGTCAATGCATTGCTTAAGGTCTCTTATTTAC
AAAAAAAAACCTTAAACATAGTCGCTGTCATTCAGACATTCAGAGAATGGTTGGCCACAAACAATGACCAAGTAT

FIGURE 33B

TGCTTGGCTTAACTTGAAGGCCTGCTGTCTCCTTCTGGGGGTCAGGGACGCAGCTCCACCCTCACCACTAGCCCA
CCCTGCCCGTGGGCATAACCTTGACGAAGAGAGAGAATGATTGGCATCTGCTTTTCTCTTTTCTTTGCTAATAAT
TCTGTTCCTGGCTGCCGAGAGTGAAGTTTCACCATGTGGAGGTTTGGCTCCTATCACCTGGTGGTCTGATTCATA
CCCTAGCCTGAGGCTCCACTGGAAGATCTCGCAGCCTCAGTGTATGGGAAACCCTTTCCCCAGGCTTGTCCCAGC
ACTGCCGCTCCCCACCCCTGAGCCAGGACCCCAGAGGATGGCCATGCCCCGTGCCTGGCAGAGGTCTGGTGCCAG
CACTGGGAGCTGCTCCGCCCTTGCCTTGGGGCCGAGGGAGCCCTCGTCCACCCCTGCACAGCAGCTGGGCACAGA
GGAGCGCTCTTCCATCTTGACCAGGACTGCACCAAGAAGCACCAGGTGTCTTCAGCCTCCAACCTCCGGGGCGAC
CTTCTCTTCCAGCCACAGTCCCATGAGGGCCCCTAGCCAGGGACACTGGTCTGTAAATTGTAATCCTTTCTCCAG
CCCAGCTCTCCACTTGTTCCTTGTGTGAGCTGAGCAGGCAGTGCACCTCTGAGTGTCCCTTTTGTAAGGCCCAGG
GGTTGCACTGAGTCTGCAGAGGCCGCGACCTCCTAGAACGCTGTGGGTGCAAGTGAGCCGGCGTGTCCTGGGGAG
ATGCTGCCAGCACACAGGGGCCCTCCTGCTGCCAGCAGGTTGGGGTGGTTAAGTCTTATTAGTGTCTATTCTTAA
AATTAAGTGGGCTGGAGAAGAATGGAGCTCCACATGCCAGCACCGTATATGGAATACAAAAGCTGGGGAAGCAGG
GCCTGCCTTACAGGTGTGGCTGACTCTGAGCCCAGGCCTGCAGGGGTGGAGGGCAGTCCCTCAGAATCCCAGAGG
CAGTCCCAGCCTCAGAACCCAGGATAGGAAATGGGTGTGTTTAGTGGGGAAAGGGACGGGGTGCAGACGGCAGGG
CCAGTATGGGGCCCCCTCCCTCTCCTCTCCTCTCCTATGGTGAGCCCAGCGTGGGCACCGGGCCGTCTCAGCCGT
GTTCCCAGGGCTGGGAGGACAGCTCTGGCCCTTCTTAGGCCTAGCCTCGTCCCAAGCTAAATGTAAGCCAGTTGG
GCTGTGTTAAAGGAAGCAGTGTTTTTGGTTTGATTCTGCCTCTGTAGCTCAAGGGGGGCAGCCCCCAGAGTCCTG
TGCATTCTGCCAAGGCTCCATAGCTTTGCCAAATGCACGGAGCTCTGCCATTCCGGTGCAGTGCAGGCCTTGCGA
AGGGTTTATCTGCGTTCGTCTCGGTGGGCTTCTCCTGCATGGGAGTTGTGTTCCTGTGCAAGGGGGAGCTTTGCT
CAGGACAGGATGACTGTCTTCCCTATTCTTAGGGACAAGTCCCAAGATGCCAGAAAGGCAGTCTCCCAAGGACCC
ACCATGCAGAAGTGTCAATAAACCACAAGTTCTG

FIGURE 34

MSSGAPQKSSPMASGAEETPGFLDTLLQDFPALLNPEDPLPWKAPGTVLSQEEVEGELAELAMGFLGSRKAPPPL
AAALAHEAVSQLLQTDLSEFRKLPREEEEEEEDDDEEEKAPVTLLDAQSLAQSFFNRLWEVAGQWQKQVPLAARA
SQRQWLVSIHAIRNTRRKMEDRHVSLPSFNQLFGLSDPVNRAYFAVFDGHGGVDAARYAAVHVHTNAARQPELPT
DPEGALREAFRRTDQMFLRKAKRERLQSGTTGVCALIAGATLHVAWLGDSQVILVQQGQVVKLMEPHRPERQDEK
ARIEALGGFVSHMDCWRVNGTLAVSRAIGDVFQKPYVSGEADAASRALTGSEDYLLLACDGFFDVVPHQEVVGLV
QSHLTRQQGSGLRVAEELVAAARERGSHDNITVMVVFLRDPQELLEGGNQGEGDPQAEGRRQDLPSSLPEPETQA
PPRS

FIGURE 35

ATGGCGGCGGCCGTAGCGGCTCCACTCGCCGCCGGGGGGTGAGGAGGCGGCAGCCACGACCTCCGTGCCCGGGTCT
CCAGGTCTGCCGGGGAGACGCAGTGCAGAGCGGGCCCTAGAGGACGCCGTGGCCACCGGGACCCTGAACCTGTCT
AACCGGCGCTTGAAGCACTTCCCCCGGGGCGCGGCCCGTAGCTACGACCTGTCAGACATCACCCAGGCTGACCTG
TCCCGGAACCGGTTTCCCGAGGTGCCCGAGGCGGCGTGCCAGCTGGTGTCCCTGGAGGGCCTGAGCCTCTACCAC
AATTGCCTGAGATGCCTGAACCCAGCCTTGGGGAATCTCACAGCCCTCACCTACCTCAACCTCAGCCGAAACCAG
CTGTCGCTGCTGCCACCCTACATCTGCCAGCTGCCCCTGAGGGTCCTCATCGTCAGCAACAACAAGCTGGGAGCC
CTGCCCCCTGACATCGGCACCCTGGGAAGCCTGCGACAGCTTGACGTGAGCAGCAACGAGCTCCAATCCCTGCCC
TCGGAACTGTGTGGCCTCTCTTCCCTGCGGGACCTCAATGTCCGGAGGAACCAGCTCAGTACGCTGCCCGAAGAG
CTGGGGGGACCTCCCTCTGGTCCGCCTGGATTTCTCCTGTAACCGCGTCTCCCGAATCCCAGTCTCCTTCTGCCGC
CTGAGGCACCTGCAGGTCATTCTGCTGGACAGCAACCCTCTGCAGAGTCCACCTGCCCAGGTCTGCCTGAAGGGG
AAACTTCACATCTTCAAGTATTTGTCCACAGAGGCCGGGCAGCGTGGGTCGGCCCTGGGGGACCTGGCCCCTTCT
CGGCCCCCGAGTTTCAGTCCCTGCCCTGCAGAGGATCTATTTCCGGGACATCGGTACGATGGTGGGCTGGACTCA
GGCTTCCACAGCGTTGATAGTGGCAGCAAGAGGTGGTCTGGAAATGAGTCAACAGATGAATTTTCAGAGCTGTCA
TTCCGGATCTCAGAGCTGGCCCGGGAGCCCCGGGGGCCCAGAGAACGCAAGGAGGATGGCTCAGCGGACGGAGAC
CCTGTGCAGATTGACTTCATCGACAGCCATGTCCCCGGGGAGGATGAAGAGCGAGGCACTGTGGAGGAGCAGCGA
CCACCCGAATTAAGCCCTGGGGCAGGGGACAGGGAGAGGGCACCAAACAGCAGGCGGGAGGAGCCGGCAGGGGAG
GAGCGGCGGCGCCCGGACACCTTGCAGCTGTGGCAGGAGCGGGAACGGCGGCAGCAGCAGCAGAGCGGGGCGTGG
GGGGCCCCGAGGAAGGATAGCCTCTTGAAGCCAGGGCTCAGGGCTGTTGTGGGAGGGGCCGCCGCCGTGTCCACT
CAAGCCATGCACAACGGCTCGCCTAAGTCCAGTGCCTCCCAAGCAGGGGGCTGCAGCGGGGCAGGGAGCCCCGCC
CCTGCCCCTGCCTCCCAAGAGCCCCTTCCCATAGCTGGACCAGCGACAGCACCTGCTCCACGGCCACTTGGCTCC
ATTCAGAGACCAAACAGCTTCCTCTTCCGTTCCTCCTCTCAGAGTGGCTCAGGCCCTTCCTCACCAGACTCTGTC
CTGAGACCTCGGCGGTACCCCCAGGTTCCAGATGAGAAGGACTTAATGACTCAGCTGCGCCAGGTCCTTGAGTCC
CGGCTGCAGCGGCCCCTGCCTGAGGACCTGGCCGAGGCTCTGGCCAGTGGGGTCATCCTGTGCCAGCTGGCCAAC
CAGCTACGGCCGCGCTCCGTGCCCTTCATCCATGTGCCCTCCCCTGCTGTGCCAAAACTCAGTGCCCTCAAGGCT
CGGAAGAATGTGGAGAGTTTTCTAGAAGCCTGTCGAAAAATGGGGGTGCCTGAGGCTGACCTGTGCTCGCCCTCG
GATCTCCTCCAGGGCACTGCCCGGGGGCTGCGGACCGCGCTGGAGGCCGTGAAGCGGGTGGGGGGCAAGGCCCTA
CCGCCCCTCTGGCCCCCCTCTGGTCTGGGCGGCTTCGTCGTCTTCTACGTGGTCCTCATGCTGCTGCTCTATGTC
ACCTACACTCGGCTCCTGGATCCCCGTTCCCCCCAGGTGGCCTGGGAGGTGGCCCCCTCGAGGATGACTCCACTA
GCGCCCTGGGACCCCAAGTATGAAGCCAAAGCAGGACCTCGGCCGGTGTGGGTGAGTTGGGGGCAAACCTGTGGG
ACTGGCTGGGGTGCTCAGGGAGCTGTGCGGTGGCCTGAGGCTCCAGTGCTCTGTCCTCCTCACCCTAGGGGGCCA
ACTGTAGCTCAGGAGCCTCGTTCTCAGGCCGGACGCTGTGTCACCCCTCATTCTGGCCGCTGTATGAAGCAGCCT
CGGGCAGGGGTCTCAGGCCCGTGGCCCCTGCCACAGGGCACTGGAATGGACAGCAGGCGCCCCCAGATGCAGGGT
TCCCGGTGGTGTGCTGTGAAGATGTCTTCCTCTCGGACCCTCTGCTGCCCCGGGGGCAGCGTGTTCCCCTGTACC
TGTCCAAGGCCCCCCAGCAGATGAATGGGCTCCCTGAAACTGCTGCCGCCGCCCCCCATCATGTCTGCCAGGGTGC
TCCCCCGCCCATCACCCTCCCGGGGCCCCTCCACTGCCTGGCTCAGCGGGCCGGAGCTGATCGCTCTCACTGGCC
TGCTGCAGATGAGCCAGGGGGAGCCTAGGCCCAGCTCCTCCGCGGTTGGCCCCCCAGACCATACCTCTGACCCAC
CCAGCCCCTGTGGTAGCCCCAGCAGTTCTCAGGGTGCTGACCTCTCTCTCCCACAGACCCCAGACACCCATTGTC
CATAGCCTTCTCAGGGCAGAGTGGGCTGGTTGTGTTGACAATAAAACAGTGTTGGTTTGCA

FIGURE 36

MAAAVAAPLAAGGEEAAATTSVPGSPGLPGRRSAERALEDAVATGTLNLSNRRLKHFPRGAARSYDLSDITQADL
SRNRFPEVPEAACQLVSLEGLSLYHNCLRCLNPALGNLTALTYLNLSRNQLSLLPPYICQLPLRVLIVSNNKLGA
LPPDIGTLGSLRQLDVSSNELQSLPSELCGLSSLRDLNVRRNQLSTLPEELGDLPLVRLDFSCNRVSRIPVSFCR
LRHLQVILLDSNPLQSPPAQVCLKGKLHIFKYLSTEAGQRGSALGDLAPSRPPSFSPCPAEDLFPGHRYDGGLDS
GFHSVDSGSKRWSGNESTDEFSELSFRISELAREPRGPRERKEDGSADGDPVQIDFIDSHVPGEDEERGTVEEQR
PPELSPGAGDRERAPNSRREEPAGEERRRPDTLQLWQERERRQQQQSGAWGAPRKDSLLKPGLRAVVGGAAAVST
QAMHNGSPKSSASQAGGCSGAGSPAPAPASQEPLPIAGPATAPAPRPLGSIQRPNSFLFRSSSQSGSGPSSPDSV
LRPRRYPQVPDEKDLMTQLRQVLESRLQRPLPEDLAEALASGVILCQLANQLRPRSVPFIHVPSPAVPKLSALKA
RKNVESFLEACRKMGVPEADLCSPSDLLQGTARGLRTALEAVKRVGGKALPPLWPPSGLGGFVVFYVVLMLLLYV
TYTRLLDPRSPQVAWEVAPSRMTPLAPWDPKYEAKAGPRPVWVSWGQTCGTGWGAQGAVRWPEAPVLCPPHPRGP
TVAQEPRSQAGRCVTPHSGRCMKQPRAGVSGPWPLPQGTGMDSRRPQMQGSRWCAVKMSSSRTLCCPGGSVFPCT
CPRPPSR

FIGURE 37

GCGCGGCCC**ATG**TCCTCCGCGCCGCGCTCGCCCACCCCGCGGCCCCGCAGGATGAAGAAGGACGAGTCGTTCCTG
GGCAAGCTGGGCGGCACCCTGGCCAGGAAGCGGAGGGCGCGCGAGGTGAGTGACCTGCAGGAAGAAGGCAAGAAT
GCCATCAACTCACCGATGTCCCCCGCCCTGGTGGATGTTCACCCTGAAGACACCCAGCTTGAGGAGAACGAGGAG
CGCACGATGATTGACCCCACTTCCAAGGAAGACCCCAAGTTCAAGGAACTGGTCAAGGTCCTCCTCGACTGGATT
AATGACGTGCTGGTGGAGGAGAGGATCATTGTGAAGCAGCTGGAGGAAGACCTGTATGACGGCCAGGTGCTGCAG
AAGCTCTTGGAAAAACTGGCAGGGTGCAAGCTGAATGTGGCTGAGGTGACACAGTCCGAAATAGGGCAGAAACAG
AAGCTGCAGACGGTGCTGGAAGCAGTACATGACCTGCTGCGGCCCCGAGGCTGGGCGCTCCGGTGGAGCGTGGAC
TCAATTCACGGGAAGAACCTGGTGGCCATCCTCCACCTGCTGGTCTCTCTGGCCATGCACTTCAGGGCCCCCATC
CGCCTTCCTGAGCATGTAACGGTGCAGGTGGTGGTCGTGCGGAAACGGGAAGGCCTGCTGCATTCCAGCCACATC
TCGGAGGAGCTGACCACAACTACAGAGATGATGATGGGCCGGTTCGAGCGGGATGCCTTCGACACGCTGTTCGAC
CACGCCCCGGATAAGCTCAGCGTGGTGAAGAAGTCTCTCATCACTTTTGTGAACAAGCACCTGAACAAGCTGAAT
TTGGAGGTGACGGAACTGGAGACCCAGTTTGCAGATGGCGTGTACCTGGTTCTGCTCATGGGCCTTCTGGAAGAC
TACTTTGTTCCTCTCCACCACTTCTACCTGACTCCGGAAAGCTTCGATCAGAAGGTCCACAATGTGTCCTTCGCC
TTTGAGCTGATGCTGGACGGAGGCCTCAAGAAACCCAAGGCTCGTCCTGAAGACGTGGTTAACTTGGACCTCAAA
TCCACCCTGAGGGTTCTTTACAACCTGTTCACCAAGTACAAGAACGTGGAG**TGA**CGGGGGAGCTGTGGATGGTGG
CAGGAGTGTCCCAGCAAGAAAGGCGGCATCCGTCTGTGCCCTGTGCCTTTCCAGGGAGCCAGGCGCCATGGGCTT
CTGGTCCAAGCTGTGTTGACTGTCATCCCCACCCCACCCCTACCTCACGCCTGCCCCACCCCCTGCCTCTTTTGG
TTGTTGTTCTTAATCTCCTCTCCATGTAGTTCCCAGTGGGCAAGAGCCTTTGAAAATGCAGGATTCTAAACACTC
GTGCTTGCGTTTGAAGCCTCGCGTCACTCAGTCGCGTGGGATGATGAGTCCGTTGTTGTCTGCCTTGGCCGAAAG
ATGAAAAAAAGCCTGAACCCCAACCCCCAGCTGGTTGAGAGCACCCTGCATTCTGCCTCATGGTGCAGTTAGCGA
TCACAGGCCTTCAGAAGTACAACATCAGCTCAGCAGGAACGCCGGCTCCCCGAGGACCCAGGCTTGACGATTCAC
CGGGGATCTCCTGGGCTGGGCTCTCCTTGGAAGTGAGGCCTTTTATTAAAAATAAAAGGGTTTTGCAGTTTGAAA
AAAAAAAAAAAAAAAAAAA

FIGURE 38

MSSAPRSPTPRPRRMKKDESFLGKLGGTLARKRRAREVSDLQEEGKNAINSPMSPALVDVHPEDTQLEENEERTM
IDPTSKEDPKFKELVKVLLDWINDVLVEERIIVKQLEEDLYDGQVLQKLLEKLAGCKLNVAEVTQSEIGQKQKLQ
TVLEAVHDLLRPRGWALRWSVDSIHGKNLVAILHLLVSLAMHFRAPIRLPEHVTVQVVVVRKREGLLHSSHISEE
LTTTTEMMMGRFERDAFDTLFDHAPDKLSVVKKSLITFVNKHLNKLNLEVTELETQFADGVYLVLLMGLLEDYFV
PLHHFYLTPESFDQKVHNVSFAFELMLDGGLKKPKARPEDVVNLDLKSTLRVLYNLFTKYKNVE

FIGURE 39

GCTACGCGGGCCACGCTGCTGGCTGGCCTGACCTAGGCGCGCGGGGTCGGGCGGCCGCGCGGGCGGGCTGAGTGA
GCAAGACAAGACACTCAAGAAGAGCGAGCTGCGCCTGGGTCCCGGCCAGGCTTGCACGCAGAGGCGGGCGGCAGA
CGGTGCCCGGCGGAATCTCCTGAGCTCCGCCGCCCAGCTCTGGTGCCAGCGCCCAGTGGCCGCCGCTTCGAAAGT
GACTGGTGCCTCGCCGCCTCCTCTCGGTGCGGGACC**ATG**AAGCTGCTGCCGTCGGTGGTGCTGAAGCTCTTTCTG
GCTGCAGTTCTCTCGGCACTGGTGACTGGCGAGAGCCTGGAGCGGCTTCGGAGAGGGCTAGCTGCTGGAACCAGC
AACCCGGACCCTCCCACTGTATCCACGGACCAGCTGCTACCCCTAGGAGGCGGCCGGGACCGGAAAGTCCGTGAC
TTGCAAGAGGCAGATCTGGACCTTTTGAGAGTCACTTTATCCTCCAAGCCACAAGCACTGGCCACACCAAACAAG
GAGGAGCACGGGAAAAGAAAGAAGAAAGGCAAGGGGCTAGGGAAGAAGAGGGACCCATGTCTTCGGAAATACAAG
GACTTCTGCATCCATGGAGAATGCAAATATGTGAAGGAGCTCCGGGCTCCCTCCTGCATCTGCCACCCGGGTTAC
CATGGAGAGAGGTGTCATGGGCTGAGCCTCCCAGTGGAAAATCGCTTATATACCTATGACCACACAACCATCCTG
GCCGTGGTGGCTGTGGTGCTGTCATCTGTCTGTCTGCTGGTCATCGTGGGGCTTCTCATGTTTAGGTACCATAGG
AGAGGAGGTTATGATGTGGAAAATGAAGAGAAAGTGAAGTTGGGCATGACTAATTCCCAC**TGA**GAGAGACTTGTG
CTCAAGGAATCGGCTGGGGACTGCTACCTCTGAGAAGACACAAGGTGATTTCAGACTGCAGAGGGGAAAGACTTC
CATCTAGTCACAAAGACTCCTTCGTCCCCAGTTGCCGTCTAGGATTGGGCCTCCCATAATTGCTTTGCCAAAATA
CCAGAGCCTTCAAGTGCCAAACAGAGTATGTCCGATGGTATCTGGGTAAGAAGAAAGCAAAAGCAAGGGACCTTC
ATGCCCTTCTGATTCCCCTCCACCAAACCCCACTTCCCCTCATAAGTTTGTTTAAACACTTATCTTCTGGATTAG
AATGCCGGTTAAATTCCATATGCTCCAGGATCTTTGACTGAAAAAAAAAAAAGAAGAAGAAGAAGGAGAGCAAGAA
GGAAAGATTTGTGAACTGGAAGAAAGCAACAAAGATTGAGAAGCCATGTACTCAAGTACCACCAAGGGATCTGCC
ATTGGGACCCTCCAGTGCTGGATTTGATGAGTTAACTGTGAAATACCACAAGCCTGAGAACTGAATTTTGGGACT
TCTACCCAGATGGAAAAATAACAACTATTTTTGTTGTTGTTGTTTGTAAATGCCTCTTAAATTATATATTTATTT
TATTCTATGTATGTTAATTTATTTAGTTTTTAACAATCTAACAATAATATTTCAAGTGCCTAGACTGTTACTTTG
GCAATTTCCTGGCCCTCCACTCCTCATCCCCACAATCTGGCTTAGTGCCACCCACCTTTGCCACAAAGCTAGGAT
GGTTCTGTGACCCATCTGTAGTAATTTATTGTCTGTCTACATTTCTGCAGATCTTCCGTGGTCAGAGTGCCACTG
CGGGAGCTCTGTATGGTCAGGATGTAGGGGTTAACTTGGTCAGAGCCACTCTATGAGTTGGACTTCAGTCTTGCC
TAGGCGATTTTGTCTACCATTTGTGTTTTGAAAGCCCAAGGTGCTGATGTCAAAGTGTAACAGATATCAGTGTCT
CCCCGTGTCCTCTCCCTGCCAAGTCTCAGAAGAGGTTGGGCTTCCATGCCTGTAGCTTTCCTGGTCCCTCACCCC
CATGGCCCCAGGCCACAGCGTGGGAACTCACTTTCCCTTGTGTCAAGACATTTCTCTAACTCCTGCCATTCTTCT
GGTGCTACTCCATGCAGGGGTCAGTGCAGCAGAGGACAGTCTGGAGAAGGTATTAGCAAAGCAAAAGGCTGAGAA
GGAACAGGGAACATTGGAGCTGACTGTTCTTGGTAACTGATTACCTGCCAATTGCTACCGAGAAGGTTGGAGGTG
GGGAAGGCTTTGTATAATCCCACCCACCTCACCAAAACGATGAAGGTATGCTGTCATGGTCCTTTCTGGAAGTTT
CTGGTGCCATTTCTGAACTGTTACAACTTGTATTTCCAAACCTGGTTCATATTTATACTTTGCAATCCAAATAAA
GATAACCCTTATTCCATAAAAAAAAAAAAAAAAA

FIGURE 40

MKLLPSVVLKLFLAAVLSALVTGESLERLRRGLAAGTSNPDPPTVSTDQLLPLGGGRDRKVRDLQEADLDLLRVT
LSSKPQALATPNKEEHGKRKKKGKGLGKKRDPCLRKYKDFCIHGECKYVKELRAPSCICHPGYHGERCHGLSLPV
ENRLYTYDHTTILAVVAVVLSSVCLLVIVGLLMFRYHRRGGYDVENEEKVKLGMTNSH

FIGURE 41

ACGCGTCCGCTTCGGAATGAGAGACTCAACCATAATAGAAAGAATGGAGAACTATTAACCACCATTCTTCAGTGG
GCTGTGATTTTCAGAGGGGAATACTAAGAAATGGTTTTCCATACTGGAACCCAAAGGTAAAGACACTCAAGGACA
GACATTTTTGGCAGAGCATAG**ATG**AAAATGGCAAGTTCCCTGGCTTTCCTTCTGCTCAACTTTCATGTCTCCCTC
TTCTTGGTCCAGCTGCTCACTCCTTGCTCAGCTCAGTTTTCTGTGCTTGGACCCTCTGGGCCCATCCTGGCCATG
GTGGGTGAAGACGCTGATCTGCCCTGTCACCTGTTCCCGACCATGAGTGCAGAGACCATGGAGCTGAGGTGGGTG
AGTTCCAGCCTAAGGCAGGTGGTGAACGTGTATGCAGATGGAAAGGAAGTGGAAGACAGGCAGAGTGCACCATAT
CGAGGGAGAACTTCGATTCTGCGGGATGGCATCACTGCAGGGAAGGCTGCTCTCCGAATACACAACGTCACAGCC
TCTGACAGTGGAAAGTACTTGTGTTATTTCCAAGATGGTGACTTCTACGAAAAAGCCCTGGTGGAGCTGAAGGTT
GCAGCATTGGGTTCTGATCTTCACATTGAAGTGAAGGGTTATGAGGATGGAGGGATCCATCTGGAGTGCAGGTCC
ACTGGCTGGTACCCCCAACCCCAAATAAAGTGGAGCGACACCAAGGGAGAGAACATCCCGGCTGTGGAAGCACCT
GTGGTTGCAGATGGAGTGGGCCTGTATGCAGTAGCAGCATCTGTGATCATGAGAGGCAGCTCTGGTGGGGGTGTA
TCCTGCATCATCAGAAATTCCCTCCTCGGCCTGGAAAAGACAGCCAGCATATCCATCGCAGACCCCTTCTTCAGG
AGCGCCCAGCCCTGGATCGCGGCCCTGGCAGGGACCCTGCCTATCTCGTTGCTGCTTCTCGCAGGAGCCAGTTAC
TTCTTGTGGAGACAACAGAAGGAAAAAATTGCTCTGTCCAGGGAGACAGAAAGAGAGCGAGAGATGAAAGAAATG
GGATACGCTGCAACAGAGCAAGAAATAAGCCTAAGAGAGAAGCTCCAGGAGGAACTCAAGTGGAGGAAAATCCAG
TACATGGCTCGTGGAGAGAAGTCTTTGGCCTATCATGAATGGAAAATGGCCCTCTTCAAACCTGCGGATGTGATT
CTGGATCCAGACACGGCAAACGCCATCCTCCTTGTTTCTGAGGACCAGAGGAGTGTGCAGCGTGCTGAAGAGCCG
CGGGATCTGCCAGACAACCCTGAGAGATTTGAATGGCGTTACTGTGTCCTTGGCTGTGAAAACTTCACATCAGGG
AGACATTACTGGGAGGTGGAAGTGGGGGACAGAAAAGAGTGGCATATTGGGGTATGTAGTAAGAACGTGGAGAGG
AAAAAAGGTTGGGTCAAAATGACACCGGAGAACGGATACTGGACTATGGGCCTGACTGATGGGAATAAGTATCGG
GCTCTCACTGAGCCCAGAACCAACCTGAAACTTCCTGAGCCTCCTAGGAAAGTGGGGATCTTCCTGGACTATGAG
ACTGGAGAGATCTCGTTCTATAATGCCACAGATGGATCTCATATCTACACCTTTCCGCACGCCTCTTTCTCTGAG
CCTCTATATCCTGTTTTCAGAATTTTGACCTTGGAGCCCACTGCCCTGACCATTTGCCCAATACCAAAAGAAGTA
GAGAGTTCCCCCGATCCTGACCTAGTGCCTGATCATTCCCTGGAGACACCACTGACCCCGGGCTTAGCTAATGAA
AGTGGGGAGCCTCAGGCTGAAGTAACATCTCTGCTTCTCCCTGCCCACCCTGGAGCTGAGGTCTCCCCTTCTGCA
ACAACCAATCAGAACCATAAGCTACAGGCACGCACTGAAGCACTTTAC**TGA**TATTCATTCCATTATTCCATATGA
CAGTTGTTTTGAGTTTCGTACCACCTTATTGTCCCCTTATACAGATAAGGAAACTGGGGTGCAGAAAGGTGAATT
AACTTTACAAAGTAGACATGACAAGTGAACAGCAGAGCTGGGATCTAAACAGCAATAACTAACATTAACAGAGAA
TTTAAAATGTTCTTAGTGCTGTGTTATAAGCTTTGGTGGATGTCACTCCTTTAATCCTCACAACACCCTGTCGGG
TAGTCATATTTTGCAAGTATGGAAGCTGAGGCAGGGCAACATGAAGTAACTTACATAATTCATACAGTAATTTGT
GCAGTTGGGAGATGTTCAGCCTTAGTCCCTGGCTAATTGCCTGTTCTTTTCCAGCCTGATTTTTTTTCCCACAGG
AAGAGCCCACATGTAGCCCTGAGGTTTCCTTCCCAGGACAGCTGCAGGGTAGAGATCATTTTAAGTGCTTGTGGA
GTTGACATCCCTATTGACTCTTTCCCAGCTGATATCAGAGACTTAGACCCAGCACTCCTTGGATTAGCTCTGCAG
AGTGTCTTGGTTGAGAGAATAACCTCATAGTACCAACATGACATGTGACTTGGAAAGAGACTAGAGGCCACACTT
GATAAATCATGGGGCACAGATATGTTCCCACCCAACAAATGTGATAAGTGATTGTGCAGCCAGAGCCAGCCTTCC
TTCAATCAAGGTTTCCAGGCAGAGCAAATACCCTAGAGATTCTCTGTGATATAGGAAATTTGGATCAAGGAAGCT
AAAAGAATTACAGGGATGTTTTTAATCCCACTATGGACTCAGTCTCCTGGAAATAGGTCTGTCCACTCCTGGTCA
TTGGTGGATGTTAAACCCATATTCCTTTCAACTGCTGCCTGCTAGGGAAAACTGCTCCTCATTATCATCACTATT
ATTGCTCACCACTGTATCCCCTCTACTTGGCAAGTGGTTGTCAAGTTCTAGTTGTTCAATAAATGTGTTAATAAT
GAAAAAAAAAAA

FIGURE 42

MKMASSLAFLLLNFHVSLFLVQLLTPCSAQFSVLGPSGPILAMVGEDADLPCHLFPTMSAETMELRWVSSSLRQV
VNVYADGKEVEDRQSAPYRGRTSILRDGITAGKAALRIHNVTASDSGKYLCYFQDGDFYEKALVELKVAALGSDL
HIEVKGYEDGGIHLECRSTGWYPQPQIKWSDTKGENIPAVEAPVVADGVGLYAVAASVIMRGSSGGGVSCIIRNS
LLGLEKTASISIADPFFRSAQPWIAALAGTLPISLLLLAGASYFLWRQQKEKIALSRETERE REMKEMGYAATEQ
EISLREKLQEELKWRKIQYMARGEKSLAYHEWKMALFKPADVILDPDTANAILLVSEDQRSVQRAEEPRDLPDNP
ERFEWRYCVLGCENFTSGRHYWEVEVGDRKEWHIGVCSKNVERKKGWVKMTPENGYWIMGLTDGNKYRALTEPRT
NLKLPEPPRKVGIFLDYETGEISFYNATDGSHIYTFPHASFSEPLYPVFRILTLEPTALTICPIPKEVESSPDPD
LVPDHSLETPLTPGLANESGEPQAEVTSLLLPAHPGAEVSPSATTNQNHKLQARTEALY

FIGURE 43

GGCACGAGGGTAGTGAGCGGTGTTTCAGGATGTGAGGGCCCGCAGGAGCCGAGTCAGGCTCTCTCCACTGCCTGC
CCGCCACCGTGCAAGCTCTGGCCGGCGCTGCCCACAGTCCCCATGGTGGGCAGCCCCCGCGGCGGGGACCCCTGA
TCGGCAGCGGC**ATG**CCAGGGAAGCCCAAGCACCTGGGCGTCCCCAACGGGCGCATGGTTCTGGCTGTGTCAGATG
GAGAGCTGAGCAGCACGACGGGGCCCCAGGGCCAGGGCGAGGGCCGCGGCAGCTCTCTCAGCATCCACAGCCTCC
CCAGTGGTCCCAGCAGCCCCTTCCCAACCGAGGAGCAGCCTGTGGCCAGCTGGGCCCTGTCCTTCGAGCGGCTGT
TGCAGGACCCGCTGGGCCTGGCTTACTTCACTGAGTTCCTGAAGAAGGAGTTCAGCGCGGAAAACGTGACTTTCT
GGAAGGCCTGCGAGCGCTTCCAGCAGATCCCGGCCAGCGATACCCAGCAGCTAGCTCAGGAGGCCCGCAACATCT
ACCAGGAGTTCCTGTCCAGCCAGGCGCTGAGCCCAGTGAACATCGACCGTCAGGCCTGGCTTGGCGAGGAGGTGC
TGGCCGAGCCCCGGCCGGACATGTTTCGGGCACAGCAGCTTCAGATCTTCAACTTGATGAAGTTCGACAGCTATG
CGCGCTTCGTCAAGTCCCCGCTGTACCGCGAGTGCCTGCTAGCCGAAGCCGAGGGACGCCCTCTGCGGGAACCTG
GCTCCTCGCGCCTCGGCAGCCCTGACGCCACGAGGAAGAAGCCGAAGCTGAAGCCCGGGAAGTCGCTGCCGCTGG
GTGTGGAGGAGTTGGGGCAGCTGCCACCCGTTGAGGGTCCTGGGGGCCGCCCTCTCCGCAAGTCCTTCCGCCGGG
AGCTGGGCGGGACTGCAAACGCCGCCTTGCGCCGAGAGTCTCAGGGCTCCCTCAACTCCTCCGCCAGCCTGGACC
TTGGCTTCCTAGCCTTCGTCAGCAGCAAATCTGAGAGCCACCGGAAGAGCCTTGGGAGCACGGAGGGTGAAAGTG
AAAGCCGGCCAGGGAAGTACTGCTGTGTGTACCTGCCCGATGGCACAGCCTCCTTGGCCCTGGCCAGACCTGGCC
TCACCATCCGAGACATGCTGGCAGGGATCTGTGAGAAACGAGGCCTCTCTCTACCTGACATCAAGGTCTACCTGG
TGGGCAATGAACAGGCCCTGGTCCTGGATCAGGACTGCACCGTGCTGGCGGATCAGGAAGTGCGGCTGGAAAACA
GGATCACCTTCGAGCTGGAGCTGACGGCGCTGGAGCGCGTGGTACGAATCTCAGCCAAGCCCACCAAGCGGCTGC
AGGAGGCGCTGCAGCCCATTCTGGAGAAGCACGGCTTGAGCCCGCTAGAGGTGGTGCTGCACCGGCCAGGCGAGA
AACAGCCTCTGGATCTGGGGAAGCTAGTGAGCTCGGTGGCGGCCCAGAGACTGGTTTTGGACACTCTTCCAGGTG
TGAAGATCTCCAAAGCCCGTGACAAATCTCCCTGCCGCAGCCAGGGCTGCCCACCTAGAACTCAGGATAAGGCCA
CCCATCCCCCTCCAGCGTCCCCCAGTTCTCTGGTGAAGGTGCCCAGTAGTGCCACTGGAAAGCGGCAGACCTGTG
ACATCGAAGGCCTGGTGGAGCTGCTGAACCGGGTGCAGAGCAGCGGGGCCCACGACCAGAGGGGCCTTCTGAGGA
AAGAGGACCTGGTACTTCCAGAATTTCTGCAGCTGCCCGCCCAAGGGCCCAGCTCCGAGGAGACCCCACCACAGA
CCAAATCAGCAGCCCAGCCCATCGGGGGATCCTTGAACTCCACCACCGACTCAGCCCTC**TGA**CAGCTACCCAACA
GTCCAGGACAGCTGCATGGCACCCGGCGGGCCGAGCATGCCATGGGTCCGCTCTGCATGCCCTGTCTGTGCCATG
AGTGTCCCTGGCCCCTTCCTGCCATGGGCAGGCCCGCAGGAAGAGCCGGTAGGGGTGGAAAGGGGACTCAGATGA
GACACACCCCACAGCTGCCACCGCCTTGTCCCTCAACAAGCTCACCCCCAATCCCTTGCAGCCAGGCCACAATGG
GGGAGGTGAGTCCAGCCCCTTGGAACAGGCTTGCCCAACATGGAGGGATGGCGTTGGCAGTGCCAGCCTCCCCAG
CCTGTGCCAAGCTTCAACAGGGGCAAGAGGAGGGGCCGGCCCCTCCTCAGGAAGCTGGTATGAGTAAGGCCTTGA
GGGTGCAGGCAGGCAGCCCTGTACCCCACCCACATAGACTATACTGTACATACAGATTTTGCAGTAGGCTTGGGG
CAGCTGGGTTTGTCCTTGATGTATGATACTGTTATTATAATAATTATTATTATTCTGCAAAAAAAAAAAAAAAAA
AA

FIGURE 44

MPGKPKHLGVPNGRMVLAVSDGELSSTTGPQGQGEGRGSSLSIHSLPSGPSSPFPTEEQPVASWALSFERLLQDP
LGLAYFTEFLKKEFSAENVTFWKACERFQQIPASDTQQLAQEARNIYQEFLSSQALSPVNIDRQAWLGEEVLAEP
RPDMFRAQQLQIFNLMKFDSYARFVKSPLYRECLLAEAEGRPLREPGSSRLGSPDATRKKPKLKPGKSLPLGVEE
LGQLPPVEGPGGRPLRKSFRRELGGTANAALRRESQGSLNSSASLDLGFLAFVSSKSESHRKSLGSTEGESESRP
GKYCCVYLPDGTASLALARPGLTIRDMLAGICEKRGLSLPDIKVYLVGNEQALVLDQDCTVLADQEVRLENRITF
ELELTALERVVRISAKPTKRLQEALQPILEKHGLSPLEVVLHRPGEKQPLDLGKLVSSVAAQRLVLDTLPGVKIS
KARDKSPCRSQGCPPRTQDKATHPPPASPSSLVKVPSSATGKRQTCDIEGLVELLNRVQSSGAHDQRGLLRKEDL
VLPEFLQLPAQGPSSEETPPQTKSAAQPIGGSLNSTTDSAL

FIGURE 45

CCCCTGCCCGCCCGACAGCGCCGCCGCCTGCCCCGCC**ATG**GGTCGACAGAAGGAGCTGGTGTCCCGCTGCGGGGA
GATGCTCCACATCCGCTACCGGCTGCTCCGACAGGCGCTGGCCGAGTGCCTGGGGACCCTCATCCTGGTGATGTT
TGGCTGTGGCTCCGTGGCCCAGGTTGTGCTCAGCCGGGGCACCCACGGTGGTTTCCTCACCATCAACCTGGCCTT
TGGCTTTGCTGTCACTCTGGGCATCCTCATCGCTGGCCAGGTCTCTGGGGCCCACCTGAACCCTGCCGTGACCTT
TGCCATGTGCTTCCTGGCTCGTGAGCCCTGGATCAAGCTGCCCATCTACACCCTGGCACAGACGCTGGGAGCCTT
CTTGGGTGCTGGAATAGTTTTTGGGCTGTATTATGATGCAATCTGGCACTTCGCCGACAACCAGCTTTTTGTTTC
GGGCCCCAATGGCACAGCCGGCATCTTTGCTACCTACCCCTCTGGACACTTGGATATGATCAATGGCTTCTTTGA
CCAGTTCATAGGCACAGCCTCCCTTATCGTGTGTGTGCTGGCCATTGTTGACCCCTACAACAACCCCGTCCCCCG
AGGCCTGGAGGCCTTCACCGTGGGCCTGGTGGTCCTGGTCATTGGCACCTCCATGGGCTTCAACTCCGGCTATGC
CGTCAACCCTGCCCGGGACTTTGGCCCCCGCCTTTTTACAGCCCTTGCGGGCTGGGGCTCTGCAGTCTTCACGAC
CGGCCAGCATTGGTGGTGGGTGCCCATCGTGTCCCCACTCCTGGGCTCCATTGCGGGTGTCTTCGTGTACCAGCT
GATGATCGGCTGCCACCTGGAGCAGCCCCCACCCTCCAACGAGGAAGAGAATGTGAAGCTGGCCCATGTGAAGCA
CAAGGAGCAGATC**TGA**GTGGGCAGGGGCCATCTCCCCACTCCGCTGCCCTGGCCTTGAGCATCCACTGACTGTCC
AAGGGCCACTCCCAAGAAGCCCCCTTCACGATCCACCCTTTCAGGCTAAGGAGCTCCCTATCTACCCTCACCCCA
CGAGACAGCCCCTTCAGGATTTCCACTGGACCTTGCCCAAATAGCACCTTAGGCCACTGCCCCTAAGCTGGGGTG
GAACCGGAATTTGGGTCAATACATCCTTTTGTCTCCCAAGGGAAGAGAATGGGCAGCAGGTATGTGTGTGTGTGC
ATGTGTGTGCATGTGTGTGCATGTGTGTGCAGGGGTGTGTGTGTGTGGGGGGGGTTCCCAGATATTCAGGGCAAG
GGACCAGTCGGAAGGGATTCTGGCTATTGGGGGAGCCCAGAGACAGGGGAAGGCAGCCTGTCCATCTGTGCATAA
GGAGAGGAAAGTTCCAGGGTGTGTATGTTTCAGGGGCTTCACATGGAGGAGCTGCAGATAGATATGTGTTTCTGT
GTATGTGTATGTCTGCCTTTTTTTCTAAGTGGGGGCTTCTACAGGCTTTTGGGAAGTAGGGTGGATGTGGGTAGG
GCTGGGAGGAGGGGGCCACAGCTTAGGTTTGGAGCTCTGGATGTACATACATAAGTAGGAGCAGTGGGACGTGTT
TCTGTCATAATGCAGGCATGAAGGGTGGAGTGAAGTCAGGTCATAAGTTTCATGTTTGCTTTTGTTTTGTTTTGT
TTTTAATGTATGTAGCAGATGTTACAGTCTTAGGGATCCGGGATGGGAGACCCCACTTTAGAAAGGGTCGTCACT
CCTTTAATCCTCTACTCAACAATGTACTCTTTTACTTTTATATTAAAAAAAATAAAATAAATATGTGCCTAAAAA
AAAAAAAAAA

FIGURE 46

MGRQKELVSRCGEMLHIRYRLLRQALAECLGTLILVMFGCGSVAQVVLSRGTHGGFLTINLAFGFAVTLGILIAG
QVSGAHLNPAVTFAMCFLAREPWIKLPIYTLAQTLGAFLGAGIVFGLYYDAIWHFADNQLFVSGPNGTAGIFATY
PSGHLDMINGFFDQFIGTASLIVCVLAIVDPYNNPVPRGLEAFTVGLVVLVIGTSMGFNSGYAVNPARDFGPRLF
TALAGWGSAVFTTGQHWWWVPIVSPLLGSIAGVFVYQLMIGCHLEQPPPSNEEENVKLAHVKHKEQI

FIGURE 47

TTTAGGTAAAACCGGATTTAACCCTTGGGAAAAAAAAAAAAAAAGGAGAGAGAAGACAGTTCCTTTCCTGTAGAA
ATTAAAACAAAATACAAATTGAGGAAGCTCTGCTACCCAGGCTGTCATGGTAGAGAACTTGAAGAAGACCTGTTT
GGATGGACACCTGGTTTCAAAAGTCAGGTGTGGAGACTGTTAAATGGGAGGGCCTCATCCATAAATGATTTCTGG
CAACGTCTTCTTCAGGTGGAGCTTGACGTCTTTTTAATGTTACTTGGGGAGGGAGTGCTCATTAAGGGATGCCAG
GGCCAGCTCTGGTGGTTCCTGGGGAGGCTGCGTCCTTCCCTGCTTCTGCATGTCATGAGGCAGCAGGAAGGTTTC
CCCTGCACCTGTCTGTCCTGGCTCCCTCTGGGTAGCCCCCTACTGTTCTGTGCTTCAGCACAGCCTGGTTTGTCA
AGAGGCACATAGTTGGGGCTGGGCTGCATGGCACAGGGGCTTATGTGCCTGCTGGTTATTTAATTTTCAGCCTTA
AGTTTTCTTTAATATTTTCCTGTTGGCTATTTAAAGGTTTTGGTTATCTTTTATTCCTTATCTACAATCAAGATG
ACAATGTAATTGAATTATCTTATTTATAACACGGTTCGTGATTCATGATTCATGATTACAAGTAGAAAATATGTC
ATGTTCCTCACCTCCAAATAAATATGTGTGTGTCTGTNTGNGTGTCTATATGTATGTGCGGAGAGGGAGAGAGTG
GGGAAGGAGAGCAGTGTTATCATACATAGAGAGGCTAAATGTGTCCCATCCCTCACTGTCAGCTTTATAAAGGAG
TTTGACTCCATCCACAGAAGAATGTTTTATAAGACTAGGAAAACACGTTGAAAACTAGGATAAACAGCAACAAAA
ATCAACTAAATATGTTGTTACTGTTGCTAAGGATTTTCTCCTTAGAATAATTTAGGATTTTTAAAAATTTCTGTT
TGCCAAATGCTGTAGATAAATGGCCAGATTCTTCCTATCCCTAGGATTCCTTTATTATTTTTTTTCACAGATTTT
GAGAACAAGGGGGAGAGATAGTATGGAAGATTAAGATTCCATTAATCTTATAGAACTGTGTTGTCACCCAAATTC
CTGCTTGTTTGAACATGGCATCTTCATAGATTCAGGATTCACTACCCTCTATAGCTGGATCTTGAAAATTATCTG
GCCAGATAATTTTGCATCTGCTTGGATGATTGTAGACTGAGATGTGAGTGGAGGATAAAGTATTAGACTTTTGCT
GAGTAACTGCCAACCAAGAAGTATTTATCGGACACTTACTAGGTGCCTAGGATTGTATCAGAGGGAATATGAAAT
GTGTCCCTGCCCTACCTAGTTTTAACGACAGAATATCTATTAAAGGCTACTTAGCTGAAGGGTAAGGGTGACAGG
TCTAGGGGAAGCTTTGGGAGGTGGTGTGCTGTGACAGAAAAAGTGGCAGAGTAGGGACGAGAGACCTGCATTCTA
GCCCTGTTTCTGTCACTTGCTCTGTACACTTAGACAACAGCTTGACCTCTTGAGCTTTAGTTTCCTCCTCTGCAT
AATGAGAGGGTTAGACTACTGAATTGTATGGGAAAAAAATACAAATTCCTGGGTCCTAGGCCATGCCTGCTGAAT
CCGACTGTTCAGGAAGAGGCCTAGGAAATCTGTGAGGGAATCCCCAGGGGAATCTCGTGACCAGCCAGGTGTGAA
ATCTGCTAACTGGAAGATCTCAAAGCTTCCTTCACTTTTTGTGATTTTGTGGTCATGTAACGTTACTGTATTATT
CTACGTAAATGTGGGTACTTGGATGTTTATCATACTGTTTCTCTGTGTTTACATACTAATTTGTGTAAGAAATGC
ATTTTAGTCTGTGTACCTCAACCTGCTGTTTGTTTCCTAGAGGTGTTAGTAGTCTTTAAATACAAGTAAGACTTA
AGAGGATATTTGATGTTATTTACCTGGATATTTTCTTCCCCTTTTATTTATTTAGAGGAAATTGAGATTCTAGGA
GCCAAAAAAAATGAAAACAAAATTCTAAGGCAAAGTTAAAGAAAAAAATTACATTATTTCTTACCATTTGCTACTT
TATAATGAAAATTTAAAAATTATATGGGAAGATTTTTCTCTGGGATAACAAATCCTTGTCATAAAGTAAGAGGTC
TTTTTAAAGTAGGTAGGCTATAAGGCCTGTAATTTAAAATAATACTCCTTTCTCTAGGGTTTGGTGCAATTCTCC
ATTAATGAAGATAACATTTGAATTCCCCAAAGCAGGTGAGGAGTCGGGGAGGAGAAAGCGATGTTAAAATGAAAA
CTCACTGCAAAAGAGGAGGCAGAGGAAGAAGGAATGTAAACCCCTTAAAGCAGATGTGTGTGGGGCCTTATGAAG
ACCAGGATTCTGCGGGTGTCAGGGGATTGCCCCTCTTGACAGAGACTAGGGTTTTAGACTGAGGCTTCCTGCAGG
GTGTTCGCATTGCCCTTCTCCGTTCCCCTTCAGACCTTTCTGGGGAGAAGAGGTGGGAGGAGGGGAGAAAGACTG
TTCATCTTATTCTGAATCCTGGAGCAGCTGAAGGTTTTCTCTTGAGTCAGGATGCAGTGGTAATGCATTAACCAG
CAAGTGTGGCCAAGGATAATGAAAAAGTGGGAAAGGAAGGTCCTCCTCCTCCCTGATTGTAGCATCCAGCAGTCT
CTGTAGCCAGGTTACTCAAGAACCACATTTGATTTCCTGGCCCTTTGCCTTGGCAGTGATGGCATTTTTATTTCA
CTGTGTTTTAAAGTCTTCATTTATTTTTATAACATGGGTTAGGGAGAAGGGCCACAAATGGAGGGATTGTCCTTT
CAAGCACCACAGCTTCAGATAAAATTAGTACTTTCAAATATTGTCCACTTTAACTTAAAAAATTCTAGAGGGATT
ATATTGGAGACTCAACTGCCCTTGGTTTTAGTTTATAAAATGGCCTAGTACTGTGGAATTTTAATTTTAGAAAGT
CTTAGCATCAGATCATAAACATTCATTAAAAGAACTCACATCCCATCTGAAACTTCCCAGGGGAGTTGGGATTCT
TAGTAGATTGGTAGAAAGGGGCTCATTTTCTACTGCATTTCCCATTTTTGGTATCTTGTTCAGCATGTTTTATTT
TTATTTCTTGTCTGCAGAACATCCTATATTTATGAGAACATTCTTTAAGAAGACCACCACATAGAATACCCCTTC
CTATCAGCTCGCTCTGATTTAGCCTTAATTTTGTTAAATTTTTTAGAGATGAATGAAGTGCTGCTGTGGAAAGAA
ATGTACATATACTATTTCTGTATCATTAAAATTACATTTTTATGGTTCAAG

FIGURE 48

LGKTGFNPWEKKKKRREKTVPFL

FIGURE 49A

CAGCCCGAGCCCGAGCCCGAGCCCGAGCCGGCGCCACCGCGCCCCCGGCC**ATG**GCTTTTGCCAATTTCCGCCGCA
TCCTGCGCCTGTCTACCTTCGAGAAGAGAAAGTCCCGCGAATATGAGCACGTCCGCCGCGACCTGGACCCCAACG
AGGTGTGGGAGATCGTGGGCGAGCTGGGCGACGGCGCCTTCGGCAAGGTTTACAAGGCCAAGAATAAGGAGACGG
GTGCTTTGGCTGCGGCCAAAGTCATTGAAACCAAGAGTGAGGAGGAGCTGGAGGACTACATCGTGGAGATTGAGA
TCCTGGCCACCTGCGACCACCCCTACATTGTGAAGCTCCTGGGAGCCTACTATCACGACGGGAAGCTGTGGATCA
TGATTGAGTTCTGTCCAGGGGGAGCCGTGGACGCCATCATGCTGGAGCTGGACAGAGGCCTCACGGAGCCCCAGA
TACAGGTGGTTTGCCGCCAGATGCTAGAAGCCCTCAACTTCCTGCACAGCAAGAGGATCATCCACCGAGATCTGA
AAGCTGGCAACGTGCTGATGACCCTCGAGGGAGACATCAGGCTGGCTGACTTTGGTGTGTCTGCCAAGAATCTGA
AGACTCTACAGAAACGAGATTCCTTCATCGGCACGCCTTACTGGATGGCCCCCGAGGTGGTCATGTGTGAGACCA
TGAAAGACACGCCCTACGACTACAAAGCCGACATCTGGTCCCTGGGCATCACGCTGATTGAGATGGCCCAGATCG
AGCCGCCACACCACGAGCTCAACCCCATGCGGGTCCTGCTAAAGATCGCCAAGTCAGACCCTCCCACGCTGCTCA
CGCCCTCCAAGTGGTCTGTAGAGTTCCGTGACTTCCTGAAGATAGCCCTGGATAAGAACCCAGAAACCCGACCCA
GTGCCGCGCAGCTGCTGGAGCATCCCTTCGTCAGCAGCATCACCAGTAACAAGGCTCTGCGGGAGCTGGTGGCTG
AGGCCAAGGCCGAGGTGATGGAAGAGATCGAAGACGGCCGGGATGAGGGGGAAGAGGAGGACGCCGTGGATGCCG
CCTCCACCCTGGAGAACCATACTCAGAACTCCTCTGAGGTGAGTCCGCCAAGCCTCAATGCTGACAAGCCTCTCG
AGGAGTCACCTTCCACCCCGCTGGCACCCAGCCAGTCTCAGGACAGTGTGAATGAGCCCTGCAGCCAGCCCTCTG
GGGACAGATCCCTCCAAACCACCAGTCCCCCAGTCGTGGCCCCTGGAAATGAGAACGGCCTGGCAGTGCCTGTGC
CCCTGCGGAAGTCCCGACCCGTGTCAATGGATGCCAGAATTCAGGTAGCCCAGGAGAAGCAAGTTGCTGAGCAGG
GTGGGGACCTCAGCCCAGCAGCCAACAGATCTCAAAAGGCCAGCCAGAGCCGGCCCAACAGCAGCGCCCTGGAGA
CCTTGGGTGGGGAGAAGCTGGCCAATGGCAGCCTGGAGCCACCTGCCCAGGCAGCTCCAGGGCCTTCCAAGAGGG
ACTCGGACTGCAGCAGCCTCTGCACCTCTGAGAGCATGGACTATGGTACCAATCTCTCCACTGACCTGTCGCTGA
ACAAAGAGATGGGCTCTCTGTCCATCAAGGACCCGAAACTGTACAAAAAAACCCTCAAGCGGACACGCAAATTTG
TGGTGGATGGTGTGGAGGTGAGCATCACCACCTCCAAGATCATCAGCGAAGATGAGAAGAAGGATGAGGAGATGA
GATTTCTCAGGCGCCAGGAACTCCGAGAGCTTCGGCTGCTCCAGAAAGAAGAGCATCGGAACCAGACCCAGCTGA
GTAACAAGCATGAGCTGCAGCTGGAGCAAATGCATAAACGTTTTGAACAGGAAATCAACGCCAAGAAGAAGTTCT
TTGACACGGAATTAGAGAACCTGGAGCGTCAGCAAAAGCAGCAAGTGGAGAAGATGGAGCAAGACCATGCCGTGC
GCCGCCGGGAGGAGGCCAGGCGGATCCGCCTGGAGCAGGATCGGGACTACACCAGGTTCCAAGAGCAGCTCAAAC
TGATGAAGAAAGAGGTGAAGAACGAGGTGGAGAAGCTCCCCCGACAGCAGCGGAAGGAAAGCATGAAGCAGAAGA
TGGAGGAGCACACGCAGAAAAAGCAGCTTCTTGACCGGGACTTTGTAGCCAAGCAGAAGGAGGACCTGGAGCTGG
CCATGAAGAGGCTCACCACCGACAACAGGCGGGAGATCTGTGACAAGGAGCGCGAGTGCCTCATGAAGAAGCAGG
AGCTCCTTCGAGACCGGGAAGCAGCCCTGTGGGAGATGGAAGAGCACCAGCTGCAGGAGAGGCACCAGCTGGTGA
AGCAGCAGCTCAAAGACCAGTACTTCCTCCAGCGGCACGAGCTGCTGCGCAAGCATGAGAAGGAGCGGGAGCAGA
TGCAGCGCTACAACCAGCGCATGATAGAGCAGCTGAAGGTGCGGCAGCAACAGGAAAAGGCGCGGCTGCCCAAGA
TCCAGAGGAGTGAGGGCAAGACGCGCATGGCCATGTACAAGAAGAGCCTCCACATCAACGGCGGGGGCAGCGCAG
CTGAGCAGCGTGAGAAGATCAAGCAGTTCTCCCAGCAGGAGGAGAAGAGGCAGAAGTCGGAGCGGCTGCAGCAAC
AGCAGAAACACGAGAACCAGATGCGGGACATGCTGGCGCAGTGTGAGAGCAACATGAGCGAGCTGCAGCAGCTGC
AGAATGAAAAGTGCCACCTCCTGGTAGAGCACGAAACCCAGAAACTGAAGGCCCTGGATGAGAGCCATAACCAGA
ACCTGAAGGAATGGCGGGACAAGCTTCGGCCGCGCAAGAAGGCTCTGGAAGAGGATCTGAACCAGAAGAAGCGGG
AGCAGGAGATGTTCTTCAAGCTGAGCGAGGAGGCGGAGTGCCCAAACCCCTCCACCCCAAGCAAGGCCGCCAAGT
TCTTCCCCTACAGTTCTGCGGATGCTTCT**TAA**CAACCGCCCGGGGCTGTGGCTGGCAGCTTGGTGGGCCCCAGGG
CCTTCTCCTTCATTCTCTGTGAACATGTAACTCAGGACCCCTTTTCCCTCTTGCGTCTGTGCCAGCTCAAATCCA
GCCCCTCGCCCTGTGCCACCCCAACTGTGCCTGATAGACCTGCCCCAGCGTTCCTGACTTCTTGCTGGCCTGTGG
AGGGTGAGGTGTAATTATTTGTCACCTGAACCTAATGTATATTCTCCTTGAGCCCCAGATCCCTTCAAGCTGGAA
GGGATGGGGCTGTTGGTGGGGTCAGGGTCCAAGAGGAATGGGTGTTCTGTGGCCTCGAGTCCTCTCCTGTTTGCG
AAAATACCAGTTTTGCTCTCTGTGGGACAAAGCACTGCTGATGAAGTCCCCGTGGGCTCATCCGGGCTGGAATTC
TTGGTTTTTCAGCCATTCCCTGCAGAGTCACTCAATCATCAAGTCCCTCACAGCCATTTCTGTTCCCAGAGGAGC
CAGGCCTGCAGCTGGCTGCTCAGGAGATGGCCTCATTCCTCCTGTTCTCCCAGTTTGCTTTCCACTTAAGACAAA
GCCTTGTCTATGTGGGGGGCGGGGACCGGGGAAAGAGGGAGGCTGAAATGTTTATTCTGCTTCTCCCGTGTTTCA

FIGURE 49B

TGCCATCTCGCGTCCCCCTTCCTGCACATGGGTGTGAATGCACACACATACGCGTACACACAGGACTTGGTCTGC
TGGCCTGGCCTCTTCTGCCCAGGTGGGTTGGAACACGTTTGCTGCCTGAGCCTGTGCCACTGAGCATGTTAGGTG
GAGCAGTTGGTGTGGCACGTGCGGGGTGTTGGCACCGGAGGCATGGAAAAGCACAGGCTGTACTGCCAGGCTGCG
ATGCGTGCTGGCCCCCGCACAGGCTCCTGTGTGCAGGGACTGATTCCTCAGCACACGAGGCTTCCACAACCCAGT
CTGCTCCATAGCACTCTGGCCCACCCTGTCTGCAGGTGAAACAGGAGGGCTGTTTGCCTCTGCCCCATCCCCCCG
ACTGTGTTCAGGAGTCCCACCTTGCATTTCAGACCTGGGCTGGCAGTCTGTTGGACTTCTCTTCAGGAAGAAAAA
GCATCAGGGGGAAATGGAATGCCCCTGCCCCAGGAACATGGCAGAAGCACAGGTTCTGTACCTCAGATGGACTCC
TGCTGGGCCTTCGGGGTCTCAGTTGGCTTCCCCCAGATTCTGATTCTACAGCTGCAGAATGTATATAACACAATA
AAAGCAAATGTTTGAACCAGT

FIGURE 50

MAFANFRRILRLSTFEKRKSREYEHVRRDLDPNEVWEIVGELGDGAFGKVYKAKNKETGALAAAKVIETKSEEEL
EDYIVEIEILATCDHPYIVKLLGAYYHDGKLWIMIEFCPGGAVDAIMLELDRGLTEPQIQVVCRQMLEALNFLHS
KRIIHRDLKAGNVLMTLEGDIRLADFGVSAKNLKTLQKRDSFIGTPYWMAPEVVMCETMKDTPYDYKADIWSLGI
TLIEMAQIEPPHHELNPMRVLLKIAKSDPPTLLTPSKWSVEFRDFLKIALDKNPETRPSAAQLLEHPFVSSITSN
KALRELVAEAKAEVMEEIEDGRDEGEEEDAVDAASTLENHTQNSSEVSPPSLNADKPLEESPSTPLAPSQSQDSV
NEPCSQPSGDRSLQTTSPPVVAPGNENGLAVPVPLRKSRPVSMDARIQVAQEKQVAEQGGDLSPAANRSQKASQS
RPNSSALETLGGEKLANGSLEPPAQAAPGPSKRDSDCSSLCTSESMDYGTNLSTDLSLNKEMGSLSIKDPKLYKK
TLKRTRKFVVDGVEVSITTSKIISEDEKKDEEMRFLRRQELRELRLLQKEEHRNQTQLSNKHELQLEQMHKRFEQ
EINAKKKFFDTELENLERQQKQQVEKMEQDHAVRRREEARRIRLEQDRDYTRFQEQLKLMKKEVKNEVEKLPRQQ
RKESMKQKMEEHTQKKQLLDRDFVAKQKEDLELAMKRLTTDNRREICDKERECLMKKQELLRDREAALWEMEEHQ
LQERHQLVKQQLKDQYFLQRHELLRKHEKEREQMQRYNQRMIEQLKVRQQQEKARLPKIQRSEGKTRMAMYKKSL
HINGGGSAAEQREKIKQFSQQEEKRQKSERLQQQQKHENQMRDMLAQCESNMSELQQLQNEKCHLLVEHETQKLK
ALDESHNQNLKEWRDKLRPRKKALEEDLNQKKREQEMFFKLSEEAECPNPSTPSKAAKFFPYSSADAS

FIGURE 51A

CATGTTGCCCTGGGGGGAACCTGCCAGCCCCGTAGCACTGCCCACCCCACCCACTGTGGTCTGTTGTACCCCACT
GCTGGGGTGGTGGTTCCAATGAGACAGGGCACACCAAACTCCATCTGGCTGTTACTGAGGCGGAGACACGGGTGA
TGATTGGCTTTCTGGGGAGAGAGGAAGTCCTGTGATTGGCCAGATCTCTGGAGCTTGCCGACGCGGTGTGAGGAC
GCTCCCACGGAGGCCGGAATTGGCTGTGAAAGGACTGAGGCAGCCATCTGGGGGTAGCGGGCACTCTTATCAGAG
CGGCTGGAGCCGGACCATCGTCCCAGAGAGCTGGGGCAGGGGGCCGTGCCCAATCTCCAGGGCTCCTGGGGCCAC
TGCTGACCTGGCTGGATGCATCGGGCAGTGGATCCTCCAGGGGCCCGCGCTGCACGGGAAGCCTTTGCCCTTGGG
GGCCTGAGCTGTGCTGGGGCCTGGAGCTCCTGCCCGCCTCATCCCCCTCCTCGTAGCGCATGGCTGCCTGGAGGC
AGATGCTCAGCCAGCATTGGGCAGCCCCCGCTTCCTGCTCCCCTACCCCCTTCACATGGCAGTAGTTCTGGGCAC
CCCAGCAAACCATATTATGCTCCAGGGGCGCCCACTCCAAGACCCCTCCATGGGAAGCTGGAATCCCTGCATGGC
TGTGTGCAGGCATTGCTCCGGGAGCCAGCCCAGCCAGGGCTTTGGGAACAGCTTGGGCAACTGTACGAGTCAGAG
CACGATAGTGAGGAGGCCACACGCTGCTACCACAGCGCCCTTCGATACGGAGGAAGCTTCGCTGAGCTGGGGCCC
CGCATTGGCCGACTGCAGCAGGCCCAGCTCTGGAACTTTCATACTGGCTCCTGCCAGCACCGAGCCAAGGTCCTG
CCCCCACTGGAGCAAGTGTGGAACTTGCTACACCTTGAGCACAAACGGAACTATGGAGCCAAGCGGGGAGGTCCC
CCGGTGAAGCGAGCTGCTGAACCCCCAGTGGTGCAGCCTGTGCCTCCTGCAGCACTCTCAGGCCCCTCAGGGGAG
GAGGGCCTCAGCCCTGGAGGCAAGCGAAGGAGAGGCTGCAACTCTGAACAGACTGGCCTTCCCCCAGGGCTGCCA
CTGCCTCCACCACCATTACCACCACCACCACCACCACCACCACCACCCCTGCCTGGCCTGGCTACCAGCCCCCCA
TTTCAGCTAACCAAGCCAGGGCTGTGGAGTACCCTGCATGGAGATGCCTGGGGCCCAGAGCGCAAGGGTTCAGCA
CCCCCAGAGCGCCAGGAGCAGCGGCACTCGCTGCCTCACCCATATCCATACCCAGCTCCAGCGTACACCGCGCAC
CCCCCTGGCCACCGGCTGGTCCCGGCTGCTCCCCCAGGCCCAGGCCCCCGCCCCCCAGGAGCAGAGAGCCATGGC
TGCCTGCCTGCCACCCGTCCCCCCGGAAGTGACCTTAGAGAGAGCAGAGTTCAGAGGTCGCGGATGGACTCCAGC
GTTTCACCAGCAGCAACCACCGCCTGCGTGCCTTACGCCCCTTCCCGGCCCCCTGGCCTCCCCGGCACCACCACC
AGCAGCAGCAGTAGCAGCAGCAGCAACACTGGTCTCCGGGGCGTGGAGCCGAACCCAGGCATTCCCGGCGCTGAC
CATTACCAAACTCCCGCGCTGGAGGTCTCTCACCATGGCCGCCTGGGGCCCTCGGCACACAGCAGTCGGAAACCG
TTCTTGGGGGCTCCCGCTGCCACTCCCCACCTATCCCTGCCACCTGGACCTTCCTCACCCCCTCCACCCCCCTGT
CCCCGCCTCTTACGCCCCCCACCACCCCCTGCCTGGTTGAAGGGTCCGGCCTGCCGGGCAGCCCGAGAGGATGGA
GAGATCTTAGAAGAGCTCTTCTTTGGGACTGAGGGACCCCCCCGCCCTGCCCCACCACCCCTCCCCCATCGCGAG
GGCTTCTTGGGGCCTCCGGCCTCCCGCTTTTCTGTGGGCACTCAGGATTCTCACACCCCTCCCACTCCCCCAACC
CCAACCACCAGCAGTAGCAACAGCAACAGTGGCAGCCACAGCAGCAGCCCTGCTGGGCCTGTGTCCTTTCCCCCA
CCACCCTATCTGGCCAGAAGTATAGACCCCCTTCCCCGGCCTCCCAGCCCAGCACAGAACCCCCAGGACCCACCT
CTTGTACCCCTGACTCTTGCCCTGCCTCCAGCCCCTCCTTCCTCCTGCCACCAAAATACCTCAGGAAGCTTCAGG
CGCCCGGAGAGCCCCCGGCCCAGGGTCTCCTTCCCAAAGACCCCCGAGGTGGGGCCGGGGCCACCCCCAGGCCCC
CTGAGTAAAGCCCCCCAGCCTGTGCCGCCCGGGGTTGGGGAGCTGCCTGCCCGAGGCCCTCGACTCTTTGATTTT
CCCCCCACTCCGCTGGAGGACCAGTTTGAGGAGCCAGCCGAATTCAAGATCCTACCTGATGGGCTGGCCAACATC
ATGAAGATGCTGGACGAATCCATTCGCAAGGAAGAGGAACAGCAACAACACGAAGCAGGCGTGGCCCCCCAACCC
CCGCTGAAGGAGCCCTTTGCATCTCTGCAGTCTCCTTTCCCCACCGACACAGCCCCCACCACTACTGCTCCTGCT
GTCGCCGTCACCACCACCACCACCACCACCACCACCACCACGGCCACCCAGGAAGAGGAGAAGAAGCCACCACCA
GCCCTACCACCACCACCGCCTCTAGCCAAGTTCCCTCCACCCTCTCAGCCACAGCCACCACCACCCCCACCCCCC
AGCCCGGCCAGCCTGCTCAAATCCTTGGCCTCCGTGCTGGAGGGACAAAAGTACTGTTATCGGGGGACTGGAGCA
GCTGTTTCCACCCGGCCTGGGCCCTTGCCCACCACTCAGTATTCCCCTGGCCCCCCATCAGGTGCTACCGCCCTG
CCGCCCACCTCAGCGGCCCCTAGCGCCCAGGGCTCCCCACAGCCCTCTGCTTCCTCGTCATCTCAGTTCTCTACC
TCAGGCGGGCCCTGGGCCCGGGAGCGCAGGGCGGGCGAAGAGCCAGTCCCGGGCCCCATGACCCCCACCCAACCG
CCCCCACCCCTATCTCTGCCCCCTGCTCGCTCTGAGTCTGAGGTGCTAGAAGAGATCAGCCGGGCTTGCGAGACC
CTTGTGGAGCGGGTGGGCCGGAGTGCCACTGACCCAGCCGACCCAGTGGACACAGCAGAGCCAGCGGACAGTGGG
ACTGAGCGACTGCTGCCCCCCGCACAGGCCAAGGAGGAGGCTGGCGGGGTGGCGGCAGTGTCAGGCAGCTGTAAG
CGGCGACAGAAGGAGCATCAGAAGGAGCATCGGCGGCACAGGCGGGCCTGTAAGGACAGTGTGGGTCGTCGGCCC
CGTGAGGGCAGGGCAAAGGCCAAGGCCAAGGTCCCCAAAGAAAAGAGCCGCCGGGTGCTGGGGAACCTGGACCTG
CAGAGCGAGGAGATCCAGGGTCGTGAGAAGTCCCGGCCCGATCTTGGCGGGGCCTCCAAGGCCAAGCCACCCACA
GCTCCAGCCCCTCCATCAGCTCCTGCACCTTCTGCCCAGCCCACACCCCCGTCAGCCTCTGTCCCTGGAAAGAAG

FIGURE 51B

GCTCGGGAGGAAGCCCCAGGGCCACCGGGTGTCAGCCGGGCCGACATGCTGAAGCTGCGCTCACTTAGTGAGGGG
CCCCCCAAGGAGCTGAAGATCCGGCTCATCAAGGTAGAGAGTGGTGACAAGGAGACCTTTATCGCCTCTGAGGTG
GAAGAGCGGCGGCTGCGCATGGCAGACCTCACCATCAGCCACTGTGCTGCTGACGTCGTGCGCGCCAGCAGGAAT
GCCAAGGTGAAAGGGAAGTTTCGAGAGTCCTACCTTTCCCCTGCCCAGTCTGTGAAACCGAAGATCAACACTGAG
GAGAAGCTGCCCCGGGAAAAACTCAACCCCCCTACACCCAGCATCTATCTGGAGAGCAAACGGGATGCCTTCTCA
CCTGTCCTGCTGCAGTTCTGTACAGACCCTCGAAATCCCATCACAGTGATCCGGGGCCTGGCGGGCTCCCTGCGG
CTCAACTTGGGCCTCTTCTCCACCAAGACCCTGGTGGAAGCGAGTGGCGAACACACCGTGGAAGTTCGCACCCAG
GTGCAGCAGCCCTCAGATGAGAACTGGGATCTGACAGGCACTCGGCAGATCTGGCCTTGTGAGAGCTCCCGTTCC
CACACCACCATTGCCAAGTACGCACAGTACCAGGCCTCATCCTTCCAGGAGTCTCTGCAGGAGGAGAAGGAGAGT
GAGGATGAGGAGTCAGAGGAGCCAGACAGCACCACTGGAACCCCTCCTAGCAGCGCACCAGACCCGAAGAACCAT
CACATCATCAAGTTTGGCACCAACATCGACTTGTCTGATGCTAAGCGGTGGAAGCCCCAGCTGCAGGAGCTGCTA
AAGCTGCCCGCCTTCATGCGGGTAACATCCACGGGCAACATGCTGAGCCACGTGGGCCACACCATCCTGGGCATG
AACACGGTGCAGCTGTACATGAAGGTGCCCGGCAGCCGAACGCCAGGCCACCAGGAGAATAACAACTTCTGCTCC
GTCAACATCAACATTGGCCCAGGCGACTGCGAGTGGTTCGCGGTGCACGAGCACTACTGGGAGACCATCAGCGCT
TTCTGTGATCGGCACGGCGTGGACTACTTGACGGGTTCCTGGTGGCCAATCCTGGATGATCTCTATGCATCCAAT
ATTCCTGTGTACCGCTTCGTGCAGCGACCCGGAGACCTCGTGTGGATTAATGCGGGGACTGTGCACTGGGTGCAG
GCCACCGGCTGGTGCAACAACATTGCCTGGAACGTGGGGCCCCTCACCGCCTATCAGTACCAGCTGGCCCTGGAA
CGATACGAGTGGAATGAGGTGAAGAACGTCAAATCCATCGTGCCCATGATTCACGTGTCATGGAACGTGGCTCGC
ACGGTCAAAATCAGCGACCCCGACTTGTTCAAGATGATCAAGTTCTGCCTGCTGCAGTCCATGAAGCACTGCCAG
GTGCAACGCGAGAGCCTGGTGCGGGCAGGGAAGAAAATCGCTTACCAGGGCCGTGTCAAGGACGAGCCAGCCTAC
TACTGCAACGAGTGCGATGTGGAGGTGTTTAACATCCTGTTCGTGACAAGTGAGAATGGCAGCCGCAACACGTAC
CTGGTACACTGCGAGGGCTGTGCCCGGCGCCGCAGCGCAGGCCTGCAGGGCGTGGTGGTGCTGGAGCAGTACCGC
ACTGAGGAGCTGGCTCAGGCCTACGACGCCTTCACGCTGGTGAGGGCCCGGCGGGCGCGCGGGCAGCGGAGGAGG
GCACTGGGGCAGGCTGCAGGGACGGGCTTCGGGAGCCCGGCCGCGCCTTTCCCTGAGCCCCCGCCGGCTTTCTCC
CCCCAGGCCCCAGCCAGCACGTCGCGA**TGA**GGCCGGACGCCCCGCCCGCCTGCCTGCCCGCGCAAGGCGCCGCGG
GGCCACCAGCACATGCCTGGGCTGGACCTAGGTCCCGCCTGTGGCCGAGAAGGGGGTCGGGCCCAGCCCTTCCAC
CCCATTGGCAGCTCCCCTCACTTAATTTATTAAGAAAAACTTTTTTTTTTTTTTTAGCAAATATGAGGAAAAAAG
GAAAAAAAATGGGAGACGGGGGAGGGGGCTGGCAGCCCCTCGCCCACCAGCGCCTCCCCTCACCGACTTTGGCCT
TTTTAGCAACAGACACAAGGACCAGGCTCCGGCGGCGGCGGGGGTCACATACGGGTTCCCTCACCCTGCCAGCCG
CCCGCCCGCCCGGCGCAGATGCACGCGGCTCGTGTATGTACATAGACGTTACGGCAGCCGAGGTTTTTAATGAGA
TTCTTTCTATGGGCTTTACCCCTCCCCCGGAACCTCCTTTTTTACTTCCAATGCTAGCTGTGACCCCTGTACATG
TCTCTTTATTCACTTGGTTATGATTTGTATTTTTTGTTCTTTTCTTGTTTTTTTGTTTTTAATTTATAACAGTCC
CACTCACCTCTATTTATTCATTTTTGGGAAAACCCGACCTCCCACACCCCCAAGCCATCCTGCCCGCCCCTCCAG
GGACCGCCCGTCGCCGGGCTCTCCCCGCGCCCCAGTGTGTGTCCGGGCCCGGCCCGACCGTCTCCACCCGTCCGC
CCGCGGCTCCAGCCGGGTTCTCATGGTGCTCAAACCCGCTCCCCTCCCCTACGTCCTGCACTTTCTCGGACCAGT
CCCCCCACTCCCGACCCGACCCCAGCCCCACCTGAGGGTGAGCAACTCCTGTACTGTAGGGGAAGAAGTGGGAAC
TGAAATGGTATTTTGTAAAAAAAAATAAATAAAATAAAAAAATTAAAGGTTTTAAAGAAAGAACTATGAGGAAAA
GGAACCCCGTCCTTCCCAGCCCCGGCCAACTTTAAAAAACACAGACCTTCACCCCCACCCCCTTTTCTTTTTAAG
TGTGAAACAACCCAGGGCCAGGGCCTCACTGGGGCAGGGACACCCCGGGGTGAGTTTCTCTGGGGCTTTATTTTC
GTTTTGTTGGTTGTTTTTTCTCCACGCTGGGGCTGCGGAGGGGTGGGGGGTTTACAGTCCCGCACCCTCGCACTG
CACTGTCTCTCTGCCCCAGGGGCAGAGGGGTCTTCCCAACCCTACCCCTATTTTCGGTGATTTTTGTGTGAGAAT
ATTAATATTAAAAATAAACGGAG

FIGURE 52

GHPSKPYYAPGAPTPRPLHGKLESLHGCVQALLREPAQPGLWEQLGQLYESEHDSEEATRCYHSALRYGGSFAEL
GPRIGRLQQAQLWNFHTGSCQHRAKVLPPLEQVWNLLHLEHKRNYGAKRGGPPVKRAAEPPVVQPVPPAALSGPS
GEEGLSPGGKRRRGCNSEQTGLPPGLPLPPPPLPPPPPPPPPPPPPPLPGLATSPPFQLTKPGLWSTLHGDAWG
PERKGSAPPERQEQRHSLPHPYPYPAPAYTAHPPGHRLVPAAPPGPGPRPPGAESHGCLPATRPPGSDLRESRVQ
RSRMDSSVSPAATTACVPYAPSRPPGLPGTTTSSSSSSSSNTGLRGVEPNPGIPGADHYQTPALEVSHHGRLGPS
AHSSRKPFLGAPAATPHLSLPPGPSSPPPPPCPRLLRPPPPPAWLKGPACRAAREDGEILEELFFGTEGPPRPAP
PPLPHREGFLGPPASRFSVGTQDSHTPPTPPTPTTSSSNSNSGSHSSSSAGPVSFPPPPYLARSIDPLPRPPSPA
QNPQDPPLVPLTLALPPAPPSSCHQNTSGSFRRPESPRPRVSFPKTPEVGPGPPPGPLSKAPQPVPPGVGELPAR
GPRLFDFPPTPLEDQFEEPAEFKILPDGLANIMKMLDESIRKEEEQQQHEAGVAPQPPLKEPFASLQSPFPTDTA
PTTTAPAVAVTTTTTTTTTTATQEEEKKPPPALPPPPPLAKFPPPSQPQPPPPPPPSPASLLKSLASVLEGQKY
CYRGTGAAVSTRPGPLPTTQYSPGPPSGATALPPTSAAPSAQGSPQPSASSSSQFSTSGGPWARERRAGEEPVPG
PMTPTQPPPPLSLPPARSESEVLEEISRACETLVERVGRSATDPADPVDTAEPADSGTERLLPPAQAKEEAGGVA
AVSGSCKRRQKEHQKEHRRHRRACKDSVGRRPREGRAKAKAKVPKEKSRRVLGNLDLQSEEIQGREKSRPDLGGA
SKAKPPTAPAPPSAPAPSAQPTPPSASVPGKKAREEAPGPPGVSRADMLKLRSLSEGPPKELKIRLIKVESGDKE
TFIASEVEERRLRMADLTISHCAADVVRASRNAKVKGKFRESYLSPAQSVKPKINTEEKLPREKLNPPTPSIYLE
SKRDAFSPVLLQFCTDPRNPITVIRGLAGSLRLNLGLFSTKTLVEASGEHTVEVRTQVQQPSDENWDLTGTRQIW
PCESSRSHTTIAKYAQYQASSFQESLQEEKESEDEESEEPDSTTGTPPSSAPDPKNHHIIKFGTNIDLSDAKRWK
PQLQELLKLPAFMRVTSTGNMLSHVGHTILGMNTVQLYMKVPGSRTPGHQENNNFCSVNINIGPGDCEWFAVHEH
YWETISAFCDRHGVDYLTGSWWPILDDLYASNIPVYRFVQRPGDLVWINAGTVHWVQATGWCNNIAWNVGPLTAY
QYQLALERYEWNEVKNVKSIVPMIHVSWNVARTVKISDPDLFKMIKFCLLQSMKHCQVQRESLVRAGKKIAYQGR
VKDEPAYYCNECDVEVFNILFVTSENGSRNTYLVHCEGCARRRSAGLQGVVVLEQYRTEELAQAYDAFTLVRARR
ARGQRRRALGQAAGTGFGSPAAPFPEPPPAFSPQAPASTSR

FIGURE 53A

ATGGCGCCGCCGCCGCCGCCCGTGCTGCCCGTGCTGCTGCTCCTGGCCGCCGCCGCCGCCCTGCCGGCGATGGGG
CTGCGAGCGGCCGCCTGGGAGCCGCGCGTACCCGGCGGGACCCGCGCCTTCGCCCTCCGGCCCGGCTGTACCTAC
GCGGTGGGCGCCGCTTGCACGCCCCGGGCGCCGCGGGAGCTGCTGGACGTGGGCCGCGATGGGCGGCTGGCAGGA
CGTCGGCGCGTCTCGGGCGCGGGGCGCCCGCTGCCGCTGCAAGTCCGCTTGGTGGCCCGCAGTGCCCCGACGGCG
CTGAGCCGCCGCCTGCGGGCGCGCACGCACCTTCCCGGCTGCGGAGCCCGTGCCCGGCTCTGCGGAACCGGTGCC
CGGCTCTGCGGGGCGCTCTGCTTCCCCGTCCCCGGCGGCTGCGCGGCCGCGCAGCATTCGGCGCTCGCAGCTCCG
ACCACCTTACCCGCCTGCCGCTGCCCGCCGCGCCCCAGGCCCCGCTGTCCCGGCCGTCCCATCTGCCTGCCGCCG
GGCGGCTCGGTCCGCCTGCGTCTGCTGTGCGCCCTGCGGCGCGCGGCTGGCGCCGTCCGGGTGGGACTGGCGCTG
GAGGCCGCCACCGCGGGGACGCCCTCCGCGTCGCCATCCCCATCGCCGCCCCTGCCGCCGAACTTGCCCGAAGCC
CGGGCGGGGCCGGCGCGACGGGCCCGGCGGGGCACGAGCGGCAGAGGGAGCCTGAAGTTTCCGATGCCCAACTAC
CAGGTGGCGTTGTTTGAGAACGAACCGGCGGGCACCCTCATCCTCCAGCTGCACGCGCACTACACCATCGAGGGC
GAGGAGGAGCGCGTGAGCTATTACATGGAGGGGCTGTTCGACGAGCGCTCCCGGGGCTACTTCCGAATCGACTCT
GCCACGGGCGCCGTGAGCACGGACAGCGTACTGGACCGCGAGACCAAGGAGACGCACGTCCTCAGGGTGAAAGCC
GTGGACTACAGTACGCCGCCGCGCTCGGCCACCACCTACATCACTGTCTTGGTCAAAGACACCAACGACCACAGC
CCGGTCTTCGAGCAGTCGGAGTACCGCGAGCGCGTGCGGGAGAACCTGGAGGTGGGCTACGAGGTGCTGACCATC
CGCGCCAGCGACCGCGACTCGCCCATCAACGCCAACTTGCGTTACCGCGTGTTGGGGGGCGCGTGGGACGTCTTC
CAGCTCAACGAGAGCTCTGGCGTGGTGAGCACACGGGCGGTGCTGGACCGGGAGGAGGCGGCCGAGTACCAGCTC
CTGGTGGAGGCCAACGACCAGGGGCGCAATCCGGGCCCGCTCAGTGCCACGGCCACCGTGTACATCGAGGTGGAG
GACGAGAACGACAACTACCCCCAGTTCAGCGAGCAGAACTACGTGGTCCAGGTGCCCGAGGACGTGGGGCTCAAC
ACGGCTGTGCTGCGAGTGCAGGCCACGGACCGGGACCAGGGCCAGAACGCGGCCATTCACTACAGCATCCTCAGC
GGGAACGTGGCCGGCCAGTTCTACCTGCACTCGCTGAGCGGGATCCTGGATGTGATCAACCCCTTGGATTTCGAG
GATGTCCAGAAATACTCGCTGAGCATTAAGGCCCAGGATGGGGGCCGGCCCCCGCTCATCAATTCTTCAGGGGTG
GTGTCTGTGCAGGTGCTGGATGTCAACGACAACGAGCCTATCTTTGTGAGCAGCCCCTTCCAGGCCACGGTGCTG
GAGAATGTGCCCCTGGGCTACCCCGTGGTGCACATTCAGGCGGTGGACGCGGACTCTGGAGAGAACGCCCGGCTG
CACTATCGCCTGGTGGACACGGCCTCCACCTTTCTGGGGGGGCGGCAGCGCTGGGCCTAAGAATCCTGCCCCCACC
CCTGACTTCCCCTTCCAGATCCACAACAGCTCCGGTTGGATCACAGTGTGTGCCGAGCTGGACCGCGAGGAGGTG
GAGCACTACAGCTTCGGGGTGGAGGCGGTGGACCACGGCTCGCCCCCCATGAGCTCCTCCACCAGCGTGTCCATC
ACGGTGCTGGACGTGAATGACAACGACCCGGTGTTCACGCAGCCCACCTACGAGCTTCGTCTGAATGAGGATGCG
GCCGTGGGGAGCAGCGTGCTGACCCTGCAGGCCCGCGACCGTGACGCCAACAGTGTGATTACCTACCAGCTCACA
GGCGGCAACACCCGGAACCGCTTTGCACTCAGCAGCCAGAGAGGGGGCGGCCTCATCACCCTGGCGCTACCTCTG
GACTACAAGCAGGAGCAGCAGTACGTGCTGGCGGTGACAGCATCCGACGGCACACGGTCGCACACTGCGCATGTC
CTAATCAACGTCACTGATGCCAACACCCACAGGCCTGTCTTTCAGAGCTCCCATTACACAGTGAGTGTCAGTGAG
GACAGGCCTGTGGGCACCTCCATTGCTACCCTCAGTGCCAACGATGAGGACACAGGAGAGAATGCCCGCATCACC
TACGTGATTCAGGACCCCGTGCCGCAGTTCCGCATTGACCCCGACAGTGGCACCATGTACACCATGATGGAGCTG
GACTATGAGAACCAGGTCGCCTACACGCTGACCATCATGGCCCAGGACAACGGCATCCCGCAGAAATCAGACACC
ACCACCCTAGAGATCCTCATCCTCGATGCCAATGACAATGCACCCCAGTTCCTGTGGGATTTCTACCAGGGTTCC
ATCTTTGAGGATGCTCCACCCTCGACCAGCATCCTCCAGGTCTCTGCCACGGACCGGGACTCAGGTCCCAATGGG
CGTCTGCTGTACACCTTCCAGGGTGGGGACGACGGCGATGGGGACTTCTACATCGAGCCCACGTCCGGTGTGATT
CGCACCCAGCGCCGGCTGGACCGGGAGAATGTGGCCGTGTACAACCTTTGGGCTCTGGCTGTGGATCGGGGCAGT
CCCACTCCCCTTAGCGCCTCGGTAGAAATCCAGGTGACCATCTTGGACATTAATGACAATGCCCCCATGTTTGAG
AAGGACGAACTGGAGCTGTTTGTTGAGGAGAACAACCCAGTGGGGTCGGTGGTGGCAAAGATTCGTGCTAACGAC
CCTGATGAAGGCCCTAATGCCCAGATCATGTATCAGATTGTGGAAGGGGACATGCGGCATTTCTTCCAGCTGGAC
CTGCTCAACGGGGACCTGCGTGCCATGGTGGAGCTGGACTTTGAGGTCCGGCGGGAGTATGTGCTGGTGGTGCAG
GCCACGTCGGCTCCGCTGGTGAGCCGAGCCACGGTGCACATCCTTCTCGTGGACCAGAATGACAACCCGCCTGTG
CTGCCCGACTTCCAGATCCTCTTCAACAACTATGTCACCAACAAGTCCAACAGTTTCCCCACCGGCGTGATCGGC
TGCATCCCGGCCCATGACCCCGACGTGTCAGACAGCCTCAACTACACCTTCGTGCAGGGCAACGAGCTGCGCCTG
TTGCTGCTGGACCCCGCCACGGGCGAACTGCAGCTCAGCCGCGACCTGGACAACAACCGGCCGCTGGAGGCGCTC
ATGGAGGTGTCTGTGTCTGATGGCATCCACAGCGTCACGGCCTTCTGCACCCTGCGTGTCACCATCATCACGGAC

FIGURE 53B

GACATGCTGACCAACAGCATCACTGTCCGCCTGGAGAACATGTCCCAGGAGAAGTTCCTGTCCCCGCTGCTGGCC
CTCTTCGTGGAGGGGGTGGCCGCCGTGCTGTCCACCACCAAGGACGACGTCTTCGTCTTCAACGTCCAGAACGAC
ACCGACGTCAGCTCCAACATCCTGAACGTGACCTTCTCGGCGCTGCTGCCTGGCGGCGTCCGCGGCCAGTTCTTC
CCGTCGGAGGACCTGCAGGAGCAGATCTACCTGAATCGGACGCTGCTGACCACCATCTCCACGCAGCGCGTGCTG
CCCTTCGACGACAACATCTGCCTGCGCGAGCCCTGCGAGAACTACATGAAGTGCGTGTCCGTTCTGCGATTCGAC
AGCTCCGCGCCCTTCCTCAGCTCCACCACCGTGCTCTTCCGGCCCATCCACCCCATCAACGGCCTGCGCTGCCGC
TGCCCGCCCGGCTTCACCGGCGACTACTGCGAGACGGAGATCGACCTCTGCTACTCCGACCCGTGCGGCGCCAAC
GGCCGCTGCCGCAGCCGCGAGGGCGGCTACACCTGCGAGTGCTTCGAGGACTTCACTGGAGAGCACTGTGAGGTG
GATGCCCGCTCAGGCCGCTGTGCCAACGGGGTGTGCAAGAACGGGGGCACCTGCGTGAACCTGCTCATCGGCGGC
TTCCACTGCGTGTGTCCTCCTGGCGAGTATGAGAGGCCCTACTGTGAGGTGACCACCAGGAGCTTCCCGCCCCAG
TCCTTCGTCACCTTCCGGGGCCTGAGACAGCGCTTCCACTTCACCATCTCCCTCACGTTTGCCACTCAGGAAAGG
AACGGCTTGCTTCTCTACAACGGCCGCTTCAATGAGAAGCACGACTTCATCGCCCTGGAGATCGTGGACGAGCAG
GTGCAGCTCACCTTCTCTGCAGGCGAGACAACAACGACCGTGGCACCGAAGGTTCCCAGTGGTGTGAGTGACGGG
CGGTGGCACTCTGTGCAGGTGCAGTACTACAACAAGCCCAATATTGGCCACCTGGGCCTGCCCCATGGGCCGTCC
GGGGAAAAGATGGCCGTGGTGACAGTGGATGATTGTGACACAACCATGGCTGTGCGCTTTGGAAAGGACATCGGG
AACTACAGCTGCGCTGCCCAGGGCACTCAGACCGGCTCCAAGAAGTCCCTGGATCTGACCGGCCCTCTACTCCTG
GGGGGTGTCCCCAACCTGCCAGAAGACTTCCCAGTGCACAACCGGCAGTTCGTGGGCTGCATGCGGAACCTGTCA
GTCGACGGCAAAAATGTGGACATGGCCGGATTCATCGCCAACAATGGCACCCGGGAAGGCTGCGCTGCTCGGAGG
AACTTCTGCGATGGGAGGCGGTGTCAGAATGGAGGCACCTGTGTCAACAGGTGGAATATGTATCTGTGTGAGTGT
CCACTCCGATTCGGCGGGAAGAACTGTGAGCAAGCCATGCCTCACCCCCAGCTCTTCAGCGGTGAGAGCGTCGTG
TCCTGGAGTGACCTGAACATCATCATCTCTGTGCCCTGGTACCTGGGGCTCATGTTCCGGACCCGGAAGGAGGAC
AGCGTTCTGATGGAGGCCACCAGTGGTGGGCCCACCAGCTTTCGCCTCCAGATCCTGAACAACTACCTCCAGTTT
GAGGTGTCCCACGGCCCCTCCGATGTGGAGTCCGTGATGCTGTCCGGGTTGCGGGTGACCGACGGGGAGTGGCAC
CACCTGCTGATCGAGCTGAAGAATGTTAAGGAGGACAGTGAGATGAAGCACCTGGTCACCATGACCTTGGACTAT
GGGATGGACCAGAACAAGGCAGATATCGGGGGCATGCTTCCCGGGCTGACGGTAAGGAGCGTGGTGGTCGGAGGC
GCCTCTGAAGACAAGGTCTCCGTGCGCCGTGGATTCCGAGGCTGCATGCAGGGAGTGAGGATGGGGGGGACGCCC
ACCAACGTCGCCACCCTGAACATGAACAACGCACTCAAGGTCAGGGTGAAGGACGGCTGTGATGTGGACGACCCC
TGTACCTCGAGCCCCTGTCCCCCCAATAGCCGCTGCCACGACGCCTGGGAGGACTACAGCTGCGTCTGTGACAAA
GGGTACCTTGGAATAAACTGTGTGGATGCCTGTCACCTGAACCCCTGCGAGAACATGGGGGCCTGCGTGCGCTCC
CCCGGCTCCCCGCAGGGCTACGTGTGCGAGTGTGGGCCCAGTCACTACGGGCCGTACTGTGAGAACAAACTCGAC
CTTCCGTGCCCCAGAGGCTGGTGGGGGAACCCCGTCTGTGGACCCTGCCACTGTGCCGTCAGCAAAGGCTTTGAT
CCCGACTGTAATAAGACCAACGGCCAGTGCCAATGCAAGGAGAATTACTACAAGCTCCTAGCCCAGGACACCTGT
CTGCCCTGCGACTGCTTCCCCCATGGCTCCCACAGCCGCACTTGCGACATGGCCACCGGGCAGTGTGCCTGCAAG
CCCGGCGTCATCGGCCGCCAGTGCAACCGCTGCGACAACCCGTTTGCCGAGGTCACCACGCTCGGCTGTGAAGTG
ATCTACAATGGCTGTCCCAAAGCATTTGAGGCCGGCATCTGGTGGCCACAGACCAAGTTCGGGCAGCCGGCTGCG
GTGCCATGCCCTAAGGGATCCGTTGGAAATGCGGTCCGACACTGCAGCGGGGAGAAGGGCTGGCTGCCCCCAGAG
CTCTTTAACTGTACCACCATCTCCTTCGTGGACCTCAGGGCCATGAATGAGAAGCTGAGCCGCAATGAGACGCAG
GTGGACGGCGCCAGGGCCCTGCAGCTGGTGAGGGCGCTGCGCAGTGCTACACAGCACACGGGCACGCTCTTTGGC
AATGACGTGCGCACGGCCTACCAGCTGCTGGGCCACGTCCTTCAGCACGAGAGCTGGCAGCAGGGCTTCGACCTG
GCAGCCACGCAGGACGCCGACTTTCACGAGGACGTCATCCACTCGGGCAGCGCCCTCCTGGCCCCAGCCACCAGG
GCGGCGTGGGAGCAGATCCAGCGGAGCGAGGGCGGCACGGCACAGCTGCTCCGGCGCCTCGAGGGCTACTTCAGC
AACGTGGCACGCAACGTGCGGCGGACGTACCTGCGGCCCTTCGTCATCGTCACCGCCAACATGATTCTTGCTGTC
GACATCTTTGACAAGTTCAACTTTACGGGAGCCAGGGTCCCGCGATTCGACACCATCCATGAAGAGTTCCCCAGG
GAGCTGGAGTCCTCCGTCTCCTTCCCAGCCGACTTCTTCAGACCACCTGAAGAAAAAGAAGGCCCCCTGCTGAGG
CCGGCTGGCCGGAGGACCACCCCGCAGACCACGCGCCCGGGGCCTGGCACCGAGAGGGAGGCCCCGATCAGCAGG
CGGAGGCGACACCCTGATGACGCTGGCCAGTTCGCCGTCGCTCTGGTCATCATTTACCGCACCCTGGGGCAGCTC
CTGCCCGAGCGCTACGACCCCGACCGTCGCAGCCTCCGGTTGCCTCACCGGCCCATCATTAATACCCCGATGGTG
AGCACGCTGGTGTACAGCGAGGGGGCTCCGCTCCCGAGACCCCTGGAGAGGCCCGTCCTGGTGGAGTTCGCCCTG

FIGURE 53C

CTGGAGGTGGAGGAGCGAACCAAGCCTGTCTGCGTGTTCTGGAACCACTCCCTGGCCGTTGGTGGGACGGGAGGG
TGGTCTGCCCGGGGCTGCGAGCTCCTGTCCAGGAACCGGACACATGTCGCCTGCCAGTGCAGCCACACAGCCAGC
TTTGCGGTGCTCATGGATATCTCCAGGCGTGAGAACGGGGAGGTCCTGCCTCTGAAGATTGTCACCTATGCCGCT
GTGTCCTTGTCACTGGCAGCCCTGCTGGTGGCCTTCGTCCTCCTGAGCCTGGTCCGCATGCTGCGCTCCAACCTG
CACAGCATTCACAAGCACCTCGCCGTGGCGCTCTTCCTCTCTCAGCTGGTGTTCGTGATTGGGATCAACCAGACG
GAAAACCCGTTTCTGTGCACAGTGGTTGCCATCCTCCTCCACTACATCTACATGAGCACCTTTGCCTGGACCCTC
GTGGAGAGCCTGCATGTCTACCGCATGCTGACCGAGGTGCGCAACATCGACACGGGGCCCATGCGGTTCTACTAC
GTCGTGGGCTGGGGCATCCCGGCCATTGTCACAGGACTGGCGGTCGGCCTGGACCCCCAGGGCTACGGGAACCCC
GACTTCTGCTGGCTGTCGCTTCAAGACACCCTGATTTGGAGCTTTGCGGGGCCCATCGGAGCTGTTATAATCATC
AACACAGTCACTTCTGTCCTATCTGCAAAGGTTTCCTGCCAAAGAAAGCACCATTATTATGGGAAAAAAGGGATC
GTCTCCCTGCTGAGGACCGCATTCCTCCTGCTGCTGCTCATCAGCGCCACCTGGCTGCTGGGGCTGCTGGCTGTG
AACCGCGATGCACTGAGCTTTCACTACCTCTTCGCCATCTTCAGCGGCTTACAGGGCCCCTTCGTCCTCCTTTTC
CACTGCGTGCTCAACCAGGAGGTCCGGAAGCACCTGAAGGGCGTGCTCGGCGGGAGGAAGCTGCACCTGGAGGAC
TCCGCCACCACCAGGGCCACCCTGCTGACGCGCTCCCTCAACTGCAACACCACCTTCGGTGACGGGCCTGACATG
CTGCGCACAGACTTGGGCGAGTCCACCGCCTCGCTGGACAGCATCGTCAGGGATGAAGGGATCCAGAAGCTCGGC
GTGTCCTCTGGGCTGGTGAGGGGCAGCCACGGAGAGCCAGACGCGTCCCTCATGCCCAGGAGCTGCAAGGATCCC
CCTGGCCACGATTCCGACTCAGATAGCGAGCTGTCCCTGGATGAGCAGAGCAGCTCTTACGCCTCCTCACACTCG
TCAGACAGCGAGGACGATGGGGTGGGAGCTGAGGAAAAATGGGACCCGGCCAGGGGCGCCGTCCACAGCACCCCC
AAAGGGGACGCTGTGGCCAACCACGTTCCGGCCGGCTGGCCCGACCAGAGCCTGGCTGAGAGTGACAGTGAGGAC
CCCAGCGGCAAGCCCCGCCTGAAGGTGGAGACCAAGGTCAGCGTGGAGCTGCACCGCGAGGAGCAGGGCAGTCAC
CGTGGAGAGTACCCCCCGGACCAGGAGAGCGGGGGCGCAGCCAGGCTTGCTAGCAGCCAGCCCCCAGAGCAGAGG
AAAGGCATCTTGAAAAATAAAGTCACCTACCCGCCGCCGCTGACGCTGACGGAGCAGACGCTGAAGGGCCGGCTC
CGGGAGAAGCTGGCCGACTGTGAGCAGAGCCCCACATCCTCGCGCACGTCTTCCCTGGGCTCTGGCGGCCCCGAC
TGCGCCATCACAGTCAAGAGCCCTGGGAGGGAGCCGGGGCGTGACCACCTCAACGGGGTGGCCATGAATGTGCGC
ACTGGGAGCGCCCAGGCCGATGGCTCCGACTCTGAGAAACCGTGAGGCAAGCCCGTCACCCCACACAGGCTGCGG
CATCACCCTCAGACCTTGGAGCCCAAGGGGCCACTGCCCTTGAAGTGGAGTGGGCCCAGAGTGTGGCGGTCCCCA
TGGTGGCAGCCCCCCGACTGATCATCCAGACACAAAGGTCTTGGTTCTCCCAGGAGCTCAGGGCCTGTCAGACCT
GGTGACAAGTGCCAAAGGCCACAGGCATGAGGGAGGCGTGGACCACTGGGCCAGCACCGCTGAGTCCTAAGACTG
CAGTCAAAGCCAGAACTGAGAGGGGACCCCAGACTGGGCCCAGAGGCTGGCCAGAGTTCAGGAACGCCGGGCACA
GACCAAAGACCGCGGTCCAGCCCCGCCCAGGCGGGCATCTCATGGCAGTGCGGACCCGTGGCTGGCAGCCCGGGC
AGTCCTTTGCAAAGGCACCCCTTGTCTTAAAATCACTTCGCTATGTGGGAAAGGTGGAGATACTTTTATATATTT
GTATGGGACTCTGAGGAGGTGCAACCTGTATATATATTGCATTCGTGCTGACTTTGTTATCCCGAGAGATCCATG
CAATGATCTCTTGCTGTCTTCTCTGTCAAGATTGCACAGTTGTACTTGAATCTGGCATGTGTTGACGAAACTGGT
GCCCCAGCAGATCAAAGGTGGGAAATACGTCAGCAGTGGGGCTAAAACCAAGCGGCTAGAAGCCCTACAGCTGCC
TTCGGCCAGGAAGTGAGGATGGTGTGGGCCCTCCCCGCCGGCCCCCTGGGTCCCCAGTGTTCGCTGTGTGTGCGT
TTGTCCTCTGCTGCCATCTGCCCCGGCTGTGTGAATTCAAGACAGGGCAGTGCAGCACTAGGCAGGTGTGAGGAG
CCCTGCTGAGGTCACTGTGGGGCACGGTTGCCACACGGCTGTCATTTTTCACCTGGTCATTCTGTGACCACCACC
CCCTCCCCTCACCGCCTCCCAGGTGGCCCGGGAGCTGCAGGTGGGGATGGCTTTGTCCTTTGCTCCTGCTCCCCG
TGGGACCTGGGACCTTAAAGCGTTGCAGGTTCCTGATTTGGACAGAGGTGTGGGGCCTTCCAGGCCGTTACATAC
CTCCTGCCAATTCTCTAACTCTCTGAGACTGCGAGGATCTCCAGGCAGGGTTCTCCCCTCTGGAGTCTGACCAAT
TACTTCATTTTGCTTCAAATGGCCAATTGTGCAGAGGGACAAAGCCACAGCCACACTCTTCAACGGTTACCAAAC
TGTTTTTGGAAATTCACACCAAGGTCGGGCCCACTGCAGGCAGCTGGCACAGCGTGGCCCGAGGGGCTGTGGAAC
GGGTCCCGGAACTGTCAGACATGTTTGATTTTAGCGTTTCCTTTGTTCTTCAAATCAGGTGCCCAAATAAGTGAT
CAGCACAGCTGCTTCCAAATAGGAGAAACCATAAAATAGGATGAAAATCAAGTAAAATGCAAAGATGTCCACACT
GTTTTAAACTTGACCCTGATGAAAATGTGAGCACTGTTAGCAGATGCCTATGGGAGAGGAAAAGCGTATCTGAAA
ATGGTCCAGGACAGGAGGATGAAATGAGATCCCAGAGTCCTCACACCTGAATGAATTATACATGTGCCTTACCAG
GTGAGTGGTCTTTCGAAGATAAAAAACTCTAGTCCCTTTAAACGTTTGCCCCTGGCGTTTCCTAAGTACGAAAAG
GTTTTTAAGTCTTCGAACAGTCTCCTTTCATGACTTTAACAGGATTCTGCCCCCTGAGGTGTAATTTTTTTGTTC

FIGURE 53D

TATTTTTTTCCACGTACTCCACAGCCAACATCACGAGGTGTAATTTTTAATTTGATCAGAACTGTTACCAAAAAA
CAACTGTCAGTTTTATTGAGATGGGAAAAATGTAAACCTATTTTTATTACTTAAGACTTTATGGGAGAGATTAGA
CACTGGAGGTTTTTAACAGAACGTGTATTTATTAATGTTCAAAACACTGGAATTACAAATGAGAAGAGTCTACAA
TAAATTAAGATTTTTGAATTTGTACTTCTGCGGTGCTGGTTTTTCTCCACAAACACCCCCGCCCCTCCCCATGCC
CAGGGTGGCCGTGGAAGGGACGGTTTACGGACGTGCAGCTGAGCTGTCCGTGTCCCATGCTCCCTCAGCCAGTGG
AACGTGCCGGAACTTTTTGTCCATTCCCTAGTAGGCCTGCCACAGCCTAGATGGGCAGTTTTTGTCTTTCACCAA
ATTTGAGGACTTTTTTTTTTTGCCATTATTTCTTCAGTTTTCTTTTCTTGCACTGATCTTTCTCCTCTCCTTCTG
TGACTCCAGTGACTCAGACGTTAGACCTCTTGATGTTTTCCCACTGGTCCCTGAGGCTCTGTTC

FIGURE 54

MAPPPPPVLPVLLLLAAAAALPAMGLRAAAWEPRVPGGTRAFALRPGCTYAVGAACTPRAPRELLDVGRDGRLAG
RRRVSGAGRPLPLQVRLVARSAPTALSRRLRARTHLPGCGARARLCGTGARLCGALCFPVPGGCAAAQHSALAAP
TTLPACRCPPRPRPRCPGRPICLPPGGSVRLRLLCALRRAAGAVRVGLALEAATAGTPSASPSPSPPLPPNLPEA
RAGPARRARRGTSGRGSLKFPMPNYQVALFENEPAGTLILQLHAHYTIEGEEERVSYYMEGLFDERSRGYFRIDS
ATGAVSTDSVLDRETKETHVLRVKAVDYSTPPRSATTYITVLVKDTNDHSPVFEQSEYRERVRENLEVGYEVLTI
RASDRDSPINANLRYRVLGGAWDVFQLNESSGVVSTRAVLDREEAAEYQLLVEANDQGRNPGPLSATATVYIEVE
DENDNYPQFSEQNYVVQVPEDVGLNTAVLRVQATDRDQGQNAAIHYSILSGNVAGQFYLHSLSGILDVINPLDFE
DVQKYSLSIKAQDGGRPPLINSSGVVSVQVLDVNDNEPIFVSSPFQATVLENVPLGYPVVHIQAVDADSGENARL
HYRLVDTASTFLGGGSAGPKNPAPTPDFPFQIHNSSGWITVCAELDREEVEHYSFGVEAVDHGSPPMSSSTSVSI
TVLDVNDNDPVFTQPTYELRLNEDAAVGSSVLTLQARDRDANSVITYQLTGGNTRNRFALSSQRGGGLITLALPL
DYKQEQQYVLAVTASDGTRSHTAHVLINVTDANTHRPVFQSSHYTVSVSEDRPVGTSIATLSANDEDTGENARIT
YVIQDPVPQFRIDPDSGTMYTMMELDYENQVAYTLTIMAQDNGIPQKSDTTTLEILILDANDNAPQFLWDFYQGS
IFEDAPPSTSILQVSATDRDSGPNGRLLYTFQGGDDGDGDFYIEPTSGVIRTQRRLDRENVAVYNLWALAVDRGS
PTPLSASVEIQVTILDINDNAPMFEKDELELFVEENNPVGSVVAKIRANDPDEGPNAQIMYQIVEGDMRHFFQLD
LLNGDLRAMVELDFEVRREYVLVVQATSAPLVSRATVHILLVDQNDNPPVLPDFQILFNNYVTNKSNSFPTGVIG
CIPAHDPDVSDSLNYTFVQGNELRLLLLDPATGELQLSRDLDNNRPLEALMEVSVSDGIHSVTAFCTLRVTIITD
DMLTNSITVRLENMSQEKFLSPLLALFVEGVAAVLSTTKDDVFVFNVQNDTDVSSNILNVTFSALLPGGVRGQFF
PSEDLQEQIYLNRTLLTTISTQRVLPFDDNICLREPCENYMKCVSVLRFDSSAPFLSSTTVLFRPIHPINGLRCR
CPPGFTGDYCETEIDLCYSDPCGANGRCRSREGGYTCECFEDFTGEHCEVDARSGRCANGVCKNGGTCVNLLIGG
FHCVCPPGEYERPYCEVTTRSFPPQSFVTFRGLRQRFHFTISLTFATQERNGLLLYNGRFNEKHDFIALEIVDEQ
VQLTFSAGETTTTVAPKVPSGVSDGRWHSVQVQYYNKPNIGHLGLPHGPSGEKMAVVTVDDCDTTMAVRFGKDIG
NYSCAAQGTQTGSKKSLDLTGPLLLGGVPNLPEDFPVHNRQFVGCMRNLSVDGKNVDMAGFIANNGTREGCAARR
NFCDGRRCQNGGTCVNRWNMYLCECPLRFGGKNCEQAMPHPQLFSGESVVSWSDLNIIISVPWYLGLMFRTRKED
SVLMEATSGGPTSFRLQILNNYLQFEVSHGPSDVESVMLSGLRVTDGEWHHLLIELKNVKEDSEMKHLVTMTLDY
GMDQNKADIGGMLPGLTVRSVVVGGASEDKVSVRRGFRGCMQGVRMGGTPTNVATLNMNNALKVRVKDGCDVDDP
CTSSPCPPNSRCHDAWEDYSCVCDKGYLGINCVDACHLNPCENMGACVRSPGSPQGYVCECGPSHYGPYCENKLD
LPCPRGWWGNPVCGPCHCAVSKGFDPDCNKTNGQCQCKENYYKLLAQDTC

FIGURE 55

GGCACGAGGGCCCGGCGGCAGGTCCCAGCCCGGGGCTAGAGACCGAGGGCCGGGGTCCGGGCCCGGCGGCGGGAC
CCAGGCGGTTGAGGCTGGTCAGGAGTCAGCCAGCCTGAAAGAGCAGG**ATG**GATCTTGATGTGGTTAACATGTTTG
TGATTGCGGGCGGCACGCTGGCCATCCCAATCCTGGCATTTGTGGCTTCATTTCTTCTGTGGCCTTCAGCACTGA
TAAGAATCTATTATTGGTACTGGCGGAGGACATTGGGCATGCAAGTCCGCTATGTTCACCATGAAGACTATCAGT
TCTGTTATTCCTTCCGGGGCAGGCCTGGGCACAAACCCTCCATCCTCATGCTCCACGGATTCTCTGCCCACAAGG
ATATGTGGCTCAGTGTGGTCAAGTTCCTTCCAAAGAACCTGCACTTGGTCTGCGTGGACATGCCAGGACATGAGG
GCACCACCCGCTCCTCCCTGGATGACCTGTCCATAGATGGGCAAGTTAAGAGGATACACCAGTTTGTAGAATGCC
TGAAGCTGAACAAAAAACCTTTCCACCTGGTAGGCACCTCCATGGGTGGCCAGGTGGCTGGGGTGTATGCTGCTT
ACTACCCATCGGATGTCTCCAGCCTGTGTCTCGTGTGTCCTGCTGGCCTGCAGTACTCAACTGACAATCAATTTG
TACAACGGCTCAAAGAACTGCAGGGCTCTGCCGCCGTGGAGAAGATTCCCTTGATCCCGTCTACCCCAGAAGAGA
TGAGTGAAATGCTTCAGCTCTGCTCCTATGTCCGCTTCAAGGTGCCCCAGCAGATCCTGCAAGGCCTTGTCGATG
TCCGCATCCCTCATAACAACTTCTACCGAAAGTTGTTTTTGGAAATCGTCAGTGAGAAGTCCAGATACTCTCTCC
ATCAGAACATGGACAAGATCAAGGTTCCGACGCAGATCATCTGGGGGAAACAAGACCAGGTGCTGGATGTGTCTG
GGGCAGACATGTTGGCCAAGTCAATTGCCAACTGCCAGGTGGAGCTTCTGGAAAACTGTGGGCACTCAGTAGTGA
TGGAAAGACCCAGGAAGACAGCCAAGCTCATAATCGACTTTTTAGCTTCTGTGCACAACACAGACAACAACAAGA
AGCTGGAC**TGA**GGCCCCGACTGCAGCCTGCATTCTGCACACAGCATCTGCTCCCATCCCCCAAGTCTGACGCAGC
CACCACTCTCAGGGATCCTGCCCCAAATGCGGTCGGAGCGCCAGTGACCCTGAGGAAGCCCGTCCCTTATCCCTG
GTATCCACGGTTCCCCAGAGCTTTGGGGACCACGCGAAAACCTCCAAGATATTTTTCACAAAATAGAAACTCATA
TGGAACAAAATAAGAAACCCCAGCCATGAAATCTACCATGAAGTCTTCAAGTTCATGTCACTGAGAAGCTTGTGC
AAAGCAGCCACCTTGGACCATAATTAAATCAAGGACATTTTCTTTGAGACATTCCTTATAGTTGGAGACTCAAGA
TATTTTTGTTGCATCAGGTGTATTCCCTTGCATGGGCAGTGGCTTTTATAGGAGCATTAGTCCTCATTCGCTGAA
CCCTGTTGTTTAGGTCTAATTTAAGTTTTACATAGAGACCCATGTATGACTGCAGCCCATTGGCTGCAAGACCAG
GGAGGAAAGTGGCAAGCTGTAGAAAATGTTTACACGCATGGAGGGGCATTGCTCTAGCCCTCAGAGCGTCCGGAG
CAGCAGGGTACATGGGTGGGAGGTTCATTCAGCACCCACCAGTCAGGTATGTTCTGAGTGAACCCACAGCAGTCG
CAGAATGAGCACCTGGCAGGGTGGGTTTCCTAGGAATAATTTATTATTTTTAAAAATAGGCCTAATAAAGCAATA
ATGTTCTAGACATCTGTCTAAGTAATCAGACTCAGGTTCCACACACAAGCAACAACTCGTGGGCCTCTTTTCTAT
TTCAATGTGCTACTAAGAACCCTTGGATGTAACATACTAGTTAGTTAATGAATTCTGTGAATTCTGTGAAGAGTA
ATGTGATTGAAAATAAGTCTAAACAGCTGTAAAAGTGACCACAATGACATGAAATAAATTTAATAAGTCTAGATC
AGCAAAAAAAAAAAAAAAAAA

FIGURE 56

MDLDVVNMFVIAGGTLAIPILAFVASFLLWPSALIRIYYWYWRRTLGMQVRYVHHEDYQFCYSFRGRPGHKPSIL
MLHGFSAHKDMWLSVVKFLPKNLHLVCVDMPGHEGTTRSSLDDLSIDGQVKRIHQFVECLKLNKKPFHLVGTSMG
GQVAGVYAAYYPSDVSSLCLVCPAGLQYSTDNQFVQRLKELQGSAAVEKIPLIPSTPEEMSEMLQLCSYVRFKVP
QQILQGLVDVRIPHNNFYRKLFLEIVSEKSRYSLHQNMDKIKVPTQIIWGKQDQVLDVSGADMLAKSIANCQVEL
LENCGHSVVMERPRKTAKLIIDFLASVHNTDNNKKLD

FIGURE 57A

GGAACACAAAACTGCGGCCCTTGTCTGCAAACAGTGGTATCGACTTATCAAAGGTGTAGCCCATCAGTGTTATCA
TGGTTTCATGAAGGCTGTCCAGGAAGGAAACATTCAGTGGGAGAGCCGTACCTATCCTTATCCTGGAACCCCAAT
CACTCAGCGCTTCTCGCACAGTGCATGCTATTATGATGCTAATCAGTCTATGTATGTGTTTGGAGGCTGTACCCA
GAGCAGCTGCAATGCTGCTTTCAATGACCTCTGGAGACTTGACCTAAACAGCAAAGAGTGGATCCGACCTTTGGC
TTCAGGGTCCTATCCTTCCCCCAAAGCTGGAGCAACTCTGGTCGTGTACAAGGACTTGCTAGTGCTGTTTGGTGG
CTGGACGCGGCCAAGCCCTTATCCCCTACACCAGCCAGAGAGATTCTTTGATGAAATACACACTTACTCACCCTC
TAAAAATTGGTGGAACTGCATTGTGACAACCCATGGGCCACCTCCCATGGCTGGCCACTCCTCCTGTGTGATAGA
TGATAAAATGATTGTCTTTGGTGGCTCTTTAGGATCCCGGCAAATGAGCAATGATGTCTGGGTCCTTGACCTTGA
GCAGTGGGCGTGGTCCAAGCCGAACATCTCTGGCCCCAGTCCTCATCCTCGAGGTGGCCAATCTCAGATTGTCAT
AGATGATGCAACTATCTTAATCCTCGGAGGGTGTGGCGGTCCCAATGCTCTATTCAAGGATGCTTGGTTGTTGCA
CATGCATTCTGGTCCTTGGGCCTGGCAGCCACTCAAGGTAGAAAATGAAGAGCATGGGGCCCCAGAACTGTGGTG
CCATCCAGCTTGCCGGGTGGGACAGTGTGTGGTGGTCTTCAGCCAGGCTCCTAGTGGGAGAGCCCCACTCAGCCC
CAGTTTGAACTCTCGCCCATCACCTATCAGTGCCACTCCTCCAGCTCTCGTTCCTGAAACCCGAGAGTACCGCTC
TCAGTCTCCAGTAAGAAGCATGGATGAAGCTCCTTGTGTTAACGGCCGCTGGGGAACACTGAGACCCAGGGCTCA
AAGGCAGACTCCTTCAGGTTCCCGGGAAGGGAGCCTTTCCCCAGCCAGAGGAGACGGCTCTCCTATCCTCAATGG
TGGGAGTTTGTCTCCAGGAACGGCAGCTGTGGGTGGCTCTTCTTTGGACAGTCCTGTACAGGCCATATCTCCAAG
TACTCCATCTGCTCCTGAAGGATACGACCTGAAAATAGGACTTTCTTTGGCCCCCCGACGAGGATCACTACCAGA
TCAGAAAGATCTGAGATTAGGATCCATAGATCTGAATTGGGATCTGAAACCCGCTTCCAGTAGTAATCCCATGGA
TGGCATGGACAATAGGACAGTTGGGGGAAGTATGAGACACCCTCCTGAACAGACAAATGGTGTGCATACCCCACC
TCACGTGGCCAGTGCCCTTGCAGGGGCCGTCTCCCCAGGTGCCCTGCGTCGGAGTCTGGAAGCCATCAAAGCGAT
GTCCTCCAAAGGCCCCTCGGCCTCTGCAGCACTAAGTCCTCCTCTTGGGTCTTCTCCAGGCTCTCCTGGGAGCCA
GAGTTTGAGCAGTGGAGAAACAGTGCCCATCCCTCGCCCAGGGCCTGCCCAAGGAGATGGACATTCCTTACCTCC
CATTGCTCGCCGCCTGGGCCACCACCCTCCACAGTCCCTAAATGTTGGCAAACCCCTATACCAGAGTATGAACTG
CAAGCCCATGCAGATGTACGTGCTGGACATTAAAGACACCAAGGAGAAGGGGCGGGTCAAATGGAAAGTATTTAA
TAGCAGTTCTGTGGTTGGACCTCCTGAAACCAGCCTGCATACCGTGGTACAAGGCAGGGGTGAACTCATCATATT
TGGAGGACTCATGGACAAGAAACAGAATGTGAAGTACTATCCAAAAACAAACGCCTTGTACTTTGTACGAGCAAA
GAGA**TAA**TGTGTTCTAAACCCCTTTCCTTTTCTGTGGCTTTTAATTTGGAATTTTCCAGTGTGTAAGCATTTGGA
CTGAGAATTGGGAAAACAAAATTACTCCCAGAAGCCAAAACTCTTTAATTCCCAACCGAAGTCACTCCAGGCTGG
GATCAAATCTCCATTAAGAAAAAAAATTATATATAAATATATATATATATTATATAGCCAACTCTGTTGACAA
AAAAAGGGAGAGATTTCCATCCTGGTTCAGATAAAGTTGTTGCTGTGTTTTAACAGGGGCTGGGCTGCCTTTTTC
TACCTTGCTGGTAACTAGACCAAGAAGTTAGAGAATAGACTAACATCAGTAACTTCCCAAAAGAAACTGAAGAGC
CCCCTGTAAATCTTTATGTGGCCTTCTTGGAGTTAAAAAATGAAAGGGCATATGTAAGTTGCAAAGGTGGAGGGT
TTTAGACTCTCATGCTTCAGGTGCTGTCGGGGTAAAAGTAACTGTTTTTCCCCTTCTCTTAAAACCACAGAGGAC
CTGTGACAGCTCTGCAGAAATGCCAGTGCCTGGCCCCCTCTTGCCTTTTATGGCTGAGGAAAGTTACCCAACAAA
GGATTTTATTCCACATTTGTGTGCCGGGTCATTGTGAAATAATGTTTATGCAGCCAACATCTGACCGCCTAGTAG
TGTCCATTGGTCTTTGGAGTGCTTCTTGTGTGTCTCAGAAAACATTTTGTGTCTGATTGTGGAAATTTCTGACAA
TCAATCATATTTGGTGGCAAGTTGCCAAAAAACATATTTATTCTCCTCTTTCTTCCCTTAGAACATGGTACTTGG
AAACTGCCTTTTCCATTCACTTACAGGCTGCTTTTTTCTTCTACCTTTTTTCTTTTCTTTTTTTTTTTTCATATG
TGGTGAAGTCCTAAAACCTGTCTGACTTTCTGTTTCTTTTACAAAGCTCAGGTGCCTACAGAAATCAGAAGCTGC
TTAGAAATACTTGTGGAACCCTTTCCCTGGTGTCACTAGGGGGCCAGTAGGGAATTCTAAGATGCCAATATTGTG
AGAAATCTTTGAAGCAAGCATCAAAAGATACTGTTTTTTCCCTATGGGCTTCTTTTTACTTCCAAAGCACATTGA
GCACACTCATCCCATATTTGTAGAATGTGGAAATTGATTCTGGAAGGGAATTCCAATAACAGTTCTTTTTAGAAA
TGTTTTTTTCCTTGTGGTGACATATATTCCTCTTCCTGGCTATTGGCAGGTGATGGAGTTGAGAATCATGTACTT
GACTTCTTGACGCATGGCTGACCTCAGAAACAGCTCCATCCTTTGCACTTGTCTTCTTCATGTGTCACCCAAATA
GGGCTTGGGTTTTTACTTTCACTTCATTTCTGAGATTAAGGTGTAACCAAGTAGAGCATTTCTTTGCTTGATACA
GAAAGTTACTAGTCTCAACCATGGCCTGGGCATAGGAGATGTCAAAATAAGTTTATTTCAAATGGCACCATTTAA
ATAGGGATTTTTGGTGATTTCTCATCAGTGGAAAGAGGATTTTTGTTTTGCCTTTGTTTTGTTTTGAAATTTAAA
TCCTAATTTCAAAACATCACCTTGCCACCCTGACACTCCTCTTTTTATTATTAGCGTTTCTCAGGCACAAAGCCT

FIGURE 57B

GCTGCAGCTGGCCCTGGGTCCTGGCTTTCAGCCAGCATCTGGCAGCCTAAGTGTACTGATAAGTGTGTTTTCTCC
TGTTACATCATGCTGAATCCTTTCCCTTAGCCATTAGCTTTTATGATGTGGTCTTCGTAGGAAAGCCACCCTGGT
GCCAAGCCTAGCTTGTGGGGAGGGGTATGTGTTCCAGAAACTGCTCTTTGTGTTCCCTTCAATGAGGAAACAACA
TGTGTCTACTTATGTGGCATCCAACTGCTTGGAGCTCCACACTTCCCTTTCGCGACTCAGGCTCTGGTGCTGTTG
CCAATCCTTGCTTGGCAAAGACTGTTCGATCATGTGGGGTCCTTATTTACAAGGGAAAGCTGGGCCAGAAGGCTA
GCAATTCAGGTGTTACCGCTATTGCTGTACCTTGTGTTAGGACATTGTGTTTGTGCATGGACTGTGCCTCCAAAC
TCAGTAGTTCCTATCTAAATATAAAGTATATTAGAAACCTGAAAGTACAGAATCTCAACCTTACAGTCTTTCCCT
TAGTCCTGTGGCCTTCCTAAGCCAGCTGTTAACGTGTTGATTCCTTCCACTTCCCCCAAGTAGGCAGGCAACAGA
TATGTTGATTGTCTTAGAAAGTAATCTGGTTCCTCTGAACTCCATTGAATTCCAGTTTGACGCATACTGCCTGGA
ACCAGACTGTTTGCTTACAGCTTTTTAAGAAAAATCTGCCTTGTCTGCCCCCATTATGGTTGGTCTTGGTAGCTC
CTGGGCACTGTGGGCGTGTACCATGGGAAAGTGATTCAACACAGTGAAGGTGATTGTCTCCTCAGGCCTCCTGAA
GCCACCTGTGCGGTGGGACTTCACGTGTCTCGGCCAAGGCGAGCATTTCCACAATGCCGTGGATGCTGCAGTCAG
GCCAGATTGAACCATGACCCCATTTTTCACATGATACCAATTTTGTCTTAAAATTCACTGAGAAAAATGAGACTA
AATTTTTTTTAACCCTCAGGAGCACCTGAAGCAAATATTTATCCGTATTTATTGAAAATTCATTTTGTTTCTACT
TGAAGCTTTAACCCCTTCCATTCCTGCAAGTGTGCCTTTTGAGAGCTCCCATGGCCTAGTGACTTCACTGGTCAC
CTTGTCCATCTTACTTAAGAATTTTAGTCTCTCCCTACCCTCTTGGACAGAGCTTCCTGTTCTCTTATTTCACAG
GTTATACAGCAGAGCGGGTTTTGTGTTTTCATTCCTATTTCCACCCTTCATTTGGTTGGTGGACTCCACAACCTC
ACCCTACCCTACACTTTGGGAGCACAAATTTGGTGTTGAAACAAGCTTAAATTTCATTTTAGGGCATACTGGGCT
TACTCTCCTCCCAGCTGTCTGTGGATTGATTTGATTTTAATGTTCGAGTTTTACAGCAACAGCTGAAAACCATGA
ACTATTCTAGGAACTGTGTTGGAACTCTTTAAAATAAAGAAAAGAGGAGGAGGAGGAGGAAGAAAGAAAACCAAC
TTAAGAAGCCTTGACTTTGGAGGACAGAAAGCCACCAGCCAATGGAGAACAAAGAGATGTTTCCCTTTCCTTTCT
TTCACCTTGTCATTCTGGGTTTCCTTCTGCTTCACTCTTTCCTTCCCCCTTAAAAGTGGTATTCCTGGTTGGTCT
GTCTGTCTGTCCTTGTCCTTGTGGTGATCCTGGCATGGTGATATGCTCCACTTTGCATTATCCATGGTCTCTTAC
CAGCGCACAAGTCAGTGGGGAGGATCTAACCACGCCTGGTGGTGAGGAAGCTGAATTTCCAGGCCTGCGTCCCAT
GTAGCCTCTCCATGAACTGCAGAAGGCATGTTCTGCATGGTTACCAGTAAGTGGCTCCCTCTCACCGTGTTCATT
GTCAAATGAGAGCAAACTTTAGGTGTTGGCTCCATTGTACACTCTACTTGCTCTGCTCCCCTCCCTCCAACCAGG
GTTCATGTCAGTGCACACCCCATGTGCCCTGGCGAAGCTGGTGCTGTGAGTGATGTTTCCCATACAACTCAGGGA
TGCCAGGTGGCTTACCCTGAGATAGTCATTTTGGGCACATAACAGTGTAGGAATGAAACATGGATTTCATTGATA
TTTAAATCTGTCAATTTCATTTTTTGTTAATGTTTTCCCCTGATGACTTTTTAGCAATTTAACAAATAAAATGGA
CAATTGTCTTAAC

FIGURE 58

EHKTAALVCKQWYRLIKGVAHQCYHGFMKAVQEGNIQWESRTYPYPGTPITQRFSHSACYYDANQSMYVFGGCTQ
SSCNAAFNDLWRLDLNSKEWIRPLASGSYPSPKAGATLVVYKDLLVLFGGWTRPSPYPLHQPERFFDEIHTYSPS
KNWWNCIVTTHGPPPMAGHSSCVIDDKMIVFGGSLGSRQMSNDVWVLDLEQWAWSKPNISGPSPHPRGGQSQIVI
DDATILILGGCGGPNALFKDAWLLHMHSGPWAWQPLKVENEEHGAPELWCHPACRVGQCVVVFSQAPSGRAPLSP
SLNSRPSPISATPPALVPETREYRSQSPVRSMDEAPCVNGRWGTLRPRAQRQTPSGSREGSLSPARGDGSPILNG
GSLSPGTAAVGGSSLDSPVQAISPSTPSAPEGYDLKIGLSLAPRRGSLPDQKDLRLGSIDLNWDLKPASSSNPMD
GMDNRTVGGSMRHPPEQTNGVHTPPHVASALAGAVSPGALRRSLEAIKAMSSKGPSASAALSPPLGSSPGSPGSQ
SLSSGETVPIPRPGPAQGDGHSLPPIARRLGHHPPQSLNVGKPLYQSMNCKPMQMYVLDIKDTKEKGRVKWKVFN
SSSVVGPPETSLHTVVQGRGELIIFGGLMDKKQNVKYYPKTNALYFVRAKR

FIGURE 59

GCTCTGGCGGCTCCCGCGGCTCCGGCTGGCGGCTTCGGGCCCTGCACCTGTGACTCTCGGCCGCGCTCGCCCTCG
GCCCGCCCGGCGCCGCAGCCCCATGGCCCCGTCCAGGCTGCAGCTCGGCCTCCGCGCCGCCTACTCCGGCATCAG
CTCCGTGGCCGGCTTCTCCATCTTCCTCGTCTGGACGGTGGTCTACCGACAGCCGGGGACCGCGGCCATGGGAGG
GCTCGCAGGGGTGCTGGCACTGTGGGTCCTGGTGACGCACGTGATGTACATGCAAGATTATTGGAGGACCTGGCT
CAAGGGGCTGCGCGGCTTCTTCTTCGTGGGGGTCCTCTTCTCGGCCGTCTCCATCGCTGCCTTCTGCACCTTCCT
CGTGCTGGCCATCACCCGGCATCAGAGCCTCACAGACCCCACCAGCTACTACCTCTCCAGCGTCTGGAGCTTCAT
TTCCTTCAAGTGGGCCTTCCTGCTCAGCCTCT**ATG**CCCACCGCTACCGGGCTGACTTTGCTGACATCAGCATCCT
CAGCGATTTCTGACCCAGGGGGTGAGGTCTCTGCACCCTGGGGGGGCCTTAGGACCTGGACTCAGCCTCTGAGAT
GTTGGGAGAGGCTACTCCCACCCCCTGGTGACCCCAGAACTGTGGCAGAAAATACACAGCAGGACGAGTGTGGTC
TCCCAGGAAGCTGTCCTGCCCGTCCCCTTTCGAGGAAACCTGAGTGTGGTAGAGAGGGGATCCTGCCATGTTGCT
CCTCATCAGCCTGGCCAGAGGGCAGCTTTAGACCTTTTCAAATGAATCTGTTTTCTTTTCTTTCTTTTTTTTTTC
TTTTTTTTTTTTTTTTGAGATGGAGTCTTACTCTGTCACCCAGGCTGGAGTGCAGTAGTGCGATCTCAGCTCACT
GCAACCTCCGCCTCCCAGGTTCAAGCAATTCTCCTGCCTTGGCCTCTCAAGTAGCTGGGATTACAGGCATCTGCC
ACCATGCCCGGCAAATTTTTGTGTTTTTAGTAGAGACAGGGTTTTGCCATGTTGGCCAGGCTGGTCTCGAACTCC
TGATCTCAGGTGATTCACCCGCCTCAGCCTTCCAAAGTGCTGGGATTATAGGTGTGAGCCACCGTGCCCGGCCTG
GATCTGTTTTCTTAGCACGCAGTGAGGAATCTTTGTACTTAAGGCCAGGGCAACAAAGTCAAGAGGTCAAGGTG**T**
AGGGCCATGAGGCCTGGACCTATGCTGCAGGCAAGGGTTTCCATCCCCGCTGCCCTAGGCACTCTCTTCCCAAGG
CCAGGTTGGGCACCTGGGGAGGTCAGTTCAGAAATATCTAGCAGAGACCTCTTAAACCCCCATCCCAGCACCCCA
TCCTGTTGTTCCCAGAGCTGGTCTCCCATGAGTGTGCTAGAGCCAGATAGCCGTGGCCCCCCACCCATCTCACTC
ACACACACAGGCATCCATACACCCCAGAAGACTTCCCAAATGAGGCCAGACTCAGGGTCACGGGGAATGTGCTTC
TGCCCCTGTAAGGGCTTTGGGGAAGGGGGCAACATAGTAGAGGCTGGAAAGAGCCCCCAAACCTGTGCCCATGCC
CCTCCAGCCCTGCGTTTCCATTCTGCCTTCTCAGAGTGCCCTTGCTGCACCCAGACCACCGGCCAGGAGAGACCT
TCTCTCCCACTCCAGCCCCTCTCACTGCCCTTCAACTAGAGCTTTCACCTTTTTACATTTCCCTTCTGAAGGACA
CAAATCTGCTTTTCTGCCCATACACTGGCCCAAGGGCTCACCTAACTTGGGAGGGAAGGGGCTGTTGGTACAAGG
ATGATTTTCTGTTAGGCTGCCATTTTGCACGGTCTCCCCCTCCCCATCTGATGTGTCCTGCCCCTCAGCTCTTTG
CCTTATCTGTGTCACTGTCACTTTAGCAAAAATACAGCGGCCATTTGTATCAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 60

MPTATGLTLLTSASSAISDPGGEVSAPWGGLRTWTQPLRCWERLLPPPGDPRTVAENTQQDECGLPGSCPARPLS
RKPECGREGILPCCSSSAWPEGSFRPFQMNLFSFLSFFFLFFFFLRWSLTLSPRLECSSAISAHCNLRLPGSSNS
PALASQVAGITGICHHARQIFVFLVETGFCHVGQAGLELLISGDSPASAFQSAGIIGVSHRARPGSVFLARSEES
LYLRPGQQSQEVKV

FIGURE 61

ATGGGTGTGCTGGATAGCCGGTTGCACCTGTTTCTTGGGTCTTCTCTCCTGTTCCCACTGTTCCACTTCAGGAGA
GCCAAGCATCTCACCCATGCTCTCATATTCAGTCTAGGCATCCTACCCAAGTATCCTAATTATAAACTAGCCACC
AGCTCAGGCTCTGTATCCCAGTCACCACCCCCATTCAGGCCCCCAACTATCCAGTGCCAGAGGCCCTCAGGTGCA
GAGGGCCAGTTCAGCCAAACCAGGACAGACCCAGCCACCCTTGTTTCCAGCCCAGCCTACAAGCCTCCTGAAACC
CACCAGTCTGATGGTAGCCTCCCCTCCCTGTTCTCCCAGGAAGAAAGAGAAATCGCCTCCCTCCAAAACCAAGCC
CAACCAGAAACCTGTCCCCACCCCCTCATCAGCTGCTCCCAGATCCGAATGGGATTTGCAGAAGTCCTGAGCACT
GGTGGTTGGTGGGCAGCAACAGGCCCTTTGCGCGGCAGCTGGACGGATGGGGTGGGGGCGAGGTCTGGGCCAGGG
CCTGAGGGTACGGGCACTAAGGCCGAGGCGTCGCCTCCCGGCGCCTCTCCCACGGCCACGGCCGAGCGGGCTCCA
CGGCTCCAGGAGTTCGCCGCGCTAGCTGCCTCCCCCTGCGTCCGCGTCTTGAGCTCTGAGCTCTTCACCCTGACC
TATGGTGCCCTGGTCACCCAGCTATGTAAGGACTATGAAAATGATGAAGATGTGAATAAACAGCTGGACAAAATG
GGCTTTAACATTGGAGTCCGGCTGATTGAAGATTTCTTGGCTCGGTCAAATGTTGGGAGGTGCCATGACTTTCGG
GAAACTGCGGATGTCATTGCCAAGGTGGCGTTCAAGATGTACTTGGGCATCACTCCAAGCATTACTAATTGGAGC
CCAGCTGGTGATGAATTCTCCCTCATTTTGGAAAATAACCCCTTGGTGGACTTTGTGGAACTTCCTGATAACCAC
TCATCCCTTATTTATTCCAATCTCTTGTGTGGGGTGTTGCGGGGAGCTTTGGAGATGGTCCAGATGGCTGTGGAG
GCCAAGTTTGTCCAGGACACCCTGAAAGGAGACGCCGCGAGGGGCGGCCGGCAGAGCGACGCGGAACCCCGCCGG
CGCGGACCCCGGACCCCAACGCCGCCCGCCCAGCCGCGGACGCCCCTGCCCGGAGCCCTCGCCGCCCGGGCCGCC
CTCGAGGGCCGGGAGCGGCGCCCGGCGGCCGCGCCCGCAGGCCCTGCCTCTGCTGGAACCTTCCCAGGCCCCTCC
GACCTGAAAGCCCAGCCCCTCCTGCTGCCGCTGCTGCCGCCACCACGCAGGGTAGCCGCAGAGGCCCAGGAATCT
TGGCAGGCGTGGGGAGGCAGCGGGTGGCGGGTGGCGCTCCGGAAAAGGCTGCAAATGCGAACCAGAAGCACGTCC
ACGGACGCCATGCTGGGGACTCTGACACCCCTGTCTTCGCTGCTGCTGCTGCTACTGGTGCTGGTGCTGGGGTGT
GGGCCGCGGGCGTCCTCTGGTGGCGGGGCCGGTGGGGCGGCGGGCTATGCCCCAGTGAAGTACATCCAGCCCATG
CAGAAAGGACCTGTGGGACCGCCCTTCCGTGAGGGCAAAGGCCAGTACCTGGAAATGCCTCTACCGCTGCTGCCG
ATGGACCTGAAGGGAGAGCCCGGCCCCCCTGGGAAGCCCGGGCCTCGGGGTCCCCCTGGCCCCCCTGGCTTCCCA
GGAAAACCAGGCATGGGAAAGCCAGGACTCCATGGGCAGCCTGGCCCTGCTGGGCCCCCTGGCTTCTCCCGGATG
GGCAAGGCTGGTCCCCCAGGGCTCCCTGGCAAGGTCGGGCCACCAGGGCAGCCGGGGCTTCGGGGGGAGCCAGGA
ATACGAGGGGACCAGGGCCTCCGGGGACCCCCAGGACCCCCTGGCCTCCCGGGCCCCTCAGGCATTACTATCCCT
GGAAAACCAGGTGCCCAAGGGGTGCCAGGGCCCCCAGGATTCCAGGGGGAACCAGGGCCCCAGGGGGAGCCTGGG
CCCCCAGGTGATCGAGGCCTCAAGGGGGATAATGGAGTGGGCCAGCCCGGGCTGCCTGGGGCCCCAGGGCAGGGG
GGTGCCCCCGGCCCCCCCGGCCTCCCTGGTCCAGCTGGCTTAGGCAAACCTGGTTTGGATGGGCTTCCTGGGGCC
CCAGGAGACAAGGGTGAGTCTGGGCCTCCTGGAGTTCCAGGCCCCAGGGGGGAGCCAGGAGCTGTGGGCCCAAAA
GGACCTCCTGGAGTAGACGGTGTGGGAGTCCCAGGGGCAGCAGGGTTGCCAGGACCACAGGGCCCATCAGGGGCC
AAAGGGGAGCCAGGGACCCGGGGCCCCCCTGGGCTGATAGGCCCCACTGGCTATGGGATGCCAGGACTGCCAGGC
CCCAAGGGGGACAGGGGCCCAGCTGGGGTCCCAGGACTCTTGGGGGACAGGGGTGAGCCAGGGGAGGATGGGGAG
CCAGGGGAGCAGGGCCCACAGGGTCTTGGGGGTCCCCCTGGACTTCCTGGGTCTGCAGGGCTTCCTGGCAGACGT
GGGCCCCCTGGGCCTAAGGGTGAGGCAGGGCCTGGAGGACCCCCAGGAGTGCCTGGCATTCGAGGTGACCAGGGG
CCTAGTGGCCTGGCTGGGAAACCAGGGGTCCCAGGTGAGAGGGGACTTCCTGGGGCCCATGGACCCCCTGGACCA
ACTGGGCCCAAGGGTGAGCCGGGTTTCACGGGTCGCCCTGGAGGACCAGGGGTGGCAGGAGCCCTGGGGCAGAAA
GGTGACTTGGGGCTCCCTGGGCAGCCTGGCCTGAGGGGTCCCTCAGGAATCCCAGGACTCCAGGGTCCAGCTGGC
CCTATTGGGCCCCAAGGCCTGCCGGGCCTGAAGGGGGAACCAGGCCTGCCAGGGCCCCCTGGAGAGGGGAGAGCA
GGGGAACCTGGCACGGCTGGGCCCACGGGGCCCCCAGGGGTCCCTGGCTCCCCTGGAATCACGGGCCCTCCGGGG
CCTCCCGGGCCCCCGGGACCCCCTGGTGCCCCTGGGGCCTTCGATGAGACTGGCATCGCAGGCTTGCACCTGCCC
AACGGCGGTGTGGAGGGTGCCGTGCTGGGCAAGGGGGGCAAGCCACAGTTTGGGCTGGGCGAGCTGTCTGCCCAT
GCCACACCGGCCTTCACTGCGGTGCTCACCTCGCCCTTCCCCGCCTCGGGCATGCCCGTGAAATTTGACCGGACT
CTCTACAATGGCCACAGCGGCTACAACCCAGCCACTGGCATCTTCACCTGCCCTGTGGGCGGCGTCTACTACTTT
GCTTACCATGTGCACGTCAAGGGCACCAACGTGTGGGTGGCCCTGTACAAGAACAACGTGCCGGCCACCTATACC
TACGATGAGTACAAGAAGGGCTACCTGGACCAGGCATCTGGTGGGGCCGTGCTCCAGCTGCGGCCCAACGACCAG
GTCTGGGTGCAGATGCCGTCGGACCAGGCCAACGGCCTCTACTCCACGGAGTACATCCACTCCTCCTTTTCAGGA
TTCTTGCTCTGCCCCACA**TAA**

FIGURE 62

MGVLDSRLHLFLGSSLLFPLFHFRRAKHLTHALIFSLGILPKYPNYKLATSSGSVSQSPPPFRPPTIQCQRPSGA
EGQFSQTRTDPATLVSSPAYKPPETHQSDGSLPSLFSQEEREIASLQNQAQPETCPHPLISCSQIRMGFAEVLST
GGWWAATGPLRGSWTDGVGARSGPGPEGTGTKAEASPPGASPTATAERAPRLQEFAALAASPCVRVLSSELFTLT
YGALVTQLCKDYENDEDVNKQLDKMGFNIGVRLIEDFLARSNVGRCHDFRETADVIAKVAFKMYLGITPSITNWS
PAGDEFSLILENNPLVDFVELPDNHSSLIYSNLLCGVLRGALEMVQMAVEAKFVQDTLKGDAARGGRQSDAEPRR
RGPRTPTPPAQPRTPLPGALAARAALEGRERRPAAAPAGPASAGTFPGPSDLKAQPLLLPLLPPPRRVAAEAQES
WQAWGGSGWRVALRKRLQMRTRSTSTDAMLGTLTPLSSLLLLLLVLVLGCGPRASSGGGAGGAAGYAPVKYIQPM
QKGPVGPPFREGKGQYLEMPLPLLPMDLKGEPGPPGKPGPRGPPGPPGFPGKPGMGKPGLHGQPGPAGPPGFSRM
GKAGPPGLPGKVGPPGQPGLRGEPGIRGDQGLRGPPGPPGLPGPSGITIPGKPGAQGVPGPPGFQGEPGPQGEPG
PPGDRGLKGDNGVGQPGLPGAPGQGGAPGPPGLPGPAGLGKPGLDGLPGAPGDKGESGPPGVPGPRGEPGAVGPK
GPPGVDGVGVPGAAGLPGPQGPSGAKGEPGTRGPPGLIGPTGYGMPGLPGPKGDRGPAGVPGLLGDRGEPGEDGE
PGEQGPQGLGGPPGLPGSAGLPGRRGPPGPKGEAGPGGPPGVPGIRGDQGPSGLAGKPGVPGERGLPGAHGPPGP
TGPKGEPGFTGRPGGPGVAGALGQKGDLGLPGQPGLRGPSGIPGLQGPAGPIGPQGLPGLKGEPGLPGPPGEGRA
GEPGTAGPTGPPGVPGSPGITGPPGPPGPPGPPGAPGAFDETGIAGLHLPNGGVEGAVLGKGGKPQFGLGELSAH
ATPAFTAVLTSPFPASGMPVKFDRTLYNGHSGYNPATGIFTCPVGGVYYFAYHVHVKGTNVWVALYKNNVPATYT
YDEYKKGYLDQASGGAVLQLRPNDQVWVQMPSDQANGLYSTEYIHSSFSGFLLCPT

FIGURE 63

GTTGCCGCTGCGCACCTGGCTCAGGTGAGCTGCCCCGCCCCCGCCCGGCGCGAGCCCCAGGTCCTGGCAGCAGCC
CCTGACCTGTCCAGGTGCCCTGTCCAGCTGACTGCAAGGACAGAGAGGAGTCCTGCCCAGCTCTTGGATCAGTCT
GCTGGCCGAGGAGCCCGGTGGAGCCAGGGGTGACCCTGGAGCCCAGCCTGCCCCGAGGAGGCCCCGGCTCAGAGC
C**ATG**CCAGGTGTCTGTGATAGGGCCCCTGACTTCCTCTCCCCGTCTGAAGACCAGGTGCTGAGGCCTGCCTTGGG
CAGCTCAGTGGCTCTGAACTGCACGGCTTGGGTAGTCTCTGGGCCCCACTGCTCCCTGCCTTCAGTCCAGTGGCT
GAAAGACGGGCTTCCATTGGGAATTGGGGGCCACTACAGCCTCCACGAGTACTCCTGGGTCAAGGCCAACCTGTC
AGAGGTGCTTGTGTCCAGTGTCCTGGGGGTCAACGTGACCAGCACTGAAGTCTATGGGGCCTTCACCTGCTCCAT
CCAGAACATCAGCTTCTCCTCCTTCACTCTTCAGAGAGCTGGCCCTACAAGCCACGTGGCTGCGGTGCTGGCCTC
CCTCCTGGTCCTGCTGGCCCTGCTGCTGGCCGCCCTGCTCTATGTCAAGTGCCGTCTCAACGTGCTGCTCTGGTA
CCAGGACGCGTATGGGGAGGTGGAGATAAACGACGGGAAGCTCTACGACGCCTACGTCTCCTACAGCGACTGCCC
CGAGGACCGCAAGTTCGTGAACTTCATCCTAAAGCCGCAGCTGGAGCGGCGTCGGGGCTACAAGCTCTTCCTGGA
CGACCGCGACCTCCTGCCGCGCGCTGAGCCCTCCGCCGACCTCTTGGTGAACCTGAGCCGCTGCCGACGCCTCAT
CGTGGTGCTTTCGGACGCCTTCCTGAGCCGGGCCTGGTGCAGCCACAGCTTCCGGGAGGGCCTGTGCCGGCTGCT
GGAGCTCACCCGCAGACCCATCTTCATCACCTTCGAGGGCCAGAGGCGCGACCCCGCGCACCCGGCGCTCCGCCT
GCTGCGCCAGCACCGCCACCTGGTGACCTTGCTGCTCTGGAGGCCCGGCTCCGTGACTCCTTCCTCCGATTTTTG
GAAAGAAGTGCAGCTGGCGCTGCCGCGGAAGGTGCGGTACAGGCCGGTGGAAGGAGACCCCCAGACGCAGCTGCA
GGACGACAAGGACCCCATGCTGATTCTTCGAGGCCGAGTCCCTGAGGGCCGGGCCCTGGACTCAGAGGTGGACCC
GGACCCTGAGGGCGACCTGGGTGTCCGGGGGCCTGTTTTTGGAGAGCCATCAGCTCCACCGCACACCAGTGGGGT
CTCGCTGGGAGAGAGCCGGAGCAGCGAAGTGGACGTCTCGGATCTCGGCTCGCGAAACTACAGTGCCCGCACAGA
CTTCTACTGCCTGGTGTCCAAGGATGATATG**TAG**CTCCCACCCCAGAGTGCAGGATCATAGGGACAGCGGGGGCC
AGGGCAGCGGCGTCGCTCCTCTGCTCAACAGGACCACAACCCCTGCCAGCAGCCCTGGGACCCTGCCAGCAGCCC
TGGGAAAAGGCTGTGGCCTCAGGGCGCCTCCCAGTGCCAGAAAATAAAGTCCTTTTGGATTCTGAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 64

MPGVCDRAPDFLSPSEDQVLRPALGSSVALNCTAWVVSGPHCSLPSVQWLKDGLPLGIGGHYSLHEYSWVKANLS
EVLVSSVLGVNVTSTEVYGAFTCSIQNISFSSFTLQRAGPTSHVAAVLASLLVLLALLLAALLYVKCRLNVLLWY
QDAYGEVEINDGKLYDAYVSYSDCPEDRKFVNFILKPQLERRRGYKLFLDDRDLLPRAEPSADLLVNLSRCRRLI
VVLSDAFLSRAWCSHSFREGLCRLLELTRRPIFITFEGQRRDPAHPALRLLRQHRHLVTLLLWRPGSVTPSSDFW
KEVQLALPRKVRYRPVEGDPQTQLQDDKDPMLILRGRVPEGRALDSEVDPDPEGDLGVRGPVFGEPSAPPHTSGV
SLGESRSSEVDVSDLGSRNYSARTDFYCLVSKDDM

FIGURE 65A

GGAGCTGGGGATCCCCGCTCTCCTGGACCCCAATGACATGGTCTCCATGAGCGTCCCTGACTGCCTCAGCATCAT
GACCTATGTGTCCCAGTATTACAACCACTTCTGCAGTCCTGGCCAAGCTGGTGTCTCGCCACCCAGAAAGGGCCT
TGCACCCTGTTCCCCGCCGTCTGTAGCACCCACTCCAGTGGAATCAGAAGATGTGGCTCAGGGCGAGGAGCTCTC
CTCAGGCAGCCTGTCAGAGCAGGGCACCGGCCAGACCCCCAGCAGCACGTGCGCAGCCTGCCAGCAGCATGTGCA
CTTGGTGCAGCGCTACCTGGCTGACGGCAGGCTGTACCATCGCCACTGCTTCCGGTGTCGGCGGTGCTCCAGCAC
CCTGCTCCCTGGGGCTTATGAGAATGGGCCTGAGGAGGGCACCTTTGTGTGTGCAGAACACTGTGCCAGGCTGGG
CCCGGGGACACGGTCGGGGACCAGGCCTGGGCCCTTCTCACAGCCAAAGCAGCAGCACCAGCAGCAACTCGCAGA
AGATGCCAAGGATGTTCCAGGAGGCGGCCCCAGCTCCAGTGCTCCTGCAGGGGCTGAGGCCGATGGACCCAAGGC
CAGCCCTGAGGCCCGGCCGCAGATCCCTACCAAGCCCCGGGTTCCTGGCAAACTACAGGAGCTGGCCAGCCCCCC
TGCGGGCCGCCCCACCCCTGCCCCCAGGAAGGCCTCTGAGAGCACCACCCCAGCACCCCCCACGCCCCGGCCCCG
CTCCAGTCTGCAGCAGGAGAACCTGGTGGAGCAGGCTGGCAGCAGCAGCCTGGTGAACGGGAGACTGCACGAACT
GCCTGTCCCCAAGCCGAGGGGGACACCGAAGCCGTCCGAGGGGACACCAGCCCCCAGGAAGGACCCCCCATGGAT
CACGCTGGTGCAGGCAGAACCAAAGAAGAAGCCAGCCCCACTTCCCCCAAGCAGCAGCCCGGGGCCACCAAGCCA
GGACAGCAGGCAGGTGGAGAATGGAGGCACCGAGGAGGTGGCCCAGCCGAGCCCAACGGCCAGCCTGGAGTCCAA
ACCCTATAACCCCTTTGAGGAGGAGGAGGAGGACAAGGAGGAAGAGGCTCCAGCTGCACCCAGCCTGGCCACCAG
CCCTGCCCTGGGCCACCCGGAGTCCACACCCAAGTCCCTGCACCCCTGGTACGGCATCACCCCTACCAGCAGCCC
CAAGACAAAGAAGCGCCCTGCCCCGCGCGCACCCAGCGCGTCCCCACTGGCTCTCCACGCCTCCCGCCTCTCGCA
CTCGGAGCCGCCCTCGGCCACACCATCGCCAGCGCTCAGCGTGGAGAGCCTGTCGTCTGAGAGCGCCAGCCAGAC
TGCAGGTGCAGAGCTTCTGGAGCCGCCAGCTGTGCCCAAGAGCTCCTCAGAGCCTGCTGTCCATGCCCCTGGTAC
CCCTGGAAACCCTGTCAGCCTCTCTACCAACTCCTCCCTGGCCTCCTCTGGGGAACTAGTGGAGCCTAGAGTGGA
ACAAATGCCTCAAGCCAGCCCTGGCCTTGCCCCCAGGACCAGGGGCAGCTCAGGTCCCCAGCCAGCCAAGCCCTG
CAGTGGCGCCACCCCAACGCCTCTCTTGTTGGTTGGAGACAGGAGCCCGGTGCCTTCCCCTGGAAGCTCGTCCCC
ACAGCTGCAGGTAAAGTCCTCCTGCAAGGAGAATCCTTTTAACCGGAAGCCATCACCTGCAGCGTCCCCAGCCAC
AAAGAAGGCCACCAAGGGATCCAAGCCAGTGAGGCCACCTGCCCCTGGACACGGCTTTCCACTCATCAAACGCAA
GGTCCAGGCTGACCAGTACATCCCTGAGGAGGACATCCATGGAGAGATGGATACCATTGAGCGCCGGCTGGATGC
CCTGGAGCACCGTGGGGTGCTGCTGGAGGAGAAGCTGCGTGGCGGCCTGAATGAGGGCCGTGAGGATGACATGCT
GGTGGACTGGTTCAAGCTCATCCACGAGAAGCACCTACTGGTGCGGCGAGAGTCCGAGCTCATCTATGTCTTCAA
GCAGCAGAACCTGGAGCAGCGCCAGGCTGATGTCGAGTATGAGCTCCGGTGCCTCCTCAATAAGCCAGAAAAGGA
CTGGACGGAGGAGGACCGGGCCCGGGAGAAGGTGCTGATGCAGGAGCTTGTGACCCTCATTGAGCAGCGCAACGC
TATCATCAACTGCCTGGATGAGGACCGGCAGAGGGAGGAAGAGGAAGACAAGATGTTGGAAGCCATGATCAAGAA
GAAAGAGTTCCAGAGGGAGGCTGAACCTGAGGGCAAGAAGAAGGGGAAGTTCAAGACCATGAAGATGTTGAAACT
GCTAGGAAACAAACGTGATGCCAAGAGCAAGTCCCCCAGAGACAAGAGC**TAA**CAGCACGAGAAGCCAGTTGGGGA
CTGCCCCCTCCTGGAGCAGCTCCTGGGCTGTGCTCTGTTTGAAGGGGGCGCCCTGCTCCCCTCAGATCAGTCAGG
AGGAAGATGACTAAGGGGAGGGATCCTCTGGGTGATGGCCTCTTCCTCCTCAGGGACCTCTGACTGCTCTGGGCC
AAAGAATCTCTTGTTTCTTCTCCGAGCCCCAGGCAGCGGTGATTCAGCCCTGCCCAACCTGATTCTGATGACTGC
GGATGCTGTGACGGACCCAAGGGGCAAATAGGGTCCCAGGGTCCAGGGAGGGGCGCCTGCTGAGCACTTCCGCCC
CTCACCCTGCCCAGCCCCTGCCATGAGCTCTGGGCTGGGTCTCCGCCTCCAGGGTTCTGCTCTTCCAGGCAGGCC
AGCAAGTGGCGCTGGGCCACACTGGCTTCTTCCTGCCCCATCCCTGGCTCTGAGTCTCTGTCTTCCTGTCCTGTG
CAGGCGCCCTTGGATCTCAGTTTCCCTCACTCAGGAACTCTGTTTCTGAAGTCTTCAGTTAAGTTTGAGTTTATG
ACTGAGTGGCCTGTACTGTCAGACGTGAATGGGCCTGACGGGCAAATCCATCCCTCTCTCCCTCACAGTTCCAGG
AGCGGCTTCCCTCGTCTCCCCTTACTCCACAGGGAGCCTCCCTTGCCAGGACCAGGGCTGCGACGGCCATGCTGG
GGCAGGTGAGTGCTCTGTTAGCTGCTCCCAGTGCTGTCCCCAGGCTGCAGTTCTGGTCCCTGGTTGTCAGGTAGG
AAGGGTGCACTTGAAGCAGGTGCTCATCTCGGTTCCTTAACGTTTATAGTCTGACCCCTCACTTAGGCTTTCCTC
TGCCACCCCGGTCCAGGGAAGAGGCTCGCTCCCGCCCATGGTCATCACTGGTCTGTCTGCTCTGTTGTCTGTTCT
TTCCCTGACTCCCTCCCACCGAAGGCCTGATGGCTACTCACCCCTCTGGGATGGCTATGGGAGAGGAGGAGTGAT
GGGGACCGCCACCTTTTCTGCAGGAAATGTGCCCAGCAGCTCTTGGTCAAAGCACTGTTGCTATAAGCTATCTCT
GGGATGCCTCTAGGCCCCCTTCCCTCTACACACCTCTGGGAAAAGATTACACTGTATTAACTCTCGAGGAGTTTC
CTCACCAATAAACAGACAACCTCAACTGCCAGTGCCCTGCAGCCTCGGGCCACAGCGGCAGCCTTGTTTGCCTTC

FIGURE 65B

CCACCTGCCTCTGCCACACCTGGTGGCTGAACATCTCTGGTCGCCCAGAGGCCATGTTGGGGCCATCCTCCAAGA
GGGATCTCTGCCCTCACCGCCTGCCACTGGGCAGGATCCCTTTCCTCTGCAGGGAGAGGTGGCTCCTCGGCCATG
CAGCCCCTGGCAGGCTCCTTCTAAACATGCCTGTTGACCTGGAGCTGGCGCCACCAACTCCAGGGCCTTTCCAGG
GCCAGACAGGTAACACGCATGAACCCGAGTGACAGCTCTGACGGGCTGTTTCGGTGTCAGGAGACAAAGCTGGCA
GGGGCAGGGGTGAACTGGAGGCAAGTCAAGTCACCTGTGGCCTGTGGGGCTGAATGTGGGCCCGGTGTTGCCAGA
TCCTTTGTCATAAGAAGCTAGAAATCCAGATTTTATGTGTGTGTAATTTGTAAATGCTGAAAGCTAGCCTGAATT
TTTTTTTTTTTTTTGAGACAGAGTCTCGCTCTGTCGCCCAGGCTGGAGTGCAGTGGCGCGATCTCAGCTCACTGC
AGGCTCCGCCTCCTGGGTTCACGCCATCCTCCTGCCTCGGCCTCCTGAGCAGCTGGGACTACAGGCGCATGCTAC
GACGCCTGGCTAATTTTTTGTATTTTTAGTAGAGACGGGGTTTCACCGTGTTAACCAGGATGGTCTCGATCTCCT
GACCTTGTGATCCACCCACCTTGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCACGCCCGGCCACTAG
CCTGAATTTCAATCAAGGGTTGGCTGATACTGTGTGTCCAGGGTGGACTGGATTTGTCCTGGGGGGTTCTCTGGT
TTGCTGCCTCCTGACCACATGATGGGGCCTTCGAGGTCGAGGACAACTGTTCCCATTAGATTGCACCCTCTGCCC
TCAGGTTCTTGAGGGTGTGTGGACACAGAGGCTTTCCATGGGATGTCCCTGAGCCGGCCCTTGATTGGGGCCTCA
CCATTTACAGGGCCGTTTTATTCTGCAAACCGAAACTTGGGTCATGTGACCTGATGGGATTATGGGACTCCCTCC
AGGTGCCCGAGACAAGGTTGATATTTCCAAAATATTTTGGTGATTTAGTGGGACAAGCAAATGACAGAATACCGG
AGAAGGCAGGGATCGTGGGTGTCAGGAGCCAGAGGGGAGGGGGACAGATGTGCTGTGTACAGGACAAGGTGTCAG
GTGACTCCTTCCCAGCAGGGCCTCGCAGATGCACAAGCACGGAGCTGGTGGGTTTTGCCCAAGAAAGGTCACGCG
GCACATGCAGGGATTGGAACTCCCAGGCCAGGGCTCTAGGTCGCTCCCACCTTTTCATGTTTCTTTCTGTGGCCA
TGGGTATAGTGGAAAGACATAAAGCTAAAGCCAACTTTTAATCCTGAATGCACTGCTTGCCAGGTAAATGCCCTT
GGTTGTGGTATCTTGTTGAGACTTAGTTTTCACAGAGGGATAATGAACCGTTGCAGAGGTTTATTGAGATCATTA
ACAGAGTGGAATTCAGCACCTGCCACTGCACTCCAGCCTGGGCGACAGAGCAAGACTCAGTCTCAAAAAAAAAAA
AAATTAGCTGGGCAGGGCATGGTGATGGTGCCTGTAATCCTAGCTACTTGGGAGGCTGAGGCATGAGAATTGCCT
GAACCCAGGAGGTGGAGGTTGCAGTGAGCCGAGATCGTGCCACTGTACTCCAGCCTGGGTGACAGCGCGAGACTC
CGTCTCAAAAAAAGCTGGGTGTGGGGAACACCTGTGGTCCCAGCTATTCTGGAGACTGAGGCAGGAGGATTGCTT
GAGCTCAGGAGTTCTGGCTGCAGTGAGCTATGATCATGCCACTGTATTACAGAATGGGTGACAGAATGAGAGCGA
CACTGTCTCAAAAAAAAAAAAAAAAAAAGGCCGGGAGCGGTCGTTTGTGCCTGTAATCCCAACACTTTGGGAGGC
CAGGGTGGGCGGATCACTTGAGGCCAGGAGTTCAAGACCAGCCTGGCCAACATGGTGAATCCCCATCTCTACTAA
AAAAATTAACTGGACATGGTGGTGGACACTTGTAATCCCAGCTACTCAGGAGGCTGACACATGAGAATTGCTTGA
ACCCGGGAGGCGGAGGTTACAGTGAGCCGAGATAGCACCACTGCACTCCAACCTGGGCACAGAGTAAGGCTCTGT
CTTT

FIGURE 66

ELGIPALLDPNDMVSMSVPDCLSIMTYVSQYYNHFCSPGQAGVSPPRKGLAPCSPPSVAPTPVESEDVAQGEELS
SGSLSEQGTGQTPSSTCAACQQHVHLVQRYLADGRLYHRHCFRCRRCSSTLLPGAYENGPEEGTFVCAEHCARLG
PGTRSGTRPGPFSQPKQQHQQQLAEDAKDVPGGGPSSSAPAGAEADGPKASPEARPQIPTKPRVPGKLQELASPP
AGRPTPAPRKASESTTPAPPTPRPRSSLQQENLVEQAGSSSLVNGRLHELPVPKPRGTPKPSEGTPAPRKDPPWI
TLVQAEPKKKPAPLPPSSSPGPPSQDSRQVENGGTEEVAQPSPTASLESKPYNPFEEEEEDKEEEAPAAPSLATS
PALGHPESTPKSLHPWYGITPTSSPKTKKRPAPRAPSASPLALHASRLSHSEPPSATPSPALSVESLSSESASQT
AGAELLEPPAVPKSSSEPAVHAPGTPGNPVSLSTNSSLASSGELVEPRVEQMPQASPGLAPRTRGSSGPQPAKPC
SGATPTPLLLVGDRSPVPSPGSSSPQLQVKSSCKENPFNRKPSPAASPATKKATKGSKPVRPPAPGHGFPLIKRK
VQADQYIPEEDIHGEMDTIERRLDALEHRGVLLEEKLRGGLNEGREDDMLVDWFKLIHEKHLLVRRESELIYVFK
QQNLEQRQADVEYELRCLLNKPEKDWTEEDRAREKVLMQELVTLIEQRNAIINCLDEDRQREEEEDKMLEAMIKK
KEFQREAEPEGKKKGKFKTMKMLKLLGNKRDAKSKSPRDKS

FIGURE 67

CTTTGTTTTGCTTCGAG**ATG**GCTGCGGGGATGTATTTGGAACATTATCTGGACAGTATTGAAAACCTTCCCTTTG
AATTACAGAGAAACTTTCAGCTCATGAGGGACCTAGACCAAAGAACAGAGGACCTGAAGGCTGAAATTGACAAGT
TGGCCACTGAGTATATGAGTAGTGCCCGCAGCCTGAGCTCCGAGGAAAAATTGGCCCTTCTCAAACAGATCCAGG
AAGCCTATGGCAAGTGCAAGGAATTTGGTGACGACAAGGTGCAGCTTGCCATGCAGACCTATGAGATGGTGGACA
AACACATTCGGCGGCTGGACACAGACCTGGCCCGTTTTGAGGCTGATCTCAAGGAGAAACAGATTGAGTCAAGTG
ACTATGACAGCTCTTCCAGCAAAGGCAAAAAGAAAGGCCGGACTCAAAAGGAGAAGAAAGCTGCTCGTGCTCGTT
CCAAAGGGAAAAACTCGGATGAAGAAGCCCCCAAGACTGCCCAGAAGAAGTTAAAGCTCGTGCGCACAAGTCCTG
AGTATGGGATGCCCTCAGTGACCTTTGGCAGTGTCCACCCCTCTGATGTGTTGGATATGCCTGTGGATCCCAACG
AACCCACCTATTGCCTTTGTCACCAGGTCTCCTATGGAGAGATGATTGGCTGTGACAACCCTGATTGTTCCATTG
AGTGGTTCCATTTTGCCTGTGTGGGGCTGACAACCAAGCCTCGGGGGAAATGGTTTTGCCCACGCTGCTCCCAAG
AACGGAAGAAGAAA**TAG**ATAAGGGCCTTGGATTCCAACACAGTTTCTTCCACATCCCCTGACTTGGGCTAGTGGG
CAGAGGAATGCCTGTGCTGGGGCCAGGGGTTCAGGGAGGAGTGGATGGCACAGTGCTGTCATCCCTTCTCCTCCC
CTCTCCCCACTCCCGGTGCTGAGGCTGCATCAGACCCTGGTAGGGAGGGGTGCCGCAGCCACTAACGGTATGTGC
TCTCCTTCAGCCCTCTCCTTCGGAGGGACGTGGTCTTGCCCACTGTCCTTTTGCCTCCATGCTGAGGTCGGTGCT
GTATTTCAGAGGGAGGGTCCTTTTCATTCTCCTTGCTTTGTATTTAAGGACTGGGGCATAGCATGGGGGCAGTCC
CCCAGACCTCTTCATTCCCCCTCCTGTGGTGAGGGCTAGGTGTGATCAACACTTTTCTTCTCCATTCCCTTCCTG
CTTTTTTCATGGTGGGGATCCACCAGGTCATCTAGCTCTGGCCCTAGTTGAAGGGCACCCCTTCCTCTGTGCCAA
GAGGATTCATCCTGGGAGAGGGGGCAAGGTGGAATGCAGATAACTCACATGTAAAAGGAACTTGGGTAGGTAAAT
AAAAGCTATACATGTTGAAAAAAAAAA

FIGURE 68

MAAGMYLEHYLDSIENLPFELQRNFQLMRDLDQRTEDLKAEIDKLATEYMSSARSLSSEEKLALLKQIQEAYGKC
KEFGDDKVQLAMQTYEMVDKHIRRLDTDLARFEADLKEKQIESSDYDSSSSKGKKKGRTQKEKKAARARSKGKNS
DEEAPKTAQKKLKLVRTSPEYGMPSVTFGSVHPSDVLDMPVDPNEPTYCLCHQVSYGEMIGCDNPDCSIEWFHFA
CVGLTTKPRGKWFCPRCSQERKKK

FIGURE 69

TACGTGAAGCACCGACACAAACTGGAGAATGGTCTGGCTGCGCTCAGTCCCTTAAGCAAGGGCTCC**ATG**GAGGCT
GGCCCTTACCTGCCCCGAGCCCTGCAGCAGCCTCTGGAACAGCTGACTCGGTATGGGCGGCTCCTGGAGGAGCTC
CTGAGGGAAGCTGGGCCTGAGCTCAGTTCTGAGTGCCGGGCCCTTGGGGCTGCTGTACAGCTGCTCCGGGAACAA
GAGGCCCGTGGCAGAGACCTGCTGGCCGTGGAGGCGGTGCGTGGCTGTGAGATAGATCTGAAGGAGCAGGGACAG
CTCTTGCATCGAGACCCCTTCACTGTCATCTGTGGCCGAAAGAAGTGCCTTCGCCATGTCTTTCTCTTCGAGCAT
CTCCTCCTGTTCAGCAAGCTCAAGGGCCCTGAAGGGGGGTCAGAGATGTTTGTTTACAAGCAGGCCTTTAAGACT
GCTGATATGGGGCTGACAGAAAACATCGGGGACAGCGGACTCTGCTTTGAGTTGTGGTTTCGGCGGCGGCGTGCA
CGAGAGGCATACACTCTGCAGGCAACCTCACCAGAGATCAAACTCAAGTGGACAAGTTCTATTGCCCAGCTGCTG
TGGAGACAGGCAGCCCACAACAAGGAGCTCCGAGTGCAGCAGATGGTGTCCATGGGCATTGGGAATAAACCCTTC
CTGGACATCAAAGCCCTTGGGGAGCGGACGCTGAGTGCCCTGCTCACTGGAAGAGCCCCAGAAACACTTGACTCT
TCTGGAGATGTGTCCCCAGGACCAAGAAACAGCCCCAGCCTGCAACCCCCCCACCCTGGGAGCAGCACTCCCACC
CTGGCCAGTCGAGGGATCTTAGGGCTATCCCGACAGAGTCATGCTCGAGCCCTGAGTGACCCCACCACGCCTCTG
TGACCTGGAGAAGATCCAGAACTTGCGTGCAGCTTCTCCTCTCAGCACACTTTGGGCTGGGATGGCAGTGGGGCA
TAATGGAGCCCTGGGCGATCGCTGAATTTCTTCCCTCTGCTTCCTGGACACAGAGGAGGTCTAACGACCAGAGTA
TTGCCCTGCCACCACTATCTCTAGTCTCCCTAGCTTGGTGCCTTCTCCTGCAGGAGTCAGAGCAGCCACATTGCT
TGCCTTCATACCCTGGAGGTGGGGAAGTTATCCCTCTTCCGGTGCTTTCCCATCCTGGGCCACTGTATCCAGGAC
ATCACTCCCATGCCAGCCCTCCCTGGCAGCCCATGTTCTCCTCTTTTCTCACCCCCTGACTTTCCCTGAGAAGAA
TCATCTCTGCCAGGTCAACTGGAGTCCCTGGTGACTCCATTCTGAGGTGTCACAAGCAATGAAGCTATGCAAACA
ATAGGAGGGTGTGACAGGGGAACCGTAGACTTTATATATGTAATTACTGTTATTATAATACTATTGTTATATTAA
ATGTATTTACTCACACTTTGCCTCT

FIGURE 70

MEAGPYLPRALQQPLEQLTRYGRLLEELLREAGPELSSECRALGAAVQLLREQEARGRDLLAVEAVRGCEIDLKE
QGQLLHRDPFTVICGRKKCLRHVFLFEHLLLFSKLKGPEGGSEMFVYKQAFKTADMGLTENIGDSGLCFELWFRR
RRAREAYTLQATSPEIKLKWTSSIAQLLWRQAAHNKELRVQQMVSMGIGNKPFLDIKALGERTLSALLTGRAPET
LDSSGDVSPGPRNSPSLQPPHPGSSTPTLASRGILGLSRQSHARALSDPTTPL

FIGURE 71

CTTTCTGCCCGACTCCCACAGCTACACC**ATG**CAGGAATTCGCCCGGCGTTACTTCCGGAGGTCCCAGGCCTTGCT
GGGCCAGACTGATGGAGGTGCCGCAGGAAAGGACACGGACAGCCTGGTGCAGTACACCAAGGCTCCCATCCAGGA
GTCGCTCCTCAGCCTCAGTGATGATGTGAGCAAGCTGGCTGTAGCCAGCTTCCTGGCCCTGATGCGGTTTATGGG
TGACCAGTCCAAGCCCCGGGGCAAGGATGAGATGGATCTGCTCTATGAACTGCTGAAGCTGTGCCAGCAGGAGAA
GCTGAGGGATGAGATTTACTGCCAGGTTATCAAGCAGGTCACGGGACACCCCCGGCCGGAACACTGCACTCGAGG
CTGGAGCTTCCTCAGCCTTCTCACAGGCTTCTTCCCCCCGTCGACCAGGCTGATGCCCTACCTGACCAAGTTTCT
GCAGGATTCAGGCCCCAGCCAAGAGCTGGCCCGGAGCAGCCAGGAGCACCTCCAGCGCACAGTCAAATATGGGGG
GCGCCGGCGGATGCCCCCACCGGGTGAAATGAAGGCTTTCCTGAAAGGACAAGCGATTCGCCTGCTTCTTATTCA
CCTGCCGGGGGGGTGTGGATTATAGGACGAATATCCAGACTTTCACAGTAGCAGCAGAAGTGCAGGAGGAGCTGTG
CCGGCAAATGGGTATCACGGAGCCTCAGGAAGTGCAGGAATTCGCCCTCTTCCTCATCAAAGAGAAGAGCCAGCT
GGTGCGGCCCCTGCAGCCCGCCGAATGCCTCAACAGCGTGGTAGTGGACCAGGACGTGAGCCTGCACAGCCGGCG
GCTCCACTGGGAGACCCCACTGCACTTCGATAACTCCACCTACATCAGCACCCACTACAGCCAGGTGCTGTGGGA
CTACCTTCAGGGGAAGCTGCCAGTCAGCGCCAAGGCAGACGCGCAGCTCGCCAGGCTGGCCGCCCTGCAGCACCT
CAGCAAGGCCAACAGGAATACCCCCTCAGGGCAGGACCTGCTAGCTTACGTGCCAAAGCAGCTGCAACGGCAGGT
GAACACGGCCTCCATCAAGAACCTGATGGGTCAGGAGCTGAGACGGCTGGAAGGACACAGCCCCCAGGAAGCACA
GATCAGCTTCATCGAGGCCATGAGCCAGCTGCCCCTCTTCGGCTACACCGTCTATGGGGTGCTGCGAGTGAGCAT
GCAGGCCCTGTCCGGACCCACTCTCCTGGGGCTCAACCGCCAGCATCTCATCCTCATGGACCCCAGCTCCCAGAG
CCTGTACTGCCGCATTGCCCTGAAGAGCCTGCAGCGGCTCCACCTGCTAAGCCCTCTGGAGGAGAAGGGGCCCCC
TGGCCTGGAAGTCAACTATGGCTCAGCTGACAACCCCCAGACCATCTGGTTTGAGCTGCCACAGGCCCAGGAGCT
GCTATACACCACTGTCTTCCTGATAGACAGCAGTGCCTCTTGCACTGAGTGGCCCAGCATCAAC**TGA**GAGGAGTG
CAGGCCGGGGAGAGAAGAGGATGAGGCCTCCCCCGGCCCAAGTCTCACCCACATGGTCTGCCTTGGATGCTATCA
GATCACTGTTCTAGAACCTGCCTCAGCACAGCCCAGCCGGCCCACATGCAGGCCATGAGGCAGGGGCTGCTATCA
CGTCACCAGCAGGCAAAGAAAACAGCCAGACCCTCTCCAGGACGGCCTGGGGCCAAAGCGGGCTGCAGGAACTCG
GCTGGGGCACCTGAGGTTGCCCAGTCTGAGGGAGATGCCCACCCGACCCCAGGCTCCGCCCAGGCCCCACATTAG
CACAAGCCCAGGCATGGGAGAAACAGCTGCTGAGGAAATAAAACTCCCTGGAGAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAA

FIGURE 72

MQEFARRYFRRSQALLGQTDGGAAGKDTDSLVQYTKAPIQESLLSLSDDVSKLAVASFLALMRFMGDQSKPRGKD
EMDLLYELLKLCQQEKLRDEIYCQVIKQVTGHPRPEHCTRGWSFLSLLTGFFPPSTRLMPYLTKFLQDSGPSQEL
ARSSQEHLQRTVKYGGRRRMPPPGEMKAFLKGQAIRLLLIHLPGGVDYRTNIQTFTVAAEVQEELCRQMGITEPQ
EVQEFALFLIKEKSQLVRPLQPAECLNSVVVDQDVSLHSRRLHWETPLHFDNSTYISTHYSQVLWDYLQGKLPVS
AKADAQLARLAALQHLSKANRNTPSGQDLLAYVPKQLQRQVNTASIKNLMGQELRRLEGHSPQEAQISFIEAMSQ
LPLFGYTVYGVLRVSMQALSGPTLLGLNRQHLILMDPSSQSLYCRIALKSLQRLHLLSPLEEKGPPGLEVNYGSA
DNPQTIWFELPQAQELLYTTVFLIDSSASCTEWPSIN

FIGURE 73

CAGGTCCCCCAGACCATCCGAACCAGCCGCCCATGATGACCTGCGAGAGACTCCCATGCCCCACTGCAGGCCTGG
GCCCCCTCAGGGAGGAAGCGATGAAGCCAGGGGCAGCCTCCAGTCCCTTGCAGCAGGTCCCCGCCCCGCCACTGC
CTGCGAAGAAGAACCTTCCCACTGCCCCTCCCAGACGCCGCGTTTCCGAGAGGGTGTCCTTAGAAGACCAAAGTC
CGGGGATGGCGGCAGAGGGGGACCAGCTCAGCCTGCCTCCCCAAGGGACCTCAGACGGCCCTGAGGACACGCCCC
GGGAGAGCACGGAGCAAGGCCAGGACACAGAGGTGAAAGCCAGCGATCCTCACAGCATGCCAGAGCTGCCCAGGA
CAGCCAAACAACCCCCAGTCCCGCCCCCCAGGAAAAAACGGATCTCTCGACAACTGGCCTCGACCCTCCCAGCTC
CCTTAGAGAACGCTGAGCTCTGCACACAGGCG**ATG**GCCTTGGAGACACCCACGCCGGGTCCACCCAGAGAGGGCC
AAAGCCCTGCTTCTCAGGCTGGGACTCAGCACCCTCCTGCCCAGGCCACTGCCCATTCCCAGAGCTCTCCAGAGT
TCAAGGGCTCCCTGGCCTCCCTCTCAGACAGCTTGGGGGTGTCTGTCATGGCCACCGACCAGGACTCCTACTCCA
CCAGCAGCACGGAGGAGGAGCTGGAGCAGTTCAGCAGCCCCAGCGTGAAGAAGAAGCCCTCCATGATCCTGGGCA
AGGCTCGGCACCGGCTGAGCTTTGCCAGTTTCAGCAGCATGTTCCACGCTTTCCTCTCCAACAACCGCAAGCTGT
ACAAGAAGGTGGTGGAGCTGGCGCAGGACAAGGGCTCGTACTTTGGCAGCCTGGTGCAGGACTACAAGGTGTACA
GCCTGGAGATGATGGCGCGCCAGACCTCCAGCACGGAGATGCTGCAGGAGATTCGCACCATGATGACCCAGCTCA
AGAGCTACCTGCTGCAGAGCACCGAGCTCAAGGCCCTGGTGGACCCCGCCCTGCACTCCGAGGAGGAGCTCGAAG
CAATTGTAGAGTCTGCCTTGTACAAATGTGTCCTGAAGCCCCTGAAGGAAGCCATCAACTCATGCCTGCATCAGA
TCCACAGCAAGGATGGTTCGCTGCAGCAGCTCAAGGAGAACCAGTTAGTGATCCTGGCCACCACCACCACTGACC
TAGGTGTGACCACCAGCGTGCCGGAGGTGCCCATGATGGAGAAGTTCCTGCAGAAGTTCACCAGCATGCACAAGG
CCTACTCACCTGAGAAGAAGATCTCCATCCTGCTCAAGACCTGCAAACTCATCTACGACTCCATGGCCCTCGGCA
ACCCAGGGAAGCCCTATGGGGCGGATGACTTCCTGCCTGTGCTCATGTATGTGCTGGCCCGCAGCAACCTCACGG
AGATGCTTCTCAATGTGGAGTACATGATGGAGCTCATGGACCCCGCCCTGCAGCTGGGGGAGGGTTCCTACTATC
TGACCACCACCTACGGGGCCCTGGAGCACATCAAGAGCTACGACAAGATCACGGTGACCCGGCAGCTGAGTGTGG
AGGTGCAGGACTCCATCCACCGCTGGGAGCGCCGGCGTACTCTCAACAAGGCCCGGGCCTCCCGCTCCTCCGTAC
AGGACTTCATCTGCGTGTCGTACCTGGAGCCCGAGCAGCAGGCGCGGACGCTGGCGTCGCGGGCGGACACCCAGG
CCCAGGCGCTGTGCGCGCAGTGCGCGGAGAAGTTCGCGGTGGAGCGGCCGCAGGCGCACCGGCTGTTCGTGCTGG
TGGACGGGCGCTGCTTCCAGCTGGCGGACGACGCGCTGCCGCACTGCATCAAGGGCTACCTGCTGCGCAGCGAGC
CCAAGCGCGACTTCCACTTTGTCTACCGGCCCCTGGACGGTGGTGGCGGCGGCGGCGGGAGCCCGCCCTGCCTGG
TGGTGCGGGAGCCCAACTTCCTG**TGA**GGCCCTCCCGGGGCGCCTCCCCTCACCCCCAGGCGCACGTCTGGCCCCG
CCTCTGGCTGCGCACTCCCGACCGCGACGTCCACGCAGCAGAGGGACATGGGCCATTCCATGACGTGCCCAGGCC
AACGTCGCAGGACAGTTGTGAAAATAACATGACGCTCGTCCAAGGCCACTTCCTGAGGGCAAGTCCTAATAGCCC
TGAGACACCGAGACGGCATGTTCTTCATTAGACGGAAAGGGAAACTGAGGCTCAGGAGAGAGGCGCTCCAGGCCG
CTGCAGCCAACAAACCGGCGCCCTCTTCACACGTAGCTCCTCAGGCCATTCCCCATGAGTCCCCCACACCCACCC
CATCCTCGGTCTTTGCAAAGAAGGGCCCGAGCTTAGTTTCCCCAGGACTGGCCTAGGAAGGAGCACCGGCCACAG
CTGCTCCCCGTGCCACTCAGGGTGGACCCAGCATCTCAGGAGCACCTCAGGGTGTCGGTTAAGAGACAGGCCTCC
ACCCCTGCACCAGAGCCTGCTCTTAGCTCCCGGTGCCCCCAGACCCCGCAGCTCTGTGCCCGGCAAGAAGCAGCT
AGACACACGCCAGGGCGCCAAGCACGGCCAGCTCCGCGGACCCATGGACAAGCCCAGCCCCGCCTCAGGGAAAAC
AGGGCCTTTCCCTACAGGACACGCCCCAGAGCTGTGGCAGATTGCAGGAGCCATCGTGTGGGGAGAATTTAATAA
AAGCCCTTTTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAA

FIGURE 74

MALETPTPGPPREGQSPASQAGTQHPPAQATAHSQSSPEFKGSLASLSDSLGVSVMATDQDSYSTSSTEEELEQF
SSPSVKKKPSMILGKARHRLSFASFSSMFHAFLSNNRKLYKKVVELAQDKGSYFGSLVQDYKVYSLEMMARQTSS
TEMLQEIRTMMTQLKSYLLQSTELKALVDPALHSEEELEAIVESALYKCVLKPLKEAINSCLHQIHSKDGSLQQL
KENQLVILATTTTDLGVTTSVPEVPMMEKFLQKFTSMHKAYSPEKKISILLKTCKLIYDSMALGNPGKPYGADDF
LPVLMYVLARSNLTEMLLNVEYMMELMDPALQLGEGSYYLTTTYGALEHIKSYDKITVTRQLSVEVQDSIHRWER
RRTLNKARASRSSVQDFICVSYLEPEQQARTLASRADTQAQALCAQCAEKFAVERPQAHRLFVLVDGRCFQLADD
ALPHCIKGYLLRSEPKRDFHFVYRPLDGGGGGGGSPPCLVVREPNFL

FIGURE 75

ACGAGGGACGCAGCC**ATG**GCGGAGGCGGCTTTGGAAGCCGTGCGGAGCGAGTTACGAGAATTCCCGGCCGCTGCA
AGGGAGCTCTGCGTGCCTCTTGCTGTGCCCTACCTGGACAAACCCCCAACTCCGCTCCACTTCTACCGGGACTGG
GTCTGCCCCAACAGGCCGTGCATTATCCGCAACGCTCTGCAGCACTGGCCGGCCCTCCAGAAGTGGTCCCTCCCC
TATTTCAGAGCCACAGTGGGCTCCACAGAGGTGAGTGTGGCCGTGACCCCAGATGGTTACGCGGATGCCGTGAGA
GGGGATCGCTTCATGATGCCAGCTGAGCGCCGCCTGCCCCTGAGCTTCGTGCTGGATGTGCTGGAGGGCCGGGCC
CAGCACCCTGGAGTCCTCTATGTGCAGAAGCAGTGCTCCAACCTGCCCAGCGAGCTGCCCCAGCTGCTGCCTGAT
CTGGAATCCCATGTGCCCTGGGCCTCCGAAGCCCTGGGAAAGATGCCCGATGCTGTGAACTTCTGGCTGGGGGAG
GCGGCTGCAGTGACTTCTTTGCACAAGGACCACTATGAGAACCTCTACTGCGTGGTCTCAGGAGAGAAGCATTTC
CTGTTCCATCCGCCCAGCGACCGGCCCTTCATCCCCTATGAGCTGTACACGCCGGCAACCTACCAGCTAACTGAA
GAGGGCACCTTTAAGGTGGTGGATGAAGAGGCCATGGAGAAGGCAGAGGTGTCCAGGACCTGCCTGCTCACGGTT
CGTGTCCTGCAGGCCCATCGCCTACCCTCTAAGGACCTAGTGACCCCCTCTGACTGCTACGTGACTCTCTGGCTG
CCCACGGCCTGCAGCCACAGGCTCCAGACACGCACGGTCAAGAACAGCAGTAGCCCTGTCTGGAACCAGAGCTTT
CACTTCAGGATCCACAGGCAGCTCAAGAATGTCATGGAACTGAAAGTCTTTGACCAGGACCTGGTGACCGGAGAT
GACCCTGTGTTGTCAGTACTGTTTGATGCGGGGACTCTGCGGGCTGGGGAGTTCCGGCGCGAGAGCTTCTCACTG
AGCCCTCAGGGTGAGGGGCGCCTGGAAGTTGAATTTCGCCTGCAGAGTCTGGCTGACCGTGGCGAGTGGCTCGTC
AGCAATGGCGTTCTGGTGGCCCGGGAGCTCTCCTGCTTGCACGTTCAACTGGAGGAGACAGGAGACCAGAAGTCC
TCAGAGCACAGAGTTCAGCTTGTGGTTCCTGGGTCCTGTGAGGGTCCGCAGGAGGCCTCTGTGGGCACTGGCACC
TTCCGCTTCCACTGCCCAGCCTGCTGGGAGCAGGAGCTGAGTATTCGCCTGCAGGATGCCCCCGAGGAGCAACTA
AAGGCGCCACTGAGTGCCCTGCCCTCTGGTCAAGTGGTGAGGCTTGTCTTCCCCACGTCCCAGGAGCCCCTGATG
AGAGTGGAGCTGAAAAAAGAAGCAGGACTGAGGGAGCTGGCCGTGCGACTGGGCTTCGGGCCCTGTGCAGAGGAG
CAGGCCTTCCTGAGCAGGAGGAAGCAGGTGGTGGCCGCGGCCTTGAGGCAGGCCCTGCAGCTGGATGGAGACCTG
CAGGAGGATGAGATCCCAGTGGTAGCTATTATGGCCACTGGTGGTGGGATCCGGGCAATGACTTCCCTGTATGGG
CAGCTGGCTGGCCTGAAGGAGCTGGGCCTCTTGGATTGCGTCTCCTACATCACCGGGGCCTCGGGCTCCACCTGG
GCCTTGGCCAACCTTTATGAGGACCCAGAGTGGTCTCAGAAGGACCTGGCAGGGCCCACTGAGTTGCTGAAGACC
CAGGTGACCAAGAACAAGCTGGGTGTGCTGGCCCCCAGCCAGCTGCAGCGGTACCGGCAGGAGCTGGCCGAGCGT
GCCCGCTTGGGCTACCCAAGCTGCTTCACCAACCTGTGGGCCCTCATCAACGAGGCGCTGCTGCATGATGAGCCC
CATGATCACAAGCTCTCAGATCAACGGGAGGCCCTGAGTCATGGCCAGAACCCTCTGCCCATCTACTGTGCCCTC
AACACCAAAGGGCAGAGCCTGACCACTTTTGAATTTGGGGAGTGGTGCGAGTTCTCTCCCTACGAGGTCGGCTTC
CCCAAGTACGGGGCCTTCATCCCCTCTGAGCTCTTTGGCTCCGAGTTCTTTATGGGGCAGCTGATGAAGAGGCTT
CCTGAGTCCCGCATCTGCTTCTTAGAAGGTATCTGGAGCAACCTGTATGCAGCCAACCTCCAGGACAGCTTATAC
TGGGCCTCAGAGCCCAGCCAGTTCTGGGACCGCTGGGTCAGGAACCAGGCCAACCTGGACAAGGAGCAGGTCCCC
CTTCTGAAGATAGAAGAACCACCCTCAACAGCCGGCAGRATAGCTGAGTTTTTCACCGATCTTCTGACGTGGCGT
CCACTGGCCCAGGCCACACATAATTTCCTGCGTGGCCTCCATTTCCACAAAGACTACTTTCAGCATCCTCACTTC
TCCACATGGAAAGCTACCACTCTGGATGGGCTCCCCAACCAGCTGACACCCTCGGAGCCCCACCTGTGCCTGCTG
GATGTTGGCTACCTCATCAATACCAGCTGCCTGCCCCTCCTGCAGCCCACTCGGGACGTGGACCTCATCCTGTCA
TTGGACTACAACCTCCACGGAGCCTTCCAGCAGTTGCAGCTCCTGGGCCGGTTCTGCCAGGAGCAGGGGATCCCG
TTCCCACCCATCTCGCCCAGCCCCGAAGAGCAGCTCCAGCCTCGGGAGTGCCACACCTTCTCCGACCCCACCTGC
CCCGGAGCCCCTGCGGTGCTGCACTTTCCTCTGGTCAGCGACTCCTTCCGGGAGTACTCGGCCCCTGGGGTCCGG
CGGACACCCGAGGAGGCGGCAGCTGGGGAGGTGAACCTGTCTTCATCGGACTCTCCCTACCACTACACGAAGGTG
ACCTACAGCCAGGAGGACGTGGACAAGCTGCTGCACCTGACACATTACAATGTCTGCAACAACCAGGAGCAGCTG
CTGGAGGCTCTGCGCCAGGCAGTGCAGCGGAGGCGGCAGCGCAGGCCCCAC**TGA**TGGCCGGGGCCCCTGCCACCC
CTAACTCTCATTCATTCCCTGGCTGCTGAGTTGCAGGTGGGAACTGTCATCACGCAGTGCTTCAGAGCCTCGGGC
TCAGGTGGCACKGTCCCAGGGTCCAGGCTGAGGGCTGGGAGCTCCCTTGCGCCTCAGCAGTTTGCAGTGGGGTAA
GGAGGCCAAGCCCATTTGTGTAATCACCCAAAACCCCCCGGCCTGTGCCTGTTTTCCCTTCTGCGCTACCTTGAG
TAGTTGGAGCACTTGATACATCACAGACTCATACAAAAAAAAAAAAAAAAAA

FIGURE 76

MAEAALEAVRSELREFPAAARELCVPLAVPYLDKPPTPLHFYRDWVCPNRPCIIRNALQHWPALQKWSLPYFRAT
VGSTEVSVAVTPDGYADAVRGDRFMMPAERRLPLSFVLDVLEGRAQHPGVLYVQKQCSNLPSELPQLLPDLESHV
PWASEALGKMPDAVNFWLGEAAAVTSLHKDHYENLYCVVSGEKHFLFHPPSDRPFIPYELYTPATYQLTEEGTFK
VVDEEAMEKAEVSRTCLLTVRVLQAHRLPSKDLVTPSDCYVTLWLPTACSHRLQTRTVKNSSSPVWNQSFHFRIH
RQLKNVMELKVFDQDLVTGDDPVLSVLFDAGTLRAGEFRRESFSLSPQGEGRLEVEFRLQSLADRGEWLVSNGVL
VARELSCLHVQLEETGDQKSSEHRVQLVVPGSCEGPQEASVGTGTFRFHCPACWEQELSIRLQDAPEEQLKAPLS
ALPSGQVVRLVFPTSQEPLMRVELKKEAGLRELAVRLGFGPCAEEQAFLSRRKQVVAAALRQALQLDGDLQEDEI
PVVAIMATGGGIRAMTSLYGQLAGLKELGLLDCVSYITGASGSTWALANLYEDPEWSQKDLAGPTELLKTQVTKN
KLGVLAPSQLQRYRQELAERARLGYPSCFTNLWALINEALLHDEPHDHKLSDQREALSHGQNPLPIYCALNTKGQ
SLTTFEFGEWCEFSPYEVGFPKYGAFIPSELFGSEFFMGQLMKRLPESRICFLEGIWSNLYAANLQDSLYWASEP
SQFWDRWVRNQANLDKEQVPLLKIEEPPSTAGRIAEFFTDLLTWRPLAQATHNFLRGLHFHKDYFQHPHFSTWKA
TTLDGLPNQLTPSEPHLCLLDVGYLINTSCLPLLQPTRDVDLILSLDYNLHGAFQQLQLLGRFCQEQGIPFPPIS
PSPEEQLQPRECHTFSDPTCPGAPAVLHFPLVSDSFREYSAPGVRRTPEEAAAGEVNLSSSDSPYHYTKVTYSQE
DVDKLLHLTHYNVCNNQEQLLEALRQAVQRRRQRRPH

FIGURE 77A

CCAGACAGCCTTGTATGGGAAGATGGGAAGGGTGAGGTCGCCACATCCTTATGGGCACCGGAAGTTCATCACTAT
GTCTGATGGAGCCACTTCTACATTCGACCTCTTCGAGCCCTTGGCTGAGCACTGTGTTGGAGATGATATCACCAT
GGTCATCTGCCCTGGAATTGCCACACAATTCAAAAGTTGGATC**TGA**GTTTGGAGAAAGATATTTCCAACCTAAGT
GGGTACTATTTTGAAACCAGATTTTTAATTTAATAGCCTATATTTGTAGTCTGTTGGATAGGTGTTTCCAAAGTG
TGTCTTCTCAAGTGAAAACGCAACTCTAGGTTTCAAGTACTCCTTTTCTCCGATCCTGTGGTACTTGAATATCCA
AAAACCCTGCACTTTGAACAATCAGCTGTTGCTATCTGGAACTAAACAGAACTATGAGTAAAATTGCCTGGATAC
TTTAAAAAGATATTTTTCCTCCTTCATCTCCTTTGACTCCAGGACAGACTGGAATATAAGTAGTGGGTCTGCATG
GATGTTTCAGGGATCAAAGGAGCCACCTGGGCGCCTGAGTGCCAACCCTCAGGGCCACAGGTGGGTGTGGTTTGG
GCACGGGTCCAAGTGACTGTGACGGGACCCCTGGGCATGGGGCCAGGTCTGTAACCTGAAGAAGTTGTTTTCTGA
CAATCACCAAATCATCCGAATGACATCAAAAGCAGCCCTTATCTCAGAGACCGAGATTTCTGTGGTCTCAACTTC
GCTTTGGTATAATTTCTGGCACTCACCAGCCTCTATCATTATGACTTTCCCCCCAGTGTATTATTTCTCTAATAG
GTTTCCTTTTCACGTTCTTTTAGCACAGACTGGCACTTTACCCTCTCAATTTGGAAGTTAGCCCCTCTCCTCTGT
TACTTTTCCCTTCACCCAACTACAGCTGTGATCTAGAACATTCATAGTCATATTTCTGCTACTACTACCTTCATT
TATCAAGACTTTTTATGAGAATAGGTAAACCAAGCAATAACTTCCTAGGACTGAATCACCACCCCAGAAGAGCGA
GAGGCTCCTTTCATATGCCTGAGGCCACACCCCTTAACCTGTTCTGACAAAATAGTGGCTGGCCCATGTACCAGC
TCCATTCAGAAATTCAGGAAGAGAAAAGACAGCCCTGTTGTCACACAAACCGGTGTGGGGGAGGGTGGAGCCTGG
TCTGCACGGCAGTCCTGGTGGCCCCTGTGGAGGACAGGCAGGGCTGGCAGCATAGCCTTTGTTGCCACACAACCG
GAATTTGCTCCCCCAGGACTGTGGGAGCCAGTGTCCCAGCTGAAATCTTTTTAGTGTGTGGCTCTGAATGGCACT
CACATTCCATTTTGGCTCACATGAAACTAACTGAAGCCCTTTGTTCAAGCTTCAGGCTCTTAGGCATGGAAATGA
GAATGTGACTGTGGCTGTCTTACAGGAAAATTCTTGTTTGTCCCTGAATGAGAGCACAGAGGCATTGAATTCACA
GAGCTGCAAACTTGCCTGATAAATGAGGGAGTGGCAGTTTATAGATAGGTCATCTTTTTTCCTTCCTCCAGGTGT
CCTTGCCTTTCTTCCCAAAGTCATTCATTTCTGATGAGTATATGAATCCCCCTCTTGCTAGTAAGGTTCTATTTG
GGCTAAAACAAGGCTGAATTTTTAAAGAGTATTTGAATATATTTTAGAATCAAATTGAGGCTATAAATTGCATCA
ATCTGGACAATTCCATTGCAGGAATAATATGTTAAAAACCAATGGGGAGAAGCACCCACATCTCTCCTGTAGCAC
TCCGTGTCTCATAAGCAATTTGAAGACACTTACAAGTAACTGATTCCAGTCAAATTAGGATTAACTGACTCAAAA
AATGGTGTCAAGTTTCTTTAATGTTTTTATGTTAGAAGTGAGTTTAACAGACTTGAAGAAAACTGTTATCTTTTC
CTGCTGTGAGTTTACACAAATGATTCCAGAGCAGAATGAAAGCAGAAAGCTGTTGGTTACAATATTCTTTTAACC
TCTCTGCAGCATTTTACACTTACTGGGAACCTTATGATTCACCGTAAGAGTGGAAATATACCTGAGTTCGTGTCC
TAATGGTCTCTAATTCACATTGGATCGTGGGCAAATCACCTCACCTCTCTGAGCCTGTTCCCTCCTCTTAGACCA
TCTCTAAGACCACTTCATCTATTTACACATCATTTGCTTGAACATTGCTGAACATCTGCGTGAACTTGGCCTCTC
CAGCCCTTGCAGGTGGAAACAGCTGTGTCAAGGCTCAAGGCTCACGCTGAGGGGACTTGGAGGGAGGGGGCTTCT
GCATTAAGCTTTCCTGGTGAAGACCCTTGATCTTGTCCAAAGCCCTGTGTCTTTGACTGGCTTCTCTTCAGAGTC
CCCGTTGTCATCGTAAGACCCTTGCTGTTTGGAGGGTGGTCTTGTGACTGTGGCAGCTGCTGGCCGCTGGAATGA
GGAGCCTATCTCCATCCTCCAGTGTGACTCAGGCAGAGCATTGAGAATTCCCAGGGCAGAAATCCTTCCTGCTCA
GGCTTTCATTCTAAAACTACAGTCTTCATTAAAGCTGAACTTTCTGGGTAGCTGAGCTTATATGCCCGGCATCTG
AATGAGAGCTCTCTTTGTAACTGTGTGACTTGAGATCTAGTTTGCCAGCTCCTGGGAAACAATACATGTGTTCTT
GTTTGTGTTTGCTCAGCAAGCAGATGTCTGAGATGTAAGAAGCTTTTCTTTTCCTGTGGCATTGATTCTGACTTA
GAGCTGAAGTAAAGATCACTGAAACATCACGTCAAGTTGAAGTCACTCATAGGTCTTTGTCCTTTAGGCAGGACA
GGAGAGTCATTAAGAAGCATTTCACTGTAGCATTCTATCACAATATCATCTGGAATTGTTTTCTTTGCCCAGAAA
GCCTTAACTTGCCTCTAGAGAATCCCTGGTATTACAACGATATTGCGGCATTAGAATTCCAACTCTTCTGCTGTG
GAAGTTTGAAGCGAAGCTGCAGCAAAACCAGAGAATTTCCTCAAGTGGCCTGTAGGCTCCTTGTTATCTTATGCC
CCCACCCCTCCCTCAACAATATGAGTGATCCAGAACTGGCCCAAACACCTCAGCTCTGGTCCCTTTTTGCCCTTC
TTGGCCTTACTCTGTTGTTCAAAGCCACTTTGGATTGCTTGGATGCTTCGAACAGCCATGAAAAGTAGCCTGCCT
GTGGCATTTAGAGGCCAAGCAATTGACAGAAAGGGTTTCTTCTACCTCTGTTATCTAAGCAGAGGGAAGTAAACT
TCTCACCGCCCCCCACCCCTCACTGCCCCCGATTACACTAGAATTGCTTTCGCCAAATTGTAGTTGAAGCTAAGG
AAGGGGAATCTGGCCCCTGCTGGGAGAGGGAACTGGAATGCCACACAAGGCAAGGCCTGCTTCCTTCCTTCCCCT
CTGCTGCTGCTGCCTCGGAACGCTGCAGCCCAGGCTTCCTCCCACAGTGGCCCTTGGAAGCAGGCCGCAGAGTAG
ACAGCTGCTCCTTTTGGAAGAGTCAGTCCCCTGTGTTTTCTGAACTGTTTTTCCTAGCATGTATGTGGGTAGAGC

FIGURE 77B

TTTCATGCATCTCTAGTAATAATAAGCTGAAATTAGTTTTTTTTTTAATTCTCCAATTTAAAACTTTTAATTAAA
AAGTAAATTTTAATGTCGAAAATGCAAACTTGGGGAGGGCAGAAAGATCACACACAAGGCTGTCACTTCATACTT
GCAGGATTGCACAGCAGCCGGGCAGAGGCGCTCCTCACTTCCCAGATGGGGCGGCGGGCAGCAGAGACGCACCTC
ACTTCCTAGACAGTGCGGCACCAGGCACAGGCACACCTCACTTCCCAGACAGTTGGGCGGCCCAGGCAAGCGCTC
CTCACTTCCCCAGATGGGGCGGCTCCCGGGAAGCGGGGCTCCCTCACTTCCCAGACAGGGTGGCCAGGCAGAGGT
GCTCCTCACTTCCCAGAACAATTCTTTATGAATTTGATAAAGGACTGAAGTGCAACTGAAAGCTGCTAGTGATGA
TCTGGTAATATACAATTTGTCCAGTAGCCAGTTTGTTTTTATTGTGTTTTCTAACCATAAGAGATCATTAAAGGC
AAAGCCTGTATGACGCTGTACACACACAAAAAAATGGTCACCGCAGGCCATACTACCAATGAAATGGTAGGTAAA
CAAATCTTCTGGTCAAGAGAAAAAAAAAAGAAATAGCACTCTGCATGCTTTGCTCTACAAGATGAATTTCCCTAG
AAAGAATCCAATGAAGGCCGGGCATAGTGGCTCACT

FIGURE 78

QTALYGKMGRVRSPHPYGHRKFITMSDGATSTFDLFEPLAEHCVGDDITMVICPGIATQFKSWI

FIGURE 79

GAGATGCCTGAACCCAGCCTTGGGGAATCTCACAGCCCTCACCTACCTCAACCTCAGCCGAAACCAGCTGTCGCT
GCTGCCACCCTACATCTGCCAGCTGCCCCTGAGGGTCCTCATCGTCAGCAACAACAAGCTGGGAGCCCTGCCCCC
TGACATCGGCACCCTGGGAAGCCTGCGACAGCTTGACGTGAGCAGCAACGAGCTCCAATCCCTGCCCTCGGAACT
GTGTGGCCTCTCTTCCCTGCGGGACCTCAATGTCCGGAGGAACCAGCTCAGTACGCTGCCCGAAGAGCTGGGGGA
CCTCCCTCTGGTCCGCCTGGATTTCTCCTGTAACCGCGTCTCCCGAATCCCAGTCTCCTTCTGCCGCCTGAGGCA
CCTGCAGGTCATTCTGCTGGACAGCAACCCTCTGCAGAGTCCACCTGCCCAGGTCTGCCTGAAGGGGAAACTTCA
CATCTTCAAGTATTTGTCCACAGAGGCCGGGCAGCGTGGGTCGGCCCTGGGGGACCTGGCCCCTTCTCGGCCCCC
GAGTTTCAGTCCCTGCCCTGCAGAGGATCTATTTCCGGGACATCGGTACGATGGTGGGCTGGACTCAGGCTTCCA
CAGCGTTGATAGTGGCAGCAAGAGGTGGTCTGGAAATGAGTCAACAGATGAATTTTCAGAGCTGTCATTCCGGAT
CTCAGAGCTGGCCCGGGAGCCCCGGGGGCCCAGAGAACGCAAGGAGGATGGCTCAGCGGACGGAGACCCTGTGCA
GATTGACTTCATCGACAGCCATGTCCCCGGGGAGGATGAAGAGCGAGGCACTGTGGAGGAGCAGCGACCACCCGA
ATTAAGCCCTGGGGCAGGGGACAGGGAGAGGGCACCAAGCAGCAGGCGGGAGGAGCCGGCAGGGGAGGAGCGGCG
GCGCCCGGACACCTTGCAGCTGTGGCAGGAGCGGGAACGGCGGCAGCAGCAGCAGAGCGGGGCGTGGGGGGCCCC
GAGGAAGGATAGCCTCTTGAAGCCAGGGCTCAGGGCTGTTGTGGGAGGGGCCGCCGCCGTGTCCACTCAAGCCAT
GCACAACGGCTCGCCTAAGTCCAGTGCCTCCCAAGCAGGGGCTGCAGCGGGGCAGGGAGCCCCCGCCCCTGCCCC
TGCCTCCCAAGAGCCCCTTCCCATAGCTGGACCAGCGACAGCACCTGCTCCACGGCCACTTGGCTCCATTCAGAG
ACCAAACAGCTTCCTCTTCCGTTCCTCCTCTCAGAGTGGCTCAGGCCCTTCCTCACCAGACTCTGTCCTGAGACC
TCGGCGGTACCCCCAGGTTCCAGATGAGAAGGACTTAATGACTCAGCTGCGCCAGGTCCTTGAGTCCCGGCTGCA
GCGGCCCCTGCCTGAGGACCTGGCCGAGGCTCTGGCCAGTGGGGTCATCCTGTGCCAGCTGGCCAACCAGCTACG
GCCGCGCTCCGTGCCCTTCATCCATGTGCCCTCCCCTGCTGTGCCAAAACTCAGTGCCCTCAAGGCTCGGAAGAA
TGTGGAGAGTTTTCTAGAAGCCTGTCGAAAAATGGGGGTGCCTGAGGCTGACCTGTGCTCGCCCTCGGATCTCCT
CCAGGGCACTGCCCGGGGGCTGCGGACCGCGCTGGAGGCCATGAAGCGGGTGGGGGGCAAGGCCCTACCGCCCCT
CTGGCCCCCCTCTGGTCTGGGCGGCTTCGTCGTCTTCTACGTGGTCCTCATGCTGCTGCTCTATGTCACCTACAC
TCGGCTCCTGGGTTCCTAGGCCCCAAAATCGGCCCTCCCTCACCCCTTTCCCTTCCTCTCTATTTATAAGGTCCC
TGCTCCACCCGACCCCACCTGCGGTGCCTTCAGCCCCAACCAAAGACACTAGTGCACCCCCTTCACAGACACTGA
CCTCAGAGGCCCCACTCTGGTGCCCCCAGACCCTGGGCCCCCAGCCTCTGGCCTCCCTCCAGTAGCCCCACGAGT
CCCCACCTCTCAGTGCTGACGGTGCCTTCATGTCCCCGCCGGCCCTGCCCCTGCCCTCTGTACCCCGTGAGGGGT
GGCAGGAGCTGGAGTCTCCCCCTTCCTCCTGTGCCCTCCCCTTCCCCCCCCAACAGCTGCTATGGGGGGGCTAAA
TTATCTCTATTTTGTAGAGAGGATCTATATTTGTAGGGGTTCGGGGCCCAGGCCGGGTCCCTATCTCTGTGTATA
AACTGTACAGACCGTGGCCGCCCTGCCTGTGTGTGTGTGTGTGCGCGCGCGCGCGCGTCTGCTCCGCGTGTTGGT
GGCTGTGGCCATGGCTCTGTGCCCACCAGCATCTCCCTCCTGAGATGCCGGCCTCTCATGCTCCCGGAGCGTCCG
CCAACCCCCCGTGTCACCTCCCTTCTGTTATCGCTGACAGCTTTCTTGCGTCTCATTTGTCGCCGAGCCCCGAGC
GCACGGTGATGCTCGGGTCTGCCCCCGACCCCCTGCCACAGGCCGGAAGCCGCAGGGGGCACCGTGGGGAAGCTA
ACCCGGCCCCTTCCCCCAGGAGTCACTGTGCCAGCCCCACCACATCCTGGAAGAGGAGGGGGCCCCGGGAAGGGG
CCTCCCCTACATCGCTGCTGTCGTCCACGCCCTGCTGGACCGGCCTTAGGGGTGAAGGTGGGGGCACAGGGCCCA
CCCCGCCCGGGACCCCGGGAGCAGAAGACGCGCCTGGGCTCCGCGCTCTCAGAGAAGCACGTGGTGAGGGTGGCC
TGGGCCTGGGCACCCTTGGCCTGCCGGCCTGGCTGCCTCTGGGGTCGAGGGTCTGGGTGGAAGGACCGCGGGTGT
CGCAGGTGTCGTGTCAGCCGCAATAAACAGAAGCCAGAAGCCCTCTGGGTGGCCCTCAGAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 80A

CTGCCCACCATCTTTGTCCCTGGCAAAGTGGGTTTTGCGCAGTGGCTTAGACCTAGAAAAGAATCGTGACGGGCA
GGAAACCATTACACCACCACCTGGGCTGTGCTCTCCGGCTCCCGCCGCCACCCCCGCCCTCGCCTTCGCCTCCGC
TCCGGTGCACATTAAAGATCCAAAGTC**ATG**ACTGACTCCAAGTATTTCACAACCAATAAAAAAGGAGAAATATTT
GAACTAAAAGCTGAACTCAACAATGAAAAGAAAGAAAAGAGAAAGGAGGCTGTGAAGAAAGTGATTGCTGCTATG
ACCGTGGGGAAGGATGTTAGTTCTCTCTTTCCAGACGTAGTGAACTGTATGCAGACTGACAATCTGGAACTAAAG
AAGCTTGTGTATCTCTACTTGATGAACTACGCCAAGAGTCAGCCAGACATGGCCATCATGGCTGTAAACAGCTTT
GTGAAGGACTGTGAAGATCCTAATCCTTTGATTCGAGCCTTGGCAGTCAGAACCATGGGGTGCATCCGGGTAGAC
AAAATTACAGAATATCTCTGTGAGCCGCTCCGCAAGTGCTTGAAGGATGAGGATCCCTATGTTCGGAAAACAGCA
GCAGTCTGCGTGGCAAAACTCCATGATATCAATGCCCAAATGGTGGAAGATCAGGGATTTCTGGATTCTCTACGG
GATCTCATAGCAGATTCAAATCCAATGGTGGTGGCTAATGCCGTAGCGGCATTATCTGAAATCAGTGAGTCTCAC
CCAAACAGCAACTTACTTGATCTGAACCCACAGAACATTAATAAGCTGCTGACAGCCCTGAATGAATGCACTGAA
TGGGGCCAGATTTTCATCCTGGACTGCCTGTCTAATTACAACCCTAAAGATGATCGGGAGGCTCAGAGCATCTGT
GAGCGGGTAACTCCCCGGCTATCCCATGCCAACTCAGCAGTGGTGCTTTCAGCGGTAAAAGTCCTAATGAAGTTT
CTAGAATTGTTACCTAAGGATTCTGACTACTACAATATGCTGCTGAAGAAGTTAGCCCCTCCACTTGTCACTTTG
CTGTCTGGGGAGCCAGAAGTGCAGTATGTCGCCCTGAGGAACATCAACTTAATTGTCCAGAAAAGGCCTGAAATC
TTGAAGCAGGAAATCAAAGTCTTCTTTGTGAAGTACAATGATCCCATCTATGTTAAACTAGAGAAGTTGGACATC
ATGATTCGTTTGGCATCTCAAGCCAACATTGCTCAGGTTCTGGCAGAACTGAAAGAATATGCTACAGAGGTGGAT
GTTGACTTTGTTCGAAAAGCTGTGCGGGCCATTGGACGGTGTGCCATCAAGGTGGAGCAATCTGCAGAGCGCTGT
GTAAGCACATTGCTTGATCTAATCCAGACCAAAGTGAATTATGTGGTCCAAGAAGCAATTGTTGTCATCAGGGAC
ATCTTCCGCAAATACCCCAACAAGTATGAAAGTATCATCGCCACTCTGTGTGAGAACTTAGACTCGCTGGATGAG
CCAGATGCTCGAGCAGCTATGATTTGGATTGTGGGAGAATATGCTGAAAGAATTGACAATGCAGATGAGTTACTA
GAAAGCTTCCTGGAGGGTTTTCACGATGAAAGCACCCAGGTGCAGCTCACTCTGCTTACTGCCATAGTGAAGCTG
TTTCTCAAGAAACCATCAGAAACACAGGAGCTAGTCCAGCAGGTCTTGAGTTTGGCAACACAGGATTCTGATAAT
CCTGACCTTCGAGACCGGGGCTATATTTATTGGCGCCTTCTCTCAACTGACCCTGTTACAGCTAAAGAAGTAGTC
TTGTCTGAGAAGCCACTGATCTCTGAGGAGACGGACCTTATTGAGCCAACTCTGCTGGATGAGCTAATCTGCCAC
ATTGGTTCTTTGGCCTCTGTGTATCATAAGCCTCCCAATGCTTTTGTGGAAGGAAGTCATGGAATTCATCGTAAA
CACTTGCCAATTCATCATGGGAGCACTGATGCAGGTGACAGCCCTGTTGGCACTACCACTGCAACGAACCTGGAA
CAGCCTCAGGTTATCCCCTCTCAAGGTGATCTTCTAGGGGATCTTTTAAACCTTGACCTCGGTCCCCCAGTCAAT
GTGCCACAGGTGTCCTCCATGCAGATGGGAGCAGTGGATCTCCTAGGAGGAGGACTAGATAGTCTGGTGGGACAA
TCCTTCATCCCATCATCGGTGCCTGCAACCTTTGCTCCTTCACCTACACCTGCTGTGGTCAGCAGTGGACTGAAT
GACCTGTTTGAACTCTCCACAGGGATAGGCATGGCACCTGGTGGATATGTGGCTCCTAAGGCTGTCTGGCTACCT
GCAGTAAAGGCTAAAGGCTTGGAGATTTCCGGAACATTTACTCACCGCCAAGGGCACATCTATATGGAAATGAAC
TTCACCAATAAAGCTCTGCAGCACATGACAGATTTTGCAATCCAGTTTAACAAAAATAGCTTTGGTGTCATCCCC
AGCACTCCTCTGGCCATCCATACACCACTGATGCCAAACCAGAGCATTGATGTCTCCCTGCCTCTCAATACCTTG
GGCCCAGTCATGAAGATGGAACCTCTGAATAACCTCCAGGTGGCTGTGAAAAACAATATCGATGTCTTCTACTTC
AGCTGCCTCATCCCACTCAATGTGCTTTTTGTAGAAGATGGCAAAATGGAGCGCCAGGTCTTCCTTGCAACATGG
AAGGATATTCCCAATGAAAATGAACTTCAGTTTCAGATTAAGGAATGTCATTTAAATGCTGACACTGTTTCCAGC
AAGTTGCAAAACAACAATGTTTATACTATTGCCAAGAGGAATGTGGAAGGGCAGGACATGCTGTACCAATCCCTG
AAGCTCACTAATGGCATTTGGATTTTGGCCGAACTACGTATCCAGCCAGGAAACCCCAATTACACGCTGTCACTG
AAGTGTAGAGCTCCTGAAGTCTCTCAATACATCTATCAGGTCTACGACAGCATTTTGAAAAAC**TAA**CAAGACTGG
TCCAGTACCCTTCAACCATGCTGTGATCGGTGCAAGTCAAGAACTCTTAACTGGAAGAAATTGTATTGCTGCGTA
GAATCTGAACACACTGAGGCCACCTAGCAAGGTAGTAACTAGTCTAACCTGTGCTAACATTAGGGCACAACCTGT
TGGATAGTTTTAGCTTCCTGTGAACATTTGTAACCACTGCTTCAGTCACCTCCCACCTCTTGCCACCTGCTGCTG
CTATCTGTCCTTACTTGTGGGCTTCTCCATGCTGTGCCAATGGCTGGCTTTTTCTACACCCTCTTTTGAGTGTAG
TTTGGTATTTTGTAATTGAGAGCTCATTTCAAAAGCAGAAAAAGACAACAAATATTAAAGCAAGGAAAAGTGTAA
CTGAAACACTGCACTTTACTGTTTTATACTTTTGTACATATGAGAAATCAAGGGATTAGTGCAACCAGTAGAAGG
CATTGAAATGACTGTCATTAACCACACAGTCCTGGAGGCAGAGATGCAGTTACCTACCCTAGCTTTTGATGGGTT
CTCTTACCTGTAGTAGCCTTATCCCTGGTCATTTGGATTTTCAGTTTGCTTTTTTCTTTTTTTCCCCTCCAAACT

FIGURE 80B

CCTTTTCCTTGGCCAAGCCTTCATGCTTCCCCCTTTCCATATTATAATCTCATTTGATTGCTCTGCAGTTGGGAA
CGGTGATCTTCTTGAATGATGTTTCAGTGTGCAAAAACTATAGAGCCTGTCAGCACCAAAGCTGACAGAAGTTAT
ACCTTACTCCTTTCCTTTCCCCTGAACAAACCTGCTAATCCCACTAATTCAGGAATTTGAGTAGAGATGGGGAAC
AAGAACCCAGATGCTGTCCCCTCACCCCCTCTCCTGTATTTCTCAGGTCCAGTTCAAATCTAAAATTCTACTTTT
AGAGTTGAAACAGAGTAATAACTTATCTAACCCTCTTTTCCTACAAAGGAGAAAGATAAAAGGCACAAAGGTTAC
CGCCAAGGCCCGTCAGCTGTGTAGTGGCAAAGCCGAGACCGAGTCTCCTAAGTCCCCGTCAGTGTGGTTTTCACC
ACAGGACTGTCTCTTGTCGTTTTCCCCTAATGCCTTCTCCTGCCTTTTCTGTGCCTAGTTTTTGGCTCTTCACAT
ATTCCATATTGATTTTGACGCTCTGTATATTGGCATCAGGTGGCAGCTGAATATCTTTTGAATTACTCGAAGGTA
AAGCCAGATGCCAGAATGAAGGTGTAGCCAGTGTTTCCCATATGCCCCTGGAGCCCCACTTATTGAGGCCAGCAG
AATAGGTGCAGAGATGAAGTGAGCTTAGAGATGTTGCAAATGCTCTTTATCCCTTCAGCTCTCTGATCTGCTCTT
TCTTCATGATACTTAGTCTGCAGGGCATATTAAGATCATCCCAGAGGTTCAGGCAGTTCCTGTCATCTCTGAAAA
GACTGGGGGATATGAAATCTTCCCCCTACCCCACTTAATGCGTTGGATATGATTTTTCAAAGAATGCTTCATGCC
CAAAATACCAGCCTGTTTAGCAGTGTTACACTGTTTGATCTGCGGGCACTTGTTGCATTGCCTGGCACCCAATAT
TCAGGGTCCATGACTAAGACTGGTCTTCTCAGATGCCCTGCTTAAATCAGGGGCACTTCAGGCTCCACAGGCGTC
ATGTTGGACTGAGACCTAACTCACTGGACTCAGAGGAGGAATCGTGGAAAACAAGAGCAAAACTACCCCACACCC
CTATTTCATGTCTGAAATAACCCTGTTTCATACCAGTTGCAAAGCTTGTGGGGAGCGGTCCCACAAAGCACTTTC
TTAAACCTTGAGAATCTCCAAGAGAAAAATATTTGGGGAAGGAGGGAGGAAATATGTCCCTTGCACACCACCCCT
GAAGCACATGGCAGTAGGAAACAGCATAGGATTGTATGTGGGAGGTGGATAGGTCGGTGATGTGTGGAGCGGAAA
AGCAGGTTGGTAAAGTTCCCTTCTTGGGACTTATTCCTGGAGTCAGTGGATACAAGTAGTGCAGAAGGTTCACAC
TGCAAATAGTGTTCTCATCTCAAAGCAAACTATCATTCCAGAAGGAAAAGTGTGTCAGGGCAAGCAGACAACACA
ATTTCCTATCAGAATATGTCCCTCAACCCCCGAAACAAGGCTTCTCTCAGCCTCCCCACCAGTGATGGATAACAG
CTCCTATTCTCAGCTGACCTGACTGAGCCAACCCATGAACTCTTCACTCCTTGGGGAAGCCACCTCCCATCACAC
CCCTGAGCAGAGTTAGGGAGGAATTCTACTTCCCATAAAAGGACCTCTCCTGAGAGGCAAAACCTGTTGCCTCCA
CCACGGCTTCCCTCTTGGCTCATTCCAAGCTTGGCCAAATTGGGGAAGTGGGATGGAGGTTGCCCTGCATCCCCC
CTCCTCTGCCTGAGTGTGTCTTTGTAATGTCAGCTGGCATCATACAAAGAGCAGGAGAAGCAAACACCCAGAACT
CTTTTGCTGGTCAGAGATTCCCTGAGTGTCTGTCCTCACCCAAGCCTGCTCTGTGTCTGTGTTGTGAAGCTTGAG
ACTCTGGAAAGAAATGGGGAGGGGGGGCAGGGGAAATGTTGCCCTAAGAATGCTTCTCATTCCTCTGTTCTTATT
GGGTCCTGTTTTTCGGGAGGGTGGGGGTTGGGGGAAGCTTGACCTTGTGTCTTCGTCAATAAACTCACATTTACA
C

FIGURE 81

MTDSKYFTTNKKGEIFELKAELNNEKKEKRKEAVKKVIAAMTVGKDVSSLFPDVVNCMQTDNLELKKLVYLYLMN
YAKSQPDMAIMAVNSFVKDCEDPNPLIRALAVRTMGCIRVDKITEYLCEPLRKCLKDEDPYVRKTAAVCVAKLHD
INAQMVEDQGFLDSLRDLIADSNPMVVANAVAALSEISESHPNSNLLDLNPQNINKLLTALNECTEWGQIFILDC
LSNYNPKDDREAQSICERVTPRLSHANSAVVLSAVKVLMKFLELLPKDSDYYNMLLKKLAPPLVTLLSGEPEVQY
VALRNINLIVQKRPEILKQEIKVFFVKYNDPIYVKLEKLDIMIRLASQANIAQVLAELKEYATEVDVDFVRKAVR
AIGRCAIKVEQSAERCVSTLLDLIQTKVNYVVQEAIVVIRDIFRKYPNKYESIIATLCENLDSLDEPDARAAMIW
IVGEYAERIDNADELLESFLEGFHDESTQVQLTLLTAIVKLFLKKPSETQELVQQVLSLATQDSDNPDLRDRGYI
YWRLLSTDPVTAKEVVLSEKPLISEETDLIEPTLLDELICHIGSLASVYHKPPNAFVEGSHGIHRKHLPIHHGST
DAGDSPVGTTTATNLEQPQVIPSQGDLLGDLLNLDLGPPVNVPQVSSMQMGAVDLLGGGLDSLVGQSFIPSSVPA
TFAPSPTPAVVSSGLNDLFELSTGIGMAPGGYVAPKAVWLPAVKAKGLEISGTFTHRQGHIYMEMNFTNKALQHM
TDFAIQFNKNSFGVIPSTPLAIHTPLMPNQSIDVSLPLNTLGPVMKMEPLNNLQVAVKNNIDVFYFSCLIPLNVL
FVEDGKMERQVFLATWKDIPNENELQFQIKECHLNADTVSSKLQNNNVYTIAKRNVEGQDMLYQSLKLTNGIWIL
AELRIQPGNPNYTLSLKCRAPEVSQYIYQVYDSILKN

FIGURE 82

GGCACGAGGGCGCGGAGCGGAGCGGCGGCGGGCGCAGCTAGCGGGTCGGCCGCGGAGCGGAGGTGCAGCTCGGCT
TCCCCCGGCACCCCTCCCCCTCGGGCGCCAGCCCCACCCCTCCGCCGGCCGGGCCGACCCCGCCGTACTATCCCC
TGCGGCGCGAGCCCGGGGCGGCTCCAAGCGCCCCCCAGCAGACCCCCATC**ATG**GGCAGCCAGAGCTCCAAGGCTC
CCCGGGGCGACGTGACCGCCGAGGAGGCAGCAGGCGCTTCCCCCGCGAAGGCCAACGGCCAGGAGAATGGCCACG
TGAAAAGCAATGGAGACTTATCCCCCAAGGGTGAAGGGGAGTCGCCCCCTGTGAACGGAACAGATGAGGCAGCCG
GGGCCACTGGCGATGCCATCGAGCCAGCACCCCCTAGCCAGGGTGCTGAGGCCAAGGGGGAGGTCCCCCCCAAGG
AGACCCCCAAGAAGAAGAAGAAATTCTCTTTCAAGAAGCCTTTCAAATTGAGCGGCCTGTCCTTCAAGAGAAATC
GGAAGGAGGGTGGGGGTGATTCTTCTGCCTCCTCACCCACAGAGGAAGAGCAGGAGCAGGGGGAGATCGGTGCCT
GCAGCGACGAGGGCACTGCTCAGGAAGGGAAGGCCGCAGCCACCCCTGAGAGCCAGGAACCCCAGGCCAAGGGGG
CAGAGGCTAGTGCAGCCTCAGAAGAAGAGGCAGGGCCCCAGGCTACAGAGCCATCCACTCCCTCGGGGCCGGAGA
GTGGCCCTACACCAGCCAGCGCTGAGCAGAATGAG**TAG**CTAGGTAGGGGCAGGTGGGTGATCTCTAAGCTGCAAA
AACTGTGCTGTCCTTGTGAGGTCACTGCCTGGACCTGGTGCCCTGGCTGCCTTCCTGTGCCCAGAAAGGAAGGGG
CTATTGCCTCCTCCCAGCCACGTTCCCTTTCCTCCTCTCCCTCCTGTGGATTCTCCCATCAGCCATCTGGTTCTC
CTCTTAAGGCCAGTTGAAGATGGTCCCTTACAGCTTCCCAAGTTAGGTTAGTGATGTGAAATGCTCCTGTCCCTG
GCCCTACCTCCTTCCCTGTCCCCACCCCTGCATAAGGCAGTTGTTGGTTTTCTTCCCCAATTCTTTTCCAAGTAG
GTTTTGTTTACCCTACTCCCCAAATCCCTGAGCCAGAAGTGGGGTGCTTATACTCCCAAACCTTGAGTGTCCAGC
CTTCCCCTGTTGTTTTTAGTCTCTTGTGCTGTGCCTAGTGGCACCTGGGCTGGGGAGGACACTGCCCCGTCTAGG
TTTTTATAAATGTCTTACTCAAGTTCAAACCTCCAGCCTGTGAATCAACTGTGTCTCTTTTTTGACTTGGTAAGC
AAGTATTAGGCTTTGGGGTGGGGGGAGGTCTGTAATGTGAAACAACTTCTTGTCTTTTTTTCTCCCACTGTTGTA
AATAACTTTTAATGGCCAAACCCCAGATTTGTACTTTTTTTTTTTTCTAACTGCTAAAACCATTCTCTTCCACCT
GGTTTTACTGTAACATTTGGAAAAGGAATAAATGTCGTCCCTTTTTAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 83

MGSQSSKAPRGDVTAEEAAGASPAKANGQENGHVKSNGDLSPKGEGESPPVNGTDEAAGATGDAIEPAPPSQGAE
AKGEVPPKETPKKKKKFSFKKPFKLSGLSFKRNRKEGGGDSSASSPTEEEQEQGEIGACSDEGTAQEGKAAATPE
SQEPQAKGAEASAASEEEAGPQATEPSTPSGPESGPTPASAEQNE

FIGURE 84

GCGGAGCGTGTGAGCAGTACTGCGGCCTCCTCTCCTCTCCTAACCTCGCTCTCGCGGCCTACCTTTACCCGCCCG
CCTGCTCGGCGACCAGCGGGGATCCTCCCCCAGCCGCAAGTCCACGAAGAAAGCAACGAATGAAAATTATGAAGA
CAACGAGAAGTCAGACTCCTCCGGGTCGCGCTCCAGCTGCTTCGGCTTCGTCGCCTACTCTGTGAACTCCGGGGA
GAGATCTCGAGTCAAGATTAAGACCTTAACCCACCAACCTGCCTGTTCGGACACCCCCCGGGCCGGCCGCTGTCT
GTCCCCTTCTCCATCGCCCTCTCCCAGAAAGCTCCGGTGCTTGGACCAGCTAGAGTCTGAGAAAGAGGAGAGGCG
CGAACGCCACTCCAAAAAGAGAAGGGTTAAAGAGGGCAACCCTAACGATACGCTTGACTTTCTGTGGCTGGGAAC
ACCTTCCACC**ATG**ACCACCTCAGCAAGTTCCCACTTAAATAAAGGCATCAAGCAGGTGTACATGTCCCTGCCTCA
GGGTGAGAAAGTCCAGGCCATGTATATCTGGATCGATGGTACTGGAGAAGGACTGCGCTGCAAGACCCGGACCCT
GGACAGTGAGCCCAAGTGTGTGGAAGAGTTGCCTGAGTGGAATTTCGATGGCTCCAGTACTTTACAGTCTGAGGG
TTCCAACAGTGACATGTATCTCGTGCCTGCTGCCATGTTTCGGGACCCCTTCCGTAAGGACCCTAACAAGCTGGT
GTTATGTGAAGTTTTCAAGTACAATCGAAGGCCTGCAGAGACCAATTTGAGGCACACCTGTAAACGGATAATGGA
CATGGTGAGCAACCAGCACCCCTGGTTTGGCATGGAGCAGGAGTATACCCTCATGGGGACAGATGGGCACCCCTT
TGGTTGGCCTTCCAACGGCTTCCCAGGGCCCCAGGGTCCATATTACTGTGGTGTGGGAGCAGACAGAGCCTATGG
CAGGGACATCGTGGAGGCCCATTACCGGGCCTGCTTGTATGCTGGAGTCAAGATTGCGGGGACTAATGCCGAGGT
CATGCCTGCCCAGTGGGAATTTCAGATTGGACCTTGTGAAGGAATCAGCATGGGAGATCATCTCTGGGTGGCCCG
TTTCATCTTGCATCGTGTGTGTGAAGACTTTGGAGTGATAGCAACCTTTGATCCTAAGCCCATTCCTGGGAACTG
GAATGGTGCAGGCTGCCATACCAACTTCAGCACCAAGGCCATGCGGGAGGAGAATGGTCTGAAGTACATCGAGGA
GGCCATTGAGAAACTAAGCAAGCGGCACCAGTACCACATCCGTGCCTATGATCCCAAGGGAGGCCTGGACAATGC
CCGACGTCTAACTGGATTCCATGAAACCTCCAACATCAACGACTTTTCTGCTGGTGTAGCCAATCGTAGCGCCAG
CATACGCATTCCCCGGACTGTTGGCCAGGAGAAGAAGGGTTACTTTGAAGATCGTCGCCCCTCTGCCAACTGCGA
CCCCTTTTCGGTGACAGAAGCCCTCATCCGCACGTGTCTTCTCAATGAAACCGGCGATGAGCCCTTCCAGTACAA
AAAT**TAA**GTGGACTAGACCTCCAGCTGTTGAGCCCCTCCTAGTTCTTCATCCCACTCCAACTCTTCCCCCTCTCC
CAGTTGTCCCGATTGTAACTCAAAGGGTGGAATATCAAGGTCGTTTTTTTCATTCCATGTGCCCAGTTAATCTTG
CTTTCTTTGTTTGGCTGGGATAGAGGGGTCAAGTTATTAATTTCTTCACACCTACCCTCCTTTTTTTCCCTATCA
CTGAAGCTTTTTAGTGCATTAGTGGGGAGGAGGGTGGGGAGACATAACCACTGCTTCCATTTAATGGGGTGCACC
TGTCCAATAGGCGTAGCTATCCGGACAGAGCACGTTTGCAGAAGGGGGACTCTTCTTCCAGGTAGCTGAAAGGGG
AAGACCTGACGTACTCTGGTTAGGTTAGGACTTGCCCTCGTGGTGGAAACTTTTCTTAAAAAGTTATAACCAACT
TTTCTATTAAAAGTGGGAATTAGGAGAGAAGGTAGGGGTTGGGAATCAGAGAGAATGGCTTTGGTCTCTTGCTTG
TGGGACTAGCCTGGCTTGGGACTAAATGCCCTGCTCTGAACACGAAGCTTAGTATAAACTGATGGATATCCCTAC
CTTGAAAGAAGAAAAGGTTCTTACTGCTTGGTCCTTGATTTATCACACAAAGCAGAATAGTATTTTTATATTTAA
ATGTAAAGACAAAAAACTATATGTATGGTTTTGTGGATTATGTGTGTTTTGCTAAAGGAAAAAACCATCCAGGTC
ACGGGGCACCAAATTTGAGACAAATAGTCGGATTAGAAATAAAGCATCTCATTTTGAGTAGAGAGCAAGGGAAGT
GGTTCTTAGATGGTGATCTGGGATTAGGCCCTCAAGACCCTTTTGGGTTTCTGCCCTGCCCACCCTCTGGAGAAG
GTGGGCACTGGATTAGTTAACAGACGACACGTTACTAGCAGTCACTTGATCTCCGTGGCTTTGGTTTAAAAGACA
CACTTGTCCACATAGGTTTAGAGATAAGAGTTGGCTGTTCAACTTGAGCATGTTACTGACAGAGGGGGTATTGGG
GTTATTTTCTGGTAGGAATAGCATGTCACTAAAGCAGGCCTTTTGATATTAAATTTTTTAAAAAGCAAAATTATA
GAAGTTTAGATTTTAATCAAATTTGTAGGGTTTCTAGGTAATTTTTACAGAATTGCTTGTTTGCTTCAACTGTCT
CCTACCTCTGCTCTTGGAGGAGATGGGGACAGGGCTGGAGTCAAAACACTTGTAATTTTGTATCTTGATGTCTTT
GTTAAGACTGCTGAAGAATTATTTTTTTTCTTTTATAATAAGGAATAAACCCCACCTTTATTCCTTCATTTCATC
TACCATTTTCTGGTTCTTGTGTTGGCTGTGGCAGGCCAGCTGTGGTTTTCTTTTGCCATGACAACTTCTAATTGC
CATGTACAGTATGTTCAAAGTCAAATAACTCCTCATTGTAAACAAACTGTGTAACTGCCCAAAGCAGCACTTATA
AATCAGCCTAACATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 85

MTTSASSHLNKGIKQVYMSLPQGEKVQAMYIWIDGTGEGLRCKTRTLDSEPKCVEELPEWNFDGSSTLQSEGSNS
DMYLVPAAMFRDPFRKDPNKLVLCEVFKYNRRPAETNLRHTCKRIMDMVSNQHPWFGMEQEYTLMGTDGHPFGWP
SNGFPGPQGPYYCGVGADRAYGRDIVEAHYRACLYAGVKIAGTNAEVMPAQWEFQIGPCEGISMGDHLWVARFIL
HRVCEDFGVIATFDPKPIPGNWNGAGCHTNFSTKAMREENGLKYIEEAIEKLSKRHQYHIRAYDPKGGLDNARRL
TGFHETSNINDFSAGVANRSASIRIPRTVGQEKKGYFEDRRPSANCDPFSVTEALIRTCLLNETGDEPFQYKN

FIGURE 86

AGTATGTGTGGTTGGGGAATTCATGTGGAGGTCAGAGTGGAAGCAGGTGTGAGAGGGTCCAGCAGAAGGAAACATG
GCTGCCAAAGTGTTTGAGTCCATTGGCAAGTTTGGCCTGGCCTTAGCTGTTGCAGGAGGCGTGGTGAACTCTGC
CTTATATAATGTGGATGCTGGGCACAGAGCTGTCATCTTTGACCGATTCCGTGGAGTGCAGGACATTGTGGTAGG
GGAAGGGACTCATTTTCTCATCCCGTGGGTACAGAAACCAATTATCTTTGACTGCCGTTCTCGACCACGTAATGT
GCCAGTCATCACTGGTAGCAAAGATTTACAGAATGTCAACATCACACTGCGCATCCTCTTCCGGCCTGTCGCCAG
CCAGCTTCCTCGCATCTTCACCAGCATCGGAGAGGACTATGATGAGCGTGTGCTGCCGTCCATCACAACTGAGAT
CCTCAAGTCAGTGGTGGCTCGCTTTGATGCTGGAGAACTAATCACCCAGAGAGAGCTGGTCTCCAGGCAGGTGAG
CGACGACCTTACAGAGCGAGCCGCCACCTTTGGGCTCATCCTGGATGACGTGTCCTTGACACATCTGACCTTCGG
GAAGGAGTTCACAGAAGCGGTGGAAGCCAAACAGGTGGCTCAGCAGGAAGCAGAGAGGGCCAGATTTGTGGTGGA
AAAGGCTGAGCAACAGAAAAAGGCGGCCATCATCTCTGCTGAGGGCGACTCCAAGGCAGCTGAGCTGATTGCCAA
CTCACTGGCCACTGCAGGGGATGGCCTGATCGAGCTGCGCAAGCTGGAAGCTGCAGAGGACATCGCGTACCAGCT
CTCACGCTCTCGGAACATCACCTACCTGCCAGCGGGGCAGTCCGTGCTCCTCCAGCTGCCCCAGTGAGGGCCCAC
CCTGCCTGCACCTCCGCGGGCTGACTGGGCCACAGCCCCGATGATTCTTAACACAGCCTTCCTTCTGCTCCCACC
CCAGAAATCACTGTGAAATTTCATGATTGGCTTAAAGTGAAGGAAATAAAGGTAAAATCACTTCAGATCTCTAAT
TAGTCTATCAAATGAAACTCTTTCATTCTTCTCACATCCATCTACTTTTTTATCCACCTCCCTACCAAAAATTGC
CAAGTGCCTATGCAAACCAGCTTTAGGTCCCAATTCGGGGCCTGCTGGAGTTCCGGCCTGGGCACCAGCATTTGG
CAGCACGCAGGCGGGGCAGTATGTGATGGACTGGGGAGCACAGGTGTCTGCCTAGATCCACGTGTGGCCTCCGTC
CTGTCACTGATGGAAGGTTTGCGGATGAGGGCATGTGCGGCTGAACTGAGAAGGCAGGCCTCCGTCTTCCCAGCG
GTTCCTGTGCAGATGCTGCTGAAGAGAGGTGCCGGGGAGGGGCAGAGAGGAAGTGGTCTGTCTGTTACCATAAGT
CTGATTCTCTTTAACTGTGTGACCAGCGGAAACAGGTGTGTGTGAACTGGGCACAGATTGAAGAATCTGCCCCTG
TTGAGGTGGGTGGGCCTGACTGTTGCCCCCCAGGGTCCTAAAACTTGGATGGACTTGTATAGTGAGAGAGGAGGC
CTGGACCGAGATGTGAGTCCTGTTGAAGACTTCCTCTCTACCCCCCACCTTGGTCCCTCTCAGATACCCAGTGGA
ATTCCAACTTGAAGGATTGCATCCTGCTGGGGCTGAACATGCCTGCCAAAGACGTGTCCGACCTACGTTCCTGGC
CCCCTCGTTCAGAGACTGCCCTTCTCACGGGCTCTATGCCTGCACTGGGAAGGAAACAAATGTGTATAAACTGCT
GTCAATAAATGACACCCAGACCTTCC

FIGURE 87

MAAKVFESIGKFGLALAVAGGVVNSALYNVDAGHRAVIFDRFRGVQDIVVGEGTHFLIPWVQKPIIFDCRSRPRN
VPVITGSKDLQNVNITLRILFRPVASQLPRIFTSIGEDYDERVLPSITTEILKSVVARFDAGELITQRELVSRQV
SDDLTERAATFGLILDDVSLTHLTFGKEFTEAVEAKQVAQQEAERARFVVEKAEQQKKAAIISAEGDSKAAELIA
NSLATAGDGLIELRKLEAAEDIAYQLSRSRNITYLPAGQSVLLQLPQ

FIGURE 88

GGCACGAGGGGCCGGGGGGCGCAGCTAGAGAGCCCCGGAGCCGCGGCGGGAGAGGAACGCGCAGCCAGCCTTGGG
AAGCCCAGGCCCGGCAGCC**ATG**GCGGTGGAAGGAGGAATGAAATGTGTGAAGTTCTTGCTCTACGTCCTCCTGCT
GGCCTTTTGCGCCTGTGCAGTGGGACTGATTGCCGTGGGTGTCGGGGCACAGCTTGTCCTGAGTCAGACCATAAT
CCAGGGGGCTACCCCTGGCTCTCTGTTGCCAGTGGTCATCATCGCAGTGGGTGTCTTCCTCTTCCTGGTGGCTTT
TGTGGGCTGCTGCGGGGCCTGCAAGGAGAACTATTGTCTTATGATCACGTTTGCCATCTTTCTGTCTCTTATCAT
GTTGGTGGAGGTGGCCGCAGCCATTGCTGGCTATGTGTTTAGAGATAAGGTGATGTCAGAGTTTAATAACAACTT
CCGGCAGCAGATGGAGAATTACCCGAAAAACAACCACACTGCTTCGATCCTGGACAGGATGCAGGCAGATTTTAA
GTGCTGTGGGGCTGCTAACTACACAGATTGGGAGAAAATCCCTTCCATGTCGAAGAACCGAGTCCCCGACTCCTG
CTGCATTAATGTTACTGTGGGCTGTGGGATTAATTTCAACGAGAAGGCGATCCATAAGGAGGGCTGTGTGGAGAA
GATTGGGGGCTGGCTGAGGAAAAATGTGCTGGTGGTAGCTGCAGCAGCCCTTGGAATTGCTTTTGTCGAGGTTTT
GGGAATTGTCTTTGCCTGCTGCCTCGTGAAGAGTATCAGAAGTGGCTACGAGGTGATG**TAG**GGGTCTGGTCTCCT
CAGCCTCCTCATCTGGGGGAGTGGAATAGTATCCTCCAGGTTTTTCAATTAAACGGATTATTTTTTCAGACCGAA
AAGAAAAAAAAAAAAAAAAAAAAA

FIGURE 89

MAVEGGMKCVKFLLYVLLLAFCACAVGLIAVGVGAQLVLSQTIIQGATPGSLLPVVIIAVGVFLFLVAFVGCCGA
CKENYCLMITFAIFLSLIMLVEVAAAIAGYVFRDKVMSEFNNNFRQQMENYPKNNHTASILDRMQADFKCCGAAN
YTDWEKIPSMSKNRVPDSCCINVTVGCGINFNEKAIHKEGCVEKIGGWLRKNVLVVAAAALGIAFVEVLGIVFAC
CLVKSIRSGYEVM

FIGURE 90

CGGGAGAGCGCGCTCTGCCTGCCGCCTGCCTGCCTGCCACTGAGGGTTCCCAGCACC**ATG**AGGGCCTGGATCTTC
TTTCTCCTTTGCCTGGCCGGGAGGGCCTTGGCAGCCCCTCAGCAAGAAGCCCTGCCTGATGAGACAGAGGTGGTG
GAAGAAACTGTGGCAGAGGTGACTGAGGTATCTGTGGGAGCTAATCCTGTCCAGGTGGAAGTAGGAGAATTTGAT
GATGGTGCAGAGGAAACCGAAGAGGAGGTGGTGGCGGAAAATCCCTGCCAGAACCACCACTGCAAACACGGCAAG
GTGTGCGAGCTGGATGAGAACAACACCCCCATGTGCGTGTGCCAGGACCCCACCAGCTGCCCAGCCCCCATTGGC
GAGTTTGAGAAGGTGTGCAGCAATGACAACAAGACCTTCGACTCTTCCTGCCACTTCTTTGCCACAAAGTGCACC
CTGGAGGGCACCAAGAAGGGCCACAAGCTCCACCTGGACTACATCGGGCCTTGCAAATACATCCCCCCTTGCCTG
GACTCTGAGCTGACCGAATTCCCCCTGCGCATGCGGGACTGGCTCAAGAACGTCCTGGTCACCCTGTATGAGAGG
GATGAGGACAACAACCTTCTGACTGAGAAGCAGAAGCTGCGGGTGAAGAAGATCCATGAGAATGAGAAGCGCCTG
GAGGCAGGAGACCACCCCGTGGAGCTGCTGGCCCGGGACTTCGAGAAGAACTATAACATGTACATCTTCCCTGTA
CACTGGCAGTTCGGCCAGCTGGACCAGCACCCCATTGACGGGTACCTCTCCCACACCGAGCTGGCTCCACTGCGT
GCTCCCCTCATCCCCATGGAGCATTGCACCACCCGCTTTTTCGAGACCTGTGACCTGGACAATGACAAGTACATC
GCCCTGGATGAGTGGGCCGGCTGCTTCGGCATCAAGCAGAAGGATATCGACAAGGATCTTGTGATC**TAA**ATCCAC
TCCTTCCACAGTACCGGATTCTCTCTTTAACCCTCCCCTTCGTGTTTCCCCCAATGTTTAAAATGTTTGGATGGT
TTGTTGTTCTGCCTGGAGACAAGGTGCTAACATAGATTTAAGTGAATACATTAACGGTGCTAAAAATGAAAATTC
TAACCCAAGACATGACATTCTTAGCTGTAACTTAACTATTAAGGCCTTTTCCACACGCATTAATAGTCCCATTTT
TCTCTTGCCATTTGTAGCTTTGCCCATTGTCTTATTGGCACATGGGTGGACACGGATCTGCTGGGCTCTGCCTTA
AACACACATTGCAGCTTCAACTTTTCTCTTTAGTGTTCTGTTTGAAACTAATACTTACCGAGTCAGACTTTGTGT
TCATTTCATTTCAGGGTCTTGGCTGCCTGTGGGCTTCCCCAGGTGGCCTGGAGGTGGGCAAAGGGAAGTAACAGA
CACACGATGTTGTCAAGGATGGTTTTGGGACTAGAGGCTCAGTGGTGGGAGAGATCCCTGCAGAATCCACCAACC
AGAACGTGGTTTGCCTGAGGCTGTAACTGAGAGAAAGATTCTGGGGCTGTCTTATGAAAATATAGACATTCTCAC
ATAAGCCCAGTTCATCACCATTTCCTCCTTTACCTTTCAGTGCAGTTTCTTTTCACATTAGGCTGTTGGTTCAAA
CTTTTGGGAGCACGGACTGTCAGTTCTCTGGGAAGTGGTCAGCGCATCCTGCAGGGCTTCTCCTCCTCTGTCTTT
TGGAGAACCAGGGCTCTTCTCAGGGGCTCTAGGGACTGCCAGGCTGTTTCAGCCAGGAAGGCCAAAATCAAGAGT
GAGATGTAGAAAGTTGTAAAATAGAAAAAGTGGAGTTGGTGAATCGGTTGTTCTTTCCTCACATTTGGATGATTG
TCATAAGGTTTTTAGCATGTTCCTCCTTTTCTTCACCCTCCCCTTTGTTCTTCTATTAATCAAGAGAAACTTCAA
AGTTAATGGGATGGTCGGATCTCACAGGCTGAGAACTCGTTCACCTCCAAGCATTTCATGAAAAAGCTGCTTCTT
ATTAATCATACAAACTCTCACCATGATGTGAAGAGTTTCACAAATCTTTCAAAATAAAAAGTAATGACTTAGAAA
CTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 91

MRAWIFFLLCLAGRALAAPQQEALPDETEVVEETVAEVTEVSVGANPVQVEVGEFDDGAEETEEEVVAENPCQNH
HCKHGKVCELDENNTPMCVCQDPTSCPAPIGEFEKVCSNDNKTFDSSCHFFATKCTLEGTKKGHKLHLDYIGPCK
YIPPCLDSELTEFPLRMRDWLKNVLVTLYERDEDNNLLTEKQKLRVKKIHENEKRLEAGDHPVELLARDFEKNYN
MYIFPVHWQFGQLDQHPIDGYLSHTELAPLRAPLIPMEHCTTRFFETCDLDNDKYIALDEWAGCFGIKQKDIDKD
LVI

FIGURE 92

CCGGCCCGCGCCCCGCAGGCCGCCCGCCGCCCGCGCCGCC**ATG**GGAGTGGAGGGCTGCACCAAGTGCATCAAGTA
CCTGCTCTTCGTCTTCAATTTCGTCTTCTGGCTGGCTGGAGGCGTGATCCTGGGTGTGGCCCTGTGGCTCCGCCA
TGACCCGCAGACCACCAACCTCCTGTATCTGGAGCTGGGAGACAAGCCCGCGCCCAACACCTTCTATGTAGGCAT
CTACATCCTCATCGCTGTGGGCGCTGTCATGATGTTCGTTGGCTTCCTGGGCTGCTACGGGGCCATCCAGGAATC
CCAGTGCCTGCTGGGGACGTTCTTCACCTGCCTGGTCATCCTGTTTGCCTGTGAGGTGGCCGCCGGCATCTGGGG
CTTTGTCAACAAGGACCAGATCGCCAAGGATGTGAAGCAGTTCTATGACCAGGCCCTACAGCAGGCCGTGGTGGA
TGATGACGCCAACAACGCCAAGGCTGTGGTGAAGACCTTCCACGAGACGCTTGACTGCTGTGGCTCCAGCACACT
GACTGCTTTGACCACCTCAGTGCTCAAGAACAATTTGTGTCCCTCGGGCAGCAACATCATCAGCAACCTCTTCAA
GGAGGACTGCCACCAGAAGATCGATGACCTCTTCTCCGGGAAGCTGTACCTCATCGGCATTGCTGCCATCGTGGT
CGCTGTGATCATGATCTTCGAGATGATCCTGAGCATGGTGCTGTGCTGTGGCATCCGGAACAGCTCCGTGTAC**TG**
AGGCCCCGCAGCTCTGGCCACAGGGACCTCTGCAGTGCCCCCTAAGTGACCCGGACACTTCCGAGGGGGCCATCA
CCGCCTGTGTATATAACGTTTCCGGTATTACTCTGCTACACGTAGCCTTTTTACTTTTGGGGTTTTGTTTTTGTT
CTGAACTTTCCTGTTACCTTTTCAGGGCTGACGTCACATGTAGGTGGCGTGTATGAGTGGAGACGGGCCTGGGTC
TTGGGGACTGGAGGGCAGGGGTCCTTCTGCCCTGGGGTCCCAGGGTGCTCTGCCTGCTCAGCCAGGCCTCTCCTG
GGAGCCACTCGCCCAGAGACTCAGCTTGGCCAACTTGGGGGGCTGTGTCCACCCAGCCCGCCCGTCCTGTGGGCT
GCACAGCTCACCTTGTTCCCTCCTGCCCCGGTTCGAGAGCCGAGTCTGTGGGCACTCTCTGCCTTCATGCACCTG
TCCTTTCTAACACGTCGCCTTCAACTGTAATCACAACATCCTGACTCCGTCATTTAATAAAGAAGGAACATCAGG
CATGCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 93

MGVEGCTKCIKYLLFVFNFVFWLAGGVILGVALWLRHDPQTTNLLYLELGDKPAPNTFYVGIYILIAVGAVMMFV
GFLGCYGAIQESQCLLGTFFTCLVILFACEVAAGIWGFVNKDQIAKDVKQFYDQALQQAVVDDDANNAKAVVKTF
HETLDCCGSSTLTALTTSVLKNNLCPSGSNIISNLFKEDCHQKIDDLFSGKLYLIGIAAIVVAVIMIFEMILSMV
LCCGIRNSSVY

FIGURE 94A

GCTAAGTTAGCTTTTCAACTGGCACTGTATGGCAGCATTTTTGGTATGGTTAGCGTGGCACATGGCGAAACATAA
AGCATTTTACTGTACAGGTAAGGAATGTGCCATGTGTTTTACCTATCTCTCTTTCTCTCTCACTCCCATGCACAC
ATCCTGTGTGTATTCAGAGACCTTCAGAAACATTCATATTCATTTTCATGAGTCAGCAAAAGCCCTATGCTTGAT
TCCAACAGAATATTTCCTTTACATACTTTCTTCTCTTAATTTTTACAAAATTGTATGGTAGGTGTAAAAGAAAAT
CATAGTAACTGTACCATATTATTAACCCCTAAATCAAACTTTTTTTGTCTTGTGTATCTTGATTTTTCTGTGTGC
TTTATAGTGAAGCAGCCGACACGAGTCGTTGTTCATAAAACAGCTTTTGAAAGTTGAGAGCACACCCCTGGAGAA
CCGACTGTGCTTGCTTACGTTTGGTTCATGACTTAAAAATCGAGTACAGGTGATGAAATCTTGGCAGTGTTAACA
AAAAAGTAGTGTGTATTGTGCTATTTTTTTTTTACTCTAGAAACTTAACCATTTGTAGAGAAAAAGGAAACAAAT
TTTCACACATTGAAGTTCATTCTGACATAAAATTA**ATG**ATAAATAATCATAGAAATCAAGCTTTGTATTTTAGCG
AACATAAGTACTTTCAACAAACTCAGGTGGTGTATCAGGGAGACATTTTCTGGGTGTTTTTGTGTGTTTTCTGTC
TTAGAAAAGAATGTGTTCTAATGCAAGGATGTTTCTCTGCAGGAGTTATTCCTGATGAAGCTAAAGCTTTGTCTC
TGTTGGCACCAGCTAATGCAGTGGCAGGTCTTCTGCCTGGTGGTGGACTCCTGCCTACTCCTAACCCACTTACCC
AGATTGGCGCTGTTCCACTGGCTGCTTTGGGGGCTCCTACTCTTGATCCTGCCCTTGCTGCACTTGGGCTTCCTG
GAGCAAACTTGAACTCTCAGTCTCTTGCTGCAGATCAGTTGCTGAAGCTTATGAGTACTGTTGATCCCAAGTTGA
ATCATGTAGCTGCTGGTCTCGTTTCACCAAGTCTGAAATCGGATACCTCTAGTAAAGAAATAGAGGAAGCTATGA
AAAGAGTACGAGAAGCACAGTCCCTAATTTCTGCTGCTATAGAACCAGATAAGAAAGAAGAAAAAAGAAGGCATT
CAAGATCAAGATCACGTTCTAGGAGGAGGAGGACTCCCTCATCTTCTAGACACAGGCGGTCAAGAAGCAGATCGA
GACGGCGGTCACATTCTAAGTCTAGGAGTCGGCGACGATCCAAAAGCCCAAGGCGGAGAAGATCTCATTCCAGAG
AAAGAGGTAGAAGGTCAAGGAGCACATCAAAAACAAGAGACAAAAAGAAAGAAGACAAAGAAAAGAAACGTTCTA
AAACACCACCAAAAAGTTACAGCACAGCCAGACGTTCTAGAAGTGCAAGCAGAGTATATTTGAAG**TAA**CATGGAA
TTCAAGAGAGAGAGAGACGACGACGAAGAAGCAGGAGTGGCACAAGATCTCCTAAAAAGCCTCGGTCTCCTAAAA
GAAAATTGTCCCGCTCACCATCCCCTAGGAGACATAAAAAGGAGAAGAAGAAAGATAAAGACAAAGAAAGAAGTA
GGGATGAAAGAGAACGATCAACAAGCAAGAAGAAGAAGAGTAAAGATAAGGAAAAGGACCGGGAAAGAAAATCAG
AGAGTGATAAAGATGTAAAACAGGTTACACGGGATTATGATGAAGAGGAACAGGGGTATGACAGTGAGAAAGAGA
AAAAAGAAGAGAAGAAACCAATAGAAACAGGTTCCCCTAAAACAAAGGAATGTTCTGTGGAAAAGGGAACTGGTG
ATTCACTAAGAGAATCCAAAGTGAATGGGGATGATCATCATGAAGAAGACATGGATATGAGTGACTGAATATTGC
CTCTGAGGGAGTCCAACTGTATACCTGCATCAGTGTCATTCCTTTGTGTGATTTCTTAATGCTGTATTTGTTCAT
CTCAAACCTAGATGTATACAGCTCTGAGTTATAAATGGTTATAAAGCTCCTGTTACTCATATTAGTTATTTACAT
CAAAAAGCTTTTAGAAAATGGTACGAGGTAACCAATTCTTGTCATGGTGAAATCTGATTGAGTAACCAAGCAGTT
TTACTATTCTGGTGCTGCTTCATAACAAAAATGAAAAGCTGCATGCATCTACAGCAGGCATGGATTGTTTATGTC
GTATGATATCCTTTATTAAGTAAGTTCACTTATAGTATTTCTATAATTTGATTCATTGCCGTAATAGAGCCATGT
AGGAAATGCACTGATTGCATGTTATTGTGGCAAGAATATCCTAAATGTCATTAAAATCCTCCAACATGATGGATC
TACTTATGGTCTTGTTTGTTGACATGACAAATTAACATTCTTATAGTTACATCTGGAAATGAGCATTTGAAATAG
ATAATCCTTTAAGCCTTGTGGCAAAATTTTTGTGGCTTTTGTTTAACTTTGAAAGGTTATTATGCACTAACCTTT
TTTGGTGGCTAATTAGGGTTTAAATACAGAAACAAGATTTCAAATAAAACTGTCTTTGGCAGTGAGTAAATAGCA
TATTTTGAAGTAGAGTTGTATACTTTTTCATAAGATGTTTGGGAATTTTTTTCCTGAAGTAATAATTTATTCCAC
ATCTACATCAGTGAAAGCTATCTACCTATCCTGAGTCTATCTTAAAGGAAAAAAAGAAAAAAACCTTATCTCTTG
CCCTTATTTTGAATTTTCCACTCTTTCATTAATTTGTTTTAAGCTCCGTGTTGGAAAAAAGGGGTAGTGCATTTT
AAATTGACCTTCATACGCTTTTAAAATAAGACAAATCTACTTGATAATGTACCTTTATTTGATCTCAAGTTGTAT
AAAACCAATAAATTTGTGTTACTGCAGTAGTAATCTTATGCACACGGTGATTTCATGTTATATATGCAAAGTAGG
CAACTGTTTTCTTAGTTACAGAAGTTTCAAGCTTCACTTTTGTGCAGTAGAAACAAAAGTAGGCTACAGTCTGTG
CCATGTTGATGTACAGTTTCTGAAATTGTTTTACAAGACTTTGATAATAAAACCCTTAAACTTATGTTCATGTTC
CTGTAAAACCGTATTTGTATTTATTTACGCTACTGAATGTATGACATTTACCTCATTCATTTTACAAATTCTTTC
CCTTTCTGTCCACATATTTCAGTATAGTAAAAAGAGGAAGTCTATCACTGTAGTGATAATTGCCATCAAAATTGT
CAAAAATGATTTAATTTCTATCCAAAATAGTCCTTTTCTTAGCTTAGTATCATTTTATTGCTTATTTTTTGTGTG
GGAATGGGGTTGGATAAAGCAATGAACTTTAGTATAAACAAATCCCACCTATATCTAGCAAATTTATATTTTCGG
TGAAATACAGATATTTGCCTTTCTGGAGTAGTATAGAAGCTGTCAATATGTATCTACTGTACAGTACTAAATAGT
ATTCATTTATGAAATGAGTAGTGTTTGGGTGGCTGGGGTTAAGGGAAAATGAGACTTGGAATTGTAGCTTTTATC

FIGURE 94B

CAAGTTTTGAGTATAAATAGGGTTTTGTTTTGTTTTTTTTAACCTAAAAACTGAAATGCCATATAGAAAAACAGC
ATTGTTTTTACAGTTTGTAGTAAGTAACTTTTTAAAGATTTTATCAAAAAGAATTTTGTCTATAGTGAGTAAAAG
AAGTTCTAATAATGGTCCTAATCACTGCATTTTTAAAAAACAAAGTTCAACACAAATGACATTTGTTTTAAACTT
TAGTAGATAAAAGGTGAACCATGTGACATGGGCATTTTTGTAAGTCAAAAACAAATTTCACATATGGTAAACCTA
ATATTCACAGTGTGTTCCCTCACTTGTAATCTCTGAATACAAATATACTAGCTTTTCTAAAGGGAATCATTTTTT
TAAAAGTAGTGCCACTGACAAGATGCTACAGTGAAGATTATCCATTCTTAGGATATTTATTTTCAGTGAACATTT
TCTGCACAAAGGTAGTGTTGCACTGGGACACAAGCCTTTTAACAGATAACCAGTTGAAATCAAACACTGCCTCCA
CACCGAGTTCTGTTGTGTATTTGATAGTAAATTGATTTAAAAATAAAAGTGGTTTTTGTTAGAAA

FIGURE 95

MINNHRNQALYFSEHKYFQQTQVVYQGDIFWVFLCVFCLRKECVLMQGCFSAGVIPDEAKALSLLAPANAVAGLL
PGGGLLPTPNPLTQIGAVPLAALGAPTLDPALAALGLPGANLNSQSLAADQLLKLMSTVDPKLNHVAAGLVSPSL
KSDTSSKEIEEAMKRVREAQSLISAAIEPDKKEEKRRHSRSRSRSRRRRTPSSSRHRRSRSRSRRRSHSKSRSRR
RSKSPRRRRSHSRERGRRSRSTSKTRDKKKEDKEKKRSKTPPKSYSTARRSRSASRVYLK

FIGURE 96

GGCACGAGGGGAGCGCTTGTTTGCTGCCTCGTACTCCTCCATTTATCCGCC**ATG**ATAAGTGCCAGCCGAGCTGCA
GCAGCCCGTCTCGTGGGCGCCGCAGCCTCCCGGGGCCCTACGGCCGCCCGCCACCAGGATAGCTGGAATGGCCTT
AGTCATGAGGCTTTTAGACTTGTTTCAAGGCGGGATTATGCATCAGAAGCAATCAAGGGAGCAGTTGTTGGTATT
GATTTGGGTACTACCAACTCCTGCGTGGCAGTTATGGAAGGTAAACGAGCAAAGGTGCTGGAGAATGCCGAAGGT
GCCAGAACCACCCCTTCAGTTGTGGCCTTTACAGCAGATGGTGAGCGACTTGTTGGAATGCCGGCCAAGCGACAG
GCTGTCACCAACCCAAACAATACATTTTATGCTACCAAGCGTCTCATTGGCCGGCGATATGATGATCCTGAAGTA
CAGAAAGACATTAAAAATGTTCCCTTTAAAATTGTCCGTGCCTCCAATGGTGATGCCTGGGTTGAGGCTCATGGG
AAATTGTATTCTCCGAGTCAGATTGGAGCATTTGTGTTGATGAAGATGAAAGAGACTGCAGAAAATTACTTGGGG
CGCACAGCAAAAAATGCTGTGATCACAGTCCCAGCTTATTTCAATGACTCGCAGAGACAGGCCACTAAAGATGCT
GGCCAGATATCTGGACTGAATGTGCTTCGGGTGATTAATGAGCCCACAGCTGCTGCTCTTGCCTATGGTCTAGAC
AAATCAGAAGACAAAGTCATTGCTGTATATGATTTAGGTGGTGGAACTTTTGATATTTCTATCCTGGAAATTCAG
AAAGGAGTATTTGAGGTGAAATCCACAAATGGGGATACCTTCTTAGGTGGGGAAGACTTTGACCAGGCCTTGCTA
CGGCACATTGTGAAGGAGTTCAAGAGAGAGACAGGGGTTGATTTGACTAAAGACAACATGGCACTTCAGAGGGTA
CGGGAAGCTGCTGAAAAGGCTAAGTGTGAACTCTCCTCATCTGTGCAGACTGACATCAATTTGCCCTATCTTACA
ATGGATTCTTCTGGACCCAAGCATTTGAATATGAAGTTGACCCGTGCTCAATTTGAAGGGATTGTCACTGATCTA
ATCAGAAGGACTATCGCTCCATGCCAAAAAGCTATGCAAGATGCAGAAGTCAGCAAGAGTGACATAGGAGAAGTG
ATTCTTGTGGGTGGCATGACTAGGATGCCCAAGGTTCAGCAGACTGTACAGGATCTTTTTGGCAGAGCCCCAAGT
AAAGCTGTCAATCCTGATGAGGCTGTGGCCATTGGAGCTGCCATTCAGGGAGGTGTGTTGGCCGGCGATGTCACG
GATGTGCTGCTCCTTGATGTCACTCCCCTGTCTCTGGGTATTGAAACTCTAGGAGGTGTCTTTACCAAACTTATT
AATAGGAATACCACTATTCCAACCAAGAAGAGCCAGGTATTCTCTACTGCCGCTGATGGTCAAACGCAAGTGGAA
ATTAAAGTGTGTCAGGGTGAAAGAGAGATGGCTGGAGACAACAAACTCCTTGGACAGTTTACTTTGATTGGAATT
CCACCAGCCCCTCGTGGAGTTCCTCAGATTGAAGTTACATTTGACATTGATGCCAATGGGATAGTACATGTTTCT
GCTAAAGATAAAGGCACAGGACGTGAGCAGCAGATTGTAATCCAGTCTTCTGGTGGATTAAGCAAAGATGATATT
GAAAATATGGTTAAAAATGCAGAGAAATATGCTGAAGAAGACCGGCGAAAGAAGGAACGAGTTGAAGCAGTTAAT
ATGGCTGAAGGAATCATTCACGACACAGAAACCAAGATGGAAGAATTCAAGGACCAATTACCTGCTGATGAGTGC
AACAAGCTGAAAGAAGAGATTTCCAAAATGAGGGAGCTCCTGGCTAGAAAAGACAGCGAAACAGGAGAAAATATT
AGACAGGCAGCATCCTCTCTTCAGCAGGCATCATTGAAGCTGTTCGAAATGGCATACAAAAAGATGGCATCTGAG
CGAGAAGGCTCTGGAAGTTCTGGCACTGGGGAACAAAAGGAAGATCAAAAGGAGGAAAAACAG**TAA**TAATAGCAG
AAATTTTGAAGCCAGAAGGACAACATATGAAGCTTAGGAGTGAAGAGACTTCCTGAGCAGAAATGGGCGAACTTC
AGTCTTTTTACTGTGTTTTTGCAGTATTCTATATATAATTTCCTTAATTTGTAAATTTAGTGACCATTAGCTAGT
GATCATTTAATGGACAGTGATTCTAACAGTATAAAGTTCACAATATTCTATGTCCCTAGCCTGTCATTTTTCAGC
TGCATGTAAAAGGAGGTAGGATGAATTGATCATTATAAAGATTTAACTATTTTATGCTGAAGTGACCATATTTTC
AAGGGGTGAAACCATCTCGCACACAGCAATGAAGGTAGTCATCCATAGACTTGAAATGAGACCACATATGGGGAT
GAGATCCTTCTAGTTAGCCTAGTACTGCTGTACTGGCCTGTATGTACATGGGGTCCTTCAACTGAGGCCTTGCAA
GTCAAGCTGGCTGTGCCATGTTTGTAGATGGGGCAGAGGAATCTAGAACAATGGGAAACTTAGCTATTTATATTA
GGTACAGCTATTAAAACAAGGTAGGAATGAGGCTAGACCTTTAACTTCCCTAAGGCATACTTTTCTAGCTACCTT
CTGCCCTGTGTCTGGCACCTACATCCTTGATGATTGTTCTCTTACCCATTCTGGAATTTTTTTTTTTTTTAAATA
AATACAGAAAGCATCTTGAAAAAAAAAAAAAAAAA

FIGURE 97

MISASRAAAARLVGAAASRGPTAARHQDSWNGLSHEAFRLVSRRDYASEAIKGAVVGIDLGTTNSCVAVMEGKRA
KVLENAEGARTTPSVVAFTADGERLVGMPAKRQAVTNPNNTFYATKRLIGRRYDDPEVQKDIKNVPFKIVRASNG
DAWVEAHGKLYSPSQIGAFVLMKMKETAENYLGRTAKNAVITVPAYFNDSQRQATKDAGQISGLNVLRVINEPTA
AALAYGLDKSEDKVIAVYDLGGGTFDISILEIQKGVFEVKSTNGDTFLGGEDFDQALLRHIVKEFKRETGVDLTK
DNMALQRVREAAEKAKCELSSSVQTDINLPYLTMDSSGPKHLNMKLTRAQFEGIVTDLIRRTIAPCQKAMQDAEV
SKSDIGEVILVGGMTRMPKVQQTVQDLFGRAPSKAVNPDEAVAIGAAIQGGVLAGDVTDVLLLDVTPLSLGIETL
GGVFTKLINRNTTIPTKKSQVFSTAADGQTQVEIKVCQGEREMAGDNKLLGQFTLIGIPPAPRGVPQIEVTFDID
ANGIVHVSAKDKGTGREQQIVIQSSGGLSKDDIENMVKNAEKYAEEDRRKKERVEAVNMAEGIIHDTETKMEEFK
DQLPADECNKLKEEISKMRELLARKDSETGENIRQAASSLQQASLKLFEMAYKKMASEREGSGSSGTGEQKEDQK
EEKQ

FIGURE 98

GGCACGAGGGGAGCGCTTGTTTGCTGCCTCGTACTCCTCCATTTATCCGCC**ATG**ATAAGTGCCAGCCGAGCTGCA
GCAGCCCGTCTCGTGGGCGCCGCAGCCTCCCGGGGCCCTACGGCCGCCCGCCACCAGGATAGCTGGAATGGCCTT
AGTCATGAGGCTTTTAGACTTGTTTCAAGGCGGGATTATGCATCAGAAGCAATCAAGGGAGCAGTTGTTGGTATT
GATTTGGGTACTACCAACTCCTGCGTGGCAGTTATGGAAGGTAAACGAGCAAAGGTGCTGGAGAATGCCGAAGGT
GCCAGAACCACCCCTTCAGTTGTGGCCTTTACAGCAGATGGTGAGCGACTTGTTGGAATGCCGGCCAAGCGACAG
GCTGTCACCAACCCAAACAATACATTTTATGCTACCAAGCGTCTCATTGGCCGGCGATATGATGATCCTGAAGTA
CAGAAAGACATTAAAAATGTTCCCTTTAAAATTGTCCGTGCCTCCAATGGTGATGCCTGGGTTGAGGCTCATGGG
AAATTGTATTCTCCGAGTCAGATTGGAGCATTTGTGTTGATGAAGATGAAAGAGACTGCAGAAAATTACTTGGGG
CGCACAGCAAAAAATGCTGTGATCACAGTCCCAGCTTATTTCAATGACTCGCAGAGACAGGCCACTAAAGATGCT
GGCCAGATATCTGGACTGAATGTGCTTCGGGTGATTAATGAGCCCACAGCTGCTGCTCTTGCCTATGGTCTAGAC
AAATCAGAAGACAAAGTCATTGCTGTATATGATTTAGGTGGTGGAACTTTTGATATTTCTATCCTGGAAATTCAG
AAAGGAGTATTTGAGGTGAAATCCACAAATGGGGATACCTTCTTAGGTGGGGAAGACTTTGACCAGGCCTTGCTA
CGGCACATTGTGAAGGAGTTCAAGAGAGAGACAGGGGTTGATTTGACTAAAGACAACATGGCACTTCAGAGGGTA
CGGGAAGCTGCTGAAAAGGCTAAGTGTGAACTCTCCTCATCTGTGCAGACTGACATCAATTTGCCCTATCTTACA
ATGGATTCTTCTGGACCCAAGCATTTGAATATGAAGTTGACCCGTGCTCAATTTGAAGGGATTGTCACTGATCTA
ATCAGAAGGACTATCGCTCCATGCCAAAAAGCTATGCAAGATGCAGAAGTCAGCAAGAGTGACATAGGAGAAGTG
ATTCTTGTGGGTGGCATGACTAGGATGCCCAAGGTTCAGCAGACTGTACAGGATCTTTTTGGCAGAGCCCCAAGT
AAAGCTGTCAATCCTGATGAGGCTGTGGCCATTGGAGCTGCCATTCAGGGAGGTGTGTTGGCCGGCGATGTCACG
GATGTGCTGCTCCTTGATGTCACTCCCCTGTCTCTGGGTATTGAAACTCTAGGAGGTGTCTTTACCAAACTTATT
AATAGGAATACCACTATTCCAACCAAGAAGAGCCAGGTATTCTCTACTGCCGCTGATGGTCAAACGCAAGTGGAA
ATTAAAGTGTGTCAGGGTGAAAGAGAGATGGCTGGAGACAACAAACTCCTTGGACAGTTTACTTTGATTGGAATT
CCACCAGCCCCTCGTGGAGTTCCTCAGATTGAAGTTACATTTGACATTGATGCCAATGGGATAGTACATGTTTCT
GCTAAAGATAAAGGCACAGGACGTGAGCAGCAGATTGTAATCCAGTCTTCTGGTGGATTAAGCAAAGATGATATT
GAAAATATGGTTAAAAATGCAGAGAAATATGCTGAAGAAGACCGGCGAAAGAAGGAACGAGTTGAAGCAGTTAAT
ATGGCTGAAGGAATCATTCACGACACAGAAACCAAGATGGAAGAATTCAAGGACCAATTACCTGCTGATGAGTGC
AACAAGCTGAAAGAAGAGATTTCCAAAATGAGGGAGCTCCTGGCTAGAAAAGACAGCGAAACAGGAGAAAATATT
AGACAGGCAGCATCCTCTCTTCAGCAGGCATCATTGAAGCTGTTCGAAATGGCATACAAAAAGATGGCATCTGAG
CGAGAAGGCTCTGGAAGTTCTGGCACTGGGGAACAAAAGGAAGATCAAAAGGAGGAAAAACAG**TAA**TAATAGCAG
AAATTTTGAAGCCAGAAGGACAACATATGAAGCTTAGGAGTGAAGAGACTTCCTGAGCAGAAATGGGCGAACTTC
AGTCTTTTTACTGTGTTTTTGCAGTATTCTATATATAATTTCCTTAATTTGTAAATTTAGTGACCATTAGCTAGT
GATCATTTAATGGACAGTGATTCTAACAGTATAAAGTTCACAATATTCTATGTCCCTAGCCTGTCATTTTTCAGC
TGCATGTAAAAGGAGGTAGGATGAATTGATCATTATAAAGATTTAACTATTTTATGCTGAAGTGACCATATTTTC
AAGGGGTGAAACCATCTCGCACACAGCAATGAAGGTAGTCATCCATAGACTTGAAATGAGACCACATATGGGGAT
GAGATCCTTCTAGTTAGCCTAGTACTGCTGTACTGGCCTGTATGTACATGGGGTCCTTCAACTGAGGCCTTGCAA
GTCAAGCTGGCTGTGCCATGTTTGTAGATGGGGCAGAGGAATCTAGAACAATGGGAAACTTAGCTATTTATATTA
GGTACAGCTATTAAAACAAGGTAGGAATGAGGCTAGACCTTTAACTTCCCTAAGGCATACTTTTCTAGCTACCTT
CTGCCCTGTGTCTGGCACCTACATCCTTGATGATTGTTCTCTTACCCATTCTGGAATTTTTTTTTTTTTAAATA
AATACAGAAAGCATCTTGAAAAAAAAAAAAAAAAA

FIGURE 99

MISASRAAAARLVGAAASRGPTAARHQDSWNGLSHEAFRLVSRRDYASEAIKGAVVGIDLGTTNSCVAVMEGKRA
KVLENAEGARTTPSVVAFTADGERLVGMPAKRQAVTNPNNTFYATKRLIGRRYDDPEVQKDIKNVPFKIVRASNG
DAWVEAHGKLYSPSQIGAFVLMKMKETAENYLGRTAKNAVITVPAYFNDSQRQATKDAGQISGLNVLRVINEPTA
AALAYGLDKSEDKVIAVYDLGGGTFDISILEIQKGVFEVKSTNGDTFLGGEDFDQALLRHIVKEFKRETGVDLTK
DNMALQRVREAAEKAKCELSSSVQTDINLPYLTMDSSGPKHLNMKLTRAQFEGIVTDLIRRTIAPCQKAMQDAEV
SKSDIGEVILVGGMTRMPKVQQTVQDLFGRAPSKAVNPDEAVAIGAAIQGGVLAGDVTDVLLLDVTPLSLGIETL
GGVFTKLINRNTTIPTKKSQVFSTAADGQTQVEIKVCQGEREMAGDNKLLGQFTLIGIPPAPRGVPQIEVTFDID
ANGIVHVSAKDKGTGREQQIVIQSSGGLSKDDIENMVKNAEKYAEEDRRKKERVEAVNMAEGIIHDTETKMEEFK
DQLPADECNKLKEEISKMRELLARKDSETGENIRQAASSLQQASLKLFEMAYKKMASEREGSGSSGTGEQKEDQK
EEKQ

FIGURE 100

GCCGTGTCGCCACC**ATG**GCTCCGCACCGCCCCGCGCCCGCGCTGCTTTGCGCGCTGTCCCTGGCGCTGTGCGCGC
TGTCGCTGCCCGTCCGCGCGGCCACTGCGTCGCGGGGGGCGTCCCAGGCGGGGGCGCCCCAGGGGCGGGTGCCCG
AGGCGCGGCCCAACAGCATGGTGGTGGAACACCCCGAGTTCCTCAAGGCAGGGAAGGAGCCTGGCCTGCAGATCT
GGCGTGTGGAGAAGTTCGATCTGGTGCCCGTGCCCACCAACCTTTATGGAGACTTCTTCACGGGCGACGCCTACG
TCATCCTGAAGACAGTGCAGCTGAGGAACGGAAATCTGCAGTATGACCTCCACTACTGGCTGGGCAATGAGTGCA
GCCAGGATGAGAGCGGGGCGGCCGCCATCTTTACCGTGCAGCTGGATGACTACCTGAACGGCCGGGCCGTGCAGC
ACCGTGAGGTCCAGGGCTTCGAGTCGGCCACCTTCCTAGGCTACTTCAAGTCTGGCCTGAAGTACAAGAAAGGAG
GTGTGGCATCAGGATTCAAGCACGTGGTACCCAACGAGGTGGTGGTGCAGAGACTCTTCCAGGTCAAAGGGCGGC
GTGTGGTCCGTGCCACCGAGGTACCTGTGTCCTGGGAGAGCTTCAACAATGGCGACTGCTTCATCCTGGACCTGG
GCAACAACATCCACCAGTGGTGTGGTTCCAACAGCAATCGGTATGAAAGACTGAAGGCCACACAGGTGTCCAAGG
GCATCCGGGACAACGAGCGGAGTGGCCGGGCCCGAGTGCACGTGTCTGAGGAGGGCACTGAGCCCGAGGCGATGC
TCCAGGTGCTGGGCCCCAAGCCGGCTCTGCCTGCAGGTACCGAGGACACCGCCAAGGAGGATGCGGCCAACCGCA
AGCTGGCCAAGCTCTACAAGGTCTCCAATGGTGCAGGGACCATGTCCGTCTCCCTCGTGGCTGATGAGAACCCCT
TCGCCCAGGGGGCCCTGAAGTCAGAGGACTGCTTCATCCTGGACCACGGCAAAGATGGGAAAATCTTTGTCTGGA
AAGGCAAGCAGGCAAACACGGAGGAGAGGAAGGCTGCCCTCAAAACAGCCTCTGACTTCATCACCAAGATGGACT
ACCCCAAGCAGACTCAGGTCTCGGTCCTTCCTGAGGGCGGTGAGACCCCACTGTTCAAGCAGTTCTTCAAGAACT
GGCGGGACCCAGACCAGACAGATGGCCTGGGCTTGTCCTACCTTTCCAGCCATATCGCCAACGTGGAGCGGGTGC
CCTTCGACGCCGCCACCCTGCACACCTCCACTGCCATGGCCGCCCAGCACGGCATGGATGACGATGGCACAGGCC
AGAAACAGATCTGGAGAATCGAAGGTTCCAACAAGGTGCCCGTGGACCCTGCCACATATGGACAGTTCTATGGAG
GCGACAGCTACATCATTCTGTACAACTACCGCCATGGTGGCCGCCAGGGGCAGATAATCTATAACTGGCAGGGTG
CCCAGTCTACCCAGGATGAGGTCGCTGCATCTGCCATCCTGACTGCTCAGCTGGATGAGGAGCTGGGAGGTACCC
CTGTCCAGAGCCGTGTGGTCCAAGGCAAGGAGCCCGCCCACCTCATGAGCCTGTTTGGTGGGAAGCCCATGATCA
TCTACAAGGGCGGCACCTCCCGCGAGGGCGGGCAGACAGCCCCTGCCAGCACCCGCCTCTTCCAGGTCCGCGCCA
ACAGCGCTGGAGCCACCCGGGCTGTTGAGGTATTGCCTAAGGCTGGTGCACTGAACTCCAACGATGCCTTTGTTC
TGAAAACCCCCTCAGCCGCCTACCTGTGGGTGGGTACAGGAGCCAGCGAGGCAGAGAAGACGGGGGCCCAGGAGC
TGCTCAGGGTGCTGCGGGCCCAACCTGTGCAGGTGGCAGAAGGCAGCGAGCCAGATGGCTTCTGGGAGGCCCTGG
GCGGGAAGGCTGCCTACCGCACATCCCCACGGCTGAAGGACAAGAAGATGGATGCCCATCCTCCTCGCCTCTTTG
CCTGCTCCAACAAGATTGGACGTTTTGTGATCGAAGAGGTTCCTGGTGAGCTCATGCAGGAAGACCTGGCAACGG
ATGACGTCATGCTTCTGGACACCTGGGACCAGGTCTTTGTCTGGGTTGGAAAGGATTCTCAAGAAGAAGAAAAGA
CAGAAGCCTTGACTTCTGCTAAGCGGTACATCGAGACGGACCCAGCCAATCGGGATCGGCGGACGCCCATCACCG
TGGTGAAGCAAGGCTTTGAGCCTCCCTCCTTTGTGGGCTGGTTCCTTGGCTGGGATGATGATTACTGGTCTGTGG
ACCCCTTGGACAGGGCCATGGCTGAGCTGGCTGCC**TGA**GGAGGGGCAGGGCCCACCCATGTCACCGGTCAGTGCC
TTTTGGAACTGTCCTTCCCTCAAAGAGGCCTTAGAGCGAGCAGAGCAGCTCTGCTATGAGTGTGTGTGTGTGTGT
GTGTTGTTTCTTTTTTTTTTTTTTACAGTATCCAAAAATAGCCCTGCAAAAATTCAGAGTCCTTGCAAAATTGTC
TAAAATGTCAGTGTTTGGGAAATTAAATCCAATAAAAACATTTTGAAGTGTG

FIGURE 101

MAPHRPAPALLCALSLALCALSLPVRAATASRGASQAGAPQGRVPEARPNSMVVEHPEFLKAGKEPGLQIWRVEK
FDLVPVPTNLYGDFFTGDAYVILKTVQLRNGNLQYDLHYWLGNECSQDESGAAAIFTVQLDDYLNGRAVQHREVQ
GFESATFLGYFKSGLKYKKGGVASGFKHVVPNEVVVQRLFQVKGRRVVRATEVPVSWESFNNGDCFILDLGNNIH
QWCGSNSNRYERLKATQVSKGIRDNERSGRARVHVSEEGTEPEAMLQVLGPKPALPAGTEDTAKEDAANRKLAKL
YKVSNGAGTMSVSLVADENPFAQGALKSEDCFILDHGKDGKIFVWKGKQANTEERKAALKTASDFITKMDYPKQT
QVSVLPEGGETPLFKQFFKNWRDPDQTDGLGLSYLSSHIANVERVPFDAATLHTSTAMAAQHGMDDDGTGQKQIW
RIEGSNKVPVDPATYGQFYGGDSYIILYNYRHGGRQGQIIYNWQGAQSTQDEVAASAILTAQLDEELGGTPVQSR
VVQGKEPAHLMSLFGGKPMIIYKGGTSREGGQTAPASTRLFQVRANSAGATRAVEVLPKAGALNSNDAFVLKTPS
AAYLWVGTGASEAEKTGAQELLRVLRAQPVQVAEGSEPDGFWEALGGKAAYRTSPRLKDKKMDAHPPRLFACSNK
IGRFVIEEVPGELMQEDLATDDVMLLDTWDQVFVWVGKDSQEEEKTEALTSAKRYIETDPANRDRRTPITVVKQG
FEPPSFVGWFLGWDDDYWSVDPLDRAMAELAA

FIGURE 102

GTTTCTCTCCCTGCCCCCGCGACTTCGCGCAAGATCCGGGAAGGACACCCGAGGCCCCTGGGAGACCCTGGGGAG
GTGAAAGTCAGAGAGCGAAGCGGGCCGTGGCCCCTAGGCCTGACCCCTCCCCGCGGGGTAAGGCGGGCACCCCGC
GAGCGCAGGGGTCCTCTTACTGCTGATGGCACCCAGCTCTGGGCCCAGACGCCGCTCACCGTCCACCGCCGGTGC
TGGGTAAA**ATG**TCGGTTCCAGGACCTTACCAGGCGGCCACTGGGCCTTCCTCAGCACCATCCGCACCTCCATCCT
ATGAAGAGACAGTGGCTGTTAACAGTTATTACCCCACACCTCCAGCTCCCATGCCTGGGCCAACTACGGGGCTTG
TGACGGGGCCTGATGGGAAGGGCATGAATCCTCCTTCGTATTATACCCAGCCAGCGCCCATCCCCAATAACAATC
CAATTACCGTGCAGACGGTCTACGTGCAGCACCCCATCACCTTTTTGGACCGCCCTATCCAAATGTGTTGTCCTT
CCTGCAACAAGATGATCGTGAGTCAGCTGTCCTATAACGCCGGTGCTCTGACCTGGCTGTCCTGCGGGAGCCTGT
GCCTGCTGGGGTGCATAGCGGGCTGCTGCTTCATCCCCTTCTGCGTGGATGCCCTGCAGGACGTGGACCATTACT
GTCCCAACTGCAGAGCTCTCCTGGGCACCTACAAGCGTTTG**TAG**GACTCAGCCAGACGTGGAGGGAGCCGGGTGC
CGCAGGAAGTCCTTTCCACCTCTCATCCAGCTTCACGCCTGGTGGAGGTTCTGCCCTGGTGGTCTCACCTCTCCA
GGGGGCCCACCTTCATGTCTTCTTTTGGGGGGAATACGTCGCAAAACTAACAAATCTCCAAACCCCAGAAATTGC
TGCTTGGAGTCGTGCATAGGACTTGCAAAGACATTCCCCTTGAGTGTCAGTTCCACGGTTTCCTGCCTCCCTGAG
ACCCTGAGTCCTGCCATCTAACTGTGATCATTGCCCTATCCGAATATCTTCCTGTGATCTGCCATCAGTGGCTCT
TTTTTCCTGCTTCCATGGGCCTTTCTGGTGGCAGTCTCAAACTGAGAAGCCACAGTTGCCTTATTTTTGAGGCTG
TTCTGCCCAGAGCTCGGCTGAACCAGCCTTTAGTGCCTACCATTATCTTATCCGTCTCTTCCCGTCCCTGATGAC
AAAGATCTTGCCTTACAGACTTTACAGGCTTGGCTTTGAGATTCTGTAACTGCAGACTTCATTAGCACACAGATT
CACTTTAATTTCTTAATTTTTTTTTTAAATACAAGGAGGGGGCTATTAACACCCAGTACAGACATATCCACAAGG
TCGTAAATGCATGCTAGAAAAATAGGGCTGGATCTTATCACTGCCCTGTCTCCCCTTGTTTCTCTGTGCCAGATC
TTCAGTGCCCCTTTCCATACAGGGATTTTTTTCTCATAGAGTAATTATATGAACAGTTTTTATGACCTCCTTTTG
GTCTGAAATACTTTTGAACAGAATTTCTTTTTTTTAAAAAAAAAACAGAGATGGGGTCTTACTATGTTGCCCAGGC
TGGTGTCGAACTCCTGGGCTCAAGCGATCCTTCTGCCTTGGCCTCCCGAAGTGCTGGGATTGCAGGCATAAGCTA
CCATGCTGGGCCTGAACATAATTTCAAGAGGAGGATTTATAAAACCATTTTCTGTAATCAAATGATTGGTGTCAT
TTTCCCATTTGCCAATGTAGTCTCACTTAAAAAAAAAAAAAAGAAAAAGAAATGGATAATTTCATCTACTGCCTT
TACTTGGGGTTAATGTGATTCTTAAACACCTTCATCATGGAACTCTCAGAGTGGGGTCCGTTTTGGTTTCCTGGT
GGTGGGTTTTGAAAGATAAGGGAAAGCACATTTTGAGCATGTCTGGGTACCATGGTGCGGATGCTTGGGAACCAG
AACTGTTTCAGAGGAATCTAAAGTCTGATTTTAGTTTTCAGAGACACAGCTTGTTGTAAAACATGAGAAGACATG
ATTTCTAGGACTCAAGCAGCAAGCCAGGATTCTAGGTTGGCTGCTGTGTCATCTTTGAAGTCAAGACAAAGCTGG
GCTCGACCTTCAAGGGTCCTCGTTTTGATAATACTTCAGAATAGGGAACTCATGTGAATACTACTATGTAGAAAT
AAAACCTAGACCTTGAGCGAACATCTGTATATTGGTTGAAAACGATAGTGGTAACCATTGATCCCCCTTCATTTG
ATGTTTGGAAAATTCCAGTAATTATCATTTTTGCAACGAATATGGATACCACATAGTACTTTGGTGTTACCTGCT
TTTGAAAAATAAAGTCTTTGGTTCACCCGGTAAAAAAAAAAAA

FIGURE 103

MSVPGPYQAATGPSSAPSAPPSYEETVAVNSYYPTPPAPMPGPTTGLVTGPDGKGMNPPSYYTQPAPIPNNNPIT
VQTVYVQHPITFLDRPIQMCCPSCNKMIVSQLSYNAGALTWLSCGSLCLLGCIAGCCFIPFCVDALQDVDHYCPN
CRALLGTYKRL

FIGURE 104

GTTTCTCTCCCTGCCCCCGCGACTTCGCGCAAGATCCGGGAAGGACACCCGAGGCCCCTGGGAGACCCTGGGGAG
GTGAAAGTCAGAGAGCGAAGCGGGCCGTGGCCCCTAGGCCTGACCCCTCCCCGCGGGGTAAGGCGGGCACCCCGC
GAGCGCAGGGGTCCTCTTACTGCTGATGGCACCCAGCTCTGGGCCCAGACGCCGCTCACCGTCCACCGCCGGTGC
TGGGTAAA**ATG**TCGGTTCCAGGACCTTACCAGGCGGCCACTGGGCCTTCCTCAGCACCATCCGCACCTCCATCCT
ATGAAGAGACAGTGGCTGTTAACAGTTATTACCCCACACCTCCAGCTCCCATGCCTGGGCCAACTACGGGGCTTG
TGACGGGGCCTGATGGGAAGGGCATGAATCCTCCTTCGTATTATACCCAGCCAGCGCCCATCCCCAATAACAATC
CAATTACCGTGCAGACGGTCTACGTGCAGCACCCCATCACCTTTTTGGACCGCCCTATCCAAATGTGTTGTCCTT
CCTGCAACAAGATGATCGTGAGTCAGCTGTCCTATAACGCCGGTGCTCTGACCTGGCTGTCCTGCGGGAGCCTGT
GCCTGCTGGGGGTGCATAGCGGGCTGCTGCTTCATCCCCTTCTGCGTGGATGCCCTGCAGGACGTGGACCATTAC
TGTCCCAACTGCAGAGCTCTCCTGGGCACCTACAAGCGTTTGTAGGACTCAGCCAGACGTGGAGGGAGCCGGGTG
CCGCAGGAAGTCCTTTCCACCTCTCATCCAGCTTCACGCCTGGTGGAGGTTCTGCCCTGGTGGTCTCACCTCTCC
AGGGGGCCCACCTTCATGTCTTCTTTTGGGGGGAATACGTCGCAAAACTAACAAATCTCCAAACCCCAGAAATTG
CTGCTTGGAGTCGTGCA**TAG**GACTTGCAAAGACATTCCCCTTGAGTGTCAGTTCCACGGTTTCCTGCCTCCCTGA
GACCCTGAGTCCTGCCATCTAACTGTGATCATTGCCCTATCCGAATATCTTCCTGTGATCTGCCATCAGTGGCTC
TTTTTTCCTGCTTCCATGGGCCTTTCTGGTGGCAGTCTCAAACTGAGAAGCCACAGTTGCCTTATTTTTGAGGCT
GTTCTGCCCAGAGCTCGGCTGAACCAGCCTTTAGTGCCTACCATTATCTTATCCGTCTCTTCCCGTCCCTGATGA
CAAAGATCTTGCCTTACAGACTTTACAGGCTTGGCTTTGAGATTCTGTAACTGCAGACTTCATTAGCACACAGAT
TCACTTTAATTTCTTAATTTTTTTTTTAAATACAAGGAGGGGGCTATTAACACCCAGTACAGACATATCCACAAG
GTCGTAAATGCATGCTAGAAAAATAGGGCTGGATCTTATCACTGCCCTGTCTCCCCTTGTTTCTCTGTGCCAGAT
CTTCAGTGCCCCTTTCCATACAGGGATTTTTTTCTCATAGAGTAATTATATGAACAGTTTTTATGACCTCCTTTT
GGTCTGAAATACTTTTGAACAGAATTTCTTTTTTTTTAAAAAAAAAACAGAGATGGGGTCTTACTATGTTGCCCAGG
CTGGTGTCGAACTCCTGGGCTCAAGCGATCCTTCTGCCTTGGCCTCCCGAAGTGCTGGGATTGCAGGCATAAGCT
ACCATGCTGGGCCTGAACATAATTTCAAGAGGAGGATTTATAAAACCATTTTCTGTAATCAAATGATTGGTGTCA
TTTTCCCATTTGCCAATGTAGTCTCACTTAAAAAAAAAAAAAAAAAAA

FIGURE 105

MSVPGPYQAATGPSSAPSAPPSYEETVAVNSYYPTPPAPMPGPTTGLVTGPDGKGMNPPSYYTQPAPIPNNNPIT
VQTVYVQHPITFLDRPIQMCCPSCNKMIVSQLSYNAGALTWLSCGSLCLLGVHSGLLLHPLLRGCPAGRGPLLSQ
LQSSPGHLQAFVGLSQTWREPGAAGSPFHLSSSFTPGGGSALVVSPLQGAHLHVFFWGEYVAKLTNLQTPEIAAW
SRA

FIGURE 106

GGTCCACC**ATG**GCCCTGCTGCACTCCGGCCGCGTCCTCCCCGGGATCGCCGCCGCCTTCCACCCGGGCCTCGCCG
CCGCGGCCTCTGCCAGAGCCAGCTCCTGGTGGACCCATGTGGAAATGGGACCTCCAGATCCCATTCTGGGAGTCA
CTGAAGCCTTTAAGAGGGACACCAATAGCAAAAAGATGAATCTGGGAGTTGGTGCCTACCGGGATGATAATGGAA
AGCCTTACGTTCTGCCTAGCGTCCGCAAGGCAGAGGCCCAGATTGCCGCAAAAAATTTGGACAAGGAATACCTGC
CCATTGGGGGACTGGCTGAATTTTGCAAGGCATCTGCAGAACTAGCCCTGGGTGAGAACAGCGAAGTCTTGAAGA
GTGGCCGGTTTGTCACTGTGCAGACCATTTCTGGAACTGGAGCCTTAAGGATCGGAGCCAGTTTTCTGCAAAGAT
TTTTTAAGTTCAGCCGAGATGTCTTTCTGCCCAAACCAACCTGGGGAAACCACACACCCATCTTCAGGGATGCTG
GCATGCAGCTACAAGGTTATCGGTATTATGACCCCAAGACTTGCGGTTTTGACTTCACAGGCGCTGTGGAGGATA
TTTCAAAAATACCAGAGCAGAGTGTTCTTCTTCTGCATGCCTGCGCCCACAATCCCACGGGAGTGGACCCGCGTC
CGGAACAGTGGAAGGAAATAGCAACAGTGGTGAAGAAAAGGAATCTCTTTGCGTTCTTTGACATGGCCTACCAAG
GCTTTGCCAGTGGTGATGGTGATAAGGATGCCTGGGCTGTGCGCCACTTCATCGAACAGGGCATTAATGTTTGCC
TCTGCCAATCATATGCCAAGAACATGGGCTTATATGGTGAGCGTGTAGGAGCCTTCACTATGGTCTGCAAAGATG
CGGATGAAGCCAAAAGGGTAGAGTCACAGTTGAAGATCTTGATCCGTCCCATGTATTCCAACCCTCCCCTCAATG
GGGCCCGGATTGCTGCTGCCATTCTGAACACCCCAGATTTGCGAAAACAATGGCTGCAAGAAGTGAAAGGCATGG
CTGACCGCATCATTGGCATGCGGACTCAACTGGTCTCCAACCTCAAGAAGGAGGGTTCCACCCACAATTGGCAAC
ACATCACCGACCAAATTGGCATGTTCTGTTTCACAGGGCTAAAGCCTGAACAGGTGGAGCGGCTGATCAAGGAGT
TCTCCATCTACATGACAAAAGATGGCCGCATCTCTGTGGCAGGGGTCACCTCCAGCAACGTGGGCTACCTTGCCC
ATGCCATTCACCAGGTCACCAAG**TAA**TGTCCCTGGGTCGAGGAAACAGAGACAACCTTTCTGTCTTCAGCCTCTG
CTATTGAGAGCTTCACACAGACAATGAGAGAGGGTGGATGGTGGTGAGTGGATCATTTCTTTCAGCCACAGTGTG
TAACACTCAGCATTTGAATGTTTCTCAGAAAAGAACATGTAGTGACACAGGGCAGAGGCATCCATGGCTGGCGTC
TGGAATATTAAACCAAACTCTCCCCGGTCCTTTTTTCTCCAACTTTTCTCAAAGAGTTTACATGTGCAAGAAAGT
CATCGCACCAAAAAACCTGTCAATTATGCCATTGCAATATTTCAGAAGCTTTAACTGAAGTGTCAGGTTCCTCGT
GAGAAACAAGCACACCTTAGAGGCTTTGAGAGAAGGCCAGCTAGTTCTGTCATGAGTAGTCGGCCTCGTGTCTGT
CCTCCCATCTTGGAACAACCTTATCAACAGGCCGCACTGCAGAAATGATGTTTTATGAAAACCATGAGCTGCTGC
CACTCCAGCAAGGGAAATAATGCAGTTTCCTGTCTTATTTAAGAAAAAGAGAAGGCTCTCTTTTCTCCCTTGTCA
TTGCCGTTCTTTTCCTTACACGCAAAACATTTTTAACTATTGCAGTTTCATCCCATTCTACTGCTTGATTGACCA
TCAACTCCATCCTATCGAGATTATTTAAGAATGAAGAACATAATTTTTCTGCTGATGCCGTACCCTCACCCTTTT
CAGCAAAGAATAGTGGAGAGTAGGAAACTGTACTTTATCTCGGCATCCTCTTGAATGATAGTGCAAGTTTCTCCA
GTTGGGATGTTGTCTCTGCCCGGTTGGACCTCCTCCCTTTGTTGAATGTGGTGTGCAGCCTCTCATCTCACACTG
TGAGTCCAGCGGCGCAGGGTGGTACCAGGAAAGAGGATATTCTAGGCTTGCGTGCTGCTAGCTGGGTTCAGGCTT
CACCCACTGGAAAGAACCACCATCTGCTCTAACCATGTAGACTTATTGCGGCCTGGTTTTCTCTGTTACAATAAA
ATTACTGTAGACCC

FIGURE 107

MALLHSGRVLPGIAAAFHPGLAAAASARASSWWTHVEMGPPDPILGVTEAFKRDTNSKKMNLGVGAYRDDNGKPY
VLPSVRKAEAQIAAKNLDKEYLPIGGLAEFCKASAELALGENSEVLKSGRFVTVQTISGTGALRIGASFLQRFFK
FSRDVFLPKPTWGNHTPIFRDAGMQLQGYRYYDPKTCGFDFTGAVEDISKIPEQSVLLLHACAHNPTGVDPRPEQ
WKEIATVVKKRNLFAFFDMAYQGFASGDGDKDAWAVRHFIEQGINVCLCQSYAKNMGLYGERVGAFTMVCKDADE
AKRVESQLKILIRPMYSNPPLNGARIAAAILNTPDLRKQWLQEVKGMADRIIGMRTQLVSNLKKEGSTHNWQHIT
DQIGMFCFTGLKPEQVERLIKEFSIYMTKDGRISVAGVTSSNVGYLAHAIHQVTK

FIGURE 108

GTGGGTGAGCGGCGGCCACGGCATCCTGTGCTGTGGGGGCTACGAGGAAAGATCTAATTATC**ATG**GACCTGCGAC
AGTTTCTTATGTGCCTGTCCCTGTGCACAGCCTTTGCCTTGAGCAAACCCACAGAAAAGAAGGACCGTGTACATC
ATGAGCCTCAGCTCAGTGACAAGGTTCACAATGATGCTCAGAGTTTTGATTATGACCATGATGCCTTCTTGGGTG
CTGAAGAAGCAAAGACCTTTGATCAGCTGACACCAGAAGAGAGCAAGGAAAGGCTTGGAAAGATTGTAAGTAAAA
TAGATGGCGACAAGGACGGGTTTGTCACTGTGGATGAGCTCAAAGACTGGATTAAATTTGCACAAAAGCGCTGGA
TTTACGAGGATGTAGAGCGACAGTGGAAGGGGCATGACCTCAATGAGGACGGCCTCGTTTCCTGGGAGGAGTATA
AAAATGCCACCTACGGCTACGTTTTAGATGATCCAGATCCTGATGATGGATTTAACTATAAACAGATGATGGTTA
GAGATGAGCGGAGGTTTAAAATGGCAGACAAGGATGGAGACCTCATTGCCACCAAGGAGGAGTTCACAGCTTTCC
TGCACCCTGAGGAGTATGACTACATGAAAGATATAGTAGTACAGGAAACAATGGAAGATATAGATAAGAATGCTG
ATGGTTTCATTGATCTAGAAGAGTATATTGGTGACATGTACAGCCATGATGGGAATACTGATGAGCCAGAATGGG
TAAAGACAGAGCGAGAGCAGTTTGTTGAGTTTCGGGATAAGAACCGTGATGGGAAGATGGACAAGGAAGAGACCA
AAGACTGGATCCTTCCCTCAGACTATGATCATGCAGAGGCAGAAGCCAGGCACCTGGTCTATGAATCAGACCAAA
ACAAGGATGGCAAGCTTACCAAGGAGGAGATCGTTGACAAGTATGACTTATTTGTTGGCAGCCAGGCCACAGATT
TTGGGGAGGCCTTAGTACGGCATGATGAGTTC**TGA**GCTGCGGAGGAACCCTCATTTCCTCAAAAGTAATTTATTT
TTACAGCTTCTGGTTTCACATGAAATTGTTTGCGCTACTGAGACTGTTACTACAAACTTTTTAAGACATGAAAAG
GCGTAATGAAAACCATCCCGTCCCCATTCCTCCTCCTCTCTGAGGGACTGGAGGGAAGCCGTGCTTCTGAGGAAC
AACTCTAATTAGTACACTTGTGTTTGTAGATTTACACTTTGTATTATGTATTAACATGGCGTGTTTATTTTTGTA
TTTTTCTCTGGTTGGGAGTATGATATGAAGGATCAAGATCCTCCACTCACACATGTAGACAAACATTAGCTCTTT
ACTCTTTCTCAACCCCTTATATGATTTTAATAATTCTCACTTCACTAATTTTGTAAGCCTGAGATCAATAAGAAA
TGTTCAGGAGAGAGGAAAGAAAAAATATATATGCTCCACAATTTATATTTAGAGAGAGAACACTTAGTCTTGCCT
GTCAAAAAGTCCAACATTTCATAGGTAGTAGGGGCCACATATTACATTCAGTTGCTATAGGTCCAGCAACTGAAC
CTGCCATTACCTGGGCAAGGAAAGATCCCTTTGCTCTAGGAAAGCTTGGCCCAAATTGATTTTCTTCTTTTTCCC
CCTGTAGGACTGACTGTTGGCTAATTTTGTCAAGCACAGCTGTGGTGGGAAGAGTTAGGGCCAGTGTCTTGAAAA
TCAATCAAGTAGTGAATGTGATCTCTTTGCAGAGCTATAGATAGAAACAGCTGGAAAACTAAAGGAAAAATACAA
ATGTTTTCGGGGCATACATTTTTTTTCTGGGTGTGCATCTGTTGAAATGCTCAAGACTTAATTATTTGCCTTTTG
AAATCACTGTAAATGCCCCCATCCGGTTCCTCTTCTTCCCAGGTGTGCCAAGGAATTAATCTTGGTTTCACTACA
ATTAAAATTCACTCCTTTCCAATCATGTCATTGAAAGTGCCTTTAACGAAAGAAATGGTCACTGAATGGGAATTC
TCTTAAGAAACCCTGAGATTAAAAAAAGACTATTTGGATAACTTATAGGAAAGCCTAGAACCTCCCAGTAGAGTG
GGGATTTTTTTCTTCTTCCCTTTCTCTTTTGGACAATAGTTAAATTAGCAGTATTAGTTATGAGTTTGGTTGCAG
TGTTCTTATCTTGTGGGCTGATTTCCAAAAACCACATGCTGCTGAATTTACCAGGGATCCTCATACCTCACAATG
CAAACCACTTACTACCAGGCCTTTTTCTGTGTCCACTGGAGAGCTTGAGCTCACACTCAAAGATCAGAGGACCTA
CAGAGAGGGCTCTTTGGTTTGAGGACCATGGCTTACCTTTCCTGCCTTTGACCCATCACACCCCATTTCCTCCTC
TTTCCCTCTCCCCGCTGCCAAAAAAAAAAAAAAGGAAACGTTTATCATGAATCAACAGGGTTTCAGTCCTTATCA
AAGAGAGATGTGGAAAGAGCTAAAGAAACCACCCTTTGTTCCCAACTCCACTTTACCCATATTTTATGCAACACA
AACACTGTCCTTTTGGGTCCCTTTCTTACAGATGGACCTCTTGAGAAGAATTATCGTATTCCACGTTTTTAGCCC
TCAGGTTACCAAGATAAATATATGTATATATAACCTTTATTATTGCTATATCTTTGTGGATAATACATTCAGGTG
GTGCTGGGTGATTTATTATAATCTGAACCTAGGTATATCCTTTGGTCTTCCACAGTCATGTTGAGGTGGGCTCCC
TGGTATGGTAAAAAGCCAGGTATAATGTAACTTCACCCCAGCCTTTGTACTAAGCTCTTGATAGTGGATATACTC
TTTTAAGTTTAGCCCCAATATAGGGTAATGGAAATTTCCTGCCCTCTGGGTTCCCCATTTTTACTATTAAGAAGA
CCAGTGATAATTTAATAATGCCACCAACTCTGGCTTAGTTAAGTGAGAGTGTGAACTGTGTGGCAAGAGAGCCTC
ACACCTCACTAGGTGCAGAGAGCCCAGGCCTTATGTTAAAATCATGCACTTGAAAAGCAAACCTTAATCTGCAAA
GACAGCAGCAAGCATTATACGGTCATCTTGAATGATCCCTTTGAAATTTTTTTTTTGTTTGTTTGTTTAAATCAA
GCCTGAGGCTGGTGAACAGTAGCTACACACCCATATTGTGTGTTCTGTGAATGCTAGCTCTCTTGAATTTGGATA
TTGGTTATTTTTTATAGAGTGTAAACCAAGTTTTATATTCTGCAATGCGAACAGGTACCTATCTGTTTCTAAATA
AAACTGTTTACATTCAAAAA

FIGURE 109

MDLRQFLMCLSLCTAFALSKPTEKKDRVHHEPQLSDKVHNDAQSFDYDHDAFLGAEEAKTFDQLTPEESKERLGK
IVSKIDGDKDGFVTVDELKDWIKFAQKRWIYEDVERQWKGHDLNEDGLVSWEEYKNATYGYVLDDPDPDDGFNYK
QMMVRDERRFKMADKDGDLIATKEEFTAFLHPEEYDYMKDIVVQETMEDIDKNADGFIDLEEYIGDMYSHDGNTD
EPEWVKTEREQFVEFRDKNRDGKMDKEETKDWILPSDYDHAEAEARHLVYESDQNKDGKLTKEEIVDKYDLFVGS
QATDFGEALVRHDEF

FIGURE 110A

GGCCGGCGGTGGCGGCGGCGAGGGCTGGACTCGGGCTTAGGGCCTGCTGTGGAGGCAGCGGCGGACGCCGAGCTA
AGCAGTTTCTCTGGAAACCCCCCTGGTAAGTGTGGAGGAGGCGGGACACTCTGACCCAAGACGAAAGGCCTGTAG
CTCCAGCCAAAGAAAATAAACCTTAGGAGGGAGAAGGAAAAAAAAAAATCCATCAGCTGTTCCTGAGAACAGCCT
GCATTGGAATCTACAGAGAGGACAACTAATGTGAGTGAGGAAGTGACTGTATGTGGACTGTGGAGAAAGTAAGTC
ACGTGGGCCCTTGAGGACCTGGACTGGGTTAGGAACAGTTGTACTTTCAGAGGTGAGGTGTCGAGAAGGGAAAGT
GAATGTGGTCTGGAGTGTGTCCTTGGCCTTGGCTCCACAGGGTGTGCTTTCCTCTGGGGCCGTCAGGGAGCTCAT
CCCTTGTGTTCTGCCAGGGTGGGGTACGGGGTTTGACACTGAGGAGGGTAACCTGCTGGCTGGAGCGGCAGAGCA
GTGGCCTTGATTTGTCTTTTGGAAGATTTTAAAAACCAAAAAGCATAAACATTCTGGTCCTTCAGCA**ATG**CTTTC
TCTGAAGAAATACTTAACGGAAGGACTTCTCCAGTTCACCATTCTGCTGAGTTTGATTGGGGTACGGGTGGACGT
GGATACTTACCTGACCTCACAGCTTCCCCCACTCCGGGAGATCATCCTGGGGCCCAGTTCTGCCTATACTCAGAC
CCAGTTCCACAACCTGAGGAATACCTTGGATGGCTATGGTATCCACCCCAAGAGCATAGACCTGGACAATTACTT
CACTGCCCGGCGGCTCCTCAGTCAGGTGAGGGCCCTGGACAGGTTCCAGGTGCCAACCACTGAGGTAAATGCCTG
GCTGGTTCACCGAGACCCAGAGGGGTCTGTCTCTGGCAGTCAGCCCAACTCAGGCCTCGCCCTCGAGAGTTCCAG
TGGCCTCCAAGATGTGACAGGCCCAGACAACGGGGTGCGAGAAAGCGAAACGGAGCAGGGATTCGGTGAAGATTT
GGAGGATTTGGGGGCTGTAGCCCCCCCCAGTCAGTGGAGACTTAACCAAAGAGGACATAGATCTGATTGACATCCT
TTGGCGACAGGATATTGATCTGGGGGCTGGGCGTGAGGTTTTTGACTATAGTCACCGCCAGAAGGAGCAGGATGT
GGAGAAGGAGCTGCGAGATGGAGGCGAGCAGGACACCTGGGCAGGCGAGGGCGCGGAAGCTCTGGCACGGAACCT
GCTAGTGGATGGAGAGACTGGGGAGAGCTTCCCTGCACAGGTGCCTAGTGGGGAGGACCAGACGGCCCTGTCCCT
GGAAGAGTGCCTTAGGCTGCTGGAAGCCACCTGCCCCTTTGGGGAGAATGCTGAGTTTCCAGCAGACATTTCCAG
CATAACAGAAGCAGTGCCTAGTGAGAGTGAGCCCCCTGCTCTTCAAAACAACCTCTTGTCTCCTCTTCTGACCGG
GACAGAGTCACCATTTGATTTGGAACAGCAGTGGCAAGATCTCATGTCCATCATGGAAATGCAGGCCATGGAAGT
GAACACATCAGCAAGTGAAATCCTGTACAGTGCCCCTCCTGGAGACCCACTGAGCACCAACTACAGCCTTGCCCC
CAACACTCCCATCAATCAGAATGTCAGCCTGCATCAGGCGTCCCTGGGGGGCTGCAGCCAGGACTTCTTACTCTT
CAGCCCCGAGGTGGAAAGCCTGCCTGTGGCCAGTAGCTCCACGCTGCTCCCGTTGGCCCCCAGCAATTCTACCAG
CCTCAACTCCACCTTCGGCTCCACCAACCTGACAGGGCTCTTCTTTCCACCCCAGCTCAATGGCACAGCCAATGA
CACAGCAGGCCCAGAGCTGCCTGACCCTTTGGGGGGTCTGTTAGATGAAGCTATGTTGGATGAGATCAGCCTTAT
GGACCTGGCCATTGAAGAAGGCTTTAACCCTGTGCAGGCCTCCCAGCTGGAGGAGGAATTTGACTCTGACTCAGG
CCTTTCCTTAGACTCGAGCCATAGCCCTTCTTCCCTAAGCAGCTCTGAAGGCAGTTCTTCCTCTTCTTCCTCCTC
CTCTTCCTCTTCTTCCTCTGCTTCTTCCTCTGCCTCTTCCTCCTTTTCTGAGGAAGGTGCGGTTGGCTACAGCTC
TGACTCTGAGACCCTGGATCTGGAAGAGGCCGAGGGTGCTGTGGGCTACCAGCCTGAGTATTCCAAGTTCTGCCG
CATGAGCTACCAGGATCCAGCTCAGCTCTCATGCCTGCCCTACCTGGAGCACGTGGGCCACAACCACACATACAA
CATGGCACCCAGTGCCCTGGACTCAGCCGACCTGCCACCACCCAGTGCCCTCAAGAAAGGCAGCAAGGAGAAGCA
GGCTGACTTCCTGGACAAGCAGATGAGCCGGGATGAGCACCGAGCCCGAGCCATGAAGATCCCTTTCACCAATGA
CAAAATCATCAACCTGCCTGTGGAGGAGTTCAATGAACTGCTGTCCAAATACCAGTTGAGTGAAGCCCAGCTGAG
CCTCATCCGAGACATCCGGCGCCGGGGCAAGAACAAGATGGCGGCGCAGAACTGCCGCAAGCGCAAGCTGGACAC
CATCCTGAATCTGGAGCGTGATGTGGAGGACCTGCAGCGTGACAAAGCCCGGCTGCTGCGGGAGAAAGTGGAGTT
CCTGCGCTCCCTGCGACAGATGAAGCAGAAGGTCCAGAGCCTGTACCAGGAGGTGTTTGGGCGGCTGCGAGATGA
GAACGGACGACCCTACTCGCCCAGTCAGTATGCGCTCCAGTACGCCGGGGACGGCAGTGTCCTCCTCATCCCCCG
CACGATGGCCGACCAGCAGGCCCGGCGGCAGGAGAGGAAGCCAAAGGACCGGAGAAAG**TGA**GCCTGGGGAAGAAG
GGGGTTTGAAGCCCACCAAGACCGAAACTGGAGAAGGGCTGGACCTGGACCTGGACCTGGACCTACAGCGGGGAC
TTAAATGCCTTCTTATCCAATATATCTTCTCAGATGGGATGACTGCGGGTCAGTGTACAGGAAGAGGCAGGCACT
GGCTGGCTCAGCTCCACTCGGGTGGAGTGGAAGTGGCCAGACCATTTAGACGGACAGGGTCCTCACCCTACCCCT
TTCCTGTGAGGCAGGGGTGGTGGTGGAGTTGCTGGAGGTAGAGGAGCTATGTGGAGCAAAGGCCGACAGAGGGGA
AGGAATGGACCTGTGAGAGGAAGGGAAGGTGGCAGAAAGTCTCATTTCAGGAAGGAGGGATAGAAGGAAGGAAGG
AAGGAACCCCCCCCCCCCCCCCGAAAAAAAAATCAAAGCGGGAAGAAAATCAGAGGGAAGGTTAAGGTTGGCTCTG
GCCAGGATTCCAGGCAGCAGGTTGGAGTGACTGGTGGGCCTAGATCACTGGTGTGATAAACCCCATTTCACCCCG
GGGGGGGTGGGGTACACAGACACAGGGTGGGGGTGGGGAGGGGCGGTGTTAACTCTTTCTGCTCCTTGCATTTTG
ACATCCCTGAAGGGGAGCTCTTGGATATCATTGGCCATGTTTCAATCGAATGGAGCCACTGGGCCCCAACACTGG

FIGURE 110B

CTTTGAGATTTAGAGTCAAAGGGTAGAGTGAACAGGAAAGGGTCACGTGGTCCCATGTTGCAACAGCCCCAACAT
CACGCATGTCATTCACTGCCTTGCCACTCCATCTCCCTCCGTGCTCCAGCCACCCCTGAGCTGAGGCTCCCATTG
TCTCCATCAGAGCCTGCATGTGTATGCCGTCCTCCCCTGGTCCGGTGTTTGTGTTCCCCACCCCTCACAGACTGC
CTGAGCTCTTCTGTAAGCTGGGGTAGGGTGATGGCAGTGCTCCGGGAACTGGGCCTGCAGCCTTCCTCTTCTGGG
ACTGCTGTGAGGCAGAGGAATGATGGAGAATCTAGTGTAGCAGCCTCCAGGCAGGATTCAGCACAACACTGGGGA
GTCACCCTTCCCTCGGGCCTCTGCCTACCAACAACTGGGCTTATCACTGGGAAAACACAAAAAATTACACAACCC
AGCAACAACAAAAGAACTAGTCCTCTTAGAATTTCTTGCGCTTTGATTTTTTTAGGGCTTGTGCCCTGTTTCACT
TATAGGGTCTAGAATGCTTGTGTTGAGTAAAAAGGAGATTCCCAATATTCAAAGCTGCTAAATGTTCTCTTTGCC
ATAAAGACTCCGTGTAACTGTGTGAACACTTGGGATTTTTCTCCTCTGTCCCGAGGTCGTCGTCTGCTTTCTTTT
TTGGGTTTCTTTCTAGAAGATTGAGAAGTGCATATGACAGGCTGAGAGCACCTCCCCAAACACACAAGCTCTCAG
CCACAGGCAGCTTCTCCACAGCCCCAGCTTCGCACAGGCTCCTGGAGGGCTGCCTGGGGGAGGCAGACATGGGAG
TGCCAAGGTGGCCAGATGGTTCCAGGACTACAATGTCTTTATTTTTAACTGTTTGCCACTGCTGCCCTCACCCCT
GCCCGGCTCTGGAGTACCGTCTGCCCCAGACAAGTGGGAGTGAAATGGGGGTGGGGGGAAGCACTGATTCCCAGT
TAGGGGGTGCCTAACTGAGCAGTAGGGATAGAAGGTGTGAACCTGGGAGTGCTTTTATAAATTATTTTCCTTGTA
GATTTTATTTTTAATTTATCTCTGTGACCTGCCAGGGAGAGGGGAGAGAGAGAGAGATGCTGTTGAGCACATGAC
AAAATAAAATAAAATGGATGATTCAAAAAAAAAAA

FIGURE 111

MLSLKKYLTEGLLQFTILLSLIGVRVDVDTYLTSQLPPLREIILGPSSAYTQTQFHNLRNTLDGYGIHPKSIDLD
NYFTARRLLSQVRALDRFQVPTTEVNAWLVHRDPEGSVSGSQPNSGLALESSSGLQDVTGPDNGVRESETEQGFG
EDLEDLGAVAPPVSGDLTKEDIDLIDILWRQDIDLGAGREVFDYSHRQKEQDVEKELRDGGEQDTWAGEGAEALA
RNLLVDGETGESFPAQVPSGEDQTALSLEECLRLLEATCPFGENAEFPADISSITEAVPSESEPPALQNNLLSPL
LTGTESPFDLEQQWQDLMSIMEMQAMEVNTSASEILYSAPPGDPLSTNYSLAPNTPINQNVSLHQASLGGCSQDF
LLFSPEVESLPVASSSTLLPLAPSNSTSLNSTFGSTNLTGLFFPPQLNGTANDTAGPELPDPLGGLLDEAMLDEI
SLMDLAIEEGFNPVQASQLEEEFDSDSGLSLDSSHSPSSLSSSEGSSSSSSSSSSSSSASSSASSSFSEEGAVG
YSSDSETLDLEEAEGAVGYQPEYSKFCRMSYQDPAQLSCLPYLEHVGHNHTYNMAPSALDSADLPPPSALKKGSK
EKQADFLDKQMSRDEHRARAMKIPFTNDKIINLPVEEFNELLSKYQLSEAQLSLIRDIRRRGKNKMAAQNCRKRK
LDTILNLERDVEDLQRDKARLLREKVEFLRSLRQMKQKVQSLYQEVFGRLRDENGRPYSPSQYALQYAGDGSVLL
IPRTMADQQARRQERKPKDRRK

FIGURE 112

GGCACGAGGAAGCGCACGGCCTCGGCGACCCTCTCCGACCCGGCCGCCGCCGCC**ATG**CAGCCCTCCAGCCTTCTG
CCGCTCGCCCTCTGCCTGCTGGCTGCACCCGCCTCCGCGCTCGTCAGGATCCCGCTGCACAAGTTCACGTCCATC
CGCCGGACCATGTCGGAGGTTGGGGGCTCTGTGGAGGACCTGATTGCCAAAGGCCCCGTCTCAAAGTACTCCCAG
GCGGTGCCAGCCGTGACCGAGGGGCCCATTCCCGAGGTGCTCAAGAACTACATGGACGCCCAGTACTACGGGGAG
ATTGGCATCGGGACGCCCCCCCAGTGCTTCACAGTCGTCTTCGACACGGGCTCCTCCAACCTGTGGGTCCCCTCC
ATCCACTGCAAACTGCTGGACATCGCTTGCTGGATCCACCACAAGTACAACAGCGACAAGTCCAGCACCTACGTG
AAGAATGGTACCTCGTTTGACATCCACTATGGCTCGGGCAGCCTCTCCGGGTACCTGAGCCAGGACACTGTGTCG
GTGCCCTGCCAGTCAGCGTCGTCAGCCTCTGCCCTGGGCGGTGTCAAAGTGGAGAGGCAGGTCTTTGGGGAGGCC
ACCAAGCAGCCAGGCATCACCTTCATCGCAGCCAAGTTCGATGGCATCCTGGGCATGGCCTACCCCCGCATCTCC
GTCAACAACGTGCTGCCCGTCTTCGACAACCTGATGCAGCAGAAGCTGGTGGACCAGAACATCTTCTCCTTCTAC
CTGAGCAGGGACCCAGATGCGCAGCCTGGGGGTGAGCTGATGCTGGGTGGCACAGACTCCAAGTATTACAAGGGT
TCTCTGTCCTACCTGAATGTCACCCGCAAGGCCTACTGGCAGGTCCACCTGGACCAGGTGGAGGTGGCCAGCGGG
CTGACCCTGTGCAAGGAGGGCTGTGAGGCCATTGTGGACACAGGCACTTCCCTCATGGTGGGCCCGGTGGATGAG
GTGCGCGAGCTGCAGAAGGCCATCGGGGCCGTGCCGCTGATTCAGGGCGAGTACATGATCCCCTGTGAGAAGGTG
TCCACCCTGCCCGCGATCACACTGAAGCTGGGAGGCAAAGGCTACAAGCTGTCCCCAGAGGACTACACGCTCAAG
GTGTCGCAGGCCGGGAAGACCCTCTGCCTGAGCGGCTTCATGGGCATGGACATCCCGCCACCCAGCGGGCCACTC
TGGATCCTGGGCGACGTCTTCATCGGCCGCTACTACACTGTGTTTGACCGTGACAACAACAGGGTGGGCTTCGCC
GAGGCTGCCCGCCTC**TAG**TTCCCAAGGCGTCCGCGCGCCAGCACAGAAACAGAGGAGAGTCCCAGAGCAGGAGGC
CCCTGGCCCAGCGGCCCCTCCCACACACACCCACACACTCGCCCGCCCACTGTCCTGGGCGCCCTGGAAGCCGGC
GGCCCAAGCCCGACTTGCTGTTTTGTTCTGTGGTTTTCCCCTCCCTGGGTTCAGAAATGCTGCCTGCCTGTCTGT
CTCTCCATCTGTTTGGTGGGGGTAGAGCTGATCCAGAGCACAGATCTGTTTCGTGCATTGGAAGACCCCACCCAA
GCTTGGCAGCCGAGCTCGTGTATCCTGGGGCTCCCTTCATCTCCAGGGAGTCCCCTCCCCGGCCCTACCAGCGCC
CGCTGGGCTGAGCCCCTACCCCACACCAGGCCGTCCTCCCGGGCCCTCCCTTGGAAACCTGCCCTGCCTGAGGGC
CCCTCTGCCCAGCTTGGGCCCAGCTGGGCTCTGCCACCCTACCTGTTCAGTGTCCCGGGCCCGTTGAGGATGAGG
CCGCTAGAGGCCTGAGGATGAGCTGGAAGGAGTGAGAGGGGACAAAACCCACCTTGTTGGAGCCTGCAGGGTGGT
GCTGGGACTGAGCCAGTCCCAGGGGCATGTATTGGCCTGGAGGTGGGGTTGGGATTGGGGGCTGGTGCCAGCCTT
CCTCTGCAGCTGACCTCTGTTGTCCTCCCCTTGGGCGGCTGAGAGCCCCAGCTGACATGGAAATACAGTTGTTGG
CCTCCGGCCTCCCCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 113

MQPSSLLPLALCLLAAPASALVRIPLHKFTSIRRTMSEVGGSVEDLIAKGPVSKYSQAVPAVTEGPIPEVLKNYM
DAQYYGEIGIGTPPQCFTVVFDTGSSNLWVPSIHCKLLDIACWIHHKYNSDKSSTYVKNGTSFDIHYGSGSLSGY
LSQDTVSVPCQSASSASALGGVKVERQVFGEATKQPGITFIAAKFDGILGMAYPRISVNNVLPVFDNLMQQKLVD
QNIFSFYLSRDPDAQPGGELMLGGTDSKYYKGSLSYLNVTRKAYWQVHLDQVEVASGLTLCKEGCEAIVDTGTSL
MVGPVDEVRELQKAIGAVPLIQGEYMIPCEKVSTLPAITLKLGGKGYKLSPEDYTLKVSQAGKTLCLSGFMGMDI
PPPSGPLWILGDVFIGRYYTVFDRDNNRVGFAEAARL

FIGURE 114A

GCGCACTCGGGCACGCGCTCGGAAGTCGGGGGTCGGCGCGGAGTGCAGGCTGCTCCCGGGGTAGGTGAGGGAAGC
GCGGAGGCGGGGCGCGGGGGCAGTGGTCGGCGAGCAGCGCGGTCCTCGCTAGGGGCGCCCACCCGTCAGTCTCTC
CGGCGCGAGCCGCCGCCACCGCCCGCGCCGGAGTCAGGCCCCTGGGCCCCCAGGCTCAAGCAGCGAAGCGGCCTC
CGGGGGACGCCGCTAGGCGAGAGGAACGCGCCGGTGCCCTTGCCTTCGCCGTGACCCAGCGTGCGGGCGGCGGGA
TGAGAGGGAGCCATCGGGCCGCGCCGGCCCTGCGGCCCCGGGGGCGGCTCTGGCCCGTGCTGGCCGTGCTGGCGG
CGGCCGCCGCGGCGGGCTGTGCCCAGGCAGCCATGGACGAGTGCACGGACGAGGGCGGGCGGCCGCAGCGCTGCA
TGCCCGAGTTCGTCAACGCCGCTTTCAACGTGACTGTGGTGGCCACCAACACGTGTGGGACTCCGCCCGAGGAAT
ACTGTGTGCAGACCGGGGTGACCGGGGTCACCAAGTCCTGTCACCTGTGCGACGCCGGGCAGCCCCACCTGCAGC
ACGGGGCAGCCTTCCTGACCGACTACAACAACCAGGCCGACACCACCTGGTGGCAAAGCCAGACCATGCTGGCCG
GGGTGCAGTACCCCAGCTCCATCAACCTCACGCTGCACCTGGGAAAAGCTTTTGACATCACCTATGTGCGTCTCA
AGTTCCACACCAGCCGCCCGGAGAGCTTTGCCATTTACAAGCGCACACGGGAAGACGGGCCCTGGATTCCTTACC
AGTACTACAGTGGTTCCTGCGAGAACACCTACTCCAAGGCAAACCGCGGCTTCATCAGGACAGGAGGGGACGAGC
AGCAGGCCTTGTGTACTGATGAATTCAGTGACATTTCTCCCCTCACTGGGGGCAACGTGGCCTTTTCTACCCTGG
AAGGAAGGCCCAGCGCCTATAACTTTGACAATAGCCCTGTGCTGCAGGAATGGGTAACTGCCACTGACATCAGAG
TAACTCTTAATCGCCTGAACACTTTTGGAGATGAAGTGTTTAACGATCCCAAAGTTCTCAAGTCCTATTATTATG
CCATCTCTGATTTTGCTGTAGGTGGCAGATGTAAATGTAATGGACACGCAAGCGAGTGTATGAAGAACGAATTTG
ATAAGCTGGTGTGTAATTGCAAACATAACACATATGGAGTAGACTGTGAAAAGTGTCTTCCTTTCTTCAATGACC
GGCCGTGGAGGAGGGCAACTGCGGAAAGTGCCAGTGAATGCCTGCCCTGTGATTGCAATGGTCGATCCCAGGAAT
GCTACTTCGACCCTGAACTCTATCGTTCCACTGGCCATGGGGGCCACTGTACCAACTGCCAGGATAACACAGATG
GCGCCCACTGTGAGAGGTGCCGAGAGAACTTCTTCCGCCTTGGCAACAATGAAGCCTGCTCTTCATGCCACTGTA
GTCCTGTGGGCTCTCTAAGCACACAGTGTGATAGTTACGGCAGATGCAGCTGTAAGCCAGGAGTGATGGGGGACA
AATGTGACCGTTGCCAGCCTGGATTCCATTCTCTCACTGAAGCAGGATGCAGGCCATGCTCTTGTGATCCCTCTG
GCAGCATAGATGAATGTAATGTTGAAACAGGAAGATGTGTTTGCAAAGACAATGTCGAAGGCTTCAATTGTGAAA
GATGCAAACCTGGATTTTTTAATCTGGAATCATCTAATCCTCGGGGTTGCACACCCTGCTTCTGCTTTGGGCATT
CTTCTGTCTGTACAAACGCTGTTGGCTACAGTGTTTATTCTATCTCCTCTACCTTTCAGATTGATGAGGATGGGT
GGCGTGCGGAACAGAGAGATGGCTCTGAAGCATCTCTCGAGTGGTCCTCTGAGAGGCAAGATATCGCCGTGATCT
CAGACAGCTACTTTCCTCGGTACTTCATTGCTCCTGCAAAGTTCTTGGGCAAGCAGGTGTTGAGTTATGGTCAGA
ACCTCTCCTTCTCCTTTCGAGTGGACAGGCGAGATACTCGCCTCTCTGCCGAAGACCTTGTGCTTGAGGGAGCTG
GCTTAAGAGTATCTGTACCCTTGATCGCTCAGGGCAATTCCTATCCAAGTGAGACCACTGTGAAGTATGTCTTCA
GGCTCCATGAAGCAACAGATTACCCTTGGAGGCCTGCTCTTACCCCTTTTGAATTTCAGAAGCTCCTAAACAACT
TGACCTCTATCAAGATACGTGGGACATACAGTGAGAGAAGTGCTGGATATTTGGATGATGTCACCCTGGCAAGTG
CTCGTCCTGGGCCTGGAGTCCCTGCAACTTGGGTGGAGTCCTGCACCTGTCCTGTGGGATATGGAGGGCAGTTTT
GTGAGATGTGCCTCTCAGGTTACAGAAGAGAAACTCCTAATCTTGGACCATACAGTCCATGTGTGCTTTGCGCCT
GCAATGGACACAGCGAGACCTGTGATCCTGAGACAGGTGTTTGTAACTGCAGAGACAATACGGCTGGCCCGCACT
GTGAGAAGTGCAGTGATGGGTACTATGGAGATTCAACTGCAGGCACCTCCTCCGATTGCCAACCCTGTCCGTGTC
CTGGAGGTTCAAGTTGTGCTGTTGTTCCCAAGACAAAGGAGGTGGTGTGCACCAACTGTCCTACTGGCACCACTG
GTAAGAGATGTGAGCTCTGTGATGATGGCTACTTTGGAGACCCCCTGGGTAGAAACGGCCCTGTGAGACTTTGCC
GCCTGTGCCAGTGCAGTGACAACATCGATCCCAACGCAGTTGGAAATTGCAATCGCTTGACGGGAGAATGCCTGA
AGTGCATCTATAACACTGCTGGCTTCTATTGTGACCGGTGCAAAGACGGATTTTTTGGAAATCCCCTGGCTCCCA
ATCCAGCAGACAAATGCAAAGCCTGCAATTGCAATCCGTATGGGACCATGAAGCAGCAGAGCAGCTGTAACCCCG
TGACGGGGCAGTGTGAATGTTTGCCTCACGTGACTGGCCAGGACTGTGGTGCTTGTGACCCTGGATTCTACAATC
TGCAGAGTGGGCAAGGCTGTGAGAGGTGTGACTGCCATGCCTTGGGCTCCACCAATGGGCAGTGTGACATCCGCA
CCGGCCAGTGTGAGTGCCAGCCCGGCATCACTGGTCAGCACTGTGAGCGCTGTGAGGTCAACCACTTTGGGTTTG
GACCTGAAGGCTGCAAACCCTGTGACTGTCATCCTGAGGGATCTCTTTCACTTCAGTGCAAAGATGATGGTCGCT
GTGAATGCAGAGAAGGCTTTGTGGGAAATCGCTGTGACCAGTGTGAAGAAAACTATTTCTACAATCGGTCTTGGC
CTGGCTGCCAGGAATGTCCAGCTTGTTACCGGCTGGTAAAGGATAAGGTTGCTGATCATAGAGTGAAGCTCCAGG
AATTAGAGAGTCTCATAGCAAACCTTGGAACTGGGGATGAGATGGTGACAGATCAAGCCTTCGAGGATAGACTAA
AGGAAGCAGAGAGGGAAGTTATGGACCTCCTTCGTGAGGCCCAGGATGTCAAAGATGTTGACCAGAATTTGATGG

FIGURE 114B

ATCGCCTACAGAGAGTGAATAACACTCTGTCCAGCCAAATTAGCCGTTTACAGAATATCCGGAATACCATTGAAG
AGACTGGAAACTTGGCTGAACAAGCGCGTGCCCATGTAGAGAACACAGAGCGGTTGATTGAAATCGCATCCAGAG
AACTTGAGAAAGCAAAAGTCGCTGCTGCCAATGTGTCAGTCACTCAGCCAGAATCTACAGGGGACCCAAACAACA
TGACTCTTTTGGCAGAAGAGGCTCGAAAGCTTGCTGAACGTCATAAACAGGAAGCTGATGACATTGTTCGAGTGG
CAAAGACAGCCAATGATACGTCAACTGAGGCATACAACCTGCTTCTGAGGACACTGGCAGGAGAAAATCAAACAG
CATTTGAGATTGAAGAGCTTAATAGGAAGTATGAACAAGCGAAGAACATCTCACAGGATCTGGAAAAACAAGCTG
CCCGAGTACATGAGGAGGCCAAAAGGGCCGGTGACAAAGCTGTGGAGATCTATGCCAGCGTGGCTCAGCTGAGCC
CTTTGGACTCTGAGACACTGGAGAATGAAGCAAATAACATAAAGATGGAAGCTGAGAATCTGGAACAACTGATTG
ACCAGAAATTAAAAGATTATGAGGACCTCAGAGAAGATATGAGAGGGAAGGAACTTGAAGTCAAGAACCTTCTGG
AGAAAGGCAAGACTGAACAGCAGACCGCAGACCAACTCCTAGCCCGAGCTGATGCTGCCAAGGCCCTCGCTGAAG
AAGCTGCAAAGAAGGGACGGGATACCTTACAAGAAGCTAATGACATTCTCAACAACCTGAAAGATTTTGATAGGC
GCGTGAACGATAACAAGACGGCCGCAGAGGAGGCACTAAGGAAGATTCCTGCCATCAACCAGACCATCACTGAAG
CCAATGAAAAGACCAGAGAAGCCCAGCAGGCCCTGGGCAGTGCTGCGGCGGATGCCACAGAGGCCAAGAACAAGG
CCCATGAGGCGGAGAGGATCGCAAGCGCTGTCCAAAAGAATGCCACCAGCACCAAGGCAGAAGCTGAAAGAACTT
TTGCAGAAGTTACAGATCTGGATAATGAGGTGAACAATATGTTGAAGCAACTGCAGGAAGCAGAAAAAGAGCTAA
AGAGAAAACAAGATGACGCTGACCAGGACATGATGATGGCAGGGATGGCTTCACAGGCTGCTCAAGAAGCCGAGA
TCAATGCCAGAAAAGCCAAAAACTCTGTTACTAGCCTCCTCAGCATTATTAATGACCTCTTGGAGCAGCTGGGGC
AGCTGGATACAGTGGACCTGAATAAGCTAAACGAGATTGAAGGCACCCTAAACAAAGCCAAAGATGAAATGAAGG
TCAGCGATCTTGATAGGAAAGTGTCTGACCTGGAGAATGAAGCCAAGAAGCAGGAGGCTGCCATCATGGACTATA
ACCGAGATATCGAGGAGATCATGAAGGACATTCGCAATCTGGAGGACATCAGGAAGACCTTACCATCTGGCTGCT
TCAACACCCCGTCCATTGAAAAGCCC**TAG**TGTCTTTAGGGCTGGAAGGCAGCATCCCTCTGACAGGGGGGCAGTT
GTGAGGCCACAGAGTGCCTTGACACAAAGATTACATTTTTCAGACCCCCACTCCTCTGCTGCTGTCCATCACTGT
CCTTTTGAACCAGGAAAAGTCACAGAGTTTAAAGAGAAGCAAATTAAACATCCTGAATCGGGAACAAAGGGTTTT
ATCTAATAAAGTGTCTCTTCCATCACGTTGCTACCTTACCCACACTTCCCTCTGATTTGCGTGAGGACGTGGCAT
CCTACTTACGTACGTGGCATAACACATCGTGTGAGCCCATGTATGCTGGGGTAGAGCAAGTAGCCCTCCCCTGTC
TCATCGATCCAGCAGAACCTCCTCAGTCTCAGTACTCTTGTTTCTATAAGGAAAAGTTTTGCTACTAACAGTAGC
ATTGTGATGGCCAGTATATCCAGTCCATGGATAAAGAAAATGCATCTGCATCTCCTGCCCCTCTTCCTTCTAAGC
AAAAGGAAATAAACATCCTGTGCCAAAGGTATTGGTCATTTAGAATGTCGGTAGCCATCCATCAGTGCTTTTAGC
TATTATGAGTGTAGGACACTGAGCCATCCGTGGGTCAGGATGCAATTATTTATAAAAGTCCCCAGGTGAACATGG
CTGAAGATTTTTCTAGTATATTAATAATTGACTAGGAAGATGAACTTTTTTTCAGATCTTTGGGCAGCTGATAAT
TTAAATCTGGATGGGCAGCTTGCACTCACCAATAGACCAAAAGACATCTTTTGATATTCTTATAAATGGAACTTA
CACAGAAGAAATAGGGATATGATAACCACTAAAGTTTTGTTTTCAAAATCAAACTAATTCTTACAGCTTTTTTAT
TAGTTAGTCTTGGAACTAGTGTTAAGTATCTGGCAGAGAACAGTTAATCCCTAAGGTCTTGACAAAACAGAAGAA
AAACAAGCCTCCTCGTCCTAGTCTTTTCTAGCAAAGGGATAAAACTTAGATGGCAGCTTGTACTGTCAGAATCCC
GTGTATCCATTTGTTCTTCTGTTGGAGAGATGAGACATTTGACCCTTAGCTCCAGTTTTCTTCTGATGTTTCCAT
CTTCCAGAATCCCTCAAAAAACATTGTTTGCCAAATCCTGGTGGCAAATACTTGCACTCAGTATTTCACACAGCT
GCCAACGCTATCGAGTTCCTGCACTTTGTGATTTAAATCCACTCTAAACCTTCCCTCTAAGTGTAGAGGGAAGAC
CCTTACGTGGAGTTTCCTAGTGGGCTTCTCAACTTTTGATCCTCAGCTCTGTGGTTTTAAGACCACAGTGTGACA
GTTCCCTGCCACACACCCCCTTCCTCCTACCAACCCACCTTTGAGATTCATATATAGCCTTTAACACTATGCAAC
TTTGTACTTTGCGTAGCAGGGGCTGGGGTGGGGGGAAAGAAACCTATTATCATGGACACACTGGTGCTATTAATT
ATTTCAAATTTATATTTTTGTGTGAATGTTTTGTGTTTTGTTTATCCATGCTATAGAACAAGGAATTTATGTAGA
TATACTTAGTCCTATTTCTAGAATGACACTCTGTTCACTTTGCTCAATTTTTCCTCTTCACTGGCACAAGTATCT
GAATACCTCCTTCCCTCCCTTCTAGAGTTCTTTGGATTGTACTCCAAAGAATTGTGCCTTGTGTTTGCAGCATCT
CCATTCTCTAAATTAATATAATTGCTTTCCTCCACACCCAGCCACGTAAAGAGGTAACTTGGGTCCTCTTCCATT
GCAGTCCTGATGATCCTAACCTGCAGCACGGTGGTTTTACAATGTTCCAGAGCAGGAACGCCAGGTTGACAAGCT
ATGGTAGGATTAGGAAAGTTTGCTGAAGAGGATCTTTGACGCCACAGTGGGACTAGCCAGGAATGAGGGAGAAAT
GCCCTTTTTGGCAATTGTTGGAGCTGGATAGGTAAGTTTTATAAGGGAGTACATTTTGACTGAGCACTTAGGGCA
TCAGGAACAGTGCTACTTACTGGTGGGTAGACTGGGAGAGGTGGTGTAACTTAGTTCTTGATGATCCCACTTCCT

FIGURE 114C

GTTTCCATCTGCTTGGGATATACCAGAGTTTACCACAAGTGTTTTGACGATATACTCCTGAGCTTTCACTCTGCT
GGCTTCTCCCAGGCCTCTTCTACTATGGCAGGAGATGTGGTGTGCTGTTGCAAAGTTTTCACGTCATCGTTTCCT
GGCTAGTTCATTTCATTAAGTGGCTACATCCTAACATATGCATTGGTCAAGGTTGCAGCAAGAGGACTGAAGATT
GACTGCCAAGCTAGTTTGGGTGAAGTTCACTCCAGCAAGTCTCAGGCCACAATGGGGTGGTTTGGTTTGGTTTCC
TTTTAACTTTCTTTTTGTTATTTGCTTTTCTCCTCCACCTGTGTGGTATATTTTTTAAGCAGAATTTTATTTTTT
AAAATAAAAGGTTCTTTACAAGATGATACCTTAATTACACTCCCGCAACACAGCCATTATTTTATTGTCTAGCTC
CAGTTATCTGTATTTTATGTAATGTAATTGACAGGATGGCTGCTGCAGAATGCTGGTTGACACAGGGATTATTAT
ACTGCTATTTTTCCCTGAATTCTTTTCCTTGGAATTCCAACTGTGGACCTTTTATATGTGCCTTCACTTTAGCTG
TTTGCCTTACTCTACAGCCTTGCTCTCCGGGGGTGGTTAATAAAATGCAACACTTGGCATTTTTATGTTATAAGAA
AAACAGTATTTTATTTATAATAAAATCTGAATATTTTGTAACCCTTTA

FIGURE 115

MRGSHRAAPALRPRGRLWPVLAVLAAAAAAGCAQAAMDECTDEGGRPQRCMPEFVNAAFNVTVVATNTCGTPPEE
YCVQTGVTGVTKSCHLCDAGQPHLQHGAAFLTDYNNQADTTWWQSQTMLAGVQYPSSINLTLHLGKAFDITYVRL
KFHTSRPESFAIYKRTREDGPWIPYQYYSGSCENTYSKANRGFIRTGGDEQQALCTDEFSDISPLTGGNVAFSTL
EGRPSAYNFDNSPVLQEWVTATDIRVTLNRLNTFGDEVFNDPKVLKSYYYAISDFAVGGRCKCNGHASECMKNEF
DKLVCNCKHNTYGVDCEKCLPFFNDRPWRRATAESASECLPCDCNGRSQECYFDPELYRSTGHGGHCTNCQDNTD
GAHCERCRENFFRLGNNEACSSCHCSPVGSLSTQCDSYGRCSCKPGVMGDKCDRCQPGFHSLTEAGCRPCSCDPS
GSIDECNVETGRCVCKDNVEGFNCERCKPGFFNLESSNPRGCTPCFCFGHSSVCTNAVGYSVYSISSTFQIDEDG
WRAEQRDGSEASLEWSSERQDIAVISDSYFPRYFIAPAKFLGKQVLSYGQNLSFSFRVDRRDTRLSAEDLVLEGA
GLRVSVPLIAQGNSYPSETTVKYVFRLHEATDYPWRPALTPFEFQKLLNNLTSIKIRGTYSERSAGYLDDVTLAS
ARPGPGVPATWVESCTCPVGYGGQFCEMCLSGYRRETPNLGPYSPCVLCACNGHSETCDPETGVCNCRDNTAGPH
CEKCSDGYYGDSTAGTSSDCQPCPCPGGSSCAVVPKTKEVVCTNCPTGTTGKRCELCDDGYFGDPLGRNGPVRLC
RLCQCSDNIDPNAVGNCNRLTGECLKCIYNTAGFYCDRCKDGFFGNPLAPNPADKCKACNCNPYGTMKQQSSCNP
VTGQCECLPHVTGQDCGACDPGFYNLQSGQGCERCDCHALGSTNGQCDIRTGQCECQPGITGQHCERCEVNHFGF
GPEGCKPCDCHPEGSLSLQCKDDGRCECREGFVGNRCDQCEENYFYNRSWPGCQECPACYRLVKDKVADHRVKLQ
ELESLIANLGTGDEMVTDQAFEDRLKEAEREVMDLLREAQDVKDVDQNLMDRLQRVNNTLSSQISRLQNIRNTIE
ETGNLAEQARAHVENTERLIEIASRELEKAKVAAANVSVTQPESTGDPNNMTLLAEEARKLAERHKQEADDIVRV
AKTANDTSTEAYNLLLRTLAGENQTAFEIEELNRKYEQAKNISQDLEKQAARVHEEAKRAGDKAVEIYASVAQLS
PLDSETLENEANNIKMEAENLEQLIDQKLKDYEDLREDMRGKELEVKNLLEKGKTEQQTADQLLARADAAKALAE
EAAKKGRDTLQEANDILNNLKDFDRRVNDNKTAAEEALRKIPAINQTITEANEKTREAQQALGSAAADATEAKNK
AHEAERIASAVQKNATSTKAEAERTFAEVTDLDNEVNNMLKQLQEAEKELKRKQDDADQDMMMAGMASQAAQEAE
INARKAKNSVTSLLSIINDLLEQLGQLDTVDLNKLNEIEGTLNKAKDEMKVSDLDRKVSDLENEAKKQEAAIMDY
NRDIEEIMKDIRNLEDIRKTLPSGCFNTPSIEKP

FIGURE 116

GGCATCACCGGCCAGCCGGGTGGAGTGAGCGGCGCTGGGCTCGGGCTCCGGCTCCGCGGGCGGAAGAGGCGGCGG
CGGCGGCAGAAGCGGCGGCGGCGGCGGCGGCGGGAGCCGAGGAGGAGGTTCCGGACGCTGCTTAGGAACCGGGGA
CTCAGGAGTGCCCGCGCCCTGAGCGCTCAGCTCCAGAGGCGTC**ATG**GCTGAGTACGGGACCCTCCTGCAAGACCT
GACCAACAACATCACCCTTGAAGATCTAGAACAGCTCAAGTCGGCCTGCAAGGAAGACATCCCCAGCGAAAAGAG
TGAGGAGATCACTACTGGCAGTGCCTGGTTTAGCTTCCTGGAGAGCCACAACAAGCTGGACAAAGACAACCTCTC
CTACATTGAGCACATCTTTGAGATCTCCCGCCGTCCTGACCTACTCACTATGGTGGTTGACTACAGAACCCGTGT
GCTGAAAATCTCTGAGGAGGATGAGCTGGACACCAAGCTAACCCGTATCCCCAGTGCCAAGAAGTACAAAGACAT
TATCCGGCAGCCCTCTGAGGAAGAGATCATCAAATTGGCTCCCCCACCGAAGAAGGCC**TGA**GCAAGGGGGAGGAA
GAGGAGGAAGGTTGGACCTTCATCAGACCACTCCCTTCCCCCATCCTCCAGGAGAGGGGGCAAGGGCAACCCACC
ATCTACCCACTTACTAACCTGGTCCTAACCCCCTTACTGTGCGCGTGTGTGTGCGTGTGCGCACGCTCTGGCTGT
TTGTCTATATGTCTAGCTCATCTAGTTCCTCTTCTTAAGGGGATGGGGGTCAGGGGCTAGGGGAGGGGGCTGAGT
TTCCCCACTTTAGGAGGAGGTGGGGGCTATTTCTATGCAAATAGAAATCAGCACATTCCTCCTACTTCCCTTTCC
TCCACTCCCCCCATATCTTTAAAGTGTGGAAGCAGAAAGGACCTGCATTTTCCTACATTGAGGAGCTGACATAGG
GGTAAGGTATGGGAGAGGTAGGTGGATCCAGGGAAAAGCAGTGGGGACGGAAGGCAAAGAGACCACTCAACCCCC
ACCTGGAAGGGGCAAAGAAAAGCCAGAGTTCCATGTTTGTACTCCTGTGCTGGACTGTTTCCTGAGTACCAGCAG
GTCCCTTTTTGTCTCTCATGGGCCTAGCATAGGTATGAGCCAGGGATCCTTTCCTGGTCCCTAAGATCAAACCCC
ATGGAGCAGCCAGCGTTAGATGCCCCCACCCACCTGTACTCTGGAGAGACTGTGCTGGGAACATGTACCACTGAG
CCTGAGATGGGGATGAGGGCAGAGAGAGGGGAGCCCCCTCTTCCACTCAGTTGTTCCTACTCAGACTGTTGCACT
CTAAACCTAGGGAGGTTGAAGAATGAGACCCTTAGGTTTTAACACGAATCCTGACACCACCATCTATAGGGTCCC
AACTTGGTTATTGTAGGCAACCTTCCCTCTCTCCTTGGTGAAGAACATCCCAAGCCAGAAAGAAGTTAACTACAG
TGTTTTCCTTTGCACCGATCCCCACCCCAATTCAATCCCGGAAGGGACTTACTTAGGAAACCCTTCTTTACTAGA
TATCCTGGCCCCCTGGGCTTGTGAACACCTCCTAGCCACATCACTACAGTACAGTGAGTGACCCCAGCCTCCTGC
CTACCCCAAGATGCCCCTCCCCACCCTGACCGTGCTAACTGTGTGTACATATATATTCTACATATATGTATATTA
AAACTGCACTGCCATGTCTGCCCTTTTTTGTGGTGTCTAGCATTAACTTATTGTCTAGGCCAGAGCGGGGGTGGG
AGGGGAATGCCACAGTGAAGGGAGTGGCAGAATCAAATTGCTACATAGTCCAAACAAAAAAGAAGGCTTTTTCAA
AAAACATTAAATTCACATGCAGTCTCAGAGACTATTTAGACAAAGTTCAAGTTAGGAGCTTTTAGGATGTGGGAG
TAAAACTTTAATGGGAGGGGAGGGCTGGCTGCTGGAAGAAGGAAGAAGCCAGACTGGTTAGACAGTACTCTTAAC
TCCTAGCCCAGCCTAGCGTGCCCTGCCCCTCTGGCCACTGCTGCAGACACCTGCCTTAACACACACACCTCTAGG
ACTCCACAGTTTTGCCTTAAAGGACCTTCCCAAGTCTCCCTTTCCCTGTCTGGCTTCTCCCTTAAGAAGAGAGAG
ATACTTGTAGAATTGGGTGGGGGGAATGAGCATGAACTGTCCTTCCATTTGGGATATGTTACGTTAGAGTGAGAG
AGAGAATAAGGAGCCTTTCTTATGGAAGAAATGGGAGAAGAGAGACAGGGTTCTTTTCAGCAGAGTCTAGTAGTT
TCTCTGTAAGGCAAAATAATCTAAAAAGACTAACCTGCCCACCCACTCCTTATATTGCTGTGAGATTGCCCCTAT
CTTGTGCTCTTCTGTCTGCAGTGTGCACGGCCTTGTTCTAACCCGGAATAAAGGTGATTGATTGTATTGCAAAAA
AAAAAAAAAAA

FIGURE 117

MAEYGTLLQDLTNNITLEDLEQLKSACKEDIPSEKSEEITTGSAWFSFLESHNKLDKDNLSYIEHIFEISRRPDL
LTMVVDYRTRVLKISEEDELDTKLTRIPSAKKYKDIIRQPSEEEIIKLAPPPKKA

FIGURE 118

CATCTTTGTCAGTGCACAAA**ATG**GCGCCCTACAGCCTACTGGTGACTCGGCTGCAGAAAGCTCTGGGTGTGCGGC
AGTACCATGTGGCCTCAGTCCTGTGCCAACGGGCCAAGGTGGCGATGAGCCACTTTGAGCCCAACGAGTACATCC
ATTATGACCTGCTAGAGAAGAACATTAACATTGTTCGCAAACGACTGAACCGGCCGCTGACACTCTCGGAGAAGA
TTGTGTATGGACACCTGGATGACCCCGCCAGCCAGGAAATTGAGCGAGGCAAGTCGTACCTGCGGCTGCGGCCGG
ACCGTGTGGCCATGCAGGATGCGACGGCCCAGATGGCCATGCTCCAGTTCATCAGCAGCGGGCTGTCCAAGGTGG
CTGTGCCATCCACCATCCACTGTGACCATCTGATTGAAGCCCAGGTTGGGGGCGAGAAAGACCTGCGCCGGGCCA
AGGACATCAACCAGGAAGTTTATAATTTCCTGGCAACTGCAGGTGCCAAATATGGCGTGGGCTTCTGGAAGCCTG
GATCTGGAATCATTCACCAGATTATTCTGGAAAACTATGCGTACCCTGGTGTTCTTCTGATTGGCACTGACTCCC
ACACCCCCAATGGTGGCGGCCTTGGGGGCATCTGCATTGGAGTTGGGGGTGCCGATGCTGTGGATGTCATGGCTG
GGATCCCCTGGGAGCTGAAGTGCCCCAAGGTGATTGGCGTGAAGCTGACGGGCTCTCTCTCCGGTTGGTCCTCAC
CCAAAGATGTGATCCTGAAGGTGGCAGGCATCCTCACGGTGAAAGGTGGCACAGGTGCAATCGTGGAATACCACG
GGCCTGGTGTAGACTCCATCTCCTGCACTGGCATGGCGACAATCTGCAACATGGGTGCAGAAATTGGGGCCACCA
CTTCCGTGTTCCCTTACAACCACAGGATGAAGAAGTACCTGAGCAAGACCGGCCGGGAAGACATTGCCAATCTAG
CTGATGAATTCAAGGATCACTTGGTGCCTGACCCTGGCTGCCATTATGACCAACTAATTGAAATTAACCTCAGTG
AGCTGAAGCCACACATCAATGGGCCCTTCACCCCTGACCTGGCTCACCCTGTGGCAGAAGTGGGCAAGGTGGCAG
AGAAGGAAGGATGGCCTCTGGACATCCGAGTGGGTCTAATTGGTAGCTGCACCAATTCAAGCTATGAAGATATGG
GGCGCTCAGCAGCTGTGGCCAAGCAGGCACTGGCCCATGGCCTCAAGTGCAAGTCCCAGTTCACCATCACTCCAG
GTTCCGAGCAGATCCGCGCCACCATTGAGCGGGACGGCTATGCACAGATCTTGAGGGATCTGGGTGGCATTGTCC
TGGCCAATGCTTGTGGCCCCTGCATTGGCCAGTGGGACAGGAAGGACATCAAGAAGGGGGAGAAGAACACAATCG
TCACCTCCTACAACAGGAACTTCACGGGCCGCAACGACGCAAACCCCGAGACCCATGCCTTTGTCACGTCCCCAG
AGATTGTCACAGCCCTGGCCATTGCGGGAACCCTCAAGTTCAACCCAGAGACCGACTACCTGACGGGCACGGATG
GCAAGAAGTTCAGGCTGGAGGCTCCGGATGCAGATGAGCTTCCCAAAGGGGAGTTTGACCCAGGGCAGGACACCT
ACCAGCACCCACCCAAGGACAGCAGCGGGCAGCATGTGGACGTGAGCCCCACCAGCCAGCGCCTGCAGCTCCTGG
AGCCTTTTGACAAGTGGGATGGCAAGGACCTGGAGGACCTGCAGATCCTCATCAAGGTCAAAGGGAAGTGTACCA
CTGACCACATCTCAGCTGCTGGCCCCTGGCTCAAGTTCCGTGGGCACTTGGATAACATCTCCAACAACCTGCTCA
TTGGTGCCATCAACATTGAAAACGGCAAGGCCAACTCCGTGCGCAATGCCGTCACTCAGGAGTTTGGCCCCGTCC
CTGACACTGCCCGCTACTACAAGAAACATGGCATCAGGTGGGTGGTGATCGGAGACGAGAACTACGGCGAGGGCT
CGAGCCGGGAGCATGCAGCTCTGGAGCCTCGCCACCTTGGGGGCCGGGCCATCATCACCAAGAGCTTTGCCAGGA
TCCACGAGACCAACCTGAAGAAACAGGGCCTGCTGCCTCTGACCTTCGCTGACCCGGCTGACTACAACAAGATTC
ACCCTGTGGACAAGCTGACCATTCAGGGCCTGAAGGACTTCACCCCTGGCAAGCCCCTGAAGTGCATCATCAAGC
ACCCCAACGGGACCCAGGAGACCATCCTCCTGAACCACACCTTCAACGAGACGCAGATTGAGTGGTTCCGCGCTG
GCAGTGCCCTCAACAGAATGAAGGAACTGCAACAG**TGA**GGGCAGTGCCTCCCCGCCGCGCTGGCGTCAAGTTCAG
CTCCACGTGTGCCATCAGTGGATCCGATCCGTCCAGCCATGGCTTCCTATTCCAAGTAGTGTAACCC

FIGURE 119

MAPYSLLVTRLQKALGVRQYHVASVLCQRAKVAMSHFEPNEYIHYDLLEKNINIVRKRLNRPLTLSEKIVYGHLD
DPASQEIERGKSYLRLRPDRVAMQDATAQMAMLQFISSGLSKVAVPSTIHCDHLIEAQVGGEKDLRRAKDINQEV
YNFLATAGAKYGVGFWKPGSGIIHQIILENYAYPGVLLIGTDSHTPNGGGLGGICIGVGGADAVDVMAGIPWELK
CPKVIGVKLTGSLSGWSSPKDVILKVAGILTVKGGTGAIVEYHGPGVDSISCTGMATICNMGAEIGATTSVFPYN
HRMKKYLSKTGREDIANLADEFKDHLVPDPGCHYDQLIEINLSELKPHINGPFTPDLAHPVAEVGKVAEKEGWPL
DIRVGLIGSCTNSSYEDMGRSAAVAKQALAHGLKCKSQFTITPGSEQIRATIERDGYAQILRDLGGIVLANACGP
CIGQWDRKDIKKGEKNTIVTSYNRNFTGRNDANPETHAFVTSPEIVTALAIAGTLKFNPETDYLTGTDGKKFRLE
APDADELPKGEFDPGQDTYQHPPKDSSGQHVDVSPTSQRLQLLEPFDKWDGKDLEDLQILIKVKGKCTTDHISAA
GPWLKFRGHLDNISNNLLIGAINIENGKANSVRNAVTQEFGPVPDTARYYKKHGIRWVVIGDENYGEGSSREHAA
LEPRHLGGRAIITKSFARIHETNLKKQGLLPLTFADPADYNKIHPVDKLTIQGLKDFTPGKPLKCIIKHPNGTQE
TILLNHTFNETQIEWFRAGSALNRMKELQQ

FIGURE 120

CTCCGAACAGGAAGAGGACGAAAAAAATAACCGTCCGCGACGCCGAGACAAACCGGACCCGCAACCACC**ATG**AAC
AGCAAAGGTCAATATCCAACACAGCCAACCTACCCTGTGCAGCCTCCTGGGAATCCAGTATACCCTCAGACCTTG
CATCTTCCTCAGGCTCCACCCTATACCGATGCTCCACCTGCCTACTCAGAGCTCTATCGTCCGAGCTTTGTGCAC
CCAGGGGCTGCCACAGTCCCCACCATGTCAGCCGCATTTCCTGGAGCCTCTCTGTATCTTCCCATGGCCCAGTCT
GTGGCTGTTGGGCCTTTAGGTTCCACAATCCCCATGGCTTATTATCCAGTCGGTCCCATCTATCCACCTGGCTCC
ACAGTGCTGGTGGAAGGAGGGTATGATGCAGGTGCCAGATTTGGAGCTGGGGCTACTGCTGGCAACATTCCTCCT
CCACCTCCTGGATGCCCTCCCAATGCTGCTCAGCTTGCAGTCATGCAGGGAGCCAACGTCCTCGTAACTCAGCGG
AAGGGGAACTTCTTCATGGGTGGTTCAGATGGTGGCTACACCATCTGG**TGA**GGAACCAAGGCCACCTCTGTGCCG
GGAAAGACATCACATACCTTCAGCACTTCTCACAATGTAACTGCTTTAGTCATATTAACCTGAAGTTGCAGTTTA
GACACATGTTGTTGGGGTGTCTTTCTGGTGCCCAAACTTTCAGGCACTTTTCAAATTTAATAAGGAACCATGTAA
TGGTAGCAGTACCTCCCTAAAGCATTTTGAGGTAGGGGAGGTATCCATTCATAAAATGAATGTGGGTGAAGCCGC
CCTAAGGATTTTCCTTTAATTTCTCTGGAGTAATACTGTACCATACTGGTCTTTGCTTTTAGTAATAAAACATCA
AATTAGGTTTGGAGGGAACTTTGATCTTCCTAAGAATTAAAGTTGCCAAATTATTCTGATTGGTCTTTAATCTCC
TTTAAGTCTTTGATATATATTACTTGTTATAAATGGAACGCATTAGTTGTCTGCCTTTTCCTTTCCATCCCTTGC
CCCACCCATCCCATCTCCAACCCTAGTCTTCCATTTCCTCCCGCCAGTCTCCATTGAATCAATGGTGCAGGACAG
AAAGCCAGTCAGACTAATTTCCTTCTTTCCTCGCACTTCTCCCCACTCGTCATCTTTTAACTAGTGTTTCACAAG
GATCCTCTGAAACCCTCTCTGTGCCCCAAGTACAGATGCCATTACTTCTGCTTTCGTATCTCCTCAGGCAAAAGT
GGAGGGTGCCTTATGGGCCCTCCTCATAGGTTGTCTCTGCATACACGAACCTAACCCAAATTTGCTTTGGTGCCA
GAAAAACTGAGCTATGTTTGAACAAAGATGTCGTGCAAACTGTACTGTGAACAACAGTTGGTTTAAAATATGAGG
GGCAAGGAGGAGGATGCATTTCAAAAGCTTGATTGATGTGTTCAGAGCTAAATTAAGAGGAGTTTTCAGATCAAA
AACTGGTTACCATTTTTTGTCAGAGTGTCTGATGCGGCCACTCATTCGGCTCCCCAGAATTCCTAGACTGGGTTA
ATAGGGTCATATTGTGAATGTCTCACTACAAAATGACTTGAGTCCAGTGAAATCTCATTAGGGTTTAAGAATATT
TCAGGGATCCTTAATGTTTTGATTTTTGTTTTCTGAAATTGGATTTTATTTTATTTTATCTTATAATTTCAGTTC
ATCTAAATTGTGTGTTCTGTACATGTGATGTTTGACTGTACCATTGACTGTTATGGAAGTTCAGCGTTGTATGTC
TCTCTCTACACTGTGGTGCACTTAACTTGTGGAATTTTTATACTAAAAATGTAGAATAAAGACTATTTTGAAGAT
TTGAATAAAGTGATGAAGTTGC

FIGURE 121

MNSKGQYPTQPTYPVQPPGNPVYPQTLHLPQAPPYTDAPPAYSELYRPSFVHPGAATVPTMSAAFPGASLYLPMA
QSVAVGPLGSTIPMAYYPVGPIYPPGSTVLVEGGYDAGARFGAGATAGNIPPPPPGCPPNAAQLAVMQGANVLVT
QRKGNFFMGGSDGGYTIW

FIGURE 122A

GGCACGAGGAAGGAGTCGGGGTCTTCCCCAGTTTTCTCAGCCAGGCGGCGGCGGCGACTGGCA**ATG**TTTGGCCTC
AAAAGAAACGCGGTAATCGGACTCAACCTCTACTGTGGGGGGGCCGGCTTGGGGGCCGGCAGCGGCGGCGCCACC
CGCCCGGGAGGGCGACTTTTGGCTACGGAGAAGGAGGCCTCGGCCCGGCGAGAGATAGGGGGAGGGGAGGCCGGC
GCGGTGATTGGCGGAAGCGCCGGCGCAAGCCCCCCGTCCACCCTCACGCCAGACTCCCGGAGGGTCGCGCGGCCG
CCGCCCATTGGCGCCGAGGTCCCCGACGTCACCGCGACCCCCGCGAGGCTGCTTTTCTTCGCGCCCACCCGCCGC
GCGGCGCCGCTTGAGGAGATGGAAGCCCCGGCCGCTGACGCCATCATGTCGCCCGAAGAGGAGCTGGACGGGTAC
GAGCCGGAGCCTCTCGGGAAGCGGCCGGCTGTCCTGCCGCTGCTGGAGTTGGTCGGGGAATCTGGTAATAACACC
AGTACGGACGGGTCACTACCCTCGACGCCGCCGCCAGCAGAGGAGGAGGAGGACGAGTTGTACCGGCAGTCGCTG
GAGATTATCTCTCGGTACCTTCGGGAGCAGGCCACCGGCGCCAAGGACACAAAGCCAATGGGCAGGTCTGGGGCC
ACCAGCAGGAAGGCGCTGGAGACCTTACGACGGGTTGGGGATGGCGTGCAGCGCAACCACGAGACGGCCTTCCAA
GGCATGCTTCGGAAACTGGACATCAAAAACGAAGACGATGTGAAATCGTTGTCTCGAGTGATGATCCATGTTTTC
AGCGACGGCGTAACAAACTGGGGCAGGATTGTGACTCTCATTTCTTTTGGTGCCTTTGTGGCTAAACACTTGAAG
ACCATAAACCAAGAAAGCTGCATCGAACCATTAGCAGAAAGTATCACAGACGTTCTCGTAAGGACAAAACGGGAC
TGGCTAGTTAAACAAAGAGGCTGGGATGGGTTTGTGGAGTTCTTCCATGTAGAGGACCTAGAAGGTGGCATCAGG
AATGTGCTGCTGGCTTTTGCAGGTGTTGCTGGAGTAGGAGCTGGTTTGGCATATCTAATAAGA**TAG**CCTTACTGT
AAGTGCAATAGTTGACTTTTAACCAACCACCACCACCACCAAAACCAGTTTATGCAGTTGGACTCCAAGCTGTAA
CTTCCTAGAGTTGCACCCTAGCAACCTAGCCAGAAAAGCAAGTGGCAAGAGGATTATGGCTAACAAGAATAAATA
CATGGGAAGAGTGCTCCCCATTGATTGAAGAGTCACTGTCTGAAAGAAGCAAAGTTCAGTTTCAGCAACAAACAA
ACTTTGTTTGGGAAGCTATGGAGGAGGACTTTTAGATTTAGTGAAGATGGTAGGGTGGAAAGACTTAATTTCCTT
GTTGAGAACAGGAAAGTGGCCAGTAGCCAGGCAAGTCATAGAATTGATTACCCGCCGAATTCATTAATTTACTGT
AGTGTTAAGAGAAGCACTAAGAATGCCAGTGACCTGTGTAAAAGTTACAAGTAATAGAACTATGACTGTAAGCCT
CAGTACTGTACAAGGGAAGCTTTTCCTCTCTCTAATTAGCTTTCCCAGTATACTTCTTAGAAAGTCCAAGTGTTC
AGGACTTTTATACCTGTTATACTTTGGCTTGGTTTCCATGATTCTTACTTTATTAGCCTAGTTTATCACCAATAA
TACTTGACGGAAGGCTCAGTAATTAGTTATGAATATGGATATCCTCAATTCTTAAGACAGCTTGTAAATGTATTT
GTAAAAATTGTATATATTTTTACAGAAAGTCTATTTCTTTGAAACGAAGGAAGTATCGAATTTACATTAGTTTTT
TTCATACCCTTTTGAACTTTGCAACTTCCGTAATTAGGAACCTGTTTCTTACAGCTTTTCTATGCTAAACTTTGT
TCTGTTCAGTTCTAGAGTGTATACAGAACGAATTGATGTGTAACTGTATGCAGACTGGTTGTAGTGGAACAAATC
TGATAACTATGCAGGTTTAAATTTTCTTATCTGATTTTGGTAAGTATTCCTTAGATAGGTTTTTCTTTGAAAACC
TGGGATTGAGAGGTTGATGAATGGAAATTCTTTCACTTCATTATATGCAAGTTTTCAATAATTAGGTCTAAGTGG
AGTTTTAAGGTTACTGATGACTTACAAATAATGGGCTCTGATTGGGCAATACTCATTTGAGTTCCTTCCATTTGA
CCTAATTTAACTGGTGAAATTTAAAGTGAATTCATGGGCTCATCTTTAAAGCTTTTACTAAAAGATTTTCAGCTG
AATGGAACTCATTAGCTGTGTGCATATAAAAAGATCACATCAGGTGGATGGAGAGACATTTGATCCCTTGTTTGC
TTAATAAATTATAAAATGATGGCTTGGAAAAGCAGGCTAGTCTAACCATGGTGCTATTATTAGGCTTGCTTGTTA
CACACACAGGTCTAAGCCTAGTATGTCAATAAAGCAAATACTTACTGTTTTGTTTCTATTAATGATTCCCAAACC
TTGTTGCAAGTTTTTGCATTGGCATCTTTGGATTTCAGTCTTGATGTTTGTTCTATCAGACTTAACCTTTTATTT
CCTGTCCTTCCTTGAAATTGCTGATTGTTCTGCTCCCTCTACAGATATTTATATCAATTCCTACAGCTTTCCCCT
GCCATCCCTGAACTCTTTCTAGCCCTTTTAGATTTTGGCACTGTGAAACCCCTGCTGGAAACCTGAGTGACCCTC
CCTCCCCACCAAGAGTCCACAGACCTTTCATCTTTCACGAACTTGATCCTGTTAGCAGGTGGTAATACCATGGGT
GCTGTGACACTAACAGTCATTGAGAGGTGGGAGGAAGTCCCTTTTCCTTGGACTGGTATCTTTTCAACTATTGTT
TTATCCTGTCTTTGGGGGCAATGTGTCAAAAGTCCCCTCAGGAATTTTCAGAGGAAAGAACATTTTATGAGGCTT
TCTCTAAAGTTTCCTTTGTATAGGAGTATGCTCACTTAAATTTACAGAAAGAGGTGAGCTGTGTTAAACCTCAGA
GTTTAAAAGCTACTGATAAACTGAAGAAAGTGTCTATATTGGAACTAGGGTCATTTGAAAGCTTCAGTCTCGGAA
CATGACCTTTAGTCTGTGGACTCCATTTAAAAATAGGTATGAATAAGATGACTAAGAATGTAATGGGGAAGAACT
GCCCTGCCTGCCCATCTCAGAGCCATAAGGTCATCTTTGCTAGAGCTATTTTTACCTATGTATTTATCGTTCTTG
ATCATAAGCCGCTTATTTATATCATGTATCTCTAAGGACCTAAAAGCACTTTATGTAGTTTTTAATTAATCTTAA
GATCTGGTTACGGTAACTAAAAAAGCCTGTCTGCCAAATCCAGTGGAAACAAGTGCATAGATGTGAATTGGTTTT
TAGGGGCCCCACTTCCCAATTCATTAGGTATGACTGTGGAAATACAGACAAGGATCTTAGTTGATATTTTGGGCT
TGGGGCAGTGAGGGCTTAGGACACCCCAAGTGGTTTGGGAAAGGAGGAGGGGAGTGGTGGGTTTATAGGGGGAGG

FIGURE 122B

AGGAGGCAGGTGGTCTAAGTGCTGACTGGCTACGTAGTTTGGGCAAATCCTCCAAAAGGGAAAGGGAGGATTTGC
TTAGAAGGATGGCGCTCCCAGTGACTACTTTTTGACTTCTGTTTGTCTTACGCTTCTCTCAGGGAAAAACATGCA
GTCCTCTAGTGTTTCATGTACATTCTGTGGGGGGTGAACACCTTGGTTCTGGTTAAACAGCTGTACTTTTGATAG
CTGTGCCAGGAAGGGTTAGGACCAACTACAAATTAATGTTGGTTGTCAAATGTAGTGTGTTTCCCTAACTTTCTG
TTTTTCCTGAGAAAAAAAAATAAATCTTTTATTCAAAAAAAAAAAAAAAAAAA

FIGURE 123

MFGLKRNAVIGLNLYCGGAGLGAGSGGATRPGGRLLATEKEASARREIGGGEAGAVIGGSAGASPPSTLTPDSRR
VARPPPIGAEVPDVTATPARLLFFAPTRRAAPLEEMEAPAADAIMSPEEELDGYEPEPLGKRPAVLPLLELVGES
GNNTSTDGSLPSTPPPAEEEEDELYRQSLEIISRYLREQATGAKDTKPMGRSGATSRKALETLRRVGDGVQRNHE
TAFQGMLRKLDIKNEDDVKSLSRVMIHVFSDGVTNWGRIVTLISFGAFVAKHLKTINQESCIEPLAESITDVLVR
TKRDWLVKQRGWDGFVEFFHVEDLEGGIRNVLLAFAGVAGVGAGLAYLIR

FIGURE 124

CACGCTTGCCGCCGCCCCGCAGAA**ATG**CTTCGGTTACCCACAGTCTTTCGCCAGATGAGACCGGTGTCCAGGGTA
CTGGCTCCTCATCTCACTCGGGCTTATGCCAAAGATGTAAAATTTGGTGCAGATGCCCGAGCCTTAATGCTTCAA
GGTGTAGACCTTTTAGCCGATGCTGTGGCCGTTACAATGGGGCCAAAGGGAAGAACAGTGATTATTGAGCAGGGT
TGGGGAAGTCCCAAAGTAACAAAAGATGGTGTGACTGTTGCAAAGTCAATTGACTTAAAAGATAAATACAAGAAC
ATTGGAGCTAAACTTGTTCAAGATGTTGCCAATAACACAAATGAAGAAGCTGGGGATGGCACTACCACTGCTACT
GTACTGGCACGCTCTATAGCCAAGGAAGGCTTCGAGAAGATTAGCAAAGGTGCTAATCCAGTGGAAATCAGGAGA
GGTGTGATGTTAGCTGTTGATGCTGTAATTGCTGAACTTAAAAAGCAGTCTAAACCTGTGACCACCCCTGAAGAA
ATTGCACAGGTTGCTACGATTTCTGCAAACGGAGACAAAGAAATTGGCAATATCATCTCTGATGCAATGAAAAAA
GTTGGAAGAAAGGGTGTCATCACAGTAAAGGATGGAAAAACACTGAATGATGAATTAGAAATTATTGAAGGCATG
AAGTTTGATCGAGGCTATATTTCTCCATACTTTATTAATACATCAAAAGGTCAGAAATGTGAATTCCAGGATGCC
TATGTTCTGTTGAGTGAAAAGAAAATTTCTAGTATCCAGTCCATTGTACCTGCTCTTGAAATTGCCAATGCTCAC
CGTAAGCCTTTGGTCATAATCGCTGAAGATGTTGATGGAGAAGCTCTAAGTACACTCGTCTTGAATAGGCTAAAG
GTTGGTCTTCAGGTTGTGGCAGTCAAGGCTCCAGGGTTTGGTGACAATAGAAAGAACCAGCTTAAAGATATGGCT
ATTGCTACTGGTGGTGCAGTGTTTGGAGAAGAGGGATTGACCCTGAATCTTGAAGACGTTCAGCCTCATGACTTA
GGAAAAGTTGGAGAGGTCATTGTGACCAAAGACGATGCCATGCTCTTAAAAGGAAAAGGTGACAAGGCTCAAATT
GAAAAACGTATTCAAGAAATCATTGAGCAGTTAGATGTCACAACTAGTGAATATGAAAAGGAAAAACTGAATGAA
CGGCTTGCAAAACTTTCAGATGGAGTGGCTGTGCTGAAGGTTGGTGGGACAAGTGATGTTGAAGTGAATGAAAAG
AAAGACAGAGTTACAGATGCCCTTAATGCTACAAGAGCTGCTGTTGAAGAAGGCATTGTTTTGGGAGGGGGTTGT
GCCCTCCTTCGATGCATTCCAGCCTTGGACTCATTGACTCCAGCTAATGAAGATCAAAAAATTGGTATAGAAATT
ATTAAAAGAACACTCAAAATTCCAGCAATGACCATTGCTAAGAATGCAGGTGTTGAAGGATCTTTGATAGTTGAG
AAAATTATGCAAAGTTCCTCAGAAGTTGGTTATGATGCTATGGCTGGAGATTTTGTGAATATGGTGGAAAAAGGA
ATCATTGACCCAACAAAGGTTGTGAGAACTGCTTTATTGGATGCTGCTGGTGTGGCCTCTCTGTTAACTACAGCA
GAAGTTGTAGTCACAGAAATTCCTAAAGAAGAGAAGGACCCTGGAATGGGTGCAATGGGTGGAATGGGAGGTGGT
ATGGGAGGTGGCATGTTC**TAA**CTCCTAGACTAGTGCTTTACCTTTATTAATGAACTGTGACAGGAAGCCCAAGGC
AGTGTTCCTCACCAATAACTTCAGAGAAGTCAGTTGGAGAAAATGAAGAAAAAGGCTGGCTGAAAATCACTATAA
CCATCAGTTACTGGTTTCAGTTGACAAAATATATAATGGTTTACTGCTGTCATTGTCCATGCCTACAGATAATTT
ATTTTGTATTTTTGAATAAAAAACATTTGTACATTCCTGATACTGGGTACAAGAGCCATGTACCAGTGTACTGCT
TTCAACTTAAATCACTGAGGCATTTTTACTACTATTCTGTTAAAATCAGGATTTTAGTGCTTGCCACCACCAGAT
GAGAAGTTAAGCAGCCTTTCTGTGGAGAGTGAGAATAATTGTGTACAAAGTAGAGAAGTATCCAATTATGTGACA
ACCTTTGTGTAATAAAAATTTGTTTAA

FIGURE 125

MLRLPTVFRQMRPVSRVLAPHLTRAYAKDVKFGADARALMLQGVDLLADAVAVTMGPKGRTVIIEQGWGSPKVTK
DGVTVAKSIDLKDKYKNIGAKLVQDVANNTNEEAGDGTTTATVLARSIAKEGFEKISKGANPVEIRRGVMLAVDA
VIAELKKQSKPVTTPEEIAQVATISANGDKEIGNIISDAMKKVGRKGVITVKDGKTLNDELEIIEGMKFDRGYIS
PYFINTSKGQKCEFQDAYVLLSEKKISSIQSIVPALEIANAHRKPLVIIAEDVDGEALSTLVLNRLKVGLQVVAV
KAPGFGDNRKNQLKDMAIATGGAVFGEEGLTLNLEDVQPHDLGKVGEVIVTKDDAMLLKGKGDKAQIEKRIQEII
EQLDVTTSEYEKEKLNERLAKLSDGVAVLKVGGTSDVEVNEKKDRVTDALNATRAAVEEGIVLGGGCALLRCIPA
LDSLTPANEDQKIGIEIIKRTLKIPAMTIAKNAGVEGSLIVEKIMQSSSEVGYDAMAGDFVNMVEKGIIDPTKVV
RTALLDAAGVASLLTTAEVVVTEIPKEEKDPGMGAMGGMGGGMGGGMF

FIGURE 126

CGGGGCGGCAGGCTTCTCGAGCTCCGGGCCCGCGGCAACCTCGGGCGCTGTTCTGCAGGCCGCGACCGGC**ATG**TA
CGAGCAACTCAAGGGCGAGTGGAACCGTAAAAGCCCCAATCTTAGCAAGTGCGGGGAAGAGCTGGGTCGACTCAA
GCTAGTTCTTCTGGAGCTCAACTTCTTGCCAACCACAGGGACCAAGCTGACCAAACAGCAGCTAATTCTGGCCCG
TGACATACTGGAGATCGGGGCCCAATGGAGCATCCTACGCAAGGACATCCCCTCCTTCGAGCGCTACATGGCCCA
GCTCAAATGCTACTACTTTGATTACAAGGAGCAGCTCCCCGAGTCAGCCTATATGCACCAGCTCTTGGGCCTCAA
CCTCCTCTTCCTGCTGTCCCAGAACCGGGTGGCTGAGTTCCACACGGAGTTGGAGCGGCTGCCTGCCAAGGACAT
ACAGACCAATGTCTACATCAAGCACCCAGTGTCCCTGGAGCAATACCTGATGGAGGGCAGCTACAACAAAGTGTT
CCTGGCCAAGGGTAACATCCCCGCCGAGAGCTACACCTTCTTCATTGACATCCTGCTCGACACTATCAGGGATGA
GATCGCTGGGTGCATCGAGAAGGCCTACGAGAAAATCCTTTTCACTGAGGCCACCCGGATCCTCTTCTTCAACAC
ACCCAAAAAGATGACAGACTACGCCAAGAAGCGAGGGTGGGTCCTGGGCCCCAACAACTACTACAGTTTTGCCAG
CCAGCAGCAGAAGCCGGAAGACACCACCATTCCCTCCACAGAACTGGCCAAACAGGTCATCGAGTATGCCCGGCA
GCTGGAGATGATCGTC**TGA**GCCCCCCGGGCACTGGGTGGGGCAGGGCACGAGTTATTTAAAACAGTTACACTGCA
GGGTTTCGCCCAATAAAGGTGGACTGAC

FIGURE 127

MYEQLKGEWNRKSPNLSKCGEELGRLKLVLLELNFLPTTGTKLTKQQLILARDILEIGAQWSILRKDIPSFERYM
AQLKCYYFDYKEQLPESAYMHQLLGLNLLFLLSQNRVAEFHTELERLPAKDIQTNVYIKHPVSLEQYLMEGSYNK
VFLAKGNIPAESYTFFIDILLDTIRDEIAGCIEKAYEKILFTEATRILFFNTPKKMTDYAKKRGWVLGPNNYYSF
ASQQQKPEDTTIPSTELAKQVIEYARQLEMIV

FIGURE 128A

GTGGTGTCGGTGTCGGCAGCATCCCCGGCGCCCTGCTGCGGTCGCCGGAGCCCTCGGCCTCTGTTCTCCTCCCCC
TCCCGCCCTTACCTCCACGCGGGACCGCCCGCGCCAGTCAACTCCTCGCACTTTGCCCCTGCTTGGCAGCGGATA
AAAGGGGGCTGAGGAAATACCGGACACGTCCACCCGTTGCCAGCTCTAGCCTTTAAATTCCCGGCTCGGGACCTC
CACGCACCGGGCTAGCGCCGACAACCAGCTAGCGTGCAAGGCGCCGCGGCTCAGCGCGTACCGGCGGGCTTCGAA
ACCGCAGTCCTCCGGCGACCCCGAACTCCGCTCCGGAGCCTCAGCCCCCTGGAAAGTGATCCCGGCATCGGAGAG
CCAAG**ATG**CCGGCCCACTTGCTGCAGGACGATATCTCTAGCTCCTATACCACCACCACCACCATTACAGCGCCTC
CCTCCAGGGTCCTGCAGAATGGAGGAGATAAGTTGGAGACGATGCCCCTCTACTTGGAAGACGACATTCGCCCTG
ATATAAAAGATGATATATATGACCCCACCTACAAGGATAAGGAAGGCCCAAGCCCCAAGGTTGAATATGTCTGGA
GAAACATCATCCTTATGTCTCTGCTACACTTGGGAGCCCTGTATGGGATCACTTTGATTCCTACCTGCAAGTTCT
ACACCTGGCTTTGGGGGGTATTCTACTATTTTGTCAGTGCCCTGGGCATAACAGCAGGAGCTCATCGTCTGTGGA
GCCACCGCTCTTACAAAGCTCGGCTGCCCCTACGGCTCTTTCTGATCATTGCCAACACAATGGCATTCCAGAATG
ATGTCTATGAATGGGCTCGTGACCACCGTGCCCACCACAAGTTTTCAGAAACACATGCTGATCCTCATAATTCCC
GACGTGGCTTTTTCTTCTCTCACGTGGGTTGGCTGCTTGTGCGCAAACACCCAGCTGTCAAAGAGAAGGGGAGTA
CGCTAGACTTGTCTGACCTAGAAGCTGAGAAACTGGTGATGTTCCAGAGGAGGTACTACAAACCTGGCTTGCTGC
TGATGTGCTTCATCCTGCCCACGCTTGTGCCCTGGTATTTCTGGGGTGAAACTTTTCAAAACAGTGTGTTCGTTG
CCACTTTCTTGCGATATGCTGTGGTGCTTAATGCCACCTGGCTGGTGAACAGTGCTGCCCACCTCTTCGGATATC
GTCCTTATGACAAGAACATTAGCCCCCGGGAGAATATCCTGGTTTCACTTGGAGCTGTGGGTGAGGGCTTCCACA
ACTACCACCACTCCTTTCCCTATGACTACTCTGCCAGTGAGTACCGCTGGCACATCAACTTCACCACATTCTTCA
TTGATTGCATGGCCGCCCTCGGTCTGGCCTATGACCGGAAGAAAGTCTCCAAGGCCGCCATCTTGGCCAGGATTA
AAAGAACCGGAGATGGAAACTACAAGAGTGGC**TGA**GTTTGGGGTCCCTCAGGTTCCTTTTTCAAAAACCAGCCAG
GCAGAGGTTTTAATGTCTGTTTATTAACTACTGAATAATGCTACCAGGATGCTAAAGATGATGATGTTAACCCAT
TCCAGTACAGTATTCTTTTAAAATTCAAAAGTATTGAAAGCCAACAACTCTGCCTTTATGATGCTAAGCTGATAT
TATTTCTTCTCTTATCCTCTCTCTCTTCTAGGCCCATTGTCCTCCTTTTCACTTTAATCGCCCTCCTTTCCCTTA
TTGCCTCCCAGGCAAGCAGCTGGTCAGTCTTTGCTCAGTGTCCAGCTTCCAAAGCCTAGACAACCTTTCTGTAGC
CTAAAACGAATGGTCTTTGCTCCAGATAACTCTCTTTCCTTGAGCTGTTGTGAGCTTTGAAGTAGGTGGCTTGAG
CTAGAGATAAAACAGAATCTTCTGGGTAGTCCCCTGTTGATTATCTTCAGCCCAGGCTTTTGCTAGATGGAATGG
AAAAGCAACTTCATTTGACACAAAGCTTCTAAAGCXAGGTAAATTGTCGGGGGAGAGAGTTAGCATGTATGAATG
TAAGGATGAGGGAAGCGAAGGAACCTCTCGCCATGATCAGACATACAGCTGCCTACCTAATGAGGACTTCAAGCC
CCACCACATAGCATGCTTCCTTTCTCTCCTGGCTCGGGGTAAAAAGTGGCTGCGGTGTTTGGCAATGCTAATTCA
ATGCCGCAACATATAGTTGAGGCCGAGGATAAAGAAAAGACATTTTAAGTTTGTAGTAAAAGTGGTCTCTGCTGG
GGAAGGGTTTTCTTTTCTTTTTTTCTTTAATAACAAGGAGATTTCTTAGTTCATATATCAAGAAGTCTTGAAGTT
GGGTGTTTCCAGAATTGGTAAAAACAGCAGCTCATAGAATTTTGAGTATTCCATGAGCTGCTCATTACAGTTCTT
TCCTCTTTCTGCTCTGCCATCTTCAGGATATTGGTTCTTCCCCTCATAGTAATAAGATGGCTGTGGCATTTCCAA
ACATCCAAAAAAAGGGAAGGATTTAAGGAGGTGAAGTCGGGTCAAAAATAAAATATATATACATATATACATTGC
TTAGAACGTTAAACTATTAGAGTATTTCCCTTCCAAAGAGGGATGTTTGGAAAAAACTCTGAAGGAGAGGAGGAA
TTAGTTGGGATGCCAATTTCCTCTCCACTGCTGGACATGAGATGGAGAGGCTGAGGGACAGGATCTATAGGCAGC
TTCTAAGAGCGAACTTCACATAGGAAGGGATCTGAGAACACGTTCAGGGGTTGAGAAGGTTACTGAGTGAGTTAT
TGGGAGTCTTAATAAACTAGATATTAGGTCCATTCATTAATTAGTTCCAGTTTCTCCTTGAAATGAGTAAAAACT
AGAAGGCTTCTCTCCACAGTGTTGTGCCCCTTCACTCATTTTTTTTTGAGGAGAAGGGGGTCTCTGTTAACATCT
AGCCTAAAGTATACAAACTGCCTGGGGGGCAGGGTTAGGAATCTCTTCACTACCCTGATTCTTGATTCCTGGCTC
TACCCTGTCTGTCCCTTTTCTTTGACCAGATCTTTCTCTTCCCTGAACGTTTTCTTCTTTCCCTGGACAGGCAGC
CTCCTTTGTGTGTATTCAGAGGCAGTGATGACTTGCTGTCCAGGCAGCTCCCTCCTGCACACAGAATGCTCAGGG
TCACTGAACCACTGCTTCTCTTTTGAAAGTAGAGCTAGCTGCCACTTTCACGTGGCCTCCGCAGTGTCTCCACCT
ACACCCCTGTGCTCCCCTGCCACACTGATGGCTCAAGACAAGGCTGGCAAACCCTCCCAGAAACATCTCTGGCCC
AGAAAGCCTCTCTCTCCCTCCCTCTCTCATGAGAAGCCAAGCGCTCATGTTGAGCCAGTGGGCCAGCCACAGAGC
AAAAGAGGGTTTATTTTCAGTCCCCTCTCTCTGGGTCAGAACCAGAGGGCATGCTGAATGCCCCCTGCTTACTTG
GTGAGGGTGCCCCGCCTGAGTCAGTGCTCTCAGCTGGCAGTGCAATGCTTGTAGAAGTAGGAGGAAACAGTTCTC
ACTGGGAAGAAGCAAGGGCAAGAACCCAAGTGCCTCACCTCGAAAGGAGGCCCTGTTCCCTGGAGTCAGGGTGAA

FIGURE 128B

CTGCAAAGCTTTGGCTGAGACCTGGGATTTGAGATACCACAAACCCTGCTGAACACAGTGTCTGTTCAGCAAACT
AACCAGCATTCCCTACAGCCTAGGGCAGACAATAGTATAGAAGTCTGGAAAAAAACAAAAACAGAATTTGAGAAC
CTTGGACCACTCCTGTCCCTGTAGCTCAGTCATCAAAGCAGAAGTCTGGCTTTGCTCTATTAAGATTGGAAATGT
ACACTACCAAACACTCAGTCCACTGTTGAGCCCCAGTGCTGGAAGGGAGGAAGGCCTTTCTTCTGTGTTAATTGC
GTAGAGGCTACAGGGGTTAGCCTGGACTAAAGGCATCCTTGTCTTTGAGCTATTCACCTCAGTAGAAAAGGATCT
AAGGGAAGATCACTGTAGTTTAGTTCTGTTGACCTGTGCACCTACCCCTTGGAAATGTCTGCTGGTATTTCTAAT
TCCACAGGTCATCAGATGCCTGCTTGATAATATATAAACAATAAAAACAACTTTCACTTCTTCCTATTGTAATCG
TGTGCCATGGATCTGATCTGTACCATGACCCTACATAAGGCTGGATGGCACCTCAGGCTGAGGGCCCCAATGTAT
GTGTGGCTGTGGGTGTGGGTGGGAGTGTGTCTGCTGAGTAAGGAACACGATTTTCAAGATTCTAAAGCTCAATTC
AAGTGACACATTAATGATAAACTCAGATCTGATCAAGAGTCCGGATTTCTAACAGTCCTTGCTTTGGGGGGTGTG
CTGGCAACTTAGCTCAGGTGCCTTACATCTTTTCTAATCACAGTGTTGCATATGAGCCTGCCCTCACTCCCTCTG
CAGAATCCCTTTGCACCTGAGACCCTACTGAAGTGGCTGGTAGAAAAAGGGGCCTGAGTGGAGGATTATCAGTAT
CACGATTTGCAGGATTCCCTTCTGGGCTTCATTCTGGAAACTTTTGTTAGGGCTGCTTTTCTTAAGTGCCCACAT
TTGATGGAGGGTGGAAATAATTTGAATGTATTTGATTTATAAGTTTTTTTTTTTTTTGGGTTAAAAGATGGTTG
TAGCATTTAAAATGGAAAATTTTCTCCTTGGTTTGCTAGTATCTTGGGTGTATTCTCTGTAAGTGTAGCTCAAAT
AGGTCATCATGAAAGGTTAAAAAAGCGAGGTGGCCATGTTATGCTGGTGGTTGCCAGGGCCTCCAACCACTGTGC
CACTGACTTGCTGTGTGACCCTGGGCAAGTCACTTAACTATAAGGTGCCTCAGTTTTCCTTCTGTTAAAATGGGG
ATAATAATACTGACCTACCTCAAAGGGCAGTTTTGAGGCATGACTAATGCTTTTTAGAAAGCATTTTGGGATCCT
TCAGCACAGGAATTCTCAAGACCTGAGTATTTTTTATAATAGGAATGTCCACCATGAACTTGATACGTCCGTGTG
TCCCAGATGCTGTCATTAGTCTATATGGTTCTCCAAGAAACTGAATGAATCCATTGGAGAAGCGGTGGATAACTA
GCCAGACAAAATTTGAGAATACATAAACAACGCATTGCCACGGAAACATACAGAGGATGCCTTTTCTGTGATTGG
GTGGGATTTTTTCCCTTTTTATGTGGGATATAGTAGTTACTTGTGACAAGAATAATTTTGGAATAATTTCTATTA
ATATCAACTCTGAAGCTAATTGTACTAATCTGAGATTGTGTTTGTTCATAATAAAAGTGAAGTGAATCTGATTGC
ACTG

FIGURE 129

MPAHLLQDDISSSYTTTTTITAPPSRVLQNGGDKLETMPLYLEDDIRPDIKDDIYDPTYKDKEGPSPKVEYVWRN
IILMSLLHLGALYGITLIPTCKFYTWLWGVFYYFVSALGITAGAHRLWSHRSYKARLPLRLFLIIANTMAFQNDV
YEWARDHRAHHKFSETHADPHNSRRGFFFSHVGWLLVRKHPAVKEKGSTLDLSDLEAEKLVMFQRRYYKPGLLLM
CFILPTLVPWYFWGETFQNSVFVATFLRYAVVLNATWLVNSAAHLFGYRPYDKNISPRENILVSLGAVGEGFHNY
HHSFPYDYSASEYRWHINFTTFFIDCMAALGLAYDRKKVSKAAILARIKRTGDGNYKSG

FIGURE 130

TTTCCGGCCGCGGTATGAGGGGCGGGGCCGGGGCTGCTGTGGGAGAGTTCGGTTGCTGCGGCGGGGCCTGCACGT
TGACTGTGGGAAACTCGGAAACAAGCTCACATCTTCCTGTGGGAAACCTTCTAGCAACAGG**ATG**AGTCTGCAGTG
GACTGCAGTTGCCACCTTCCTCTATGCGGAGGTCTTTGTTGTGTTGCTTCTCTGCATTCCCTTCATTTCTCCTAA
AAGATGGCAGAAGATTTTCAAGTCCCGGCTGGTGGAGTTGTTAGTGTCCTATGGCAACACCTTCTTTGTGGTTCT
CATTGTCATCCTTGTGCTGTTGGTCATCGATGCCGTGCGCGAAATTCGGAAGTATGATGATGTGACGGAAAAGGT
GAACCTCCAGAACAATCCCGGGGCCATGGAGCACTTCCACATGAAGCTTTTCCGTGCCCAGAGGAATCTCTACAT
TGCTGGCTTTTCCTTGCTGCTGTCCTTCCTGCTTAGACGCCTGGTGACTCTCATTTCGCAGCAGGCCACGCTGCT
GGCCTCCAATGAAGCCTTTAAAAAGCAGGCGGAGAGTGCTAGTGAGGCGGCCAAGAAGTACATGGAGGAGAATGA
CCAGCTCAAGAAGGGAGCTGCTGTTGACGGAGGCAAGTTGGATGTCGGGAATGCTGAGGTGAAGTTGGAGGAAGA
GAACAGGAGCCTGAAGGCTGACCTGCAGAAGCTAAAGGACGAGCTGGCCAGCACTAAGCAAAAACTAGAGAAAGC
TGAAAACCAGGTTCTGGCCATGCGGAAGCAGTCTGAGGGCCTCACCAAGGAGTACGACCGCTTGCTGGAGGAGCA
CGCAAAGCTGCAGGCTGCAGTAGATGGTCCCATGGACAAGAAGGAAGAG**TAA**GGGCCTCCTTCCTCCCCTGCCTG
CAGCTGGCTTCCACCTGGCACGTGCCTGCTGCTTCCTGAGAGCCCGGCCTCTCCCTCCAGTACTTCTGTTTGTGC
CCTTCTGCTTCCCCCATTCCCTTCCACAGCTCATAGCTCGTCATCTCGGCCCTTGTCCACACTCTCCAAGCACAT
TACAGGGGACCTGATTGCTACACGTTCAGAATGCGTTTGCTGTCATCCTGCTTGGCCTGGCCAGGCCTGGCACAG
CCTTGGCTTCCACGCCTGAGCGTGGAGAGCACGAGTTAGTTGTAGTCCGGCTTGCGGTGGGGCTGACTTCCTGTT
GGTTTGAGCCCCTTTTTGTTTTGCCCTCTGGGTGTTTTCTTTGGTCCCGCAGGAGGGTGGGTGGAACAGGTGGAC
TGGAGTTTCTCTTGAGGGCAATAAAAGTTTTCATGGTGG

FIGURE 131

MSLQWTAVATFLYAEVFVVLLLCIPFISPKRWQKIFKSRLVELLVSYGNTFFVVLIVILVLLVIDAVREIRKYDD
VTEKVNLQNNPGAMEHFHMKLFRAQRNLYIAGFSLLLSFLLRRLVTLISQQATLLASNEAFKKQAESASEAAKKY
MEENDQLKKGAAVDGGKLDVGNAEVKLEEENRSLKADLQKLKDELASTKQKLEKAENQVLAMRKQSEGLTKEYDR
LLEEHAKLQAAVDGPMDKKEE

FIGURE 132

TCCGGCAACGCCAACCGCTCCGCTGCGCGCAGGCTGGGCTGCAGGCTCTCGGCTGCAGCGCTGGGCTGGTGTGCA
GTGGTGCGACCACGGCTCACGGCAGCCTCAGCCACCCAGATGTAAGCGATCTGGTTCCCACCTCAGCCTCCCGAG
TAGTGGATCTAGGATCCGGCTTCCAAC**ATG**TGGCAGCTCTGGGCCTCCCTCTGCTGCCTGCTGGTGTTGGCCAAT
GCCCGGAGCAGGCCCTCTTTCCATCCCCTGTCGGATGAGCTGGTCAACTATGTCAACAAACGGAATACCACGTGG
CAGGCCGGGCACAACTTCTACAACGTGGACATGAGCTACTTGAAGAGGCTATGTGGTACCTTCCTGGGTGGGCCC
AAGCCACCCCAGAGAGTTATGTTTACCGAGGACCTGAAGCTGCCTGCAAGCTTCGATGCACGGGAACAATGGCCA
CAGTGTCCCACCATCAAAGAGATCAGAGACCAGGGCTCCTGTGGCTCCTGCTGGGCCTTCGGGGCTGTGGAAGCC
ATCTCTGACCGGATCTGCATCCACACCAATGCGCACGTCAGCGTGGAGGTGTCGGCGGAGGACCTGCTCACATGC
TGTGGCAGCATGTGTGGGGACGGCTGTAATGGTGGCTATCCTGCTGAAGCTTGGAACTTCTGGACAAGAAAAGGC
CTGGTTTCTGGTGGCCTCTATGAATCCCATGTAGGGTGCAGACCGTACTCCATCCCTCCCTGTGAGCACCACGTC
AACGGCTCCCGGCCCCCATGCACGGGGGAGGGAGATACCCCCAAGTGTAGCAAGATCTGTGAGCCTGGCTACAGC
CCGACCTACAAACAGGACAAGCACTACGGATACAATTCCTACAGCGTCTCCAATAGCGAGAAGGACATCATGGCC
GAGATCTACAAAAACGGCCCCGTGGAGGGAGCTTTCTCTGTGTATTCGGACTTCCTGCTCTACAAGTCAGGAGTG
TACCAACACGTCACCGGAGAGATGATGGGTGGCCATGCCATCCGCATCCTGGGCTGGGGAGTGGAGAATGGCACA
CCCTACTGGCTGGTTGCCAACTCCTGGAACACTGACTGGGGTGACAATGGCTTCTTTAAAATACTCAGAGGACAG
GATCACTGTGGAATCGAATCAGAAGTGGTGGCTGGAATTCCACGCACCGATCAGTACTGGGAAAAGATC**TAA**TCT
GCCGTGGGCCTGTCGTGCCAGTCCTGGGGGCGAGATCGGGGTAGAAATGCATTTTATTCTTTAAGTTCACGTAAG
ATACAAGTTTCAGGCAGGGTCTGAAGGACTGGATTGGCCAAACATCAGACCTGTCTTCCAAGGAGACCAAGTCCT
GGCTACATCCCAGCCTGTGGTTACAGTGCAGACAGGCCATGTGAGCCACCGCTGCCAGCACAGAGCGTCCTTCCC
CCTGTAGACTAGTGCCGTGGGAGTACCTGCTGCCCAGCTGCTGTGGCCCCCTCCGTGATCCATCCATCTCCAGGG
AGCAAGACAGAGACGCAGGATGGAAAGCGGAGTTCCTAACAGGATGAAAGTTCCCCCATCAGTTCCCCCAGTACC
TCCAAGCAAGTAGCTTTCCACATTTGTCACAGAAATCAGAGGAGAGATGGTGTTGGGAGCCCTTTGGAGAACGCC
AGTCTCCAGGTCCCCCTGCATCTATCGAGTTTGCAATGTCACAACCTCTCTGATCTTGTGCTCAGCATGATTCTT
TAATAGAAGTTTTATTTTTCGTGCACTCTGCTAATCATGTGGGTGAGCCAGTGGAACAGCGGGAGCCTGTGCTGG
TTTGCAGATTGCCTCCTAATGACGCGGCTCAAAAGGAAACCAAGTGGTCAGGAGTTGTTTCTGACCCACTGATCT
CTACTACCACAAGGAAAATAGTTTAGGAGAAACCAGCTTTTACTGTTTTTGAAAAATTACAGCTTCACCCTGTCA
AGTTAACAAGGAATGCCTGTGCCAATAAAAGGTTTCTCCAACTTGA

FIGURE 133

MWQLWASLCCLLVLANARSRPSFHPLSDELVNYVNKRNTTWQAGHNFYNVDMSYLKRLCGTFLGGPKPPQRVMFT
EDLKLPASFDAREQWPQCPTIKEIRDQGSCGSCWAFGAVEAISDRICIHTNAHVSVEVSAEDLLTCCGSMCGDGC
NGGYPAEAWNFWTRKGLVSGGLYESHVGCRPYSIPPCEHHVNGSRPPCTGEGDTPKCSKICEPGYSPTYKQDKHY
GYNSYSVSNSEKDIMAEIYKNGPVEGAFSVYSDFLLYKSGVYQHVTGEMMGGHAIRILGWGVENGTPYWLVANSW
NTDWGDNGFFKILRGQDHCGIESEVVAGIPRTDQYWEKI

FIGURE 134A

TATACTTCGCTACTTGGCTAGAGTTGCAACTACAGCTGGGTTATATGGCTCTAATCTG**ATG**GAACATACTGAGAT
TGATCACTGGTTGGAGTTCAGTGCTACAAAATTATCTTCATGTGATTCCTTTACTTCTACAATTAATGAACTCAA
TCATTGCCTGTCTCTGAGAACATACTTAGTTGGAAACTCCTTGAGTTTAGCAGATTTATGTGTTTGGGCCACCCT
AAAAGGAAATGCTGCCTGGCAAGAACAGTTGAAACAGAAGAAAGCTCCAGTTCATGTAAAACGTTGGTTTGGCTT
TCTTGAAGCCCAGCAGGCCTTCCAGTCAGTAGGTACCAAGTGGGATGTTTCAACAACCAAAGCTCGAGTGGCACC
TGAGAAAAAGCAAGATGTTGGGAAATTTGTTGAGCTTCCAGGTGCGGAGATGGGAAAGGTTACCGTCAGATTTCC
TCCAGAGGCCAGTGGTTACTTACACATTGGGCATGCAAAAGCTGCTCTTCTGAACCAGCACTACCAGGTTAACTT
TAAAGGGAAACTGATCATGAGATTTGATGACACAAATCCTGAAAAAGAAAAGGAAGATTTTGAGAAGGTTATCTT
GGAAGATGTTGCAATGTTGCATATCAAACCAGATCAATTTACTTATACTTCGGATCATTTTGAAACTATAATGAA
GTATGCAGAGAAGCTAATTCAAGAAGGGAAGGCTTATGTGGATGATACTCCTGCTGAACAGATGAAAGCAGAACG
TGAGCAGAGGATAGAATCTAAACATAGAAAAAACCCTATTGAGAAGAATCTACAAATGTGGGAAGAAATGAAAAA
AGGGAGCCAGTTTGGTCACTCCTGTTGTTTGCGAGCAAAAATTGACATGAGTAGTAACAATGGATGCATGAGAGA
TCCAACCCTTTATCGCTGCAAAATTCAACCACATCCAAGAACTGGAAATAAATACAATGTTTATCCAACATATGA
TTTTGCCTGCCCCATAGTTGACAGCATCGAAGGTGTTACACATGCCCTGAGAACAACAGAATACCATGACAGAGA
TGAGCAGTTTTACTGGATTATTGAAGCTTTAGGCATAAGAAAACCATATATTTGGGAATATAGTCGGCTAAATCT
CAACAACACAGTGCTATCCAAAAGAAAACTCACATGGTTTGTCAATGAAGGACTAGTAGATGGATGGGATGACCC
AAGATTTCCTACGGTTCGTGGTGTACTGAGAAGAGGGATGACAGTTGAAGGACTGAAACAGTTTATTGCTGCTCA
GGGCTCCTCACGTTCAGTCGTGAACATGGAGTGGGACAAAATCTGGGCGTTTAACAAAAAGGTTATTGACCCAGT
GGCTCCACGATATGTTGCATTACTGAAGAAAGAAGTGATCCCAGTGAATGTACCTGAAGCTCAGGAGGAGATGAA
AGAAGTAGCCAAACACCCAAAGAATCCTGAGGTTGGCTTGAAGCCTGTGTGGTATAGTCCCAAAGTTTTCATTGA
AGGTGCTGATGCAGAGACTTTTTCGGAGGGTGAGATGGTTACATTTATAAATTGGGGCAACCTCAACATTACAAA
AATACACAAAAATGCAGATGGAAAAATCATATCTCTTGATGCAAAGTTTAATTTGGAAAACAAAGACTACAAGAA
AACCACTAAGGTCACTTGGCTTGCAGAGACTACACATGCTCTTCCTATTCCAGTAATCTGTGTCACTTATGAGCA
CTTGATCACAAAGCCAGTGCTAGGAAAAGACGAGGACTTTAAGCAGTATGTCAACAAGAACAGTAAGCATGAAGA
GCTAATGCTAGGGGATCCCTGCCTTAAGGATTTGAAAAAAGGAGATATTATACAACTCCAGAGAAGAGGATTCTT
CATATGTGATCAACCTTATGAACCTGTTAGCCCATATAGTTGCAAGGAAGCCCCGTGTGTTTTGATATACATTCC
TGATGGGCACACAAAGGAAATGCCAACATCAGGGTCAAAGGAAAAGACCAAAGTAGAAGCCACAAAAAATGAGAC
CTCTGCTCCTTTTAAGGAAAGACCAACACCTTCTCTGAATAATAATTGTACTACATCTGAGGATTCCTTGGTCCT
TTACAATAGAGTGGCTGTTCAAGGAGATGTGGTTCGTGAATTAAAAGCCAAGAAAGCACCAAAGGAAGATGTAGA
TGCAGCTGTAAAACAGCTTTTGTCTTTGAAAGCTGAATATAAGGAGAAAACTGGCCAGGAATATAAACCTGGAAA
CCCTCCTGCTGAAATAGGACAGAATATTTCTTCTAATTCCTCAGCAAGTATTCTGGAAAGTAAATCTCTGTATGA
TGAAGTTGCTGCACAAGGGGAGGTGGTTCGTAAGCTAAAAGCTGAAAAATCCCCTAAGGCTAAAATAAATGAAGC
TGTAGAATGCTTACTGTCCCTGAAGGCTCAGTATAAAGAAAAAACTGGGAAGGAGTACATACCTGGTCAGCCCCC
ATTATCTCAAAGTTCGGATTCAAGCCCAACCAGAAATTCTGAACCTGCTGGTTTAGAAACACCAGAAGCGAAAGT
ACTTTTTGACAAAGTAGCTTCTCAAGGGGAAGTAGTTCGGAAACTTAAAACTGAAAAAGCCCCTAAGGATCAAGT
AGATATAGCTGTTCAAGAACTCCTTCAGCTAAAGGCACAGTACAAGTCTTTGATAGGAGTAGAGTATAAGCCTGT
GTCGGCCACTGGAGCTGAGGACAAAGATAAGAAGAAGAAAGAAAAAGAAAATAAATCTGAAAAGCAGAATAAGCC
TCAGAAACAAAATGATGGCCAAAGGAAAGACCCTTCTAAAAACCAAGGAGGTGGGCTCTCATCAAGTGGAGCAGG
AGAAGGGCAGGGGCCTAAGAAACAGACCAGGTTGGGTCTTGAGGCAAAAAAAGAAGAAAATCTTGCTGATTGGTA
TTCTCAGGTCATCACAAAGTCAGAAATGATTGAATACCATGACATAAGTGGCTGTTATATTCTTCGTCCCTGGGC
CTATGCCATTTGGGAAGCCATCAAGGACTTTTTTGATGCTGAGATCAAGAAACTTGGTGTTGAAAACTGCTACTT
CCCCATGTTTGTGTCTCAAAGTGCATTAGAGAAAGAGAAGACTCATGTTGCTGACTTTGCCCCAGAGGTTGCTTG
GGTTACAAGATCTGGCAAAACCGAGCTGGCAGAACCAATTGCCATTCGTCCTACTAGTGAAACAGTAATGTATCC
TGCATATGCAAAATGGGTACAATCACACAGAGACCTGCCCATCAAGCTCAATCAGTGGTGCAATGTGGTGCGTTG
GGAATTCAAGCATCCTCAGCCTTTCCTACGTACTCGTGAATTTCTTTGGCAGGAAGGGCACAGTGCTTTTGCTAC
CATGGAAGAGGCAGCGGAAGAGGTCTTGCAGATACTTGACTTATATGCTCAGGTATATGAAGAACTCCTGGCAAT
TCCTGTTGTTAAAGGAAGAAAGACGGAAAAGGAAAAATTTGCAGGAGGAGACTATACAACTACAATAGAAGCATT
TATATCTGCTAGTGGAAGAGCTATCCAGGGAGGAACATCACATCATTTAGGGCAGAATTTTTCCAAAATGTTTGA

FIGURE 134B

AATCGTTTTTGAAGATCCAAAGATACCAGGAGAGAAGCAATTTGCCTATCAAAACTCCTGGGGCCTGACAACTCG
AACTATTGGTGTTATGACCATGGTTCATGGGGACAACATGGGTTTAGTATTACCACCCCGTGTAGCATGTGTTCA
GGTGGTGATTATTCCTTGTGGCATTACCAATGCACTTTCTGAAGAAGACAAAGAAGCGCTGATTGCAAAATGCAA
TGATTATCGAAGGCGATTACTCAGTGTTAACATCCGCGTTAGAGCTGATTTACGAGATAATTATTCTCCAGGTTG
GAAATTCAATCACTGGGAGCTCAAGGGAGTTCCCATTAGACTTGAAGTTGGGCCACGTGATATGAAGAGCTGTCA
GTTTGTAGCCGTCAGACGAGATACTGGAGAAAAGCTGACAGTTGCTGAAAATGAGGCAGAGACTAAACTTCAAGC
TATTTTGGAAGACATCCAGGTCACCCTTTTCACAAGGGCTTCTGAAGACCTTAAGACTCATATGGTTGTGGCTAA
TACAATGGAAGACTTTCAGAAGATACTAGATTCTGGAAAGATTGTTCAGATTCCATTCTGTGGGGAAATTGACTG
TGAGGACTGGATCAAAAAGACCACTGCCAGGGATCAAGATCTTGAACCTGGTGCTCCATCCATGGGAGCTAAAAG
CCTTTGCATCCCCTTCAAACCACTCTGTGAACTGCAGCCTGGAGCCAAATGTGTCTGTGGCAAGAACCCTGCCAA
GTACTACACCTTATTTGGTCGCAGCTAC**TGA**GGGATGAACGAAAGCCCCCTCTTCAACTCCTCTCACTTTTTAAA
GCATTGATATTAGTATCTTCTCAGATACAGACCGTTTTATGATTTTTTAAAAAGTAAAAGTTCTAAAATGAAGTC
ACACAGGACAATTATTCTTATGCCTAAGTTAACAGTGGATAAAAGACTTTTCTGTAAACAACTCCAGTAATAAAT
ATCATGAACTA

FIGURE 135

MEHTEIDHWLEFSATKLSSCDSFTSTINELNHCLSLRTYLVGNSLSLADLCVWATLKGNAAWQEQLKQKKAPVHV
KRWFGFLEAQQAFQSVGTKWDVSTTKARVAPEKKQDVGKFVELPGAEMGKVTVRFPPEASGYLHIGHAKAALLNQ
HYQVNFKGKLIMRFDDTNPEKEKEDFEKVILEDVAMLHIKPDQFTYTSDHFETIMKYAEKLIQEGKAYVDDTPAE
QMKAEREQRIESKHRKNPIEKNLQMWEEMKKGSQFGHSCCLRAKIDMSSNNGCMRDPTLYRCKIQPHPRTGNKYN
VYPTYDFACPIVDSIEGVTHALRTTEYHDRDEQFYWIIEALGIRKPYIWEYSRLNLNNTVLSKRKLTWFVNEGLV
DGWDDPRFPTVRGVLRRGMTVEGLKQFIAAQGSSRSVVNMEWDKIWAFNKKVIDPVAPRYVALLKKEVIPVNVPE
AQEEMKEVAKHPKNPEVGLKPVWYSPKVFIEGADAETFSEGEMVTFINWGNLNITKIHKNADGKIISLDAKFNLE
NKDYKKTTKVTWLAETTHALPIPVICVTYEHLITKPVLGKDEDFKQYVNKNSKHEELMLGDPCLKDLKKGDIIQL
QRRGFFICDQPYEPVSPYSCKEAPCVLIYIPDGHTKEMPTSGSKEKTKVEATKNETSAPFKERPTPSLNNNCTTS
EDSLVLYNRVAVQGDVVRELKAKKAPKEDVDAAVKQLLSLKAEYKEKTGQEYKPGNPPAEIGQNISSNSSASILE
SKSLYDEVAAQGEVVRKLKAEKSPKAKINEAVECLLSLKAQYKEKTGKEYIPGQPPLSQSSDSSPTRNSEPAGLE
TPEAKVLFDKVASQGEVVRKLKTEKAPKDQVDIAVQELLQLKAQYKSLIGVEYKPVSATGAEDKDKKKKEKENKS
EKQNKPQKQNDGQRKDPSKNQGGGLSSSGAGEGQGPKKQTRLGLEAKKEENLADWYSQVITKSEMIEYHDISGCY
ILRPWAYAIWEAIKDFFDAEIKKLGVENCYFPMFVSQSALEKEKTHVADFAPEVAWVTRSGKTELAEPIAIRPTS
ETVMYPAYAKWVQSHRDLPIKLNQWCNVVRWEFKHPQPFLRTREFLWQEGHSAFATMEEAAEEVLQILDLYAQVY
EELLAIPVVKGRKTEKEKFAGGDYTTTIEAFISASGRAIQGGTSHHLGQNFSKMFEIVFEDPKIPGEKQFAYQNS
WGLTTRTIGVMTMVHGDNMGLVLPPRVACVQVVIIPCGITNALSEEDKEALIAKCNDYRRRLLSVNIRVRADLRD
NYSPGWKFNHWELKGVPIRLEVGPRDMKSCQFVAVRRDTGEKLTVAENEAETKLQAILEDIQVTLFTRASEDLKT
HMVVANTMEDFQKILDSGKIVQIPFCGEIDCEDWIKKTTARDQDLEPGAPSMGAKSLCIPFKPLCELQPGAKCVC
GKNPAKYYTLFGRSY

FIGURE 136

CGGTTGCTTGCTGTCCCAGCGGCGCCCCCTCATCACCGTCGCC**ATG**CCCGGAGGTCTGCTTCTCGGGGACGTGGC
TCCCAACTTTGAGGCCAATACCACCGTCGGCCGCATCCGTTTCCACGACTTTCTGGGAGACTCATGGGGCATTCT
CTTCTCCCACCCTCGGGACTTTACCCCAGTGTGCACCACAGAGCTTGGCAGAGCTGCAAAGCTGGCACCAGAATT
TGCCAAGAGGAATGTTAAGTTGATTGCCCTTTCAATAGACAGTGTTGAGGACCATCTTGCCTGGAGCAAGGATAT
CAATGCTTACAATTGTGAAGAGCCCACAGAAAAGTTACCTTTTCCCATCATCGATGATAGGAATCGGGAGCTTGC
CATCCTGTTGGGCATGCTGGATCCAGCAGAGAAGGATGAAAAGGGCATGCCTGTGACAGCTCGTGTGGTGTTTGT
TTTTGGTCCTGATAAGAAGCTGAAGCTGTCTATCCTCTACCCAGCTACCACTGGCAGGAACTTTGATGAGATTCT
CAGGGTAGTCATCTCTCTCCAGCTGACAGCAGAAAAAAGGGTTGCCACCCCAGTTGATTGGAAGGATGGGGATAG
TGTGATGGTCCTTCCAACCATCCCTGAAGAAGAAGCCAAAAAACTTTTCCCGAAAGGAGTCTTCACCAAAGAGCT
CCCATCTGGCAAGAAATACCTCCGCTACACACCCCAGCCT**TAA**GTCTCTTGGAGAAGTTGGTGCTGTGAGCCAGA
GGATGTCAGCTGCCAATTGTGTTTTCCTGCAGCAATTCCATAAACACATCCTGGTGTCATCACAGCCAAGGTTTT
TAGGTTGCTATACCAATGGCTTATTAAATGAAAATGGCACTAAAAGTTTCTTGAGATTCTTTATACTCTCTGCCT
TCAGCAATCAATTCCATTCATACATCAGCACTCTGCTGGTTCTGTTTGAAATATGTTCTGTATTTAAAACTCAAA
TCTTGTTGGATCTCTGCAGGGCTTGTGACCAATGAAGTCATATTTGTTGATGGTTGACAAAGCTTGCTTCACTCC
ATCAGAGAATGACTATCAATTTTTTTTTAACTGTCCTATCACGTCCTCTCCTGTCACCCATTTTGAAGAGTGGCA
GAACTTGAAGTTCAACTTCCTCTGTAAATATCCAAGTATAAAGCCCAGGAACTTCTAGAATAACCCAGATGCGCT
TTAATTTTTTTTAATATGTTTTGATCACAGAACTTCTAGAATAACCCAGATGCTCTTTCATATTCTTTTAATACA
TCTTGATCACAGCTGGGGGAAAAAAAGCTTTTTAATTCTGTACCTTCCTAGTAGATAAGTGAAGAGCAGGGAAAG
AGACCTTTAAATATTTTGCTATAAAAAAATTTGTGATAAGTTTCTATCAAAATGGGGAGATTGCAGAAAAGGCTT
CCCTTGGCTCCCAAGGAGGTGTAGCAGGTGTGAGCAATATTAGTGCCATGTGCCTTTCACACAGGGTTTGCATTT
ATCAGTCTGTTTTCCGATGATGTGTACATGAAAGAGTACACCATGTGAAGAGAAGAGAGAATGATTGAAAATGTT
TTAGTATAGAACTCTTCTTGCAGTGGGTTGCTATTTTCTAGATTTTACTTTTTAGGGAACAAAATAAAATCCTTT
GTT

FIGURE 137

MPGGLLLGDVAPNFEANTTVGRIRFHDFLGDSWGILFSHPRDFTPVCTTELGRAAKLAPEFAKRNVKLIALSIDS
VEDHLAWSKDINAYNCEEPTEKLPFPIIDDRNRELAILLGMLDPAEKDEKGMPVTARVVFVFGPDKKLKLSILYP
ATTGRNFDEILRVVISLQLTAEKRVATPVDWKDGDSVMVLPTIPEEEAKKLFPKGVFTKELPSGKKYLRYTPQP

FIGURE 138

CAGAGTGCCCTTTCTCCCCGCCTCTTCCCCCTCCCGGGAGCTGCCAGTACTTGACGTGGCGTCACCGCCCTCTAC
CCTCGCTTTGCGTGCGTGTTTGCGTACAGCGGAGGTGGCGGCGCGGGCAGGTCGGAGCTCGGAGCTGCTGCTTCT
GGTTCTCTTGTGGCCACCGTCGCTGTCCGGCTGCCTTGGGCTGCCGAACAGACAAGGCGTGGGCCACAGCACCTC
AGAAGCCGACGCAGCTCGACGCAGGGGCCGGCAGGAGGGTGGGCGATCGCGTGTCGGAGGGCGCCGCGCGGGCAG
GCGGGCGGGCGCCAGAGGGGGAAAGAGGCGGGGGCGGCGGGTCAGCCGCTGGCCGGGCCGGCGGGGGA**ATG**TCGA
TGCCTGACGCGATGCCGCTGCCCGGGGTCGGGGAGGAGCTGAAGCAGGCCAAGGAGATCGAGGACGCCGAGAAGT
ACTCCTTCATGGCCACCGTCACCAAGGCGCCCAAGAAGCAAATCCAGTTTGCTGATGACATGCAGGAGTTCACCA
AATTCCCCACCAAAACTGGCCGAAGATCTTTGTCTCGCTCGATCTCACAGTCCTCCACTGACAGCTACAGTTCAG
CTGCATCCTACACAGATAGCTCTGATGATGAGGTTTCTCCCCGAGAGAAGCAGCAAACCAACTCCAAGGGCAGCA
GCAATTTCTGTGTGAAGAACATCAAGCAGGCAGAATTTGGACGCCGGGAGATTGAGATTGCAGAGCAAGACATGT
CTGCTCTGATTTCACTCAGGAAACGTGCTCAGGGGGAGAAGCCCTTGGCTGGTGCTAAAATAGTGGGCTGTACAC
ACATCACAGCCCAGACAGCGGTGTTGATTGAGACACTCTGTGCCCTGGGGGCTCAGTGCCGCTGGTCTGCTTGTA
ACATCTACTCAACTCAGAATGAAGTAGCTGCAGCACTGGCTGAGGCTGGAGTTGCAGTGTTCGCTTGGAAGGGCG
AGTCAGAAGATGACTTCTGGTGGTGTATTGACCGCTGTGTGAACATGGATGGGTGGCAGGCCAACATGATCCTGG
ATGATGGGGGAGACTTAACCCACTGGGTTTATAAGAAGTATCCAAACGTGTTTAAGAAGATCCGAGGCATTGTGG
AAGAGAGCGTGACTGGTGTTCACAGGCTGTATCAGCTCTCCAAAGCTGGGAAGCTCTGTGTTCCGGCCATGAACG
TCAATGATTCTGTTACCAAACAGAAGTTTGATAACTTGTACTGCTGCCGAGAATCCATTTTGGATGGCCTGAAGA
GGACCACAGATGTGATGTTTGGTGGGAAACAAGTGGTGGTGTGTGGCTATGGTGAGGTAGGCAAGGGCTGCTGTG
CTGCTCTCAAAGCTCTTGGAGCAATTGTCTACATTACCGAAATCGACCCCATCTGTGCTCTGCAGGCCTGCATGG
ATGGGTTCAGGGTGGTAAAGCTAAATGAAGTCATCCGGCAAGTCGATGTCGTAATAACTTGCACAGGAAATAAGA
ATGTAGTGACACGGGAGCACTTGGATCGCATGAAAAACAGTTGTATCGTATGCAATATGGGCCACTCCAACACAG
AAATCGATGTGACCAGCCTCCGCACTCCGGAGCTGACGTGGGAGCGAGTACGTTCTCAGGTGGACCATGTCATCT
GGCCAGATGGCAAACGAGTTGTCCTCCTGGCAGAGGGTCGTCTACTCAATTTGAGCTGCTCCACAGTTCCCACCT
TTGTTCTGTCCATCACAGCCACAACACAGGCTTTGGCACTGATAGAACTCTATAATGCACCCGAGGGGCGATACA
AGCAGGATGTGTACTTGCTTCCTAAGAAAATGGATGAATACGTTGCCAGCTTGCATCTGCCATCATTTGATGCCC
ACCTTACAGAGCTGACAGATGACCAAGCAAAATATCTGGGACTCAACAAAAATGGGCCATTCAAACCTAATTATT
ACAGATAC**TAA**TGGACCATACTACCAAGGACCAGTCCACCTGAACCACACACTCTAAAGAAATATTTTTTAAGAT
AACTTTTATTTTCTTCTTACTCCTTTCCTCTTGATTTTTTTCCTATAATTTCATTCTTGTTTTTTCATCTCATTA
TCCAAGTTCTGCAGACCACACAGGAACTTGCTTCATGGCTCTTTAGATGAAATAGAAGTTCAGGGTCCCTCACTC
TAGTCACTAAAGAAGGATTTTACTCCCCCAGCCCAGAAAGGTGATTCTTCTCTTTACCATTTCTGGGGACTTTAG
TCTTAATTAGGTACCTTATTAACAGGAAATGCTAAGGTACCTTCTCTGTGGAACAATCTGCAATGTCTAAATCGC
CTTAAAAGAGCCCATTTCTTAGCTGCTGAAATCAGTGCTCTTTCACTTCTTCAGAGAAGCAGGGATGGTACCTAC
CCGGCAGGTAGGTTAGATGTGGGTGGTGCATGTTAATTTCCCTTAGAAGTTCCAAGCCCTGTTTCCTGCGTAAAG
GTGGTATGTCCAGTTCAGAGATGTGTATAATGAGCATGGCTTGTTAAGATCAGGAGGCCCACTTGGATTTATAGT
ATAGCCCTTCCTCCACTCCCACCAGACTTGCTCATTTTTCGAGTTTTTAACTAGACTACACTCTATTTGAGTTTA
ATTTTGTCCTCTAGGATTTATTTCTGTTGTCCAAAAAAAAAAAAAAAAAAAA

FIGURE 139

MSMPDAMPLPGVGEELKQAKEIEDAEKYSFMATVTKAPKKQIQFADDMQEFTKFPTKTGRRSLSRSISQSSTDSY
SSAASYTDSSDDEVSPREKQQTNSKGSSNFCVKNIKQAEFGRREIEIAEQDMSALISLRKRAQGEKPLAGAKIVG
CTHITAQTAVLIETLCALGAQCRWSACNIYSTQNEVAAALAEAGVAVFAWKGESEDDFWWCIDRCVNMDGWQANM
ILDDGGDLTHWVYKKYPNVFKKIRGIVEESVTGVHRLYQLSKAGKLCVPAMNVNDSVTKQKFDNLYCCRESILDG
LKRTTDVMFGGKQVVVCGYGEVGKGCCAALKALGAIVYITEIDPICALQACMDGFRVVKLNEVIRQVDVVITCTG
NKNVVTREHLDRMKNSCIVCNMGHSNTEIDVTSLRTPELTWERVRSQVDHVIWPDGKRVVLLAEGRLLNLSCSTV
PTFVLSITATTQALALIELYNAPEGRYKQDVYLLPKKMDEYVASLHLPSFDAHLTELTDDQAKYLGLNKNGPFKP
NYYRY

FIGURE 140A

CCCGGGCTGTGGGCTACAGGCGCAGAGCGGGCCAGGCGCGGAGCTGGCGGCAGTGACAGGAGGCGCGAACCCGCA
GCGCTTACCGCGCGGCGCCGCACC**ATG**GAGCCCGCCGTGTCGCTGGCCGTGTGCGCGCTGCTCTTCCTGCTGTGG
GTGCGCCTGAAGGGGCTGGAGTTCGTGCTCATCCACCAGCGCTGGGTGTTCGTGTGCCTCTTCCTCCTGCCGCTC
TCGCTTATCTTCGATATCTACTACTACGTGCGCGCCTGGGTGGTGTTCAAGCTCAGCAGCGCTCCGCGCCTGCAC
GAGCAGCGCGTGCGGGACATCCAGAAGCAGGTGCGGGAATGGAAGGAGCAGGGTAGCAAGACCTTCATGTGCACG
GGGCGCCCTGGCTGGCTCACTGTCTCACTACGTGTCGGGAAGTACAAGAAGACACACAAAAACATCATGATCAAC
CTGATGGACATTCTGGAAGTGGACACCAAGAAACAGATTGTCCGTGTGGAGCCCTTGGTGACCATGGGCCAGGTG
ACTGCCCTGCTGACCTCCATTGGCTGGACTCTCCCCGTGTTGCCTGAGCTTGATGACCTCACAGTGGGGGGCTTG
ATCATGGGCACAGGCATCGAGTCATCATCCCACAAGTACGGCCTGTTCCAACACATCTGCACTGCTTACGAGCTG
GTCCTGGCTGATGGCAGCTTTGTGCGATGCACTCCGTCCGAAAACTCAGACCTGTTCTATGCCGTACCCTGGTCC
TGTGGGACGCTGGGTTTCCTGGTGGCCGCTGAGATCCGCATCATCCCTGCCAAGAAGTACGTCAAGCTGCGTTTC
GAGCCAGTGCGGGGCCTGGAGGCTATCTGTGCCAAGTTCACCCACGAGTCCCAGCGGCAGGAGAACCACTTCGTG
GAAGGGCTGCTCTACTCCCTGGATGAGGCTGTCATTATGACAGGGGTCATGACAGATGAGGCAGAGCCCAGCAAG
CTGAATAGCATTGGCAATTACTACAAGCCGTGGTTCTTTAAGCATGTGGAGAACTATCTGAAGACAAACCGAGAG
GGCCTGGAGTACATTCCCTTGAGACACTACTACCACCGCCACACGCGCAGCATCTTCTGGGAGCTCCAGGACATC
ATCCCCTTTGGCAACAACCCCATCTTCCGCTACCTCTTTGGCTGGATGGTGCCTCCCAAGATCTCCCTCCTGAAG
CTGACCCAGGGTGAGACCCTGCGCAAGCTGTACGAGCAGCACCACGTGGTGCAGGACATGCTGGTGCCCATGAAG
TGCCTGCAGCAGGCCCTGCACACCTTCCAAAACGACATCCACGTCTACCCCATCTGGCTGTGTCCGTTCATCCTG
CCCAGCCAGCCAGGCCTAGTGCACCCCAAAGGAAATGAGGCAGAGCTCTACATCGACATTGGAGCATATGGGGAG
CCGCGTGTGAAACACTTTGAAGCCAGGTCCTGCATGAGGCAGCTGGAGAAGTTTGTCCGCAGCGTGCATGGCTTC
CAGATGCTGTATGCCGACTGCTACATGAACCGGGAGGAGTTCTGGGAGATGTTTGATGGCTCCTTGTACCACAAG
CTGCGAGAGAAGCTGGGTTGCCAGGACGCCTTCCCCGAGGTGTACGACAAGATCTGCAAGGCCGCCAGGCAC**TGA**

GCTGGAGCCCGCCTGGAGAGACAGACACGTGTGAGTGGTCAGGCATCTTCCCTTCACTCAAGCTTGGCTGCTTTC
CTAGATCCACACTTTCAAAGAGAAACCCCTCCAGAACTCCCACCCTGACAGCCCAACACCACCTTCCTCCTGGCT
TCCAGGGGGCAGCCCAGTGGAATGGAAAGAATGTGGGATTTGGAGTCAGACAAGCCTGAGTCCAGTTCCCCGTTT
AGAACTCATTAGCTGTGTGACTCTGGGTGAGTCCCTTAACCCCTCTGAGCCCGGGTCTCTTCATTAGTTGAAAGG
GATAGTAATACCTACTTGCAGGTTGTTGTCATCTGAGTTGAGCACTGGTCACATTGAAGGTGCTGGGTAAGTGGT
AGCTCTTGTTGCTTCCCGTTCAGCGTCACATCTGCAGTGGAGCCTGAAAAGGCTCCACATTAGGTCACCTGTGCA
CAGCCATGGCTGGAATGATGAAGGGGATACGCTGGAGTTGCCCTGCCATCGCCTCCATCAGCCAGACGAGGTCCT
CACAGGAGAAGGACAGCTCTTCCCCACCCTGGGATCTCAGGAGGGCAGCCACGGAGTGGGGAGGCCCCAGATGCG
CTGTGCCAAAGCCAGGTCCGAGGCCAAAGTTCTCCCTGCCATCCTTGGTGCCGTCCTGCCCCTTCCTCCTTCATG
CCTGGGCCTGCAGGCCCACCCCAGCCACCACTGAGTCCACTCGGAGTGCCCTGTGTTCCTGGAGAAGGCATTCCA
GGGTTGAATCTTGTCCCAGCCTCAGCCTGGGACACCTAGGTGGAGAGAGTGGTCTCCGCTCTGAATTGGATCCAG
GGGACCTGGGCTCATTCTTCTTGGCTCACCAACCCTGCAGGCCTCATCTTTCCCAAAACCCACTTTGTCTTGGTG
GGAGTGGGTCCGCGCTGCTCTGCAGCAGGGGCTGGGGAGTGGACAGCATCAGGTGGGAAAGTGGAGTCCACCCTC
ATGTTTCTGTAGGATTCTCACCGTGGGGCTGGAAGAAAAGAGCATCGACTTGATTTCTCCAACCACTCATCCCTC
TTTTTCTTTCTTCCACCACTCCCCACCCCAGCTGTAGTTAATTTCAGTGCCTTACAAATCCTAAGCTCAGAGAAA
GTTCCATTTCCGTTCCAGAGGGAAGGGAACCTCCCTAGGTCCTTCCCTGGCTTGTTATAACGCAAAGCTTGGTTG
TTTATGCAACTCTATCTTAAGAACTGCCCAGCCTCAGCTGAAAACCCGAATCTGAGAAGGAATTGCGTCATGTAA
GGGAAGCTGGAATTAAGGGAGCTGAGCCAGTCATGGTTGTGGCGTGTGAGTCAGGAGACCTAGGTTTCAGCCCCT
CTCTACTGTCAGCGAGCTGTGCAACGTGGGCAAGTCATTGTCCTCTGAGCTGCAGTTTCCTCATCTGTCACATCG
CTACAGACAAGACCTCCCTGGAACCCTTCTGATTGTCTTAGACACTGTGGTTGCAAAACCCACGGAAAGCCTCAT
TTGTGTGGAAAGTCAGAGGAAAAATGATCCAGTGGACACTTGGGGATTATCTGTCATTCAAGATCCTTCCTTCAA
CCCCAAGGCCAGCTCCCATCTCATTTCCAGAAAGGCTCATACCTGGCTTGCAGGGAAGCATCTGTCTTGTCATTC
CAGGTGCCAGAATCCTCTCAGAGTCATTGAAGGGTGTTCACCCATCCCACCCAAGGCTTGGCACACTGCCAGTGT
CTTAGCAGGGTCTTGTGAGGGCTGGGGGCATCCAGGCACTCAGAAGGCAAAGGAACCACCCTACCCATTTGGCCT
CTGGAGGGGGCAGAAGAAAGAAAGAAACCTCATCCTATATTTTACAAAGCATGTGAATTCTGGCATTAGCTCTCA
TAGGAGACCCATGTGCTTCCTTGCTCAGTGCAAAACTGATGATTCTACTTGCTGTAGATGAATGGTTAACACGAG

FIGURE 140B

CTAGTTAAACAGTGCCATTGTTTTGCCAGTGAAGCCTCCAACCCTAAGCCACTGGGACGGTGGCCAGAGATGCCA
GCAGCCTCTGTCGCCCTTAGTCATATAACCAAAATCCAGACCTTATCCACAACCCGGGGCTTGGAAAGGAAGGTA
TTTTGGAATCACACCCTCCGGTTATGTTGCTCCAGTAAAATCTTGCCTGGAAAGAGGCAGTCTTCTTAGCATGGT
GAGCTGAGTTCATGGCTTTTTTTTGTAGCCAGTCCTGTCCCTGGCCATCCATGTGATGGTTTTGGATGGAGTTAA
ACTTGATGCCAGTGGGCAGTGCATGTGGAAAGTATCAGAGTAAGCCTCTCCCCTCCAGAGCCCTGAGTTTCTTGG
CTGCATGAAGGTTTTCTTTAGAATCAGAATTGTAGCCAGTTTCTTTGGCCAGAAGGATGAATACTTGGATATTAC
TGAAAGGGAGGGGTGGAGATGGGTGTGGCAGTGTATGGTGTGTGATTTTTATTTTCTTCTTTGGTCATGGGGGCC
AAGGAGAAAGGCATGAATCTTCCCTGTCAGGCTCTTACAGCCACAGGCACTGTGTCTACTGTCTGGAAGACATGT
CCCCGTGGCTGTGGGGCCGCTGCTTCTGTTTAAATAAAAGTGGCCTGG

FIGURE 141

MEPAVSLAVCALLFLLWVRLKGLEFVLIHQRWVFVCLFLLPLSLIFDIYYYVRAWVVFKLSSAPRLHEQRVRDIQ
KQVREWKEQGSKTFMCTGRPGWLTVSLRVGKYKKTHKNIMINLMDILEVDTKKQIVRVEPLVTMGQVTALLTSIG
WTLPVLPELDDLTVGGLIMGTGIESSSHKYGLFQHICTAYELVLADGSFVRCTPSENSDLFYAVPWSCGTLGFLV
AAEIRIIPAKKYVKLRFEPVRGLEAICAKFTHESQRQENHFVEGLLYSLDEAVIMTGVMTDEAEPSKLNSIGNYY
KPWFFKHVENYLKTNREGLEYIPLRHYYHRHTRSIFWELQDIIPFGNNPIFRYLFGWMVPPKISLLKLTQGETLR
KLYEQHHVVQDMLVPMKCLQQALHTFQNDIHVYPIWLCPFILPSQPGLVHPKGNEAELYIDIGAYGEPRVKHFEA
RSCMRQLEKFVRSVHGFQMLYADCYMNREEFWEMFDGSLYHKLREKLGCQDAFPEVYDKICKAARH

FIGURE 142

GGGGGGGAAGTGCTCTAACTTTTCTTAAGGTTTTGTTGCTAGCCCTTCAAGTGCACTGAGCTATGTGACTCGGATG
GTCTTTCACACGGCACATTTGGACATTTCCAGAACTACCATGAGATGGTTTAGACGGGAATTCATGCAAATGAG
GGGTCAAAAATGGTATAGTGACCCCGTCCACGTCCTCCAAGCTCACGACCTTGGAGCCCCGTGGAGCTGGACTGA
GGAGGAGGCTGCACAGCGGGAGAGCAGCTGGTCCAGACCAGCCCTGCAGCCCCCACTCAGCCGGCAGCCAGATGG
CCCCGCAAGGCCTCCAGGGATGGCCCCTAGCCACAGGCCCTGGCTGAGGTCTCTGGGTCGGTCAGTGACATGTAG
GTAGGAAGCACTGAAAATAGTGTTCCCAGAGCACTTTGCAACTCCCTGGGTAAGAGGGACGACACCTCTGGTTTT
TCAATACCAATTACATGGAACTTTTCTGTAATGGGTACAATGAAGAAGTTTCTAAAAACACACACAAAGCACATT
GGGCCAACTATTTAGTAAGCCCGGATAGACTTATTGCCAAAAACAAAAAATAGCTTTCAAAAGAAATTTAAGTTC
TATGAGAAATTCCTTAGTCATGGTGTTGCGTAAATCATATTTTAGCTGCACGGCATTACCCCACACAGGGTGGCA
GAACTTGAAGGGTTACTGACGTGTAAATGCTGGTATTTGATTTCCTGTGTGTGTTGCCCTGGCATTAAGGGCATT
TTACCCTTGCAGTTTTACTAAAACACTGAAAAATATTCCAAGCTTCATATTAACCCTACCTGTCAACGTAACGAT
TTCATGAACGTTATTATATTGTCGAATTCCTACTGACAACATTATAACTGTATGGGAGCTTAACTTTATAAGGAA
ATGTATTTTGACACTGGTATCTTATTAAAGTATTCTGATCCTACCAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 143

MVFHTAHLDISRTTMRWFRREFMQMRGQKWYSDPVHVLQAHDLGAPWSWTEEEAAQRESSWSRPALQPPLSRQPD
GPARPPGMAPSHRPWLRSLGRSVTCR

FIGURE 144

GCCGCGTGCAGAGGTGCTCAAGCCTCCTCGCGGTCCGCAGTCAGTGCCGCCGCGCCCGGCCTCCCGCACGCCCCG
CAGGTAGCGCCCCCGCCCGCGGCCCAGAGTGCGCTCGCGCCGGCACCAGCTCCCGGATAAACGGCGCGCCGCGCG
GAGATGACAGCCGAGGAGATGAAGGCGACCGAGAGCGGGGCGCAGTCGGCGCCGCTGCCCATGGAGGGAGTGGAC
ATCAGCCCCAAACAGGACGAAGGCGTGCTGAAGGTCATCAAGAGAGAGGGCACAGGTACAGAGATGCCCATGATT
GGGGACCGAGTCTTTGTCCACTACACTGGCTGGCTATTAGATGGCACAAAGTTTGACTCCAGTCTGGATCGCAAG
GACAAATTCTCCTTTGACCTGGGAAAAGGGGAGGTCATCAAGGCTTGGGACATTGCCATAGCCACCATGAAGGTG
GGGGAGGTGTGCCACATCACCTGCAAACCAGAATATGCCTACGGTTCAGCAGGCAGTCCTCCAAAGATTCCCCCC
AATGCCACGCTTGTATTTGAGGTGGAGTTGTTTGAGTTTAAGGGAGAAGATCTGACGGAAGAGGAAGATGGCGGA
ATCATTCGCAGAATACAGACTCGCGGTGAAGGCTATGCTAAGCCCAATGAGGGTGCTATCGTGGAGGTTGCACTG
GAAGGGTACTACAAGGACAAGCTCTTTGACCAGCGGGAGCTCCGCTTTGAGATTGGCGAGGGGGAGAACCTGGAT
CTGCCTTATGGTCTGGAGAGGGCCATTCAGCGCATGGAGAAAGGAGAACATTCCATCGTGTACCTCAAGCCCAGC
TATGCTTTTGGCAGTGTTGGGAAGGAAAAGTTCCAAATCCCACCAAATGCTGAGCTGAAATATGAATTACACCTC
AAGAGTTTTGAAAAGGCCAAGGAGTCTTGGGAGATGAATTCAGAAGAGAAGCTGGAACAGAGCACCATAGTGAAA
GAGCGGGGCACTGTGTACTTCAAGGAAGGTAAATACAAGCAAGCTTTACTACAGTATAAGAAGATCGTGTCTTGG
CTGGAATATGAGTCTAGTTTTTCCAATGAGGAAGCACAGAAAGCACAGGCCCTTCGACTGGCCTCTCACCTCAAC
CTGGCCATGTGTCATCTGAAACTACAGGCCTTCTCTGCTGCCATTGAAAGCTGTAACAAGGCCCTAGAACTGGAC
AGCAACAACGAGAAGGGCCTCTTCCGCCGGGGAGAGGCCCACCTGGCCGTGAATGACTTTGAACTGGCACGGGCT
GATTTCCAGAAGGTCCTGCAGCTCTACCCCAACAACAAAGCCGCCAAGACCCAGCTGGCTGTGTGCCAGCAGCGG
ATCCGAAGGCAGCTTGCCCGGGAGAAGAAGCTCTATGCCAATATGTTTGAGAGGCTGGCTGAGGAGGAGAACAAG
GCCAAGGCAGAGGCTTCCTCAGGAGACCATCCCACTGACACAGAGATGAAGGAGGAGCAGAAGAGCAACACGGCA
GGGAGCCAGTCTCAGGTGGAGACAGAAGCATAGCCCCTCTCCACCAGCCCTACTCCTGCGGCTGCCTGCCCCCCA
GTCTCCCCACTCCACCCTGTTAGTTTTGTAAAAACTGAAGAATTTTGAGTGAATTAGACCTTTATTTTTCTATCT
GGTTGGATGGTGGCTTTAGGGGAAGGGGGAAAGGTGTAGGCTGGGGGATTGAGGTGGGGAATCATTTTAGCTGGT
GTCAGCCCCTCTTCCCTTCCTCCATTGCACATGAACATATGTCCATCCATATATATTCATCAGAATGTTAATTTA
TTTTGCTCCCTCTGTTAGGTCCATTTTCTAAGGGTAGAAGAGGCAAGTGGTAGGGATGAGGTCTGATAAGAACCC
AGGGTGGAGAGGGAGACTCCTGGGCAGCCGTTTTCCTCATCCTTTCCCTCTCCCAGTCCATTTCCAAATGTGGCC
TCCATGTGGGTGCTAGGGACATGGGAAAAACCACTGCTATGCCATTTCTTCTCTCTGTTCCCTTCCTCACCCCCG
ACGGTGTGGCTGATGATGTCTTCTGGTGTCATGGTGACCACCCCCTGTTCCCTGTTCTGGTATTTCCCCTGTCAG
TTTCCCCTCTCGGCCAGGTTGTGTCCCAAAATCCCCTCAGCCTCTTCTCTGCACGTTGCTGAAGGTCCAGGCTTG
CCTCAAGTTCCATGCTTGAGCAATAAAGTGGAAACAATAAAACCTGGGTGTCAGACAAAAAAAAAAAAAAAAAA
A

FIGURE 145

MTAEEMKATESGAQSAPLPMEGVDISPKQDEGVLKVIKREGTGTEMPMIGDRVFVHYTGWLLDGTKFDSSLDRKD
KFSFDLGKGEVIKAWDIAIATMKVGEVCHITCKPEYAYGSAGSPPKIPPNATLVFEVELFEFKGEDLTEEEDGGI
IRRIQTRGEGYAKPNEGAIVEVALEGYYKDKLFDQRELRFEIGEGENLDLPYGLERAIQRMEKGEHSIVYLKPSY
AFGSVGKEKFQIPPNAELKYELHLKSFEKAKESWEMNSEEKLEQSTIVKERGTVYFKEGKYKQALLQYKKIVSWL
EYESSFSNEEAQKAQALRLASHLNLAMCHLKLQAFSAAIESCNKALELDSNNEKGLFRRGEAHLAVNDFELARAD
FQKVLQLYPNNKAAKTQLAVCQQRIRRQLAREKKLYANMFERLAEEENKAKAEASSGDHPTDTEMKEEQKSNTAG
SQSQVETEA

FIGURE 146A

AGGCAGCAGCAGAGGGAGAGCTCGGGGCTTGGAGGGGAAACAGCGGAAGACCTAAGATTATCGGGAGGGCAGCAG
AGGCAGAGAACGAGGACAGGACCCTTGGCCGTCTTCTTCCAGGGAACGAGAGGTCACAGCCTCGCTCTCCGCTTA
TGCTTCTGGCGCCCCAGCTTAAAGCCGAGGCTGCGGCTGACAAAGGGCTCGCGCCGGTGCCGCCGCCCTTCTCAT
CCGGGCATTCGGGTCCCTGCGAGAAGGAGGGGGAAGGACAGAGGGGGAGGGGAAGGAGCCGGAGGGGCGCACACT
TGGAGCTGAAGCCCTCTCCAGGGCTCCGGGCCGGTGCCCCAACGGACAGAGGTCGAGGAGGACCCGCAGAGGTGG
CAGCGGCCGGGGGCAGGAGG**ATG**GTGCAGAAGGAGAGTCAAGCGACGTTGGAGGAGCGGGAGAGCGAGCTCAGCT
CCAACCCTGCCGCCTCTGCGGGGGCATCGCTGGAGCCGCCGGCAGCTCCGGCACCCGGAGAAGACAACCCCGCCG
GGGCTGGGGGAGCGGCGGTGGCCGGGGCTGCAGGAGGGGCTCGGCGGTTCCTCTGCGGTGTGGTGGAAGGATTTT
ATGGAAGACCTTGGGTTATGGAACAGAGAAAAGAACTCTTTAGAAGGCTCCAGAAATGGGAATTAAATACATACT
TGTATGCCCCAAAAGATGACTACAAACATAGGATGTTTTGGCGAGAGATGTATTCAGTGGAGGAAGCTGAGCAAC
TTATGACTCTCATCTCTGCTGCACGAGAATATGAGATAGAGTTCATCTATGCGATCTCACCTGGATTGGATATCA
CTTTTTCTAACCCCAAGGAAGTATCCACATTGAAACGTAAATTGGACCAGGTTTCTCAGTTTGGGTGCAGATCAT
TTGCTTTGCTTTTTGATGATATAGACCATAATATGTGTGCAGCAGACAAAGAGGTATTCAGTTCTTTTGCTCATG
CCCAAGTCTCCATCACAAATGAAATCTATCAGTACCTAGGAGAGCCAGAAACTTTCCTCTTCTGTCCCACAGAAT
ACTGTGGCACTTTCTGTTATCCAAATGTGTCTCAGTCTCCATATTTAAGGACTGTGGGTGAAAAGCTTCTACCTG
GAATTGAAGTGCTTTGGACAGGTCCCAAAGTTGTTTCTAAAGAAATTCCAGTAGAGTCCATCGAAGAGGTTTCTA
AGATTATTAAGAGAGCTCCAGTAATCTGGGATAACATTCATGCTAATGATTATGATCAGAAGAGACTGTTTCTGG
GCCCGTACAAAGGAAGATCCACAGAACTCATCCCACGGTTAAAAGGAGTCCTCACTAATCCAAATTGTGAATTTG
AAGCCAACTACGTTGCTATCCACACCCTTGCCACCTGGTACAAATCAAACATGAATGGAGTGAGAAAAGATGTAG
TGATGACTGACAGTGAAGATAGTACTGTGTCCATCCAGATAAAATTAGAAAATGAAGGCAGTGATGAAGATATTG
AAACTGATGTACTCTATAGTCCACAGATGGCTCTAAAGCTAGCATTAACAGAATGGTTGCAAGAGTTTGGTGTGC
CTCATCAATACAGCAGTAGGCAAGTTGCACACAGTGGAGCTAAAGCAAGTGTAGTTGATGGGACTCCTTTAGTTG
CAGCACCCTCTTTAAATGCCACAACCGTAGTAACAACAGTTTATCAGGAGCCCATTATGAGCCAGGGAGCAGCCT
TGAGTGGTGAGCCTACTACTCTGACCAAGGAAGAAGAAAAGAAACAGCCTGATGAAGAACCCATGGACATGGTGG
TGGAAAAACAAGAAGAAACGGACCACAAGAATGACAATCAAATACTGAGTGAAATTGTTGAAGCGAAAATGGCAG
AGGAATTGAAACCAATGGACACTGATAAAGAGAGCATAGCTGAATCAAAATCCCCAGAGATGTCCATGCAAGAAG
ATTGTATTAGTGACATTGCCCCCATGCAAACTGATGAACAGACAAACAAGGAGCAGTTTGTGCCAGGTCCAAATG
AAAAGCCTTTGTACACTGCGGAACCAGTGACCCTGGAGGATTTGCAGTTACTTGCTGATCTATTCTACCTTCCTT
ACGAGCATGGACCCAAAGGAGCACAGATGTTACGGGAATTTCAATGGCTTCGAGCAAATAGTAGTGTTGTCAGTG
TCAATTGCAAAGGAAAAGACTCTGAAAAAATTGAAGAATGGCGGTCACGAGCAGCCAAGTTTGAAGAGATGTGTG
GACTAGTGATGGGAATGTTCACTCGGCTCTCCAATTGTGCCAACAGGACAATTCTTTATGACATGTACTCCTATG
TTTGGGATATCAAGAGTATAATGTCTATGGTGAAGTCTTTTGTACAGTGGTTAGGGTGTCGTAGTCATTCTTCAG
CACAATTCTTAATTGGAGACCAAGAACCCTGGGCCTTTAGAGGTGGTCTAGCAGGAGAGTTCCAGCGTTTGCTGC
CAATTGATGGGGCAAATGATCTCTTTTTTCAGCCACCTCCACTGACTCCTACCTCCAAAGTTTATACTATCAGAC
CTTATTTTCCTAAGGATGAGGCATCCGTGTACAAGATTTGCAGAGAAATGTATGACGATGGAGTGGGTTTACCCT
TTCAAAGTCAGCCTGATCTTATTGGAGACAAGTTAGTAGGAGGGCTGCTTTCCCTCAGCCTGGATTACTGCTTTG
TCCTAGAAGATGAAGATGGCATATGTGGTTATGCCTTGGGCACTGTAGATGTGACCCCCTTTATTAAAAAATGTA
AAATTTCCTGGATCCCCTTCATGCAGGAGAAGTATACCAAGCCAAATGGTGACAAGGAACTCTCTGAGGCTGAGA
AAATAATGTTGAGTTTCCATGAAGAACAGGAAGTACTGCCAGAAACTTTCCTTGCTAATTTCCCTTCTCTGATAA
AGATGGACATTCACAAAAAAGTAACTGACCCAAGTGTGGCCAAAAGCATGATGGCTTGCCTCCTGTCTTCACTGA
AGGCTAATGGCTCCCGGGGAGCTTTCTGTGAAGTGAGACCAGATGATAAAAGAATTCTGGAATTTTACAGCAAGT
TAGGATGTTTTGAAATTGCAAAAATGGAAGGATTTCCAAAGGATGTGGTTATACTTGGTCGGAGCCTG**TGA**CATT
TGTTGACACTGTGAACTGTCCAAAAGTCTCTTAACTGCACCTTGTGAATGGTAGTTGAGGTCTTCATACAGTTCA
GCCTCTAGAATGGTAACAAATCAGCCAATTGGATTCGAAACAAAGAAGACTATGTAAAACTCACCCATCACACTT
TGAGACTACTCACTGGTTGGAAGAATATAGTATTGCAGCAAATCCTGTATGAAAGAGAGATGTGGGCTTCCTTTT
TGAGTCTTGTGTTAGGTGCTGAGACCTTTTACATGGGCTTATACAGGGAGAGAGTCTTCAATAAATGTAGTCAGC
ACTATTTTCTGCATCCAGTGTGGTTGCGTTTCTCACCTGAGAGTAATCAAGATAACATCTGTCATCTTCCTTGGT
TTATTGAGTGAAATGCCTCTCAGTCTTAGGGGACATGGCAGAGATGAAAGAAAGAAAGAGTGGGTTTCAGAAGTG

FIGURE 146B

TCAGGGTGGAGTGATTCCAAGTGGGATGGTTGTGGCATTAGTTTAAGCTGAATAAATAATTTCAATTTGGGGCAG
TTATTCTGCTTTTTGTAAAGCCGTGGCCAATTGTCTCCTGTAATGACTGTTGGTTCAGGCATGTTGTACTTTGTA
GGGACAAATGTGCATTTGTTTGTGGCAAAAGCCTACAATTGACAAACTTGTAAATTTCTTTGTATATAAACTAGC
TGTAACCTGACTATCCTTTGTGTTTACTGTTTTTGTAAATTTTTTTCCTCTATAAATGAAAGGGTGTTGGTTCAG
AATGGCACTTTGAATAATGTAAACCAGTGAAAAGTGGATTTTCTTTACTTTTGTCTTTGGGTTTGGGGTTGTTTT
TGTTCTTTTTGAAGTTTTATTATTTTTAAAGTGCCTCCCACCTAGGCGTAGGCCATGACCATTTGGGGTACGAGA
GCCTAATTTTGTAGGACTTAATCTGTTGAAAAGTGCAGTTACTTCTGGAAATTAACCTCAATATTAGGTCAGCAT
GTGAAATGTTGGATTTGACATGTCAGGTAGGGTTCAGGGACTGATTGGTCCCATTTGCCCTCAGGTCAGTTGTTT
AATCTCAAGACCTGTTACTACTGATTTTATTAAATCAGAGTCTTTAATTCTTGCATGTTTGTATCTAATTTCTGA
ACGAATGAGCACACTTTAACCAGTTATTTACAGTTACCTTTTTCCTTTAACCGGATTGTGAAAGCTTCATGTATT
TTAATTTAGATTCTGTGTTTTTAAGGGTTCTGAGCATGAAGCTGGCAGATAGTCGGCAGGACTCATTTTTTCATC
ATGGCTGGCTGATTTCTCCATAGATTGATAACAGTATTTTGTTATCTTGCTTCTCTGTAGTTTTGCATCAGCTGT
TTAACTTTGAGCTGAGTGAGGGGAGAGGGGTAAAGAGAAAGAAACTTAAGTTTTCTTTCACAGAACTCCACCATT
GTGGGCTTTGAGAGAGCCCTAAAGCATTGTACCTAGTGGTACCTAGTGACTTCCAACCAAAGCCTTTGAGTATGC
ACTAAATAGGTGAGAAGAAAGGAGAGAAGGTTTTTAGGTTAGAAACCTTTAACCGATAGAAGGATATGGTATGTT
GTAAAGCTGGAACCAAGTTTGCATTTTTGAGGGCTTGAGATGAAGGGAAGACTCTTACCAGATAGTAAGACAGCT
GAGTTTTCCTCAGTTTTCTCGTCTTAACACTAGTGGACAATTCTAGCATTTTGTTTGGAGGATTTCAGAGTTAAC
CTCATGGAATTCAGGATTTTTTAGCAAGTTTGCTTTTGGTTTTATCTTGGCTTTTAGTAATCATGTTGGCTGGTC
TGGTCACAGGTGACTGTGAAACAGATGCCCCTGGTCTTGCTTTCATCACTCTAGGATCATGAAGTGCTATGCTAT
TTCCTGGTTATGAATATTAAGGTTGGAATTACATTTTTATTGATTGTTTGGATCAGAGCTCAGTTCCTGTAGAAA
ACGAACTGTAAAAGACCATGCAAGAGGCAAAATAAAACTTGAAGTGG

FIGURE 147

MVQKESQATLEERESELSSNPAASAGASLEPPAAPAPGEDNPAGAGGAAVAGAAGGARRFLCGVVEGFYGRPWVM
EQRKELFRRLQKWELNTYLYAPKDDYKHRMFWREMYSVEEAEQLMTLISAAREYEIEFIYAISPGLDITFSNPKE
VSTLKRKLDQVSQFGCRSFALLFDDIDHNMCAADKEVFSSFAHAQVSITNEIYQYLGEPETFLFCPTEYCGTFCY
PNVSQSPYLRTVGEKLLPGIEVLWTGPKVVSKEIPVESIEEVSKIIKRAPVIWDNIHANDYDQKRLFLGPYKGRS
TELIPRLKGVLTNPNCEFEANYVAIHTLATWYKSNMNGVRKDVVMTDSEDSTVSIQIKLENEGSDEDIETDVLYS
PQMALKLALTEWLQEFGVPHQYSSRQVAHSGAKASVVDGTPLVAAPSLNATTVVTTVYQEPIMSQGAALSGEPTT
LTKEEEKKQPDEEPMDMVVEKQEETDHKNDNQILSEIVEAKMAEELKPMDTDKESIAESKSPEMSMQEDCISDIA
PMQTDEQTNKEQFVPGPNEKPLYTAEPVTLEDLQLLADLFYLPYEHGPKGAQMLREFQWLRANSSVVSVNCKGKD
SEKIEEWRSRAAKFEEMCGLVMGMFTRLSNCANRTILYDMYSYVWDIKSIMSMVKSFVQWLGCRSHSSAQFLIGD
QEPWAFRGGLAGEFQRLLPIDGANDLFFQPPPLTPTSKVYTIRPYFPKDEASVYKICREMYDDGVGLPFQSQPDL
IGDKLVGGLLSLSLDYCFVLEDEDGICGYALGTVDVTPFIKKCKISWIPFMQEKYTKPNGDKELSEAEKIMLSFH
EEQEVLPETFLANFPSLIKMDIHKKVTDPSVAKSMMACLLSSLKANGSRGAFCEVRPDDKRILEFYSKLGCFEIA
KMEGFPKDVVILGRSL

FIGURE 148

TTCCGGTTCCCAGAGTGGGGCACAGCGAGGCGCTAGGGGGAACGCTGGCCTCTGAAACTAGCTCTGGGACCGGGG
TCTGCGGCCGGCCCCTAGCTGGCCCCGTCTCCCATCCCCAGAAGGGTATTCACTGGGGATTCTGAGCTTTGGCTA
CTCCAGTTTCCCACGACACG**ATG**TTCCCTTTCTACAGCTGCTGGAGGACTGGACTGCTACTACTACTCCTGGCTG
TGGCAGTGAGAGAATCCTGGCAGACAGAAGAAAAAACTTGCGACTTGGTAGGAGAAAAGGGTAAAGAGTCAGAGA
AAGAGTTGGCTCTAGTGAAGAGGCTGAAACCACTGTTTAATAAAAGCTTTGAGAGCACTGTGGGCCAGGGTTCAG
ACACATACATCTACATCTTCAGGGTGTGCCGGGAAGCTGGCAACCACACTTCTGGGGCAGGCCTGGTGCAAATCA
ACAAAAGTAATGGGAAGGAGACAGTGGTAGGGAGACTCAACGAGACTCACATCTTCAACGGAAGTAATTGGATCA
TGCTGATCTATAAAGGGGGTGATGAATATGACAACCACTGTGGCAAGGAGCAGCGTCGTGCAGTGGTGATGATCT
CCTGCAATCGACACACCCTAGCGGACAATTTTAACCCTGTGTCTGAGGAGCGTGGCAAAGTCCAAGATTGTTTCT
ACCTCTTTGAGATGGATAGCAGCCTGGCCTGTTCACCAGAGATCTCCCACCTCAGTGTGGGTTCCATCTTACTTG
TCACGTTTGCATCACTGGTTGCTGTTTATGTTGTTGGGGGGTTCCTATACCAGCGACTGGTAGTGGGAGCCAAAG
GAATGGAGCAGTTTCCCCACTTAGCCTTCTGGCAGGATCTTGGCAACCTGGTAGCAGATGGCTGTGACTTTGTCT
GCCGTTCTAAACCTCGAAATGTGCCTGCAGCATATCGTGGTGTGGGGGATGACCAGCTGGGGGGAGGAGTCAGAAG
AAAGGGATGACCATTTATTACCAATG**TAG**ATTGCACTTTATATGTCCAGCCTCTTCCTCAGTCCCCCAAACCAAA
GCTACACAGCCAGATTTCTCAAGCAGTCTCAACTCCAGTCCCTCATCTCACCCTTACTATTGCTCTTGCTTTCCA
GTTTGCTTTTGATTTGCATCTTCTCACTAGTAAAACTGCCTTCCCTTTGTTCCTTATTTTCTGTTTTTTCTCTAG
AGAGGTACAGTTGTAAGTCAGAGTTAATATAATAGGGCCTGTGAAAACAGAGGCTTTTGCATTGTCTCTTGACAT
CAGAAGTTACAATAGGCATATGGGCAAAATGGTGTAGCAGGCTCACTGGCCGTTTGTTTTTTAAACACATTTTCA
CAAGTTTTTGAGACACTGGATTTCTTTAATTAAAAAAAAAATGCCAAGAAACATTATTTATACAGGGTTGATTGC
TTTCATGTTGTTATTCTGTACCCTATAGTAGCCTCCATGAGAATCTGGTATTTCTTGCTGCTTGGAACTACTTTG
CAGTGATTACTTGGTTGCAGTCCAAGTACTCTCGTTTAGTCTGAGCCTGGAGATGTTCTAGACTTGCTTCTCCCA
CCTCTGAGATTAGGACAGGAAAAATGTGAAATTTCCCAATTACAGGATTATACGGTACCATCACATCATTTGTGG
AAATTGGGGTGACTGTATAGCTGGGATTGGGCTAAGGACTGTGGTCTTATCTGTCCACATACAGCCAAAATGCCT
ATCCAGAAATCCAGTTCGTTGGAAAGGAAAATTGGTACTCCTGTGCCACAGGGGTTCCAGAAAAGGGAAGTCACT
TTACCTTGCGGTGGTGGGATCCTGATGTCTTTCATCCATTTGTAGTAAAAGCTGGTAAAGCTTTTCTTACTCCTG
GTTCCCTACCAGTATTTCTAAACATGTCGCACTTTCTCCACAGGCATGTGGTTTTGACCTTTTTTTCAATCTTCT
AGAAAGGGAACGGAAGCAGAAGTGGGACATCGAGGGCTCTGCTGTCCTCTGCGCTGGGTGTGGAATGCTGCTGCA
CCTGTCCCTTCTGCTGGCTCAGGGAAGTGTCTTCTTGCCCACATTTCTGTGGGGAAAGGTTTTTAATCCTCTGAT
GCTTCCATCTTCCTGTTTAGGCCATGTGCCCAGAAACCTGGACTGATCTTTCTTTAATAGTGAACCCCTGGGCCA
CTGAAGAGTAACATGGCTCCACTGGACACAAAAGAGGGATGGAATCAACAGGCAGGGGGCCTTTTATAAGCCTTA
GGAAAAGAAAATGAAACTATTTCATCTTTGGACTTTTCAATACTATTGGAGTGATTTTTTTCTTTCTAAACAGGG
AAAATAATGTTACAAAAGCATCTTTTTTGTTATTTGTTTGCATCCCTCCCCCACACCCTGGTGTTTTAAAATGAA
GAAAAAAAACCATCACCTTTTGTACAAAAACTCTTAATGATTAAAAAACAAACA

FIGURE 149

MFPFYSCWRTGLLLLLLAVAVRESWQTEEKTCDLVGEKGKESEKELALVKRLKPLFNKSFESTVGQGSDTYIYIF
RVCREAGNHTSGAGLVQINKSNGKETVVGRLNETHIFNGSNWIMLIYKGGDEYDNHCGKEQRRAVVMISCNRHTL
ADNFNPVSEERGKVQDCFYLFEMDSSLACSPEISHLSVGSILLVTFASLVAVYVVGGFLYQRLVVGAKGMEQFPH
LAFWQDLGNLVADGCDFVCRSKPRNVPAAYRGVGDDQLGEESEERDDHLLPM

FIGURE 150

CTGAGGCCCAGCCCCCTTCGCCCGTTTCCATCACGAGTGCCGCCAGC**ATG**TCTGACAAACTGCCCTACAAAGTCG
CCGACATCGGCCTGGCTGCCTGGGGACGCAAGGCCCTGGACATTGCTGAGAACGAGATGCCGGGCCTGATGCGTA
TGCGGGAGCGGTACTCGGCCTCCAAGCCACTGAAGGGCGCCCGCATCGCTGGCTGCCTGCACATGACCGTGGAGA
CGGCCGTCCTCATTGAGACCCTCGTCACCCTGGGTGCTGAGGTGCAGTGGTCCAGCTGCAACATCTTCTCCACCC
AGGACCATGCGGCGGCTGCCATTGCCAAGGCTGGCATTCCGGTGTATGCCTGGAAGGGCGAAACGGACGAGGAGT
ACCTGTGGTGCATTGAGCAGACCCTGTACTTCAAGGACGGGCCCCTCAACATGATTCTGGACGACGGGGGCGACC
TCACCAACCTCATCCACACCAAGTACCCGCAGCTTCTGCCAGGCATCCGAGGCATCTCTGAGGAGACCACGACTG
GGGTCCACAACCTCTACAAGATGATGGCCAATGGGATCCTCAAGGTGCCTGCCATCAATGTCAATGACTCCGTCA
CCAAGAGCAAGTTTGACAACCTCTATGGCTGCCGGGAGTCCCTCATAGATGGCATCAAGCGGGCCACAGATGTGA
TGATTGCCGGCAAGGTAGCGGTGGTAGCAGGCTATGGTGATGTGGGCAAGGGCTGTGCCCAGGCCCTGCGGGGTT
TCGGAGCCCGCGTCATCATCACCGAGATTGACCCCATCAACGCACTGCAGGCTGCCATGGAGGGCTATGAGGTGA
CCACCATGGATGAGGCCTGTCAGGAGGGCAACATCTTTGTCACCACCACAGGCTGTATTGACATCATCCTTGGCC
GGCACTTTGAGCAGATGAAGGATGATGCCATTGTGTGTAACATTGGACACTTTGACGTGGAGATCGATGTCAAGT
GGCTCAACGAGAACGCCGTGGAGAAGGTGAACATCAAGCCGCAGGTGGACCGGTATCGGTTGAAGAATGGGCGCC
GCATCATCCTGCTGGCCGAGGGTCGGCTGGTCAACCTGGGTTGTGCCATGGGCCACCCCAGCTTCGTGATGAGTA
ACTCCTTCACCAACCAGGTGATGGCGCAGATCGAGCTGTGGACCCATCCAGACAAGTACCCCGTTGGGGTTCATT
TCCTGCCCAAGAAGCTGGATGAGGCAGTGGCTGAAGCCCACCTGGGCAAGCTGAATGTGAAGTTGACCAAGCTAA
CTGAGAAGCAAGCCCAGTACCTGGGCATGTCCTGTGATGGCCCCTTCAAGCCGGATCACTACCGCTAC**TGA**GAGC
CAGGTCTGCGTTTCACCCTCCAGCTGCTGTCCTTGCCCAGGCCCCACCTCTCCTCCCTAAGAGCTAATGGCACCA
ACTTTGTGACTGGTTTGTCAGTGTCCCCCATCGACTCTCTGGGGCTGATCACTTAGTTTTTGGCCTCTGCTGCAG
CCGTCATACTGTTCCAAATGTGGCAGCGGGAACAGAGTACCCTCTTCAAGCCCCGGTCATGATGGAGGTCCCAGC
CACAGGGAACCATGAGCTCAGTGGTCTTGGAACAGCTCACTAAGTCAGTCCTTCCTTAGCCTGGAAGCCAGTAGT
GGAGTCACAAAGCCCATGTGTTTTGCCATCTAGGCCTTCACCTGGTCTGTGGACTTATACCTGTGTGCTTGGTTT
ACAGGTCCAGTGGTTCTTCAGCCCATGACAGATGAGAAGGGGCTATATTGAAGGGCAAAGAGGAACTGTTGTTTG
AATTTTCCTGAGAGCCTGGCTTAGTGCTGGGCCTTCTCTTAAACCTCATTACAATGAGGTTAGTACTTTTAGTCC
CTGTTTTACAGGGGTTAGAATAGACTGTTAAGGGGCAACTGAGAAAGAACAGAGAAGTGACAGCTAGGGGTTGAG
AGGGGCCAGAAAAACATGAATGCAGGCAGATTTCGTGAAATCTGCCACCACTTTATAACCAGATGGTTCCTTTCA
CAACCCTGGGTCAAAAAGAGAATAATTTGGCCTATAATGTTAAAAGAAAGCAGGAAGGTGGGTAAATAAAAATCT
TGGTGCCTGG

FIGURE 151

MSDKLPYKVADIGLAAWGRKALDIAENEMPGLMRMRERYSASKPLKGARIAGCLHMTVETAVLIETLVTLGAEVQ
WSSCNIFSTQDHAAAAIAKAGIPVYAWKGETDEEYLWCIEQTLYFKDGPLNMILDDGGDLTNLIHTKYPQLLPGI
RGISEETTTGVHNLYKMMANGILKVPAINVNDSVTKSKFDNLYGCRESLIDGIKRATDVMIAGKVAVVAGYGDVG
KGCAQALRGFGARVIITEIDPINALQAAMEGYEVTTMDEACQEGNIFVTTTGCIDIILGRHFEQMKDDAIVCNIG
HFDVEIDVKWLNENAVEKVNIKPQVDRYRLKNGRRIILLAEGRLVNLGCAMGHPSFVMSNSFTNQVMAQIELWTH
PDKYPVGVHFLPKKLDEAVAEAHLGKLNVKLTKLTEKQAQYLGMSCDGPFKPDHYRY

FIGURE 152

ATACACGTGCCATGTGCAGCATGAGGGGCTACCCGAGCCCGTCACCCTGAGATGGAAGCCGGCTTCCCAGCCCAC
CATCCCCATCGTGGGCATCATTGCTGGCCTGGTTCTCCTTGGATCTGTGGTCTCTGGAGCTGTGGTTGCTGCTGT
GATATGGAGGAAGAAGAGCTCAGGTGGAAAAGGAGGGAGCTACTCTAAGGCTGAGTGGAGCGACAGTGCCCAGGG
GTCTGAGTCTCACAGCTTGTAAAGCCTGAGACAGCTGCCTTGTGTGCGACTGAGATGCACAGCTGCCTTGTGTGC
GACTGAGATGCAGGATTTCCTCACGCCTCCCCTATGTGTCTTAGGGGACTCTGGCTTCTCTTTTTGCAAGGGCCT
CTGAATCTGTCTGTGTCCCTGTTAGCACAATGTGAGGAGGTAGAGAAACAGTCCACCTCTGTGTCTACCATGACC
CCCTTCCTCACACTGACCTGTGTTCCTTCCCTGTTCTCTTTTCTATTAAAAATAAGAACCTGGGCAGAGTGCGGC
AGCTCATGCCTGTAATCCCAGCACTTAGGGAGGCCGAGGAGGGCAGATCACGAGGTCAGGAGATCGAAACCATCC
TGGCTAACACGGTGAAACCCCGTCTCTACTAAAAAATACAAAAAATTAGCTGGGCGCAGAGGCACGGGCCTGTAG
TCCCAGCTACTCAGGAGGCGGAGGCAGGAGAATGGCGTCAACCCGGGAGGCGGAGGTTGCAGTGAGCCAGGATTG
TGCGACTGCACTCCAGCCTGGGTGACAGGGTGAAACGCCATCTCAAAAAATAAAAATTAAAAAATAAAAAAAGAA
CCTGGATCTCAATTTAATTTTTCATATTCTTGCAATGAAATGGACTTGAGGAAGCTAAGATCATAGCTAGAAATA
CAGATAATTCCACAGCACATCTCTAGCAAATTTAGCCTATTCCTATTCTCTAGCCTATTCCTTACCACCTGTAAT
CTTGACCATATACCTTGGAGTTGAATATTGTTTTCATACTGCTGTGGTTTGAATGTTCCCTCCAACACTCATGTT
GAGACTTAATCCCTAATGTGGCAATACTGAAAGGTGGGGCCTTTGAGATGTGATTGGATCGTAAGGCTGTGCCTT
CATTCATGGGTTAATGGATTAATGGGTTATCACAGGAATGGGACTGGTGGCTTTATAAGAAGAGGAAAAGAGAAC
TGAGCTAGCATGCCCAACCCACAGAGAGCCTCCACTAGAGTGATGCTAAGTGGAAATGTGAGGTGCAGCTGCCAC
AGAGGGCCCCCACCAGGGAAATGTCTAGTGTCTAGTGGATCCAGGCCACAGGAGAGAGTGCCTTGTGGAGCGCTG
GGAGCAGGACCTGACCACCACCAGGACCCCAGAACTGTGGAGTCAGTGGCAGCATGCAGCGCCCCCTTGGGAAAG
CTTTAGGCACCAGCCTGCAACCCATTCGAGCAGCCACGTAGGCTCGACCCAGCAAAGCCACAGGCACGGGGCTAC
CTGAGGCCTTGGGGGCCAATCCCTGCTCCAGTGTGTCCGTGAGGCAGCACACGAAGTCAAAAGAGATTATCTCTT
CCCACAGATACCTTTTCTCTCCCATGACCCTTTAACAGCATCTGCTTCATTCCCCTCACCTTCCCAGGCTGATCT
GAGGTAAACTTTGAAGTAAAATAAAAGCTGTGTTTGAGCATC

FIGURE 153

GGGATC**ATG**GTAGATGGAACCCTCCTTTTACTCTCCTCGGAGGCCCTGGCCCTTACCCAGACCTGGGCGGGCTCC
CACTCCTTGAAGTATTTCCACACTTCCGTGTCCCGGCCCGGCCGCGGGGAGCCCCGCTTCATCTCTGTGGGCTAC
GTGGACGACACCCAGTTCGTGCGCTTCGACAACGACGCCGCGAGTCCGAGGATGGTGCCGCGGGCGCCGTGGATG
GAGCAGGAGGGGTCAGAGTATTGGGACCGGGAGACACGGAGCGCCAGGGACACCGCACAGATTTTCCGAGTGAAC
CTGCGGACGCTGCGCGGCTACTACAATCAGAGCGAGGCCGGGTCTCACACCCTGCAGTGGATGCATGGCTGCGAG
CTGGGGCCCGACAGGCGCTTCCTCCGCGGGTATGAACAGTTCGCCTACGACGGCAAGGATTATCTCACCCTGAAT
GAGGACCTGCGCTCCTGGACCGCGGTGGACACGGCGGCTCAGATCTCCGAGCAAAAGTCAAATGATGCCTCTGAG
GCGGAGCACCAGAGAGCCTACCTGGAAGACACATGCGTGGAGTGGCTCCACAAATACCTGGAGAAGGGGAAGGAG
ACGCTGCTTCACCTGGAGCCCCCAAAGACACACGTGACTCACCACCCCATCTCTGACCATGAGGCCACCCTGAGG
TGCTGGGCCCTGGGCTTCTACCCTGCGGAGATCACACTGACCTGGCAGCAGGATGGGGAGGGCCATACCCAGGAC
ACGGAGCTCGTGGAGACCAGGCCTGCAGGGGATGGAACCTTCCAGAAGTGGGCAGCTGTGGTGGTGCCTTCTGGA
GAGGAGCAGAGATACACGTGCCATGTGCAGCATGAGGGGCTACCCGAGCCCGTCACCCTGAGATGGAAGCCGGCT
TCCCAGCCCACCATCCCCATCGTGGGCATCATTGCTGGCCTGGTTCTCCTTGGATCTGTGGTCTCTGGAGCTGTG
GTTGCTGCTGTGATATGGAGGAAGAAGAGCTCAGGTGGAAAAGGAGGGAGCTACTCTAAGGCTGAGTGGAGCGAC
AGTGCCCAGGGGTCTGAGTCTCACAGCTTG**TAA**AGCCTGAGACAGCTGCCTTGTGTGCGACTGAGATGCACAGCT
GCCTTGTGTGCGACTGAGATGCAGGATTTCCTCACGCCTCCCCTATGTGTCTTAGGGGACTCTGGCTTCTCTTTT
TGCAAGGGCCTCTGAATCTGTCTGTGTCCCTGTTAGCACAATGTGAGGAGGTAGAGAAACAGTCCACCTCTGTGT
CTACCATGACCCCCTTCCTCACACTGACCTGTGTTCCTTCCCTGTTCTCTTTTCTATTAAAAATAAGAACCTGGG
CAGAGTGCGGCAGCTCATGCCTGTAATCCCAGCACTTAGGGAGGCCGAGGAGGGCAGATCACGAGGTCAGGAGAT
CGAAACCATCCTGGCTAACACGGTGAAACCCCGTCTCTACTAAAAAATACAAAAAATTAGCTGGGCGCAGAGGCA
CGGGCCTGTAGTCCCAGCTACTCAGGAGGCGGAGGCATGGAGAATGGCGTCAACCCGGGAGGCGGAGGTTGCAGT
GAGCCAGGATTGTGCGACTGCACTCCAGCCTGGGTGACAGGGTGAAACGCCATCTCAAAAAATAAAAATTAAAAA
ATAAAAAAAGAACC

FIGURE 154

MVDGTLLLLSSEALALTQTWAGSHSLKYFHTSVSRPGRGEPRFISVGYVDDTQFVRFDNDAASPRMVPRAPWMEQ
EGSEYWDRETRSARDTAQIFRVNLRTLRGYYNQSEAGSHTLQWMHGCELGPDRRFLRGYEQFAYDGKDYLTLNED
LRSWTAVDTAAQISEQKSNDASEAEHQRAYLEDTCVEWLHKYLEKGKETLLHLEPPKTHVTHHPISDHEATLRCW
ALGFYPAEITLTWQQDGEGHTQDTELVETRPAGDGTFQKWAAVVVPSGEEQRYTCHVQHEGLPEPVTLRWKPASQ
PTIPIVGIIAGLVLLGSVVSGAVVAAVIWRKKSSGGKGGSYSKAEWSDSAQGSESHSL

FIGURE 155

CCTCTCGGAGCTGGAAATGCAGCTATTGAGATCTTCGAATGCTGCGGAGCTGGAGGCGGAGGCAGCTGGGGAGGT
CCGAGCGATGTGACCAGGCCGCCATCGCTCGTCTCTTCCTCTCTCCTGCCGCCTCCTGTGTCGAAAATAACTTTT
TTAGTCTAAAGAAAGAAAGACAAAAGTAGTCGTCCGCCCCTCACGCCCTCTCTTCCTCTCAGCCTTCCGCCCGGT
GAGGAAGCCCGGGGTGGCTGCTCCGCCGTCGGGGCCGCGCCGCCGAGCCCCAGCGCCCCGGGCCGCCCCCGCACG
CCGCCCCC**ATG**CATCCCTTCTACACCCGGGCCGCCACCATGATAGGCGAGATCGCCGCCGCCGTGTCCTTCATCT
CCAAGTTTCTCCGCACCAAGGGGCTGACGAGCGAGCGACAGCTGCAGACCTTCAGCCAGAGCCTGCAGGAGCTGC
TGGCAGAACATTATAAACATCACTGGTTCCCAGAAAAGCCATGCAAGGGATCGGGTTACCGTTGTATTCGCATCA
ACCATAAAATGGATCCTCTGATTGGACAGGCAGCACAGCGGATTGGACTGAGCAGTCAGGAGCTGTTCAGGCTTC
TCCCAAGTGAACTCACACTCTGGGTTGACCCCTATGAAGTGTCCTACAGAATTGGAGAGGATGGCTCCATCTGTG
TGCTGTATGAAGCCTCACCAGCAGGAGGTAGCACTCAAAACAGCACCAACGTGCAAATGGTAGACAGCCGAATCA
GCTGTAAGGAGGAACTTCTCTTGGGCAGAACGAGCCCTTCCAAAAACTACAATATGATGACTGTATCAGGT**TAA**G
ATATAGTCTGTGGATGGATCATCTGATGATGATCCATAAATTTGATTTTTGCTTTGGGTGGGCTCCTCTTGGGGA
TGGATTATGGAATTTAAACCATGTCACAGCTGTGAAGATCTGGCACAAGATAGAATGGTAAAAAAAAAAAAAAAT
TTTAAGTGACAGTGCCATAGTTTGGACAGTACCTTTCAATGATTAATTTTAATAGCCTGTGAGTCCAAGTAAATG
ATCACTTTATTTGCTAGGGAGGGAAGTCCTAGGGTGGTTTCAGTTTCTCCCAGACATACCTAAATTTTTACATCA
ATCCTTTTAAAGAAAATCTGTATTTCAAAGAATCTTTCTCTGCAGTAAATCTCGCAGGGGAATTTGCACTATTAC
ACTTGAAAGTTGTTATTGTTAACCTTTTCGGCAGCTTTTAATAGGAAAGTTAAACGTTTTAAACATGGTAGTACT
GGAAATTTTACAAGACTTTTACCTAGCACTTAAATATGTATAAATGTACATAAAGACAAACTAGTAAGCATGACC
TGGGGAAATGGTCAGACCTTGTATTGTGTTTTTGGCCTTGAAAGTAGCAAGTGACCAGAATCTGCCATGGCAACA
GGCTTTAAAAAAGACCCTTAAAAAGACACTGTCTCAACTGTGGTGTTAGCACCAGCCAGCTCTCTGTACATTTGC
TAGCTTGTAGTTTTCTAAGACTGAGTAAACTTCTTATTTTTAGAAAGTGGAGGTCTGGTTTGTAACTTTCCTTGT
ACTTAATTGGGTAAAAGTCTTTTCCACAAACCACCATCTATTTTGTGAACTTTGTTAGTCATCTTTTATTTGGTA
AATTATGAACTGGTGTAAATTTGTACAGTTCATGTATATTGATTGTGGCAAAGTTGTACAGATTTCTATATTTTG
GATGAGAAATTTTTCTTCTCTCTATAATAAATCGTTTCTTATCTTGGCATTTTTAACC

FIGURE 156

MHPFYTRAATMIGEIAAAVSFISKFLRTKGLTSERQLQTFSQSLQELLAEHYKHHWFPEKPCKGSGYRCIRINHK
MDPLIGQAAQRIGLSSQELFRLLPSELTLWVDPYEVSYRIGEDGSICVLYEASPAGGSTQNSTNVQMVDSRISCK
EELLLGRTSPSKNYNMMTVSG

FIGURE 157

GGCACGAGGACCGACCGCATTGCGGCTTGGTTTTCTCACCCAGTGCATGTGGCAGGAGCGGTGAGATCACTGCCT
CACGGCGATCCTGGACTGACGGTCACGACTGCCTACCCTCTAACCCTGTTCTGAGCTGCCCCTTGCCCACACACC
CCAAACCTGTGTGCAGGATCCGCCTCCATGGAGCTACAGCCTCCTGAAGCCTCGATCGCCGTCGTGTCGATTCCG
CGCCAGTTGCCTGGCTCACATTCGGAGGCTGGTGTCCAGGGTCTCAGCGCGGGGGACGACTCAGAGTTGGGGTCT
CACTGTGTTGCCCAGACTGGTCTCGAACTCTTGGCCTCAGGTGATCCTCTTCCCTCAGCTTCCCAGAATGCCGAG
ATGATAGAGACGGGGTCTGACTGTGTTACCCAGGCTGGTCTTCAACTCTTGGCCTCAAGTGATCCTCCTGCCTTA
GCTTCCAAGAATGCTGAGGTTACAGGCACC**ATG**AGCCAGGACACCGAGGTGGATATGAAGGAGGTGGAGCTGAAT
GAGTTAGAGCCCGAGAAGCAGCCGATGAACGCGGCGTCTGGGGCGGCCATGTCCCTGGCGGGAGCCGAGAAGAAT
GGTCTGGTGAAGATCAAGGTGGCGGAAGACGAGGCGGAGGCGGCAGCCGCGGCTAAGTTCACGGGCCTGTCCAAG
GAGGAGCTGCTGAAGGTGGCAGGCAGCCCCGGCTGGGTACGCACCCGCTGGGCACTGCTGCTGCTCTTCTGGCTC
GGCTGGCTCGGCATGCTTGCTGGTGCCGTGGTCATAATCGTGCGAGCGCCGCGTTGTCGCGAGCTACCGGCGCAG
AAGTGGTGGCACACGGGCGCCCTCTACCGCATCGGCGACCTTCAGGCCTTCCAGGGCCACGGCGCGGGCAACCTG
GCGGGTCTGAAGGGGCGTCTCGATTACCTGAGCTCTCTGAAGGTGAAGGGCCTTGTGCTGGGTCCAATTCACAAG
AACCAGAAGGATGATGTCGCTCAGACTGACTTGCTGCAGATCGACCCCAATTTTGGCTCCAAGGAAGATTTTGAC
AGTCTCTTGCAATCGGCTAAAAAAAAAGAGCATCCGTGTCATTCTGGACCTTACTCCCAACTACCGGGGTGAGAAC
TCGTGGTTCTCCACTCAGGTTGACACTGTGGCCACCAAGGTGAAGGATGCTCTGGAGTTTTGGCTGCAAGCTGGC
GTGGATGGGTTCCAGGTTCGGGACATAGAGAATCTGAAGGATGCATCCTCATTCTTGGCTGAGTGGCAAAATATC
ACCAAGGGCTTCAGTGAAGACAGGCTCTTGATTGCGGGGACTAACTCCTCCGACCTTCAGCAGATCCTGAGCCTA
CTCGAATCCAACAAAGACTTGCTGTTGACTAGCTCATACCTGTCTGATTCTGGTTCTACTGGGGAGCATACAAAA
TCCCTAGTCACACAGTATTTGAATGCCACTGGCAATCGCTGGTGCAGCTGGAGTTTGTCTCAGGCAAGGCTCCTG
ACTTCCTTCTTGCCGGCTCAACTTCTCCGACTCTACCAGCTGATGCTCTTCACCCTGCCAGGGACCCCTGTTTTC
AGCTACGGGGATGAGATTGGCCTGGATGCAGCTGCCCTTCCTGGACAGCCTATGGAGGCTCCAGTCATGCTGTGG
GATGAGTCCAGCTTCCCTGACATCCCAGGGGCTGTAAGTGCCAACATGACTGTGAAGGGCCAGAGTGAAGACCCT
GGCTCCCTCCTTTCCTTGTTCCGGCGGCTGAGTGACCAGCGGAGTAAGGAGCGCTCCCTACTGCATGGGGACTTC
CACGCGTTCTCCGCTGGGCCTGGACTCTTCTCCTATATCCGCCACTGGGACCAGAATGAGCGTTTTCTGGTAGTG
CTTAACTTTGGGGATGTGGGCCTCTCGGCTGGACTGCAGGCCTCCGACCTGCCTGCCAGCGCCAGCCTGCCAGCC
AAGGCTGACCTCCTGCTCAGCACCCAGCCAGGCCGTGAGGAGGGCTCCCCTCTTGAGCTGGAACGCCTGAAACTG
GAGCCTCACGAAGGGCTGCTGCTCCGCTTCCCCTACGCGGCC**TGA**CTTCAGCCTGACATGGACCCACTACCCTTC
TCCTTTCCTTCCCAGGCCCTTTGGCTTCTGATTTTTCTCTTTTTTAAAAACAAACAAACAAACTGTTGCAAAAAA
AAAAAAAAAAAAA

FIGURE 158

MSQDTEVDMKEVELNELEPEKQPMNAASGAAMSLAGAEKNGLVKIKVAEDEAEAAAAAKFTGLSKEELLKVAGSP
GWVRTRWALLLLFWLGWLGMLAGAVVIIVRAPRCRELPAQKWWHTGALYRIGDLQAFQGHGAGNLAGLKGRLDYL
SSLKVKGLVLGPIHKNQKDDVAQTDLLQIDPNFGSKEDFDSLLQSAKKKSIRVILDLTPNYRGENSWFSTQVDTV
ATKVKDALEFWLQAGVDGFQVRDIENLKDASSFLAEWQNITKGFSEDRLLIAGTNSSDLQQILSLLESNKDLLLT
SSYLSDSGSTGEHTKSLVTQYLNATGNRWCSWSLSQARLLTSFLPAQLLRLYQLMLFTLPGTPVFSYGDEIGLDA
AALPGQPMEAPVMLWDESSFPDIPGAVSANMTVKGQSEDPGSLLSLFRRLSDQRSKERSLLHGDFHAFSAGPGLF
SYIRHWDQNERFLVVLNFGDVGLSAGLQASDLPASASLPAKADLLLSTQPGREEGSPLELERLKLEPHEGLLLRF
PYAA

FIGURE 159

GGCACGAGGCCCCGGTTCCGGCGCGGTTGAGGCCTTCGGTGGTGAACGAGTCTCCAGCACC**ATG**TCTGGTTTGTC
TGGCCCACCAGCCCGGCGCGGCCCTTTTCCGTTAGCGTTGCTGCTTTTGTTCCTGCTCGGCCCCAGATTGGTCCT
TGCCATCTCCTTCCATCTGCCCATTAACTCTCGCAAGTGCCTCCGTGAGGAGATTCACAAGGACCTGCTAGTGAC
TGGCGCGTACGAGATCTCCGACCAGTCTGGGGGGCGCTGGCGGCCTGCGCAGCCACCTCAAGATCACAGATTCTGC
TGGCCATATTCTCTACTCCAAAGAGGATGCAACCAAGGGGAAATTTGCCTTTACCACTGAAGATTATGACATGTT
TGAAGTGTGTTTTGAGAGCAAGGGAACAGGGCGGATACCTGACCAACTCGTGATCCTAGACATGAAGCATGGAGT
GGAGGCGAAAAATTACGAAGAGATTGCAAAAGTTGAGAAGCTCAAACCATTAGAGGTAGAGCTGCGACGCCTAGA
AGACCTTTCAGAATCTATTGTTAATGATTTTGCCTACATGAAGAAGAGAGAAGAGGAGATGCGTGATACCAACGA
GTCAACAAACACTCGGGTCCTATACTTCAGCATCTTTTCAATGTTCTGTCTCATTGGACTAGCTACCTGGCAGGT
CTTCTACCTGCGACGCTTCTTCAAGGCCAAGAAATTGATTGAG**TAA**TGAATGAGGCATATTCTCCTCCCACCTTG
TACCTCAGCCAGCAGAACATCGCTGGGACGTGCCTGGCCTAAGGCATCCTACCAACAGCACCATCAAGGCACGTT
GGAGCTTTCTTGCCAGAACTGATCTCTTTTGGTGTGGGAGGACATGGGGTACCACCTACACCCAACAAGTCAATG
AGGGACTTCTTTTTAATTTGGTAGGATTTTGACTGGTTTTGCAACAATAGGTCTATTATTAGAGTCACCTATGAC
AAAAAATAGGGGTTACCTAGATAATGCCAAAGTCAGCATTTGTCCTGGGTTCCCTTGTGTGATCTGTTTGGACTA
TGTTTTCTTTTCTTCTCCCACTTGCTCAGCAGCTTGGGCTTCCATTCTAGTTCTTTTACCAAGATTTTTGTGTGA
CCATGTTGACTTCATTTGGATTGCCCTCTTTCAATTTCCTTGTGAAAACACCCTTAACTTTCTCTTTACCCTTAG
CTGAAATGTTTACATAGCTTCTGGTGATATCTTTTCATGATTTTATATCTCTTAAAATGGTGATGGATGTGACAC
CTCATAAAAGTGAGCTTTGAACTGTAGATAACTCTTAAAGAAAATGTCATTTTAGACAATTAAAATATTTGTGCT
CAACTGCTTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 160

MSGLSGPPARRGPFPLALLLLFLLGPRLVLAISFHLPINSRKCLREEIHKDLLVTGAYEISDQSGGAGGLRSHLK
ITDSAGHILYSKEDATKGKFAFTTEDYDMFEVCFESKGTGRIPDQLVILDMKHGVEAKNYEEIAKVEKLKPLEVE
LRRLEDLSESIVNDFAYMKKREEEMRDTNESTNTRVLYFSIFSMFCLIGLATWQVFYLRRFFKAKKLIE

FIGURE 161

GTCCGTACTGCAGAGCCGCTGCCGGAGGGTCGTTTTAAAGGGCCGCGTTGCCGCCCCCTCGGCCCGCC**ATG**CTGC
TATCCGTGCCGCTGCTGCTCGGCCTCCTCGGCCTGGCCGTCGCCGAGCCCGCCGTCTACTTCAAGGAGCAGTTTC
TGGACGGAGACGGGTGGACTTCCCGCTGGATCGAATCCAAACACAAGTCAGATTTTGGCAAATTCGTTCTCAGTT
CCGGCAAGTTCTACGGTGACGAGGAGAAAGATAAAGGTTTGCAGACAAGCCAGGATGCACGCTTTTATGCTCTGT
CGGCCAGTTTCGAGCCTTTCAGCAACAAAGGCCAGACGCTGGTGGTGCAGTTCACGGTGAAACATGAGCAGAACA
TCGACTGTGGGGGCGGCTATGTGAAGCTGTTTCCTAATAGTTTGGACCAGACAGACATGCACGGAGACTCAGAAT
ACAACATCATGTTTGGTCCCGACATCTGTGGCCCTGGCACCAAGAAGGTTCATGTCATCTTCAACTACAAGGGCA
AGAACGTGCTGATCAACAAGGACATCCGTTGCAAGGATGATGAGTTTACACACCTGTACACACTGATTGTGCGGC
CAGACAACACCTATGAGGTGAAGATTGACAACAGCCAGGTGGAGTCCGGCTCCTTGGAAGACGATTGGGACTTCC
TGCCACCCAAGAAGATAAAGGATCCTGATGCTTCAAAACCGGAAGACTGGGATGAGCGGGCCAAGATCGATGATC
CCACAGACTCCAAGCCTGAGGACTGGGACAAGCCCGAGCATATCCCTGACCCTGATGCTAAGAAGCCCGAGGACT
GGGATGAAGAGATGGACGGAGAGTGGGAACCCCCAGTGATTCAGAACCCTGAGTACAAGGGTGAGTGGAAGCCCC
GGCAGATCGACAACCCAGATTACAAGGGCACTTGGATCCACCCAGAAATTGACAACCCCGAGTATTCTCCCGATC
CCAGTATCTATGCCTATGATAACTTTGGCGTGCTGGGCCTGGACCTCTGGCAGGTCAAGTCTGGCACCATCTTTG
ACAACTTCCTCATCACCAACGATGAGGCATACGCTGAGGAGTTTGGCAACGAGACGTGGGGCGTAACAAAGGCAG
CAGAGAAACAAATGAAGGACAAACAGGACGAGGAGCAGAGGCTTAAGGAGGAGGAAGAAGACAAGAAACGCAAAG
AGGAGGAGGAGGCAGAGGACAAGGAGGATGATGAGGACAAAGATGAGGATGAGGAGGATGAGGAGGACAAGGAGG
AAGATGAGGAGGAAGATGTCCCCGGCCAGGCCAAGGACGAGCTG**TAG**AGAGGCCTGCCTCCAGGGCTGGACTGAG
GCCTGAGCGCTCCTGCCGCAGAGCTTGCCGCGCCAAATAATGTCTCTGTGAGACTCGAGAACTTTCATTTTTTTC
CAGGCTGGTTCGGATTTGGGGTGGATTTTGGTTTTGTTCCCCTCCTCCACTCTCCCCCACCCCCTCCCCGCCCTT
TTTTTTTTTTTTTTTAAACTGGTATTTTATCCTTTGATTCTCCTTCAGCCCTCACCCCTGGTTCTCATCTTTCTT
GATCAACATCTTTTCTTGCCTCTGTGCCCCTTCTCTCATCTCTTAGCTCCCCTCCAACCTGGGGGGCAGTGGTGT
GGAGAAGCCACAGGCCTGAGATTTCATCTGCTCTCCTTCCTGGAGCCCAGAGGAGGGCAGCAGAAGGGGGTGGTG
TCTCCAACCCCCCAGCACTGAGGAAGAACGGGGCTCTTCTCATTTCACCCCTCCCTTTCTCCCCTGCCCCCAGGA
CTGGGCCACTTCTGGGTGGGGCAGTGGGTCCCAGATTGGCTCACACTGAGAATGTAAGAACTACAAACAAAATTT
CTATTAAATTAAATTTTGTGTCTC

FIGURE 162

MLLSVPLLLGLLGLAVAEPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFY
ALSASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPGTKKVHVIFNY
KGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLEDDWDFLPPKKIKDPDASKPEDWDERAKI
DDPTDSKPEDWDKPEHIPDPDAKKPEDWDEEMDGEWEPPVIQNPEYKGEWKPRQIDNPDYKGTWIHPEIDNPEYS
PDPSIYAYDNFGVLGLDLWQVKSGTIFDNFLITNDEAYAEEFGNETWGVTKAAEKQMKDKQDEEQRLKEEEEDKK
RKEEEEAEDKEDDEDKDEDEEDEEDKEEDEEEDVPGQAKDEL

FIGURE 163

GAATTTAATATGACTCACTATAGGGAATTTGGCCCTCGAGGCCAAGAATTCGGCACGAGGGCGCGCGGCCTCGAG
GCCTTCCGGTGCGGGAGAAACTACTACTCCCATAATGCCCCGCGGTCCCGCGAGCTGCCAGTCTCGTCGCGAGAA
GCAGCGGCCCGGGGCGACTGAGCGGACAAACGGAAGTGTAGGTTACGGTCTGAGACATCACCGCCAAGCTGGGCA
TCGGGGAGATGGCCGAGACTGACCCCAAGACCGTGCAGGACCTCACCTCGGTGGTGCAGACACTCCTGCAGCAGA
TGCAAGATAAATTTCAGACCATGTCTGACCAGATCATTGGGAGAATTGATGATATGAGTAGTCGCATTGATGATC
TGGAAAAGAATATCGCGGACCTCATGACACAGGCTGGGGTGGAAGAACTGGAAAGTGAAAACAAGATACCTGCCA
CGCAAAAGAGTTGAAGGTTGCTAATAATTTATACTGGAATCTGGCATTTTTCCAAGCCAAGAGAAGATCGAATGG
CTTTTTGCAGCTAACTACTATGTGTAGACAGGTTTTATATTATAAAGTATGCATTCTTATCACCTAGTATATAGT
TAGTTTGTAGAGTGATTTCCCCCCAGTTTCTTGAACATGGTATCTTCACATCTTGGACCTTGGTCAGTTGTGCTA
TTCATTATTAAACACTAAAACTTTGGCGGTTCTTGCATAACATTGTCAGATTTTTTAGTGTATTTCTGTGAAGTC
ATTTTTTTTCTTGTCATTCCTTTTGTAGTAGTTGCTGTTTGGATAAAAGTTGATGTGTGATTTTTTATTAAACAA
ATAGTAAACCCTTCAATTATAGTTAGTCTTGGTGAAGTAAGATGTTTGTAGACTTTAGAGTTCTTTAATTCTTGG
CACAACGTGACTGTTGAGCTAACACCAAATAGTGTGTTGGCAATACTTTTCAAATGGCTGAAAACACCTAAAAAT
TGTTCATTCAGAAATATCTGTCACTGCTCTGTTGCCAAAACTCAGAATAGAACTTAGACGTATGTCTGAGTCCCT
GAGATCACATGCTAAAGTCGATGAAAAGTAACCACTGCCACTGTCTTGTGTCAGAACTTTTACAGTACAGAAAAT
AACAGAATAGCCTTCTGTAATGAGGCGTTTGTTAGAGTTTTGCATGAGATTCTAATACTTCAGTAGGACCCTACC
TACGTGGTTCATCTACAATGGTTACCATAAAAAATCTGGCAGGATTTTAAAACTCAATCAGTCTTTCCTTTGAGC
TAGTGACTTGAAAAGAAAGAGAGAAGGAAAAGAGACCATATTAAGTCCATGCCAGTTGCTTGGCTAGAATATGAT
CAACGACTTGTAGTAGACTCAAGTTTTTAAAAAACACTATTTTACTTAAACTGTTTCTTATCTAAATTCTTGCAG
AGTGTCAATGTTATCATTGATTATAGAAGACAGGGATAATACCTTTATCTCTGGCCACTCAAAAATGCAGTGCCA
GGAGTGCTAAACCTAGAGGCCAATACTGATGACCTGGAAGGTGATCCATATGATTGTCACCACAAAGTGCTTTTA
CACAAAAACTTGAAAATTTGAAAAACATGATTTTTTTAAGTTTCTCATCTCACCAGTCTTGGTGTTTATATTGCA
AATCTATCAAAGTAAGAAATAATTTGTGCTGTATACAAATTACATGGGGAACATAAAGGAGTGAGATCCTTCTGT
GATAAAATGAATTCACCACTCTGGTTACCCAACTACAGAACCTCCTTTGATCAGGCCAGTAGGTTGTGATGCAGG
CTGGAGCCCCCGAATGCCCCACACACACTGCAGCATTGACCAGACCATCCGAAACCTGCGTCCCTGGTGATGTTC
TCAAGCCTCGGAAGTGGCAAATGGAAATGATATGGCCGGTTGCGGTTGTAGGAGAGTTGTGACTTAGGCAGGAGT
CGACCTCCTCAAGTAATGGAACGATTTCAAAGGCAGGCTGCCCTGACCAAAAATATCTGCCATGAATAAAGGTGC
CTGAAATCCTGCT**ATG**AAGCTTCCTTTGTGTCAAAAATCTGTTTGGTTTTCAGATGGAAATGCAGAAATCACATT
AGAGTATCAACTAAAACCTCTGGACGGATTAAGTACAAGTAGCCCAAGGCAAAGCAGGAGAGGGGGTGTTGGGGG
AGGTTGCCTGCTGGAAGGGGAAGCTGAGGAGCGGGAGGAGGGCTTGCCAAGACTGGCATTGCAGGAGACTTGTCT
CAGGTGTGTTCCCAGAACTCTTGCCCCTGGAGATGCTGCAGGAAGGAAGGGGTTATGGTCACTTGGGTTTAGACG
ACATTCTGTGAACCTCATGAAGAAATTAGCATATTAAAGACTCTGAAAGTAGAGCAGAGAACTCAGCTTTAACCT
GCTCACCTGCTAGTTTTC

FIGURE 164

MKLPLCQKSVWFSDGNAEITLEYQLKPLDGLSTSSPRQSRRGGVGGGCLLEGEAEEREEGLPRLALQETCLRCVP
RTLAPGDAAGRKGLWSLGFRRHSVNLMKKLAYKDSESRAENSALTCSPASF

FIGURE 165

GGCACGAGGGCGGGAGGAGTGGCAGCGGCAAGGCAGCCCAGTTTCGCGAAGGCTGTCGGCGCGCCGCGGCCCGCA
GGCACCCGGCACGCGCCTTCCCCGCAGGCACCCGGCACGCGCCTTCCCCGCCGCCACG**ATG**CCCAAGAGGAAGGT
CAGCTCCGCCGAAGGCGCCGCCAAGGAAGAGCCCAAGAGGAGATCGGCGCGGTTGTCAGCTAAACCTCCTGCAAA
AGTGGAAGCGAAGCCGAAAAAGGCAGCAGCGAAGGATAAATCTTCAGACAAAAAAGTGCAAACAAAAGGGAAAAG
GGGAGCAAAGGGAAAACAGGCCGAAGTGGCTAACCAAGAAACTAAAGAAGACTTACCTGCGGAAAACGGGGAAAC
GAAGACTGAGGAGAGTCCAGCCTCTGATGAAGCAGGAGAGAAAGAAGCCAAGTCTGAT**TAA**TAACCATATACCAT
GTCTTATCAGTGGTCCCTGTCTCCCTTCTTGTACAATCCAGAGGAATATTTTTATCAACTATTTTGTAAATGCAA
GTTTTTTAGTAGCTCTAGAAACATTTTTAAGAAGGAGGGAATCCCACCTCATCCCATTTTTTAAGTGTAAATGCT
TTTTTTTAAGAGGTGAAATCATTTGCTGGTTGTTTATTTTTTGGTACAACCAGAAAATAGTGTGGGATATTGAAT
TATGGGAGGCTCTGACTGTCTCGGGTGTCAGCTTAACATTCCACAGATGGGGGGTTAGTTTTTATATCCTATAAT
ACAAAGCATATTAAATGGCAATATGGAGTCAGTCCTGCATTTAATGTCTTGAACATTTTAAATTACTTCTATTAC
CATGTTGTTTTTTAGTAGAATTGTTTCCTAAAGAAAACCACTCTTTGATCATGGCTCTCTCTGCCAGAATTGTGT
GCACTCTGTAACATCTTTGGTTGTGGTAGTCCTGTTTTCCTAATAACTTTGTTACTGTGCTGTGAAAGATTACAG
ATTTGAACATGTAGTGTACGTGCTATTGAGTTGTGAACTGGTGGGCCGTATGTAACAGCTGACCAACGTGAAGAT
ACTGGTACTTGATAGCCTCTTAAGGAAAATTTGCTTCCAAATTTTAAGCTGGAAAGTCACTGGAATAACTTTAAA
AAAGAATTACAATACATGGCTTTTTAGAATTTCGTTACGTATGTTAAGATTTGTGTACAAATTGAAATGTCTGTA
CTGATCCTCAACCAATAAAATCTCAGTTATGAAAATAAAAAAAAAAAAAAAAAA

FIGURE 166

MPKRKVSSAEGAAKEEPKRRSARLSAKPPAKVEAKPKKAAAKDKSSDKKVQTKGKRGAKGKQAEVANQETKEDLP
AENGETKTEESPASDEAGEKEAKSD

FIGURE 167A

AGAGCGAGCAGGGGAGAGCGAGACCAGTTTTAAGGGGAGGACCGGTGCGAGTGAGGCAGCCCCGAGGCTCTGCTC
GCCCACCACCCAATCCTCGCCTCCCTTCTGCTCCACCTTCTCTCTCTGCCCTCACCTCTCCCCCGAAAACCCCCT
ATTTAGCCAAAGGAAGGAGGTCAGGGGAACGCTCTCCCCTCCCCTTCCAAAAAACAAAAACAGAAAAACCCTTTT
CCAGGCCGGGGAAAGCAGGAGGGAGAGGGGCCGCCGGGCTGGCC**ATG**GAGCTGCTGTGCCACGAGGTGGACCCGG
TCCGCAGGGCCGTGCGGGACCGCAACCTGCTCCGAGACGACCGCGTCCTGCAGAACCTGCTCACCATCGAGGAGC
GCTACCTTCCGCAGTGCTCCTACTTCAAGTGCGTGCAGAAGGACATCCAACCCTACATGCGCAGAATGGTGGCCA
CCTGGATGCTGGAGGTCTGTGAGGAACAGAAGTGCGAAGAAGAGGTCTTCCCTCTGGCCATGAATTACCTGGACC
GTTTCTTGGCTGGGGTCCCGACTCCGAAGTCCCATCTGCAACTCCTGGGTGCTGTCTGCATGTTCCTGGCCTCCA
AACTCAAAGAGACCAGCCCGCTGACCGCGGAGAAGCTGTGCATTTACACCGACAACTCCATCAAGCCTCAGGAGC
TGCTGGAGTGGGAACTGGTGGTGCTGGGGAAGTTGAAGTGGAACCTGGCAGCTGTCACTCCTCATGACTTCATTG
AGCACATCTTGCGCAAGCTGCCCCAGCAGCGGGAGAAGCTGTCTCTGATCCGCAAGCATGCTCAGACCTTCATTG
CTCTGTGTGCCACCGACTTTAAGTTTGCCATGTACCCACCGTCGATGATCGCAACTGGAAGTGTGGGAGCAGCCA
TCTGTGGGCTCCAGCAGGATGAGGAAGTGAGCTCGCTCACTTGTGATGCCCTGACTGAGCTGCTGGCTAAGATCA
CCAACACAGACGTGGATTGTCTCAAAGCTTGCCAGGAGCAGATTGAGGCGGTGCTCCTCAATAGCCTGCAGCAGT
ACCGTCAGGACCAACGTGACGGATCCAAGTCGGAGGATGAACTGGACCAAGCCAGCACCCCTACAGACGTGCGGG
ATATCGACCTG**TGA**GGATGCCAGTTGGGCCGAAAGAGAGAGACGCGTCCATAATCTGGTCTCTTCTTCTTTCTGG
TTGTTTTTGTTCTTTGTGTTTTAGGGTGAAACTTAAAAAAAAAAATTCTGCCCCCACCTAGATCATATTTAAAGAT
CTTTTAGAAGTGAGAGAAAAAGGTCCTACGAAAACGGAATAATAAAAAGCATTTGGTGCCTATTTGAAGTACAGC
ATAAGGGAATCCCTTGTATATGCGAACAGTTATTGTTTGATTATGTAAAAGTAATAGTAAAATGCTTACAGGAAA
ACCTGCAGAGTAGTTAGAGAATATGTATGCCTGCAATATGGGAACAAATTAGAGGAGACTTTTTTTTTTCATGTT
ATGAGCTAGCACATACACCCCCTTGTAGTATAATTTCAAGGAACTGTGTACGCCATTTATGGCATGATTAGATTG
CAAAGCAATGAACTCAAGAAGGAATTGAAATAAGGAGGGACATGATGGGGAAGGAGTACAAAACAATCTCTCAAC
ATGATTGAACCATTTGGGATGGAGAAGCACCTTTGCTCTCAGCCACCTGTTACTAAGTCAGGAGTGTAGTTGGAT
CTCTACATTAATGTCCTCTTGCTGTCTACAGTAGCTGCTACCTAAAAAAAGATGTTTTATTTTGCCAGTTGGACA
CAGGTGATTGGCTCCTGGGTTTCATGTTCTGTGACATCCTGCTTCTTCTTCCAAATGCAGTTCATTGCAGACACC
ACCATATTGCTATCTAATGGGGAAATGTAGCTATGGGCCATAACCAAAACTCACATGAAACGGAGGCAGATGGAG
ACCAAGGGTGGGATCCAGAATGGAGTCTTTTCTGTTATTGTATTTAAAAGGGTAATGTGGCCTTGGCATTTCTTC
TTAGAAAAAAACTAATTTTTGGTGCTGATTGGCATGTCTGGTTCACAGTTTAGCATTGTTATAAACCATTCCATT
CGAAAAGCACTTTGAAAAATTGTTCCCGAGCGATAGATGGGATGGTTTATGCAAGTCATGCTGAATACTCCTCCC
CTCTTCTCTTTTGCCCCCTCCCTTCCTGCCCCCAGTCTGGGTTACTCTTCGCTTCTGGTATCTGGCGTTCTTTGG
TACACAGTTCTGGTGTTCCTACCAGGACTCAAGAGACACCCCTTCCTGCTGACATTCCCATCACAACATTCCTCA
GACAAGCCTGTAAACTAAAATCTGTTACCATTCTGATGGCACAGAAGGATCTTAATTCCCATCTCTATACTTCTC
CTTTGGACATGGAAAGAAAAGTTATTGCTGGTGCAAAGATAGATGGCTGAACATCAGGGTGTGGCATTTTGTTCC
CTTTTCCGTTTTTTTTTTTTTTATTGTTGTTGTTAATTTTATTGCAAAGTTGTATTCAGCGTACTTGAATTTTTC
TTCCTCTCCACTTCTTAGAGGCATTCAGTTAGCAAAGAGGTTGGAGCAACAACTTTTTTTTTTTTTTTTGCACAA
TTGTAATTGACAGGTAATGAAGCTATTTGTTAAAATATTTGCCTTTTTAAGTAAAAAAGAAAAATCAGAACAGGG
CTATTTGAAGAATTATTTTATACACAGATTCTGCCTTGTTTCATAGTATGAGGGTTGAAGACGGAAAACAATCTA
AGGGTCTCTCATTTTTTTAATTTTGTTTTGTTCAGTTTGGTTTTTTTTTTTTTTTGCGCTGCTAAGAAGCTAAAG
TCATCCATCCTTATTCACGTTGACAGTACCTAGCTGTAATGTTTCACAGAGTGTGCTGCTATTTTATAAACATTT
TTATAATATATTATTTTACTGCTTAAATTCCAAGTCCTGAAGTAGATGGTTGAGATATGAGTTCTTCGTACTGGA
AAAGCCCTTCCGTAGTTTGTTTTCTTCTGGTAGCATATTCATGGTTGTTTTTTTTTTTCTTTTTTGGTTTTTTGG
TTTTTTTTTTTTCCTCTGATCACATTCTTCAAAGACGGAGTATTCTTTACCTCAGGTTTACTGGACAAAATCAAT
AACTACAAAAGGCAATGATTCACGCTTTTGTTTTCATAATACCTCACAACCGTACAGTTTCTGCTTGGGAGCCCA
TTCGCATGAGGAATACAGAAGCAGTGTGAGCAGGGCTGACTCCCTCTCAGGTGGAAGGCAGGGCGGTCTCACTCC
CAGGGACCTTTTTGGTCATGGAGGCCATCGGGCTCCCAGTTAGACCCTGGTATCCTCATCATGATGGAAAAAATA
CATTGAACCAAGGGATCCTCCCTCCCCTTCAAGGCAGACGTTCAGTACAAACATTTATGCGGTAGGCTCAGATGT
CGTAATTTGCACTTAGGTACCAGGTGTCAGGAAACAGACTAAAAAGAATTCCACCAGGCTGTTTGGAGATCCTCA
TCTTGGAGCTTTTTCAAAAGCGGGGCTTCATCTGCAAAGGGCCCTTTCATCTTGAAGTTTTTCCCCTCCGTCTTT

FIGURE 167B

CCCCTCCCCTGGCATGGACACCTTGTGTTTAGGATCATCTCTGCAGGTTTCCTAGGTCTGAATCTGCGAGTAGAT
GAACCTGCAGCAAGCAGCGTTTATGGTGCTTCCTTCTCCCTCCTCTGTCTCAAACTGCGCAGGCAAGCACTATGC
AAGCCCAGGCCCTCTGCTGAGCGGTACTAAACGGTCGGGTTTTCAATCACACTGAATTGGCAGGATAAGAAAAAT
AGGTCAGATAAGTATGGGATGATAGTTGAAGGGAGGTGAAGAGGCTGCTTCTCTACAGAGGTGAAATTCCAGATG
AGTCAGTCTCTTGGGAAGTGTGTTTAGAAGGGTTCAGGACTTTGTGAGTTAGCATGACCCTAAAATTCTAGGGGA
TTTCTGGTGGGACAATGGGTGGTGAATTTTGAAGTTTTGGAGAGGGAAGTGGAGCAGCCAGCAAGTAAGCTAGCC
AGAGTTTTCTCAAGAGCCAGCTTTGCTCAGCACACTCTCCTGGGCCCCAAGGAGTCCCACGGAATGGGGAAAGTG
GGAACCCTGGAGTTCTTGGGAATCTTGGAGCCTAAAGAGAAACCGAGGTGCAAATTCATTTCATGGTGACTGACC
CTTGAGCTTAAACAGAAGCAGCAAATGAAAGAACCGGACAAATAAGGAAGGGCACAAGCCTACCCGACTCTATTT
ACAGTCTGTAACTTTCCACTCTTCCTGTAGTCCCGAGGCCCCTGGGTCCTTCTAGCTTTTCTCTTTCCCATCCTT
GGGGCCTTGTGTGATGATGGGTGTGGGGCTGCCGATGGGAAAGTCGGGGGTTGTTAGGCTTTTCTGCCTGCTCCT
GCTTAAACACAAGAAGGAATCCTGGATTTTGCCCTCTCCTTAGCTCTTAGTCTCTTTGGTAGGAGTTTTGTTCCA
GAGGAGCTCTCCCCCTTGGATTTGAACTTGCTCTTTTTGTTGTTGTTGTTCTTTCTCTTCTTTTTCTTACCTCCC
ACTAAAGGGGTTCCAAATTATCCTGGTCTTTTTCTACCTTGTTGTGTTTCTATCTCGTCTTTACTTCCATCTGTT
TGTTTTTTTCTCCATCAGTGGGGGCCGAGTTGTTCCCCCAGCCTGCCAAATTTTGATCCTTCCCCTCTTTTGGCC
AAATCCTAGGGGGAAGAAATCCTAGTATGCCAAAAATATATGCTAAGCATAATTAAACTCCATGCGGGTCCATAA
CAGCCAAGAAGCCTGCAGGAGAAAGCCAAGGGCAGTTCCCTCCGCAGAACACCCCATGCGTGCTGAGAGGCGAGC
TCCTTGAAGAAGGGGCTGTTCTTCCAGGAGGCCTTATTTTGAACTGCCTCAGGACCCCACTGGAGAGCACAGCAT
GCCTTACTACTGGGTCATCCTTGGTCTATGTGCTCTGTACTGGAGGCTCTGTTCTGCCTCTTATCAGCCAGGTCA
GGGGCACACATGGCTTAAGTGACAAAGCCAGAGGAGAAGACAACCCTGACAGCATCACGCTGCATCCCATTGCTA
GCAGGATTGGCAACTCTTCAGACGGAGCTGCGCTTCCCTGCAGTCTAGCACCTCTAGGGCCTCTCCAGACTGTGC
CCTGGGAGCTCTGGGACTGAAAGGTTAAGAACATAAGGCAGGATCAGATGACTCTCTCCAAGAGGGCAGGGGAAT
TTTCTCTCCATGGGCCACAGGGGACAGGGCTGGGAGAAGAAATAGACTTGCACCTTATGTCATGTAAATAATTGA
TTTTCTAGTTCAAGAAGATAATATTGGTAGTGTGGGAATTGGAGGTAGGAAGGGGAGGAAGTCTGAGTAAGCCAG
TTGGCTTCTAAGCCAAAAGGATTCCTCTTTGTTTATCTCTGAGACAGTCCAACCTTGAGAATAGCTTTAAAAGGG
AAATTAATGCTGAGATGATAAAGTCCCCTTAAGCCAACAAACCCTCTGTAGCTATAGAATGAGTGCAGGTTTCTA
TTGGTGTGGACTCAGAGCAATTTACAAGAGCTGTTCATGCAGCCATCCATTTGTGCAAAATAGGGTAAGAAGATT
CAAGAGGATATTTATTACTTCCTCATACCACATGGCTTTTGATGATTCTGGATTCTAAACAACCCAGAATGGTCA
TTTCAGGCACAACGATACTACATTCGTGTGTGTCTGCTTTTAAACTTGGCTGGGCTATCAGACCCTATTCTCGGC
TCAGGTTTTGAGAAGCCATCAGCAAATGTGTACGTGCATGCTGTAGCTGCAGCCTGCATCCCTTCGCCTGCAGCC
TACTTTGGGGAAATAAAGTGCCTTACTGACTGTAGCCATTACAGTATCCAATGTCTTTTGACAGGTGCCTGTCCT
TGAAAAACAAAGTTTCTATTTTTATTTTTAATTGGTTTAGTTCTTAACTGCTGGCCAACTCTTACATCCCCAGCA
AATCATCGGGCCATTGGATTTTTTCCATTATGTTCATCACCCTTATATCATGTACCTCAGATCTCTCTCTCTCTC
CTCTCTCTCAGTTATATAGTTTCTTGTCTTGGACTTTTTTTTTTCTTTTCTTTTTCTTTTTTTTTTTTGCTTTAAAA
CAAGTGTGATGCCATATCAAGTCCATGTTATTCTCTCACAGTGTACTCTATAAGAGGTGTGGGTGTCTGTTTGGT
CAGGATGTTAGAAAGTGCTGATAAGTAGCATGATCAGTGTATGCGAAAAGGTTTTTAGGAAGTATGGCAAAAATG
TTGTATTGGCTATGATGGTGACATGATATAGTCAGCTGCCTTTTAAGAGGTCTTATCTGTTCAGTGTTAAGTGAT
TTAAAAAAATAATAACCTGTTTTCTGACTAGTTTAAAGATGGATTTGAAAATGGTTTTGAATGCAATTAGGTTAT
GCTATTTGGACAATAAACTCACCTTGACCT

FIGURE 168

MELLCHEVDPVRRAVRDRNLLRDDRVLQNLLTIEERYLPQCSYFKCVQKDIQPYMRRMVATWMLEVCEEQKCEEE
VFPLAMNYLDRFLAGVPTPKSHLQLLGAVCMFLASKLKETSPLTAEKLCIYTDNSIKPQELLEWELVVLGKLKWN
LAAVTPHDFIEHILRKLPQQREKLSLIRKHAQTFIALCATDFKFAMYPPSMIATGSVGAAICGLQQDEEVSSLTC
DALTELLAKITNTDVDCLKACQEQIEAVLLNSLQQYRQDQRDGSKSEDELDQASTPTDVRDIDL

FIGURE 169

GTGCATGCCGTGGGTCTGACGGCTTGAGTAGCGCTAGGGAGAATCCCTGCAGGTAATATTTGACTTTTGCTTCAT
ATTAATCTGAGTGGAAAATAAAAGGGCCCTCTTCTCCTCTCGCTTCCCTGCCGGGCAGGCGCC**ATG**GCGGAAGCC
TCGGCGACGGGCGCCTGCGGAGAGGCGATGGCAGCGGCGGAAGGCTCCTCGGGCCCGGCGGGCTTGACTCTGGGC
CGGAGCTTCTCGAACTACCGGCCCTTCGAGCCCCAGGCGTTGGGCCTCAGCCCGAGCTGGCGGCTGACGGGCTTC
TCCGGCATGAAGGGCTGAGGCTGCAAGGTCCCGCAGGAGGCGCTGCTCAAACTCCTGGCGGGACTGACGCGGCCG
GACGTGCGGCCCCCGCTGGGCCGGGGCCTGGTGGGTGGCCAGGAAGAGGCGTCCCAGGAAGCCGGCCTGCCGGCA
GGAGCGGGCCCCAGCCCCACCTTTCCAGCCCTGGGCATCGGGATGGACTCCTGCGTCATCCCCCTGAGGCACGGG
GGCCTGTCACTGGTGCAGACCACGGACTTCTTTTACCCCTTGGTAGAAGATCCCTACATGATGGGGCGCATAGCT
TGTGCCAACGTGCTGAGTGACCTCTACGCCATGGGGATTACTGAGTGTGACAACATGTTGATGTTACTCAGCGTC
AGCCAGAGTATGAGTGAGGAGGAACGCGAAAAGGTAACGCCACTCATGGTCAAAGGCTTTCGGGATGCGGCTGAG
GAAGGAGGGACGGCAGTGACCGGTGGGCAAACGGTGGTCAACCCTTGGATTATAATCGGTGGAGTTGCCACTGTA
GTATGCCAACCAAATGAGTTCATAATGCCGGACAGCGCCGTCGTTGGGGACGTGCTGGTGTTAACCAAACCGTTA
GGAACCCAGGTTGCTGTCAATGCCCACCAATGGCTGGATAATCCTGAAAGATGGAATAAAGTAAAGATGGTGGTC
TCCAGAGAAGAGGTGGAGCTGGCCTATCAGGAAGCCATGTTCAATATGGCTACCCTCAACAGAACTGCTGCAGGT
TTAATGCACACATTTAATGCCCATGCGGCCACAGATATCACAGGCTTTGGCATTCTAGGACACTCCCAGAACCTT
GCAAAACAACAAAGAAATGAAGTGTCCTTTGTTATTCATAATCTGCCAATAATTGCCAAGATGGCTGCCGTCAGC
AAGGCCAGTGGACGGTTTGGGCTTCTTCAAGGAACCTCAGCTGAAACCTCTGGGGGGATTACTGATTTGTCTGCCA
AGAGAACAGGCGGCTCGCTTTTGTTCTGAAATCAAATCCTCCAAGTACGGAGAGGGTCACCAAGCGTGGATCGTT
GGCATTGTGGAAAAGGGAAACCGAACGGCCCGGATCATTGACAAGCCGCGAGTTATTGAAGTCCTGCCTCGTGGG
GCCACAGCTGCTGTTCTTGCTCCTGACAGTTCAAATGCCTCCTCTGAGCCTAGCTCG**TGA**GATGAAAGAACAGAA
GTTGTTTGGACCTTAGAGCCATTGTCCACAATCACGGATGGTTCTCAAGAGTTGATTGTAAGAAATTTCCAAAGA
AGGCTGCCTGCATAGTGGTTCCGGCTGCCCTTTCTAGGTGATTGGAATCAGCCCATCTAAAGCAGTCTTTATATG
CATTCCGAGGCCAGAGTAACATTTTGAACTTTGGGGGGATATTTGTTCATCACTTGGGTAGAAGAGGAGCAAAAA
TACTTCTGTTTTCTCTTGCCAAAGTAAGATGAAGCTATTCCAGGTTGAGGGATTTTTCTTTGCACGGGGTTGATT
AATTTCTGCACAGGGAGTGAGATTATTAAAGTAACACACACACAAAGTAAATTGCAAAATGAAAAAAATTAGAAG
CAAATGAGTTTTGGACCAATATTGTTGATAAATCTAAATTGTTAAGAGAGATCTTATAATGCAACATCAAATTCT
TTATTCAATTTTACTGAAGTACTGGCTCTTTCCTGCTCTGGACAAGAATTGAGCAACTTGTCTGATGACTGGGAA
AGGAGGACCTGCAACCATCTGACTTGGTCTCTGTTAATGACGTCTCTCCCTCTAAACCCCATTAAGGACTGGGAG
AGGCAGAGCAAGCCTCAGAGCCCAGGCCTCAGTGGTCATTAAGATGTTAAGTCTTTTGCGGCAGATTCCTGGTGA
TTTGATCAATAAAGAGTAATTTCTTGCTAAATAAATAAAAGAAACCTTGTTGAAAAACTAAAAAAAAAAAAAAAA
AAA

FIGURE 170

MAEASATGACGEAMAAAEGSSGPAGLTLGRSFSNYRPFEPQALGLSPSWRLTGFSGMKGXGCKVPQEALLKLLAG
LTRPDVRPPLGRGLVGGQEEASQEAGLPAGAGPSPTFPALGIGMDSCVIPLRHGGLSLVQTTDFFYPLVEDPYMM
GRIACANVLSDLYAMGITECDNMLMLLSVSQSMSEEEREKVTPLMVKGFRDAAEEGGTAVTGGQTVVNPWIIIGG
VATVVCQPNEFIMPDSAVVGDVLVLTKPLGTQVAVNAHQWLDNPERWNKVKMVVSREEVELAYQEAMFNMATLNR
TAAGLMHTFNAHAATDITGFGILGHSQNLAKQQRNEVSFVIHNLPIIAKMAAVSKASGRFGLLQGTSAETSGGLL
ICLPREQAARFCSEIKSSKYGEGHQAWIVGIVEKGNRTARIIDKPRVIEVLPRGATAAVLAPDSSNASSEPSS

FIGURE 171

AAAAAAGGCCGTGCAGTTCCTAGCGAGGAGGCGCCGCCGCCATTGCCGCTCTCTCGGTGAGCGCAGCCCCGCTCT
CCGGGCCGGGCCTTCGCGGGCCACCGGCGCC**ATG**GGCCAGTGCGGCATCACCTCCTCCAAGACCGTGCTGGTCTT
TCTCAACCTCATCTTCTGGGGGGCAGCTGGCATTTTATGCTATGTGGGAGCCTATGTCTTCATCACTTATGATGA
CTATGACCACTTCTTTGAAGATGTGTACACGCTCATCCCTGCTGTAGTGATCATAGCTGTAGGAGCCCTGCTTTT
CATCATTGGGCTAATTGGCTGCTGTGCCACAATCCGGGAAAGTCGCTGTGGACTTGCCACGTTTGTCATCATCCT
GCTCTTGGTTTTTGTCACAGAAGTTGTTGTAGTGGTTTTGGGATATGTTTACAGAGCAAAGGTGGAAAATGAGGT
TGATCGCAGCATTCAGAAAGTGTATAAGACCTACAATGGAACCAACCCTGATGCTGCTAGCCGGGCTATTGATTA
TGTACAGAGACAGCTGCATTGTTGTGGAATTCACAACTACTCAGACTGGGAAAATACAGATTGGTTCAAAGAAAC
CAAAAACCAGAGTGTCCCTCTTAGCTGCTGCAGAGAGACTGCCAGCAATTGTAATGGCAGCCTGGCCCACCCTTC
CGACCTCTATGCTGAGGGGTGTGAGGCTCTAGTTGTGAAGAAGCTACAAGAAATCATGATGCATGTGATCTGGGC
CGCACTGGCATTTGCAGCTATTCAGCTGCTGGGCATGCTGTGTGCTTGCATCGTGTTGTGCAGAAGGAGTAGAGA
TCCTGCTTACGAGCTCCTCATCACTGGCGGAACCTATGCA**TAG**TTGACAACTCAAGCCTGAGCTTTTTGGTCTTG
TTCTGATTTGGAAGGTGAATTGAGCAGGTCTGCTGCTGTTGGCCTCTGGAGTTCATTTAGTTAAGGCACATGTAC
ACTGGTGTTGGACAGAGCAGCTTGGCTTTTCATGTGCCCACCTACTTACCTACTACCTGCGACTTTCTTTTTCCT
TGTTCTAGCTGACTCTTCATGCCCCTAAGATTTTAAGTACGATGGTGAACGTTCTAATTTCAGAACCAATTGCGA
GTCATGTAGTGTGGTAGAATTAAAGGAGGACACGAGCCTGCTTCTGTTACCTCCAAGTGGTAACAGGACTGATGC
CGAAATGTCACCAGGTCCTTTCAGTCTTCACAGTGGAGAACTCTTGGCCAAAGGTTTTTGGGGGGAGGAGGAGGA
AACCAGCTTTCTGGTTAAGGTTAACACCAGATGGTGCCCCTCATTGGTGTCCTTTTAAAAAATATTTACTGTAGT
CCAATAAGATAGCAGCTGTACAAAATGACTAAAATAGATTGTAGGATCATATGGCGTATATCTTGGTTCATCTTC
AAAATCAGAGACTGAGCTTTGAAACTAGTGGTTTTTAATCAAAGTTGGCTTTATAGGAGGAGTATAATGTATGCA
CTACTGTTTTAAAAGAATTAGTGTGAGTGTGTTTTTGTATGAATGAGCCCATTCATGGTAAGTCTTAAGCTTGTT
GGAAATAATGTACCCATGTAGACTAGCAAAATAGTATGTAGATGTGATCTCAGTTGTAAATAGAAAAATCTAATT
CAATAAACTCTGTATCAGCCCCC

FIGURE 172

MGQCGITSSKTVLVFLNLIFWGAAGILCYVGAYVFITYDDYDHFFEDVYTLIPAVVIIAVGALLFIIGLIGCCAT
IRESRCGLATFVIILLLVFVTEVVVVVLGYVYRAKVENEVDRSIQKVYKTYNGTNPDAASRAIDYVQRQLHCCGI
HNYSDWENTDWFKETKNQSVPLSCCRETASNCNGSLAHPSDLYAEGCEALVVKKLQEIMMHVIWAALAFAAIQLL
GMLCACIVLCRRSRDPAYELLITGGTYA

FIGURE 173

GTTGCCAGGGAGCGGCGCGGGAGCCCTGAGGGGACTGCGGCGGCTGCGCGGAGGAGCGAGGCGCTTGCTGGGGTC
GGGGCTGCGCGACGGCGCAGGGGCTGCGGGGAGCGCCGCGCAGGCCGTGCAGTTCCTAGCGAGGAGGCGCCGCCG
CCATTGCCGCTCTCTCGGTGAGCGCAGCCCCGCTCTCCGGGCCGGGCCTTCGCGGGCCACCGGCGCC**ATG**GGCCA
GTGCGGCATCACCTCCTCCAAGACCGTGCTGGTCTTTCTCAACCTCATCTTCTGGGGGGCAGCTGGCATTTTATG
CTATGTGGGAGCCTATGTCTTCATCACTTATGATGACTATGACCACTTCTTTGAAGATGTGTACACGCTCATCCC
TGCTGTAGTGATCATAGCTGTAGGAGCCCTGCTTTTCATCATTGGGCTAATTGGCTGCTGTGCCACAATCCGGGA
AAGTCGCTGTGGACTTGCCACGTTTGTCATCATCCTGCTCTTGGTTTTTGTCACAGAAGTTGTTGTAGTGGTTTT
GGGATATGTTTACAGAGCAAAGGTGGAAAATGAGGTTGATCGCAGCATTCAGAAAGTGTATAAGACCTACAATGG
AACCAACCCTGATGCTGCTAGCCGGGCTATTGATTATGTACAGAGACAGCTGCATTGTTGTGGAATTCACAACTA
CTCAGACTGGGAAAATACAGATTGGTTCAAAGAAACCAAAAACCAGAGTGTCCCTCTTAGCTGCTGCAGAGAGAC
TGCCAGCAATTGTAATGGCAGCCTGGCCCACCCTTCCGACCTCTATGCTGAGGGGTGTGAGGCTCTAGTTGTGAA
GAAGCTACAAGAAATCATGATGCATGTGATCTGGGCCGCACTGGCATTTGCAGCTATTCAGCTGCTGGGCATGCT
GTGTGCTTGCATCGTGTTGTGCAGAAGGAGTAGAGATCCTGCTTACGAGCTCCTCATCACTGGCGGAACCTATGC
A**TAG**TTGACAACTCAAGCCTGAGCTTTTTGGTCTTGTTCTGATTTGGAAGGTGAATTGAGCAGGTCTGCTGCTGT
TGGCCTCTGGAGTTCATTTAGTTAAAGCACATGTACACTGGTGTTGGACAGAGCAGCTTGGCTTTTCATGTGCCC
ACCTACTTACCTACTACCTGCGACTTTCTTTTTCCTTGTTCTAGCTGACTCTTCATGCCCCTAAGATTTTAAGTA
CGATGGTGAACGTTCTAATTTCAGAACCAATTGCGAGTCATGTAGTGTGGTAGAATTAAAGGAGGACACGAGCCT
GCTTCTGTTACCTCCAAGTGGTAACAGGACTGATGCCGAAATGTCACCAGGTCCTTTCAGTCTTCACAGTGGAGA
ACTCTTGGCCAAAGGTTTTTGGGGGGAGGAGGAGGAAACCAGCTTTCTGGTTAAGGTTAACACCAGATGGTGCCC
CTCATTGGTGTCCTTTTAAAAAATATTTACTGTAGTCCAATAAGATAGCAGCTGTACAAAATGACTAAAATAGAT
TGTAGGATCATATGGCGTATATCTTGGTTCATCTTCAAAATCAGAGACTGAGCTTTGAAACTAGTGGTTTTTAAT
CAAAGTTGGCTTTATAGGAGGAGTATAATGTATGCACTACTGTTTTAAAAGAATTAGTGTGAGTGTGTTTTTGTA
TGAATGAGCCCATTCATGGTAAGTCTTAAGCTTGTTGGAAATAATGTACCCATGTAGACTAGCAAAATAGTATGT
AGATGTGATCTCAGTTGTAAATAGAAAAATCTAATTCAATAAACTCTGTATCAGCCCCCAACATATTATTTTTCA
TTATTTGGGGGATATTTCAGTTCCAAAAAAAAAAAAAAAAAA

FIGURE 174

MGQCGITSSKTVLVFLNLIFWGAAGILCYVGAYVFITYDDYDHFFEDVYTLIPAVVIIAVGALLFIIGLIGCCAT
IRESRCGLATFVIILLLVFVTEVVVVVLGYVYRAKVENEVDRSIQKVYKTYNGTNPDAASRAIDYVQRQLHCCGI
HNYSDWENTDWFKETKNQSVPLSCCRETASNCNGSLAHPSDLYAEGCEALVVKKLQEIMMHVIWAALAFAAIQLL
GMLCACIVLCRRSRDPAYELLITGGTYA

FIGURE 175

CTGACTCTCTGAGGCTCATTTTGCAGTTGTTGAAATTGTCCCCGCAGTTTTCAATC**ATG**TCTGAACCAATCAGAG
TCCTTGTGACTGGAGCAGCTGGTCAAATTGCATATTCACTGCTGTACAGTATTGGAAATGGATCTGTCTTTGGTA
AAGATCAGCCTATAATTCTTGTGCTGTTGGATATCACCCCCATGATGGGTGTCCTGGACGGTGTCCTAATGGAAC
TGCAAGACTGTGCCCTTCCCCTCCTGAAAGATGTCATCGCAACAGATAAAGAAGACGTTGCCTTCAAAGACCTGG
ATGTGGCCATTCTTGTGGGCTCCATGCCAAGAAGGGAAGGCATGGAGAGAAAAGATTTACTGAAAGCAAATGTGA
AAATCTTCAAATCCCAGGGTGCAGCCTTAGATAAATACGCCAAGAAGTCAGTTAAGGTTATTGTTGTGGGTAATC
CAGCCAATACCAACTGCCTGACTGCTTCCAAGTCAGCTCCATCCATCCCCAAGGAGAACTTCAGTTGCTTGACTC
GTTTGGATCACAACCGAGCTAAAGCTCAAATTGCTCTTAAACTTGGTGTGACTGCTAATGATGTAAAGAATGTCA
TTATCTGGGGAAACCATTCCTCGACTCAGTATCCAGATGTCAACCATGCCAAGGTGAAATTGCAAGGAAAGGAAG
TTGGTGTTTATGAAGCTCTGAAAGATGACAGCTGGCTCAAGGGAGAATTTGTCACGACTGTGCAGCAGCGTGGCG
CTGCTGTCATCAAGGCTCGAAAACTATCCAGTGCCATGTCTGCTGCAAAAGCCATCTGTGACCACGTCAGGGACA
TCTGGTTTGGAACCCCAGAGGGAGAGTTTGTGTCCATGGGTGTTATCTCTGATGGCAACTCCTATGGTGTTCCTG
ATGATCTGCTCTACTCATTCCCTGTTGTAATCAAGAATAAGACCTGGAAGTTTGTTGAAGGTCTCCCTATTAATG
ATTTCTCACGTGAGAAGATGGATCTTACTGCAAAGGAACTGACAGAAGAAAAAGAAAGTGCTTTTGAATTTCTTT
CCTCTGCC**TGA**CTAGACAATGATGTTACTAAATGCTTCAAAGCTGAAGAATCTAAATGTCGTCTTTGACTCAAGT
ACCAAATAATAATAATGCTATACTTAAATTACTTGTGAAAAACAACACATTTTAAAGATTACGTGCTTCTTGGTA
CAGGTTTGTGAATGACAGTTTATCGTCATGCTGTTAGTGTGCATTCTAAATAAATATATATTCAAATG

FIGURE 176

MSEPIRVLVTGAAGQIAYSLLYSIGNGSVFGKDQPIILVLLDITPMMGVLDGVLMELQDCALPLLKDVIATDKED
VAFKDLDVAILVGSMPRREGMERKDLLKANVKIFKSQGAALDKYAKKSVKVIVVGNPANTNCLTASKSAPSIPKE
NFSCLTRLDHNRAKAQIALKLGVTANDVKNVIIWGNHSSTQYPDVNHAKVKLQGKEVGVYEALKDDSWLKGEFVT
TVQQRGAAVIKARKLSSAMSAAKAICDHVRDIWFGTPEGEFVSMGVISDGNSYGVPDDLLYSFPVVIKNKTWKFV
EGLPINDFSREKMDLTAKELTEEKESAFEFLSSA

FIGURE 177

GGCACGAGGAGAGGATCCTGGGCGCCGCCAGGTTCTGTGGACAATCACA**ATG**GGAATCCAAGGAGGGTCTGTCCT
GTTCGGGCTGCTGCTCGTCCTGGCTGTCTTCTGCCATTCAGGTCATAGCCTGCAGTGCTACAACTGTCCTAACCC
AACTGCTGACTGCAAAACAGCCGTCAATTGTTCATCTGATTTTGATGCGTGTCTCATTACCAAAGCTGGGTTACA
AGTGTATAACAAGTGTTGGAAGTTTGAGCATTGCAATTTCAACGACGTCACAACCCGCTTGAGGGAAAATGAGCT
AACGTACTACTGCTGCAAGAAGGACCTGTGTAACTTTAACGAACAGCTTGAAAATGGTGGGACATCCTTATCAGA
GAAAACAGTTCTTCTGCTGGTGACTCCATTTCTGGCAGCAGCCTGGAGCCTTCATCCC**TAA**GTCAACACCAGGAG
AGCTTCTCCCAAACTCCCCGTTCCTGCGTAGTCCGCTTTCTCTTGCTGCCACATTCTAAAGGCTTGATATTTTCC
AAATGGATCCTGTTGGGAAAGAATAAAATTAGCTTGAGCAACCTGGCTAAGATAGAGGGGCTCTGGGAGACTTTG
AAGACCAGTCCTGTTTGCAGGGAAGCCCCACTTGAAGGAAGAAGTCTAAGAGTGAAGTAGGTGTGACTTGAACTA
GATTGCATGCTTCCTCCTTTGCTCTTGGGAAGACCAGCTTTGCAGTGACAGCTTGAGTGGGTTCTCTGCAGCCCT
CAGATTATTTTTCCTCTGGCTCCTTGGATGTAGTCAGTTAGCATCATTAGTACATCTTTGGAGGGTGGGGCAGGA
GTATATGAGCATCCTCTCTCACATGGAACGCTTTCATAAACTTCAGGGATCCCGTGTTGCCATGGAGGCATGCCA
AATGTTCCATATGTGGGTGTCAGTCAGGGACAACAAGATCCTTAATGCAGAGCTAGAGGACTTCTGGCAGGGAAG
TGGGGAAGTGTTCCAGATAGCAGGGCATGAAAACTTAGAGAGGTACAAGTGGCTGAAAATCGAGTTTTTCCTCTG
TCTTTAAATTTTATATGGGCTTTGTTATCTTCCACTGGAAAAGTGTAATAGCATACATCAATGGTGTGTTAAAGC
TATTTCCTTGCCTTTTTTTTATTGGAATGGTAGGATATCTTGGCTTTGCCACACACAGTTACAGAGTGAACACTC
TACTACATGTGACTGGCAGTATTAAGTGTGCTTATTTTAAATGTTACTGGTAGAAAGGCAGTTCAGGTATGTGTG
TATATAGTATGAATGCAGTGGGGACACCCTTTGTGGTTACAGTTTGAGACTTCCAAAGGTCATCCTTAATAACAA
CAGATCTGCAGGGGTATGTTTTACCATCTGCATCCAGCCTCCTGCTAACTCCTAGCTGACTCAGCATAGATTGTA
TAAAATACCTTTGTAACGGCTCTTAGCACACTCACAGATGTTTGAGGCTTTCAGAAGCTCTTCTAAAAAATGATA
CACACCTTTCACAAGGGCAAACTTTTTCCTTTTCCCTGTGTATTCTAGTGAATGAATCTCAAGATTCAGTAGACC
TAATGACATTTGTATTTTATGATCTTGGCTGTATTTAATGGCATAGGCTGACTTTTGCAGATGGAGGAATTTCTT
GATTAATGTTGAAAAAAAACCCTTGATTATACTCTGTTGGACAAACCGAGTGCAATGAATGATGCTTTTCTGAAA
ATGAAATATAACAAGTGGGTGAATGTGGTTATGGCCGAAAAGGATATGCAGTATGCTTAATGGTAGCAACTGAAA
GAAGACATCCTGAGCAGTGCCAGCTTTCTTCTGTTGATGCCGTTCCCTGAACATAGGAAAATAGAAACTTGCTTA
TCAAAACTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 178

MGIQGGSVLFGLLLVLAVFCHSGHSLQCYNCPNPTADCKTAVNCSSDFDACLITKAGLQVYNKCWKFEHCNFNDV
TTRLRENELTYYCCKKDLCNFNEQLENGGTSLSEKTVLLLVTPFLAAAWSLHP

FIGURE 179

GGTACAGCTGCGCGTCTGCGGGAATAGGTGCAGCGGGCCCTTGGCGGGGGACTCTGAGGGAGGAGCTGGGGACGG
CGACCCTAGGAGAGTTCTTTGGGGTGACTTTCAAG**ATG**GACTCTACTCTAACAGCAAGTGAAATCCGGCAGCGAT
TTATAGATTTCTTCAAGAGGAACGAGCATACGTATGTTCACTCGTCTGCCACCATCCCATTGGATGACCCCACTT
TGCTCTTTGCCAATGCAGGCATGAACCAGTTTAAACCCATTTTCCTGAACACAATTGACCCATCTCACCCCATGG
CAAAGCTGAGCAGAGCTGCCAATACCCAGAAGTGCATCCGGGCTGGGGGCAAACAAAATGACCTGGACGATGTGG
GCAAGGATGTCTATCATCACACCTTCTTCGAGATGCTGGGCTCTTGGTCTTTTGGAGATTACTTTAAGGAATTGG
CATGTAAGATGGCTCTGGAACTCCTCACCCAAGAGTTTGGCATTCCCATTGAAAGACTTTATGTTACTTACTTTG
GCGGGGATGAAGCAGCTGGCTTAGAAGCAGATCTGGAATGCAAACAGATCTGGCAAAATTTGGGGCTGGATGACA
CCAAAATCCTCCCAGGCAACATGAAGGATAACTTCTGGGAGATGGGTGACACGGGCCCCTGTGGTCCTTGCAGTG
AGATCCACTACGACCGGATTGGTGGTCGGGACGCCGCACATCTTGTCAACCAGGACGACCCTAATGTGCTGGAGA
TCTGGAACCTTGTGTTCATCCAGTATAACAGGGAAGCTGATGGCATTCTGAAACCTCTTCCCAAGAAAAGCATTG
ACACAGGGATGGGCCTGGAACGACTGGTATCTGTGCTGCAGAATAAGATGTCCAACTATGACACTGACCTTTTTG
TCCCTTACTTTGAAGCCATTCAGAAGGGCACAGGTGCCCGACCATACACTGGGAAAGTTGGTGCTGAGGATGCCG
ATGGGATTGACATGGCCTACCGGGTGCTGGCTGACCATGCTCGGACCATCACTGTGGCACTGGCTGATGGTGGCC
GGCCTGACAACACAGGGCGTGGATATGTGTTGAGACGGATTCTCCGCCGAGCTGTCCGATACGCCCATGAAAAGC
TCAATGCCAGCAGGGGCTTCTTTGCTACGTTAGTGGATGTTGTCGTCCAGTCCCTGGGAGATGCATTTCCTGAGC
TGAAGAAGGACCCAGACATGGTGAAGGACATCATTAATGAAGAAGAGGTGCAGTTTCTCAAGACTCTCAGCAGAG
GGCGTCGCATCCTGGACAGGAAAATTCAGAGCCTGGGAGACAGCAAGACCATTCCCGGAGACACTGCTTGGCTCC
TCTATGACACCTATGGGTTTCCAGTGGATCTGACTGGACTGATTGCTGAAGAGAAGGGCCTGGTGGTAGACATGG
ATGGCTTTGAAGAGGAGAGGAAACTGGCCCAGCTGAAATCACAGGGCAAGGGAGCTGGTGGGGAAGACCTCATTA
TGCTGGACATTTACGCTATCGAAGAGCTCCGGGCACGGGGTCTGGAGGTCACAGATGATTCCCCAAAGTACAATT
ACCATTTGGACTCCAGTGGTAGCTATGTATTTGAGAACACAGTGGCTACGGTGATGGCTCTGCGCAGGGAGAAGA
TGTTCGTGGAAGAGGTGTCCACAGGCCAGGAGTGTGGAGTGGTGCTGGACAAGACCTGTTTCTATGCTGAGCAAG
GAGGCCAGATCTATGACGAAGGCTACCTGGTGAAGGTGGATGACAGCAGTGAAGATAAAACAGAGTTTACAGTGA
AGAATGCTCAGGTCCGAGGAGGGTATGTGCTACACATTGGAACCATCTACGGTGACCTGAAAGTGGGGGATCAGG
TCTGGCTGTTTATATGATGAGCCCCGACGAAGACCCATCATGAGCAACCACACAGCTACGCACATTCTGAACTTCG
CCCTGCGCTCAGTGCTTGGGGAAGCTGACCAGAAAGGCTCATTGGTTGCTCCTGACCGCCTCAGATTTGACTTTA
CTGCCAAGGGAGCCATGTCCACCCAACAGATCAAGAAGGCTGAAGAGATTGCTAATGAGATGATTGAGGCAGCCA
AGGCCGTCTATACCCAGGATTGCCCCCTGGCAGCAGCGAAAGCCATCCAGGGCCTACGGGCTGTGTTTGATGAGA
CCTATCCTGACCCTGTGCGAGTCGTCTCCATTGGGGTCCCGGTGTCCGAGTTGCTGGATGACCCCTCTGGGCCTG
CTGGCTCCCTGACTTCTGTTGAGTTCTGTGGGGGAACGCACCTGCGGAACTCGAGTCATGCAGGAGCTTTTGTGA
TCGTGACGGAAGAAGCCATTGCCAAGGGTATCCGGAGGATTGTGGCTGTCACAGGTGCCGAGGCCCAGAAGGCCC
TCAGGAAAGCAGAGAGCTTGAAGAAATGTCTCTCTGTCATGGAAGCCAAAGTGAAGGCTCAGACTGCTCCAAACA
AGGATGTGCAGAGGGAGATCGCTGACCTTGGAGAGGCCCTGGCCACTGCAGTCATCCCCCAGTGGCAGAAGGATG
AATTGCGGGAGACTCTCAAATCCCTAAAGAAGGTCATGGATGACTTGGACCGAGCCAGCAAAGCCGATGTCCAGA
AACGAGTGTTAGAGAAGACGAAGCAGTTCATCGACAGCAACCCCAACCAGCCTCTTGTCATCCTGGAGATGGAGA
GCGGCGCCTCAGCCAAGGCCCTGAATGAAGCCTTGAAGCTCTTCAAGATGCACTCCCCTCAGACTTCTGCCATGC
TCTTCACGGTGGACAATGAGGCTGGCAAGATCACGTGCCTGTGTCAAGTCCCCCAGAATGCAGCCAATCGGGGCT
TAAAAGCCAGCGAGTGGGTGCAGCAGGTGTCAGGCTTGATGGACGGTAAAGGTGGTGGCAAGGATGTGTCTGCAC
AGGCCACAGGCAAGAACGTTGGCTGCCTGCAGGAGGCGCTGCAGCTGGCCACTTCCTTCGCCCAGCTGCGCCTCG
GGGATGTAAAGAAC**TGA**GTGGGGAAGGAGGAGGCTCCCACTGGATCCATCCGTCCAGCCAAGAGCTCTTCATCTG
CTACAAGAACATTTGAATCTTGGGACCTTTAAAGAGCCCCTCCTAACCCAGCAGTAACTGGAACACACTTGGGAG
CAGTCCTATGTCTCAGTGCCCCTTAAATTTCTGCCCTGAGCCCTCCACGTCAGTGCCATCGGTCTAGAACCACTA
ACCCCGCATTGCTGTTGATCGTCACGCTCGCATCTATAGATAACGGCTCTCCAGACCTGAGCTTTCCGCGTCAGC
AAGTAGGAATCGTTTTTGCTGCAGAGAATAAAAGGACCACGTGC

FIGURE 180

MDSTLTASEIRQRFIDFFKRNEHTYVHSSATIPLDDPTLLFANAGMNQFKPIFLNTIDPSHPMAKLSRAANTQKC
IRAGGKQNDLDDVGKDVYHHTFFEMLGSWSFGDYFKELACKMALELLTQEFGIPIERLYVTYFGGDEAAGLEADL
ECKQIWQNLGLDDTKILPGNMKDNFWEMGDTGPCGPCSEIHYDRIGGRDAAHLVNQDDPNVLEIWNLVFIQYNRE
ADGILKPLPKKSIDTGMGLERLVSVLQNKMSNYDTDLFVPYFEAIQKGTGARPYTGKVGAEDADGIDMAYRVLAD
HARTITVALADGGRPDNTGRGYVLRRILRRAVRYAHEKLNASRGFFATLVDVVVQSLGDAFPELKKDPDMVKDII
NEEEVQFLKTLSRGRRILDRKIQSLGDSKTIPGDTAWLLYDTYGFPVDLTGLIAEEKGLVVDMDGFEEERKLAQL
KSQGKGAGGEDLIMLDIYAIEELRARGLEVTDDSPKYNYHLDSSGSYVFENTVATVMALRREKMFVEEVSTGQEC
GVVLDKTCFYAEQGGQIYDEGYLVKVDDSSEDKTEFTVKNAQVRGGYVLHIGTIYGDLKVGDQVWLFIDEPRRRP
IMSNHTATHILNFALRSVLGEADQKGSLVAPDRLRFDFTAKGAMSTQQIKKAEEIANEMIEAAKAVYTQDCPLAA
AKAIQGLRAVFDETYPDPVRVVSIGVPVSELLDDPSGPAGSLTSVEFCGGTHLRNSSHAGAFVIVTEEAIAKGIR
RIVAVTGAEAQKALRKAESLKKCLSVMEAKVKAQTAPNKDVQREIADLGEALATAVIPQWQKDELRETLKSLKKV
MDDLDRASKADVQKRVLEKTKQFIDSNPNQPLVILEMESGASAKALNEALKLFKMHSPQTSAMLFTVDNEAGKIT
CLCQVPQNAANRGLKASEWVQQVSGLMDGKGGGKDVSAQATGKNVGCLQEALQLATSFAQLRLGDVKN

FIGURE 181

GACCAGCCTACAGCCGCCTGCATCTGTATCCAGCGCCAGGTCCCGCCAGTCCCAGCTGCGCGCGCCCCCCAGTCC
CGCACCCGTTCGGCCCAGGCTAAGTTAGCCCTCACC**ATG**CCGGTCAAAGGAGGCACCAAGTGCATCAAATACCTG
CTGTTCGGATTTAACTTCATCTTCTGGCTTGCCGGGATTGCTGTCCTTGCCATTGGACTATGGCTCCGATTCGAC
TCTCAGACCAAGAGCATCTTCGAGCAAGAAACTAATAATAATAATTCCAGCTTCTACACAGGAGTCTATATTCTG
ATCGGAGCCGGCGCCCTCATGATGCTGGTGGGCTTCCTGGGCTGCTGCGGGGCTGTGCAGGAGTCCCAGTGCATG
CTGGGACTGTTCTTCGGCTTCCTCTTGGTGATATTCGCCATTGAAATAGCTGCGGCCATCTGGGGATATTCCCAC
AAGGATGAGGTGATTAAGGAAGTCCAGGAGTTTTACAAGGACACCTACAACAAGCTGAAAACCAAGGATGAGCCC
CAGCGGGAAACGCTGAAAGCCATCCACTATGCGTTGAACTGCTGTGGTTTGGCTGGGGGCGTGGAACAGTTTATC
TCAGACATCTGCCCCAAGAAGGACGTACTCGAAACCTTCACCGTGAAGTCCTGTCCTGATGCCATCAAAGAGGTC
TTCGACAATAAATTCCACATCATCGGCGCAGTGGGCATCGGCATTGCCGTGGTCATGATATTTGGCATGATCTTC
AGTATGATCTTGTGCTGTGCTATCCGCAGGAACCGCGAGATGGTC**TAG**AGTCAGCTTACATCCCTGAGCAGGAAA
GTTTACCCATGAAGATTGGTGGGATTTTTTGTTTGTTTGTTTTGTTTTGTTTGTTGTTTGTTGTTTGTTTTTTTG
CCACTAATTTTAGTATTCATTCTGCATTGCTAGATAAAAGCTGAAGTTACTTTATGTTTGTCTTTTAATGCTTCA
TTCAATATTGACATTTGTAGTTGAGCGGGGGGTTTGGTTTGCTTTGGTTTATATTTTTTCAGTTGTTTGTTTTTG
CTTGTTATATTAAGCAGAAATCCTGCAATGAAAGGTACTATATTTGCTAGACTCTAGACAAGATATTGTACATAA
AAGAATTTTTTTGTCTTTAAATAGATACAAATGTCTATCAACTTTAATCAAGTTGTAACTTATATTGAAGACAAT
TTGATACATAATAAAAAATTATGACAATGTCAAAAAAAAAAAAAAA

FIGURE 182

MPVKGGTKCIKYLLFGFNFIFWLAGIAVLAIGLWLRFDSQTKSIFEQETNNNNSSFYTGVYILIGAGALMMLVGF
LGCCGAVQESQCMLGLFFGFLLVIFAIEIAAAIWGYSHKDEVIKEVQEFYKDTYNKLKTKDEPQRETLKAIHYAL
NCCGLAGGVEQFISDICPKKDVLETFTVKSCPDAIKEVFDNKFHIIGAVGIGIAVVMIFGMIFSMILCCAIRRNR
EMV

FIGURE 183

CTTGCTCCGAGAGGGAGTCCTCGCGGACGTCAGCCAAGATTCCAGA**ATG**ACTATCTTGACTTACCCCTTTAAAAA
TCTTCCCACTGCATCAAAATGGGCCCTCAGATTTTCCATAAGACCTCTGAGCTGTTCCTCCCAGCTACGAGCTGC
CCCAGCTGTCCAGACCAAAACGAAGAAGACGTTAGCCAAACCCAATATAAGGAATGTTGTGGTGGTGGATGGTGT
TCGCACTCCATTTTTGCTGTCTGGCACTTCATATAAAGACCTGATGCCACATGATTTGGCTAGAGCAGCGCTTAC
GGGTTTGTTGCATCGGACCAGTGTCCCTAAGGAAGTAGTTGATTATATCATCTTTGGTACAGTTATTCAGGAAGT
GAAAACAAGCAATGTGGCTAGAGAGGCTGCCCTTGGAGCTGGCTTCTCTGACAAGACTCCTGCTCACACTGTCAC
CATGGCTTGTATCTCTGCCAACCAAGCCATGACCACAGGTGTTGGCTTGATTGCTTCTGGCCAGTGTGATGTGAT
CGTGGCAGGTGGTGTTGAGTTGATGTCCGATGTCCCTATTCGTCACTCAAGGAAAATGAGAAAACTGATGCTTGA
TCTCAATAAGGCCAAATCTATGGGCCAGCGACTGTCTTTAATCTCTAAATTCCGATTTAATTTCCTAGCACCTGA
GCTCCCTGCGGTTTCTGAGTTCTCCACCAGTGAGACCATGGGCCACTCTGCAGACCGACTGGCCGCTGCCTTTGC
TGTTTCTCGGCTGGAACAGGATGAATATGCACTGCGCTCTCACAGTCTAGCCAAGAAGGCACAGGATGAAGGACT
CCTTTCTGATGTGGTACCCTTCAAAGTACCAGGAAAAGATACAGTTACCAAAGATAATGGCATCCGTCCTTCCTC
ACTGGAGCAGATGGCCAAACTAAAACCTGCATTCATCAAGCCCTACGGCACAGTGACAGCTGCAAATTCTTCTTT
CTTGACTGATGGTGCATCTGCAATGTTAATCATGGCGGAGGAAAAGGCTCTGGCCATGGGTTATAAGCCGAAGGC
ATATTTGAGGGATTTTATGTATGTGTCTCAGGATCCAAAAGATCAACTATTACTTGGACCAACATATGCTACTCC
AAAAGTTCTAGAAAAGGCAGGATTGACCATGAATGATATTGATGCTTTTGAATTTCATGAAGCTTTCTCGGGTCA
GATTTTGGCAAATTTTAAAGCCATGGATTCTGATTGGTTTGCAGAAAACTACATGGGTAGAAAAACCAAGGTTGG
ATTGCCTCCTTTGGAGAAGTTTAATAACTGGGGTGGATCTCTGTCCCTGGGACACCCATTTGGAGCCACTGGCTG
CAGGTTGGTCATGGCTGCTGCCAACAGATTACGGAAAGAAGGAGGCCAGTATGGCTTAGTGGCTGCGTGTGCAGC
TGGAGGGCAGGGCCATGCTATGATAGTGGAAGCTTATCCAAAA**TAA**TAGATCCAGAAGAAGTGACCTGAAGTTTC
TGTGCAACACTCACACTAGGCAATGCCATTTCAATGCATTACTAAATGACATTTGTAGTTCCTAGCTCCTCTTAG
GAAAACAGTTCTTGTGGCCTTCTATTAAATAGTTTGCACTTAAGCCTTGCCAGTGTTCTGAGCTTTTCAATAATC
AGTTTACTGCTCTTTCAGGGATTTCTAAGCCACCAGAATCTCACATGAGATGTGTGGGTGGTTGTTTTTGGTCTC
TGTTGTCACTAAAGACTAAATGAGGGTTTGCAGTTGGGAAAGAGGTCAACTGAGATTTGGAAATCATCTTTGTAA
TATTTGCAAATTATACTTGTTCTTATCTGTGTCCTAAAGATGTGTTCTCTATAAAATACAAACCAACGTGCCTAA
TTAATTATGGAAAAATAATTCAGAATCTAAACACCACTGAAAACTTATAAAAAATGTTTAGATACATAAATATGG
TGGTCAGCGTTAATAAAGTGGAGAAATATTGGAAAAAAAAA

FIGURE 184

MTILTYPFKNLPTASKWALRFSIRPLSCSSQLRAAPAVQTKTKKTLAKPNIRNVVVVDGVRTPFLLSGTSYKDLM
PHDLARAALTGLLHRTSVPKEVVDYIIFGTVIQEVKTSNVAREAALGAGFSDKTPAHTVTMACISANQAMTTGVG
LIASGQCDVIVAGGVELMSDVPIRHSRKMRKLMLDLNKAKSMGQRLSLISKFRFNFLAPELPAVSEFSTSETMGH
SADRLAAAFAVSRLEQDEYALRSHSLAKKAQDEGLLSDVVPFKVPGKDTVTKDNGIRPSSLEQMAKLKPAFIKPY
GTVTAANSSFLTDGASAMLIMAEEKALAMGYKPKAYLRDFMYVSQDPKDQLLLGPTYATPKVLEKAGLTMNDIDA
FEFHEAFSGQILANFKAMDSDWFAENYMGRKTKVGLPPLEKFNNWGGSLSLGHPFGATGCRLVMAAANRLRKEGG
QYGLVAACAAGGQGHAMIVEAYPK

FIGURE 185

GCTTAGTGTAACCAGCGGCGTATATTTTTTAGGCGCCTTTTCGAAAACCTAGTAGTTAATATTCATTTGTTTAAA
TCTTATTTTATTTTTAAGCTCAAACTGCTTAAGAATACCTTAATTCCTTAAAGTGAAATAATTTTTTGCAAAGGG
GTTTCCTCGATTTGGAGCTTTTTTTTTCTTCCACCGTCATTTCTAACTCTTAAAACCAACTCAGTTCCATC**ATG**G
TGATGTTCAAGAAGATCAAGTCTTTTGAGGTGGTCTTTAACGACCCTGAAAAGGTGTACGGCAGTGGCGAGAGGG
TGGCTGGCCGGGTGATAGTGGAGGTGTGTGAAGTTACTCGTGTCAAAGCCGTTAGGATCCTGGCTTGCGGAGTGG
CTAAAGTGCTTTGGATGCAGGGATCCCAGCAGTGCAAACAGACTTCGGAGTACCTGCGCTATGAAGACACGCTTC
TTCTGGAAGACCAGCCAACAGGTGAGAATGAGATGGTGATCATGAGACCTGGAAACAAATATGAGTACAAGTTCG
GCTTTGAGCTTCCTCAGGGGCCTCTGGGAACATCCTTCAAAGGAAAATATGGGTGTGTAGACTACTGGGTGAAGG
CTTTTCTTGACCGCCCGAGCCAGCCAACTCAAGAGACAAAGAAAAACTTTGAAGTAGTGGATCTGGTGGATGTCA
ATACCCCTGATTTAATGGCACCTGTGTCTGCTAAAAAAGAAAAGAAAGTTTCCTGCATGTTCATTCCTGATGGGC
GGGTGTCTGTCTCTGCTCGAATTGACAGAAAAGGATTCTGTGAAGGTGATGAGATTTCCATCCATGCTGACTTTG
AGAATACATGTTCCCGAATTGTGGTCCCCAAAGCTGCCATTGTGGCCCGCCACACTTACCTTGCCAATGGCCAGA
CCAAGGTGCTGACTCAGAAGTTGTCATCAGTCAGAGGCAATCATATTATCTCAGGGACATGCGCATCATGGCGTG
GCAAGAGCCTTCGGGTTCAGAAGATCAGGCCTTCTATCCTGGGCTGCAACATCCTTCGAGTTGAATATTCCTTAC
TGATCTATGTTAGCGTTCCTGGATCCAAGAAGGTCATCCTTGACCTGCCCCTGGTAATTGGCAGCAGATCAGGTC
TAAGCAGCAGAACATCCAGCATGGCCAGCCGAACCAGCTCTGAGATGAGTTGGGTAGATCTGAACATCCCTGATA
CCCCAGAAGCTCCTCCCTGCTATATGGATGTCATTCCTGAAGATCACCGATTGGAGAGCCCAACAACTCCTCTGC
TAGATGACATGGATGGCTCTCAAGACAGCCCTATCTTTATGTATGCCCCTGAGTTCAAGTTCATGCCACCACCGA
CTTATACTGAGGTGGATCCCTGCATCCTCAACAACAATGTGCAG**TGA**GCATGTGGAAGAAAAGAAGCAGCTTTAC
CTACTTGTTTCTTTTTGTCTCTCTTCCTGGACACTCACTTTTTCAGAGACTCAACAGTCTCGTCAATGGAGTGTG
GGTCCACCTTAGCCTCTGACTTCCTAATGTAGGAGGTGGTCAGCAGGCAATCTCCTGGGCCTTAAAGGATGCGGA
CTCATCCTCAGCCAGCGCCCATGTTGTGATACAGGGGTGTTTGTTGGATGGGTTTAAAAATAACTAGAAAAACTC
AGGCCCATCCATTTTCTCAGATCTCCTTGAAAATTGAGGCCTTTTCGATAGTTTCGGGTCAGGTAAAAATGGCCT
CCTGGCGTAAGCTTTTCAAGGTTTTTTGGAGGCTTTTTGTAAATTGTGATAGGAACTTTGGACCTTGAACTTACG
TATCATGTGGAGAAGAGCCAATTTAACAAACTAGGAAGATGAAAAGGGAAATTGTGGCCAAAACTTTGGGAAAAG
GAGGTTCTTAAAATCAGTGTTTCCCCTTTGTGCACTTGTAGAAAAAAAAGAAAAACCTTCTAGAGCTGATTTGAT
GGACAATGGAGAGAGCTTTCCCTGTGATTATAAAAAAGGAAGCTAGCTGCTCTACGGTCATCTTTGCTTAGAGTA
TACTTTAACCTGGCTTTTAAAGCAGTAGTAACTGCCCCACCAAAGGTCTTAAAAGCCATTTTTGGAGCCTATTGC
ACTGTGTTCTCCTACTGCAAATATTTTCATATGGGAGGATGGTTTTCTCTTCATGTAAGTCCTTGGAATTGATTC
TAAGGTGATGTTCTTAGCACTTTAATTCCTGTCAAATTTTTTGTTCTCCCCTTCTGCCATCTTAAATGTAAGCTG
AAACTGGTCTACTGTGTCTCTAGGGTTAAGCCAAAAGACAAAAAAAATTTTACTACTTTTGAGATTGCCCCAATG
TACAGAATTATATAATTCTAACGCTTAAATCATGTGAAAGGGTTGCTGCTGTCAGCCTTGCCCACTGTGACTTCA
AACCCAAGGAGGAACTCTTGATCAAGATGCCCAACCCTGTGATCAGAACCTCCAAATACTGCCATGAGAAACTAG
AGGGCAGGTGTTCATAAAAGCCCTTTGAACCCCCTTCCTGCCCTGTGTTAGGAGATAGGGATATTGGCCCCTCAC
TGCAGCTGCCAGCACTTGGTCAGTCACTCTCAGCCATAGCACTTTGTTCACTGTCCTGTGTCAGAGCACTGAGCT
CCACCCTTTTCTGAGAGTTATTACAGCCAGAAAGTGTGGGCTGAAGATGGTTGGTTTCATGTGGGGGTATTATGT
ACCC

FIGURE 186

MVMFKKIKSFEVVFNDPEKVYGSGERVAGRVIVEVCEVTRVKAVRILACGVAKVLWMQGSQQCKQTSEYLRYEDT
LLLEDQPTGENEMVIMRPGNKYEYKFGFELPQGPLGTSFKGKYGCVDYWVKAFLDRPSQPTQETKKNFEVVDLVD
VNTPDLMAPVSAKKEKKVSCMFIPDGRVSVSARIDRKGFCEGDEISIHADFENTCSRIVVPKAAIVARHTYLANG
QTKVLTQKLSSVRGNHIISGTCASWRGKSLRVQKIRPSILGCNILRVEYSLLIYVSVPGSKKVILDLPLVIGSRS
GLSSRTSSMASRTSSEMSWVDLNIPDTPEAPPCYMDVIPEDHRLESPTTPLLDDMDGSQDSPIFMYAPEFKFMPP
PTYTEVDPCILNNNVQ

FIGURE 187

GAAAGCTGTATTTGCTGCACGTGGAAATCTCCGTTATTTTCCAGCACCCAACAGTAGCGTAATGGGAGTAACGGA
CTTAACCTCATTTCTCTTTCAGAGCATTTAGCCTTCATATGCCCTTCCCTGCATGCTTCCCCCAGGCCGTCAAGA
CTTGAGTTCTGCCTCGCTTCCCGGCGCGGTCGCAGCCCTCAGCCCACTTAGGATA**ATG**GCGACAGCTGAGGTACT
GAACATTGGTAAAAAATTATATGAGGGTAAAACAAAAGAAGTCTACGAATTGTTAGACAGTCCAGGAAAAGTCCT
CCTGCAGTCCAAGGACCAGATTACAGCAGGAAATGCAGCTAGAAAAAACCACCTGGAAGGAAAAGCTGCAATCTC
AAATAAAATCACCAGTTGTATTTTTCAGTTATTACAGGAAGCAGGTATTAAAACTGCCTTCACCAGAAAATGTGG
GGAGACAGCTTTCATTGCACCGCAGTGTGAAATGATTCCAATTGAATGGGTTTGCAGAAGAATAGCAACTGGTTC
TTTTCTCAAAAGAAATCCTGGTGTCAAGGAAGGATATAAGTTTTACCCACCTAAAGTGGAGTTGTTTTTCAAGGA
TGATGCCAATAATGACCCACAGTGGTCTGAGGAACAGCTGATTGCTGCAAAATTTTGCTTTGCTGGACTTCTTAT
AGGCCAGACTGAAGTGGATATCATGAGTCATGCTACACAGGCTATATTTGAAATACTGGAGAAATCCTGGTTGCC
CCAGAATTGTACACTGGTTGATATGAAGATTGAATTTGGTGTTGATGTAACCACCAAAGAAATTGTTCTTGCTGA
TGTTATTGACAATGATTCCTGGAGACTCTGGCCATCAGGAGATCGAAGCCAACAGAAAGACAAACAGTCTTATCG
GGACCTCAAAGAAGTAACTCCTGAAGGGCTCCAAATGGTAAAGAAAAACTTTGAGTGGGTTGCAGAGAGAGTAGA
GTTGCTTTTGAAATCAGAAAGTCAGTGCAGGGTTGTAGTGTTGATGGGCTCTACTTCTGATCTTGGTCACTGTGA
AAAAATCAAGAAGGCCTGTGGAAATTTTGGCATTCCATGTGAACTTCGAGTAACATCTGCGCATAAAGGACCAGA
TGAAACTCTGAGGATTAAAGCTGAGTATGAAGGGGATGGCATTCCTACTGTATTTGTGGCAGTGGCAGGCAGAAG
TAATGGTTTGGGACCAGTGATGTCTGGGAACACTGCATATCCAGTTATCAGCTGTCCTCCCCTCACACCAGACTG
GGGAGTTCAGGATGTGTGGTCTTCTCTTCGACTACCCAGTGGTCTTGGCTGTTCAACCGTACTTTCTCCAGAAGG
ATCAGCTCAATTTGCTGCTCAGATATTTGGGTTAAGCAACCATTTGGTATGGAGCAAACTGCGAGCAAGCATTTT
GAACACATGGATTTCCTTGAAGCAGGCTGACAAGAAAATCAGAGAATGTAATTTA**TAA**GAAAGAATGCCATTGAA
TTTTTTAGGGGAAAAACTACAAATTTCTAATTTAGCTGAAGGAAAATCAAGCAAGATGAAAAGGTAATTTTAAAT
TAGAGAACACAAATAAAATGTATTAGTGAATAAATGCTTCTCTAGATCCATATTAATAAACATGAGCATCTAACC
CCTCCTTTCTTAGGCTAGACACCAAGATATTTCAGCCAGCCTTTATCATTCCTCTTACTTTATCCTTTTTCCTTA
AGTATTGGTGGTCACTACTATTGAGTTTCTTCCTTAACACTGATTAAATGATCTTAACTCCCTCAGCTAAAACTG
GCATTACTGACTCCCAGCTATATTTCTCCAGACTTGCATTTTTTTTTTTTTTTTTGAGACAGGGTCTCACTGTCG
CCCAGGCTGGAGTGCAGTGGCGTGATCTCAGTTCACTGCTGCTTTCCCTCCTGGGCTCAAGCAGTTCTCCCACCT
CAGCCTCTCGACTAACAGGGACTATAATCTTGCAGCACCATGCCGAGCTAATTTTATTTTTTGTAGAGATGAGCT
CTCACTATGTCACCCAGGTTCGTCTCAAACTCCTGAACCCTAGTAATTCTCCTATCTCAGCCTCCCAAAGTGCTA
GGGTTACAGACATGAGCCACTGTGCCTGTCTAGACTTGTACTTTCAACTGTCCATTTCTCCCTGTCTGTCCCATG
GGCACTCATGAAAAAACAGAATGCTCCCAACTTTATTCATCTTCCAAGCCTGTAGCTCTTGGTATACTCACTGTT
GCAAGTCAGAAGCTTGATTTCATCATTGATGTTTTTCTCACGTTTCACATCTCACTCATCACCAAGTCATGTTGG
TGTTAATTTCTGATTAACCCTTGAATTTACCGTCTTCTCATCCTCTGTACAAAAGCCTCAAGTGAGGGTCAAATT
CAACATTATCCTGATCTAGACAGCCCCCATTCTCAATCCACCCTTTTCCAAGTTGATTGCCCAAGGACTTCTAAC
AATAAACTCTCTTTTGCACCACAGACTTCTTTGAAAATATACATGCTGTTGACCCTCTCTGTAGAAAACCGCACA
CATAAAACTTACCAACAGATTTCATTGGTTCTTGGGTTCTCCCGAAGCCTATCCATGGTTTATAGATTAAGAATT
GATGAGGTAGCTGGGCACAGTGGCTCACACCTACGATCACAGCACTTCGGGAGGCTGAAGCAAGCAGATCACTTG
AGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCTGTCTCTACTAAAAATACAAAAAGTAGCCAGC
CGTGATGACAGGCACCTGTAATCCCAGCTACTCGGGAGGCTGAGGCATGAGAATTGCTTGAACCCGGGAGGCGGA
GGTTGCAGTGAGCCTGGATCATGCCACTGCACTCCAACCTGGGCAGCAGAGCAAGACTCTGTCTCAAAAGGGGAA
AAAAAAAATTGCTGATGTGACCCATGAAGGGAACTCATTTTCCTCGTAATTTTGGACTGCCACACATTGGTACCT
TTAGTTCTCTGAAGGCCCACGTTTTTATCATTAAGACCTATTTGTTAGCTAGTAGAGCTTTATGTTCGCTGTCCA
TGAAACCTTCTGTAACCACAGTGACTACAAGTAGTTCTTTCTCTATTGAATTATTAGGTCCAGAATAGAAGATGT
CATTGTACACTTTATTTCCCTCACACTGTGTTATGCTCTGATGTGCTATGCTTAGCTATCTGTCAGAGATTAGTA
AATTATAAAACTCATGTGTACTACTTAAGTTTATATCTTATGCTAGTTTATAAGAACAATTAAAAGGACTTAGAA
GATTAAAAAAAAAAAAAAAAAA

FIGURE 188

MATAEVLNIGKKLYEGKTKEVYELLDSPGKVLLQSKDQITAGNAARKNHLEGKAAISNKITSCIFQLLQEAGIKT
AFTRKCGETAFIAPQCEMIPIEWVCRRIATGSFLKRNPGVKEGYKFYPPKVELFFKDDANNDPQWSEEQLIAAKF
CFAGLLIGQTEVDIMSHATQAIFEILEKSWLPQNCTLVDMKIEFGVDVTTKEIVLADVIDNDSWRLWPSGDRSQQ
KDKQSYRDLKEVTPEGLQMVKKNFEWVAERVELLLKSESQCRVVVLMGSTSDLGHCEKIKKACGNFGIPCELRVT
SAHKGPDETLRIKAEYEGDGIPTVFVAVAGRSNGLGPVMSGNTAYPVISCPPLTPDWGVQDVWSSLRLPSGLGCS
TVLSPEGSAQFAAQIFGLSNHLVWSKLRASILNTWISLKQADKKIRECNL

FIGURE 189

CGGGGAGGACGGTCTGCATACTCGCTGCCCGCCGGCTCCCTCCCCCGCGTCCCTGCGACCGCCGCGGCGAAG**ATG**

GCCTCAGGAGTGCAAGTAGCTGATGAAGTATGTCGCATTTTTTATGACATGAAAGTTCGTAAATGCTCCACACCA
GAAGAAATCAAGAAAAGAAAGAAGGCTGTCATTTTTTGTCTCAGTGCAGACAAAAAGTGCATCATTGTAGAAGAA
GGCAAAGAGATCTTGGTTGGAGATGTTGGTGTAACCATAACTGATCCTTTCAAGCATTTTGTGGGAATGCTTCCT
GAAAAAGATTGTCGCTATGCTTTGTATGATGCAAGCTTTGAAACAAAAGAATCCAGAAAAGAAGAGTTGATGTTT
TTTTTGTGGGCACCAGAACTAGCACCTCTGAAAAGTAAAATGATCTATGCAAGCTCCAAGGATGCAATTAAAAAG
AAATTTCAAGGCATAAAACATGAATGTCAAGCAAATGGACCAGAAGATCTCAATCGGGCTTGTATTGCTGAAAAG
TTAGGTGGATCCTTAATTGTAGCCTTTGAAGGATGCCCTGTG**TAG**ATTATTCAGTGCCACAAATTGAAAGCTTCC
ATGTTTAATGTTATCCTCTTGCTATATAAATAAAGCAAATATATTTAGGCCAGGGTCTCACTGAGGGGGAGCTGT
CTTGTCATCTTTTAGAGTAAACTATTCTATAAACATATGCAAACAGCCCTAAATAAATCTAAAGTCTAAAGTTTT
ATTGATGTGAAATTAAATTCTTATTGGCCAAATGCCTGTTTTGATGAGTTGATTTATAAAGATTTTTGTTAAGCT
CAGGATTTTAAATTACACAGTTCACAAACAGTAAAGGCCATGTGAAGAGAATTATTACATCTTTATTAACCTCAG
CATTTACTTTGTTTCTTTTGCTTAGGAAATTGCTCATAATCTGGTTATAATTTTGGTCCAAATTCTTTATTCTTC
CTTGAGCTAAGCAGAATAATGGAATATAATATGTCTTCATAATATAACAACACTAATACACTAATAGTAAGATTA
AGTTAGGCAGTCTTCTACCAAATGTGTAATGGAGATTGCCTCAAAATTGTGTCCACATAATCCACGCTCATCTTG
CAAAGCGCTATTTCAGGCACATCATTGGAATACAGGAAGTAGCCCTGCACCTGCCAGTGAGCTCGCCATTCACTG
ATTGGAAGAGTGACCTGGCATCTTGGAAATCATTGTGTGTCTTCAGGAGAATGTGCAGTGTCTTGTAACAACTAA
TTAATAATGCAAATTAGGGCTACATTGTAATCTGCTTTGTTAATGAAAATGATAAAACAGAATATTGACAAGCTA
GGACACCTGTGGTATCTTTAATTGTATCTCCTTCAGAAGTTTGCTTCTTATGGTATAATAAAGTATGGAAGAATA
AAAAAAAAAAAAAA

FIGURE 190

MASGVQVADEVCRIFYDMKVRKCSTPEEIKKRKKAVIFCLSADKKCIIVEEGKEILVGDVGVTITDPFKHFVGML
PEKDCRYALYDASFETKESRKEELMFFLWAPELAPLKSKMIYASSKDAIKKKFQGIKHECQANGPEDLNRACIAE
KLGGSLIVAFEGCPV

FIGURE 191

GGCACGAGGGTGCAGAGGCAACCAAAAAGGAACCCACACCTCCCTCCAGGGCCCGGGGCGCTGTCAGACGGGGCA
GCAACCAGGAGATTCCCTGGGCCTGCAGGAAGCCCTTCCGCGGACCGAAAGATTGTTCCCCATTTTGGAGATGAA
GAAACTGAGACTCAAAGCAGCTGAGTGACCTTCCCAAGGACACACACTGAACTGGGCGGTGATCAGGATCTGAAT
GCACAGGGCGGGTGTTCAGTGATTGTTTACTACGTTGAACGTGACCTCCAGGAAAGCAGTTCTGGCCGAGATCCC
CTGACAACGCAAAGCAAGAAGTAACGTGGAAGGAGGCTCCCCAAGCTGGCTGGCCATTTTGCTGCTGTGTGTGGA
GGTGCTGTCAGTGGCATGCCCAAACCCAAAGCTGGAAGAGGAATAAATTACAAGTGGTCAAGGTTGCTGCTGTGT
GTGGAGGTGCTGTCAGTGGCATGCCCAAACCCAAAGCTGGAAGAGGAATAAATTACAAGTGGTCAAGGTTGCATC
CTTTTGAGCCCAGGACCTGCTTGTAAGCCGAGAGGGTTCTCTGGCCCTAATCTAGCCAAGCACCATGGAGAGAAT
CAGTGCCTTCTTCAGCTCTATCTGGGACACCATCTTGACCAAACACCAAGAAGGCATCTACAACACCATCTGCCT
GGGAGTCCTCCTGGGCCTGCCACTCTTGGTGATCATCACACTCCTCTTCATCTGTTGCCATTGCTGCTGGAGCCC
ACCAGGCAAGAGGGGCCAGCAGCCAGAGAAGAACAAGAAGAAAAAGAAGAAGAAGAAGAAGGATGAAGAAGA
CCTCTGGATCTCTGCTCAACCCAAGCTTCTCCAGATGGAGAAGAGACCATCACTGCCTGTTTAGTTAGGCAGGAA
GCAGAGGTGTTTCCTTTCTGGGGCTAAGCCTCCTTCTGACCACACACAGACATTTCAGGAACCCCTGAAATAATG
CACTATGTCCATGTCCACAGAGTAACTACTCAACCAAGGAACAAACCTCAGACTAAGTGTCCCAGTGGAGGGAAG
TCCCAGGGACCACGTGGACAATTCTTGGATACTGTCTTGGCAGCTATGTGTCCAATAGCAATGCTCCTTACTGCA
GACCCAGGCATGCCTCCCACCTGTCTCTGGCATACCCCACATGCAAAGCACAAAGAACATTTATCCATACATCTC
AATATGGTTCCCAAGTGTGTGCACATGCACGTAACACACACACACACAAATTCAGGTAGCAGGTACGTGGGCAAG
TATATTCTGCTCATCAAATGGTCATTGGCTATGTACTTTGTGCAGGGAAGTACATTATCTACAGTCACAAAAATG
TCTCATGGGAAAGCCTTGCCAGATTCAGACACATATATACAATTTCCTAACCAGCAAGGCCCCCATACACCATCT
ATTCCATAAACCACTCAGGTTACAGATGCATGCTTTCCTATTTCTAACTCTACACATAAACTTTTACTGGAAGTA
CTCATAATTGGACATTCCAGCAACCTGCTACAGTCCCCACCCTTGTGTGTCTTGATACAGACACACCAAGTTTCT
GTGCCTCTGACCCCTCACCTGTGCCAAGATGTTTAAAGTGTGATGGTTCAAAATTCAAAAAAAAAAAAAAAAAAC
TCGAGACCGGCGCCGGAGGAGACGCACGCAGCTGACTTTGTCTTCTCCGCACGACTGTTACAGAGGTCTCCAGAG
CCTTCTCTCTCCTGTGCAAA**ATG**GCAACTCTTAAGGAAAAACTCATTGCACCAGTTGCGGAAGAAGAGGCAACAG
TTCCAAACAATAAGATCACTGTAGTGGGTGTTGGACAAGTTGGTATGGCGTGTGCTATCAGCATTCTGGGAAAGT
CTCTGGCTGATGAACTTGCTCTTGTGGATGTTTTGGAAGATAAGCTTAAAGGAGAAATGATGGATCTGCAGCATG
GGAGCTTATTTCTTCAGACACCTAAAATTGTGGCAGATAAAGATTATTCTGTGACCGCCAATTCTAAGATTGTAG
TGGTAACTGCAGGAGTCCGTCAGCAAGAAGGGGAGAGTCGGCTCAATCTGGTGCAGAGAAATGTTAATGTCTTCA
AATTCATTATTCCTCAGATCGTCAAGTACAGTCCTGATTGCATCATAATTGTGGTTTCCAACCCAGTGGACATTC
TTACGTATGTTACCTGGAAACTAAGTGGATTACCCAAACACCGCGTGATTGGAAGTGGATGTAATCTGGATTCTG
CTAGATTTCGCTACCTTATGGCTGAAAAACTTGGCATTCATCCCAGCAGCTGCCATGGATGGATTTTGGGGGAAC
ATGGCGACTCAAGTGTGGCTGTGTGGAGTGGTGTGAATGTGGCAGGTGTTTCTCTCCAGGAATTGAATCCAGAAA
TGGGAACTGACAATGATAGTGAAAATTGGAAGGAAGTGCATAAGATGGTGGTTGAAAGTGCCTATGAAGTCATCA
AGCTAAAAGGATATACCAACTGGGCTATTGGATTAAGTGTGGCTGATCTTATTGAATCCATGTTGAAAAATCTAT
CCAGGATTCATCCCGTGTCAACAATGGTAAAGGGGATGTATGGCATTGAGAATGAAGTCTTCCTGAGCCTTCCAT
GTATCCTCAATGCCCGGGGATTAACCAGCGTTATCAACCAGAAGCTAAAGGATGATGAGGTTGCTCAGCTCAAGA
AAAGTGCAGATACCCTGTGGGACATCCAGAAGGACCTAAAAGACCTG**TGA**CTAGTGAGCTCTAGGCTGTAGAAAT
TTAAAAACTACAATGTGATTAACTCGAGCCTTTAGTTTTCATCCATGTACATGGATCACAGTTTGCTTTGATCTT
CTTCAATATGTGAATTTGGGCTCACAGAATCAAAGCCTATGCTTGGTTTAATGCTTGCAATCTGAGCTCTTGAAC
AAATAAAATTAACTATTGTAGTGTGAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 192

MATLKEKLIAPVAEEEATVPNNKITVVGVGQVGMACAISILGKSLADELALVDVLEDKLKGEMMDLQHGSLFLQT
PKIVADKDYSVTANSKIVVVTAGVRQQEGESRLNLVQRNVNVFKFIIPQIVKYSPDCIIIVVSNPVDILTYVTWK
LSGLPKHRVIGSGCNLDSARFRYLMAEKLGIHPSSCHGWILGEHGDSSVAVWSGVNVAGVSLQELNPEMGTDNDS
ENWKEVHKMVVESAYEVIKLKGYTNWAIGLSVADLIESMLKNLSRIHPVSTMVKGMYGIENEVFLSLPCILNARG
LTSVINQKLKDDEVAQLKKSADTLWDIQKDLKDL

FIGURE 193

CGCCCCCAGAGTCTGGCTTTCCGCGGCTGCCCGCCTCGCGCGTCTTCCCTGCCCGGGTCTCCTCGCTGTCGCCGC
CGCTGCCACACC**ATG**GCCTTCGTCACCAGGCAGTTCATGCGTTCCGTGTCCTCCTCGTCCACCGCCTCGGCCTCG
GCCAAGAAGATAATCGTCAAGCACGTGACGGTCATCGGCGGCGGGCTGATGGGCGCCGGCATTGCCCAGGTTGCT
GCAGCAACTGGTCACACAGTAGTGTTGGTAGACCAGACAGAGGACATCCTGGCAAAATCCAAAAAGGGAATTGAG
GAAAGCCTTAGGAAAGTGGCAAAGAAGAAGTTTGCAGAAAACCCTAAGGCCGGCGATGAATTTGTGGAGAAGACC
CTGAGCACCATAGCGACCAGCACGGATGCAGCCTCCGTTGTCCACAGCACAGACTTGGTGGTGGAAGCCATCGTG
GAGAATCTGAAGGTGAAAAACGAGCTCTTCAAAAGGCTGGACAAGTTTGCTGCTGAACATACAATCTTTGCCAGC
AACACTTCCTCCTTGCATATTACAAGCATAGCTAATGCCACCACCAGACAAGACCGATTCGCTGGCCTCCATTTC
TTCAACCCAGTGCCTGTCATGAAACTTGTGGAGGTCATTAAAACACCAATGACCAGCCAGAAGACATTTGAATCT
TTGGTAGACTTTAGCAAAGCCCTAGGAAAGCATCCTGTTTCTTGCAAGGACACTCCTGGGTTTATTGTGAACCGC
CTCCTGGTTCCATACCTCATGGAAGCAATCAGGCTGTATGAACGAGGTGACGCATCCAAAGAAGACATTGACACT
GCTATGAAATTAGGAGCCGGTTACCCCATGGGCCCATTTGAGCTTCTAGATTATGTCGGACTGGATACTACGAAG
TTCATCGTGGATGGGTGGCATGAAATGGATGCAGAGAACCCATTACATCAGCCCAGCCCATCCTTAAATAAGCTG
GTAGCAGAGAACAAGTTCGGCAAGAAGACTGGAGAAGGATTTTACAAATACAAG**TGA**TGTGCAGCTTCTCCGGCT
CTGAGAAGAACACCTGAGAGCGCTTTCCAGCCAGTGCCCCGAGTGCCTGTGGGAATGCTCTTTGGTCAGACATTC
CCTCACACAGTACAGTTTAATAAATGTGCATTTTGATTGTAATCTATCGAAGTGATTATTACACCAGTTACAGCA
GTAATAGATTCTCCATTAAGAAATAATTCCCTTTTTTAGTCTGTTCATTTCTGTGTATTTTCTAAACAGCTTTAC
ACCCTTGGTGCCTTGGAGCAAACATGTTTTTTGAACCTTGTCATTTTTGTGAAGAATTGCCTAGATTCCTTCTCT
CATCAACGGGAAAGTACTTCCTCTGAGAGTGCGAGTGCACCATGCTCACTGTTGCTGCGTGGGAGAGTCACAAGC
CACTGGCAAGCAAGTGGTATAGTCTGTGAAGCACTGCAGCGAGCAGCACCTGGATCTTGCCTTTATAAGAACATT
TTACTACCTGCAGCTTTGAGTCTTGCCCTACATTTTGGGCATGACATAAGATGTGTCTTTATTCAGCTCGTCGTG
AAGATGCTGCTGCTGAATGGGTCAGCATATCTCTGTTTGCATGGTTTGCAGGAGGTCGGTTTTCATGGTCATTCA
GTTCCACAGATCTGAATGATTACTGTCTGTCTGTGTCTTTTTTCCATGAGAAATCACTGTTGCAAATTGCCTATA
AATTGACTCTACTAAAATAACAATGTTTCAGTCTGAAAATTTGAATTGAAAAAAATGTATAATATAAAATTGTAA
TACACTCAAATGATTATAAAAGTAAAAGTTGGTAATTTAGGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

FIGURE 194

MAFVTRQFMRSVSSSSTASASAKKIIVKHVTVIGGGLMGAGIAQVAAATGHTVVLVDQTEDILAKSKKGIEESLR
KVAKKKFAENPKAGDEFVEKTLSTIATSTDAASVVHSTDLVVEAIVENLKVKNELFKRLDKFAAEHTIFASNTSS
LHITSIANATTRQDRFAGLHFFNPVPVMKLVEVIKTPMTSQKTFESLVDFSKALGKHPVSCKDTPGFIVNRLLVP
YLMEAIRLYERGDASKEDIDTAMKLGAGYPMGPFELLDYVGLDTTKFIVDGWHEMDAENPLHQPSPSLNKLVAEN
KFGKKTGEGFYKYK

FIGURE 195

CCCGGACGTGCGGCTCCCCTCGGCCTCCTCGCC**ATG**GACGCGGACGACTCCCGGGCCCCCAAGGGCTCCTTGCGG
AAGTTCCTGGAGCACCTCTCCGGGGCCGGCAAGGCCATCGGCGTGCTGACCAGCGGCGGGGATGCTCAAGGTATG
AACGCTGCCGTCCGTGCCGTGGTGCGCATGGGTATCTACGTGGGGGCCAAGGTGTACTTCATCTACGAGGGCTAC
CAGGGCATGGTGGACGGAGGCTCAAACATCGCAGAGGCCGACTGGGAGAGTGTCTCCAGCATCCTGCAAGTGGGC
GGGACGATCATTGGCAGTGCGCGGTGCCAGGCCTTCCGCACGCGGGAAGGCCGCCTGAAGGCTGCTTGCAACCTG
CTGCAGCGCGGCATCACCAACCTGTGTGTGATCGGCGGGGACGGGAGCCTCACCGGGGCCAACCTCTTCCGGAAG
GAGTGGAGTGGGCTGCTGGAGGAGCTGGCCAGGAACGGCCAGATCGATAAGGAGGCCGTGCAGAAGTACGCCTAC
CTCAACGTGGTGGGCATGGTGGGCTCCATCGACAATGATTTCTGCGGCACCGACATGACCATCGGCACGGACTCC
GCCCTGCACAGGATCATCGAGGTCGTCGACGCCATCATGACCACGGCCCAGAGCCACCAGAGGACCTTCGTTCTG
GAGGTGATGGGACGACACTGTGGGTACCTGGCCCTGGTGAGTGCCTTGGCCTGCGGTGCGGACTGGGTGTTCCTT
CCAGAATCTCCACCAGAGGAAGGCTGGGAGGAGCAGATGTGTGTCAAACTCTCGGAGAACCGTGCCCGGAAAAAA
AGGCTGAATATTATTATTGTGGCTGAAGGAGCAATTGATACCCAAAATAAACCCATCACCTCTGAGAAAATCAAA
GAGCTTGTCGTCACGCAGCTGGGCTATGACACACGTGTGACCATCCTCGGGCACGTGCAGAGAGGAGGGACCCCT
TCGGCATTCGACAGGATCTTGGCCAGCCGCATGGGAGTGGAGGCAGTCATCGCCTTGCTAGAGGCCACCCCGGAC
ACCCCAGCTTGCGTCGTGTCACTGAACGGGAACCACGCCGTGCGCCTGCCGCTGATGGAGTGCGTGCAGATGACT
CAGGATGTGCAGAAGGCGATGGACGAGAGGAGATTTCAAGATGCGGTTCGACTCCGAGGGAGGAGCTTTGCGGGC
AACCTGAACACCTACAAGCGACTTGCCATCAAGCTGCCGGATGATCAGATCCCAAAGACCAATTGCAACGTAGCT
GTCATCAACGTGGGGGCACCCGCGGCTGGGATGAACGCGGCCGTACGCTCAGCTGTGCGCGTGGGCATTGCCGAC
GGCCACAGGATGCTCGCCATCTATGATGGCTTTGACGGCTTCGCCAAGGGCCAGATCAAAGAAATCGGCTGGACA
GATGTCGGGGGCTGGACCGGCCAAGGAGGCTCCATTCTTGGGACAAAACGCGTTCTCCCGGGGAAGTACTTGGAA
GAGATCGCCACACAGATGCGCACGCACAGCATCAACGCGCTGCTGATCATCGGTGGATTCGAGGCCTACCTGGGA
CTCCTGGAGCTGTCAGCCGCCCGGGAGAAGCACGAGGAGTTCTGTGTCCCCATGGTCATGGTTCCCGCTACTGTG
TCCAACAATGTGCCGGGTTCCGATTTCAGCATCGGGGCAGACACCGCCCTGAACACTATCACCGACACCTGCGAC
CGCATCAAGCAGTCCGCCAGCGGAACCAAGCGGCGCGTGTTCATCATCGAGACCATGGGCGGCTACTGTGGCTAC
CTGGCCAACATGGGGGGGCTCGCGGCCGGAGCTGATGCCGCATACATTTTCGAAGAGCCCTTCGACATCAGGGAT
CTGCAGTCCAACGTGGAGCACCTGACGGAGAAAATGAAGACCACCATCCAGAGAGGCCTTGTGCTCAGAAATGAG
AGCTGCAGTGAAAACTACACCACCGACTTCATTTACCAGCTGTATTCAGAAGAGGGCAAAGGCGTGTTTGACTGC
AGGAAGAACGTGCTGGGTCACATGCAGCAGGGTGGGGCACCCTCTCCATTTGATAGAAACTTTGGAACCAAAATC
TCTGCCAGAGCTATGGAGTGGATCACTGCAAAACTCAAGGAGGCCCGGGGCAGAGGAAAAAAATTTACCACCGAT
GATTCCATTTGTGTGCTGGGAATAAGCAAAAGAAACGTTATTTTTCAACCTGTGGCAGAGCTGAAGAAGCAAACG
GATTTTGAGCACAGGATTCCCAAAGAACAGTGGTGGCTCAAGCTACGGCCCCTCATGAAAATCCTGGCCAAGTAC
AAGGCCAGCTATGACGTGTCGGACTCAGGCCAGCTGGAACATGTGCAGCCCTGGAGTGTC**TGA**CCCAGTCCCGCC
TGCATGTGCCTGCAGCCACCGTGGACTGTCTGTTTTTGTAACACTTAAGTTATTTTATCAGCACTTTATGCACGT
ATTATTGACATTAATACCTAATCGGCGAGTGCCCATCTGCCCCACCAGCTCCAGTGCGTGCTGTCTGTGGAGTGT
GTCTCATGCTTTCAGATGTGCATATGAGCAGAATTAATTAA

FIGURE 196

MDADDSRAPKGSLRKFLEHLSGAGKAIGVLTSGGDAQGMNAAVRAVVRMGIYVGAKVYFIYEGYQGMVDGGSNIA
EADWESVSSILQVGGTIIGSARCQAFRTREGRLKAACNLLQRGITNLCVIGGDGSLTGANLFRKEWSGLLEELAR
NGQIDKEAVQKYAYLNVVGMVGSIDNDFCGTDMTIGTDSALHRIIEVVDAIMTTAQSHQRTFVLEVMGRHCGYLA
LVSALACGADWVFLPESPPEEGWEEQMCVKLSENRARKKRLNIIIVAEGAIDTQNKPITSEKIKELVVTQLGYDT
RVTILGHVQRGGTPSAFDRILASRMGVEAVIALLEATPDTPACVVSLNGNHAVRLPLMECVQMTQDVQKAMDERR
FQDAVRLRGRSFAGNLNTYKRLAIKLPDDQIPKTNCNVAVINVGAPAAGMNAAVRSAVRVGIADGHRMLAIYDGF
DGFAKGQIKEIGWTDVGGWTGQGGSILGTKRVLPGKYLEEIATQMRTHSINALLIIGGFEAYLGLLELSAAREKH
EEFCVPMVMVPATVSNNVPGSDFSIGADTALNTITDTCDRIKQSASGTKRRVFIIETMGGYCGYLANMGGLAAGA
DAAYIFEEPFDIRDLQSNVEHLTEKMKTTIQRGLVLRNESCSENYTTDFIYQLYSEEGKGVFDCRKNVLGHMQQG
GAPSPFDRNFGTKISARAMEWITAKLKEARGRGKKFTTDDSICVLGISKRNVIFQPVAELKKQTDFEHRIPKEQW
WLKLRPLMKILAKYKASYDVSDSGQLEHVQPWSV

FIGURE 197

TCGCTGCGAAGGACATTTGGGCTGTGTGTGCGACGCGGGTCGGAGGGGCAGTCGGGGGAACCGCGAAGAAGCCGA
GGAGCCCGGAGCCCCGCGTGACGCTCCTCTCTCAGTCCAAAAGCGGCTTTTGGTTCGGCGCAGAGAGACCCGGGG
GTCTAGCTTTTCCTCGAAAAGCGCCGCCCTGCCCTTGGCCCCGAGAACAGACAAAGAGCACCGCAGGGCCGATCA
CGCTGGGGGCGCTGAGGCCGGCC**ATG**GTCATGGAAGTGGGCACCCTGGACGCTGGAGGCCTGCGGGCGCTGCTGG
GGGAGCGAGCGGCGCAATGCCTGCTGCTGGACTGCCGCTCCTTCTTCGCTTTCAACGCCGGCCACATCGCCGGCT
CTGTCAACGTGCGCTTCAGCACCATCGTGCGGCGCCGGGCCAAGGGCGCCATGGGCCTGGAGCACATCGTGCCCA
ACGCCGAGCTCCGCGGCCGCCTGCTGGCCGGCGCCTACCACGCCGTGGTGTTGCTGGACGAGCGCAGCGCCGCCC
TGGACGGCGCCAAGCGCGACGGCACCCTGGCCCTGGCGGCCGGCGCGCTCTGCCGCGAGGCGCGCGCCGCGCAAG
TCTTCTTCCTCAAAGGAGGATACGAAGCGTTTTCGGCTTCCTGCCCGGAGCTGTGCAGCAAACAGTCGACCCCCA
TGGGGCTCAGCCTTCCCCTGAGTACTAGCGTCCCTGACAGCGCGGAATCTGGGTGCAGTTCCTGCAGTACCCCAC
TCTACGATCAGGGTGGCCCGGTGGAAATCCTGCCCTTTCTGTACCTGGGCAGTGCGTATCACGCTTCCCGCAAGG
ACATGCTGGATGCCTTGGGCATAACTGCCTTGATCAACGTCTCAGCCAATTGTCCCAACCATTTTGAGGGTCACT
ACCAGTACAAGAGCATCCCTGTGGAGGACAACCACAAGGCAGACATCAGCTCCTGGTTCAACGAGGCCATTGACT
TCATAGACTCCATCAAGAATGCTGGAGGAAGGGTGTTTGTCCACTGCCAGGCAGGCATTTCCCGGTCAGCCACCA
TCTGCCTTGCTTACCTTATGAGGACTAATCGAGTCAAGCTGGACGAGGCCTTTGAGTTTGTGAAGCAGAGGCGAA
GCATCATCTCTCCCAACTTCAGCTTCATGGGCCAGCTGCTGCAGTTTGAGTCCCAGGTGCTGGCTCCGCACTGTT
CGGCAGAGGCTGGGAGCCCCGCCATGGCTGTGCTCGACCGAGGCACCTCCACCACCACCGTGTTCAACTTCCCCG
TCTCCATCCCTGTCCACTCCACGAACAGTGCGCTGAGCTACCTTCAGAGCCCCATTACGACCTCTCCCAGCTGC**T**
GAAAGGCCACGGGAGGTGAGGCTCTTCACATCCCATTGGGACTCCATGCTCCTTGAGAGGAGAAATGCAATAACT
CTGGGAGGGGCTCGAGAGGGCTGGTCCTTATTTATTTAACTTCACCCGAGTTCCTCTGGGTTTCTAAGCAGTTAT
GGTGATGACTTAGCGTCAAGACATTTGCTGAACTCAGCACATTCGGGACCAATATATAGTGGGTACATCAAGTCC
ATCTGACAAAATGGGGCAGAAGAGAAAGGACTCAGTGTGTGATCCGGTTTCTTTTTGCTCGCCCCTGTTTTTTGT
AGAATCTCTTCATGCTTGACATACCTACCAGTATTATTCCCGACGACACATATACATATGAGAATATACCTTATT
TATTTTTGTGTAGGTGTCTGCCTTCACAAATGTCATTGTCTACTCCTAGAAGAACCAAATACCTCAATTTTTGTT
TTTGAGTACTGTACTATCCTGTAAATATATCTTAAGCAGGTTTGTTTTCAGCACTGATGGAAAATACCAGTGTTG
GGTTTTTTTTTAGTTGCCAACAGTTGTATGTTTGCTGATTATTTATGACCTGAAATAATATATTTCTTCTTCTAA
GAAGACATTTTGTTACATAAGGATGACTTTTTTATACAATGGAATAAATTATGGCATTTCTATTG

FIGURE 198

MVMEVGTLDAGGLRALLGERAAQCLLLDCRSFFAFNAGHIAGSVNVRFSTIVRRRAKGAMGLEHIVPNAELRGRL
LAGAYHAVVLLDERSAALDGAKRDGTLALAAGALCREARAAQVFFLKGGYEAFSASCPELCSKQSTPMGLSLPLS
TSVPDSAESGCSSCSTPLYDQGGPVEILPFLYLGSAYHASRKDMLDALGITALINVSANCPNHFEGHYQYKSIPV
EDNHKADISSWFNEAIDFIDSIKNAGGRVFVHCQAGISRSATICLAYLMRTNRVKLDEAFEFVKQRRSIISPNFS
FMGQLLQFESQVLAPHCSAEAGSPAMAVLDRGTSTTTVFNFPVSIPVHSTNSALSYLQSPITTSPSC

FIGURE 199

GTGAGGAATGCTCTGTGCCAGAAACAGTGGGAGCCCTGACCTTGGCTGACTGGGGCTGGGGTGAGAGAGGAAAGA
CCTACATTCCCTCTCCTGCCCAGATGCCCTTTGGAAAGCCATTGACCACCCACCATATTGTTTGATCTACTTCAT
AGCTCCTTGGAGCAGCCAAAAAAGGGACAGCATGCCCCTTGGCTGGATCAGGGAATCCAGCTCCCTAGACTGCAT
CCCGTACCTCTTCCCATGACTGCACCCAGCTCCAGGGGCCCTTGGGACAGCCAGAGCTGGGTGGGGACAGTGATA
GGCCCAAGGTCCCCTCCACATCCCAGCAGCCCAAGCTTAATAGCCCTCCCCCTCAACCTCACCATTGTGAAGCAC
CTACTATGTGCTGGGTGCCTCCCACACTTGCTGGGGCTCACGGGGCCTCCAACCCATTTAATCACCATGGGAAAC
TGTTGTGGGCGCTGCTTCCAGGATAAGGAGACTGAGGCTTAGAGAGAGGAGGCAGCCCCCTCCACACCAGTGGCC
TCGTGGTTATTAGCAAGGCTGGGTAATGTGAAGGCCCAAGAGCAGAGTCTGGGCCTCTGACTCTGAGTCCACTGC
TCCATTTATAACCCCAGCCTGACCTGAGACTGTCGGAGAGGCTGTCTGGGGCCTTTATCAAAAAAAGACTCAGCC
AAGACAAGGAGGTAGAGAGGGGACTGGGGGACTGGGAGTCAGAGCCCTGGCTGGGTTCAGGTCCCACGTCTGGCC
AGGCACTGCCTTCTCCTCTCTGGGCCTTTGTTTCCTTGTTGGTCAGAGGAGTGATTGAACCAGCTCATCTCCAAG
GATCCTCTCCACTCCATGTTTGCAATGCTTTTATATGGCCCAGCCTTGTAAATAACCACAAGGTCCACTCCCTGC
TCCACGAAGCCTTAAGCCATAGGCCCAGGATATTTCTGAGAGTGAAACCATGACTGTGACCACCTTCTGTCCCCA
GCCCTGTCCTGGTTCCTTCCTATGCCCAGGTACCACCCTTCAGACCCCAGTTCTAGGGGAGAAGAGCCCTGGACA
CCCCTGCTCTACCCATGAGCCTGCCCGCTGCAATGCCTAGACTTCCCAACAGCCTTAGCTGCCAGTGCTGGTCAC
TAACCAACAAGGTTGGCACCCCAGCTACCCCTTCTTTGCAGGGCTAAGGCCCCCAAACATAGCCCCTGCCCCGGA
GGAAGCTTGGGGAACCCATGAGTTGTCAGCTTTGACTTTATCTCCTGCTCTTTCTACATGACTGGGCCTCCCTTG
GGCTGGAAGAATTGGGGATTCTCTATTGGAGGTGAGATCACAGCCTCCAGGGCCCCCCAAATCCCAGGGAAGGAC
TTGGAGAGAATCATGCTGTTGCATTTAGAACTTTCTGCTTTGCACAGGAAAGAGTCACACAATTAATCAACATGT
ATATTTTCTCTATACATAGAGCTCTATTTCTCTACGGTTTTATAAAAGCCTTGGGTTCCAACCAGGCAGTAGATG
TGCTTCTGAACCGCAAGGAGCAAACACTGAAATAAAATAGTTTATTTTTCACACTCA

FIGURE 200

CTCTTTATAATTTAGTTTCCATAGAAGTTATATGTGCATTTAAAAAAATTCAATGCTGGAGCGACCGTGTCTGGG
GAGCCGAGCCCCGCTTCTCGCTGCGGTGAGCCCGGACTGGGGCACGCACTGCGCAGACTCCCCGCTGCAGTGGGC
GGAGTCCCACAGGCCCCGCCCCTCCTCCCACCCTCGTTCAGCCTGTCCAGACAGAAGCTGGGGCCCAGCGGAGGT
AGCAGCAGACGCCTGAGAGCGAGGCCGAGGCCCTCAGGGTTTGGAGACCCTGACACACCCACCTTCTCACCTGGG
CTCTGCGTATCCCCCAGCCTTGAGGGAAGATGAAGCCTAAACTGATGTACCAGGAGCTGAAGGTGCCTGCAGAGG
AGCCCGCCAATGAGCTGCCCATGAATGAGATTGAGGCGTGGAAGGCTGCGGAAAAGAAAGCCCGCTGGGTCCTGC
TGGTCCTCATTCTGGCGGTTGTGGGCTTCGGAGCCTG**ATG**ACTCAGCTGTTTCTATGGGAATACGGCGACTTGCA
TCTCTTTGGGCCCAACCAGCGCCCAGCCCCCTGCTATGACCCTTGCGAAGCAGTGCTGGTGGAAAGCATTCCTGA
GGGCCTGGACTTCCCCAATGCCTCCACGGGGAACCCTTCCACCAGCCAGGCCTGGCTGGGCCTGCTCGCCGGTGC
GCACAGCAGCCTGGACATCGCCTCCTTCTACTGGACCCTCACCAACAATGACACCCACACGCAGGAGCCCTCTGC
CCAGCAGGGTGAGGAGGTCCTCCGGCAGCTGCAGACCCTGGCACCAAAGGGCGTGAACGTCCGCATCGCTGTGAG
CAAGCCCAGCGGGCCCCAGCCACAGGCGGACCTGCAGGCTCTGCTGCAGAGCGGTGCCCAGGTCCGCATGGTGGA
CATGCAGAAGCTGACCCATGGCGTCCTGCATACCAAGTTCTGGGTGGTGGACCAGACCCACTTCTACCTGGGCAG
TGCCAACATGGACTGGCGTTCACTGACCCAGGTCAAGGAGCTGGGCGTGGTCATGTACAACTGCAGCTGCCTGGC
TCGAGACCTGACCAAGATCTTTGAGGCCTACTGGTTCCTGGGCCAGGCAGGCAGCTCCATCCCATCAACTTGGCC
CCGGTTCTATGACACCCGCTACAACCAAGAGACACCAATGGAGATCTGCCTCAATGGAACCCCTGCTCTGGCCTA
CCTGGCGAGTGCGCCCCCACCCCTGTGTCCAAGTGGCCGCACTCCAGACCTGAAGGCTCTACTCAACGTGGTGGA
CAATGCCCGGAGTTTCATCTACGTCGCTGTCATGAACTACCTGCCCACTCTGGAGTTCTCCCACCCTCACAGGTT
CTGGCCTGCCATTGACGATGGGCTGCGGCGGGCCACCTACGAGCGTGGCGTCAAGGTGCGCCTGCTCATCAGCTG
CTGGGGACACTCGGAGCCATCCATGCGGGCCTTCCTGCTCTCTCTGGCTGCCCTGCGTGACAACCATACCCACTC
TGACATCCAGGTGAAACTCTTTGTGGTCCCCGCGGATGAGGCCCAGGCTCGAATCCCATATGCCCGTGTCAACCA
CAACAAGTACATGGTGACTGAACGCGCCACCTACATCGGAACCTCCAACTGGTCTGGCAACTACTTCACGGAGAC
GGCGGGCACCTCGCTGCTGGTGACGCAGAATGGGAGGGGCGGCCTGCGGAGCCAGCTGGAGGCCATTTTCCTGAG
GGACTGGGACTCCCCTTACATTCATGACCTTGACACCTCAGCTGACAGCGTGGGCAACGCCTGCCGCCTGCTC**TG**
AGGCCCGATCCAGTGGGCAGGCCAAGGCCTGCTGGGCCCCCGCGGACCCAGGTGCTCTGGGTCACGGTCCCTGTC
CCCGCACCCCCGCTTCTGTCTGCCCCATTGTGGCTCCTCAGGCTCTCTCCCCTGCTCTCCCACCTCTACCTCCAC
CCCCACCGGCCTGACGCTGTGGCCCCGGGACCCAGCAGAGCTGGGGGAGGGATCAGCCCCCAAAGAAATGGGGGT
GCATGCTGGCCTGCCCCCTGGCCCACCCCCACTTTCCAGGGCAAAAAGGGCCCAGGGTTATAATAAGTAAATAAC
TTGTCTGTAAAAAAAAAAAAAAAAAAAAAA

FIGURE 201

MTQLFLWEYGDLHLFGPNQRPAPCYDPCEAVLVESIPEGLDFPNASTGNPSTSQAWLGLLAGAHSSLDIASFYWT
LTNNDTHTQEPSAQQGEEVLRQLQTLAPKGVNVRIAVSKPSGPQPQADLQALLQSGAQVRMVDMQKLTHGVLHTK
FWVVDQTHFYLGSANMDWRSLTQVKELGVVMYNCSCLARDLTKIFEAYWFLGQAGSSIPSTWPRFYDTRYNQETP
MEICLNGTPALAYLASAPPPLCPSGRTPDLKALLNVVDNARSFIYVAVMNYLPTLEFSHPHRFWPAIDDGLRRAT
YERGVKVRLLISCWGHSEPSMRAFLLSLAALRDNHTHSDIQVKLFVVPADEAQARIPYARVNHNKYMVTERATYI
GTSNWSGNYFTETAGTSLLVTQNGRGGLRSQLEAIFLRDWDSPYIHDLDTSADSVGNACRLL

FIGURE 202

CGCCTCCACGGCGATCAGGTTAGTGTGCGCCGCGGGTGCTGGGGGCTCGAGAACCGAGCGGAGCTGGTTGAGCCT
TCAAAGTCCTAAAACGCGCGGCCGTGGGTTCGGGGTTTATTGATTGAATTCCGCCGGCGCGGGAGCCTCTGCAGA
GAGAGAGCGCGAGAGATGGAGATGGGCAGACGGATTCATTTAGAGCTGCGGAACAGGACGCCCTCTGATGTGAAA
GAACTTGTCCTGGACAACAGTCGGTCGAATGAAGGCAAACTCGAAGGCCTCACAGATGAATTTGAAGAACTGGAA
TTCTTAAGTACAATCAACGTAGGCCTCACCTCAATCGCAAACTTACCAAAGTTAAACAAACTTAAGAAGCTTGAA
CTAAGCGATAACAGAGTCTCAGGGGGCCTGGAAGTATTGGCAGAAAAGTGTCCGAACCTCACGCATCTAAATTTA
AGTGGCAACAAAATTAAAGACCTCAGCACAATAGAGCCACTGAAAAAGTTAGAAAACCTCAAGAGCTTAGACCTT
TTCAATTGCGAGGTAACCAACCTGAACGACTACCGAGAAAATGTGTTCAAGCTCCTCCCGCAACTCACATATCTC
GACGGCTATGACCGGGACGACAAGGAGGCCCCTGACTCGGATGCTGAGGGCTACGTGGAGGGCCTGGATGATGAG
GAGGAGGATGAGGATGAGGAGGAGTATGATGAAGATGCTCAGGTAGTGGAAGACGAGGAGGACGAGGATGAGGAG
GAGGAAGGTGAAGAGGAGGACGTGAGTGGAGATGACGAGGAGGATGAAGAAGGTTATAACGATGGAGAGGTAGAT
GACGAGGAAGATGAAGAAGAGCTTGGTGAAGAAGAAAGGGGTCAGAAGCGAAAACGAGAACCTGAAGATGAGGGA
GAAGATGATGAC**TAA**GTGGAATAACCTATTTTGAAAAATTCCTATTGTGATTTGACTGTTTTTACCCATATCCCC
TCTCCCCCCCCCCTCCAATCCTGCCCCCTGAAACTTATTTTTTTCTGATTGTAACGTTGCTGTGGGAACGAGAGG
GGAAGAGTGTACTGGGGGTTGCGGGGGGAGGGATGGCGGGTGGGGGTGGAATAAAATACTATTTTTACTGCCACT
CTTTATTTTTTTCCCCTACTTTTTCTTTGTGTCCGGTTTTTGTCCCTGTAAATGCGATAGCTAAGTACACACTAA
GTGAGCATTTGTTCCTGACTCTCAAAGAGGATGGTTTGGAGTTCTCTTACGTTTCCTGGTATTTCCCAAGTCTCT
TGGGTTGGTTGGAAGGCTGTGGCTGGTCTCAGTTTGGTTACTCAATGCCCAGGAGGGGCTGAGCACCAGCCATAT
CTTTTGCTTTGGTTCACATGATGATACCTGCTTTTCTCAGGCCTGCTAGAGGCATCCAACGCCCTGGTTTGTAAA
TAGCAACCTAAAGGCGTATTTTGGCACTGGTCTGGGGACATTCCCCATCTCTCATCCCTTTTCCCCCTTCACAGA
TGGTGGTGGGCTTCGCTCTACAAAGAGGACTCTGATGTTACTCTTGAGCTTATGAGCCAGAGAGCTGAAAACCGC
AGGCTTGTTGTGTTAAGTTACAAGGAAAATGGATTTGGTAATTAAAATTAGAAGAAACACACCTTCAAACTTCAA
CTTCTTTAAAAGAAAAAAAAAACTGTCCTATCTTGTTCTGTAAAATATTAGAACGCTTTGTTTTACAAAAAATGA
TGAGAGAATTCTTCCACATGTACTTCTGTGCTTAGAACATTTTTACGGACCTAAGCGCTGGAGACGTTGCTGCAT
GTCGGCTGGGTTTTTTTTTTCATACACCCGAGCACGGAAAAACTAACGCAAAATTGTATTTTCTTACCTAGTGGA
AATCTGAAATGACTGCAAATTCCTAGTGAATGTACAGGTTTGCTTTCGTGTCCCTCTTCTGGTTGCTTTAGAAGT
GACGTGTAATTTCTGAACCCATGTTTCATCTGTATAAAAGAACATCTGCACCAGTTTTTCTCCTGCCCCTCAGAA
GAGCCAAACTTTGAGTTTTATGTCTGTTTGTCATTGATAAATTTCAATAAATCTTTTTATACAATTTTTTTGGGG
ATGGCTTCTTTGAGTCCAACAGGCCATTGATCTTTTCAAGATGCATTCCAGATGAACTGCTAGGTGAGGGGGAAG
CTTCATTTTTGTTACCTGATAGAATAGCTTTTCTTATGAGATATATATAATGTGATACTATGTTTGGATATTTTT
GGTCTTAAAGCAAGACTCAGTGGTGTATCTTCATTAAAAGCTTCCTTTAAAAAAGTTACAGAGTTACTAAAAAAA
CAAGTACCCAAACAATCAAGTTGGGCCAACCTTGGAACCTTGTTTTGAATATCTTTCATTGTTTTGTTTGTCGTA
TTGTAAAAAGAATGTATGGTTGAAAACTCAGGAATGTTTATAAAACAAATTATTTCACAAACCCAAAAAA

FIGURE 203

ASTAIRLVCAAGAGGSRTERSWLSLQSPKNARPWVRGLLIEFRRRGSLCRERAREMEMGRRIHLELRNRTPSDVK
ELVLDNSRSNEGKLEGLTDEFEELEFLSTINVGLTSIANLPKLNKLKKLELSDNRVSGGLEVLAEKCPNLTHLNL
SGNKIKDLSTIEPLKKLENLKSLDLFNCEVTNLNDYRENVFKLLPQLTYLDGYDRDDKEAPDSDAEGYVEGLDDE
EEDEDEEEYDEDAQVVEDEEDEDEEEEGEEEDVSGDDEEDEEGYNDGEVDDEEDEEELGEEERGQKRKREPEDEG
EDDD

FIGURE 204

CAACTACAAGCAAACAGCACAATTAATGCAACATTCAGCAACTCCAGACCAGCTTTTCTTACCCCCATGAAGAAC
GATCAATTTAAAAAACACAGATCTCAGGTTTCCTCCCAAGCTGTCAGCGAGCGCTGCTACCGGTCTAGATTGCCA
TGTCCCAACAACAGCAAAGCCACCCTCCCTCCTGCTTCTTCCAGGATTGCTCTTTAAAGGGACCAGAGTGACATA
CTGATGCCTGGGGAATAAAGGTGGAGCGTGTGGAAATTAAGGATGTGAAACTACCTGTGCAGCTCCAGAGAGCTA
TGGCTGCAGAAGCAGAAGCGTCCCGCGAGGCCCGCGCCAAGGTTATTGCAGCCGAAGGAGAAATGAATGCATCCA
GGGCTCTGAAAGAAGCCTCCATGGTCATCACTGAATCTCCTGCAGCCCTTCAGCTCCGATACCTGCAGACACTGA
CCACCATTGCTGCTGAGAAAAACTCAACAATTGTCTTCCCTCTGCCCATAGATATGCTGCAAGGAATCATAGGGG
CAAAACACAGCCATCTAGGCTAGTGTAGAGATGAGCGCTAGCCTTCCAAGCATGAAGTCGGGGACCAAATTAGCC
TTTAACTCATAAAGAGAGGGTAGGGCTTTTCTTTTTCCATATGTCAATTGTGGTGTTCCCAGAATGTATAGCAGT
TATAAAAATAGGTGAAAGAATTGTTAGCTTGTAAATACTGAGAGATTGGTGATTTATATAAGGTAATCTGTTAGT
CTTAAAATAGTTAAAAGTTTGTATTTTTAGATTATTATGTAGTAGGTTAGATCCCTCTTGTTTTGACTTCCACTG
ACTCATTCTGAACCCCCTAAGCACCCAGGCCAGAGGCAAGAACCTGGGCTGTAACTGCCACCTGACACCGCTGAC
TGGCTAAATGCTTTGCAGAAAGTGATGACCTTACACCACAACCAGCTTCTCCAGGTCATATGTGCCTTACCTCCA
GAGAGTCTTTTTTTTTTTTTTTCTGAGATGGAGTTTCACTCTTGTTGCCCAGGCTGGAGTGCAATAGCATGATCT
CGGCTCACTGCAACCTCCGCCTCCTGGGTTCAAGAGATTCTCCTGCCTCAGCCTCCCCAGTAGCTGGGATTACAG
GCTCATACCACCATGCCCAGCTAATTTTTGTATTATTATTATTGTTTTTTAGTAGAGACGGGGTTTCACCATGTT
GGCCAGGCTAGTCACGAACTCCTAACCTCAGGTGATCCACCCACCTCTGCCTCCCAAAGTGCTGGGATTACAGGC
ATGAGCTACCACACCTGGTTTGGAGAGTCTTAATTAAGGAAATTTCCCTAATGTTCATTTATTTTCTAAATCCAG
ACCGTGTTTCAGAATAATCCTTACTTGAGAGTAGCCATTTTCTTGCCTGTACTTGTCAGAACTAGAGGAAATAGC
CAAGACTAATGAAAAAGATTACTCTAACCCTTAAAAGACTTTTAAATTCACTACTAGAGTGGTCATTTTAAAAAT
ACATCCATGTTTTAACTTATTTGAGCCTTCTTTATGAGTAAATGATTCCTCCTTGTTCTGTCTTTCAAACCAGCT
AAATATTTGTCACAAAAGTGCTTTTTTCTCACTGTTGCCTATTTTCATATATCAGGTTTTAAATAGTTTTAATTT
TTTAATAAAATTTTCTCTACGTTCTATAAAAAAAAAAAAAAA

FIGURE 205

CCATTGTGCTCTAAAGGGAAGGTGCTGTGTAATCATTAAGGAGCGGAGGCTTTTGGAGCTGCTAAA**ATG**CCGGAT
TACCTCGGTGCCGATCAGCGGAAGACCAAAGAGGATGAGAAGGACGACAAGCCCATCCGAGCTCTGGATGAGGGG
GATATTGCCTTGTTGAAAACTTATGGTCAGAGCACTTACTCTAGGCAGATCAAGCAAGTTGAAGATGACATTCAG
CAACTTCTCAAGAAAATTAATGAGCTCACTGGTATTAAAGAATCTGACACTGGCCTGGCCCCACCAGCACTCTGG
GATTTGGCTGCAGATAAGCAGACACTCCAGAGTGAACAGCCTTTACAGGTTGCCAGGTGTACAAAGATAATCAAT
GCTGATTCGGAGGACCCAAAATACATTATCAACGTAAAGCAGTTTGCCAAGTTTGTGGTGGACCTTAGTGATCAG
GTGGCACCTACTGACATTGAAGAAGGGATGAGAGTGGGCGTGGATAGAAATAAATATCAAATTCACATTCCATTG
CCTCCTAAGATTGACCCAACAGTTACCATGATGCAGGTGGAAGAGAAACCTGATGTCACATACAGTGATGTTGGT
GGCTGTAAGGAACAGATTGAGAAACTGCGAGAAGTAGTTGAAACCCCATTACTTCATCCAGAGAGGTTTGTGAAC
CTTGGCATTGAGCCTCCCAAGGGCGTGCTGCTCTTTGGTCCACCCGGTACAGGCAAGACACTCTGTGCGCGGGCA
GTTGCTAATCGGACTGATGCGTGCTTCATTCGAGTTATTGGATCTGAGCTTGTACAGAAATACGTCGGTGAGGGG
GCTCGAATGGTTCGTGAACTCTTTGAAATGGCCAGAACAAAAAAAGCCTGCCTTATCTTCTTTGATGAAATTGAT
GCTATTGGAGGGGCTCGTTTTGATGATGGTGCTGGAGGTGACAATGAAGTGCAGAGAACAATGTTGGAACTGATC
AATCAGCTTGATGGTTTTGATCCTCGAGGCAATATTAAAGTGCTGATGGCCACTAACAGACCTGATACTTTGGAT
CCAGCACTGATGAGGCCAGGGAGATTGGATAGAAAAATTGAATTTAGCTTGCCCGATCTAGAGGGTCGGACCCAC
ATATTTAAGATTCACGCTCGTTCAATGAGTGTTGAAAGAGATATCAGATTTGAACTGTTAGCACGACTGTGTCCA
AATAGCACTGGTGCTGAGATTAGAAGCGTCTGCACAGAGGCTGGTATGTTTGCCATCAGAGCACGGCGAAAAATT
GCTACCGAGAAGGATTTCTTGGAAGCTGTAAATAAGGTCATTAAGTCTTATGCCAAATTCAGTGCTACTCCTCGT
TACATGACATACAAC**TGA**ACCCTGAAGGCTTTCAAGTGAAAACTTTAAATTGGAATCCTAACCTTATATAGACTT
GTTAATAACCAATTCATAAACAAATAAATGGCTTCAACTTTAGAGCACAATGG

FIGURE 206

MPDYLGADQRKTKEDEKDDKPIRALDEGDIALLKTYGQSTYSRQIKQVEDDIQQLLKKINELTGIKESDTGLAPP
ALWDLAADKQTLQSEQPLQVARCTKIINADSEDPKYIINVKQFAKFVVDLSDQVAPTDIEEGMRVGVDRNKYQIH
IPLPPKIDPTVTMMQVEEKPDVTYSDVGGCKEQIEKLREVVETPLLHPERFVNLGIEPPKGVLLFGPPGTGKTLC
ARAVANRTDACFIRVIGSELVQKYVGEGARMVRELFEMARTKKACLIFFDEIDAIGGARFDDGAGGDNEVQRTML
ELINQLDGFDPRGNIKVLMATNRPDTLDPALMRPGRLDRKIEFSLPDLEGRTHIFKIHARSMSVERDIRFELLAR
LCPNSTGAEIRSVCTEAGMFAIRARRKIATEKDFLEAVNKVIKSYAKFSATPRYMTYN

FIGURE 207

CCGCGCCAGTCGCCTAGCAGGTCCTCTACCGGCTTATTCCTGTGCCGGATCTTCATCGGCACAGGGGCCACTGAG
ACGTTTCTGCCTCCCTCTTTCTTCCTCCGCTCTTTCTCTTCCCTCTCGTTTAGTTTGCCTGGAGCTTGAAAGGAG
AAAGCACGGGGTCGCCCCAAACCCCTTCTGCTTCTGCCCATCACAAGTGCCACTACCGCC**ATG**GGCCTCACTATC
TCCTCCCTCTTCTCCCGACTATTTGGCAAGAAGCAGATGCGCATTTTGATGGTTGGATTGGATGCTGCTGGCAAG
ACAACCATTCTGTATAAACTGAAGTTAGGGGAGATAGTCACCACCATTCCTACCATTGGTTTTAATGTGGAAACA
GTAGAATATAAGAACATTTGTTTCACAGTATGGGATGTTGGTGGTCAAGATAGAATTAGGCCTCTCTGGAAGCAT
TACTTCCAGAATACCCAGGGTCTTATTTTTGTGGTAGATAGCAACGATCGTGAAAGAATTCAGGAAGTAGCAGAT
GAGCTGCAGAAAATGCTTCTGGTAGATGAATTGAGAGATGCAGTGCTGCTACTTTTTGCAAACAAACAGGATTTG
CCAAATGCTATGGCCATCAGTGAAATGACAGATAAACTAGGGCTTCAGTCTCTTCGTAACAGAACATGGTATGTT
CAAGCCACTTGTGCAACACAAGGAACTGGTCTGTATGAAGGACTTGACTGGCTGTCAAATGAGCTTTCAAAACGT
TAAATGAAATTGGATATCTAACCAAGGACATGTTTGATAAAATTGGTCTAGGCTTGTTACAACAAAATTAGTTTG
TATCTTGGTTATTAAACAGTATCTGGGACTGGTTTGGGCAGAATATTAAACTTATTTTGTTGCCAATTATTGTTT
ACCGAGTATAATGTTGCTATTTAGCAATGTGCTTGGTTTTAAAGAAATTCTCCTTGGGAAAAAAGTATCCTCTTT
TAATTTTACTTCCCATAAGCGTAAATGCCTGGACATAGCTCTTGTGAACCTTTAAATAAATTGTTTGAGTGTTTT
TGAGCCCCAGACAAATAATGTTTTAAAGTTATCCCTTGCTACTTTACTGATACCTTTATCATTCCTGAGACAGTT
TGCTAATTTAAAAATGTAGCATTCCATTTGTATTTATTTCTCTCCCTTGCCAAAAAGATTTTCTAATACTGCTTG
TACCAGCCAGAGAAAGATCCAAAACACTACTCAGCTCTCTTGCACTGAGGAAATTTTTCCCCCTACATTGACTCC
TGGCCTACATCAGCCAAACTTAACCTTGGTGGGGTTTGGATTTGATAGCCAATTAGTTCTGTGCTGGTTGCAAAG
AATTGATATTTAGATGGTTTTTAATACTCAGCAGATTGTCTTCCCATATTGTGTCTTTTTTATGTTGCATGTTGC
TTTTGTTATCAGCCTGATTTTTTGCTCAGTATATGATAGTTCTGCTGATGTTTTGTTTATTGGGCAGACATATCT
TCATTAAGAGTTTTTGGAAAACTCATCAAATTCGATGAATACATTTTCTTCATAACCCATTTGGAATTATTCCTA
ATAAAATGATAAAATACGTAAAAAAAAAGGAATTC

FIGURE 208

MGLTISSLFSRLFGKKQMRILMVGLDAAGKTTILYKLKLGEIVTTIPTIGFNVETVEYKNICFTVWDVGGQDRIR
PLWKHYFQNTQGLIFVVDSNDRERIQEVADELQKMLLVDELRDAVLLLFANKQDLPNAMAISEMTDKLGLQSLRN
RTWYVQATCATQGTGLYEGLDWLSNELSKR

FIGURE 209

GAGAAATTGAAAAGAAGGGGAAGGGGAAGAAAAGAAGGGGAAGAAGATCAAAGAAGAAAAGAAGAAGGGGAAGAA
AAGAAGGGGAAGAAGATCAAAACCCACCATGCCCCAGGCTCAACAGCGTGCTGATGGAAGTGGAAGAGCCTGAAG
TCTTGCAGGACTCACTGGATAGATGTTATTCGACTCCATCAATGTACTTTGAACTACCTGACTCATTCCAGCACT
ACAGAAGTGTGTTTTACTCATTTGAGGAACAGCACATCACCTTTGCCCTTGACATGGACAATAGCTTTTTTACTT
TGACGGTGACAAGTCTTCACCTGGTCTTCCAGATGGGAGTCATATTCCCACAATAAGCAGCCCTTACTAAGCCGA
GAGGTTTCATTCCTGCAGGCAGGACCTATAGGCACCTGAAGATTTGAATGAAACTATAGTTCCATTTGGAAGCCC
AGACATAGGATGGGTCAGTGGGCATGGCTCTATTCCTATTCTCAGAGCATGCCAGTGGCAACCTGTGCTCAGTCT
GAAGACAATGGACCCACGTTAGGTGTGACACGTTCACATAACTGTGCAGCACATGCCGGGAGTGATCAGCCGGAC
ATTTTAATTTGAACCATGTATCTCTGGGTAGCTACAAAATTCCTCAGGGATTTCATTTTGCAGGCATGTCTCTGA
GCTTCTATACCTACTCAAGGTCAGTGTCATCTTTGTGTTTAGTTCATCCAAAGGTGTTACCCTGGTTTCAATGAA
CCTAACCTCATTATTTGTGTCTTCAGTGTTGGCTTGTTTTAGCTGATCCATCTGTAACACAGGAGGGATCCTTGG
CTGAGGATTGTATTTCAGAACCACCAACTGCTCTTGACAATTGTTAACCCACTAGGCTCCTTTGGTTAGAGAAGC
CACAGTCCTTCAGCCTCCAATTGGTGTCAGTACTTAGGAAGACCACAGCTAGATGGACAAACAGCATTGGGAGGC
CTTAGCCCTGCTCCTCTCAATTCCATCCTGTAGAGAACAGGAGTCAGGAGCCGCTGGCAGGAGACAGCATGTCAC
CCAGGACTCTGCCGGTGCAGAATATGAGCAATGCCATGTTCTTGCAGAAAACGCTTAGCCTGAGTTTCATAGGAG
GTAATCACCAGACAACTGCAGAGTGTGGAACACTGAGCAGGACAACTGACCTGTCTCCTTCACATAGTCCATGTC
ACCACAAATCACACAACAAAAAGGAGAAGAGATATTTTGGGTTGAAAAAAAGTAAAAAGATAATGTAGCTGCATT
TCTTTAGTTGTTTTGAACCCCAAATATTTCCTCATCTTTTTGTTGTTGTCATTGATGGTGGTGACATGGACTTGT
TTATAGAGGACAGGTCAGCTCTCTGGCTCGGTGATCTACATTCTGAAGTTGTCTGAAAATGTCTTCATGATTAAA
TTCAGCCTAAACTTTTTGCTGGGAACACTGCAGAGACAATGCTGTGAGTTTCCAACCTCAGCCCATCTGCGGGCA
GAGAAGGTCTAGTTTGTCCATCACCATTATGATATCAGGACTGGTTACTTGGTTAAGGAGGGGTCTAGGAGATCT
GTCCCTTTTAGAGACACCTTACTTATAATGAAGTACTTGGGAAAGCGGTTTTCAAGAGTATAAATATCCTGTATT
CTAATGATCATCCTCTAAACATTTTATCATTTATTAATCCTCCCTGCCTGTGTCTATTATTATATACATATCTCT
ACGCTGCAAATTTTGGGTCTCAATTTTTACTGTGCCTTTGTTTTTACTAGTGTCTGCTGTTGCAAAAAGAAGAAA
ACATTCTCTGCCTGAGTTTTAATTTTTGTCCAAAGTTAATTTTAATCTATACAATTAAAACCTTTTGCCTATCAA
AAAAAAAAAAAAAAAAA

FIGURE 210A

AAGATCTCATAAAATCT**ATG**CTGAGGAATGAGCGACAGTTCAAGGAGGAGAAGCTTGCAGAGCAGCTCAAGCAAG
CTGAGGAGCTCAGGCAATATAAAGTCCTGGTTCACGCTCAGGAACGAGAGCTGACCCAGTTAAGGGAGAAGTTGC
GGGAAGGGAGAGATGCCTCCCGCTCATTGAATGAGCATCTCCAGGCCCTCCTCACTCCGGATGAGCCGGACAAGT
CCCAGGGGCAGGACCTCCAAGAACAGCTGGCTGAGGGGTGTAGACTGGCACAGCACCTTGTCCAAAAGCTCAGCC
CAGAAAATGACAACGATGACGATGAAGATGTTCAAGTTGAGGTGGCTGAGAAAGTGCAGAAATCGTCTGCCCCCA
GGGAGATGCAGAAGGCTGAAGAAAAGGAAGTCCCTGAGGACTCACTGGAGGAATGTGCCATCACTTGTTCAAATA
GCCATGGCCCTTATGACTCCAACCAGCCACATAGGAAAACCAAAATCACATTTGAGGAAGACAAAGTCGACTCAA
CTCTCATTGGCTCATCCTCTCATGTTGAATGGGAGGATGCTGTACACATTATTCCAGAAAATGAAAGTGATGATG
AGGAAGAGGAAGAAAAAGGACCAGTGTCTCCCAGGAATCTGCAGGAGTCTGAAGAGGAGGAAGTCCCCCAGGAGT
CCTGGGATGAAGGTTATTCGACTCTCTCAATTCCTCCTGAAATGTTGGCCTCGTACAAGTCTTACAGCAGCACAT
TTCACTCATTAGAGGAACAGCAAGTCTGCATGGCTGTTGACATAGGCAGACATCGGTGGGATCAAGTGAAAAAGG
AGGACCACGAGGCAACAGGTCCCAGGCTCAGCAGAGAGCTGCTGGATGAGAAAGGGCCTGAAGTCTTGCAGGACT
CACTGGATAGATGTTATTCAACTCCTTCAGGTTGTCTTGAACTGACTGACTCATGCCAGCCCTACAGAAGTGCCT
TTTACGTATTGGAGCAACAGCGTGTTGGCTTGGCTGTTAACATGGATGAAATTGAAAAGTACCAAGAAGTGGAAG
AAGACCAAGACCCATCATGCCCCAGGCTCAGCAGGGAGCTGCTGGATGAGAAAGAGCCTGAAGTCTTGCAGGACT
CACTGGGTAGATGTTATTCGACTCCTTCAGGTTATCTTGAACTGCCTGACTTAGGCCAGCCCTACAGCAGTGCTG
TTTACTCATTGGAGGAACAGTACCTTGGCTTGGCTCTTGACGTGGACAGAATTAAAAAGGACCAAGAAGAGGAAG
AAGACCAAGGCCCACCATGCCCCAGGCTCAGCAGGGAGCTGCTGGAGGTAGTAGAGCCTGAAGTCTTGCAGGACT
CACTGGATAGATGTTATTCAACTCCTTCCAGTTGTCTTGAACAGCCTGACTCCTGCCAGCCCTATGGAAGTTCCT
TTTATGCATTGGAGGAAAAGCATGTTGGCTTTTCTCTTGACGTGGGAGAAATTGAAAAGAAGGGGAAGGGGAAGA
AAAGAAGGGGAAGAAGATCAAAGAAGGAAAGAAGAAGGGGAAGAAAAGAAGGGGAAGAAGATCAAAACCCACCAT
GCCCCAGGCTCAGCAGGGAGCTGCTGGATGAGAAAGGGCCTGAAGTCTTGCAGGACTCACTGGATAGATGTTATT
CAACTCCTTCAGGTTGTCTTGAACTGACTGACTCATGCCAGCCCTACAGAAGTGCCTTTTACATATTGGAGCAAC
AGCGTGTTGGCTTGGCTGTTGACATGGATGAAATTGAAAAGTACCAAGAAGTGGAAGAAGACCAAGACCCATCAT
GCCCCAGGCTCAGCGGGGAGCTGTTGGATGAGAAAGAGCCTGAAGTCTTGCAGGAGTCACTGGATAGATGCTATT
CAACTCCTTCAGGTTGTCTTGAACTGACTGACTCATGCCAGCCCTACAGAAGTGCCTTTTACATATTGGAGCAAC
AGCGTGTTGGCTTGGCTGTTGACATGGATGAAATTGAAAAGTACCAAGAAGTGGAAGAAGACCAAGACCCATCAT
GCCCCAGGCTCAGCAGGGAGCTGCTGGATGAGAAAGAGCCTGAAGTCTTGCAGGACTCACTGGGTAGATGTTATT
CGACTCCTTCAGGTTATCTTGAACTGCCTGACTTAGGCCAGCCCTACAGCAGTGCTGTTTACTCATTGGAGGAAC
AGTACCTTGGCTTGGCTCTTGACGTGGACAGAATTAAAAAGGACCAAGAAGAGGAAGAAGACCAAGGCCCACCAT
GCCCCAGGCTCAGCAGGGAGCTGCTGGAGGTAGTAGAGCCTGAAGTCTTGCAGGACTCACTGGATAGATGTTATT
CAACTCCTTCCAGTTGTCTTGAACAGCCTGACTCCTGCCAGCCCTATGGAAGTTCCTTTTATGCATTGGAGGAAA
AACATGTTGGCTTTTCTCTTGACGTGGGAGAAATTGAAAAGAAGGGGAAGGGGAAGAAAAGAAGGGGAAGAAGAT
CAAAGAAGGAAAGAAGAAGGGGAAGAAAAGAAGGGGAAGAAGATCAAAACCCACCATGCCCCAGGCTCAACAGCA
TGCTGATGGAAGTGGAAGAGCCTGAAGTCTTGCAGGACTCACTGGATATATGTTATTCGACTCCGTCAATGTACT
TTGAACTACCTGACTCATTCCAGCACTACAGAAGTGTGTTTTACTCATTTGAGGAAGAGCATATCAGCTTCGCCC
TTTACGTGGACAATAGGTTTTTTACTTTGACGGTGACAAGTCTCCACCTGGTGTTCCAGATGGGAGTCATATTCC
CACAA**TAA**GCAGCCCTTACTAAGCCGAGAGGTGTCATTCCTGCAGGCAGGACCTATAGGCACGTGAAGATTTGAA
TGAAAGTACAGTTCCATTTGGAAGCCCAGACATAGGATGGGTCAGTGGGCATGGCTCTATTCCTATTCTCAAACC
ATGCCAGTGGCAACCTGTGCTCAGTCTGAAGACAATGGACCCACGTTAGGTGTGACACGTTCACATAACTGTGCA
GCACATGCCGGGAGTGATCAGTCAGACATTTTAATTTGAACCACGTATCTCTGGGTAGCTACAAAATTCCTCAGG
GATGTCATTTTGCAGGCATGTCTCTGAGCTTCTATACCTGCTCAAGGTCATTGTCATCTTTGTGTTTAGCTCATC
CAAAGGTGTTACCCTGGTTTCAATGAACCTAACCTCATTCTTTGTGTCTTCAGTGTTGGCTTGTTTTAGCTGATC
CATCTGTAACACAGGAGGGATCCTTGGCTGAGGATTGTATTTCAGAACCACCAACTGCTCTTGACAATTGTTAAC
CCGCTAGGCTCCTTTGGTTAGAGAAGCCACAGTCCTTCAGCCTCCAATTGGTGTCAGTACTTAGGAAGACCACAG
CTAGATGGACAAACAGCATTGGGAGGCCTTAGCCCTGCTCCTCTCAATTCCATCCTGTAGAGAACAGGAGTCAGG
AGCCGCTGGCAGGAGACAGCATGTCACCCAGGACTCTGCCGGTGCAGAATATGAGCAATGCCATGTTCTTGCAGA
AAACGCTTAACCTGAGTTTCATAGGAGGTAATCACCAGACAACTGCAGAATGTAGAACACTGAGCAGGACAACTG

FIGURE 210B

ACCTGTCTCCTTCACATAGTCCATATCACCACAAATCACACAACAAAAAGGAGAAGAGATATTTTCGGTTGAAAA
AAAGTAAAAAGATA

FIGURE 211

MLRNERQFKEEKLAEQLKQAEELRQYKVLVHAQERELTQLREKLREGRDASRSLNEHLQALLTPDEPDKSQGQDL
QEQLAEGCRLAQHLVQKLSPENDNDDDEDVQVEVAEKVQKSSAPREMQKAEEKEVPEDSLEECAITCSNSHGPYD
SNQPHRKTKITFEEDKVDSTLIGSSSHVEWEDAVHIIPENESDDEEEEEKGPVSPRNLQESEEEEVPQESWDEGY
STLSIPPEMLASYKSYSSTFHSLEEQQVCMAVDIGRHRWDQVKKEDHEATGPRLSRELLDEKGPEVLQDSLDRCY
STPSGCLELTDSCQPYRSAFYVLEQQRVGLAVNMDEIEKYQEVEEDQDPSCPRLSRELLDEKEPEVLQDSLGRCY
STPSGYLELPDLGQPYSSAVYSLEEQYLGLALDVDRIKKDQEEEEDQGPPCPRLSRELLEVVEPEVLQDSLDRCY
STPSSCLEQPDSCQPYGSSFYALEEKHVGFSLDVGEIEKKGKGKKRRGRRSKKERRRGRKEGEEDQNPPCPRLSR
ELLDEKGPEVLQDSLDRCYSTPSGCLELTDSCQPYRSAFYILEQQRVGLAVDMDEIEKYQEVEEDQDPSCPRLSG
ELLDEKEPEVLQESLDRCYSTPSGCLELTDSCQPYRSAFYILEQQRVGLAVDMDEIEKYQEVEEDQDPSCPRLSR
ELLDEKEPEVLQDSLGRCYSTPSGYLELPDLGQPYSSAVYSLEEQYLGLALDVDRIKKDQEEEEDQGPPCPRLSR
ELLEVVEPEVLQDSLDRCYSTPSSCLEQPDSCQPYGSSFYALEEKHVGFSLDVGEIEKKGKGKKRRGRRSKKERR
RGRKEGEEDQNPPCPRLNSMLMEVEEPEVLQDSLDICYSTPSMYFELPDSFQHYRSVFYSFEEEHISFALYVDNR
FFTLTVTSLHLVFQMGVIFPQ

FIGURE 212

CGGGGAGGCGCGGAAAGCCGACGCGCGTCCATTGGTCGGCTGGACGAGGGGAGGAGCCGCTGGCTCCCAGCCCCG
CCGCG**ATG**AGCCTCGGCCGCCTTTGCCGCCTACTGAAGCCGGCGCTGCTCTGTGGGGCTCTGGCCGCGCCTGGCC
TGGCCGGGACCATGTGCGCGTCCCGGGACGACTGGCGCTGTGCGCGCTCCATGCACGAGTTTTCCGCCAAGGACA
TCGACGGGCACATGGTTAACCTGGACAAGTACCGGGGCTTCGTGTGCATCGTCACCAACGTGGCCTCCCAGTGAG
GCAAGACCGAAGTAAACTACACTCAGCTCGTCGACCTGCACGCCCGATACGCTGAGTGTGGTTTGCGGATCCTGG
CCTTCCCGTGTAACCAGTTCGGGAAGCAGGAGCCAGGGAGTAACGAAGAGATCAAAGAGTTCGCCGCGGGCTACA
ACGTCAAATTCGATATGTTCAGCAAGATCTGCGTGAACGGGGACGACGCCCACCCGCTGTGGAAGTGGATGAAGA
TCCAACCCAAGGGCAAGGGCATCCTGGGAAATGCCATCAAGTGGAACTTCACCAAGTTCCTCATCGACAAGAACG
GCTGCGTGGTGAAGCGCTACGGACCCATGGAGGAGCCCCTGGTGATAGAGAAGGACCTGCCCCACTATTTC**TAG**C
TCCACAAGTGTGTGGCCCCGCCCGAGCCCCTGCCCACGCCCTTGGAGCCTTCCACCGGCACTCATGACGGCCTGC
CTGCAAACCTGCTGGTGGGGCAGACCCGAAAATCCAGCGTGCACCCCGCCGGAGGAAGGTCCCATGGCCTGCTGG
GCTTGGCTCGGCGCCCCCACCCCTGGCTACCTTGTGGGAATAAACAGACAAATTAGAAAAAAAAAAAAAAAA

FIGURE 213

MSLGRLCRLLKPALLCGALAAPGLAGTMCASRDDWRCARSMHEFSAKDIDGHMVNLDKYRGFVCIVTNVASQXGK
TEVNYTQLVDLHARYAECGLRILAFPCNQFGKQEPGSNEEIKEFAAGYNVKFDMFSKICVNGDDAHPLWKWMKIQ
PKGKGILGNAIKWNFTKFLIDKNGCVVKRYGPMEEPLVIEKDLPHYF

FIGURE 214

GCCGCC**ATG**GCCCAAGCTGACATCGCGCTGATCGGATTGGCCGTCATGGGCCAGAACTTAATTCTGAACATGAAT
GACCACGGCTTTGTGGTCTGTGCTTTTAATAGGACTGTCTCCAAAGTTGACGATTTCTTGGCCAATGAGGCAAAG
GGAACCAAAGTGGTGGGTGCCCAGTCCCTGAAAGAGATGGTCTCCAAGCTGAAGAAGCCCCGGCGGATCATCCTC
CTGGTGAAGGCTGGGCAAGCTGTGGATGATTTCATCGAGAAATTGGTACCATTGTTGGATACTGGTGACATCATC
ATTGACGGAGGAAATTCTGAATATAGGGACACCACAAGACGGTGCCGAGACCTCAAAGGCAAGGGAATTTTATTT
GTGGGGAGCGGAGTCAGTGGTGGAGAGGAAGGGCCCCGGTATGGCCCATCGCTCATGCCAGGAGGGAACAAAGAA
GCGTGGCCCCACATCAAGACCATCTTCCAAGGCATTGCTGCAAAAGTGGGAACTGGAGAACCCTGCTGTGACTGG
GTGGGAGATGAGGGAGCAGGCCACTTTGTGAAGATGGTGCACAACGGGATAGAGTATGGGGACATGCAGCTGATC
TGTGAGGCATACCACCTGATGAAAGACGTGCTGGGCATGGCGCAGGACGAGATGGCCCAGGCCTTTGAGGATTGG
AATAAGACAGAGCTAGACTCATTCCTGATTGAAATCACAGCCAATATTCTCAAGTTCCAAGACACCGATGGCAAA
CACCTGCTGCCAAAGATCAGGGACAGCGCGGGGCAGAAGGGCACAGGGAAGTGGACCGCCATCTCCGCCCTGGAA
TACGGCGTACCCGTCACCCTCATTGGAGAAGCTGTCTTTGCTCGGTGCTTATCATCTCTGAAGGATGAGAGAATT
CAAGCTAGCAAAAAGCTGAAGGGTCCCCAGAAGTTCCAGTTTGATGGTGATAAGAAATCATTCCTGGAGGACATT
CGGAAGGCACTCTACGCTTCCAAGATCATCTCTTACGCTCAAGGCTTTATGCTGCTAAGGCAGGCAGCCACCGAG
TTTGGCTGGACTCTCAATTATGGTGGCATCGCCCTGATGTGGAGAGGGGGCTGCATCATTAGAAGTGTATTCCTA
GGAAAGATAAAGGATGCATTTGATCGAAACCCGGAACTTCAGAACCTCCTACTGGACGACTTCTTTAAGTCAGCT
GTTGAAAACTGCCAGGACTCCTGGCGGCGGGCAGTCAGCACTGGGGTCCAGGCTGGCATTCCCATGCCCTGTTTT
ACCACTGCCCTCTCCTTCTATGACGGGTACAGACATGAGATGCTTCCAGCCAGCCTCATCCAGGCTCAGCGGGAT
TACTTCGGGGCTCACACCTATGAACTCTTGGCCAAACCAGGGCAGTTTATCCACACCAACTGGACAGGCCATGGT
GGCACCGTGTCATCCTCGTCATACAATGCC**TGA**TGGGCTCCTGTCACCCTCCACGTCTCCACAGACCAGGACATT
CCATGTGCCTCATGGCACTGCCACCTGGGCCTTTGG

FIGURE 215

MAQADIALIGLAVMGQNLILNMNDHGFVVCAFNRTVSKVDDFLANEAKGTKVVGAQSLKEMVSKLKKPRRIILLV
KAGQAVDDFIEKLVPLLDTGDIIIDGGNSEYRDTTRRCRDLKGKGILFVGSGVSGGEEGPRYGPSLMPGGNKEAW
PHIKTIFQGIAAKVGTGEPCCDWVGDEGAGHFVKMVHNGIEYGDMQLICEAYHLMKDVLGMAQDEMAQAFEDWNK
TELDSFLIEITANILKFQDTDGKHLLPKIRDSAGQKGTGKWTAISALEYGVPVTLIGEAVFARCLSSLKDERIQA
SKKLKGPQKFQFDGDKKSFLEDIRKALYASKIISYAQGFMLLRQAATEFGWTLNYGGIALMWRGGCIIRSVFLGK
IKDAFDRNPELQNLLLDDFFKSAVENCQDSWRRAVSTGVQAGIPMPCFTTALSFYDGYRHEMLPASLIQAQRDYF
GAHTYELLAKPGQFIHTNWTGHGGTVSSSSYNA

FIGURE 216

GGCACGAGGGCGGAGCCAGCCCCTCCCCTACCCGGAGCAGCCCGCTGGGGCCGTCCCGAGCGGCGACACACTAGG
AGTCCCGGCCGGCCAGCCAGGGCAGCCGCGGTCCCGGGACTCGGCCGTGAGTGCTGCGGGACGGATGGTGGCGGC
GGGGCGCGGGCCAGCGCGGGCGCCGTGAGCCGGAGCTGCGCGCGGGGCATGCGGCTGCGGCCCCCGGCCCTCGGC
CCCCGCGCTCCGGCCCCAGCCCCGGCCGCCGGCCCCCGCGGAGTGCAGCGACCGCGCCGCCGCTGAGGGAGGCGC
CCCACC**ATG**CCGCGGGCCCCGGCGCCGCTGTACGCCTGCCTCCTGGGGCTCTGCGCGCTCCTGCCCCGGCTCGCA
GGTCTCAACATATGCACTAGTGGAAGTGCCACCTCATGTGAAGAATGTCTGCTAATCCACCCAAAATGTGCCTGG
TGCTCCAAAGAGGACTTCGGAAGCCCACGGTCCATCACCTCTCGGTGTGATCTGAGGGCAAACCTTGTCAAAAAT
GGCTGTGGAGGTGAGATAGAGAGCCCAGCCAGCAGCTTCCATGTCCTGAGGAGCCTGCCCCTCAGCAGCAAGGGT
TCGGGCTCTGCAGGCTGGGACGTCATTCAGATGACACCACAGGAGATTGCCGTGAACCTCCGGCCCGGTGACAAG
ACCACCTTCCAGCTACAGGTTCGCCAGGTGGAGGACTATCCTGTGGACCTGTACTACCTGATGGACCTCTCCCTG
TCCATGAAGGATGACTTGGACAATATCCGGAGCCTGGGCACCAAACTCGCGGAGGAGATGAGGAAGCTCACCAGC
AACTTCCGGTTGGGATTTGGGTCTTTTGTTGATAAGGACATCTCTCCTTTCTCCTACACGGCACCGAGGTACCAG
ACCAATCCGTGCATTGGTTACAAGTTGTTTCCAAATTGCGTCCCCTCCTTTGGGTTCCGCCATCTGCTGCCTCTC
ACAGACAGAGTGGACAGCTTCAATGAGGAAGTTCGGAAACAGAGGGTGTCCCGGAACCGAGATGCCCCTGAGGGG
GGCTTTGATGCAGTACTCCAGGCAGCCGTCTGCAAGGAGAAGATTGGCTGGCGAAAGGATGCACTGCATTTGCTG
GTGTTCACAACAGATGATGTGCCCCACATCGCATTGGATGGAAAATTGGGAGGCCTGGTGCAGCCACACGATGGC
CAGTGCCACCTGAACGAGGCCAACGAGTACACTGCATCCAACCAGATGGACTATCCATCCCTTGCCTTGCTTGGA
GAGAAATTGGCAGAGAACAACATCAACCTCATCTTTGCAGTGACAAAAAACCATTATATGCTGTACAAGAATTTT
ACAGCCCTGATACCTGGAACAACGGTGGAGATTTTAGATGGAGACTCCAAAAATATTATTCAACTGATTATTAAT
GCATACAATAGTATCCGGTCTAAAGTGGAGTTGTCAGTCTGGGATCAGCCTGAGGATCTTAATCTCTTCTTTACT
GCTACCTGCCAAGATGGGGTATCCTATCCTGGTCAGAGGAAGTGTGAGGGTCTGAAGATTGGGGACACGGCATCT
TTTGAAGTATCATTGGAGGCCCGAAGCTGTCCCAGCAGACACACGGAGCATGTGTTTGCCCTGCGGCCGGTGGGA
TTCCGGGACAGCCTGGAGGTGGGGGTCACCTACAACTGCACGTGCGGCTGCAGCGTGGGGCTGGAACCCAACAGT
GCCAGGTGCAACGGGAGCGGGACCTATGTCTGCGGCCTGTGTGAGTGCAGCCCCGGCTACCTGGGCACCAGGTGC
GAGTGCCAGGATGGGGAGAACCAGAGCGTGTACCAGAACCTGTGCCGGGAGGCAGAGGGCAAGCCACTGTGCAGC
GGGCGTGGGGACTGCAGCTGCAACCAGTGCTCCTGCTTCGAGAGCGAGTTCGGCAAGATCTATGGGCCTTTCTGT
GAGTGCGACAACTTCTCCTGTGCCAGGAACAAGGGAGTCCTCTGCTCAGGCCATGGCGAGTGTCACTGCGGGGAA
TGCAAGTGCCATGCAGGTTACATCGGGGACAACTGTAACTGCTCGACAGACATCAGCACATGCCGGGGCAGAGAT
GGCCAGATCTGCAGCGAGCGTGGGCACTGTCTCTGTGGGCAGTGCCAATGCACGGAGCCGGGGGCCTTTGGGGAG
ATGTGTGAGAAGTGCCCCACCTGCCCGGATGCATGCAGCACCAAGAGAGATTGCGTCGAGTGCCTGCTGCTCCAC
TCTGGGAAACCTGACAACCAGACCTGCCACAGCCTATGCAGGGATGAGGTGATCACATGGGTGGACACCATCGTG
AAAGATGACCAGGAGGCTGTGCTATGTTTCTACAAAACCGCCAAGGACTGCGTCATGATGTTCACCTATGTGGAG
CTCCCCAGTGGGAAGTCCAACCTGACCGTCCTCAGGGAGCCAGAGTGTGGAAACACCCCCAACGCCATGACCATC
CTCCTGGCTGTGGTCGGTAGCATCCTCCTTGTTGGGCTTGCACTCCTGGCTATCTGGAAGCTGCTTGTCACCATC
CACGACCGGAGGGAGTTTGCAAAGTTTCAGAGCGAGCGATCCAGGGCCCGCTATGAAATGGCTTCAAATCCATTA
TACAGAAAGCCTATCTCCACGCACACTGTGGACTTCACCTTCAACAAGTTCAACAAATCCTACAATGGCACTGTG
GAC**TGA**TGTTTCCTTCTCCGAGGGGCTGGAGCGGGGATCTGATGAAAAGGTCAGACTGAAACGCCTTGCACGGCT
GCTCGGCTTGATCACAGCTCCCTAGGTAGGCACCACAGAGAAGACCTTCTAGTGAGCCTGGGCCAGGAGCCCACA
GTGCCTGTACAGGAAGGTGCCTGGCCATGTCACCTGGCTGCTAGGCCAGAGCCATGCCAGGCTGCGTCCCTCCGA
GCTTGGGATAAAGCAAGGGGACCTTGGCACTCTCAGCTTTCCCTGCCACATCCAGCTTGTTGTCCCAATGAAATA
CTGAGATGCTGGGCTGTCTCTCCCTTCCAGGAATGCTGGGCCCCCAGCCTGGCCAGACAAGACGACTGTCAGGAA
GGGTCGGAGTCTGTAAAACCAGCATACAGTTTGGCTTTTTTCACATTGATCATTTTTATATGAAATAAAAAGATC
CTGCATTTATGGTGTAGTTCTGAGTCCTGAGACTTTTCCGCGTGATGGCTATGCCTTGCACACAGGTGTTGGTGA
TGGGGCTGTTGAGATGCCTGTTGAAGGTACATCGTTTGCAAATGTCAGTTTCCTCTCCTGTCCGTGTTTGTTTAG
TACTTTTATAATGAAAAGAAACAAGATTGTTTGGGATTGGAAGTAAAGATTAAAACCAAAAGAATTTGTGTTTGT
CTGATAAAAAAAAAAAAAAAAAAAA

FIGURE 217

MPRAPAPLYACLLGLCALLPRLAGLNICTSGSATSCEECLLIHPKCAWCSKEDFGSPRSITSRCDLRANLVKNGC
GGEIESPASSFHVLRSLPLSSKGSGSAGWDVIQMTPQEIAVNLRPGDKTTFQLQVRQVEDYPVDLYYLMDLSLSM
KDDLDNIRSLGTKLAEEMRKLTSNFRLGFGSFVDKDISPFSYAAPRYQTNPCIGYKLFPNCVPSFGFRHLLPLTD
RVDSFNEEVRKQRVSRNRDAPEGGFDAVLQAAVCKEKIGWRKDALHLLVFTTDDVPHIALDGKLGGLVQPHDGQC
HLNEANEYTASNQMDYPSLALLGEKLAENNINLIFAVTKNHYMLYKNFTALIPGTTVEILDGDSKNIIQLIINAY
NSIRSKVELSVWDQPEDLNLFFTATCQDGVSYPGQRKCEGLKIGDTASFEVSLEARSCPSRHTEHVFALRPVGFR
DSLEVGVTYNCTCGCSVGLEPNSARCNGSGTYVCGLCECSPGYLGTRCECQDGENQSVYQNLCREAEGKPLCSGR
GDCSCNQCSCFESEFGKIYGPFCECDNFSCARNKGVLCSGHGECHCGECKCHAGYIGDNCNCSTDISTCRGRDGQ
ICSERGHCLCGQCQCTEPGAFGEMCEKCPTCPDACSTKRDCVECLLLHSGKPDNQTCHSLCRDEVITWVDTIVKD
DQEAVLCFYKTAKDCVMMFTYVELPSGKSNLTVLREPECGNTPNAMTILLAVVGSILLVGLALLAIWKLLVTIHD
RREFAKFQSERSRARYEMASNPLYRKPISTHTVDFTFNKSYNGTVD

FIGURE 218

GCGGAGCGAGCCCTGAAAGGCTATAGGCGAGGGGGCGGCTCCGCGGGGCCGGGCGAGGAGTCCAGAGAGCC**ATG**G
CCGCCCTGCGTGTCCTGCTGTCCTGCGCCCGCGGCCCGCTGAGGCCCCCGGTTCGCTGTCCCGCCTGGCGTCCCT
TCGCCTCGGGTGCTAACTTTGAGTACATCATCGCAGAAAAAAGAGGGAAGAATAACACCGTGGGGTTGATCCAAC
TGAACCGCCCCAAGGCCCTCAATGCACTTTGCGATGGCCTGATTGACGAGCTCAACCAGGCCCTGAAGATCTTCG
AGGAGGACCCGGCCGTGGGGGCCATTGTCCTCACCGGCGGGGATAAGGCCTTTGCAGCTGGAGCTGATATCAAGG
AAATGCAGAACCTGAGTTTCCAGGACTGTTACTCCAGCAAGTTCTTGAAGCACTGGGACCACCTCACCCAGGTCA
AGAAGCCAGTCATCGCTGCTGTCAATGGCTATGCCTTTGGCGGGGGCTGTGAGCTTGCCATGATGTGTGATATCA
TCTATGCCGGTGAGAAGGCCCAGTTTGCACAGCCGGAGATCTTAATAGGAACCATCCCAGGTGCGGGCGGCACCC
AGAGACTCACCCGTGCTGTTGGGAAGTCGCTGGCGATGGAGATGGTCCTCACCGGTGACCGGATCTCAGCCCAGG
ACGCCAAGCAAGCAGGTCTTGTCAGCAAGATTTGTCCTGTTGAGACACTGGTGGAAGAAGCCATCCAGTGTGCAG
AAAAAATTGCCAGCAATTCTAAAATTGTAGTAGCGATGGCCAAAGAATCAGTGAATGCAGCTTTTGAAATGACAT
TAACAGAAGGAAGTAAGTTGGAGAAGAAACTCTTTTATTCAACCTTTGCCACTGATGACCGGAAAGAAGGGATGA
CCGCGTTTGTGGAAAAGAGAAAGGCCAACTTCAAAGACCAG**TGA**GAACCAGCTGCCCCTGCTTCACACCTCTGCT
TGGAGAGGACAAGTGCAGCCTGTCAGTTTTAGAAGCAAGTAAATCATCCTCTTTTCAAGAGCAGTGTCCGTGGTG
TGCAGTTCCTCTCCAATTGCTGCGTGGTCGTGGCCCGACCTCTCACGGCATGACAGCCTTCGTCACCCAGCCTGT
GAGGGTCCTGACTGGAGCACCTTCTAAATCTAAGATTCTGCTGAGGAGCCCCCGCTGGTCCCTCTGGGCATGCTG
TGCTCGGACGGAAAGCGGGGCCTGCGGGTCCTTGTGTCCCTGCCGCTGAAGAATGGGGCTGCTCTGAGGGAAACG
CTGTCTGCTGCCTTCATACAGATGCTGATTAAAGTGATAGCGATTCAGATT

FIGURE 219

MAALRVLLSCARGPLRPPVRCPAWRPFASGANFEYIIAEKRGKNNTVGLIQLNRPKALNALCDGLIDELNQALKI
FEEDPAVGAIVLTGGDKAFAAGADIKEMQNLSFQDCYSSKFLKHWDHLTQVKKPVIAAVNGYAFGGGCELAMMCD
IIYAGEKAQFAQPEILIGTIPGAGGTQRLTRAVGKSLAMEMVLTGDRISAQDAKQAGLVSKICPVETLVEEAIQC
AEKIASNSKIVVAMAKESVNAAFEMTLTEGSKLEKKLFYSTFATDDRKEGMTAFVEKRKANFKDQ

FIGURE 220

CAGATGCCAGAAGAACACTGTTGCTCTTGGTGGACGGGCCCAGAGGAATTCAGAGTTAAACCTTGAGTGCCTGCG
TCCGTGAGAATTCAGC**ATG**GAATGTCTCTACTATTTCCTGGGATTTCTGCTCCTGGCTGCAAGATTGCCACTTGA
TGCCGCCAAACGATTTCATGATGTGCTGGGCAATGAAAGACCTTCTGCTTACATGAGGGAGCACAATCAATTAAA
TGGCTGGTCTTCTGATGAAAATGACTGGAATGAAAAACTCTACCCAGTGTGGAAGCGGGGAGACATGAGGTGGAA
AAACTCCTGGAAGGGAGGCCGTGTGCAGGCGGTCCTGACCAGTGACTCACCAGCCCTCGTGGGCTCAAATATAAC
ATTTGCGGTGAACCTGATATTCCCTAGATGCCAAAAGGAAGATGCCAATGGCAACATAGTCTATGAGAAGAACTG
CAGAAATGAGGCTGGTTTATCTGCTGATCCATATGTTTACAACTGGACAGCATGGTCAGAGGACAGTGACGGGGA
AAATGGCACCGGCCAAAGCCATCATAACGTCTTCCCTGATGGGAAACCTTTTCCTCACCACCCCGGATGGAGAAG
ATGGAATTTCATCTACGTCTTCCACACACTTGGTCAGTATTTCCAGAAATTGGGACGATGTTCAGTGAGAGTTTC
TGTGAACACAGCCAATGTGACACTTGGGCCTCAACTCATGGAAGTGACTGTCTACAGAAGACATGGACGGGCATA
TGTTCCCATCGCACAAGTGAAAGATGTGTACGTGGTAACAGATCAGATTCCTGTGTTTGTGACTATGTTCCAGAA
GAACGATCGAAATTCATCCGACGAAACCTTCCTCAAAGATCTCCCCATTATGTTTGATGTCCTGATTCATGATCC
TAGCCACTTCCTCAATTATTCTACCATTAACTACAAGTGGAGCTTCGGGGATAATACTGGCCTGTTTGTTTCCAC
CAATCATACTGTGAATCACACGTATGTGCTCAATGGAACCTTCAGCCTTAACCTCACTGTGAAAGCTGCAGCACC
AGGACCTTGTCCGCCACCGCCACCACCACCCAGACCTTCAAAACCCACCCCTTCTTTAGGACCTGCTGGTGACAA
CCCCCTGGAGCTGAGTAGGATTCCTGATGAAAACTGCCAGATTAACAGATATGGCCACTTTCAAGCCACCATCAC
AATTGTAGAGGGAATCTTAGAGGTTAACATCATCCAGATGACAGACGTCCTGATGCCGGTGCCATGGCCTGAAAG
CTCCCTAATAGACTTTGTCGTGACCTGCCAAGGGAGCATTCCCACGGAGGTCTGTACCATCATTTCTGACCCCAC
CTGCGAGATCACCCAGAACACAGTCTGCAGCCCTGTGGATGTGGATGAGATGTGTCTGCTGACTGTGAGACGAAC
CTTCAATGGGTCTGGGACGTACTGTGTGAACCTCACCCTGGGGGATGACACAAGCCTGGCTCTCACGAGCACCCT
GATTTCTGTTCCTGACAGAGACCCAGCCTCGCCTTTAAGGATGGCAAACAGTGCCCTGATCTCCGTTGGCTGCTT
GGCCATATTTGTCACTGTGATCTCCCTCTTGGTGTACAAAAAACACAAGGAATACAACCCAATAGAAAATAGTCC
TGGGAATGTGGTCAGAAGCAAAGGCCTGAGTGTCTTTCTCAACCGTGCAAAAGCCGTGTTCTTCCCGGGAAACCA
GGAAAAGGATCCGCTACTCAAAAACCAAGAATTTAAAGGAGTTTCT**TAA**ATTTCGACCTTGTTTCTGAAGCTCAC
TTTTCAGTGCCATTGATGTGAGATGTGCTGGAGTGGCTATTAACCTTTTTTTCCTAAAGATTATTGTTAAATAGA
TATTGTGGTTTGGGGAAGTTGAATTTTTTATAGGTTAAATGTCATTTTAGAGATGGGGAGAGGGATTATACTGCA
GGCAGCTTCAGCCATGTTGTGAAACTGATAAAAGCAACTTAGCAAGGCTTCTTTTCATTATTTTTTATGTTTCAC
TTATAAAGTCTTAGGTAACTAGTAGGATAGAAACACTGTGTCCCGAGAGTAAGGAGAGAAGCTACTATTGATTAG
AGCCTAACCCAGGTTAACTGCAAGAAGAGGCGGGATACTTTCAGCTTTCCATGTAACTGTATGCATAAAGCCAAT
GTAGTCCAGTTTCTAAGATCATGTTCCAAGCTAACTGAATCCCACTTCAATACACACTCATGAACTCCTGATGGA
ACAATAACAGGCCCAAGCCTGTGGTATGATGTGCACACTTGCTAGACTCAGAAAAAATACTACTCTCATAAATGG
GTGGGAGTATTTTGGTGACAACCTACTTTGCTTGGCTGAGTGAAGGAATGATATTCATATATTCATTTATTCCAT
GGACATTTAGTTAGTGCTTTTTATATACCAGGCATGATGCTGAGTGACACTCTTGTGTATATTTCCAAATTTTTG
TATAGTCGCTGCACATATTTGAAATCATATATTAAGACTTTCCAAAGATGAGGTCCCTGGTTTTTCATGGCAACT
TGATCAGTAAGGATTTCACCTCTGTTTGTAACTAAAACCATCTACTATATGTTAGACATGACATTCTTTTTCTCT
CCTTCCTGAAAAATAAAGTGTGGGAAGAGACAAAAAAAAAAAAA

FIGURE 221

MECLYYFLGFLLLAARLPLDAAKRFHDVLGNERPSAYMREHNQLNGWSSDENDWNEKLYPVWKRGDMRWKNSWKG
GRVQAVLTSDSPALVGSNITFAVNLIFPRCQKEDANGNIVYEKNCRNEAGLSADPYVYNWTAWSEDSDGENGTGQ
SHHNVFPDGKPFPHHPGWRRWNFIYVFHTLGQYFQKLGRCSVRVSVNTANVTLGPQLMEVTVYRRHGRAYVPIAQ
VKDVYVVTDQIPVFVTMFQKNDRNSSDETFLKDLPIMFDVLIHDPSHFLNYSTINYKWSFGDNTGLFVSTNHTVN
HTYVLNGTFSLNLTVKAAAPGPCPPPPPPPRPSKPTPSLGPAGDNPLELSRIPDENCQINRYGHFQATITIVEGI
LEVNIIQMTDVLMPVPWPESSLIDFVVTCQGSIPTEVCTIISDPTCEITQNTVCSPVDVDEMCLLTVRRTFNGSG
TYCVNLTLGDDTSLALTSTLISVPDRDPASPLRMANSALISVGCLAIFVTVISLLVYKKHKEYNPIENSPGNVVR
SKGLSVFLNRAKAVFFPGNQEKDPLLKNQEFKGVS

FIGURE 222

GCCGCTGCCACCGCACCCCGCC**ATG**GAGCGGCCGTCGCTGCGCGCCCTGCTCCTCGGCGCCGCTGGGCTGCTGCT
CCTGCTCCTGCCCCTCTCCTCTTCCTCCTCTTCGGACACCTGCGGCCCCTGCGAGCCGGCCTCCTGCCCGCCCCT
GCCCCCGCTGGGCTGCCTGCTGGGCGAGACCCGCGACGCGTGCGGCTGCTGCCCTATGTGCGCCCGCGGCGAGGG
CGAGCCGTGCGGGGGTGGCGGCGCCGGCAGGGGGTACTGCGCGCCGGGCATGGAGTGCGTGAAGAGCCGCAAGAG
GCGGAAGGGTAAAGCCGGGGCAGCAGCCGGCGGTCCGGGTGTAAGCGGCGTGTGCGTGTGCAAGAGCCGCTACCC
GGTGTGCGGCAGCGACGGCACCACCTACCCGAGCGGCTGCCAGCTGCGCGCCGCCAGCCAGAGGGCCGAGAGCCG
CGGGGAGAAGGCCATCACCCAGGTCAGCAAGGGCACCTGCGAGCAAGGTCCTTCCATAGTGACGCCCCCCAAGGA
CATCTGGAATGTCACTGGTGCCCAGGTGTACTTGAGCTGTGAGGTCATCGGAATCCCGACACCTGTCCTCATCTG
GAACAAGGTAAAAAGGGGTCACTATGGAGTTCAAAGGACAGAACTCCTGCCTGGTGACCGGGACAACCTGGCCAT
TCAGACCCGGGGTGGCCCAGAAAAGCATGAAGTAACTGGCTGGGTGCTGGTATCTCCTCTAAGTAAGGAAGATGC
TGGAGAATATGAGTGCCATGCATCCAATTCCCAAGGACAGGCTTCAGCATCAGCAAAAATTACAGTGGTTGATGC
CTTACATGAAATACCAGTGAAAAAAGGTGAAGGTGCCGAGCTA**TAA**ACCTCCAGAATATTATTAGTCTGCATGGT
TAAAAGTAGTCATGGATAACTACATTACCTGTTCTTGCCTAATAAGTTTCTTTTAATCCAATCCACTAACACTTT
AGTTATATTCACTGGTTTTACACAGAGAAATACAAAATAAAGATCACACATCAAGACTATCTACAAAAATTTATT
ATATATTTACAGAAGAAAAGCATGCATATCATTAAACAAATAAAATACTTTTTATCACAAAAAAAAAAAAAAAA

FIGURE 223

MERPSLRALLLGAAGLLLLLLPLSSSSSSDTCGPCEPASCPPLPPLGCLLGETRDACGCCPMCARGEGEPCGGGG
AGRGYCAPGMECVKSRKRRKGKAGAAAGGPGVSGVCVCKSRYPVCGSDGTTYPSGCQLRAASQRAESRGEKAITQ
VSKGTCEQGPSIVTPPKDIWNVTGAQVYLSCEVIGIPTPVLIWNKVKRGHYGVQRTELLPGDRDNLAIQTRGGPE
KHEVTGWVLVSPLSKEDAGEYECHASNSQGQASASAKITVVDALHEIPVKKGEGAEL

FIGURE 224

GGACACCGGGCCATGCACGCCCCCAACTGAAGCTGCATCTCAAAGCCGAAGATTCCAGCAGCCCAGGGGATTTCA
AAGAGCTCAGACTCAGAGGAACATCTGCGGAGAGACCCCCGAAGCCCTCTCCAGGGCAGTCCTCATCCAGACGCT
CCGCTAGTGCAGACAGGAGCGCGCAGTGGCCCCGGCTCGCCGCGCC**ATG**GAGCGGATCCCCAGCGCGCAACCACC
CCCCGCCTGCCTGCCCAAAGCACCGGGACTGGAGCACGGAGACCTACCAGGGATGTACCCTGCCCACATGTACCA
AGTGTACAAGTCAAGACGGGGAATAAAGCGGAGCGAGGACAGCAAGGAGACCTACAAATTGCCGCACCGGCTCAT
CGAGAAAAAGAGACGTGACCGGATTAACGAGTGCATCGCCCAGCTGAAGGATCTCCTACCCGAACATCTCAAACT
TACAACTTTGGGTCACTTGGAAAAAGCAGTGGTTCTTGAACTTACCTTGAAGCATGTGAAAGCACTAACAAACCT
AATTGATCAGCAGCAGCAGAAAATCATTGCCCTGCAGAGTGGTTTACAAGCTGGTGAGCTGTCAGGGAGAAATGT
CGAAACAGGTCAAGAGATGTTCTGCTCAGGTTTCCAGACATGTGCCCGGGAGGTGCTTCAGTATCTGGCCAAGCA
CGAGAACACTCGGGACCTGAAGTCTTCGCAGCTTGTCACCCACCTCCACCGGGTGGTCTCGGAGCTGCTGCAGGG
TGGTACCTCCAGGAAGCCATCAGACCCAGCTCCCAAAGTGATGGACTTCAAGGAAAAACCCAGCTCTCCGGCCAA
AGGTTCGGAAGGTCCTGGGAAAAACTGCGTGCCAGTCATCCAGCGGACTTTCGCTCACTCGAGTGGGGAGCAGAG
CGGCAGCGACACGGACACAGACAGTGGCTATGGAGGAGAATCGGAGAAGGGCGACTTGCGCAGTGAGCAGCCGTG
CTTCAAAAGTGACCACGGACGCAGGTTCACGATGGGAGAAAGGATCGGCGCAATTAAGCAAGAGTCCGAAGAACC
CCCCACAAAAAAGAACCGGATGCAGCTTTCGGATGATGAAGGCCATTTCACTAGCAGTGACCTGATCAGCTCCCC
GTTCCTGGGCCCACACCCACACCAGCCTCCTTTCTGCCTGCCCTTCTACCTGATCCCACCTTCAGCGACTGCCTA
CCTGCCCATGCTGGAGAAGTGCTGGTATCCCACCTCAGTGCCAGTGCTATACCCAGGCCTCAACGCCTCTGCCGC
AGCCCTCTCTAGCTTCATGAACCCAGACAAGATCTCGGCTCCCTTGCTCATGCCCCAGAGACTCCCTTCTCCCTT
GCCAGCTCATCCGTCCGTCGACTCTTCTGTCTTGCTCCAAGCTCTGAAGCCAATCCCCCCTTTAAACTTAGAAAC
CAAAGAC**TAA**ACTCTCTAGGGGATCCTGCTGCTTTGCTTTCCTTCCTCGCTACTTCCTAAAAAGCAACAAAAAAG
TTTTTGTGAATGCTGCAAGATTGTTGCATTGTGTATACTGAGATAATCTGAGGCATGGAGAGCAGATTCAGGGTG
TGTGTGTGTGTGTGTGTGTGTGTGTATGTGCGTGTGCGTGCACATGTGTGCCTGCGTGTTGGTATAGGACTTT
AAAGCTCCTTTTGGCATAGGGAAGTCACGAAGGATTGCTTGACATCAGGAGACTTGGGGGGGATTGTAGCAGACG
TCTGGGCTTTTCCCCACCCAGAGAATAGCCCCCTTCGATACACATCAGCTGGATTTTCAAAAGCTTCAAAGTCTT
GGTCTGTGAGTCACTCTTCAGTTTGGGAGCTGGGTCTGTGGCTTTGATCAGAAGGTACTTTCAAAAGAGGGCTTT
CCAGGGCTCAGCTCCCAACCAGCTGTTAGGACCCCACCCTTTTGCCTTTATTGTCGACGTGACTCACCAGACGTC
GGGGAGAGAGAGCAGTCAGACCGAGCTTTCTGCTAACATGGGGAGGTAGCAGGCACTGGCATAGCACGGTAGTGG
TTTGGGGAGGTTTCCGCAGGTCTGCTCCCCACCCCTGCCTCGGAAGAATAAAGAGAATGTAGTTCCCTACTCAGG
CTTTCGTAGTGATTAGCTTACTAAGGAACTGAAAATGGGCCCCTTGTACAAGCTGAGCTGCCCCGGAGGGAGGGA
GGAGTTCCCTGGGCTTCTGGCACCTGTTTCTAGGCCTAACCATTAGTACTTACTGTGCAGGGAACCAAACCAAGG
TCTGAGAAATGCGGACACCCCGAGCGAGCACCCCAAAGTGCACAAAGCTGAGTAAAAAGCTGCCCCCTTCAAACA
GAACTAGACTCAGTTTTCAATTCCATCCTAAAACTCCTTTTAACCAAGCTTAGCTTCTCAAAGGCCTAACCAAGC
CTTGGCACCGCCAGATCCTTTCTGTAGGCTAATTCCTCTTGCCCAACGGCATATGGAGTGTCCTTATTGCTAAAA
AGGATTCCGTCTCCTTCAAAGAAGTTTTATTTTTGGTCCAGAGTACTTGTTTTCCCGATGTGTCCAGCCAGCTCC
GCAGCAGCTTTTCAAGATGCACTATGCCTGATTGCTGATCGTGTTTTAACTTTTTCTTTTCCTGTTTTTATTTTG
GTATTAAGTCGTTGCCTTTATTTGTAAAGCTGTTATAAATATATATTATATAAATATATTAAAAAGGAAAATGTT
TCAGATGTTTATTTGTATAATTACTTGATTCACACAGTGAGAAAAAATGAATGTATTCCTGTTTTTGAAGAGAAG
AATAATTTTTTTTTCTCTAGGGAGAGGTACAGTGTTTATATTTTGGAGCCTTCCTGAAGGTGTAAAATTGTAAAT
ATTTTTATCTATGAGTAAATGTTAAGTAGTTGTTTTAAAATACTTAATAAAATAATTCTTTTCCTGTGGAAG

FIGURE 225

MERIPSAQPPPACLPKAPGLEHGDLPGMYPAHMYQVYKSRRGIKRSEDSKETYKLPHRLIEKKRRDRINECIAQL
KDLLPEHLKLTTLGHLEKAVVLELTLKHVKALTNLIDQQQQKIIALQSGLQAGELSGRNVETGQEMFCSGFQTCA
REVLQYLAKHENTRDLKSSQLVTHLHRVVSELLQGGTSRKPSDPAPKVMDFKEKPSSPAKGSEGPGKNCVPVIQR
TFAHSSGEQSGSDTDTDSGYGGESEKGDLRSEQPCFKSDHGRRFTMGERIGAIKQESEEPPTKKNRMQLSDDEGH
FTSSDLISSPFLGPHPHQPPFCLPFYLIPPSATAYLPMLEKCWYPTSVPVLYPGLNASAAALSSFMNPDKISAPL
LMPQRLPSPLPAHPSVDSSVLLQALKPIPPLNLETKD

FIGURE 226

GGGGCGAGACCTACGACGCCGGCGAGCAGTGGCCGTTACGCCTAAAAAG**ATG**GCGGTCTTGGCACCTCTAATTGC
TCTCGTGTATTCGGTGCCGCGACTTTCACGATGGCTCGCCCAACCTTACTACCTTCTGTCGGCCCTGCTCTCTGC
TGCCTTCCTACTCGTGAGGAAACTGCCGCCGCTCTGCCACGGTCTGCCCACCCAACGCGAAGACGGTAACCCGTG
TGACTTTGACTGGAGAGAAGTGGAGATCCTGATGTTTCTCAGTGCCATTGTGATGATGAAGAACCGCAGATCCAT
CACTGTGGAGCAACATATAGGCAACATTTTCATGTTTAGTAAAGTGGCCAACACAATTCTTTTCTTCCGCTTGGA
TATTCGCATGGGCCTACTTTACATCACACTCTGCATAGTGTTCCTGATGACGTGCAAACCCCCCCTATATATGGG
CCCTGAGTATATCAAGTACTTCAATGATAAAACCATTGATGAGGAACTAGAACGGGACAAGAGGGTCACTTGGAT
TGTGGAGTTCTTTGCCAATTGGTCTAATGACTGCCAATCATTTGCCCCTATCTATGCTGACCTCTCCCTTAAATA
CAACTGTACAGGGCTAAATTTTGGGAAGGTGGATGTTGGACGCTATACTGATGTTAGTACGCGGTACAAAGTGAG
CACATCACCCCTCACCAAGCAACTCCCTACCCTGATCCTGTTCCAAGGTGGCAAGGAGGCAATGCGGCGGCCACA
GATTGACAAGAAAGGACGGGCTGTCTCATGGACCTTCTCTGAGGAGAATGTGATCCGAGAATTTAACTTAAATGA
GCTATACCAGCGGGCCAAGAAACTATCAAAGGCTGGAGACAATATCCCTGAGGAGCAGCCTGTGGCTTCAACCCC
CACCACAGTGTCAGATGGGGAAAACAAGAAGGATAAA**TAA**GATCCTCACTTTGGCAGTGCTTCCTCTCCTGTCAA
TTCCAGGCTCTTTCCATAACCACAAGCCTGAGGTGCAGCTTTTATTTATGTTTTCCCTTTGGCTGTGACTGGGTG
GGGCAGCATGCAGCTTCTGATTTTAAAGAGGCATCTAGGGAATTGTCAGGCACCCTACAGGAAGGCCTGCCATGC
TTGTGGCCAACTGTTTCACTGGAGCAAAGAAAGAGATCTCATAGGACGGAGGGGGAAAATGGTTTTCCCTCCAAG
CTTGGGTCAGTGTGTTAACTGCTTATCAGCTATTCAGACATCTCCATGGTTTCTCCATGAAACTCTGTGGTTTCA
TCATTCCTTCTTAGTTGACCTGCACAGCTTGGTTAGACCTAGATTTAACCCTAAGGTAAGATGCTGGGGTATAGA
ACGCTAAGAATTTTCCCCCAAGGACTCTTGCTTCCTCAAGCCCTTCTGGCTTCGTTTATGGTCTTCATTAAAAGT
ATAAGCCTAACTTTGTCGCTAGTCCTAAGGAGAAACCTTTAACCACAAAGTTTTTATCATTGAAGACAATATTGA
ACAACCCCCTATTTTGTGGGGATTGAGAAGGGGTGAATAGAGGCTTGAGACTTTCCTTTGTGTGGTAGGACTTGG
AGGAGAAATCCCCTGGACTTTCACTAACCCTCTGACATACTCCCCACACCCAGTTGATGGCTTTCCGTAATAAAA
AGATTGGGATTTCCTTTTG

FIGURE 227

MAVLAPLIALVYSVPRLSRWLAQPYYLLSALLSAAFLLVRKLPPLCHGLPTQREDGNPCDFDWREVEILMFLSAI
VMMKNRRSITVEQHIGNIFMFSKVANTILFFRLDIRMGLLYITLCIVFLMTCKPPLYMGPEYIKYFNDKTIDEEL
ERDKRVTWIVEFFANWSNDCQSFAPIYADLSLKYNCTGLNFGKVDVGRYTDVSTRYKVSTSPLTKQLPTLILFQG
GKEAMRRPQIDKKGRAVSWTFSEENVIREFNLNELYQRAKKLSKAGDNIPEEQPVASTPTTVSDGENKKDK

FIGURE 228

TGAGCGGGGGATG**ATG**GCGCCGCGGAGGGTCAGGTCGTTTCTGCGCGGGCTCCCGGCGCTGCTACTGCTGCTGCT
CTTCCTCGGGCCCTGGCCCGCTGCGAGCCACGGCGGCAAGTACTCGCGGGAGAAGAACCAGCCCAAGCCGTCCCC
GAAACGCGAGTCCGGAGAGGAGTTCCGCATGGAGAAGTTGAACCAGCTGTGGGAGAAGGCCCAGCGACTGCATCT
TCCTCCCGTGAGGCTGGCCGAGCTCCACGCTGATCTGAAGATACAGGAGAGGGACGAACTCGCCTGGAAGAAACT
AAAGCTTGACGGCTTGGACGAAGATGGGGAGAAGGAAGCGAGACTCATACGCAACCTCAATGTCATCTTGGCCAA
GTATGGTCTGGACGGAAAGAAGGACGCTCGGCAGGTGACCAGCAACTCCCTCAGTGGCACCCAGGAAGACGGGCT
GGATGACCCCAGGCTGGAAAAGCTGTGGCACAAGGCGAAGACCTCTGGGAAATTCTCCGGCGAAGAACTGGACAA
GCTCTGGCGGGAGTTCCTGCATCACAAAGAGAAAGTTCACGAGTACAACGTCCTGCTGGAGACCCTGAGCAGGAC
CGAAGAAATCCACGAGAACGTCATTAGCCCCTCGGACCTGAGCGACATCAAGGGCAGCGTCCTGCACAGCAGGCA
CACGGAGCTGAAGGAGAAGCTGCGCAGCATCAACCAGGGCCTGGACCGCCTGCGCAGGGTCAGCCACCAGGGCTA
CAGCACTGAGGCTGAGTTCGAGGAGCCCAGGGTGATTGACCTGTGGGACCTGGCGCAGTCCGCCAACCTCACGGA
CAAGGAGCTGGAGGCGTTCCGGGAGGAGCTCAAGCACTTCGAAGCCAAAATCGAGAAGCACAACCACTACCAGAA
GCAGCTGGAGATTGCGCACGAGAAGCTGAGGCACGCAGAGAGCGTGGGCGACGGCGAGCGTGTGAGCCGCAGCCG
CGAGAAGCACGCCCTGCTGGAGGGGCGGACCAAGGAGCTGGGCTACACGGTGAAGAAGCATCTGCAGGACCTGTC
CGGCAGGATCTCCAGAGCTCGGCACAACGAACTC**TGA**AGGCACTGGGGAGCCCAGCCCGGCAGGGAAGAGGCCAG
CGTGAAGGACCTGGGCTCTTGGCCGTGGCATTTCCGTGGACAGCCCGCCGTCAGGGTGGCTGGGGCTGGCACGGG
TGTCGAGGCAGGAAGGATTGTTTCTGGTGACTGCAGCCGCTGCCGTCGCGACACAGGGCTTGGTGGTGGTAGCAT
TTGGGTCTGAGATCGGCCCAGCTCTGACTGAAGGGGCTTGGCTTCCACTCAGCATCAGCGTGGCAGTCACCACCC
CAGTGAGGACCTCGATGTCCAGCTGCTGTCAGGTCTGATAGTCCTCTGCTAAAACAACACGATTTACATAAAAAA
TCTTACACATCTGCCACCGGAAATACCATGCACAGAGTCCTTAAAAAATAGAGTGCAGTATTTAAACC

FIGURE 229

MAPRRVRSFLRGLPALLLLLLFLGPWPAASHGGKYSREKNQPKPSPKRESGEEFRMEKLNQLWEKAQRLHLPPVR
LAELHADLKIQERDELAWKKLKLDGLDEDGEKEARLIRNLNVILAKYGLDGKKDARQVTSNSLSGTQEDGLDDPR
LEKLWHKAKTSGKFSGEELDKLWREFLHHKEKVHEYNVLLETLSRTEEIHENVISPSDLSDIKGSVLHSRHTELK
EKLRSINQGLDRLRRVSHQGYSTEAEFEEPRVIDLWDLAQSANLTDKELEAFREELKHFEAKIEKHNHYQKQLEI
AHEKLRHAESVGDGERVSRSREKHALLEGRTKELGYTVKKHLQDLSGRISRARHNEL

FIGURE 230

CGCGGCCGCGTCGGACCTGTGGTCCCGGGTTTCTGCAGAGTCTACTTCAGAAGCGGAGGCACTGGGAGTCCGGTT
TGGGATTGCCAGGCTGTGGTTGTGAGTCTGAGCTTGTGAGCGGCTGTGGCGCCCCAACTCTTCGCCAGCATATCA
TCCCGGCAGGCGATAAACTACATTCAGTTGAGTCTGCAAGACTGGGAGGAACTGGGGTGATAAGAAATCTATTCA
CTGTCAAGGTTTATTGAAGTCAAA**ATG**TCCAAAAAAATCAGTGGCGGTTCTGTGGTAGAGATGCAAGGAGATGAA
ATGACACGAATCATTTGGGAATTGATTAAAGAGAAACTCATTTTTCCCTACGTGGAATTGGATCTACATAGCTAT
GATTTAGGCATAGAGAATCGTGATGCCACCAACGACCAAGTCACCAAGGATGCTGCAGAAGCTATAAAGAAGCAT
AATGTTGGCGTCAAATGTGCCACTATCACTCCTGATGAGAAGAGGGTTGAGGAGTTCAAGTTGAAACAAATGTGG
AAATCACCAAATGGCACCATACGAAATATTCTGGGTGGCACGGTCTTCAGAGAAGCCATTATCTGCAAAAATATC
CCCCGGCTTGTGAGTGGATGGGTAAAACCTATCATCATAGGTCGTCATGCTTATGGGGATCAATACAGAGCAACT
GATTTTGTTGTTCCTGGGCCTGGAAAAGTAGAGATAACCTACACACCAAGTGACGGAACCCAAAAGGTGACATAC
CTGGTACATAACTTTGAAGAAGGTGGTGGTGTTGCCATGGGGATGTATAATCAAGATAAGTCAATTGAAGATTTT
GCACACAGTTCCTTCCAGATGGCTCTGTCTAAGGGTTGGCCTTTGTATCTGAGCACCAAAAACACTATTCTGAAG
ATATATGATGGGCGTTTTAAAGACATCTTTCAGGAGATATATGACAAGCAGTACAAGTCCCAGTTTGAAGCTCAA
AAGATCTGGTATGAGCATAGGCTCATCGACGACATGGTGGCCCAAGCTATGAAATCAGAGGGAGGCTTCATCTGG
GCCTGTAAAAACTATGATGGTGACGTGCAGTCGGACTCTGTGGCCCAAGGGTATGGCTCTCTCGGCATGATGACC
AGCGTGCTGGTTTGTCCAGATGGCAAGACAGTAGAAGCAGAGGCTGCCCACGGGACTGTAACCCGTCACTACCGC
ATGTACCAGAAAGGACAGGAGACGTCCACCAACCTCATTGCTTCCATTTTTGCCTGGACCAGAGGGTTAGCCCAC
AGAGCAAAGCTTGATAACAATAAAGAGCTTGCCTTCTTTGCAAATGCTTTGGAAGAAGTCTCTATTGAGACAATT
GAGGCTGGCTTCATGACCAAGGACTTGGCTGCTTGCATTAGAGGTTTACCCAATGTGCAACGTTCTGACTACTTG
AATACATTTGAGTTCATGGATAAACTTGGAGAAAACTTGAAGATCAAACTAGCTCAGGCCAAACTT**TAA**GTTCAT
ACCTGAGCTAAGAAGGATAATTGTCTTTTGGTAACTAGGTCTACAGGTTTACATTTTTCTGTGTTACACTCAAGG
ATAAAGGCAAAATCAATTTTGTAATTTGTTTAGAAGCCAGAGTTTATCTTTTCTATAAGTTTACAGCCTTTTTCT
TATATATACAGTTATTGCCACCTTTGTGAACATGGCAAGGGACTTTTTTACAATTTTTATTTTATTTTCTAGTAC
CAGCCTAGGAATTCGGTTAGTACTCATTTGTATTCACTGTCACTTTTTCTCATGTTCTAATTATAAATGACCAAA
ATCAAGATTGCTCAAAAGGGTAAATGATAGCCACAGTATTGCTCCCTAAAATATGCATAAAGTAGAAATTCACTG
CCTTCCCCTCCTGTCCATGACCTTGGGCACAGGGAAGTTCTGGTGTCATAGATATCCCGTTTTGTGAGGTAGAGC
TGTGCATTAAACTTGCACATGACTGGAACGAAGTATGAGTGCAACTCAAATGTGTTGAAGATACTGCAGTCATTT
TTGTAAAGACCTTGCTGAATGTTTCCAATAGACTAAATACTGTTTAGGCCGCAGGAGAGTTTGGAATCCGGAATA
AATACTACCTGGAGTCTTGTCCTCTCCATTTTTCTCTTTCTCCTCCTGGCCTGGCCTGAATATTATACTACTCTA
AATAGCATATTTCATCCAAGTGCAATAATGTAAGCTGAATCTTTTTTGGACTTCTGCTGGCCTGTTTTATTTCTT
TTATATAAATGTGATTTCTCAGAAATTGATATTAAACACTATCTTATCTTCTCCTGAACTGTTGATTTTAATTAA
AATTAAGTGCTAATTACCAAAAAAAAAAA

FIGURE 231

MSKKISGGSVVEMQGDEMTRIIWELIKEKLIFPYVELDLHSYDLGIENRDATNDQVTKDAAEAIKKHNVGVKCAT
ITPDEKRVEEFKLKQMWKSPNGTIRNILGGTVFREAIICKNIPRLVSGWVKPIIIGRHAYGDQYRATDFVVPGPG
KVEITYTPSDGTQKVTYLVHNFEEGGGVAMGMYNQDKSIEDFAHSSFQMALSKGWPLYLSTKNTILKIYDGRFKD
IFQEIYDKQYKSQFEAQKIWYEHRLIDDMVAQAMKSEGGFIWACKNYDGDVQSDSVAQGYGSLGMMTSVLVCPDG
KTVEAEAAHGTVTRHYRMYQKGQETSTNLIASIFAWTRGLAHRAKLDNNKELAFFANALEEVSIETIEAGFMTKD
LAACIRGLPNVQRSDYLNTFEFMDKLGENLKIKLAQAKL

FIGURE 232

CAGGTGGGAGGTTAGTGTGGCCCGGGCGTCCGCTCCTCAGCGGATGTGGCAGCCCCGAGCC**ATG**GCTCTCGCCGT
CCGAGTCGTTTATTGTGGCGCTTGAGGCTACAAGTCCAAGTATCTTCAGCTCAAGAAGAAGTTAGAAGATGAGTT
CCCCGGCCGCCTGGACATCTGCGGCGAGGGAACTCCCCAGGCCACCGGGTTCTTTGAAGTGATGGTAGCCGGGAA
GTTGATTCACTCTAAGAAGAAAGGCGATGGCTACGTGGACACAGAAAGCAAGTTTCTGAAGTTGGTGGCCGCCAT
CAAAGCCGCCTTGGCTCAGGGC**TAA**TGCGCCCTGAAGGCAGAGTCCAGGGACCTTGACCCAGCCCCTCTCAGCAG
ACGCTTCATGATAGGAAGGACTGAAAAGTCTTGTGGACACCTGGTCTTTCCCTGATGTTCTCGTGGCTGCTGTTG
GGGGCAGAGATTGACGCCCCCGGTCTTTGCCTCTGAGCGGGAGAGTCTGTGTGTATGTGTCTTCCCCGGAATCCA
CACCACCCCACCCTCCTCCTGTCCCGTGGTTTCATCATATCTCTTTGCATACCCCATGTCTTCCCCAGTTGTCCC
CTGGAGTTTGGGGGGACATCCCGCCTCAGGCATCCTTCTCAAGGGGAAGCCAAGAGAGGCATCAGGATGGGTGGG
TTTCTGATTGTGGCAACGTTTGCAACCGTTCACGATTCAATAAATATTGGATGAAATTAACCGGAAAAAAAAAAA
AAAAAAAA

FIGURE 233

MALAVRVVYCGAXGYKSKYLQLKKKLEDEFPGRLDICGEGTPQATGFFEVMVAGKLIHSKKKGDGYVDTESKFLK
LVAAIKAALAQG

FIGURE 234A

GTCCTTTCACGCGTGTCTTCGTGTTGGTGCGCTTTTCACTGGTCATAAAGTGCTGCTCACGGCCGTGAACTGCTA
CAGCGTGAAGGCCGCCACCCGGGTCCAGGATGCTTTTGCCGCCGCCAAGCTCCTGGCCCTGGCCCTGATCATCCT
GCTGGGCTTCGTCCAGATCGGGAAGGGTGATGTGTCCAATCTAGATCCCAAGTTCTCATTTGAAGGCACCAAACT
GGATGTGGGGAACATTGTGCTGGCATTATACAGCGGCCTCTTTGCCTATGGAGGATGGAATTACTTGAATTTCGT
CACAGAGGAA**ATG**ATCAACCCCTACAGAAACCTGCCCCTGGCCATCATCATCTCCCTGCCCATCGTGACGCTGGT
GTACGTGCTGACCAACCTGGCCTACTTCACCACCCTGTCCACCGAGCAGATGCTGTCGTCCGAGGCCGTGGCCGT
GGACTTCGGGAACTATCACCTGGGCGTCATGTCCTGGATCATCCCCGTCTTCGTGGGCCTGTCCTGCTTTGGCTC
CGTCAATGGGTCCCTGTTCACATCCTCCAGGCTCTTCTTCGTGGGGTCCCGGGAAGGCCACCTGCCCTCCATCCT
CTCCATGATCCACCCACAGCTCCTCACCCCCGTGCCGTCCCTCGTGTTCACGTGTGTGATGACGCTGCTCTACGC
CTTCTCCAAGGACATCTTCTCCGTCATCAACTTCTTCAGCTTCTTCAACTGGCTCTGCGTGGCCCTGGCCATCAT
CGGCATGATCTGGCTGCGCCACAGAAAGCCTGAGCTTGAGCGGCCCATCAAGGTGAACCTGGCCCTGCCTGTGTT
CTTCATCCTGGCCTGCCTCTTCCTGATCGCCGTCTCCTTCTGGAAGACACCCGTGGAGTGTGGCATCGGCTTCAC
CATCATCCTCAGCGGGCTGCCCGTCTACTTCTTCGGGGTCTGGTGGAAAAACAAGCCCAAGTGGCTCCTCCAGGG
CATCTTCTCCACGACCGTCCTGTGTCAGAAGCTCATGCAGGTGGTCCCCCAGGAGACA**TAG**CCAGGAGGCCGAGT
GGCTGCCGGAGGAGCATGCGCAGAGGCCAGTTAAAGTAGATCACCTCCTCGAACCCACTCCGGTTCCCCGCAACC
CACAGCTCAGCTGCCCATCCCAGTCCTCGCCGTCCCTCCCAGGTCGGGCAGTGGAGGCTGCTGTGAAAACTCTGG
TACGAATCTCATCCCTCAACTGAGGGCCAGGGACCCAGGTGTGCCTGTGCTCCTGCCCAGGAGCAGCTTTTGGTC
TCCTTGGGCCCTTTTTCCCTTCCCTCCTTTGTTTACTTATATATATATTTTTTTTAAACTTAAATTTTGGGTCAA
CTTGACACCACTAAGATGATTTTTTAAGGAGCTGGGGGGAAGGCAGGAGCCTTCCTTTCTCCTGCCCCAAGGGCCC
AGACCCTGGGCAAACAGAGCTACTGAGACTTGGAACCTCATTGCTACCACAGACTTGCACTGAAGCCAGACAGCT
GCCCAGACACATGGGCTTGTGACATTCGTGAAAACCAACCCTGTGGGCTTATGTCTCTGCCTTAGGGTTTGCAGA
GTGGAAACTCAGCCGTAGGGTGGCACTGGGAGGGGGTGGGGGATCTGGGCAAGGTGGGTGATTCCTCCCAGGAGG
TGCTTGAGGCCCCGATGGACTCCTGACCATAATCCTAGCCCCGAGACACCATCCTGAGCCAGGGAACAGCCCCAG
GGTTGGGGGGTGCCGGCATCTCCCCTAGCTCACCAGGCCTGGCCTCTGGGCAGTGTGGCCTCTTGGCTATTTCTG
TTCCAGTTTTGGAGGCTGAGTTCTGGTTCATGCAGACAAAGCCCTGTCCTTCAGTCTTCTAGAAACAGAGACAAG
AAAGGCAGACACACCGCGGCCAGGCACCCATGTGGGCGCCCACCCTGGGCTCCACACAGCAGTGTCCCCTGCCCC
AGAGGTCGCAGCTACCCTCAGCCTCCAATGCATTGGCCTCTGTACCGCCCGGCAGCCCCTTCTGGCCGGTGCTGG
GTTCCCACTCCCGGCCTAGGCACCTCCCCGCTCTCCCTGTCACGCTCATGTCCTGTCCTGGTCCTGATGCCCGTT
GTCTAGGAGACAGAGCCAAGCACTGCTCACGTCTCTGCCGCCTGCGTTTGGAGGCCCCTGGGCTCTCACCCAGTC
CCCACCCGCCTGCAGAGAGGGAACTAGGGCACCCCTTGTTTCTGTTGTTCCCGTGAATTTTTTTCGCTATGGGAG
GCAGCCGAGGCCTGGCCAATGCGGCCCACTTTCCTGAGCTGTCGCTGCCTCCATGGCAGCAGCCAAGGACCCCCA
GAACAAGAAGACCCCCCCGCAGGATCCCTCCTGAGCTCGGGGGGCTCTGCCTTCTCAGGCCCCGGGCTTCCCTTC
TCCCCAGCCAGAGGTGGAGCCAAGTGGTCCAGCGTCACTCCAGTGCTCAGCTGTGGCTGGAGGAGCTGGCCTGTG
GCACAGCCCTGAGTGTCCCAAGCCGGGAGCCAACGAAGCCGGACACGGCTTCACTGACCAGCGGCTGCTCAAGCC
GCAAGCTCTCAGCAAGTGCCCAGTGGAGCCTGCCGCCCCCACCTGGGCACCGGGACCCCCTCACCATCCAGTGGG
CCCGGAGAAACCTGATGAACAGTTTGGGGACTCAGGACCAGATGTCCGTCTCTCTTGCTTGAGGAATGAAGACCT
TTATTCACCCCTGCCCCGTTGCTTCCCGCTGCACATGGACAGACTTCACAGCGTCTGCTCATAGGACCTGCATCC
TTCCTGGGGACGAATTCCACTCGTCCAAGGGACAGCCCACGGTCTGGAGGCCGAGGACCACCAGCAGGCAGGTGG
ACTGACTGTGTTGGGCAAGACCTCTTCCCTCTGGGCCTGTTCTCTTGGCTGCAAATAAGGACAGCAGCTGGTGCC
CCACCTGCCTGGTGCATTGCTGTGTGAATCCAGGAGGCAGTGGACATCGTAGGCAGCCACGGCCCCAGGTCCAGG
AGAAGTGCTCCCTGGAGGCACGGACCACTGCTTCCCACTGGGGCCGGCGGGGCCCACGCACGACGTCAGCCTCTT
ACCTTCCCGCCTCGGCTAGGGGTCCTCGGGATGCCGTTCTGTTCCAACCTCCTGTTCTGGGAGGTGGACATGCCT
CAAGGATACAGGGAGCCGGCGGCCTCTCGACGGCACGCACTTCCTGTTGGCTGCTGCGGCTGTGGGCGAGCATGG
GGGCTGCCAGCGTCTGTTGTGGAAAGTAGCTGCTAGTGAAATGGCTGGGGCCGCTGGGGTCCGTCTTCACACTGC
GCAGGTCTCTTCTGGGCGTCTGAGCTGGGGTGGGAGCTCCTCCGCAGAAGGTTGGTGGGGGGTCCAGTCTGTGAT
CCTTGGTGCTGTGTGCCCCACTCCAGCCTGGGGACCCCACTTCAGAAGGTAGGGGCCGTGTCCCGCGGTGCTGAC
TGAGGCCTGCTTCCCCCTCCCCCTCCTGCTGTGCTGGAATTCCACAGGGACCAGGGCCACCGCAGGGGACTGTCT
CAGAAGACTTGATTTTTCCGTCCCTTTTTCTCCACACTCCACTGACAAACGTCCCCAGCGGTTTCCACTTGTGGG

FIGURE 234B

CTTCAGGTGTTTTCAAGCACAACCCACCACAACAAGCAAGTGCATTTTCAGTCGTTGTGCTTTTTTGTTTTGTGC
TAACGTCTTACTAATTTAAAGATGCTGTCGGCACCATGTTTATTTATTTCCAGTGGTCATGCTCAGCCTTGCTGC
TCTGCGTGGCGCAGGTGCCATGCCTGCTCCCTGTCTGTGTCCCAGCCACGCAGGGCCATCCACTGTGACGTCGGC
CGACCAGGCTGGACACCCTCTGCCGAGTAATGACGTGTGTGGCTGGGACCTTCTTTATTCTGTGTTAATGGCTAA
CCTGTTACACTGGGCTGGGTTGGGTAGGGTGTTCTGGCTTTTTTGTGGGGTTTTTATTTTTAAAGAAACACTCAA
TCATCCTAG

FIGURE 235

MINPYRNLPLAIIISLPIVTLVYVLTNLAYFTTLSTEQMLSSEAVAVDFGNYHLGVMSWIIPVFVGLSCFGSVNG
SLFTSSRLFFVGSREGHLPSILSMIHPQLLTPVPSLVFTCVMTLLYAFSKDIFSVINFFSFFNWLCVALAIIGMI
WLRHRKPELERPIKVNLALPVFFILACLFLIAVSFWKTPVECGIGFTIILSGLPVYFFGVWWKNKPKWLLQGIFS
TTVLCQKLMQVVPQET

FIGURE 236

GCGGCCGCCGGGACTCTTCCTGGAGACACCGCC**ATG**GCCGGGCTATCCCGCGGGTCCGCGCGCGCACTGCTCGCC
GCCCTGCTGGCGTCGACGCTGTTGGCGCTGCTCGTGTCGCCCGCGCGGGGTCGCGGCGGCCGGGACCACGGGGAC
TGGGACGAGGCCTCCCGGCTGCCGCCGCTACCACCCCGCGAGGACGCGGCGCGCGTGGCCCGCTTCGTGACGCAC
GTCTCCGACTGGGGCGCTCTGGCCACCATCTCCACGCTGGAGGCGGTGCGCGGCCGGCCCTTCGCCGACGTCCTC
TCGCTCAGCGACGGGCCCCCGGGCGCGGGCAGCGGCGTGCCCTATTTCTACCTGAGCCCGCTGCAGCTCTCCGTG
AGCAACCTGCAGGAGAATCCATATGCTACACTGACCATGACTTTGGCACAGACCAACTTCTGCAAGAAACATGGA
TTTGATCCACAAAGTCCCCTTTGTGTTCACATAATGCTGTCAGGAACTGTGACCAAGGTGAATGAAACAGAAATG
GATATTGCAAAGCATTCGTTATTCATTCGACACCCTGAGATGAAAACCTGGCCTTCCAGCCATAATTGGTTCTTT
GCTAAGTTGAATATAACCAATATCTGGGTCCTGGACTACTTTGGTGGACCAAAAATCGTGACACCAGAAGAATAT
TATAATGTCACAGTTCAG**TGA**AGCAGACTGTGGTGAATTTAGCAACACTTATGAAGTTTCTTAAAGTGGCTCATA
CACACTTAAAAGGCTTAATGTTTCTCTGGAAAGCGTCCCAGAATATTAGCCAGTTTTCTGTCACATGCTGGTTTG
TTTGCTTGCTTGTTTACTTGCTTGTTTACCAATAGAGTTGACCTGTTATTGGATTTCCTGGAAGATGTGGTAGCT
ACTTTTTTCCTATTTTGAAGCCATTTTCGTAGAGAAATATCCTTCACTATAATCAAATAAGTTTTGTCCCATCAA
TTCCAAAGATGTTTCCAGTGGTGCTCTTGAAGAGGAATGAGTACCAGTTTTAAATTGCCCATTGGCATTTGAAGG
TAGTTGAGTATGTGTTCTTTATTCCTAGAAGCCACTGTGCTTGGTAGAGTGCATCACTCACCACAGCTGCCTCCT
GAGCTGCCTGAGCCTGGTGCAAAAGGATTGGCCCCCATTATGGTGCTTCTGAATAAATCTTGCCAAGATAGACAA
ACAATGATGAAACTCAGATGGAGCTTCCTACTCATGTTGATTTATGTCTCACAATCCTGGGTATTGTTAATTCAA
CATAGGGTGAAACTATTTCTGATAAAGAACTTTTGAAAAACTTTTTATACTCTAAAGTGATACTCAGAACAAAAG
AAAGTCATAAAACTCCTGAATTTAATTTCCCCACCTAAGTCGAGACAGTATTATCAAAACACATGTGCACACAGA
TTATTTTTTGGCTCCAAAACTGGATTGCAAAAGAAAGAGGAGAAGAATATTTTGTGTGTTCCTGGTATTCTTTTA
TAAGTAAAGTTTACCCAGGCATGGACCAGCTTCAGCCAGGGACAAAATCCCCTCCCAAACCACTCTCCACAGCTT
TTTAAAAATACTTCTACTCTTAACAATTACCTAAGGCTTCCTCAACTGCCCCAAATCTCTTAATAGCTTCTAGTG
CTGCTACAATCTAAGTCAGGTCACCAGAGGGAAGAGAACATGGCATTAAAAGAATCACATCTTCAGAAGAGAAGA
CACTAATATTATTACCCATATACATGATTTCAGAAGATGACATAAGATTCCTCTTAAAGAGGAAATGTCAGGAAT
CAAGCCACTGAATCCTTAAAGAGAAAAGTTGAATATGAGTCATTGTGTCTGAAAACTGCAAAGTGAACTTAACTG
AGATCCAGCAAACAGGTTCTGTTTAAGAAAAATAATTTATACTAAATTTAGTAAAATGGACTTCTTATTCAAAGC
ATCAATAATTAAAAGAATTATTTTAAAAAAAAAAAAAAA

FIGURE 237

MAGLSRGSARALLAALLASTLLALLVSPARGRGGRDHGDWDEASRLPPLPPREDAARVARFVTHVSDWGALATIS
TLEAVRGRPFADVLSLSDGPPGAGSGVPYFYLSPLQLSVSNLQENPYATLTMTLAQTNFCKKHGFDPQSPLCVHI
MLSGTVTKVNETEMDIAKHSLFIRHPEMKTWPSSHNWFFAKLNITNIWVLDYFGGPKIVTPEEYYNVTVQ

FIGURE 238

CCCCTTGGTTCCGCCCGCGCGTCACGTGACCCCAGCGCCTACTTGGGCTGAGGAGCCGCCGCGTCCCCTCGCCGA
GTCCCCTCGCCAGATTCCCTCCGTCGCCGCCAAG**ATG**ATGTGCGGGGCGCCCTCCGCCACGCAGCCGGCCACCGC
CGAGACCCAGCACATCGCCGACCAGGTGAGGTCCCAGCTTGAAGAGAAAGAAAACAAGAAGTTCCCTGTGTTTAA
GGCCGTGTCATTCAAGAGCCAGGTGGTCGCGGGGACAAACTACTTCATCAAGGTGCACGTCGGCGACGAGGACTT
CGTACACCTGCGAGTGTTCCAATCTCTCCCTCATGAAAACAAGCCCTTGACCTTATCTAACTACCAGACCAACAA
AGCCAAGCATGATGAGCTGACCTATTTC**TGA**TCCTGACTTTGGACAAGGCCCTTCAGCCAGAAGACTGACAAAGT
CATCCTCCGTCTACCAGAGCGTGCACTTGTGATCCTAAAATAAGCTTCATCTCCGGGCTGTGCCCCTTGGGGTGG
AAGGGGCAGGATTCTGCAGCTGCTTTTGCATTTCTCTTCCTAAATTTCATTGTGTTGATTTCTTTCCTTCCCAAT
AGGTGATCTTAATTACTTTCAGAATATTTTCAAAATAGATATATTTTTAAAATCCTTAAAAAAAAAAAAAAAAA

FIGURE 239

MMCGAPSATQPATAETQHIADQVRSQLEEKENKKFPVFKAVSFKSQVVAGTNYFIKVHVGDEDFVHLRVFQSLPH
ENKPLTLSNYQTNKAKHDELTYF

FIGURE 240

AGGTCTCAGCCGGTCGTCGCGACGTTCGCCCGCTCGCTCTGAGGCTCCTGAAGCCGAAACTAGCTAGACTTTCCT
CCTTCCCGCCTGCCTGTAGCGGCGTTGTTGCCACTCCGCCACC**ATG**TTCGAGGCGCGCCTGGTCCAGGGCTCCAT
CCTCAAGAAGGTGTTGGAGGCACTCAAGGACCTCATCAACGAGGCCTGCTGGGATATTAGCTCCAGCGGTGTAAA
CCTGCAGAGCATGGACTCGTCCCACGTCTCTTTGGTGCAGCTCACCCTGCGGTCTGAGGGCTTCGACACCTACCG
CTGCGACCGCAACCTGGCCATGGGCGTGAACCTCACCAGTATGTCCAAAATACTAAAATGCGCCGGCAATGAAGA
TATCATTACACTAAGGGCCGAAGATAACGCGGATACCTTGGCGCTAGTATTTGAAGCACCAAACCAGGAGAAAGT
TTCAGACTATGAAATGAAGTTGATGGATTTAGATGTTGAACAACTTGGAATTCCAGAACAGGAGTACAGCTGTGT
AGTAAAGATGCCTTCTGGTGAATTTGCACGTATATGCCGAGATCTCAGCCATATTGGAGATGCTGTTGTAATTTC
CTGTGCAAAAGACGGAGTGAAATTTTCTGCAAGTGGAGAACTTGGAAATGGAAACATTAAATTGTCACAGACAAG
TAATGTCGATAAAGAGGAGGAAGCTGTTACCATAGAGATGAATGAACCAGTTCAACTAACTTTTGCACTGAGGTA
CCTGAACTTCTTTACAAAAGCCACTCCACTCTCTTCAACGGTGACACTCAGTATGTCTGCAGATGTACCCCTTGT
TGTAGAGTATAAAATTGCGGATATGGGACACTTAAAATACTACTTGGCTCCCAAGATCGAGGATGAAGAAGGATC
T**TAG**GCATTCTTAAAATTCAAGAAAATAAAACTAAGCTCTTTGAGAACTGCTTCTAAGATGCCAGCATATACTGA
AGTCTTTTCTGTCACCAAATTTGTACCTCTAAGTACATATGTAGATATTGTTTTCTGTAAATAACCTATTTTTTT
TCTCTATTCTCTCCAATTTGTTTAAAGAATAAAGTCCAAAGTCTGATCTGGTCTAGTTAACCTAGAAGTATTTTT
GTCTCTTAGAAATACTTGTGATTTTTATAATACAAAAGGGTCTTGACTCTAAATGCAGTTTTAAGAAGTGTTTTT
GAATTTAAATAAAGTTACTTGAATTTCAAAC

FIGURE 241

MFEARLVQGSILKKVLEALKDLINEACWDISSSGVNLQSMDSSHVSLVQLTLRSEGFDTYRCDRNLAMGVNLTSM
SKILKCAGNEDIITLRAEDNADTLALVFEAPNQEKVSDYEMKLMDLDVEQLGIPEQEYSCVVKMPSGEFARICRD
LSHIGDAVVISCAKDGVKFSASGELGNGNIKLSQTSNVDKEEEAVTIEMNEPVQLTFALRYLNFFTKATPLSSTV
TLSMSADVPLVVEYKIADMGHLKYYLAPKIEDEEGS

FIGURE 242

CATGCAGTATGGAAACAAAACAATCTCCACCATGAAAGTGATGCAGTTTCAGGGTATGAAACGCAAAGCCAGTTC
TCCCGTCCCCCTACCTCCAGTCACACACCTTGACCTCACCCCCAGCCCTGATGTGCCTCTCACCATCATGAAAAG
GAAACTGATGAACACCAATGATCTGGAGGAGTCCAGGCAGCTCACGGAGGAGATCCAGCGGCATCTGGATGCCAG
GCACCTCATTGAGAAGTCAGTGCGTAAGATCGTCTCCTTGCTGGCAGCGTCCGAGGCTGAGGTGGAGCAGCTCCT
GTCCGAGAGAGCCCCGCTCACGGGGCACAGCTGCTACCCAGAGGCCCTGCTGCACTTCCGGACCCACTGCTTCAA
CTGGCACTCCCCCACGTACGAGTATGCGTTGAGACATTTGTACGTGCTGGTCAACCTTTGTGAGAAGCCGTATCC
GCTTCACAGGATAAAATTGTCCATGGACCACGTGTGCCTTGGTCACTACTGAAGAGCTGCCTCCTGGAAGCTTTT
CCAAGTGTGAGCGCCCCACCGACTGTGTGCTGATCAGAGACTGGAGAGGTGGAGTGAGAAGTCTCCGCTGCTCGG
GCCCTCCTGGGGAGCCCCCGCTCCAGGGCTCGCTCCAGGACCTTCTTCACAAGATGACTTGCTCGCTGTTACCTG
CTTCCCCAGTCTTTTCTGAAAAACTACAAATTAGGGTGGGAAAAGCTCTGTATTGAGAAGGGTCATATTTGCTTT
CTAGGAGGTTTGTTGTTTTGCCTGTTAGTTTTGAGGAGCAGGAAGCTCATGGGGGCTTCTGTAGCCCCTCTCAAA
AGGAGTCTTTATTCTGAGAATTTGAAGCTGAAACCTCTTTAAATCTTCAGAATGATTTTATTGAAGAGGGCCGCA
AGCCCCAAATGGAAAACTGTTTTTAGAAAATATGATGATTTTTGATTGCTTTTGTATTTAATTCTGCAGGTGTTC
AAGTCTTAAAAAATAAAGATTTATAACAGACCCCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 243A

CGATTAATCCTCCAGTTGGTTGTCCCTGCCGTCTCGGAAGGGTTAGCACACAGCCAGGTCTGTTTTTGATGTATG
TAATTGAAGATTTATAAAGAAAAGCTTCTCCTCTGCCTCATCCACAGTCATTTTTTTTCCA**ATG**CCAGTTCCCAG
CAGGCATATAAATATTGGTCGTTCTCAGAGCTGGGATGCTGCTGGGTGGTACGAGGGCCCCTGGGAGAACGCCGA
GTCCCTGCGGCCTCTGGGGAGGAGAAGCTCCCTGACGTATGGCACAGCAGAGGGGACTTGGTTTGAGCCAAACCA
CCGACCACAGGACGCTGCCCTGCCCGTGGCCGCCGAGCCCTACCTGTACCGGGAGGCCGTTTATAACTCAGTGGC
TGCAAGAAAGGGGTCTACTCCTGACTTCACCTTCTACGACAGCAGACAGGCAGTGATGTCTGGTCGCAGCCCCCT
GCTGCCACGGGAGTACTACAGTGATCCGTCTGGAGCTGCTAGGGTACCCAAAGAGCCTCCCCTCTATCGGGACCC
AGGAGTCAGCCGGCCGGTCCCCAGCTACGGAGTGCTTGGCAGCAGAACGTCATGGGATCCAATGCAAGGCCGGTC
ACCTGCCCTGCAGGACGCCGGTCACCTGTACCGGGATCCTGGAGGTAAAATGATCCCTCAGGGGCGGCAGACACA
GAGCAGGGCTGCATCTCCCGGGCGGTATGGACGGGAGCAGCCCGACACCAGGTATGGGGCGGAGGTGCCTGCCTA
CCCCCTCAGCCAGGTCTTCAGCGACATCAGCGAAAGACCCATTGACCCTGCCCCTGCCAGACAGGTGGCCCCGAC
GTGCCTGGTTGTGGACCCCAGTTCAGCTGCTGCCCCCGAAGGCAGCACAGGGGTGGCCCCAGGGGCCCTGAATCG
TGGCTACGGGCCTGCCCGGGAAAGCATCCCATCCAAGATGGCTTACGAGACTTACGAAGCTGACCTGTCCACCTT
CCAGGGTCCTGGTGGCAAGAGGACCGTGCTCCCTGAGTTCCTGGCCTTTCTGCGGGCGGAGGGGCTGGCAGAGGC
CACGCTGGGAGCCCTACTGCAGCAGGGCTTTGACTCCCCGGCCGTCCTGGCTACCCTGGAGGACGCGGATATCAA
GTCTGTCGCACCCAACCTGGGCCAGGCCCGTGTTCTGAGCCGCCTGGCCAATAGCTGCAGGACCGAAATGCAGCT
GCGGAGGCAGGACCGGGGGGGCCCGCTGCCCCGGGCGCGGTCCAGCAGCTTCAGCCACCGAAGCGAACTGCTCCA
TGGTGACTTGGCTTCTCTGGGCGCTGCGGCTCCTCTGCAGACAGCATCCCCCCGAGCTGGAGACCCGGCTCGCCG
TCCCTCCAGCGCACCATCTCAGCACCTCCTGGAGACGGCAGCCACCTATTCTGCCCCTGGCGTGGGCACCCATGC
CCCACACTTCCCCTCCAACTCCGGGTACAGCTCTCCCACCCCTTGCGCCCTGACAGCGCGTCTGAGCCCCACGCA
CCCCCTGCAGGCAGGGGTGGCCTTGACTAACCCGGGCCCCTCAAACCCCCTTCACCCAGGCCCCAGAACAGCTTA
CTCCACGGCATACACGGTGCCCATGGAGCTGCTAAAGAGGGAGCGCAACGTGGCCGCCTCTCCGCTGCCCAGCCC
TCACGGCAGCCCCCAGGTCTTGCGGAAGCCAGGTGCACCCCTGGGGCCATCCACCCTGCCGCCGGCCAGCCAGAG
CCTCCACACGCCTCACTCACCGTACGAGAAGGTGGCCCGGCGCACAGGGGCACCCATCATCGTGTCCACCATGCT
TGCACCAGAACCAAGTATCCGCCCCCAGATCATGAACGGCCCCCTGCACCCCCGCCCCCTGGTGGCGCTGCTGGA
CGGCCGCGACTGCACTGTGGAGATGCCCATCCTGAAGGACCTGGCCACTGTGGCCTTCTGTGACGCGCAGTCGAC
GCAGGAAATCCACGAGAAGGTTCTAAACGAAGCCGTGGGCGCCATGATGTACCACACCATCACCTTCAACAGGGA
GGACCTGGAGAAGTTCAAGGCCCTGAGAGTGATCGTGCGGATAGGCAGTGGCTATGACAACGTGAACATCAAGGC
TGCCGGCGAGCTCGGAATTGCCGTGTGCAACATCCCGTCTGCAGCCGTGGAAGAGACAGCGGACTCTACCATCTG
CCACATCCTCAACCTGTACCGGAGGAACACGTGGCTGTACCAGGCACTGCGGGAAGGCACGCGGGTTCAGAGCGT
GGAGCAGATCCGCGAGGTGGCCTCGGGAGCGGCCCGCATCCGTGGGGAGACGCTGGGCCTCATTGGCTTTGGTCG
CACGGGGCAGGCGGTTGCAGTTCGAGCCAAGGCCTTTGGATTCAGCGTCATATTTTATGACCCCTACTTGCAGGA
TGGGATCGAGCGGTCCCTGGGCGTGCAGAGGGTCTACACCCTGCAGGATTTGCTGTATCAGAGCGACTGCGTCTC
CTTGCACTGCAATCTCAACGAACATAACCACCACCTCATCAATGACTTTACCATAAAGCAGATGAGGCAGGGAGC
ATTCCTTGTGAACGCAGCCCGTGGCGGCCTGGTGGACGAGAAAGCCTTAGCACAAGCCCTCAAGGAGGGCAGGAT
ACGAGGGGCAGCCCTCGACGTGCATGAGTCAGAGCCCTTCAGCTTTGCTCAGGGTCCGTTGAAAGATGCCCCGAA
TCTCATCTGCACTCCTCACACTGCCTGGTACAGTGAGCAGGCGTCACTGGAGATGAGGGAGGCAGCTGCCACCGA
GATCCGCCGAGCCATCACAGGTCGCATCCCAGAAAGCTTAAGAAATTGTGTGAACAAGGAATTCTTTGTCACATC
AGCGCCTTGGTCAGTAATAGACCAGCAAGCAATTCATCCTGAGCTCAATGGTGCCACATACAGATATCCGCCAGG
CATCGTGGGTGTGGCTCCAGGAGGACTTCCTGCAGCCATGGAAGGGATCATCCCTGGAGGCATCCCAGTGACTCA
CAACCTCCCGACAGTGGCACATCCTTCCCAAGCGCCCTCTCCCAACCAGCCCACAAAACACGGGGACAATCGAGA
GCACCCCAACGAGCAA**TAG**CAGAGAATGCCAGAAGGTAATCACTCAGATACACTTGGGACCAAGAGACAGTGAAA
AATAGATGAACTAAGAGAAAAAGAATCGGATGGTCTTTGTAACTGATTCTGGACATATGCATCATTGATGTTGCA
GTGTTGAAACTACAAGAGCTAGAAAACTGAAGATGTCGTCTGCTTACGGAAGCGCTGAAAGACTAGGATGTGATT
TATTAACGACCAACTTCTGTTATTGTGTGTTAAGTTTTTCATCTGTGCATCAAATCACAAAAAGAATAAATAGAG
CTTTTTCCTTTATCAGTCCCTTGGGCACAGCAGGTCCTGAACACCCTGCTCTACAATGTTGCATCAAGAGTTCAA
ACAACAAAATAAAAAATATTAAGAGGAAATCCCCATCCTGTGACTTGAGTCCCTTAAGTCTACAGGGGCTGGGTG
ACCTCTTTTTGCTAATAGGAAAATCACATTACTACAAAATGGGGAAAAAACTGTTTGCCTGTGGTAGACACCTGC

FIGURE 243B

ACGCATAGGATTGAAGACAGTACAGGCTGCTGTACAGAGAAGCGCCTCTCACATCTGAACTGCATACTGAGCGGG
CAAGTCGGTTGTAAGTTCAGTAAAACCCTCTGATGATGCAAAAAAAAAAAAAAAAGTATTAAGTTTCACAAGCTGT
TTGTACTCAAATATATTTTCTCAGTTTCAG

FIGURE 244

MPVPSRHINIGRSQSWDAAGWYEGPWENAESLRPLGRRSSLTYGTAEGTWFEPNHRPQDAALPVAAEPYLYREAV
YNSVAARKGSTPDFTFYDSRQAVMSGRSPLLPREYYSDPSGAARVPKEPPLYRDPGVSRPVPSYGVLGSRTSWDP
MQGRSPALQDAGHLYRDPGGKMIPQGRQTQSRAASPGRYGREQPDTRYGAEVPAYPLSQVFSDISERPIDPAPAR
QVAPTCLVVDPSSAAAPEGSTGVAPGALNRGYGPARESIPSKMAYETYEADLSTFQGPGGKRTVLPEFLAFLRAE
GLAEATLGALLQQGFDSPAVLATLEDADIKSVAPNLGQARVLSRLANSCRTEMQLRRQDRGGPLPRARSSSFSHR
SELLHGDLASLGAAAPLQTASPRAGDPARRPSSAPSQHLLETAATYSAPGVGTHAPHFPSNSGYSSPTPCALTAR
LSPTHPLQAGVALTNPGPSNPLHPGPRTAYSTAYTVPMELLKRERNVAASPLPSPHGSPQVLRKPGAPLGPSTLP
PASQSLHTPHSPYEKVARRTGAPIIVSTMLAPEPSIRPQIMNGPLHPRPLVALLDGRDCTVEMPILKDLATVAFC
DAQSTQEIHEKVLNEAVGAMMYHTITFNREDLEKFKALRVIVRIGSGYDNVNIKAAGELGIAVCNIPSAAVEETA
DSTICHILNLYRRNTWLYQALREGTRVQSVEQIREVASGAARIRGETLGLIGFGRTGQAVAVRAKAFGFSVIFYD
PYLQDGIERSLGVQRVYTLQDLLYQSDCVSLHCNLNEHNHHLINDFTIKQMRQGAFLVNAARGGLVDEKALAQAL
KEGRIRGAALDVHESEPFSFAQGPLKDAPNLICTPHTAWYSEQASLEMREAAATEIRRAITGRIPESLRNCVNKE
FFVTSAPWSVIDQQAIHPELNGATYRYPPGIVGVAPGGLPAAMEGIIPGGIPVTHNLPTVAHPSQAPSPNQPTKH
GDNREHPNEQ

FIGURE 245

CGGCATGTGGAAGAAGGTGAAG**ATG**GCGGTGGCCAGGGCCGGGGTCTTGGGAGTCCAGTGGCTGCAAAGGGCATC
CCGGAACGTGATGCCGCTGGGCGCACGGACAGCCTCCCACATGACCAAGGACATGTTCCCGGGGCCCTATCCTAG
GACCCCAGAAGAACGGGCCGCCGCCGCCAAGAAGTATAATATGCGTGTGGAAGACTACGAACCTTACCCGGATGA
TGGCATGGGGTATGGCGACTACCCGAAGCTCCCTGACCGCTCACAGCATGAGAGAGATCCATGGTATAGCTGGGA
CCAGCCGGGCCTGAGGTTGAACTGGGGTGAACCGATGCACTGGCACCTAGACATGTACAACAGGAACCGTGTGGA
TACATCCCCCACACCTGTTTCTTGGCATGTCATGTGTATGCAGCTCTTCGGTTTCCTGGCTTTCATGATATTCAT
GTGCTGGGTGGGGGACGTGTACCCTGTCTACCAGCCTGTGGGACCAAAGCAGTATCCTTACAATAATCTGTACCT
GGAACGAGGCGGTGATCCCTCCAAAGAACCAGAGCGGGTGGTTCACTATGAGATC**TGA**GGAGGCTTCGTGGGCTT
TTGGGTCCTCTAACTAGGACTCCCTCATTCCTAGAAATTTAACCTTAATGAAATCCCTAATAAAACTCAGTGCTG
TGTTAAAAAAAAAA

FIGURE 246

MAVARAGVLGVQWLQRASRNVMPLGARTASHMTKDMFPGPYPRTPEERAAAAKKYNMRVEDYEPYPDDGMGYGDY
PKLPDRSQHERDPWYSWDQPGLRLNWGEPMHWHLDMYNRNRVDTSPTPVSWHVMCMQLFGFLAFMIFMCWVGDVY
PVYQPVGPKQYPYNNLYLERGGDPSKEPERVVHYEI

FIGURE 247

GAATTCATGCTAAATTGCTGGAAGGCTGCGTCTCTGCTGTGGTGTCAGTTCCGGATGCCTCATCGCCAGGGGCGC
GCCGCAGCCACCCACCCTCCGGACCGCGGCAGCTGCTGACCCGCCATCGCC**ATG**GCCCGCGGGAAAGCCAAGGAG
GAGGGCAGCTGGAAGAAATTCATCTGGAACTCAGAGAAGAAGGAGTTTCTGGGCAGGACCGGTGGCAGTTGGTTT
AAGATCCTTCTATTCTACGTAATATTTTATGGCTGCCTGGCTGGCATCTTCATCGGAACCATCCAAGTGATGCTG
CTCACCATCAGTGAATTTAAGCCCACATATCAGGACCGAGTGGCCCCGCCAGGATTAACACAGATTCCTCAGATC
CAGAAGACTGAAATTTCCTTTCGTCCTAATGATCCCAAGAGCTATGAGGCATATGTACTGAACATAGTTAGGTTC
CTGGAAAAGTACAAAGATTCAGCCCAGAGGGATGACATGATTTTTGAAGATTGTGGCGATGTGCCCAGTGAACCG
AAAGAACGAGGAGACTTTAATCATGAACGAGGAGAGCGAAAGGTCTGCAGATTCAAGCTTGAATGGCTGGGAAAT
TGCTCTGGATTAAATGATGAAACTTATGGCTACAAAGAGGGCAAACCGTGCATTATTATAAAGCTCAACCGAGTT
CTAGGCTTCAAACCTAAGCCTCCCAAGAATGAGTCCTTGGAGACTTACCCAGTGATGAAGTATAACCCAAATGTC
CTTCCCGTTCAGTGCACTGGCAAGCGAGATGAAGATAAGGATAAAGTTGGAAATGTGGAGTATTTTGGACTGGGC
AACTCCCCTGGTTTTCCTCTGCAGTATTATCCGTACTATGGCAAACTCCTGCAGCCCAAATACCTGCAGCCCCTG
CTGGCCGTACAGTTCACCAATCTTACCATGGACACTGAAATTCGCATAGAGTGTAAGGCGTACGGTGAGAACATT
GGGTACAGTGAGAAAGACCGTTTTCAGGGACGTTTTGATGTAAAAATTGAAGTTAAGAGC**TGA**TCACAAGCACAA
ATCTTTCCCACTAGCCATTTAATAAGTTAAAAAAAGATACAAAAACAAAAACCTACTAGTCTTGAACAAACTGTC
ATACGTATGGGACCTACACTTAATCTATATGCTTTACACTAGCTTTCTGCATTTAATAGGTTAGAATGTAAATTA
AAGTGTAGCAATAGCAACAAAATATTTATTCTACTGTAAATGACAAAAGAAAAAGAAAAATTGAGCCTTGGGACG
TGCCCATTTTTACTGTAAATTATGATTCCGTAACTGACCTTGTAGTAAGCAGTGTTTCTGGCCCCTAAGTATTGC
TGCCTTGTGTATTTTATTTAGTGTACAGTACTACAGGTGCATACTCTGGTCATTTTTCAAGCCATGTTTTATTGT
ATCTGTTTTCTACTTTATGTGAGCAAGGTTTGCTGTCCAAGGTGTAAATATTCAACGGGAATAAAACTGGCATGG
TAATTTTTTTTTTTTGTTTGTTTTTTGTTTTTTGGCTCTTTCAAAGGTAATGGCCCATCGATGAGCATTTTTAAC
ATACTCCATAGTCTTTTCCTGTGGTGTTAGGTCTTTATTTTTATTTTTTTCCTGGGGGCTGGGGTGGGGGTTTGT
CATGGGGGAACTGCCCTTTAAATTTTAAGTGACACTACAGAAAAACACAAAAAGGTGATGGGTTGTGTTATGCTT
GTATTGAATGCTGTCTTGACATCTCTTGCCTTGTCCTCCGGTATGTTCTAAAGCTGTGTCTGAGATCTGGATCTG
CCCATCACTTTGGCCTAGGGACAGGGCTAATTAATTTGCTTTATACATTTTCTTTTACTTTCCTTTTTTCCTTTC
TGGAGGCATCACATGCTGGTGCTGTGTCTTTATGAATGTTTTAACCATTTTCATGGTGGAAGAATTTTATATTTA
TGCAGTTGTACAATTTTATTTTTTTCTGCAAGAAAAAGTGTAATGTATGAAATAAACCAAAGTCACTTGTTTGAA
AATAAATCTTTATTTTGAACTTTATAAAAGCAATGCAGTACCCCATAGACTGGTGTTAAATGTTGTCTACAGTGC
AAAATCCATGTTCTAACATATGTAATAATTGCCAGGAGTACAGTGCTCTTGTTGATCTTGTATTCAGTCAGGTTA
AAACAACGGACAATAAAAGAATGAACCGAATTC

FIGURE 248

MARGKAKEEGSWKKFIWNSEKKEFLGRTGGSWFKILLFYVIFYGCLAGIFIGTIQVMLLTISEFKPTYQDRVAPP
GLTQIPQIQKTEISFRPNDPKSYEAYVLNIVRFLEKYKDSAQRDDMIFEDCGDVPSEPKERGDFNHERGERKVCR
FKLEWLGNCSGLNDETYGYKEGKPCIIIKLNRVLGFKPKPPKNESLETYPVMKYNPNVLPVQCTGKRDEDKDKVG
NVEYFGLGNSPGFPLQYYPYYGKLLQPKYLQPLLAVQFTNLTMDTEIRIECKAYGENIGYSEKDRFQGRFDVKIE
VKS

FIGURE 249

GCTTTGTTGCCTGAGTAACCGTATGATGGTGGTGGTGGTGGTGTCTTCCTGTCTCAACGATACCTATTTTCTAGT
GCTGAGATCCTGAGACA**ATG**AATCATAGTGAAAGATTCGTTTTCATTGCAGAGTGGTATGATCCAAATGCTTCAC
TTCTTCGACGTTATGAGCTTTTATTTTACCCAGGGGATGGATCTGTTGAAATGCATGATGTAAAGAATCATCGCA
CCTTTTTAAAGCGGACCAAATATGATAACCTGCACTTGGAAGATTTATTTATAGGCAACAAAGTGAATGTCTTTT
CTCGACAACTGGTATTAATTGACTATGGGGATCAATATACAGCTCGCCAGCTGGGCAGTAGGAAAGAAAAAACGC
TAGCCCTAATTAAACCAGATGCAATATCAAAGGCTGGAGAAATAATTGAAATAATAAACAAAGCTGGATTTACTA
TAACCAAACTCAAAATGATGATGCTTTCAAGGAAAGAAGCATTGGATTTTCATGTAGATCACCAGTCAAGACCCT
TTTTCAATGAGCTGATCCAGTTTATTACAACTGGTCCTATTATTGCCATGGAGATTTTAAGAGATGATGCTATAT
GTGAATGGAAAAGACTGCTGGGACCTGCAAACTCTGGAGTGGCACGCACAGATGCTTCTGAAAGCATTAGAGCCC
TCTTTGGAACAGATGGCATAAGAAATGCAGCGCATGGCCCTGATTCTTTTGCTTCTGCGGCCAGAGAAATGGAGT
TGTTTTTTCCTTCAAGTGGAGGTTGTGGGCCGGCAAACACTGCTAAATTTACTAATTGTACCTGTTGCATTGTTA
AACCCCATGCTGTCAGTGAAGGACTGTTGGGAAAGATCCTGATGGCTATCCGAGATGCAGGTTTTGAAATCTCAG
CTATGCAGATGTTCAATATGGATCGGGTTAATGTTGAGGAATTCTATGAAGTTTATAAAGGAGTAGTGACCGAAT
ATCATGACATGGTGACAGAAATGTATTCTGGCCCTTGTGTAGCAATGGAGATTCAACAGAATAATGCTACAAAGA
CATTTCGAGAATTTTGTGGACCTGCTGATCCTGAAATTGCCCGGCATTTACGCCCTGGAACTCTCAGAGCAATCT
TTGGTAAAACTAAGATCCAGAATGCTGTTCACTGTACTGATCTGCCAGAGGATGGCCTATTAGAGGTTCAATACT
TCTTCAAGATCTTGGATAAT**TAG**TGGTGTGGAAAGTAAAGAAGTCACAGGTTGGGACATTTAGACAAGAGTGAAT
CACACACGAGGAATGTGTTCATTCTTTTATTGTCCGTTGTTTTAACCTGACTGAATACAAGATCAACAAGAGCAC
TGTACTCCTGGCAATTATTACATATGTTAGAACATGGATTTTGCACTGTAGACAACATTTAACACCAGTCTATGG
GGTACTGCATTGCTTTTTATAAAGTTCAAAATAAAGATTTATTTTCAAAC

FIGURE 250

MNHSERFVFIAEWYDPNASLLRRYELLFYPGDGSVEMHDVKNHRTFLKRTKYDNLHLEDLFIGNKVNVFSRQLVL
IDYGDQYTARQLGSRKEKTLALIKPDAISKAGEIIEIINKAGFTITKLKMMMLSRKEALDFHVDHQSRPFFNELI
QFITTGPIIAMEILRDDAICEWKRLLGPANSGVARTDASESIRALFGTDGIRNAAHGPDSFASAAREMELFFPSS
GGCGPANTAKFTNCTCCIVKPHAVSEGLLGKILMAIRDAGFEISAMQMFNMDRVNVEEFYEVYKGVVTEYHDMVT
EMYSGPCVAMEIQQNNATKTFREFCGPADPEIARHLRPGTLRAIFGKTKIQNAVHCTDLPEDGLLEVQYFFKILD
N

FIGURE 251

CCGAGGCCAAGTCCCGGGCGCTAGCCCACCTCCCACCCGCCTCTTGGCTCCTCTCCTCTAGGCCGTCGCTTTCGG
GTTCTCTCATCGCTTCGTCGTTCGCCAATGTTTGAGGAGAAGGCCAGCAGTCCTTCAGGGAAG**ATG**GGAGGCGAG
GAGAAGCCGATTGGTGCTGGTGAAGAGAAGCAAAAGGAAGGAGGCAAAAAGAAGAACAAAGAAGGATCTGGAGAT
GGAGGTCGAGCTGAGTTGAATCCTTGGCCTGAATATATTTACACACGTCTTGAGATGTATAATATACTAAAAGCA
GAACATGATTCCATTCTGGCAGAAAAGGCAGAAAAAGATAGCAAGCCAATTAAAGTCACTTTGCCTGATGGTAAA
CAGGTTGATGCGGAATCTTGGAAAACTACACCATATCAAATTGCCTGTGGAATTAGTCAAGGCCTGGCCGACAAC
ACCGTTATTGCTAAAGTAAATAATGTTGTGTGGGACCTGGACCGCCCTCTGGAAGAAGATTGTACCTTGGAGCTT
CTCAAGTTTGAGGATGAGGAAGCTCAGGCAGTGTATTGGCACTCTAGTGCTCACATAATGGGTGAAGGCATGGAA
AGAGTCTATGGTGGATGTTTATGCTACGGTCCGCCAATAGAAAATGGATTCTATTATGACATGTACCTCGAAGAA
GGGGGTGTGTCTAGCAATGATTTCTCTTCTCTGGAGGCTTTGTGTAAGAAAATCATTAAAGAAAAACAAGCTTTT
GAAAGACTGGAAGTTAAGAAAGAAACTTTACTGGCAATGTTTAAGTACAACAAGTTCAAATGCCGGATATTGAAT
GAAAAGGTGAATACTCCAACTACCACAGTCTATAGATGTGGCCCTTTGATAGATCTCTGCCGGGGTCCTCATGTT
AGACACACGGGCAAAATTAAGGCTTTAAAAATACACAAAAATTCCTCCACGTACTGGGAAGGCAAAGCAGATATG
GAGACTCTCCAGAGAATTTATGGCATTTCATTCCCAGATCCTAAAATGTTGAAAGAGTGGGAGAAGTTCCAAGAG
GAAGCTAAAAACCGAGATCATAGGAAAATTGGCAGGGACCAAGAACTATATTTCTTTCATGAACTCAGCCCTGGA
AGTTGCTTTTTTCTGCCAAAAGGAGTCTATATTTATAATGCACTTATTGAATTCATTAGGAGCGAATATAGGAAA
AGAGGATTCCAGGAGGTAGTCACCCCAAACATCTTCAACAGCCGACTCTGGATGACCTCGGGCCACTGGCAGCAC
TACAGCGAGAACATGTTCTCCTTTGAGGTGGAGAAGGAGCTGTTTGCCCTGAAACCCATGAACTGCCCAGGACAC
TCCCTTATGTTTGATCATCGGCCAAGGTCCTGGCGAGAACTGCCTCTGCGGCTAGCTGATTTTGGGGGTCTTCAT
AGGAACGAGCTGTCTGGAGCACTCACAGGACTCACCCGGGTACGAAGATTCCAACAGGATGATGCTCACATATTC
TGTGCCATGGAGCAGATTGAAGATGAAATAAAAGGTTGTTTGGATTTTCTACGTACGGTATATAGCGTATTTGGA
TTTTCTTTTAAACTAAACCTTTCTACTCGCCCGGAAAAATTCCTTGGAGATATCGAAGTATGGGATCAAGCTGAG
AAACAACTTGAAAACAGTCTGAATGAATTTGGTGAAAAGTGGGAGTTAAACTCTGGAGATGGAGCTTTCTATGGC
CCAAAGATTGACATACAGATTAAAGATGCGATTGGGCGGTACCACCAGTGTGCAACCATCCAGCTGGATTTCCAG
TTGCCCATCAGATTTAATCTTACTTATGTAAGCCATGATGGTGAGGATAAGAAAAGGCCAGTGATTGTTCATCGA
GCCATCTTGGGATCAGTGGAAAGAATGATTGCTATCCTCACAGAAAACTATGGGGGCAAATTGGCCCCCTTTTGG
CTGTCCCCTCGCCAGGTAATGGTAGTTCCAGTGGGACCAACCTGTGATGAATATGCCCAAAACGTACGACAACAA
TTCCACGATGCCAAATTCATGGCAGACATTGATCTGGATCCAGGCTGTACATTGAATAAAAAGATTCGAAATGCA
CAGTTAGCACAGTATAACTTCATTTTAGTTGTTGGTGAAAAAGAGAAAATCACTGGCACTGTTAATATCCGCACA
AGAGACAATAAGGTCCACGGGGAACGCACCATTTCTGAAACTATCGAGCGGCTACAGCAGCTCAAAGAGTTCCGC
AGCAAACAGGCAGAAGAAGAATTT**TAA**TGAAAAAATTACCCAGATTGGCTCCATGGAAAAGGAGGAACAGCGTTT
CCGTAAAATTGACTTTGTACTCGAAAACGTCAATTTATATTGAACTTGGAGGAGGAGTTTGGCAAAGTCTGAAAT
AGGTCAACCTGCAGGCGTAACTATTTTTGACCTAGTCAGTTTTTAAACAATGTGCATTTGAAGGAGTTAATTAAA
AGAGAGCCAATAAAATGATTTTACTCATTCAGTATCTGAGTACTGGAAGTGAAACATGAGGAATGCTTTAGTGTA
ATGTGGGAGAACTTTTTTGTAAATTTAATGCAATTGAAAAAGTTTTCAAATTCAATTAAGATAACTAGAATTGGT
TATGGTGTAACCCGAATTC

FIGURE 252

MGGEEKPIGAGEEKQKEGGKKKNKEGSGDGGRAELNPWPEYIYTRLEMYNILKAEHDSILAEKAEKDSKPIKVTL
PDGKQVDAESWKTTPYQIACGISQGLADNTVIAKVNNVVWDLDRPLEEDCTLELLKFEDEEAQAVYWHSSAHIMG
EGMERVYGGCLCYGPPIENGFYYDMYLEEGGVSSNDFSSLEALCKKIIKEKQAFERLEVKKETLLAMFKYNKFKC
RILNEKVNTPTTTVYRCGPLIDLCRGPHVRHTGKIKALKIHKNSSTYWEGKADMETLQRIYGISFPDPKMLKEWE
KFQEEAKNRDHRKIGRDQELYFFHELSPGSCFFLPKGVYIYNALIEFIRSEYRKRGFQEVVTPNIFNSRLWMTSG
HWQHYSENMFSFEVEKELFALKPMNCPGHSLMFDHRPRSWRELPLRLADFGGLHRNELSGALTGLTRVRRFQQDD
AHIFCAMEQIEDEIKGCLDFLRTVYSVFGFSFKLNLSTRPEKFLGDIEVWDQAEKQLENSLNEFGEKWELNSGDG
AFYGPKIDIQIKDAIGRYHQCATIQLDFQLPIRFNLTYVSHDGEDKKRPVIVHRAILGSVERMIAILTENYGGKL
APFWLSPRQVMVVPVGPTCDEYAQNVRQQFHDAKFMADIDLDPGCTLNKKIRNAQLAQYNFILVVGEKEKITGTV
NIRTRDNKVHGERTISETIERLQQLKEFRSKQAEEEF

FIGURE 253A

GAATTCGGGTGGAGTCCTGAAGGAGGGCCTGATGTCTTCATCATTCTCAAATTCTTGTAAGCTCTGCGTCGGGTG
AAACCAGACAAAGCCGCGAGCCCAGGGATGGGAGCACGCGGGGGACGGCCTGCCGGCGGGGACGACAGCATTGCG
CCTGGGTGCAGCAGTGTGCGTCTCGGGGAAGGGAAGATATTTTAAGGCGTGTCTGAGCAGACGGGGAGGCTTTTC
CAAACCCAGGCAGCTTCGTGGCGTGTGCGGTTTCGACCCGGTCACACAAAGCTTCAGCATGTCATGTGAGGACGG
TCGGGCCCTGAAAGGAACGCTCTCGGAATTGGCCGCGGAAACCGATCTGCCCGTTGTGTTTGTGAAACAGAGAAA
GATAGGCGGCCATGGTCCAACCTTGAAGGCTTATCAGGAGGGCAGACTTCAAAAGCTACTAAAA**ATG**AACGGCCC
TGAAGATCTTCCCAAGTCCTATGACTATGACCTTATCATCATTGGAGGTGGCTCAGGAGGTCTGGCAGCTGCTAA
GGAGGCAGCCCAATATGGCAAGAAGGTGATGGTCCTGGACTTTGTCACTCCCACCCCTCTTGGAACTAGATGGGG
TCTTGGAGGAACATGTGTGAATGTGGGTTGCATACCTAAAAAACTGATGCATCAAGCAGCTTTGTTAGGACAAGC
CCTGCAAGACTCTCGAAATTATGGATGGAAAGTCGAGGAGACAGTTAAGCATGATTGGGACAGAATGATAGAAGC
TGTACAGAATCACATTGGCTCTTTGAATTGGGGCTACCGAGTAGCTCTGCGGGAGAAAAAAGTCGTCTATGAGAA
TGCTTATGGGCAATTTATTGGTCCTCACAGGATTAAGGCAACAAATAATAAAGGCAAAGAAAAAATTTATTCAGC
AGAGAGTTTTCTCATTGCCACTGGTGAAAGACCACGTTACTTGGGCATCCCTGGTGACAAAGAATACTGCATCAG
CAGTGATGATCTTTTCTCCTTGCCTTACTGCCCGGGTAAGACCCTGGTTGTTGGAGCATCCTATGTCGCTTTGGA
GTGCGCTGGATTTCTTGCTGGTATTGGTTTAGGCGTCACTGTTATGGTTAGGTCCATTCTTCTTAGAGGATTTGA
CCAGGACATGGCCAACAAAATTGGTGAACACATGGAAGAACATGGCATCAAGTTTATAAGACAGTTCGTACCAAT
TAAAGTTGAACAAATTGAAGCAGGGACACCAGGCCGACTCAGAGTAGTAGCTCAGTCCACCAATAGTGAGGAAAT
CATTGAAGGAGAATATAATACGGTGATGCTGGCAATAGGAAGAGATGCTTGCACAAGAAAAATTGGCTTAGAAAC
CGTAGGGGTGAAGATAAATGAAAAGACTGGAAAAATACCTGTCACAGATGAAGAACAGACCAATGTGCCTTACAT
CTATGCCATTGGCGATATATTGGAGGATAAGGTGGAGCTCACCCCAGTTGCAATCCAGGCAGGAAGATTGCTGGC
TCAGAGGCTCTATGCAGGTTCCACTGTCAAGTGTGACTATGAAAATGTTCCAACCACTGTATTTACTCCTTTGGA
ATATGGTGCTTGTGGCCTTTCTGAGGAGAAAGCTGTGGAGAAGTTTGGGGAAGAAAATATTGAGGTTTACCATAG
TTACTTTTGGCCATTGGAATGGACGATTCCGTCAAGAGATAACAACAAATGTTATGCAAAAATAATCTGTAATAC
TAAAGACAATGAACGTGTTGTGGGCTTTCACGTACTGGGTCCAAATGCTGGAGAAGTTACACAAGGCTTTGCAGC
TGCGCTCAAATGTGGACTGACCAAAAAGCAGCTGGACAGCACAATTGGAATCCACCCTGTCTGTGCAGAGGTATT
CACAACATTGTCTGTGACCAAGCGCTCTGGGGCAAGCATCCTCCAGGCTGGCTGC**TGA**GGTTAAGCCCCAGTGTG
GATGCTGTTGCCAAGACTGCAAACCACTGGCTCGTTTCCGTGCCCAAATCCAAGGCGAAGTTTTCTAGAGGGTTC
TTGGGCTCTTGGCACCTGCGTGTCCTGTGCTTACCACCGCCCAAGGCCCCCTTGGATCTCTTGGATAGGAGTTGG
TGAATAGAAGGCAGGCAGCATCACACTGGGGTCACTGACAGACTTGAAGCTGACATTTGGCAGGGCATCGAAGGG
ATGCATCCATGAAGTCACCAGTCTCAAGCCCATGTGGTAGGCGGTGATGGAACAACTGTCAAATCAGTTTTAGCA
TGACCTTTCCTTGTGGATTTTCTTATTCTCGTTGTCAAGTTTTCTAGGGTTGAATTTTTTTCTTTTTTCTCCATG
GTGTTAATGATATTAGAGATGAAAAACGTTAGCAGTTGATTTTTGTCCAAAAGCAAGTCATGGCTAGAGTATCCA
TGCAAGGTGTCTTGTTGCATGGAAGGGATAGTTTGGCTCCCTTGGAGGCTATGTAGGCTTGTCCCGGGAAAGAGA
ACTGTCCTGCAGCTGAAATGGACTGTTCTTTACTGACCTGCTCAGCAGTTTCTTCTCTCATATATTCCCAAAACA
AGTACATCTGCGATCAACTCTAGCCAAATTTGCCCCTGTGTGCTACATGATGGATGATTATTATTTTAAGGTCTG
TTTAGGAAGGGAAATGGCTACTTGGCCAGCCATTGCCTGGCATTTGGTAGTATAGTATGATTCTCACCATTATTT
GTCATGGAGGCAGACATACACCAGAAATGGGGGAGAAACAGTACATATCTTTCTGTCTTTAGTTTATTGTGTGCT
GGTCTAAGCAAGCTGAGATCATTTGCAATGGAAAACACGTAACTTGTTTAAAAGTTTTTCTGGTAGCTTTAGCTT
TATGCTAAAAAAAATAATGACATTGGGTATCTATTTCTTTCTAAGACATACATTAGTAGGAAAATAAGTCTTTTC
ATGCTTATGATTTAGCTGTTTTGTGGTAATTGCTTTTTAAAGGAAGTTATTAATATCATAAGTTATTATTAATAT
TTTGAACACAGGTGGATGTGAAGGATTTTCATTTAAAAACCAAGTGGTTTTGACTTTTTCTGTTGAATGAACAAC
TGTGCCTTGTGGAATTTTTGCAGAAGTGTTTATGCTTTGTTAGCATTTCAACTTGCATTATTATAAAGAGGTATT
AATGCCTCAGTTATGTGTTTGTCAATGTACTGGCTGAGGATTCTATCTCAGCTGTCTTTTCTAACTGTGTAGGTT
GAGTTTTGAACACGTGCTTGTGGACATCAGCCTCCTGCCAGCAGTTCTTGAAGCTTCTTTTTCATTCCTGCTACT
CTACCTGTATTTCTCAGTTGCAGCACTGAGTGGTCAAAATACATTTCTGGGCCACCTCAGGGAACCCATGCATCT
GCCTGGCATTTAGGCAGCAGAGCCCCTGACCGTCCCCCACAGGCTCTGCCTCACGTCCTCATCTCATTTGGCTGT
GTAAAGAAATGGGAAAAGGGAAAAGGAGAGAGCAATTGAGGCAGTTGACCATATTCAGTTTTATTTATTTATTTT
TAATTTGTTTTTTTCTCCAAGTCCACCAGTCTCTGAAATTAGAACAGTAGGCGGTATGAGATAATCAGGCCTAAT

FIGURE 253B

CATGTTGTGATTCTCTTTTCTTAGTGGAGTGGAATGTTCTATCCCCACAAGAAGGATTATATCTTATAGACTTGT
CTTGTTCAGATTCTGTATTTACCCATTTTATTGAAACATATACTAAGTTCCATGTATTTTTGTTACAAATCTTCT
GAAAAAAAACAAAACAATGTGAAACATTAAAATTAAAAGGCATTAATAATAAAAAAAAAAAAAAAAACCCGAATT
C

FIGURE 254

MNGPEDLPKSYDYDLIIIGGGSGGLAAAKEAAQYGKKVMVLDFVTPTPLGTRWGLGGTCVNVGCIPKKLMHQAAL
LGQALQDSRNYGWKVEETVKHDWDRMIEAVQNHIGSLNWGYRVALREKKVVYENAYGQFIGPHRIKATNNKGKEK
IYSAESFLIATGERPRYLGIPGDKEYCISSDDLFSLPYCPGKTLVVGASYVALECAGFLAGIGLGVTVMVRSILL
RGFDQDMANKIGEHMEEHGIKFIRQFVPIKVEQIEAGTPGRLRVVAQSTNSEEIIEGEYNTVMLAIGRDACTRKI
GLETVGVKINEKTGKIPVTDEEQTNVPYIYAIGDILEDKVELTPVAIQAGRLLAQRLYAGSTVKCDYENVPTTVF
TPLEYGACGLSEEKAVEKFGEENIEVYHSYFWPLEWTIPSRDNNKCYAKIICNTKDNERVVGFHVLGPNAGEVTQ
GFAAALKCGLTKKQLDSTIGIHPVCAEVFTTLSVTKRSGASILQAGC

FIGURE 255

CGGCCACGAGGCGGAATCCCTTCTGCTCTCCCAGCGCAGCGCCGCCGCCCGGCCCCTCCAGCTTCCCGGACC**ATG**

GCCAACCTGGAGCGCACCTTCATCGCCATCAAGCCGGACGGCGTGCAGCGCGGCCTGGTGGGCGAGATCATCAAG
CGCTTCGAGCAGAAGGGATTCCGCCTCGTGGCCATGAAGTTCCTCCGGGCCTCTGAAGAACACCTGAAGCAGCAC
TACATTGACCTGAAAGACCGACCATTCTTCCCTGGGCTGGTGAAGTACATGAACTCAGGGCCGGTTGTGGCCATG
GTCTGGGAGGGGCTGAACGTGGTGAAGACAGGCCGAGTGATGCTTGGGGAGACCAATCCAGCAGATTCAAAGCCA
GGCACCATTCGTGGGGACTTCTGCATTCAGGTTGGCAGGAACATCATTCATGGCAGTGATTCAGTAAAAAGTGCT
GAAAAAGAAATCAGCCTATGGTTTAAGCCTGAAGAACTGGTTGACTACAAGTCTTGTGCTCATGACTGGGTCTAT
GAA**TAA**GAGGTGGACACAACAGCAGTCTCCTTCAGCACGGCGTGGTGTGTCCCTGGACACAGCTCTTCATTCCAT
TGACTTAGAGGCAACAGGATTGATCATTCTTTTATAGAGCATATTTGCCAATAAAGCTTTTGGAAGCCGG

FIGURE 256

MANLERTFIAIKPDGVQRGLVGEIIKRFEQKGFRLVAMKFLRASEEHLKQHYIDLKDRPFFPGLVKYMNSGPVVA
MVWEGLNVVKTGRVMLGETNPADSKPGTIRGDFCIQVGRNIIHGSDSVKSAEKEISLWFKPEELVDYKSCAHDWV
YE

FIGURE 257

GAAGGCCGCACCGTACTGGGCGGGGGTCTGGGGAGCGCAGCAGCC**ATG**GCAAGCCGTCTCCTGCTCAACAACGGC
GCCAAGATGCCCATCCTGGGGTTGGGTACCTGGAAGTCCCCTCCAGGGCAGGTGACTGAGGCCGTGAAGGTGGCC
ATTGACGTCGGGTACCGCCACATCGACTGTGCCCATGTGTACCAGAATGAGAATGAGGTGGGGGTGGCCATTCAG
GAGAAGCTCAGGGAGCAGGTGGTGAAGCGTGAGGAGCTCTTCATCGTCAGCAAGCTGTGGTGCACGTACCATGAG
AAGGGCCTGGTGAAAGGAGCCTGCCAGAAGACACTCAGCGACCTGAAGCTGGACTACCTGGACCTCTACCTTATT
CACTGGCCGACTGGCTTTAAGCCTGGGAAGGAATTTTTCCCATTGGATGAGTCGGGCAATGTGGTTCCCAGTGAC
ACCAACATTCTGGACACGTGGGCGGCCATGGAAGAGCTGGTGGATGAAGGGCTGGTGAAAGCTATTGGCATCTCC
AACTTCAACCATCTCCAGGTGGAGATGATCTTAAACAAACCTGGCTTGAAGTATAAGCCTGCAGTTAACCAGATT
GAGTGCCACCCATATCTCACTCAGGAGAAGTTAATCCAGTACTGCCAGTCCAAAGGCATCGTGGTGACCGCCTAC
AGCCCCCTCGGCTCTCCTGACAGGCCCTGGGCCAAGCCCGAGGACCCTTCTCTCCTGGAGGATCCCAGGATCAAG
GCGATCGCAGCCAAGCACAATAAAACTACAGCCCAGGTCCTGATCCGGTTCCCCATGCAGAGGAACTTGGTGGTG
ATCCCCAAGTCTGTGACACCAGAACGCATTGCTGAGAACTTTAAGGTCTTTGACTTTGAACTGAGCAGCCAGGAT
ATGACCACCTTACTCAGCTACAACAGGAACTGGAGGGTCTGTGCCTTGTTGAGCTGTACCTCCCACAAGGATTAC
CCCTTCCATGAAGAGTTT**TGA**AGCTGTGGTTGCCTGCTCGTCCCCAAGTGACCTATACCTGTGTTTCTTGCCTCA
TTTTTTTCCTTGCAAATGTAGTATGGCCTGTGTCACTCAGCAGTGGGACAGCAACCTGTAGAGTGGCCAGCGAGG
GCGTGTCTAGCTTGATGTTGGATCTCAAGAGCCCTGTCAGTAGAGTAGAAGTCTCTTCCAGTTTGCTTTGCCCTT
CTTTCTACCCTGCTGGGGAAAGTACAACCTGAATACCCTTTTCTGACCAAAGAGAAGCAAAATCTACCAGGTCAA
AATAGTGCCACTAACGGTTGAGTTTTGACTGCTTGGAACTGGAATCCTTTCAGCAAGACTTCTCTTTGCCTCAAA
TAAAAAGTGCTTTTGTG

FIGURE 258

MASRLLLNNGAKMPILGLGTWKSPPGQVTEAVKVAIDVGYRHIDCAHVYQNENEVGVAIQEKLREQVVKREELFI
VSKLWCTYHEKGLVKGACQKTLSDLKLDYLDLYLIHWPTGFKPGKEFFPLDESGNVVPSDTNILDTWAAMEELVD
EGLVKAIGISNFNHLQVEMILNKPGLKYKPAVNQIECHPYLTQEKLIQYCQSKGIVVTAYSPLGSPDRPWAKPED
PSLLEDPRIKAIAAKHNKTTAQVLIRFPMQRNLVVIPKSVTPERIAENFKVFDFELSSQDMTTLLSYNRNWRVCA
LLSCTSHKDYPFHEEF

FIGURE 259

GGCACCGCGCGGGACGGAGCTTGGCTGTTGGTCGGTGGGTTCCCGTGCGGCGGCGGCCAAGGAGGAGGAGACACA
GTTGGAGCAGCTCCGTGGGCTGACTGGGGCGAGGCCTCAGCAGCGCGAGCTTGAGTGCGGCCGAGCCTGCGGCGC
CTTCCCCTGCGGGTGGGGACGAGCGGGCCCCGCGGCGTCATCGGCGGCGAGGAGCCGCCGCGCCTCGGCCTAGC**A**
TGTCGGAAGCGGGCGAGGAGCAGCCCATGGAGACGACGGGCGCCACCGAGAACGGACATGAGGCCGTCCCCGAAG
CGAGTCGCGGCCGGGGCTGGACGGGCGCCGCGGCGGGGCTGGAGGCGCGACCGCCGCGCCCCCGAGCGGGAATCA
GAACGGCGCCGAGGGACCAGATCAACGCCAGCAAGAACGAGGAGGACGCGGGAAAAATGTTCGTTGGTGGCCTGA
GCTGGGATACTAGCAAAAAAGATTTAAAAGACTATTTTACTAAATTTGGAGAGGTCGTTGACTGTACAATAAAAA
TGGATCCCAACACTGGACGGTCAAGAGGGTTTGGGTTTATCCTGTTCAAAGATGCAGCCAGTGTGGAGAAGGTCC
TAGACCAGAAGGAGCACAGGCTGGATGGCCGTGTCATTGACCCTAAAAAGGCCATGGCTATGAAGAAGGACCCGG
TCAAGAAAATCTTCGTTGGGGGTCTGAATCCTGAAAGTCCCACTGAGGAAAAGATCAGGGAGTACTTTGGCGAGT
TTGGGGAGATTGAGGCCATTGAATTGCCAATGGATCCAAAGTTGAACAAAAGACGAGGTTTTGTGTTTATCACCT
TTAAAGAAGAAGAACCCGTGAAGAAGGTTCTGGAGAAAAAGTTCCATACTGTCAGTGGAAGCAAGTGTGAGATCA
AGGTGGCCCAGCCCAAAGAAGTCTATCAGCAGCAGCAGTATGGCTCTGGGGGCCGTGGAAACCGCAACCGAGGGA
ACCGAGGCAGCGGAGGTGGTGGTGGAGGTGGAGGTCAGAGTCAGAGTTGGAATCAGGGCTACGGCAACTACTGGA
ACCAGGGCTACGGCTACCAGCAGGGCTACGGGCCTGGCTATGGCGGCTACGACTACTCGCCCTATGGCTATTACG
GCTACGGCCCCGGCTACGACTACAGTCAGGGTAGTACAAACTACGGCAAGAGCCAGCGACGTGGTGGCCATCAGA
ATAACTACAAGCCATAC**TGA**GGCGGCCAAGGGAGCGACCAACTGATCGCACACATGCTTTGTTTGGATATGGAGT
GAACACAATTATGTACCAAATTTAACTTGGCAAACTTTCTATTGCCTGTCCCATGTGCATCTTATTTAAAATTTC
CCCCATGGAAATCACTCTCCTGTTGACTATTTCCAGAGCTCTAGGTGTTTAGGCAGCGTGTGGTGTCTGAGAGGC
CATAGCGCCATCATGGGCTGATTTTTATTACCAGGTCCCCCAGAAGCAGGTGAGAGGCTCTGCTTCCTGCTGCCG
CTCTGCAGCCTGGACCTGTGGACCCTGGTTGTAAAGAGTAAATTGTATCTTAGGAAACCAGTGTCACCTTTTTTT
CACCTTTTAATTTTATATTATTTGCGTCATACATTTCCTGTAACGGAAGTGTTAATTTTACTGTACTTTTTGGTA
CCCCTTTTGGGAATCTAATGTATTGTAAGGTATTTTACACGTGTCCTGATTTTGCCACAACCTGGATATTGAAGC
TATCCAAGCTTTTGAAATAAAATTTAAAAACCCCAAGCCTGGGTGAGTGTGGGAAAAAAAAAAAAAAA

FIGURE 260

MSEAGEEQPMETTGATENGHEAVPEASRGRGWTGAAAGLEARPPRPRAGIRTAPRDQINASKNEEDAGKMFVGGL
SWDTSKKDLKDYFTKFGEVVDCTIKMDPNTGRSRGFGFILFKDAASVEKVLDQKEHRLDGRVIDPKKAMAMKKDP
VKKIFVGGLNPESPTEEKIREYFGEFGEIEAIELPMDPKLNKRRGFVFITFKEEEPVKKVLEKKFHTVSGSKCEI
KVAQPKEVYQQQQYGSGGRGNRNRGNRGSGGGGGGGGQSQSWNQGYGNYWNQGYGYQQGYGPGYGGYDYSPYGYY
GYGPGYDYSQGSTNYGKSQRRGGHQNNYKPY

FIGURE 261

GCCGGGGAAGTCATGCTCGCTTCACGGAGGCAATAGCTAGCCGGTGTCTGTGGGAGGTTATGTTTATTTGAGACT
TCTCCATCGGGATCGCCTGGTGTCACCAAGTGTCCACTGGTACTGAGGTTTGCTGCCTGCCTTCTTGCC**ATG**TCT
AACGAAGTAGAAACAAGTGCAACCAATGGTCAGCCCGACCAACAGGCCGCACCAAAAGCACCCTCAAAGAAGGAA
AAAAAGAAAGGCCCTGAAAAGACAGATGAATATCTCCTAGCAAGGTTCAAAGGCGATGGCGTAAAATATAAGGCC
AAGCTGATTGGCATTGATGATGTGCCAGATGCAAGAGGGGATAAAATGAGCCAAGACTCTATGATGAAACTAAAG
GGAATGGCGGCACGTGGTCGGTCTCAGGGACAACACAAACAAAGGATCTGGGTCAACATTTCCCTTTCTGGGATA
AAAATAATTGATGAGAAAACTGGGGTAATAGAGCATGAACATCCAGTAAATAAGATTTCTTTCATTGCCCGTGAT
GTGACAGACAACCGGGCATTTGGTTACGTGTGTGGAGGAGAAGGCCAGCATCAGTTTTTTACCATAAAAACCGGG
CAACAGGCTGAACCATTAGTTGTTGATCTTAAAGACCTTTTTCAAGTTATCTATAATGTAAAGAAAAAGGAAGAA
GAAAAGAAAAAGATAGAGGAAGCCAGCAAAGCAGTTGAGAATGGGAGTGAGGCCCTAAGGATTCTAGATGACCAA
ACTAACAAACTGAAATCGGGTGTTGACCAGATGGATTTGTTTGGGGACATGTCTACACCTCCTGACCTAAATAGT
CCAACAGAAAGCAAAGATATCCTGTTAGTGGATCTAAACTCTGAAATCGACACCAATCAGAATTCTTTAAGAGAA
AATCCATTCTTAACAAACGGCATCACCTCCTGTTCTCTTCCTCGACCAACGCCTCAGGCATCCTTCTTGCCTGAA
AATGCCTTTTCTGCCAATCTCAACTTCTTTCCCACCCCTAATCCTGATCCTTTCCGTGACGATCCTTTCACACAG
CCAGACCAATCGACACCTTCTTCGTTTGATTCTCTCAAATCTCCAGATCAGAAGAAAGAGAATTCGAGTAGCTCG
TCTACTCCGCTGAGTAATGGGCCCCTGAATGGTGATGTTGACTACTTTGGTCAGCAATTTGACCAGATCTCTAAC
CGGACTGGCAAACAGGAAGCTCAGGCAGGCCCATGGCCCTTTTCAAGTTCGCAAACCCAGCCAGCAGTGAGAACT
CAAAATGGGGTATCTGAAAGAGAACAGAACGGCTTCTCTGTCAAATCCTCCCCGAACCCTTTTGTGGGAAGCCCT
CCCAAAGGACTGTCCATACAGAATGGCGTAAAGCAGGACTTGGAAAGCTCTGTCCAGTCCTCACCACATGACTCC
ATAGCCATTATCCCACCTCCACAAAGTACCAAACCAGGAAGAGGCAGAAGGACTGCTAAGTCTTCAGCCAATGAC
TTGCTTGCATCAGACATCTTTGCTCCTCCCGTCTCAGAACCTTCAGGCCAGGCGTCACCCACAGGACAACCTACA
GCCCTGCAGCCCAACCCTCTGGATCTCTTCAAAACAAGTGCTCCTGCCCCAGTGGGGCCCCTGGTGGGTCTAGGT
GGTGTAACTGTCACACTCCCTCAGGCAGGACCATGGAACACAGCATCTTTGGTCTTCAATCAGTCCCCTTCAATG
GCTCCGGGAGCCATGATGGGTGGTCAACCTTCAGGTTTTAGTCAGCCCGTCATTTTTGGTACAAGTCCAGCTGTT
TCAGGTTGGAACCAGCCTTCACCCTTTGCAGCCTCAACTCCCCCTCCAGTGCCTGTTGTCTGGGGCCCTTCTGCA
TCTGTGGCACCCAATGCTTGGTCAACAACAAGCCCTTTGGGGAATCCTTTTCAGAGCAATATTTTTCCAGCTCCT
GCTGTGTCCACTCAGCCCCCATCCATGCACTCCTCTCTCCTGGTCACTCCTCCTCAGCCACCTCCCAGAGCTGGC
CCTCCCAAGGACATCTCCAGTGATGCCTTCACTGCCTTAGACCCACTTGGGGATAAAGAGATCAAGGATGTGAAA
GAAATGTTTAAGGATTTCCAACTGCGGCAGCCACCTGCTGTGCCCGCGCGGAAGGGAGAGCAGACTTCTTCTGGG
ACTTTGAGTGCCTTTGCCAGTTATTTCAACAGCAAGGTTGGCATTCCTCAGGAGAATGCAGACCATGATGACTTT
GATGCTAATCAACTATTGAACAAGATCAATGAACCACCAAAGCCAGCTCCCAGACAAGTTTCCCTGCCAGTTACC
AAATCTACTGACAATGCATTTGAGAACCCTTTCTTTAAAGATTCTTTTGGTTCATCACAAGCCTCTGTGGCTTCT
TCTCAACCTGTATCTTCTGAGATGTATAGGGATCCATTTGGAAATCCTTTTGCC**TAA**ATTCTGAACTTGGTCTGC
AGACCATCCAGAGGAATAAAAAGGTTGGCCTTAGTAGTCAAAAACAAAGCTGATAGCCAGACACGTTCTGATTTC
TGCCCTTGTTCCAGCTTTGACGTATTATCTGTTGCCTTATTTCTCATTGCCTCTTCTACTTGTAAAATGCTTTTC
ACTTTCTGTCTAGGTTAAAGCTAAACTGAATCTATGGCTTTAAATAAATTAAGATCCTAAACTCTCTAGCTTAAG
TGTAAATGAAGTACAGTAGTTTCCCTACTGAACCCTACCTCTTGTGTCCCTGGAACCTTCTAGAACACCTGCCTT
CTACCCTCTGGTTGGGAGATGCAGCCACCACATCCCTTCATATCATACTGTTTTGAATAAATTTTCAAATCCTTA
TTGTTCAGAGTTGTTTGGGGGTTCTGTTTCAGAGCATAAAACCTAAAGGTTATAGTAGAACAAGGCACCTTCTTA
AAAGAAATCTTGCTTCAGACCATCAGTTACAGAGAATTTCCTAAAGTAAAATTGAAGCAACTACAACTTCTCCTT
AGACACTTTGGAATCTAACCACTTAAGGACCTTTTTAAAGAGATAGCTTCTCTTCTTTCTGAAGATCAATTTCTC
CCAAGGCCAAGATTGTCCTTTTCTCCCATTTCTTGCTAGCTATTGCAAATGAGGGAAGAACATTATTCATCTCTC
CTCCCCTTTTTTTTCTGATTCTTTTTTCAGTCAGTTTTGCTCCTGGGTTCAAGTAGTATTACCACCCTTTCACAA
GCAACAGACTCTCACAGGGCAAAAAAAAAAAAAAAAAAAAAA

FIGURE 262

MSNEVETSATNGQPDQQAAPKAPSKKEKKKGPEKTDEYLLARFKGDGVKYKAKLIGIDDVPDARGDKMSQDSMMK
LKGMAARGRSQGQHKQRIWVNISLSGIKIIDEKTGVIEHEHPVNKISFIARDVTDNRAFGYVCGGEGQHQFFTIK
TGQQAEPLVVDLKDLFQVIYNVKKKEEEKKKIEEASKAVENGSEALRILDDQTNKLKSGVDQMDLFGDMSTPPDL
NSPTESKDILLVDLNSEIDTNQNSLRENPFLTNGITSCSLPRPTPQASFLPENAFSANLNFFPTPNPDPFRDDPF
TQPDQSTPSSFDSLKSPDQKKENSSSSSTPLSNGPLNGDVDYFGQQFDQISNRTGKQEAQAGPWPFSSSQTQPAV
RTQNGVSEREQNGFSVKSSPNPFVGSPPKGLSIQNGVKQDLESSVQSSPHDSIAIIPPPQSTKPGRGRRTAKSSA
NDLLASDIFAPPVSEPSGQASPTGQPTALQPNPLDLFKTSAPAPVGPLVGLGGVTVTLPQAGPWNTASLVFNQSP
SMAPGAMMGGQPSGFSQPVIFGTSPAVSGWNQPSPFAASTPPPVPVVWGPSASVAPNAWSTTSPLGNPFQSNIFP
APAVSTQPPSMHSSLLVTPPQPPPRAGPPKDISSDAFTALDPLGDKEIKDVKEMFKDFQLRQPPAVPARKGEQTS
SGTLSAFASYFNSKVGIPQENADHDDFDANQLLNKINEPPKPAPRQVSLPVTKSTDNAFENPFFKDSFGSSQASV
ASSQPVSSEMYRDPFGNPFA

FIGURE 263

AGATATCTCCGGCGCCGCCCGCCATTTTGACTCCAGTGTCTCGTTTGCAGTCGGCGCTTTAGGGGAACTGTCTTC
CTCCGCAGGCGCGAGGCTGGGTACAGGGTCTATTGTCTGTGGTTGACTCCGTACTTTGGTCTGAGGCCTTCGGGA
GCTTTCCCGAGGCAGTTAGCAGAAGCCGCAGCGGCCGCCCCCGCCCGTCTCCTCTGTCCCTGGGCCCGGGAGGGA
CCAACTTGGCGTCACGCCCCTCAGCGGTCGCCACTCTCTTCTCTGTTGTTGGGTCCGCATCGTATTCCCGGAATC
AGACGGTGCCCCATAG**ATG**GCCAGCTTTCCCCCGAGGGTCAACGAGAAAGAGATCGTGAGATTACGTACTATAGG
TGAACTTTTAGCTCCTGCAGCTCCTTTTGACAAGAAATGTGGTCGTGAAAATTGGACTGTTGCTTTTGCTCCAGA
TGGTTCATACTTTGCTTGGTCACAAGGACATCGCACAGTAAAGCTTGTTCCGTGGTCCCAGTGCCTTCAGAACTT
TCTCTTGCATGGCACCAAGAATGTTACCAATTCAAGCAGTTTAAGATTGCCAAGACAAAATAGTGATGGTGGTCA
GAAAAATAAGCCTCGTGAACATATTATAGACTGTGGAGATATAGTCTGGAGTCTTGCTTTTGGGTCATCAGTTCC
AGAAAAACAGAGTCGCTGTGTAAATATAGAATGGCATCGCTTCAGATTTGGACAAGATCAGCTACTTCTTGCTAC
AGGGTTGAACAATGGGCGTATCAAAATATGGGATGTATATACAGGAAAACTCCTCCTTAACTTGGTAGATCATAC
TGAAGTGGTCAGAGATTTAACTTTTGCTCCAGATGGAAGCTTGATCCTGGTGTCAGCTTCAAGAGACAAAACTCT
CAGAGTATGGGACCTGAAAGATGATGGAAACATGATGAAAGTATTGAGGGGGCATCAGAATTGGGTGTACAGCTG
TGCATTCTCTCCTGACTCTTCTATGCTGTGTTCAGTCGGAGCCAGTAAAGCAGTTTTCCTTTGGAATATGGATAA
ATACACCATGATACGGAAACTAGAAGGACATCACCATGATGTGGTAGCTTGTGACTTTTCTCCTGATGGAGCATT
ACTGGCTACTGCATCTTATGATACTCGAGTATATATCTGGGATCCACATAATGGAGACATTCTGATGGAATTTGG
GCACCTGTTTCCCCCACCTACTCCAATATTTGCTGGAGGAGCAAATGACCGGTGGGTACGATCTGTATCTTTTAG
CCATGATGGACTGCATGTTGCAAGCCTTGCTGATGATAAAATGGTGAGGTTCTGGAGAATTGATGAGGATTATCC
AGTGCAAGTTGCACCTTTGAGCAATGGTCTTTGCTGTGCCTTCTCTACTGATGGCAGTGTTTTAGCTGCTGGGAC
ACATGACGGAAGTGTGTATTTTTGGGCCACTCCACGGCAGGTCCCTAGCCTGCAACATTTATGTCGCATGTCAAT
CCGAAGAGTGATGCCCACCCAAGAAGTTCAGGAGCTGCCGATTCCTTCCAAGCTTTTGGAGTTTCTCTCGTATCG
TATT**TAG**AAGATTCTGCCTTCCCTAGTAGTAGGGACTGACAGAATACACTTAACACAAACCTCAAGCTTTACTGA
CTTCAATTATCTGTTTTTAAAGACGTAGAAGATTTATTTAATTTGATATGTTCTTGTACTGCATTTTGATCAGTT
GAGCTTTTAAAATATTATTTATAGACAATAGAAGTATTTCTGAACATATCAAATATAAATTTTTTTAAAGATCTA
ACTGTGAAAACATACATACCTGTACATATTTAGATATAAGCTGCTATATGTTGAATGGACCCTTTTGCTTTTCTG
ATTTTTAGTTCTGACATGTATATATTGCTTCAGTAGAGCCACAATATGTATCTTTGCTGTAAAGTGCAAGGAAAT
TTTAAATTCTGGGACACTGAGTTAGATGGTAAATACTGACTTACGAAAGTTGAATTGGGTGAGGCGGGCAAATCA
CCTGAGGTCAGCAGTTTGAGACTAGCCTGGCAAACATGATGAAACCCTGTCTCTACTAAAAATACAAAAAAAAAA
AAAATTAGCCAGGCGTGGTGGTGCACACCTGTAGTCCTAGCTACTTGGGAGGCTGAGGCAGGAGAATTGCTTGAA
CCCAGGAGGTGGAGGTTGCAGTAAGCCAAGATCACACCACTGCACTCCAACCTGGACAACAGAGCGAGACTCCAT
CTCAAAAAAAAAAAAAAAATTGTGTTGCCTCATACGAAATGTATTTGGTTTTGTTGGAGAGTGTCAGACTGATCTG
GAAGTGAAACACAGTTTATGTACAGGGAAAAGGATTTTATTATCCTTAGGAATGTCATCCAAGACGTAGAGCTTG
AATGTGACGTTATTTAAAAACAACAACAAAGAAGGCAGAGCCAGGATATAACTAGAAAAAGGATGTCTTTTTTTT
TTTTTTTACTCCCCCTCTAAACACTGCTGCTGCCTTAATTTTAGAAAGCAGCTTACTAGTTTACCCTTGTGGTAT
AAAGTATTATAAATTGTTGTGAATTTGAAGAATCCGTCTACTGTATTATTGCTAAATATTTTGTTTATACTAAGG
GACAATTATTTTAAGACCATGGATTTAAAAAAAAAAAAAAAAACTCTGTTTCTGCAGGGGATGATATTGGTGAGT
TGCCAAAGAAGCAATACAGCATATCTGCTTTTGCCTTCTGTTGTTTATCTTACCTGCAGATATTAAGAATGTATG
CATTATGTAAAATGCTCAATTATATATTTTTGTTGAGTTTTTTAATTAAAGACTTGTAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 264

MASFPPRVNEKEIVRLRTIGELLAPAAPFDKKCGRENWTVAFAPDGSYFAWSQGHRTVKLVPWSQCLQNFLLHGT
KNVTNSSSLRLPRQNSDGGQKNKPREHIIDCGDIVWSLAFGSSVPEKQSRCVNIEWHRFRFGQDQLLLATGLNNG
RIKIWDVYTGKLLLNLVDHTEVVRDLTFAPDGSLILVSASRDKTLRVWDLKDDGNMMKVLRGHQNWVYSCAFSPD
SSMLCSVGASKAVFLWNMDKYTMIRKLEGHHHDVVACDFSPDGALLATASYDTRVYIWDPHNGDILMEFGHLFPP
PTPIFAGGANDRWVRSVSFSHDGLHVASLADDKMVRFWRIDEDYPVQVAPLSNGLCCAFSTDGSVLAAGTHDGSV
YFWATPRQVPSLQHLCRMSIRRVMPTQEVQELPIPSKLLEFLSYRI

FIGURE 265

GCGCGAGGGAGGCGAGCCGGAGCCCGAGCACTAGCAGCAGCCGGAGTCGGCGGAAAGCACCCGGGCGCAGCCGGA
GCCGGTGCCGCAGCTGCG**ATG**GCCGTGGCCGTGGGGAGACCGTCTAATGAAGAGCTTCGAAACTTGTCTTTGTCT
GGCCATGTGGGATTTGACAGCCTCCCTGACCAGCTGGTCAACAAGTCTACTTCTCAAGGATTCTGTTTCAACATC
CTTTGTGTTGGTGAGACAGGCATTGGCAAATCCACGTTAATGGACACTTTGTTCAACACCAAATTTGAAAGTGAC
CCAGCTACTCACAATGAACCAGGTGTTCGGTTAAAAGCCAGAAGTTATGAGCTTCAGGAAAGCAATGTACGGCTG
AAGTTAACCATTGTTGACACCGTGGGATTTGGAGACCAGATAAATAAAGATGACAGCTATAAGCCGATAGTAGAA
TATATTGATGCCCAGTTCGAGGCCTACCTGCAAGAGGAATTGAAGATTAAACGTTCTCTCTTCAACTACCATGAC
ACGAGGATCCATGCCTGCCTCTACTTTATTGCCCCTACTGGACATTCACTAAAGTCCCTGGATCTGGTCACCATG
AAAAAGCTGGACAGTAAGGTGAACATCATTCCAATAATTGCAAAAGCTGACACCATTGCCAAGAATGAACTGCAC
AAATTCAAGAGTAAGATCATGAGTGAACTGGTCAGCAATGGGGTCCAGATATATCAGTTTCCCACTGATGAAGAA
ACGGTGGCAGAGATTAACGCAACAATGAGTGTCCATCTCCCATTTGCAGTGGTTGGCAGCACCGAAGAGGTGAAG
ATTGGCAACAAGATGGCAAAGGCCAGGCAGTACCCCTGGGGGTGTGGTGCAGGTTGAGAATGAAAATCATTGCGAT
TTTGTGAAACTTCGAGAGATGCTGATCCGCGTGAACATGGAGGACTTGCGAGAGCAGACTCACACCCGCCACTAT
GAATTGTACCGACGCTGTAAGCTTGAAGAGATGGGGTTCAAGGACACTGACCCTGACAGCAAACCCTTCAGTCTT
CAGGAGACATATGAAGCAAAAAGGAATGAATTCCTGGGAGAACTGCAGAAGAAAGAAGAAGAAATGAGACAAATG
TTTGTTATGAGAGTGAAGGAGAAAGAAGCTGAACTTAAGGAGGCAGAGAAAGAGCTTCACGAGAAGTTTGACCTT
CTAAAGCGGACACACCAAGAAGAAAAGAAGAAAGTGGAAGACAAGAAGAAGGAGCTTGAGGAGGAGGTGAACAAC
TTCCAGAAGAAGAAAGCAGCGGCTCAGTTACTACAGTCCCAGGCCCAGCAATCTGGGGCCCAGCAAACCAAGAAA
GACAAGGATAAGAAAAATGCAAGCTTCACA**TAA**AGCCTGGCAAGCCAAGGATGTTCCCGCATTCACCTGCTTTTG
CAGTAATATCGTATCTCTGCCATGTGTGTTCTTTAGTTTTATTTTATTTTATTTTATTTTTTTACCCTTCCTCAA
ACACCAGTAACTATTATTAACTCGTTTTGCTGAATGTTGTTGGGTGGTAGAAAATGATAGAACAAGGGAATAACC
GCGAATGCTCTGTGCAGCTGGACTCTGTTTCCGGAAAGTAAATGATTTGCTTTTTATGCCTGTTCTGAATGGCAG
CACGAAGCAGGCCTGTTACTTGTATGTCGCTTTGGACAGAGGAAAGTGGGGTAAAATGCTACCTGTACGTCTGAC
ATGAAAACTTCTCACCGCCTCAGCAGCTGAACTAAAAACCTGAATAGCCATGACAAGAGTTTGCATTTTCTTGAT
GATTCATCTCCATGAGTGCACAATCCCTGAACTCACTGTCTTTTCTCCACACTTGTCCTAAGCCAAGGTAGATTT
GTACGTAGACAGACTGGTGAGCAAGCATTATATTTTATTTTTACCCTTGCATGACATTTTCATTTTAATCAATAA
CATTATTTGGCCTGAGCTTGTGGGTCTGTTCAGACTGTCTCCTCTCATGGTTTGAAACTGCATCTGAATGCCTGC
CTTCAATCCTGGCCAAGTTGGAGTAGACTGGTATGAGAAAACTATGATTAGTTCACATTTACTGGTGCATCCTTG
ATCCTCTCACAGATAGAGGTCTTAAAGGTTGGATCATGTAACATTGCTTAGTAGAAGAATCTTCTTCTAAGGATG
ATGGGCTTTCTACAGCCTGCTTACCACTAACAGTAAGGAATCTTTCATAAACACACCTCAGTTTGTTCCCAGTGG
GCTTAGAGGGAGGACCTGATGACTGATTCCAGGATACTTGTACTTCTAATAACATTTTTCATGAATCATGAGAAA
ATTTCCACAGATACTTCCCTTAGAAAATTTGCTATAAACTCTGTATCATTGGTAGCACAAATTTGAGCGAGGCCC
TGTCAATTTTAAGGTGGAAATAGGAAGGACCACAACATGACCCGTAAGTCAAGAAGGTAGACATTTCATATCCAG
CTTCCTTGCTTAGTCTCCTTTCAGTATTTGGCAATAAAAGAAAGAAGAAATAGAACAGCTGAAGTCTCAAATCAT
TGTCTGGAATTTTCCTCACCTTGGCTAGCTCCACCTGCTCTTTGTCTAAGGCCCTTGCCTCATCAGGGATTAGAA
CTGGCCCATATGCCAGAACCTGTACTAAATGCCTAATTTGTATGGAAGAGTGCATATTTAATCTCTTTTCTATAC
TGCTCCTTTCTGATGCTTATCCTTTCATCTGTGTGATTGTTTTTTCCCCTCTACTAACAAGATCCTCCCAGCTTT
CTCTCTACATGTAGAAAGGATAACATTTCTCATGAACCCACTGCCCCTCTGCATTTTCCTCACTGGTTAG

FIGURE 266

MAVAVGRPSNEELRNLSLSGHVGFDSLPDQLVNKSTSQGFCFNILCVGETGIGKSTLMDTLFNTKFESDPATHNE
PGVRLKARSYELQESNVRLKLTIVDTVGFGDQINKDDSYKPIVEYIDAQFEAYLQEELKIKRSLFNYHDTRIHAC
LYFIAPTGHSLKSLDLVTMKKLDSKVNIIPIIAKADTIAKNELHKFKSKIMSELVSNGVQIYQFPTDEETVAEIN
ATMSVHLPFAVVGSTEEVKIGNKMAKARQYPWGVVQVENENHCDFVKLREMLIRVNMEDLREQTHTRHYELYRRC
KLEEMGFKDTDPDSKPFSLQETYEAKRNEFLGELQKKEEEMRQMFVMRVKEKEAELKEAEKELHEKFDLLKRTHQ
EEKKKVEDKKKELEEEVNNFQKKKAAAQLLQSQAQQSGAQQTKKDKDKKNASFT

FIGURE 267

ACCCGCGCTCGTACGTGCGCCTCCGCCGGCAGCTCCTGACTCATCGGGGGCTCCGGGTCACATGCGCCCGCGCGG
CCCTATAGGCGCCTCCTCCGCCCGCCGCCCGGGAGCCGCAGCCGCCGCCGCCACTGCCACTCCCGCTCTCTCAGC
GCCGCCGTCGCCACCGCCACCGCCACCGCCACTACCACCGTCTGAGTCTGCAGTCCCGAGATCCCAGCCATC**ATG**

TCCATAGAGAAGATCTGGGCCCGGGAGATCCTGGACTCCCGCGGGAACCCCACAGTGGAGGTGGATCTCTATACT
GCCAAAGGTCTTTTCCGGGCTGCAGTGCCCAGTGGAGCCTCTACGGGCATCTATGAGGCCCTGGAGCTGAGGGAT
GGAGACAAACAGCGTTACTTAGGCAAAGGTGTCCTGAAGGCAGTGGACCACATCAACTCCACCATCGCGCCAGCC
CTCATCAGCTCAGGTCTCTCTGTGGTGGAGCAAGAGAAACTGGACAACCTGATGCTGGAGTTGGATGGGACTGAG
AACAAATCCAAGTTTGGGGCCAATGCCATCCTGGGTGTGTCTCTGGCCGTGTGTAAGGCAGGGGCAGCTGAGCGG
GAACTGCCCCTGTATCGCCACATTGCTCAGCTGGCCGGGAACTCAGACCTCATCCTGCCTGTGCCGGCCTTCAAC
GTGATCAATGGTGGCTCTCATGCTGGCAACAAGCTGGCCATGCAGGAGTTCATGATCCTCCCAGTGGGAGCTGAG
AGCTTTCGGGATGCCATGCGACTAGGTGCAGAGGTCTACCATACACTCAAGGGAGTCATCAAGGACAAATACGGC
AAGGATGCCACCAATGTGGGGGATGAAGGTGGCTTTGCCCCCAATATCCTGGAGAACAGTGAAGCCTTGGAGCTG
GTGAAGGAAGCCATCGACAAGGCTGGCTACACGGAAAAGATCGTTATTGGCATGGATGTTGCTGCCTCAGAGTTT
TATCGTGATGGCAAATATGACTTGGACTTCAAGTCTCCCACTGATCCTTCCCGATACATCACTGGGGACCAGCTG
GGGGCACTCTACCAGGACTTTGTCAGGGACTATCCTGTGGTCTCCATTGAGGACCCATTTGACCAGGATGATTGG
GCTGCCTGGTCCAAGTTCACAGCCAATGTAGGGATCCAGATTGTGGGTGATGACCTGACAGTGACCAACCCAAAA
CGTATTGAGCGGGCAGTGGAAGAAAAGGCCTGCAACTGTCTGCTGCTCAAGGTCAACCAGATCGGCTCGGTCACT
GAAGCCATCCAAGCGTGCAAGCTGGCCCAGGAGAATGGCTGGGGGGGTCATGGTGAGTCATCGCTCAGGAGAGACT
GAGGACACATTCATTGCTGACCTGGTGGTGGGGCTGTGCACAGGCCAGATCAAGACTGGTGCCCCGTGCCGTTCT
GAACGTCTGGCTAAATACAACCAGCTCATGAGAATTGAGGAAGAGCTGGGGGGATGAAGCTCGCTTTGCCGGACAT
AACTTCCGTAATCCCAGTGTGCTG**TGA**TTCCTCTGCTTGCCTGGAGACGTGGAACCTCTGTCTCATCCTCCTGGA
ACCTTGCTGTCCTGATCTGTGATAGTTCACCCCCTGAGATCCCCTGAGCCCCAGGGTGCCCAGAACTTCCCTGAT
TGACCTGCTCCGCTGCTCCTTGGCTTACCTGACCTCTTGCTGTCTCTGCTCGCCCTCCTTTCTGTGCCCTACTCA
TTGGGGTTCCGCACTTTCCACTTCTTCCTTTCTCTTTCTCTCTTCCCTCAGAAACTAGAAATGTGAATGAGGATT
ATTATAAAAGGGGGTCCGTGGAAGAATGATCAGCATCTGTGATGGGAGCGTCAGGGTTGGTGTGCTGAGGTGTTA
GAGAGGGACCATGTGTCACTTGTGCTTTGCTCTTGTCCCACGTGTCTTCCACTTTGCATATGAGCCGTGAACTGT
GCATAGTGCTGGGATGGAGGGGAGTGTTGGGCATGTGATCACGCCTGGCTAATAAGGCTTTAGTGTATTTATTTA
TTTATTTATTTTATTTGTTTTTCATTCATCCCATTAATCATTTCCCCATAACTCAATGGCCTAAAACTGGCCTGA
CTTGGGGGGAACGATGTGTCTGTATTTCATGTGGCTGTAGATCCCAAGATGACTGGGGTGGGAGGTCTTGCTAGAA
TGGGAAGGGTCATAGAAAGGGCCTTGACATCAGTTCCTTTGTGTGTACTCACTGAAGCCTGCGTTGGTCCAGAGC
GGAGGCTGTGTGCCTGGGGGAGTTTTCCTCTATACATCTCTCCCCAACCCTAGGTTCCCTGTTCTTCCTCCAGCT
GCACCAGAGCAACCTCTCACTCCCCATGCCACGTTCCACAGTTGCCACCACCTCTGTGGCATTGAAATGAGCACC
TCCATTAAAGTCTGAATCAGTGC

FIGURE 268

MSIEKIWAREILDSRGNPTVEVDLYTAKGLFRAAVPSGASTGIYEALELRDGDKQRYLGKGVLKAVDHINSTIAP
ALISSGLSVVEQEKLDNLMLELDGTENKSKFGANAILGVSLAVCKAGAAERELPLYRHIAQLAGNSDLILPVPAF
NVINGGSHAGNKLAMQEFMILPVGAESFRDAMRLGAEVYHTLKGVIKDKYGKDATNVGDEGGFAPNILENSEALE
LVKEAIDKAGYTEKIVIGMDVAASEFYRDGKYDLDFKSPTDPSRYITGDQLGALYQDFVRDYPVVSIEDPFDQDD
WAAWSKFTANVGIQIVGDDLTVTNPKRIERAVEEKACNCLLLKVNQIGSVTEAIQACKLAQENGWGVMVSHRSGE
TEDTFIADLVVGLCTGQIKTGAPCRSERLAKYNQLMRIEEELGDEARFAGHNFRNPSVL

FIGURE 269

CAACACAGGGGCAGTCTCCAGGACCTCCACACCATTAACAAGATGAGCCTTGTGCTCCCTTGGGCTCTAGAGAGG
AAGCCCCTCTGAGCCCTCAGCCCCTCTTTCCTCCCTCTCCTAAAGTAATTTGATCCTCAGGAATTTGTTCTGCCC
TCATCTGGCCCTGGCCAGCTCTGCATTTGACAAATGCCAGGAAGAGGAAACTGTTGAGAAAACGGAACTACTGGG
GAAAGGGAGGGCTCACTGAGAACCATCCCGGTAACCCGACCGCCGCTGGTCACC**ATG**AACCACATTGTGCAAACC
TTCTCTCCTGTCAACAGCGGCCAGCCTCCCAACTACGAGATGCTCAAGGAGGAGCAGGAAGTGGCTATGCTGGGG
GGGCCCCACAACCCTGCTCCCCCGACGTCCACCGTGATCCACATCCGCAGCGAGACCTCCGTGCCTGACCATGTC
GTCTGGTCCCTGTTCAACACCCTCTTCATGAACACCTGCTGCCTGGGCTTCATAGCATTCGCCTACTCCGTGAAG
TCTAGGGACAGGAAGATGGTTGGCGACGTGACCGGGGCCCAGGCCTATGCCTCCACCGCCAAGTGCCTGAACATC
TGGGCCCTGATTTTGGGCATCTTCATGACCATTCTGCTCGTCATCATCCCAGTGTTGGTCGTCCAGGCCCAGCGA
TAGATCAGGAGGCATCATTGAGGCCAGGAGCTCTGCCCGTGACCTGTATCCCACGTACTCTATCTTCCATTCCTC
GCCCTGCCCCCAGAGGCCAGGAGCTCTGCCCTTGACCTGTATTCCACTTACTCCACCTTCCATTCCTCGCCCTGT
CCCCACAGCCGAGTCCTGCATCAGCCCTTTATCCTCACACGCTTTTCTACAATGGCATTCAATAAAGTGTATATG
TTTCT

FIGURE 270

MNHIVQTFSPVNSGQPPNYEMLKEEQEVAMLGGPHNPAPPTSTVIHIRSETSVPDHVVWSLFNTLFMNTCCLGFI
AFAYSVKSRDRKMVGDVTGAQAYASTAKCLNIWALILGIFMTILLVIIPVLVVQAQR

FIGURE 271

AGCACTCTCCAGCCTCTCACCGCAAAATTACACACCCCAGTACACCAGCAGAGGAAACTTATAACCTCGGGAGGC
GGGTCCTTCCCCTCAGTGCGGTCACATACTTCCAGAAGAGCGGACCAGGGCTGCTGCCAGCACCTGCCACTCAGA
GCGCCTCTGTCGCTGGGACCCTTCAGAACTCTCTTTGCTCACAAGTTACCAAAAAAAAAAGAGCCAAC**ATG**TTGG
TATTGCTGGCTGGTATCTTTGTGGTCCACATCGCTACTGTTATTATGCTATTTGTTAGCACCATTGCCAATGTCT
GGTTGGTTTCCAATACGGTAGATGCATCAGTAGGTCTTTGGAAAAACTGTACCAACATTAGCTGCAGTGACAGCC
TGTCATATGCCAGTGAAGATGCCCTCAAGACAGTGCAGGCCTTCATGATTCTCTCTATCATCTTCTGTGTCATTG
CCCTCCTGGTCTTCGTGTTCCAGCTCTTCACCATGGAGAAGGGAAACCGGTTCTTCCTCTCAGGGGCCACCACAC
TGGTGTGCTGGCTGTGCATTCTTGTGGGGGTGTCCATCTACACTAGTCATTATGCGAATCGTGATGGAACGCAGT
ATCACCACGGCTATTCCTACATCCTGGGCTGGATCTGCTTCTGCTTCAGCTTCATCATCGGCGTTCTCTATCTGG
TCCTGAGAAAGAAA**TAA**GGCCGGACGAGTTCATGGGGATCTGGGGGGTGGGGAGGAGGAAGCCGTTGAATCTGGG
AGGGAAGTGGAGGTTGCTGTACAGGAAAAACCGAGATAGGGGAGGGGGGAGGGGGAAGCAAAGGGGGGAGGTCAA
ATCCCAAACCATTACTGAGGGGATTCTCTACTGCCAAGCCCCTGCCCTGGGGAGAAAGTAGTTGGCTAGTACTTT
GATGCTCCCTTGATGGGGTCCAGAGAGCCTCCCTGCAGCCACCAGACTTGGCCTCCAGCTGTTCTTAGTGACACA
CACTGTCTGGGGCCCCATCAGCTGCCACAACACCAGCCCCACTTCTGGGTCATGCACTGAGGTCCACAGACCTAC
TGCACTGAGTTAAAATAGCGGTACAAGTTCTGGCAAGAGCAGATACTGTCTTTGTGCTGAATACGCTAAGCCTGG
AAGCCATCCTGCCCTTCTGACCCAAAGCAAAACATCACATTCCAGTCTGAAGTGCCTACTGGGGGGCTTTGGCCT
GTGAGCCATTGTCCCTCTTTGGAACAGATATTTAGCTCTGTGGAATTCAGTGACAAAATGGGAGGAGGAAAGAGA
GTTTGTAAGGTCATGCTGGTGGGTTAGCTAAACCAAGAAGGAGACCTTTTCACAATGGAAAACCTGGGGGATGGT
CAGAGCCCAGTCGAGACCTCACACACGGCTGTCCCTCATGGAGACCTCATGCCATGGTCTTTGCTAGGCCTCTTG
CTGAAAGCCAAGGCAGCTCTTCTGGAGTTTCTCTAAAGTCACTAGTGAACAATTCGGTGGTAAAAGTACCACACA
AACTATGGGATCCAAGGGGCAGTCTTGCAACAGTGCCATGTTAGGGTTATGTTTTTAGGATTCCCCTCAATGCAG
TCAGTGTTTCTTTTAAGTATACAACAGGAGAGAGATGGACATGGCTCATTGTAGCACAATCCTATTACTCTTCCT
CTAACATTTTTGAGGAAGTTTTGTCTAATTATCAATATTGAGGATCAGGGCTCCTAGGCTCAGTGGTAGCTCTGG
CTTAGACACCACCTGGAGTGATCACCTCTTGGGGACCCTGCCTATCCCACTTCACAGGTGAGGCATGGCAATTCT
GGAAGCTGATTAAAACACACATAAACCAAAACCAAACAACAGGCCCTTGGGTGAAAGGTGCTATATAATTGTGAA
GTATTAAGCCTACCGTATTTCAGCCATGATAAGAACAGAGTGCCTGCATTCCCAGGAAAATACGAAAATCCCATG
AGATAAATAAAAATATAGGTGATGGGCAGATCTTTTCTTTAAAATAAAAAAGCAAAAACTCTTGTGGTACCTAGT
CAGATGGTAGACGAGCTGTCTGCTGCCGCAGGAGCACCTCTATACAGGACTTAGAAGTAGTATGTTATTCCTGGT
TAAGCAGGCATTGCTTTGCCCTGGAGCAGCTATTTTAAGCCATCTCAGATTCTGTCTAAAGGGGTTTTTTGGGAA
GACGTTTTCTTTATCGCCCTGAGAAGATCTACCCCAGGGAGAATCTGAGACATCTTGCCTACTTTTCTTTATTAG
CTTTCTCCTCATCCATTTCTTTTATACCTTTCCTTTTTGGGGAGTTGTTATGCCATGATTTTTGGTATTTATGTA
AAAGGATTATTACTAATTCTATTTCTCTATGTTTATTCTAGTTAAGGAAATGTTGAGGGCAAGCCACCAAATTAC
CTAGGCTGAGGTTAGAGAGATTGGCCAGCAAAAACTGTGGGAAGATGAACTTTGTCATTATGATTTCATTATCAC
ATGATTATAGAAGGCTGTCTTAGTGCAAAAAACATACTTACATTTCAGACATATCCAAAGGGAATACTCACATTT
TGTTAAGAAGTTGAACTATGACTGGAGTAAACCATGTATTCCCTTATCTTTTACTTTTTTTCTGTGACATTTATG
TCTCATGTAATTTGCATTACTCTGGTGGATTGTTCTAGTACTGTATTGGGCTTCTTCGTTAATAGATTATTTCAT
ATACTATAATTGTAAATATTTTGATACAAATGTTTATAACTCTAGGGATATAAAAACAGATTCTGATTCCCTTCA
AAAAAAAAAAA

FIGURE 272

MLVLLAGIFVVHIATVIMLFVSTIANVWLVSNTVDASVGLWKNCTNISCSDSLSYASEDALKTVQAFMILSIIFC
VIALLVFVFQLFTMEKGNRFFLSGATTLVCWLCILVGVSIYTSHYANRDGTQYHHGYSYILGWICFCFSFIIGVL
YLVLRKK

FIGURE 273

AGCCAAAAGAGGAAGGGACCGGCCTCCCACGTCCACAGGGACCTGACTTCCACCTCTCTGCCCAGATTTGCTTAT
GTCACTGTCGCCCCGGGACGGGGAGGTGGGGAGCTGAGGGCAAGTCGCGCCCGCCCCTGAAATCCCAGCCGCCTA
GCGATTGGCTGCAAGGGTCTCGGCTTGGCCGCGGATTAATCACACCCGAGGGCTTGAAAGGTGGCTGGGAGCGCC
GGACACCTCAGACGGACGGTGGCCAGGGATCAGGCAGCGGCTCAGGCGACCCTGAGTGTGCCCCCACCCCGCC**ATG**
GCCCGGCTGCTGCAGGCGTCCTGCCTGCTTTCCCTGCTCCTGGCCGGCTTCGTCTCGCAGAGCCGGGGACAAGA
GAAGTCGAAGATGGACTGCCATGGTGGCATAAGTGGCACCATTTACGAGTACGGAGCCCTCACCATTGATGGGGA
GGAGTACATCCCCTTCAAGCAGTATGCTGGCAAATACGTCCTCTTTGTCAACGTGGCCAGCTACTGAGGCCTGAC
GGGCCAGTACATTGAACTGAATGCACTACAGGAAGAGCTTGCACCATTCGGTCTGGTCATTCTGGGCTTTCCCTG
CAACCAATTTGGAAAACAGGAACCAGGAGAGAACTCAGAGATCCTTCCTACCCTCAAGTATGTCCGACCAGGTGG
AGGCTTTGTCCCTAATTTCCAGCTCTTTGAGAAAGGGGATGTCAATGGAGAGAAAGAGCAGAAATTCTACACTTT
CCTAAAGAACTCCTGTCCTCCCACCTCGGAGCTCCTGGGTACATCTGACCGCCTCTTCTGGGAACCCATGAAGGT
TCACGACATCCGCTGGAACTTTGAGAAGTTCCTGGTGGGGCCAGATGGTATACCCATCATGCGCTGGCACCACCG
GACCACGGTCAGCAACGTCAAGATGGACATCCTGTCCTACATGAGGCGGCAGGCAGCCCTGGGGGTCAAGAGGAA
G**TAA**CTGAAGGCCGTCTCATCCCATGTCCACCATGTAGGGGAGGGACTTTGTTCAGGAAGAAATCCGTGTCTCCA
ACCACACTATCTACCCATCACAGACCCCTTTCCTATCACTCAAGGCCCCAGCCTGGCACAAATGGATGCATACAG
TTCTGTGTACTGCCAGGCATGTGGGTGTGGGTGCAATGTGGGTGTTTACACACATGCCTACAGGTATGCGTGATT
GTGTGTGTGTGCATGGGTGTACAGCCACGTGTCTACCTATGTGTCTTTCTGGGAATGTGTACCATCTGTGTGCCT
GCAGCTGTGTAGTGCTGGACAGTGACAACCCTTTCTCTCCAGTTCTCCACTCCAATGATAATAGTTCACTTATAC
CTAAACCCAAAGGAAAAACCAGCTCTAGGTCCAATTGTTCTGCTCTAACTGATACCTCAACCTTGGGGCCAGCAT
CTCCCACTGCCTCCAAATATTAGTAACTATGACTGACGTCCCCAGAAGTTTCTGGGTCTACCACACTCCCCAACC
CCCCACTCCTACTTCCTGAAGGGCCCTCCCAAGGCTACATCCCCACCCCACAGTTCTCCCTGAGAGAGATCAACC
TCCCTGAGATCAACCAAGGCAGATGTGACAGCAAGGGCCACGGACCCCATGGCAGGGGTGGCGTCTTCATGAGGG
AGGGGCCCAAAGCCCTTGTGGGCGGACCTCCCCTGAGCCTGTCTGAGGGGCCAGCCCTTAGTGCATTCAGGCTAA
GGCCCCTGGGCAGGGATGCCACCCCTGCTCCTTCGGAGGACGTGCCCTCACCCCTCACTGGTCCACTGGCTTGAG
ACTCACCCCGTCTGCCCAGTAAAAGCCTTTCTGCAGCAAAAAAAAAAAAAAAAAA

FIGURE 274

MARLLQASCLLSLLLAGFVSQSRGQEKSKMDCHGGISGTIYEYGALTIDGEEYIPFKQYAGKYVLFVNVASYXGL
TGQYIELNALQEELAPFGLVILGFPCNQFGKQEPGENSEILPTLKYVRPGGGFVPNFQLFEKGDVNGEKEQKFYT
FLKNSCPPTSELLGTSDRLFWEPMKVHDIRWNFEKFLVGPDGIPIMRWHHRTTVSNVKMDILSYMRRQAALGVKR
K

FIGURE 275

GGCACGAGGCCTGGGCGGCTCCGCTAGCTGTTTTTCGTCTTCCCTAGGCTATTTCTGCCGGGCGCTCCGCGAAGA
TGCAGCTCAAGCCGATGGAGATCAACCCCGAGATGCTGAACAAAGTGCTGTCCCGGCTGGGGGTCGCCGGCCAGT
GGCGCTTCGTGGACGTGCTGGGGCTGGAAGAGGAGTCTCTGGGCTCGGTGCCAGCGCCTGCCTGCGCGCTGCTGC
TGCTGTTTCCCCTCACGGCCCAGCATGAGAACTTCAGGAAAAAGCAGATTGAAGAGCTGAAGGGACAAGAAGTTA
GTCCTAAAGTGTACTTCATGAAGCAGACCATTGGGAATTCCTGTGGCACAATCGGACTTATTCACGCAGTGGCCA
ATAATCAAGACAAACTGGGATTTGAGGATGGATCAGTTCTGAAACAGTTTCTTTCTGAAACAGAGAAAATGTCCC
CTGAAGACAGAGCAAAATGCTTTGAAAAGAATGAGGCCATACAGGCAGCCCATGATGCCGTGGCACAGGAAGGCC
AATGTCGGGTAGATGACAAGGTGAATTTCCATTTTATTCTGTTTAACAACGTGGATGGCCACCTCTATGAACTTG
ATGGACGAATGCCTTTTCCGGTGAACCATGGCGCCAGTTCAGAGGACACCCTGCTGAAGGACGCTGCCAAGGTCT
GCAGAGAATTCACCGAGCGTGAGCAAGGAGAAGTCCGCTTCTCTGCCGTGGCTCTCTGCAAGGCAGCCTAATGCT
CTGTGGGAGGGACTTTGCTGATTTCCCCTCTTCCCTTCAACATGAAAATATATACCCCCCCATGCAGTCTAAAAT
GCTTCAGTACTTGTGAAACACAGCTGTTCTTCTGTTCTGCAGACACGCCTTCCCCTCAGCCACACCCAGGCACTT
AAGCACAAGCAGAGTGCACAGCTGTCCACTGGGCCATTGTGGTGTGAGCTTCAGATGGTGAAGCATTCTCCCCAG
TGTATGTCTTGTATCCGATATCTAACGCTTTAAATGGCTACTTTGGTTTCTGTCTGTAAGTTAAGACCTTGGATG
TGGTTTAATTGTTTGTCCTCAAAAGGAATAAAACTTTTCTGCTGATAAGATAAAAAAAAAAAAAAAAAA

FIGURE 276

MQLKPMEINPEMLNKVLSRLGVAGQWRFVDVLGLEEESLGSVPAPACALLLLFPLTAQHENFRKKQIEELKGQEV
SPKVYFMKQTIGNSCGTIGLIHAVANNQDKLGFEDGSVLKQFLSETEKMSPEDRAKCFEKNEAIQAAHDAVAQEG
QCRVDDKVNFHFILFNNVDGHLYELDGRMPFPVNHGASSEDTLLKDAAKVCREFTEREQGEVRFSAVALCKAA

FIGURE 277

GGCCGTCGGCGGAGGCGCCATTTTGTGTAGCCGCCGAACCTTGTTGGAGGTTCTGGGGCGCAGAACCGCTACTGC
TGCTTCGGTCTCTCCTTGGGAAAAAATAAAATTTGAACCTTTTGGAGCTGTGTGCTAAATCTTCAGTGGGACAATG
GGGTTCAGACAAAAGAGTGAGTAGAACAGAGCGTAGTGGAAGATACGGTTCCATCATAGACAGGGATGACCGTGA
TGAGCGTGAATCCCGAAGCAGGCGGAGGGACTCAGATTACAAAAGATCTAGTGATGATCGGAGGGGTGATAGATA
TGATGACTACCGAGACTATGACAGTCCAGAGAGAGAGCGTGAAAGAAGGAACAGTGACCGATCCGAAGATGGCTA
CCATTCAGATGGTGACTATGGTGAGCACGACTATAGGCATGACATCAGTGACGAGAGGGAGAGCAAGACCATCAT
GCTGCGCGGCCTTCCCATCACCATCACAGAGAGCGATATTCGAGAAATGATGGAGTCCTTCGAAGGCCCTCAGCC
TGCGGATGTGAGGCTGATGAAGAGGAAAACAGGTGTAAGCCGTGGTTTCGCCTTCGTGGAGTTTTATCACTTGCA
AGATGCTACCAGCTGGATGGAAGCCAATCAGAAAAAGTTGGTGATTCAAGGAAAGCACATTGCAATGCATTATAG
CAATCCCAGACCTAAGTTTGAAGATTGGCTTTGTAACAAGTGCTGCCTTAACAATTTCAGGAAAAGACTAAAATG
CTTCCGATGTGGAGCAGACAAGTTTGACTCTGAACAGGAAGTGCCTCCTGGAACCACAGAGTCGGTTCAGTCTGT
GGATTACTACTGTGATACGATCATTCTTCGGAACATAGCTCCGCACACTGTGGTGGATTCCATCATGACAGCACT
GTCTCCTTACGCGTCTTTAGCTGTCAATAACATCCGCCTCATAAAAGACAAACAGACCCAGCAGAACAGAGGCTT
CGCATTTGTGCAGCTGTCCTCTGCAATGGATGCTTCTCAGCTGCTTCAGATATTACAGAGTCTCCATCCTCCTTT
GAAAATTGATGGCAAAACTATTGGGGTTGATTTTGCAAAAAGTGCCAGAAAAGACTTGGTCCTCTCAGATGGTAA
CCGCGTCAGCGCCTTCTCTGTAGCTAGTACGGCTATTGCTGCTGCTCAGTGGTCATCCACCCAGTCTCAAAGTGG
TGAAGGAGGCAGTGTTGACTACAGTTATCTGCAACCAGGTCAAGATGGCTATGCCCAATATGCTCAGTATTCACA
GGATTATCAGCAGTTTTATCAACAACAAGCTGGAGGATTGGAATCTGATGCATCATCTGCATCAGGCACAGCAGT
GACCACCACCTCAGCGGCTGTAGTGTCCCAGAGTCCTCAGCTGTATAATCAAACCTCCAATCCACCTGGCTCTCC
GACTGAGGAAGCACAGCCTAGCACTAGCACAAGTACACAGGCCCCAGCCGCTTCCCCTACTGGTGTAGTTCCTGG
TACCAAATATGCAGTACCTGACACGTCCACTTACCAGTATGATGAATCTTCAGGATATTACTATGATCCGACAAC
AGGGCTCTATTATGACCCCAACTCGCAATACTACTATAATTCCTTGACCCAGCAGTACCTTTACTGGGATGGGGA
AAAAGAGACCTACGTGCCAGCTGCAGAGTCTAGCTCCCACCAGCAGTCGGGCCTGCCTCCTGCAAAAGAGGGGAA
AGAGAAGAAGGAGAAACCCAAGAGCAAAACAGCCCAGCAGATTGCCAAAGACATGGAACGCTGGGCTAAGAGTTT
GAATAAGCAGAAAGAAAACTTTAAAAATAGCTTTCAGCCTGTCAATTCCTTGAGGGAAGAAGAAAGGAGAGAATC
TGCTGCAGCAGACGCTGGCTTTGCTCTCTTTGAGAAGAAGGGAGCCTTAGCTGAAAGGCAGCAGCTCATCCCAGA
ATTGGTGCGAAATGGAGATGAGGAGAATCCCCTCAAAAGGGGTCTGGTTGCTGCTTACAGTGGTGACAGTGACAA
TGAGGAGGAGCTGGTGGAGAGACTTGAGAGTGAGGAAGAGAAGCTAGCTGACTGGAAGAAGATGGCCTGTCTGCT
CTGCCGGCGCCAGTTCCCGAACAAAGATGCCCTAGTCAGGCACCAGCAACTCTCAGACCTTCACAAGCAAAACAT
GGACATCTACCGACGATCCAGGCTGAGCGAGCAGGAGCTGGAAGCCTTGGAGCTAAGGGAGAGAGAGATGAAATA
CCGAGACCGAGCTGCAGAAAGACGGGAGAAGTACGGCATTCCAGAACCTCCAGAGCCCAAGCGCAAGAAGCAGTT
TGATGCCGGCACTGTGAATTACGAGCAACCCACCAAAGATGGCATTGACCACAGTAACATTGGCAACAAGATGCT
GCAGGCCATGGGCTGGCGGGAAGGCTCTGGCTTGGGACGAAAGTGTCAAGGCATTACGGCTCCCATTGAGGCTCA
AGTTCGGCTAAAGGGAGCTGGCCTAGGAGCCAAAGGCAGCGCATATGGTTTGTCGGGCGCCGATTCCTACAAAGA
TGCTGTCCGGAAAGCCATGTTTGCCCGGTTCACTGAGATGGAGTGAGAGAGAGAGAGAGAGAGAGATGACAAGGA
GCACAAGAAGTGGTCCATCTCCCGAATTCGCTGTTACCGCCTGTCTCTTTAAGGGCATGCCTTGTGCTGTTAATA
GATCTTAGGGTGAACCACTTCATTCTGCAGGGTTCTCCCTCCCACCTTAAAGAAGTTCCCCTTATGTGGGTTGCC
TGGTGAATGGCCTTCCTTCCCGCCAGAGGGCTTGTGAACAGACCGGAGAGGACAGTGGATTGTTTATACTCCAGT
GTACATAGTGTAATGTAGCGTGTTTACATGTGTAGCCTATGTTGTGGTCCATCAGCCCCTCACATTCCTAGGGGT
TTGAGATGCTGTAGGTGGTATGTGACACCAAAGCCACCTCTGTCATTTGTTGTGATGTCTTTTCTTGGCAAAAGC
CTTGTGTATATTTGTATATTACACATTTGTACAGAATTTTGGAAGATTTTCAGTCTAGTTGCCAAATCTGGCTCC
TTTACAAAAGAAATACCTTGAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 278

MGSDKRVSRTERSGRYGSIIDRDDRDERESRSRRRDSDYKRSSDDRRGDRYDDYRDYDSPERERERRNSDRSEDG
YHSDGDYGEHDYRHDISDERESKTIMLRGLPITITESDIREMMESFEGPQPADVRLMKRKTGVSRGFAFVEFYHL
QDATSWMEANQKKLVIQGKHIAMHYSNPRPKFEDWLCNKCCLNNFRKRLKCFRCGADKFDSEQEVPPGTTESVQS
VDYYCDTIILRNIAPHTVVDSIMTALSPYASLAVNNIRLIKDKQTQQNRGFAFVQLSSAMDASQLLQILQSLHPP
LKIDGKTIGVDFAKSARKDLVLSDGNRVSAFSVASTAIAAAQWSSTQSQSGEGGSVDYSYLQPGQDGYAQYAQYS
QDYQQFYQQQAGGLESDASSASGTAVTTTSAAVVSQSPQLYNQTSNPPGSPTEEAQPSTSTSTQAPAASPTGVVP
GTKYAVPDTSTYQYDESSGYYYDPTTGLYYDPNSQYYYNSLTQQYLYWDGEKETYVPAAESSSHQQSGLPPAKEG
KEKKEKPKSKTAQQIAKDMERWAKSLNKQKENFKNSFQPVNSLREEERRESAAADAGFALFEKKGALAERQQLIP
ELVRNGDEENPLKRGLVAAYSGDSDNEEELVERLESEEEKLADWKKMACLLCRRQFPNKDALVRHQQLSDLHKQN
MDIYRRSRLSEQELEALELREREMKYRDRAAERREKYGIPEPPEPKRKKQFDAGTVNYEQPTKDGIDHSNIGNKM
LQAMGWREGSGLGRKCQGITAPIEAQVRLKGAGLGAKGSAYGLSGADSYKDAVRKAMFARFTEME

FIGURE 279

AGCCCCGCCCCAGGCGAGGGCGCCGCACCCACACCGCGCTGCGCAGTTTTGTTCTGCTCCAGCTGTTCGAAGGTG
ATCCAGACGCAAG**ATG**GCTGTCCTCTCTAAGGAATATGGTTTTGTGCTTCTAACTGGTGCTGCCAGCTTTATAAT
GGTGGCCCACCTAGCCATCAATGTTTCCAAGGCCCGCAAGAAGTACAAAGTGGAGTATCCTATCATGTACAGCAC
GGACCCTGAAAATGGGCACATCTTCAACTGCATTCAGCGAGCCCACCAGAACACGTTGGAAGTGTATCCTCCCTT
CTTATTTTTTCTAGCTGTTGGAGGTGTTTACCACCCGCGTATAGCTTCTGGCCTGGGCTTGGCCTGGATTGTTGG
ACGAGTTCTTTATGCTTATGGCTATTACACGGGAGAACCCAGCAAGCGTAGTCGAGGAGCCCTGGGGTCCATCGC
CCTCCTGGGCTTGGTGGGCACAACTGTGTGCTCTGCTTTCCAGCATCTTGGTTGGGTTAAAAGTGGCTTGGGCAG
TGGACCCAAATGCTGCCAT**TAA**AGAATTATAGGGGTTTAAAAACTCTCATTCATTTTAAATGACTTACCTTTATT
TCCAGTTACATTTTTTTTCTAAATATAATAAAAACTTACCTGGCATCAGCCTCATACCTAAAAAAAAAAAAAAAA
AAAAAAAAAAAA

FIGURE 280

MAVLSKEYGFVLLTGAASFIMVAHLAINVSKARKKYKVEYPIMYSTDPENGHIFNCIQRAHQNTLEVYPPFLFFL
AVGGVYHPRIASGLGLAWIVGRVLYAYGYYTGEPSKRSRGALGSIALLGLVGTTVCSAFQHLGWVKSGLGSGPKC
CH

FIGURE 281A

GGCCTGGGTCTGACGCGGCCCTGTTCGAGGGGGCCTCTCTTGTTTATTTATTTATTTTCCGTGGGTGCCTCCGAG
TGTGCGCGCGCTCTCGCTACCCGGCGGGGAGGGGGTGGGGGGAGGGCCCGGGAAAAGGGGGAGTTGGAGCCGGGG
TCGAAACGCCGCGTGACTTGTAGGTGAGAGAACGCCGAGCCGTCGCCGCAGCCTCCGCCGCCGAGAAGCCCTTGT
TCCCGCTGCTGGGAAGGAGAGTCTGTGCCGACAAGATGGCGGACGGGGAGCTGAACGTGGACAGCCTCATCACCC
GGCTGCTGGAGGTACGAGGATGTCGTCCAGGAAAGATTGTGCAGATGACTGAAGCAGAAGTTCGAGGCTTATGTA
TCAAGTCTCGGGAGATCTTTCTCAGCCAGCCTATTCTTTTGGAATTGGAAGCACCGCTGAAAATTTGTGGAGATA
TTCATGGACAGTATACAGATTTACTGAGATTATTTGAATATGGAGGTTTCCCACCAGAAGCCAACTATCTTTTCT
TAGGAGATTATGTGGACAGAGGAAAGCAGTCTTTGGAAACCATTTGTTTGCTATTGGCTTATAAAATCAAATATC
CAGAGAACTTCTTTCTCTTAAGAGGAAACCATGAGTGTGCTAGCATCAATCGCATTTATGGATTCTATGATGAAT
GCAAACGAAGATTTAATATTAAATTGTGGAAGACCTTCACTGATTGTTTTAACTGTCTGCCTATAGCAGCCATTG
TGGATGAGAAGATCTTCTGTTGTCATGGAGGATTGTCACCAGACCTGCAATCTATGGAGCAGATTCGGAGAATTA
TGAGACCTACTGATGTCCCTGATACAGGTTTGCTCTGTGATTTGCTATGGTCTGATCCAGATAAGGATGTGCAAG
GCTGGGGAGAAAATGATCGTGGTGTTTCCTTTACTTTTGGAGCTGATGTAGTCAGTAAATTTCTGAATCGTCATG
ATTTAGATTTGATTTGTCGAGCTCATCAGGTGGTGGAAGATGGATATGAATTTTTTGCTAAACGACAGTTGGTAA
CCTTATTTTCAGCCCCAAATTACTGTGGCGAGTTTGATAATGCTGGTGGAATGATGAGTGTGGATGAAACTTTGA
TGTGTTCATTTCAGATATTGAAACCATCTGAAAAGAAAGCTAAATACCAGTATGGTGGACTGAATTCTGGACGTC
CTGTCACTCCACCTCGAACAGCTAATCCGCCGAAGAAAAGG**TGA**AGAAAGGAATTCTGTAAAGAAACCATCAGAT
TTGTTAAGGACATACTTCATAATATATAAGTGTGCACTGTAAAACCATCCAGCCATTTGACACCCTTTATGATGT
CACACCTTTAACTTAAGGAGACGGGTAAAGGATCTTAAATTTTTTTCTAATAGAAAGATGTGCTACACTGTATTG
TAATAAGTATACTCTGTTATAGTCAACAAAGTTAAATCCAAATTCAAAATTATCCATTAAAGTTACATCTTCATG
TATCACAATTTTTAAAGTTGAAAAGCATCCCAGTTAAACTAGATGTGATAGTTAAACCAGATGAAAGCATGATGA
TCCATCTGTGTAATGTGGTTTTAGTGTTGCTTGGTTGTTTAATTATTTTGAGCTTGTTTTGTTTTTGTTTGTTTT
CACTAGAATAATGGCAAATACTTCTAATTTTTTTCCCTAAACATTTTTAAAAGTGAAATATGGGAAGAGCTTTAC
AGACATTCACCAACTATTATTTTCCCTTGTTTATCTACTTAGATATCTGTTTAATCTTACTAAGAAAACTTTCGC
CTCATTACATTAAAAAGGAATTTTAGAGATTGATTGTTTTAAAAAAAAATACGCACATTGTCCAATCCAGTGATT
TTAATCATACAGTTTGACTGGGCAAACTTTACAGCTGATAGTGAATATTTTGCTTTATACAGGAATTGACACTGA
TTTGGATTTGTGCACTCTAATTTTTAACTTATTGATGCTCTATTGTGCAGTAGCATTTCATTTAAGATAAGGCTC
ATATAGTATTACCCAACTAGTTGGTAATGTGATTATGTGGTACCTTGGCTTTAGGTTTTCATTCGCACGGAACAC
CTTTTGGCATGCTTAACTTCCTGGTAACACCTTCACCTGCATTGGTTTTCTTTTTCTTTTTTCTTTCTTTTTGGT
GTTGTATTTTTTGAGTTGTTGTTTGTTTTTAGATCCACAGTACATGAGAATCCTTTTTTGACAAGCCTTGGAAAG
CTGACACTGTCTCTTTTTCCTCCCTCTATACGAAGGATGTATTTAAATGAATGCTGGTCAGTGGGACATTTTGTC
AACTATGGGTATTGGGTGCTTAACTGTCTAATATTGCCATGTGAATGTTGTATACGATTGTAAGGCTTATGTCAC
TAAAGATTTTTATTCTGATTTTTTCATAATCAAAGGTCATATGATACTGTATAGACAAGCTTTGTAGTGAAGTAT
AGTAGCAATAATTTCTGTACCTGATCAAGTTTATTGCAGCCTTTCTTTTCCTATTTCTTTTTTTTAAGGGTTAGT
ATTAACAAATGGCAATGAGTAGAAAAGTTAACATGAAGATTTTAGAAGGAGAGAACTTACAGGACACAGATTTGT
GATTCTTTGACTGTGACACTATTGGATGTGATTCTAAAAGCTTTTATTGAGCATTGTCAAATTTGTAAGCTTCAT
AGGGATGGACATCATATCTATAATGCCCTTCTATATGTGCTACCATAGATGTGACATTTTTGACCTTAATATCGT
CTTTGAAAATGTTAAATTGAGAAACCTGTTAACTTACATTTTATGAATTGGCACATTGTATTACTTACTGCAAGA
GATATTTCATTTTCAGCACAGTGCAAAAGTTCTTTAAAATGCATATGTCTTTTTTTCTAATTCCGTTTTGTTTTA
AAGCACATTTTAAATGTAGTTTTCTCATTTAGTAAAAGTTGTCTAATTGATATGAAGCCTGACTGATTTTTTTTT
TCCTTACAGTGAGACATTTAAGCACACATTTTATTCACATAGATACTATGTCCTTGACATATTGAAATGATTCTT
TTCTGAAAGTATTCATGATCTGCATATGATGTATTAGGTTAGGTCACAAAGGTTTTATCTGAGGTGATTTAAATA
ACTTCCTGATTGGAGTGTGTAAGCTGAGCGATTTCTAATAAAATTTTAGTTGTACACTTTTAGTAGTCATAGTGA
AGCAGGTCTAGAAAATAAGCCTTTGGCAGGGAAAAAGGGCAATGTTGATTAATCTCAGTATTAAACCACATTAAT
CTGTATCCCATTGTCTGGCTTTTGTAAATTCATCCAGGTCAAGACTAAGTATGTTGGTTAATAGGAATCCTTTTT
TTTTTTTTTGTTAAAGACTAAATGTGAAAAAATAATCACTACTTAAGCTAATTAATATTGGTCATTAAATTTAAA
GGATGGAAATTTATCATGTTTAAAAATTATTCAAGCACTCTTAAAACCACTTAAACAGCCTCCAGTCATAAAAAT
GTGTTCTTTACAAATATTTGCTTGGCAACACGACTTGAAATAAATAAAACTTTGTTTCTTAGGAGAAAATGATTC

FIGURE 281B

TGTAATTCCAGTGTCACTAATTTATATTGTTCTTTCCTCTGATTTTTTTCAGGTTAGTGATTTTTTTGTATACAA
TTTAATCCAAATGTTATGACATTCAGAAATCATGAAACACAGTAGATATCTGTTATAATGTGGTGTATCACATGG
ATTATAAAGCAAAGTTATGGTCGATTTCTATTCTTGAAAGAATCAACTACAGTGAATCCTTTGCATTTGAAGCCT
TAACATGCATTGCTTTAATTTTGCCCAGGGACAAATTTTAATAATCAGCAAGACTGGTTTGTGCAAAGCGTTGAG
TCATCAGGTATTTAGAGCCTAGCCAGCTACCCAGTATCCATGCTGCCATATCCCTTCATTGTAAAAAGTACCTAA
ACATTCGTGAAATGATTTTTTTTAGCTGAAAAATGCTGGCAAGAAGAATTTTAAAGCTTAAAATAGGTGGTAAAT
TTGAAGTATGAGTGTGTTCACGAGAAACATAGGCTTTTCAAAAAAATTTTTATTCAAGGCAAAGCAAGGAACATC
TTGAGATATGTCTCAAGAATATAAAGATGTATTATTTTAAGCCAAGGAGCTGAAATATATCTCAGTTTATAAATT
CAGGTATATTCTTTTTGTCTCCATGGCAACCATAACTTTTGAACCAAAAAAAATTGTTTTTACATCTTTATGCTG
AAAATGTGTTTAGATTAGGAATATGGTCGGGCTGAATTTGCTGTTGCTCCCTAACCAAATCCACCTCTTGTTTTC
CTTGTGAGTCCATGGCTAAATCAAAGCTGCCCCTGAGAAGAGACTTAATCCAAGCCTGATTGTACTAGTGGCATC
ACTTAGAAGTAGGCTTTCCCTCTTCCTAGTAGATCTCAATGTTTTATAATTCCTTAAAACAGCTGAAAATTGGGA
CAACATACTTTACGCAATGAACAGTAGTTAAATAGGAAATAAACTAGTTCCATGTAAGTATACACCTAGAGTTTT
AATTACCTTTATAATGTTTCTTAAAAGTGAAACTTAGATACAATTGTGATTGGATACTTAGATACTAAGTGAAAC
TTAGTGTAACAATTTTGATCTGTTAAATTGGATTTTACATGTACATTTGAATGCCAGAATTTCTAAATAAATCCC
CTGGTTAGGAAATTTTAAAAGTCAAAGCTTGTTTTCTTCAACCACTACCTTCTACATTGGTTGACTTAGACCGTA
AGCTTTTTAAGTTTCTCATTGTAATTTACCTTCTCATGCAGATTGCTGATGTTTTATTAAACCTTATTTTTACAA
AAATGAAAAAA

FIGURE 282

GLGLTRPCSRGPLLFIYLFSVGASECARALATRRGGGGGRAREKGELEPGSKRRVTCRRERRAVAAASAAEKPLF
PLLGRRVCADKMADGELNVDSLITRLLEVRGCRPGKIVQMTEAEVRGLCIKSREIFLSQPILLELEAPLKICGDI
HGQYTDLLRLFEYGGFPPEANYLFLGDYVDRGKQSLETICLLLAYKIKYPENFFLLRGNHECASINRIYGFYDEC
KRRFNIKLWKTFTDCFNCLPIAAIVDEKIFCCHGGLSPDLQSMEQIRRIMRPTDVPDTGLLCDLLWSDPDKDVQG
WGENDRGVSFTFGADVVSKFLNRHDLDLICRAHQVVEDGYEFFAKRQLVTLFSAPNYCGEFDNAGGMMSVDETLM
CSFQILKPSEKKAKYQYGGLNSGRPVTPPRTANPPKKR

FIGURE 283

AGTTGCAGGCGAGCAGGCGAGGAATCGCCGTGGCGTCTTGGTGTTCTCCACGCTGGTTCGCAGGTGAAGAG**ATG**G
CGTTTGTGAAGAGTGGCTGGTTGCTGCGACAGAGTACTATTTTGAAGCGCTGGAAGAAGAACTGGTTTGATCTGT
GGTCGGATGGTCACCTGATCTATTATGATGACCAGACTCGGCAGAATATCGAGGATAAGGTCCACATGCCAATGG
ACTGCATCAACATCCGCACGGGGCAGGAATGTCGGGATACTCAGCCCCCGGATGGAAAGTCAAAAGACTGCATGC
TCCAGATTGTTTGTCGAGATGGGAAAACAATTAGTCTTTGTGCAGAAAGCACAGATGATTGCTTGGCCTGGAAAT
TTACACTCCAAGATTCTAGGACAAACACAGCGTATGTGGGCTCTGCAGTCATGACCGATGAGACATCCGTGGTTT
CCTCACCTCCACCATACACGGCCTATGCTGCACCGGCCCCTGAGGCTTATGGCTATGGGCCATACGGTGGTGCGT
ACCCGCCAGGAACTCAAGTTGTCTACGCTGCGAATGGGCAGGCGTATGCCGTGCCCCACCAGTACCCATATGCAG
GACTTTATGGACAGCAGCCTGCTAACCAAGTCATCATTCGAGAGCGCTATCGAGACAACGACAGCGACCTGGCAC
TGGGCATGCTGGCAGGAGCAGCCACGGGCATGGCCTTAGGGTCTCTATTTTGGGTCTTC**TAG**GGGCCTCAAGGTC
TTGATGTGCATAGCTTCTGATAACCCTGTGTGCAATAATATGATTTGCAGGGCATTTCTGTTTGTGACAAAAGTT
TTTAATAATAGTTTTAATCATTCCTTTGAAAGTAGTGATGTCATAATTGTACTAATCCACATAAGTACCACAGAG
AAGGGTTTGAACTGTGCTATTTTGTTCAAATGTTGACTCTCCGGGGGCACTGGCTCATTCCAAGACTGTTCTTGT
GCAACTCTCAGAATACCTTATTTGAGCATACCTGTTTTGAAAGGCATTTTCTTTTTAGAGTTAGGTGTAGTGCTT
AAGGGTTAATTTATTTTCATGTTATGCCAGTAATATAGTGTTGTATGCCTATTGAGTGATTGTGGCAAGAAAAGC
TACAGCTTCTTTGCGTTTAACTTTTTCAAACCACAGACCAGAACTGGTTGCATGTTACTTTAGGAGTTGTGGGTT
GGTAAGCTCCCAGGTACTTCCCGAGGCTATGGTGTGAGAGCCCCCGTCCTGCCCTCTGGGGCTCCACAGGCCCCT
GGCAAGGCCGATGGCTCAGGATGATGGGGCACAGCCCGCCTTTGAACAATCATGCTTCAGAAATCTGCCTGACCC
TAGCTGCTGCTGCTGCTCACTTTATTCTTGTATGGCTTTGGTAGGCATACTTGGAGAACATATCCCACATTAGGA
ATTGATTTAAGCCTGAGAGTTTGAGGGCTTTAATCCTTTAAAACTTGGAGAAGCTGGCTGGGCGCGGTGGCTCAC
GCCTGTAATCCCAGCACTTTGAGAGACCGAGGCGGGCGGATCACGAGGTCAGGAGATCGAGACCATCCTGGCTAA
CACGGTGAAACCCCATCTCTACTAAAAATACAAAAAATTAGCTGGGCGTGGTGGCAGGCGCCTGTGGTCCCAGCT
ACTCGGGAGGCTGAGGCAGGAGAATAGTGTGAACCCAGGAGGCGGAGCTTGCAGTGAGCCAAGATAGTGCCACTG
CACTTCAGCCTGGGTGACAGAGTGAGACTCTGTCTCAAAAAAAAAAAAAAAAA

FIGURE 284

MAFVKSGWLLRQSTILKRWKKNWFDLWSDGHLIYYDDQTRQNIEDKVHMPMDCINIRTGQECRDTQPPDGKSKDC
MLQIVCRDGKTISLCAESTDDCLAWKFTLQDSRTNTAYVGSAVMTDETSVVSSPPPYTAYAAPAPEAYGYGPYGG
AYPPGTQVVYAANGQAYAVPHQYPYAGLYGQQPANQVIIRERYRDNDSDLALGMLAGAATGMALGSLFWVF

FIGURE 285

GGGAGAACCGTTCGCGGAGGAAAGGCGAACTAGTGTTGGG**ATG**GCCACCAACTGGGGGAGCCTCTTGCAGGATAA
ACAGCAGCTAGAGGAGCTGGCACGGCAGGCCGTGGACCGGGCCCTGGCTGAGGGAGTATTGCTGAGGACCTCACA
GGAGCCCACTTCCTCGGAGGTGGTGAGCTATGCCCCATTCACGCTCTTCCCCTCACTGGTCCCCAGTGCCCTGCT
GGAGCAAGCCTATGCTGTGCAGATGGACTTCAACCTGCTAGTGGATGCTGTCAGCCAGAACGCTGCCTTCCTGGA
GCAAACTCTTTCCAGCACCATCAAACAGGATGACTTTACCGCTCGTCTCTTTGACATCCACAAGCAAGTCCTAAA
AGAGGGCATTGCCCAGACTGTGTTCCTGGGCCTGAATCGCTCAGACTACATGTTCCAGCGCAGCGCAGATGGCTC
CCCAGCCCTGAAACAGATCGAAATCAACACCATCTCTGCCAGCTTTGGGGGCCTGGCCTCCCGGACCCCAGCTGT
GCACCGACATGTTCTCAGTGTCCTGAGTAAGACCAAAGAAGCTGGCAAGATCCTCTCTAATAATCCCAGCAAGGG
ACTGGCCCTGGGAATTGCCAAAGCCTGGGAGCTCTACGGCTCACCCAATGCTCTGGTGCTACTGATTGCTCAAGA
GAAGGAAAGAAACATATTTGACCAGCGTGCCATAGAGAATGAGCTACTGGCCAGGAACATCCATGTGATCCGACG
AACATTTGAAGATATCTCTGAAAAGGGGTCTCTGGACCAAGACCGAAGGCTGTTTGTGGATGGCCAGGAAATTGC
TGTGGTTTACTTCCGGGATGGCTACATGCCTCGTCAGTACAGTCTACAGAATTGGGAAGCACGTCTACTGCTGGA
GAGGTCACATGCTGCCAAGTGCCCAGACATTGCCACCCAGCTGGCTGGGACTAAGAAGGTGCAGCAGGAGCTAAG
CAGGCCGGGCATGCTGGAGATGTTGCTCCCTGGCCAGCCTGAGGCTGTGGCCCGCCTCCGCGCCACCTTTGCTGG
CCTCTACTCACTGGATGTGGGTGAAGAAGGGGACCAGGCCATCGCCGAGGCCCTTGCTGCCCCTAGCCGGTTTGT
GCTAAAGCCCCAGAGAGAGGGTGGAGGTAACAACCTATATGGGGAGGAAATGGTACAGGCCCTGAAACAGCTGAA
GGACAGTGAGGAGAGGGCCTCCTACATCCTCATGGAGAAGATCGAACCTGAGCCTTTTGAGAATTGCCTGCTACG
GCCTGGCAGCCCTGCCCGAGTGGTCCAGTGCATTTCAGAGCTGGGCATCTTTGGGGTCTATGTCAGGCAGGAAAA
GACACTCGTGATGAACAAGCACGTGGGGCATCTACTTCGAACCAAAGCCATCGAGCATGCAGATGGTGGTGTGGC
AGCGGGAGTGGCAGTCCTGGACAACCCATACCCTGTG**TGA**GGGCACAACCAGGCCACGGGACCTTCTATCCTCTG
TATTTGTCATTCCTCTCCTAGCCCTCCTGAGGGGTATCCTCCTAAAGACCTCCAAAGTTTTTATGGAAGGGTAAA
TACTGGTACCTTCCCCCAGCTTTCCATCTGAGGACCAGAAAAGTTGTGTCTCCCTTAGATGAGATCTAGACGCCC
CCAAATCCTTGAGATGTGGGTATAGCTCAGGGTAAGCTGCTCTGAGGTAAAGGTCCATGAACCCTGCCCCACTCC
TGTCAGCCCCTCATCAGCCTTTTCAGCAGGTTCCAGTGCCTGACTTGGGATAGGACTGAGTGGTAGGAGGAGGGG
GAGTGGAGGGGCATAGCCTTTCCCTAATTCTGCCTTAAATAAAACTGCATTGCTGT

FIGURE 286

MATNWGSLLQDKQQLEELARQAVDRALAEGVLLRTSQEPTSSEVVSYAPFTLFPSLVPSALLEQAYAVQMDFNLL
VDAVSQNAAFLEQTLSSTIKQDDFTARLFDIHKQVLKEGIAQTVFLGLNRSDYMFQRSADGSPALKQIEINTISA
SFGGLASRTPAVHRHVLSVLSKTKEAGKILSNNPSKGLALGIAKAWELYGSPNALVLLIAQEKERNIFDQRAIEN
ELLARNIHVIRRTFEDISEKGSLDQDRRLFVDGQEIAVVYFRDGYMPRQYSLQNWEARLLLERSHAAKCPDIATQ
LAGTKKVQQELSRPGMLEMLLPGQPEAVARLRATFAGLYSLDVGEEGDQAIAEALAAPSRFVLKPQREGGGNNLY
GEEMVQALKQLKDSEERASYILMEKIEPEPFENCLLRPGSPARVVQCISELGIFGVYVRQEKTLVMNKHVGHLLR
TKAIEHADGGVAAGVAVLDNPYPV

FIGURE 287

CGATCAGATCGATCTAAG**ATG**GCGACTGTCGAACCGGAAACCACCCCTACTCCTAATCCCCCGACTACAGAAGAG
GAGAAAACGGAATCTAATCAGGAGGTTGCTAACCCAGAACACTATATTAAACATCCCCTACAGAACAGATGGGCA
CTCTGGTTTTTTAAAAATGATAAAAGCAAAACTTGGCAAGCAAACCTGCGGCTGATCTCCAAGTTTGATACTGTT
GAAGACTTTTGGGCTCTGTACAACCATATCCAGTTGTCTAGTAATTTAATGCCTGGCTGTGACTACTCACTTTTT
AAGGATGGTATTGAGCCTATGTGGGAAGATGAGAAAAACAAACGGGGAGGACGATGGCTAATTACATTGAACAAA
CAGCAGAGACGAAGTGACCTCGATCGCTTTTGGCTAGAGACACTTCTGTGCCTTATTGGAGAATCTTTTGATGAC
TACAGTGATGATGTATGTGGCGCTGTTGTTAATGTTAGAGCTAAAGGTGATAAGATAGCAATATGGACTACTGAA
TGTGAAAACAGAGAAGCTGTTACACATATAGGGAGGGTATACAAGGAAAGGTTAGGACTTCCTCCAAAGATAGTG
ATTGGTTATCAGTCCCACGCAGACACAGCTACTAAGAGCGGCTCCACCACTAAAAATAGGTTTGTTGTT**TAA**GAA
GACACCTTCTGAGTATTCTCATAGGAGACTGCGTCAAGCAATCGAGATTTGGGAGCTGAACCAAAGCCTCTTCAA
AAAGCAGAGTGGACTGCATTTAAATTTGATTTCCATCTTAATGTTACTCAGATATAAGAGAAGTCTCATTCGCCT
TTGTCTTGTACTTCTGTGTTCATTTTTTTTTTTTTTTTTGGCTAGAGTTTCCACTATCCCAATCAAAGAATTAC
AGTACACATCCCCAGAATCCATAAATGTGTTCCTGGCCCACTCTGTAATAGTTCAGTAGAATTACCATTAATTAC
ATACAGATTTTACCTATCCACAATAGTCAGAAAACAACTTGGCATTTCTATACTTTACAGGAAAAAAAATTCTGT
TGTTCCATTTTATGCAGAAGCATATTTTGCTGGTTTGAAAGATTATGATGCATACAGTTTTCTAGCAATTTTCTT
TGTTTCTTTTTACAGCATTGTCTTTGCTGTACTCTTGCTGATGGCTGCTAGATTTTAATTTATTTGTTTCCCTAC
TTGATAATATTAGTGATTCTGATTTCAGTTTTTCATTTGTTTTGCTTAAATTTTTTTTTTTTTTTCCTCATGTA
ACATTGGTGAAGGATCCAGGAATATGACACAAAGGTGGAATAAACATTAATTTTGTGCATTCTTTGGTAATTTTT
TTTGTTTTTTGTAACTACAAAGCTTTGCTACAAATTTATGCATTTCATTCAAATCAGTGATCTATGTTTGTGTGA
TTTCCTAAACATAATTGTGGATTATAAAAAATGTAACATCATAATTACATTCCTAACTAGAATTAGTATGTCTGT
TTTTGTATCTTTATGCTGTATTTTAACACTTTGTATTACTTAGGTTATTTTGCTTTGGTTAAAAATGGCTCAAGT
AGAAAAGCAGTCCCATTCATATTAAGACAGTGTACAAAACTGTAAATAAAATGTGTACAGTGAATTGTCTTTTAG
ACAACTAGATTTGTCCTTTTATTTCTCCATCTTTATAGAAGGAATTTGTACTTCTTATTGCAGGCAAGTCTCTAT
ATTATGTCCTCTTTTGTGGTGTCTTCCATGTGAACAGCATAAGTTTGGAGCACTAGTTTGATTATTATGTTTATT
ACAATTTTTAATAAATTGAATAGGTAGTATCATATATATGGA

FIGURE 288

MATVEPETTPTPNPPTTEEEKTESNQEVANPEHYIKHPLQNRWALWFFKNDKSKTWQANLRLISKFDTVEDFWAL
YNHIQLSSNLMPGCDYSLFKDGIEPMWEDEKNKRGGRWLITLNKQQRRSDLDRFWLETLLCLIGESFDDYSDDVC
GAVVNVRAKGDKIAIWTTECENREAVTHIGRVYKERLGLPPKIVIGYQSHADTATKSGSTTKNRFVV

FIGURE 289

GGCAGTTGGTAAGAACTAGATTGCATGTACAAAGACAGGTTTACTAAGTGCTGTACAGTGGTCCTGAGGTTACAG
TTGAATTAGAAAAACGAAATGTACTTACAGGAAATAAGAAAGCAAACCTTTCAAATGAGAGTGATGATTTCTTTA
AAAAAAATCAGTTTTTTTCTCTCAAATAATGTTCTTTATTTCACGAAATCGTCAATCTTAAGCATGAGCAGGGAT
AAACAACTCCTAGAAGGAACTCAATTCA

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FIGURE 290

GCGTAATTAAAAGGCGGCGGAAGAAGGTGGGAGGGTCATGACGCAGCGAGTTTCAGTCGTGACTTTTCTGGGGGC
ATCGCGGCGTCCCCTTTTTTTTGCCTTTAAAGTAAAACGTCGCCCCGACGCACCCCCCGCGTATTTCGGGGGGCG
GAGGCGGCGGGCCACGGCGCGAAGAGGGGCGGTGCTGACGCCGGCCGGTCACGTGGGCGTGTTGTGGGGGGGAGG
GGCGCCGCCGCGCGGTCGGTTCCGGGCGGTTGGGAGCGCGCGAGCTAGCGAGCGAGAGGCAGCCGCGCCCGCCGC
CGCCCCTGCTCTGTATGCCGCTCTCTCCCGGCGCGGCCGCCGCCGATCACAGCAGCAGGAGCCACCGCCGCCGCG
GTTGATGTGGTTGGGCCGGGGCTGAGGAGGCCGCCAAG**ATG**CCGCAGTCCAAGTCCCGGAAGATCGCGATCCTGG
GCTACCGGTCTGTGGGGAAATCCTCATTGACGATTCAATTTGTTGAAGGCCAATTTGTGGACTCCTACGATCCAA
CCATAGAAAACACTTTTACAAAGTTGATCACAGTAAATGGACAAGAATATCATCTTCAACTTGTAGACACAGCCG
GGCAAGATGAATATTCTATCTTTCCTCAGACATACTCCATAGATATTAATGGCTATATTCTTGTGTATTCTGTTA
CATCAATCAAAAGTTTTGAAGTGATTAAAGTTATCCATGGCAAATTGTTGGATATGGTGGGGAAAGTACAAATAC
CTATTATGTTGGTTGGGAATAAGAAAGACCTGCATATGGAAAGGGTGATCAGTTATGAAGAAGGGAAAGCTTTGG
CAGAATCTTGGAATGCAGCTTTTTTGGAATCTTCTGCTAAAGAAAATCAGACTGCTGTGGATGTTTTTCGAAGGA
TAATTTTGGAGGCAGAAAAAATGGACGGGGCAGCTTCACAAGGCAAGTCTTCATGCTCGGTGATG**TGA**TTCTGCT
GCAAAGCCTGAGGACACTGGGAATATATTCTACCTGAAGAAGCAAACTGCCCGTTCTCCTTGAAGATAAACTATG
CTTCTTTTTTCTTCTGTTAACCTGAAAGATATCATTTGGGTCAGAGCTCCCCTCCCTTCAGATTATGTTAACTCT
GAGTCTGTCCAAATGAGTTCACTTCCATTTTCAAATTTTAAGCAATCATATTTTCAATTTATATATTGTATTTCT
TAATATTATGACCAAGAATTTTATCGGCATTAATTTTTCAGTGTAGTTTGTTGTTTAAAATAATGTAATCATCAA
AATGATGCATATTGTTACACTACTATTAACTAGGCTTCAGTATATCAGTGTTTATTTCATTGTGTTAAATGTATA
CTTGTAAATAAAATAGCTGCAAACCTCAAAAAAAAAAAAAAAAAAA

FIGURE 291

MPQSKSRKIAILGYRSVGKSSLTIQFVEGQFVDSYDPTIENTFTKLITVNGQEYHLQLVDTAGQDEYSIFPQTYS
IDINGYILVYSVTSIKSFEVIKVIHGKLLDMVGKVQIPIMLVGNKKDLHMERVISYEEGKALAESWNAAFLESSA
KENQTAVDVFRRIILEAEKMDGAASQGKSSCSVM

FIGURE 292

CCCGGCAACCACGAGCCCAGCCAATCAGCGCCCCGGACTGCACCAGAGCC**ATG**GTCGGCAGAAGAGCACTGATCG
TACTGGCTCACTCAGAGAGGACCTCCTTCAACTATGCCATGAAGGAGGCTGCTGCAGCGGCTTTGAAGAAGAAAG
GATGGGAGGTGGTGGAGTCGGACCTCTATGCCATGAACTTCAATCCCATCATTTCCAGAAAGGACATCACAGGTA
AACTGAAGGACCCTGCGAACTTTCAGTATCCTGCCGAGTCTGTTCTGGCTTATAAAGAAGGCCATCTGAGCCCAG
ATATTGTGGCTGAACAAAAGAAGCTGGAAGCCGCAGACCTTGTGATATTCCAGTTCCCCCTGCAGTGGTTTGGAG
TCCCTGCCATTCTGAAAGGCTGGTTTGAGCGAGTGTTCATAGGAGAGTTTGCTTACACTTACGCTGCCATGTATG
ACAAAGGACCCTTCCGGAGTAAGAAGGCAGTGCTTTCCATCACCACTGGTGGCAGTGGCTCCATGTACTCTCTGC
AAGGGATCCACGGGGACATGAATGTCATTCTCTGGCCAATTCAGAGTGGCATTCTGCATTTCTGTGGCTTCCAAG
TCTTAGAACCTCAACTGACATATAGCATTGGGCACACTCCAGCAGACGCCCGAATTCAAATCCTGGAAGGATGGA
AGAAACGCCTGGAGAATATTTGGGATGAGACACCACTGTATTTTGCTCCAAGCAGCCTCTTTGACCTAAACTTCC
AGGCAGGATTCTTAATGAAAAAAGAGGTACAGGATGAGGAGAAAAACAAGAAATTTGGCCTTTCTGTGGGCCATC
ACTTGGGCAAGTCCATCCCAACTGACAACCAGATCAAAGCTAGAAAA**TGA**GATTCCTTAGCCTGGATTTCCTTCT
AACATGTTATCAAATCTGGGTATCTTTCCAGGCTTCCCTGACTTGCTTTAGTTTTTAAGATTTGTGTTTTTCTTT
TTCCACAAGGAATAAATGAGAGGGAATCGACCGTATTCGTGCATTTTTGGATGCATTTTTAACTGATTCTTATGA
TTACTATCATGGCATATAACCAAAATCCGACTGGGCTCAAGAGGCCACTTAGGGAAAGATGTAGAAAGATGCTAG
AAAAATGTTCTTTAAAGGCATCTACACAATTTAATTCCTCTTTTTAGGGTCAAAGTTTAGGGTACAGTTGGCTAG
GTATCATTCAACTCTCCAATGTTCTATTAATCACCTCTCTGTAGTTTATGGTCAGAAGGGAATTGCTCAGAGAAG
GTAAAAGACTGAATCTACCTGCCTAAGGGACTTAACTTGTTTGGTAGTTAGCCATCTAATGCTTGTTTATGATAT
TTCTTGCTTTCAATTACAAAGCAGTTACTAATATGCCTAGCACAAGTACCACTCTTGGTCAGCTTTTGTTGTTTA
TATACAGTACACAGATACCTTGAAAGGAAGAGCTAATAAATCTCTTCTTTGCTGCAGTCATCTACTTTTTTTTTA
ATTAAAAAAAATTTTTTTTGAAGCAGTCTTGCTCTGTTACCCAGGCTGGAGTGCAGTGGTGTGATCTCGGCTCAC
TGCAACCTCTGCCTCCCAGGTTCCAGCAATTCTCCTGCCTCAGCCTCCCTAGTAGCTGGGATGACAGGCGCCTGC
CATCATGCCTGACTAATTTTTGTATTTTTAGTAGAGACGGCGTTTCACCATGTTGGCCAGGCTGGTCTCAAACTC
CTGACCTCAGGTGATCCGCCTACCTCAGCCTCCCAAAGTGCTGGGATTACAGGCGTGATCCACCACACCTGGCCC
TTGCAATCTTCTACTTTAAGGTTTGCAGAGATAAACCAATAAATCCACACCGTACATCTGCAATATGAATTCCAA
GAAAGGAAATAGTACCTTCAATACTTAAAAATAGTCTTCCACAAAAAATACTTTATTTCTGATCTATACAAATTT
TCAGAAGGTTATTTTCTTTATCATTGCTAAACTGATGACTTACCATGGGATGGGGTCCAGTCCCATGACCTTGGG
GTACAATTGTAAACCTAGAGTTTTATCAACTTTGGTGAACAGTTTTGGCATAATAGTCAATTTCTACTTCTGGAA
GTCATCTCATTCCACTGTTGGTATTATATAATTCAAGGAGAATATGATAAAACACTGCCCTCTTGTGGTGCATTG
AAAGAAGAGATGAGAAATGATGAAAAGGTTGCCTGAAAAATGGGAGACAGCCTCTTACTTGCCAAGAAAATGAAG
GGATTGGACCGAGCTGGAAAACCTCCTTTACCAGATGCTGACTGGCACTGGTGGTTTTTGCTCTCGACATATCCA
CAATAGCTGACGGCTGGGTGTTTCAGTTTGCAAAATATTTTGTTGCCTTCATCTTCACTGCAATTTTGTGTAAAT
TTCTCAAAGATCTAATTAAATAAATAAAATTCATTTCTACAGACTCA

FIGURE 293

MVGRRALIVLAHSERTSFNYAMKEAAAAALKKKGWEVVESDLYAMNFNPIISRKDITGKLKDPANFQYPAESVLA
YKEGHLSPDIVAEQKKLEAADLVIFQFPLQWFGVPAILKGWFERVFIGEFAYTYAAMYDKGPFRSKKAVLSITTG
GSGSMYSLQGIHGDMNVILWPIQSGILHFCGFQVLEPQLTYSIGHTPADARIQILEGWKKRLENIWDETPLYFAP
SSLFDLNFQAGFLMKKEVQDEEKNKKFGLSVGHHLGKSIPTDNQIKARK

FIGURE 294

TGCGCCACG**ATG**TCCGGGGAGTCAGCCAGGAGCTTGGGGAAGGGAAGCGCGCCCCCGGGGCCGGTCCCGGAGGGC
TCGATCCGCATCTACAGCATGAGGTTCTGCCCGTTTGCTGAGAGGACGCGTCTAGTCCTGAAGGCCAAGGGAATC
AGGCATGAAGTCATCAATATCAACCTGAAAAATAAGCCTGAGTGGTTCTTTAAGAAAAATCCCTTTGGTCTGGTG
CCAGTTCTGGAAAACAGTCAGGGTCAGCTGATCTACGAGTCTGCCATCACCTGTGAGTACCTGGATGAAGCATAC
CCAGGGAAGAAGCTGTTGCCGGATGACCCCTATGAGAAAGCTTGCCAGAAGATGATCTTAGAGTTGTTTTCTAAG
GTGCCATCCTTGGTAGGAAGCTTTATTAGAAGCCAAAATAAAGAAGACTATGCTGGCCTAAAAGAAGAATTTCGT
AAAGAATTTACCAAGCTAGAGGAGGTTCTGACTAATAAGAAGACGACCTTCTTTGGTGGCAATTCTATCTCTATG
ATTGATTACCTCATCTGGCCCTGGTTTGAACGGCTGGAAGCAATGAAGTTAAATGAGTGTGTAGACCACACTCCA
AAACTGAAACTGTGGATGGCAGCCATGAAGGAAGATCCCACAGTCTCAGCCCTGCTTACTAGTGAGAAAGACTGG
CAAGGTTTCCTAGAGCTCTACTTACAGAACAGCCCTGAGGCCTGTGACTATGGGCTC**TGA**AGGGGGCAGGAGTCA
GCAATAAAGCTATGTCTGATATTTTCCTTCAGTAAAAAAAAAA

FIGURE 295

MSGESARSLGKGSAPPGPVPEGSIRIYSMRFCPFAERTRLVLKAKGIRHEVININLKNKPEWFFKKNPFGLVPVL
ENSQGQLIYESAITCEYLDEAYPGKKLLPDDPYEKACQKMILELFSKVPSLVGSFIRSQNKEDYAGLKEEFRKEF
TKLEEVLTNKKTTFFGGNSISMIDYLIWPWFERLEAMKLNECVDHTPKLKLWMAAMKEDPTVSALLTSEKDWQGF
LELYLQNSPEACDYGL

FIGURE 296

GGCCTGGGTGGCGAATTCGGCACGAGGCTCGCCGCTCGCTATGGCGTCGCTCACCGTGAAGGCCTACCTTCTGGG
CAAGGAGGACGCGGCGCGCGAGATTCGCCGCTTCAGCTTCTGCTGCAGCCCCGAGCCTGAGGCGGAAGCCGAGGC
TGCGGCGGGTCCGGGACCCTGCGAGCGGCTGCTGAGCCGGGTGGCCGCCCTGTTCCCCGCGCTGCGGCCTGGCGG
CTTCCAGGCGCACTACCGCGATGAGGACGGGGACTTGGTTGCCTTTTCCAGTGACGAGGAATTGACAATGGCCAT
GTCCTACGTGAAGGATGACATCTTCCGAATCTACATTAAAGAGAAAAAAGAGTGCCGGCGGGACCACCGCCCACC
GTGTGCTCAGGAGGCGCCCCGCAACATGGTGCACCCCAATGTGATCTGCGATGGCTGCAATGGGCCTGTGGTAGG
AACCCGCTACAAGTGCAGCGTCTGCCCAGACTACGACTTGTGTAGCGTCTGCGAGGGAAAGGGCTTGCACCGGGG
GCACACCAAGCTCGCATTCCCCAGCCCCTTCGGGCACCTGTCTGAGGGCTTCTCGCACAGCCGCTGGCTCCGGAA
GGTGAAACACGGACACTTCGGGTGGCCAGGATGGGAAATGGGTCCACCAGGAAACTGGAGCCCACGTCCTCCTCG
TGCAGGGGAGGCCCGCCCTGGCCCCACGGCAGAATCAGCTTCTGGTCCATCGGAGGATCCGAGTGTGAATTTCCT
GAAGAACGTTGGGGAGAGTGTGGCAGCTGCCCTTAGCCCTCTGGGCATTGAAGTTGATATCGATGTGGAGCACGG
AGGGAAAAGAAGCCGCCTGACCCCCGTCTCTCCAGAGAGTTCCAGCACAGAGGAGAAGAGCAGCTCACAGCCAAG
CAGCTGCTGCTCTGATCCCAGCAAGCCGGGTGGGAATGTTGAGGGCGCCACGCAGTCTCTGGCGGAGCAGATGAG
AAAGATCGCCTTGGAGTCCGAGGGGCGCCCTGAGGAACAGATGGAGTCGGATAACTGTTCAGGAGGAGATGATGA
CTGGACCCATCTGTCTTCAAAAGAAGTGGACCCGTCTACAGGTGAACTCCAGTCCCTACAGATGCCAGAATCCGA
AGGGCCAAGCTCTCTGGACCCCTCCCAGGAGGGACCCACAGGGCTGAAGGAAGCTGCCTTGTACCCACATCTCCC
GCCAGAGGCTGACCCGCGGCTGATTGAGTCCCTCTCCCAGATGCTGTCCATGGGCTTCTCTGATGAAGGCGGCTG
GCTCACCAGGCTCCTGCAGACCAAGAACTATGACATCGGAGCGGCTCTGGACACCATCCAGTATTCAAAGCATCC
CCCGCCGTTGTGACCACTTTTGCCCACCTCTTCTGCGTGCCCCTCTTCTGTCTCATAGTTGTGTTAAGCTTGCGT
AGAATTGCAGGTCTCTGTACAGGCCAGTTTCTCTGCCTTCTTCCAGGATCAGGGGTTAGGGTGCAAGAAGCCATT
TAGGGCAGCAAAACAAGTGACATGAAGGGAGGGTCCCTGTGTGTGTGTGTGTGCTGATGTTTCCTGGGTGCCCTG
GCTCCTTGCAGCAGGGCTGGGCCTGCGAGACCCAAGGCTCACTGCAGCGCGCTCCTGACCCCTCCCTGCAGGGGC
TACGTTAGCAGCCCAGCACATAGCTTGCCTAATGGCTTTCACTTTCTCTTTTGTTTTAAATGACTCATAGGTCCC
TGACATTTAGTTGATTATTTTCTGCTACAGACCTGGTACACTCTGATTTTAGATAAAGTAAGCCTAGGTGTTGTC
AGCAGGCAGGCTGGGGAGGCCAGTGTTGTGGGCTTCCTGCTGGGACTGAGAAGGCTCACGAAGGGCATCCGCAAT
GTTGGTTTCACTGAGAGCTGCCTCCTGGTCTCTTCACCACTGTAGTTCTCTCATTTCCAAACCATCAGCTGCTTT
TAAAATAAGATCTCTTTGTAGCCATCCTGTTAAATTTGTAAACAATCTAATTAAATGGCATCAGCACTTTAACCA
ATGACGTTTGCATAGAGAGAAATGATTGACAGTAAGTTTATTGTTAATGGTTCTTACAGAGTATCTTTAAAAGTG
CCTTAGGGGAACCCTGTCCCTCCTAACAAGTGTATCTCGATTAATAACCTGCCAGTCCCAGATCACACATCATCA
TCGAAGTCTTCCCCAGTTATAAAGAGGTCACATAGTCGTGTGGGTCGAGGATTCTGTGCCTCCAGGACCAGGGGC
CCACCCTCTGCCCAGGGAGTCCTTGCGTCCCATGAGGTCTTCCCGCAAGGCCTCTCAGACCCAGATGTGACGGGG
TGTGTGGCCCGAGGAAGCTGGACAGCGGCAGTGGGCCTGCTGAGGCCTTCTCTTGAGGCCTGTGCTCTGGGGGTC
CCTTGCTTAGCCTGTGCTGGACCAGCTGGCCTGGGGTCCCTCTGAAGAGACCTTGGCTGCTCACTGTCCACATGT
GAACTTTTTCTAGGTGGCAGGACAAATCGCGCCCATTTAGAGGATGTGGCTGTAACCTGCTGGATGGGACTCCAT
AGCTCCTTCCCAGGACCCCTCAGCTCCCCGGCACTGCAGTCTGCAGAGTTCTCCTGGAGGCAGGGGCTGCTGCCT
TGTTTCACCTTCCATGTCAGGCCAGCCTGTCCCTGAAAGAGAAGATGGCCATGCCCTCCATTTGTAAGAACAATG
CCAGGGCCCAGGAGGACCGCCTGCCCTGCCTGGGCCTTGGCTGGGCCTCTGGTTCTGACACTTTCTGCTGGAAGC
TGTCAGGCTGGGACAGGCTTTGATTTTGAGGGTTAGCAAGACAAAGCAAATAAATGCCTTCCACCTCACCGCAAA
AAAAAAAAAAAAAAAAAAAA

FIGURE 297

MASLTVKAYLLGKEDAAREIRRFSFCCSPEPEAEAEAAAGPGPCERLLSRVAALFPALRPGGFQAHYRDEDGDLV
AFSSDEELTMAMSYVKDDIFRIYIKEKKECRRDHRPPCAQEAPRNMVHPNVICDGCNGPVVGTRYKCSVCPDYDL
CSVCEGKGLHRGHTKLAFPSPFGHLSEGFSHSRWLRKVKHGHFGWPGWEMGPPGNWSPRPPRAGEARPGPTAESA
SGPSEDPSVNFLKNVGESVAAALSPLGIEVDIDVEHGGKRSRLTPVSPESSSTEEKSSSQPSSCCSDPSKPGGNV
EGATQSLAEQMRKIALESEGRPEEQMESDNCSGGDDDWTHLSSKEVDPSTGELQSLQMPESEGPSSLDPSQEGPT
GLKEAALYPHLPPEADPRLIESLSQMLSMGFSDEGGWLTRLLQTKNYDIGAALDTIQYSKHPPPL

FIGURE 298

CCAGCAGGGAGCTGGGAGCTGGGGGAAACGACGCCAGGAAAGCTATCGCGCCAGAGAGGGCGACGGGGGCTCGGG
AAGCCTGACAGGGCTTTTGCGCACAGCTGCCGGCTGGCTGCTACCCGCCCGCGCCAGCCCCCGAGAACGCGCGAC
CAGGCACCCAGTCCGGTCACCGCAGCGGAGAGCTCGCCGCTCGCTGCAGCGAGGCCCGGAGCGGCCCCGCAGGGA
CCCTCCCCAGACCGCCTGGGCCGCCCGG**ATG**TGCACTAAAATGGAACAGCCCTTCTACCACGACGACTCATACAC
AGCTACGGGATACGGCCGGGCCCCTGGTGGCCTCTCTCTACACGACTACAAACTCCTGAAACCGAGCCTGGCGGT
CAACCTGGCCGACCCCTACCGGAGTCTCAAAGCGCCTGGGGCTCGCGGACCCGGCCCAGAGGGCGGCGGTGGCGG
CAGCTACTTTTCTGGTCAGGGCTCGGACACCGGCGCGTCTCTCAAGCTCGCCTCTTCGGAGCTGGAACGCCTGAT
TGTCCCCAACAGCAACGGCGTGATCACGACGACGCCTACACCCCCGGGACAGTACTTTTACCCCCGCGGGGGTGG
CAGCGGTGGAGGTGCAGGGGGCGCAGGGGGCGGCGTCACCGAGGAGCAGGAGGGCTTCGCCGACGGCTTTGTCAA
AGCCCTGGACGATCTGCACAAGATGAACCACGTGACACCCCCCAACGTGTCCCTGGGCGCTACCGGGGGGCCCCC
GGCTGGGCCCGGGGGCGTCTACGCCGGCCCGGAGCCACCTCCCGTTTACACCAACCTCAGCAGCTACTCCCCAGC
CTCTGCGTCCTCGGGAGGCGCCGGGGCTGCCGTCGGGACCGGGAGCTCGTACCCGACGACCACCATCAGCTACCT
CCCACACGCGCCGCCCTTCGCCGGTGGCCACCCGGCGCAGCTGGGCTTGGGCCGCGGCGCCTCCACCTTCAAGGA
GGAACCGCAGACCGTGCCGGAGGCGCGCAGCCGGGACGCCACGCCGCCGGTGTCCCCCATCAACATGGAAGACCA
AGAGCGCATCAAAGTGGAGCGCAAGCGGCTGCGGAACCGGCTGGCGGCCACCAAGTGCCGGAAGCGGAAGCTGGA
GCGCATCGCGCGCCTGGAGGACAAGGTGAAGACGCTCAAGGCCGAGAACGCGGGGCTGTCGAGTACCGCCGGCCT
CCTCCGGGAGCAGGTGGCCCAGCTCAAACAGAAGGTCATGACCCACGTCAGCAACGGCTGTCAGCTGCTGCTTGG
GGTCAAGGGACACGCCTTC**TGA**ACGTCCCCTGCCCCTTTACGGACACCCCCTCGCTTGGACGGCTGGGCACACGC
CTCCCACTGGGGTCCAGGGAGCAGGCGGTGGGCACCCACCCTGGGACCTAGGGGCGCCGCAAACCACACTGGACT
CCGGCCCCCCTACCCTGCGCCCAGTCCTTCCACCTCGACGTTTACAAGCCCCCCCTTCCACTTTTTTTTGTATGT
TTTTTTTCTGCTGGAAACAGACTCGATTCATATTGAATATAATATATTTGTGTATTTAACAGGGAGGGGAAGAGG
GGGCGATCGCGGCGGAGCTGGCCCCGCCGCCTGGTACTCAAGCCCGCGGGGACATTGGGAAGGGGACCCCCGCCC
CCTGCCCTCCCCTCTCTGCACCGTACTGTGGAAAAGAAACACGCACTTAGTCTCTAAAGAGTTTATTTTAAGACG
TGTTTGTGTTTGTGTGTGTTTGTTCTTTTTATTGAATCTATTTAAGTAAAAAAAAAATTGGTTCTTTATTAA

FIGURE 299

MCTKMEQPFYHDDSYTATGYGRAPGGLSLHDYKLLKPSLAVNLADPYRSLKAPGARGPGPEGGGGGSYFSGQGSD
TGASLKLASSELERLIVPNSNGVITTTPTPPGQYFYPRGGGSGGGAGGAGGGVTEEQEGFADGFVKALDDLHKMN
HVTPPNVSLGATGGPPAGPGGVYAGPEPPPVYTNLSSYSPASASSGGAGAAVGTGSSYPTTTISYLPHAPPFAGG
HPAQLGLGRGASTFKEEPQTVPEARSRDATPPVSPINMEDQERIKVERKRLRNRLAATKCRKRKLERIARLEDKV
KTLKAENAGLSSTAGLLREQVAQLKQKVMTHVSNGCQLLLGVKGHAF

FIGURE 300

GCAGCCGCCCGGGCCCCCGCCAGCCTCCCTCCTCGCGTCCCTCGGTGTCCTCCGCGGGCCGGCGCG**ATG**CGGCTG
GGCCCGAGGACCGCGGCGTTGGGGCTGCTGCTGCTGTGCGCCGCCGCGGCCGGCGCCGGCAAGGCCGAGGAGCTG
CACTACCCGCTGGGCGAGCGCCGCAGCGACTACGACCGCGAGGCGCTGCTGGGCGTCCAGGAAGATGTGGATGAA
TATGTTAAACTCGGCCACGAAGAGCAGCAAAAAAGACTGCAGGCGATCATAAAGAAAATCGACTTGGACTCAGAT
GGCTTTCTCACTGAAAGTGAACTCAGTTCATGGATTCAGATGTCTTTTAAGCATTATGCTATGCAAGAAGCAAAA
CAACAGTTTGTTGAATATGATAAAAACAGTGATGATACTGTGACTTGGGATGAATATAACATTCAGATGTATGAT
CGTGTGATTGACTTTGATGAGAACACTGCTCTGGATGATGCAGAAGAGGAGTCCTTTAGGAAGCTTCACTTAAAG
GACAAGAAGCGATTTGAAAAAGCTAACCAGGATTCAGGTCCCGGTTTGAGTCTTGAAGAATTTATTGCTTTTGAG
CATCCTGAAGAAGTTGATTATATGACGGAATTTGTCATTCAAGAAGCTTTAGAAGAACATGACAAAAATGGTGAT
GGATTTGTTAGTTTGGAAGAATTTCTTGGTGATTACAGGTGGGATCCAACTGCAAATGAAGATCCAGAATGGATA
CTTGTTGAGAAAGACAGATTCGTGAATGATTATGACAAAGATAACGATGGCAGGCTTGATCCCCAAGAGCTGTTA
CCTTGGGTAGTACCTAATAATCAGGGCATTGCACAAGAGGAGGCGCTTCATCTAATTGATGAAATGGATTTGAAT
GGTGACAAAAAGCTCTCTGAAGAAGAGATTCTGGAAAACCCGGACTTGTTTCTCACCAGTGAAGCCACAGATTAT
GGCAGACAGCTCCATGATGACTATTTCTATCATGATGAGCTT**TAA**TCTCCGAGCCTGTCTCAGTAGAGTACTGGC
TCCTTTTATAATTTGTTACCAGCTTTACTTTTGTGATAAAATATTGATGTTGTATTTTACACTCTTAAGTCTTAA
CCACAGTCAGAATTATCTTAATGTAGAATTATAATTTTGGCTCTTTTAGGAAAAAACAAAATCTGATATTTTTCC
AAACGTATTGAGCAACAAAATATTAATATTGTGCCATATGACAACAAAGTCTTTCCTAAATACTCCATCTGTTTA
GTACTGTATTGTGGAATATTTGAGTTCTATTTCCAGACTTGAAAACATGGAGGATTTTAGAGATGCCTGAACAAT
ATTATTTAAGTAGTATGTGACCGAGCTATAAATTTTTTGTTTTTGTTCTAAGTAGATTTAATTTGGGAACTGACA
GGACAATGTTTTTAGGTTTAGCATTTTGTTTAAAAACCTTTAAAGAAACCTTTAGAAGGACTTAGACCTCACATA
TTAATGTTGAGAAGTTCTGCTTAATTTTAAAATGGTTTCTATAAAGGGTTTTATTGTATGAAATAGAACTTTATA
TTTTTGCATATGTATAGAGGATAATTATATTTAATGTATAACTATAGCATTATGGTGAGTGGAATTTGACATTGT
CCAAACCTTTTTCATTTTTGAGTGATTAAAAATGAAATGTCCTTTGTAAA

FIGURE 301

MRLGPRTAALGLLLLCAAAAGAGKAEELHYPLGERRSDYDREALLGVQEDVDEYVKLGHEEQQKRLQAIIKKIDL
DSDGFLTESELSSWIQMSFKHYAMQEAKQQFVEYDKNSDDTVTWDEYNIQMYDRVIDFDENTALDDAEEESFRKL
HLKDKKRFEKANQDSGPGLSLEEFIAFEHPEEVDYMTEFVIQEALEEHDKNGDGFVSLEEFLGDYRWDPTANEDP
EWILVEKDRFVNDYDKDNDGRLDPQELLPWVVPNNQGIAQEEALHLIDEMDLNGDKKLSEEEILENPDLFLTSEA
TDYGRQLHDDYFYHDEL

FIGURE 302

TCTGGGCGCGCGCGACGTCAGTTTGAGTTCTGTGTTCTCCCCGCCCGTGTCCCGCCCGACCCGCGCCCGCG**ATG**C
TGGCGCTGCGCTGCGGCTCCCGCTGGCTCGGCCTGCTCTCCGTCCCGCGCTCCGTGCCGCTGCGCCTCCCCGCGG
CCCGCGCCTGCAGCAAGGGCTCCGGCGACCCGTCCTCTTCCTCCTCCTCCGGGAACCCGCTCGTGTACCTGGACG
TGGACGCCAACGGGAAGCCGCTCGGCCGCGTGGTGCTGGAGCTGAAGGCAGATGTCGTCCCAAAGACAGCTGAGA
ACTTCAGAGCCCTGTGCACTGGTGAGAAGGGCTTCGGCTACAAAGGCTCCACCTTCCACAGGGTGATCCCTTCCT
TCATGTGCCAGGCGGGCGACTTCACCAACCACAATGGCACAGGCGGGAAGTCCATCTACGGAAGCCGCTTTCCTG
ACGAGAACTTTACACTGAAGCACGTGGGGCCAGGTGTCCTGTCCATGGCTAATGCTGGTCCTAACACCAACGGCT
CCCAGTTCTTCATCTGCACCATAAAGACAGACTGGTTGGATGGCAAGCATGTTGTGTTCGGTCACGTCAAAGAGG
GCATGGACGTCGTGAAGAAAATAGAATCTTTCGGCTCTAAGAGTGGGAGGACATCCAAGAAGATTGTCATCACAG
ACTGTGGCCAGTTGAGC**TAA**TCTGTGGCCAGGGTGCTGGCATGGTGGCAGCTGCAAATGTCCATGCACCCAGGTG
GCCGCGTTGGGCTGTCAGCCAAGGTGCCTGAAACGATACGTGTGCCCACTCCACTGTCACAGTGTGCCTGAGGAA
GGCTGCTAGGGATGTTAGACCTCGGCCAGGACCCACCACATTGCTTCCTAATACCCACCCTTCCTCACGACCTCA
TTTCTGGGCATCTTTGTGGACATGATGTCACCCACCCCTTGTCAAGCATTGCCTGTGATTGCCCAGCCCAGATTC
ATCTGTGCCTTGGACATGGTGATGGTGATGGGTTGCCATCCAAGTGAAAGTCTTTTCCTTGACCAAGGGGGACAG
TCAGTTTTGCAAAAGGACTCTAATACCTGTTTAATATTGTCTTCCTAATTGGGATAATTTAATTAACAAGATTGA
CTAGAAGTGAAACTGCAACACTAACTTCCCCGTGCTGTGGTGTGACCTGAGTTGGTGACACAGGCCACAGACCCC
AGAGCTTGGCTTTTGAAACACAACTCAGGGCTTTTGTGAAGGTTCCCCCGCTGAGATCTTTCCTCCTGGTTACTG
TGAAGCCTGTTGGTTTGCTGCTGTCGTTTTTGAGGAGGGCCCATGGGGGTAGGAGCAGTTGAACCTGGGAACAAA
CCTCACTTGAGCTGTGCCTAGACAATGTGAATTCCTGTGTTGCTAACAGAAGTGGCCTGTAAGCTCCTGTGCTCC
GGAGGGAAGCATTTCCTGGTAGGCTTTGATTTTTCTGTGTGTTAAAGAAATTCAATCTACTCATGATGTGTTATG
CATAAAACATTTCTGGAACATGGATTTGTGTTCACCTTAAATGTGAAAATAAATCCTATTTTCTATGGAAAAAAA
AAAAAAAAAAAAAAAA

FIGURE 303

MLALRCGSRWLGLLSVPRSVPLRLPAARACSKGSGDPSSSSSSGNPLVYLDVDANGKPLGRVVLELKADVVPKTA
ENFRALCTGEKGFGYKGSTFHRVIPSFMCQAGDFTNHNGTGGKSIYGSRFPDENFTLKHVGPGVLSMANAGPNTN
GSQFFICTIKTDWLDGKHVVFGHVKEGMDVVKKIESFGSKSGRTSKKIVITDCGQLS

FIGURE 304

TCTGGGCGCGCGCGACGTCAGTTTGAGTTCTGTGTTCTCCCCGCCCGTGTCCCGCCCGACCCGCGCCCGCG**ATG**C
TGGCGCTGCGCTGCGGCTCCCGCTGGCTCGGCCTGCTCTCCGTCCCGCGCTCCGTGCCGCTGCGCCTCCCCGCGG
CCCGCGCCTGCAGCAAGGGCTCCGGCGACCCGTCCTCTTCCTCCTCCTCCGGGAACCCGCTCGTGTACCTGGACG
TGGACGCCAACGGGAAGCCGCTCGGCCGCGTGGTGCTGGAGCTGAAGGCAGATGTCGTCCCAAAGACAGCTGAGA
ACTTCAGAGCCCTGTGCACTGGTGAGAAGGGCTTCGGCTACAAAGGCTCCACCTTCCACAGGGTGATCCCTTCCT
TCATGTGCCAGGCGGGCGACTTCACCAACCACAATGGCACAGGCGGGAAGTCCATCTACGGAAGCCGCTTTCCTG
ACGAGAACTTTACACTGAAGCACGTGGGGCCAGGTGTCCTGTCCATGGCTAATGCTGGTCCTAACACCAACGGCT
CCCAGTTCTTCATCTGCACCATAAAGACAGACTGGTTGGATGGCAAGCATGTTGTGTTCGGTCACGTCAAAGAGG
GCATGGACGTCGTGAAGAAAATAGAATCTTTCGGCTCTAAGAGTGGGAGGACATCCAAGAAGATTGTCATCACAG
ACTGTGGCCAGTTGAGC**TAA**TCTGTGGCCAGGGTGCTGGCATGGTGGCAGCTGCAAATGTCCATGCACCCAGGTG
GCCGCGTTGGGCTGTCAGCCAAGGTGCCTGAAACGATACGTGTGCCCACTCCACTGTCACAGTGTGCCTGAGGAA
GGCTGCTAGGGATGTTAGACCTCGGCCAGGACCCACCACATTGCTTCCTAATACCCACCCTTCCTCACGACCTCA
TTTCTGGGCATCTTTGTGGACATGATGTCACCCACCCCTTGTCAAGCATTGCCTGTGATTGCCCAGCCCAGATTC
ATCTGTGCCTTGGACATGGTGATGGTGATGGGTTGCCATCCAAGTGAAAGTCTTTTCCTTGACCAAGGGGGACAG
TCAGTTTTGCAAAAGGACTCTAATACCTGTTTAATATTGTCTTCCTAATTGGGATAATTTAATTAACAAGATTGA
CTAGAAGTGAAACTGCAACACTAACTTCCCCGTGCTGTGGTGTGACCTGAGTTGGTGACACAGGCCACAGACCCC
AGAGCTTGGCTTTTGAAACACAACTCAGGGCTTTTGTGAAGGTTCCCCCGCTGAGATCTTTCCTCCTGGTTACTG
TGAAGCCTGTTGGTTTGCTGCTGTCGTTTTTGAGGAGGGCCCATGGGGGTAGGAGCAGTTGAACCTGGGAACAAA
CCTCACTTGAGCTGTGCCTAGACAATGTGAATTCCTGTGTTGCTAACAGAAGTGGCCTGTAAGCTCCTGTGCTCC
GGAGGGAAGCATTTCCTGGTAGGCTTTGATTTTTCTGTGTGTTAAAGAAATTCAATCTACTCATGATGTGTTATG
CATAAAACATTTCTGGAACATGGATTTGTGTTCACCTTAAATGTGAAAATAAATCCTATTTTCTATGGAAAAAAA
AAAAAAAAAAAAAAAA

FIGURE 305

MLALRCGSRWLGLLSVPRSVPLRLPAARACSKGSGDPSSSSSSGNPLVYLDVDANGKPLGRVVLELKADVVPKTA
ENFRALCTGEKGFGYKGSTFHRVIPSFMCQAGDFTNHNGTGGKSIYGSRFPDENFTLKHVGPGVLSMANAGPNTN
GSQFFICTIKTDWLDGKHVVFGHVKEGMDVVKKIESFGSKSGRTSKKIVITDCGQLS

FIGURE 306

TGCCGCCGTCCCGCCCGCCAGCGCCCCAGCGAGGAAGCAGCGCGCAGCCCGCGGCCCAGCGCACCCGCAGCAGCG
CCCGCAGCTCGTCCGCGCC**ATG**TTCCAGGCGGCCGAGCGCCCCCAGGAGTGGGCCATGGAGGGCCCCCGCGACGG
GCTGAAGAAGGAGCGGCTACTGGACGACCGCCACGACAGCGGCCTGGACTCCATGAAAGACGAGGAGTACGAGCA
GATGGTCAAGGAGCTGCAGGAGATCCGCCTCGAGCCGCAGGAGGTGCCGCGCGGCTCGGAGCCCTGGAAGCAGCA
GCTCACCGAGGACGGGGACTCGTTCCTGCACTTGGCCATCATCCATGAAGAAAAGGCACTGACCATGGAAGTGAT
CCGCCAGGTGAAGGGAGACCTGGCTTTCCTCAACTTCCAGAACAACCTGCAGCAGACTCCACTCCACTTGGCTGT
GATCACCAACCAGCCAGAAATTGCTGAGGCACTTCTGGGAGCTGGCTGTGATCCTGAGCTCCGAGACTTTCGAGG
AAATACCCCCCTACACCTTGCCTGTGAGCAGGGCTGCCTGGCCAGCGTGGGAGTCCTGACTCAGTCCTGCACCAC
CCCGCACCTCCACTCCATCCTGAAGGCTACCAACTACAATGGCCACACGTGTCTACACTTAGCCTCTATCCATGG
CTACCTGGGCATCGTGGAGCTTTTGGTGTCCTTGGGTGCTGATGTCAATGCTCAGGAGCCCTGTAATGGCCGGAC
TGCCCTTCACCTCGCAGTGGACCTGCAAAATCCTGACCTGGTGTCACTCCTGTTGAAGTGTGGGGCTGATGTCAA
CAGAGTTACCTACCAGGGCTATTCTCCCTACCAGCTCACCTGGGGCCGCCCAAGCACCCGGATACAGCAGCAGCT
GGGCCAGCTGACACTAGAAAACCTTCAGATGCTGCCAGAGAGTGAGGATGAGGAGAGCTATGACACAGAGTCAGA
GTTCACGGAGTTCACAGAGGACGAGCTGCCCTATGATGACTGTGTGTTTGGAGGCCAGCGTCTGACGTTA**TGA**GT
GCAAAGGGGCTGAAAGAACATGGACTTGTATATTTGTACAAAAAAAAAGTTTTATTTTTCTAAAAAAAGAAAAAA
GAAGAAAAAATTTAAAGGGTGTACTTATATCCACACTGCACACTGCCTAGCCCAAAACGTCTTATTGTGGTAGGA
TCAGCCCTCATTTTGTTGCTTTTGTGAACTTTTTGTAGGGGACGAGAAAGATCATTGAAATTCTGAGAAAACTTC
TTTTAAACCTCACCTTTGTGGGGTTTTTGGAGAAGGTTATCAAAAATTTCATGGAAGGACCACATTTTATATTTA
TTGTGCTTCGAGTGACTGACCCCAGTGGTATCCTGTGACATGTAACAGCCAGGAGTGTTAAGCGTTCAGTGATGT
GGGGTGAAAAGTTACTACCTGTCAAGGTTTGTGTTACCCTCCTGTAAATGGTGTACATAATGTATTGTTGGTAAT
TATTTTGGTACTTTTATGATGTATATTTATTAAAGAGATTTTTACAAATG

FIGURE 307

MFQAAERPQEWAMEGPRDGLKKERLLDDRHDSGLDSMKDEEYEQMVKELQEIRLEPQEVPRGSEPWKQQLTEDGD
SFLHLAIIHEEKALTMEVIRQVKGDLAFLNFQNNLQQTPLHLAVITNQPEIAEALLGAGCDPELRDFRGNTPLHL
ACEQGCLASVGVLTQSCTTPHLHSILKATNYNGHTCLHLASIHGYLGIVELLVSLGADVNAQEPCNGRTALHLAV
DLQNPDLVSLLLKCGADVNRVTYQGYSPYQLTWGRPSTRIQQQLGQLTLENLQMLPESEDEESYDTESEFTEFTE
DELPYDDCVFGGQRLTL

FIGURE 308

GTGTGCGGACGCAGTTGCGTGAGGGGTTTGTGCTATCCTCGGTGCTGTGGTGCAGAGCTAGTTCCTCTCCAGCTC
AGCCGCGTAGGTTTGGACATATTTGACTCTTTTCCCCCCAGGTTGAATTGACCAAAGCA**ATG**GTGATGGAGAAGC
CTAGTCCCCTGCTGGTCGGGCGGGAATTTGTGAGACAGTATTACACACTGCTGAACCAGGCCCCAGACATGCTGC
ATAGATTTTATGGAAAGAACTCTTCTTATGTCCATGGGGGATTGGATTCAAATGGAAAGCCAGCAGATGCAGTCT
ACGGACAGAAAGAAATCCACAGGAAAGTGATGTCACAAAACTTCACCAACTGCCACACCAAGATTCGCCATGTTG
ATGCTCATGCCACGCTAAATGATGGTGTGGTAGTCCAGGTGATGGGGCTTCTCTCTAACAACAACCAGGCTTTGA
GGAGATTCATGCAAACGTTTGTCCTTGCTCCTGAGGGGTCTGTTGCAAATAAATTCTATGTTCACAATGATATCT
TCAGATACCAAGATGAGGTCTTTGGTGGGTTTGTCACTGAGCCTCAGGAGGAGTCTGAAGAAGAAGTAGAGGAAC
CTGAAGAAAGACAGCAAACACCTGAGGTGGTACCTGATGATTCTGGAACTTTCTATGATCAGGCAGTTGTCAGTA
ATGACATGGAAGAACATTTAGAGGAGCCTGTTGCTGAACCAGAGCCTGATCCTGAACCAGAACCAGAACAAGAAC
CTGTATCTGAAATCCAAGAGGAAAAGCCTGAGCCAGTATTAGAAGAAACTGCCCCTGAGGATGCTCAGAAGAGTT
CTTCTCCAGCACCTGCAGACATAGCTCAGACAGTACAGGAAGACTTGAGGACATTTTCTTGGGCATCTGTGACCA
GTAAGAATCTTCCACCCAGTGGAGCTGTTCCAGTTACTGGGATACCACCTCATGTTGTTAAAGTACCAGCTTCAC
AGCCCCGTCCAGAGTCTAAGCCTGAATCTCAGATTCCACCACAAAGACCTCAGCGGGATCAAAGAGTGCGAGAAC
AACGAATAAATATTCCTCCCCAAAGGGGACCCAGACCAATCCGTGAGGCTGGTGAGCAAGGTGACATTGAACCCC
GAAGAATGGTGAGACACCCTGACAGTCACCAACTCTTCATTGGCAACCTGCCTCATGAAGTGGACAAATCAGAGC
TTAAAGATTTCTTTCAAAGTTATGGAAACGTGGTGGAGTTGCGCATTAACAGTGGTGGGAAATTACCCAATTTTG
GTTTTGTTGTGTTTGATGATTCTGAGCCTGTTCAGAAAGTCCTTAGCAACAGGCCCATCATGTTCAGAGGTGAGG
TCCGTCTGAATGTCGAAGAGAAGAAGACTCGAGCTGCCAGGGAAGGCGACCGACGAGATAATCGCCTTCGGGGAC
CTGGAGGCCCTCGAGGTGGGCTGGGTGGTGGAATGAGAGGCCCTCCCCGTGGAGGCATGGTGCAGAAACCAGGAT
TTGGAGTGGGAAGGGGGCTTGCGCCACGGCAG**TGA**ATCTTCATGGATCTTCATGCAGCCATACAAACCCTGGTTC
CAACAGAATGGTGAATTTTCGACAGCCTTTGGTATCTTGGAGTATGACCCCAGTCTGTTATAAACTGCTTAAGTT
TGTATAATTTTACTTTTTTTGTGTGTTAATGGTGTGTGCTCCCTCTCCCTCTCTTCCCTTTCCTGACCTTTAGTC
TTTCACTTCCAATTTTGTGGAATGATATTTTAGGAATAACGGACTTTTAAAGAAGCAAAAAAAAAAAGACTGAATT
TCCTTGCTTACTTTGCATATACAGACTGGATTTTTTTTTTTTTTTTACAGCCATTTCCCCAAAGGAATGTCTTGC
ATATTACTGACATTTGGTATGTTTCATTCATTGGAATATTTCTTATTTTCTACGTGTTTGAAAAGCCTGTAAGAA
ATACAGGATTTGATAATATTTTGAAGGCAGGAAAAACCCAAATTGTTTCTTCTTTGAGAGTCATGACTACCTTCT
GGTGTGGAGAAATTGCCATTGGAAAATTTGACAATTTTGATTCTCACTGGTATGTTTAAAAACTGAATAAAAGGA
ATAGAATTTTTTTTTGATAAAGGATCACAAAACAATTCTAAAACCTAACTGTTTTTACCATTGAAATTTAAATTG
TGATAATAGGTTTTAAATGTCTAGAATGCAACTGATAGGCTTTTCTTGAACTGTTAGTTTTTTTGAAGTAGTTTT
TTCATGTTTAATTTGTATTTGTAAAAAAACAAAAAGCAAAAAAATTCCCAAAACCCAGATAACAACCAGAGCAAA
ACTGTTGTGCCTTCTATTTATCTTTGATTTCAGTCTTGGCAATTGTTTAAAAAAAAAATCTAGATTTGTTTTATT
AGGTTCAGAGTATGTGGGGAATTATAGAATCCCTCTTTCATCACTTTGTGTATGTCTTTTGTTAACATATTTGTT
ATGCCTTATTCTAAAATTGAGTCTCAAACTGGAATGCCTTTGAAGACAGATGCTTCTATAGAGGTTCTTTGACCT
AAATAGTTCAGCATTTGTATTTTTATTCTGGTATCTAATCAGATTCCTAATCATAGCCCGTAAGAAGGAATGTTA
CTTTAATATTGGACTTTGCTCATGTGCTCGTGTCCGCATTTTTTTTTTTCTTAAAATCATAGCCATATGGTAAAT
TTTCTATTTTGTTATGGTTCTCTTTTATTGATGGGCATGCAGTGGGTGTTACTTGGAAATGGCCAATTTTTATTA
AAATATTTCTGGAAGAAAATCCAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 309

MVMEKPSPLLVGREFVRQYYTLLNQAPDMLHRFYGKNSSYVHGGLDSNGKPADAVYGQKEIHRKVMSQNFTNCHT
KIRHVDAHATLNDGVVVQVMGLLSNNNQALRRFMQTFVLAPEGSVANKFYVHNDIFRYQDEVFGGFVTEPQEESE
EEVEEPEERQQTPEVVPDDSGTFYDQAVVSNDMEEHLEEPVAEPEPDPEPEPEQEPVSEIQEEKPEPVLEETAPE
DAQKSSSPAPADIAQTVQEDLRTFSWASVTSKNLPPSGAVPVTGIPPHVVKVPASQPRPESKPESQIPPQRPQRD
QRVREQRINIPPQRGPRPIREAGEQGDIEPRRMVRHPDSHQLFIGNLPHEVDKSELKDFFQSYGNVVELRINSGG
KLPNFGFVVFDDSEPVQKVLSNRPIMFRGEVRLNVEEKKTRAAREGDRRDNRLRGPGGPRGGLGGGMRGPPRGGM
VQKPGFGVGRGLAPRQ

FIGURE 310

CCAAG**ATG**GCCGCCCCCGTGGATCTAGAGCTGAAGAAGGCCTTCACAGAGCTTCAAGCCAAAGTTATTGACACTC
AACAGAAGGTGAAGCTCGCAGACATACAGATTGAACAGCTAAACAGAACGAAAAAGCATGCACATCTTACAGATA
CAGAGATCATGACTTTGGTAGATGAGACTAACATGTATGAAGGTGTAGGAAGAATGTTTATTCTTCAGTCCAAGG
AAGCAATTCACAGTCAGCTGTTAGAGAAGCAGAAAATAGCAGAAGAAAAAATTAAAGAACTAGAACAGAAAAAGT
CCTACCTGGAGCGAAGCGTTAAGGAAGCTGAGGACAACATCCGGGAGATGCTGATGGCACGAAGGGCCCAG**TAG**G
GAGCCTCTCTGGGAAGCTCTTCCTCCTGCCCCTCCCATTCCTGGTGGGGGCAGAGGAGTGTCTGCAGGGAAACAG
CTTCTCCTCTGCCCCGATGGATGCTTTATTTGGATGGCCTGGCAACATCACATTTTCTGCATCACCCTGAGCCCC
ATTTGCTTCCCAGCCCTGGAGTTTTTACCCGGCTTTGCCTGCCACCTCTGCCCAGGACACTCTTCCCTCTCGGGA
TGTGTGATGAACTCCCAGGAGAGGGAAGATGGGAGCCAGGGCAAGATAGGAAGCTCTGCCTGAGCTTTCCACTAG
GCACGCCAGCCAGACCAATAAAAAGCGTCTGTCCCACTCTGCTAAGCCTGGTTTTCTTGAGCAGAGGGATGGAAC
AGAGGGTGAGAGAGGCAGTGGCCGTCTCCACCTCAGCTCCTGCTCCCTCTGCATCAGAGCCCTTCCTTTCTTGGG
GGATGGGCCTTGCCCTCTTCTCTTTTCCCTTCCTGTACCTTTGACTAACGCTCAGCTTCCGGGCCTGCATGCAGT
AGACAGAAGAGGAAGAAAGAACAGATGTTCACAGCTGAATCTCAGTGAACAGAATAGCAGTCCCTGGATGGCAGT
CTGCCTAAAGATTCCTTTCCCTGCCTTCTCCCATACATTCCAAAAGGAAGTTCAACAGTAAGCAGCACCTCCAAG
ACTGTCTCCTTTTGGCCAATATCATAAGATGGACGCCATAATCCTGAGGCCTCCTAGAGGCTGAGGGGGCAACGG
TGTGATCCAGCTGGCTCATCCCAGCCCAGGTGGGCCAATTATTCAATTTTCAAGAATTTTGTTGCAAGCCAGTTG
TCAAACACAGCCATTATAATTATGTAAATTTGCAAATTATGTTAAAAACAAGGACAATAAATATTCAAAATGCAT
CCCTAAAAAAAAAAAAAAAAA

FIGURE 311

MAAPVDLELKKAFTELQAKVIDTQQKVKLADIQIEQLNRTKKHAHLTDTEIMTLVDETNMYEGVGRMFILQSKEA
IHSQLLEKQKIAEEKIKELEQKKSYLERSVKEAEDNIREMLMARRAQ

FIGURE 312

GAATTCGGGCGGGGTTTGTACTATCCTCGGTGCTGTGGTGCAGAGCTAGTTCCTCTCCAGCTCAGCCGCGTAGGT
TTGGACATATTTACTCTTTTCCCCCCAGGTTGAATTGACCAAAGCA**ATG**GTGATGGAGAAGCCTAGTCCCCTGCT
GGTCGGGCGGGAATTTGTGAGACAGTATTACACACTGCTGAACCAGGCCCCAGACATGCTGCATAGATTTTATGG
AAAGAACTCTTCTTATGTCCATGGGGGATTGGATTCAAATGGAAAGCCAGCAGATGCAGTCTACGGACAGAAAGA
AATCCACAGGAAAGTGATGTCACAAAACTTCACCAACTGCCACACCAAGATTCGCCATGTTGATGCTCATGCCAC
GCTAAATGATGGTGTGGTAGTCCAGGTGATGGGGCTTCTCTCTAACAACAACCAGGCTTTGAGGAGATTCATGCA
AACGTTTGTCCTTGCTCCTGAGGGGTCTGTTGCAAATAAATTCTATGTTCACAATGATATCTTCAGATACCAAGA
TGAGGTCTTTGGTGGGTTTGTCACTGAGCCTCAGGAGGAGTCTGAAGAAGAAGTAGAGGAACCTGAAGAAAGACA
GCAAACACCTGAGGTGGTACCTGATGATTCTGGAACTTTCTATGATCAGGCAGTTGTCAGTAATGACATGGAAGA
ACATTTAGAGGAGCCTGTTGCTGAACCAGAGCCTGATCCTGAACCAGAACCAGAACAAGAACCTGTATCTGAAAT
CCAAGAGGAAAAGCCTGAGCCAGTATTAGAAGAAACTGCCCCTGAGGATGCTCAGAAGAGTTCTTCTCCAGCACC
TGCAGACATAGCTCAGACAGTACAGGAAGACTTGAGGACATTTTCTTGGGCATCTGTGACCAGTAAGAATCTTCC
ACCCAGTGGAGCTGTTCCAGTTACTGGGATACCACCTCATGTTGTTAAAGTACCAGCTTCACAGCCCCGTCCAGA
GTCTAAGCCTGAATCTCAGATTCCACCACAAAGACCTCAGCGGGATCAAAGAGTGCGAGAACAACGAATAAATAT
TCCTCCCCAAAGGGGACCCAGACCAATCCGTGAGGCTGGTGAGCAAGGTGACATTGAACCCCGAAGAATGGTGAG
ACACCCTGACAGTCACCAACTCTTCATTGGCAACCTGCCTCATGAAGTGGACAAATCAGAGCTTAAAGATTTCTT
TCAAAGTTATGGAAACGTGGTGGAGTTGCGCATTAACAGTGGTGGGAAATTACCCAATTTTGGTTTTGTTGTGTT
TGATGATTCTGAGCCTGTTCAGAAAGTCCTTAGCAACAGGCCCATCATGTTCAGAGGTGAGGTCCGTCTGAATGT
CGAAGAGAAGAAGACTCGAGCTGCCAGGGAAGGCGACCGACGAGATAATCGCCTTCGGGGACCTGGAGGCCCTCG
AGGTGGGCTGGGTGGTGGAATGAGAGGCCCTCCCCGTGGAGGCATGGTGCAGAAACCAGGATTTGGAGTGGGAAG
GGGGCTTGCGCCACGGCAG**TAA**TCTTCATGGATCTTCATGCAGCCATACAAACCCTGGTTCCAACAGAATGGTGA
ATTTTCGACAGCCTTTGGTATCTTGGAGTATGACCCCAGTCTGTTATAAACTGCTTAAGTTTGTATAATTTTACT
TTTTTTGTGTGTTAATGGTGTGTGCTCCCTCTCCCTCTCTTCCCTTTCCTGACCTTTAGTCTTTCACTTCCAATT
TTGTGGAATGATATTTTAGGAATAACGGACTTTTACCCGAATTC

FIGURE 313

MVMEKPSPLLVGREFVRQYYTLLNQAPDMLHRFYGKNSSYVHGGLDSNGKPADAVYGQKEIHRKVMSQNFTNCHT
KIRHVDAHATLNDGVVVQVMGLLSNNNQALRRFMQTFVLAPEGSVANKFYVHNDIFRYQDEVFGGFVTEPQEESE
EEVEEPEERQQTPEVVPDDSGTFYDQAVVSNDMEEHLEEPVAEPEPDPEPEPEQEPVSEIQEEKPEPVLEETAPE
DAQKSSSPAPADIAQTVQEDLRTFSWASVTSKNLPPSGAVPVTGIPPHVVKVPASQPRPESKPESQIPPQRPQRD
QRVREQRINIPPQRGPRPIREAGEQGDIEPRRMVRHPDSHQLFIGNLPHEVDKSELKDFFQSYGNVVELRINSGG
KLPNFGFVVFDDSEPVQKVLSNRPIMFRGEVRLNVEEKKTRAAREGDRRDNRLRGPGGPRGGLGGGMRGPPRGGM
VQKPGFGVGRGLAPRQ

FIGURE 314A

TTTCCTTCCCTCCCTCGGTCTTCCTTCGCACGCTGTTTGGTGATTGTGGCGCTCGCGACAGACAGGGAGGCGGTG
GCAGAGGACACTTGTC**ATG**GCCGCCTCTAAACCTGTGGAGGCAGCGGTGGTCGCAGCCGCTGTACCGAGCTCCGG
GAGTGGGGTGGGCGGCGGCGGGACTGCGGGCCCGGGCACGGGGGGGCTGCCGCGATGGCAGCTGGCTCTGGCGGT
CGGGGCACCCCTGCTGCTGGGCGCGGGTGCCATATACCTGTGGAGTCGGCAGCAACGGCGCCGGGAGGCCAGAGG
CCGGGGCGACGCCAGCGGCCTGAAGCGCAACAGCGAACGGAAGACCCCGGAGGGCAGGGCCAGTCCGGCCCCGGG
CAGCGGACACCCTGAAGGTCCCGGTGCTCACTTGGACATGAACTCTCTTGATAGAGCCCAAGCAGCCAAGAATAA
AGGCAATAAATATTTTAAAGCAGGAAAATATGAACAAGCTATTCAGTGCTATACTGAGGCTATTAGCTTGTGCCC
TACAGAGAAGAATGTTGACCTTTCTACATTTTATCAAAACAGAGCTGCTGCCTTTGAACAGTTGCAAAAATGGAA
AGAAGTGGCACAAGACTGTACAAAAGCTGTTGAACTTAATCCCAAATATGTGAAAGCTCTCTTTAGACGTGCAAA
AGCCCATGAGAAGCTAGACAATAAGAAGGAATGTTTAGAAGATGTCACTGCTGTGTGTATATTAGAAGGGTTCCA
AAATCAACAAAGCATGCTGTTAGCCGATAAAGTTCTTAAACTCCTTGGAAAAGAGAAAGCCAAAGAAAAATATAA
GAATCGTGAACCTCTGATGCCATCTCCACAGTTTATCAAATCTTACTTCAGTTCTTTCACGGATGATATCATTTC
CCAGCCCATGCTTAAAGGAGAGAAATCTGATGAAGATAAAGACAAGGAAGGGGAGGCTTTAGAAGTGAAAGAAAA
TTCTGGATACTTAAAGGCCAAACAGTATATGGAAGAAGAAAACTACGATAAAATCATAAGTGAATGCTCAAAAGA
AATAGATGCTGAAGGCAAATACATGGCAGAAGCATTGCTACTACGAGCTACCTTCTACCTGCTTATTGGCAATGC
CAATGCAGCCAAACCAGATTTAGATAAAGTCATCAGTTTGAAAGAAGCTAATGTGAAGCTTCGAGCAAATGCTCT
CATCAAAAGAGGCAGCATGTACATGCAACAGCAGCAGCCTTTGCTGTCCACTCAAGATTTTAACATGGCTGCTGA
CATCGATCCTCAGAATGCAGATGTTTATCACCACCGAGGACAGCTGAAAATACTCCTTGATCAAGTTGAAGAAGC
AGTGGCAGATTTTGATGAATGTATTAGGTTAAGACCTGAGTCTGCTCTGGCACAAGCACAGAAATGTTTTGCATT
GTACCGCCAGGCATATACGGGAAACAACTCTTCACAAATCCAAGCAGCTATGAAAGGTTTTGAAGAGGTCATAAA
GAAATTTCCAAGGTGTGCCGAAGGCTATGCACTATACGCCCAGGCATTAACAGATCAACAACAGTTTGGTAAAGC
TGATGAAATGTATGATAAATGTATTGATTTGGAACCAGATAATGCTACAACATATGTTCATAAAGGTTTACTTCA
ACTTCAGTGGAAGCAAGATCTGGATAGAGGTTTGGAACTTATCAGCAAGGCTATTGAAATTGACAATAAATGTGA
TTTTGCCTATGAAACCATGGGAACTATTGAAGTACAAAGAGGAAACATGGAGAAAGCCATTGACATGTTCAACAA
AGCTATTAACCTGGCCAAATCGGAAATGGAGATGGCCCATCTGTATTCACTTTGCGATGCCGCCCATGCCCAGAC
AGAAGTTGCAAAGAAATACGGATTAAAACCACCAACATTA**TAA**AACAGGGGGAAAGCAGACTGACCCTCTTTTTA
AAAGTTTACCCCCTCTTCAACTGAACCCTAAAGACACTGTCATGAACTGTGTTGAATGGTGGAAATCAGTATTTC
TGTTTGTGGTGTTGTTATTTGTTACATCTGTTTCATGTCTAGGTGTTGTGGGTGTGGCTGTTGAAGGAAGTTTGC
AGTCTTGCAGCTTTTATTCCCTGTGCAACAAAAGATTAGAACATGTTAAAGGGATTTTTAAATAAAGTTGCAAAG
AGTACAAATGATAATTGGCCATGCAAATAAAAACTGATTTGTTGATTTTTTTTTTAAGGGGGGTTGGCAGTTGAT
TATGTTCTGGATGATTCCGTCTATATATGTGTGAATAATGTAAGTATTTTACAGCATGTTGATTTTTAAATTAAC
GTAGTAAATGCTGTAAAATAGATTTATATTCAGTTAACCGCTTTCAGTTGATTTTTTGAAAGAAACAAAGGTTAA
ATGGGGGATTAAAGTAAAATTGAGAGACCCTTTAAACCATTGTCAGCATGCACAATGCCTCTGATTCTGCAGTTT
TAGAAACTTGGTGGCACTTATTAATCCTCTTGGCCCCTTTCCACTCTAATGGATAGTGTACATTCTTCTTAAAGT
CCACAACAGCAGATTTTCTTGCAGTAAATTATGCAGATGCAAAATATTCTAATTGATATATGTGTTGGAAGACTG
AGTATTGATGGGGGAGTGGACCAGACAAAGAGGTAAGATGAAACAGTAGTGTGTTTATAATTGTCTGTGACTATT
TTCTATAATAATTAGTACTATTTAATGGTGAGCTTTTAAAAATGTAGGATAGAGGGTACAGTGGCACTGTATATA
CTATTTATAGTCTCAGCTACTAGGGAGGCTGAGGCAAGAGGCTTGAGACCAGGAGCTCGAGGCTGTAATGTGCCA
TGATGATTGCACCTGCGAATAGCCACTGCACTCCAGCCTGGGCAATATAGCAAGACCCCATCCTTTAAAAAATTT
TAGAACTTTTTTAAAATCAAAGTGCAGATTGCTTGTATGTAAAACCCAAATAAAGGTAGAGTAAGTGTGATATAT
GGGAGTATTAAAATAGCTTAAAATTTCTCGTGAAGGACATGTGGCTAAAGGGTCAAAAAGGATGTAAGACTTGGA
GCCAGAGCATAGTATTTCCTGAAATAACAAGTTTAGTGCTTTAACTATGGCTACATGTGCTTAAGGAATTTTGAG
CCACTTATTTTTGAAGATGCTGAGGACATGTAGAGTGCTTTTTGTAGTGAGCTAACCTTGATCTCTAAGGACTAA
CTACCCAGGTCCAGGTCTTCACTAGGGGTACTGACAGTGTTTAAGCTTTACTCCACCTCCTTACTTAGAAATCAC
TTTACGATTTATTTCCATTTTCCACTTTTATAGACCATCCTTTTGCTTATATGCTAGATTTTTCTGGTGAGGGAA
GGGTTGTGTTCTTCAGGGGTCTTTTGTTTTGAAATACTCAGGATGGGGAGAGGTTTATTTAAGAACGAATTATAA
TTATGGTTTACACTGTTGGGAGTAAAGGAGCATTTTTACACCCCTTAAGGGTGCTTAATTCTGTTGAAACCAAAA
AGATTTGTCTACAAATGCTATCTTTTTTAGAAACTATTAGAAATGACTCCCTTTCAAAGTCAATCTTTGGAAAAT

FIGURE 314B

ATTGAGGAGGTCACTAATTAGTTGGTGCAGTTAATATAATTCAAGATGATTTGGATGATGGGAAGTTTGAGACCG
CTGCATTTTGTTTTTAAATTATGCACCTTCTGATAACCCCCAAATACAGAAATGTTCTACATCTCTGAATGACCT
CTGACTTTAAAAAAGTTTTTATTTGCATGGCTGTATTTACATTAACACTGACATTTTCTTCTACTCTTCTCCCTT
CTTTCATCTTGGGGTTGGGTAGAGAAACACAAAGGAAACTGAAGCATGTGCCATTCTATACTGTCATTCCAAATT
CTCATGGACTATTGCCTGTTGTGAAAATGTTTGAAACTGCACTGAAAGCTGCATCTGTCTGTATCTTTCTTTTGT
AAATGACCTCACATGTAAATTCACCAAATAAATATTACATTC

FIGURE 315

MAASKPVEAAVVAAAVPSSGSGVGGGGTAGPGTGGLPRWQLALAVGAPLLLGAGAIYLWSRQQRRREARGRGDAS
GLKRNSERKTPEGRASPAPGSGHPEGPGAHLDMNSLDRAQAAKNKGNKYFKAGKYEQAIQCYTEAISLCPTEKNV
DLSTFYQNRAAAFEQLQKWKEVAQDCTKAVELNPKYVKALFRRAKAHEKLDNKKECLEDVTAVCILEGFQNQQSM
LLADKVLKLLGKEKAKEKYKNREPLMPSPQFIKSYFSSFTDDIISQPMLKGEKSDEDKDKEGEALEVKENSGYLK
AKQYMEEENYDKIISECSKEIDAEGKYMAEALLLRATFYLLIGNANAAKPDLDKVISLKEANVKLRANALIKRGS
MYMQQQQPLLSTQDFNMAADIDPQNADVYHHRGQLKILLDQVEEAVADFDECIRLRPESALAQAQKCFALYRQAY
TGNNSSQIQAAMKGFEEVIKKFPRCAEGYALYAQALTDQQQFGKADEMYDKCIDLEPDNATTYVHKGLLQLQWKQ
DLDRGLELISKAIEIDNKCDFAYETMGTIEVQRGNMEKAIDMFNKAINLAKSEMEMAHLYSLCDAAHAQTEVAKK
YGLKPPTL

FIGURE 316

GGCGGAGGCGGGGTTTCAGTGGCTTCTGGTGCTCTAGGGTGAGCTCTGCCCGGCTGCAGGG**ATG**GCGGGGAGGGG
TAAGCTCATCGCAGTGATCGGAGACGAGGACACGGTGACTGGTTTCCTGCTGGGCGGCATAGGGGAGCTTAACAA
GAACCGCCATCCCAATTTCCTGGTGGTGGAGAAGGATACAACCATCAATGAGATCGAAGACACTTTCCGGCAATT
TCTAAACCGGGATGACATTGGCATCATCCTCATCAACCAGTACATCGCAGAGATGGTGCGGCATGCCCTGGACGC
CCACCAGCAGTCCATCCCCGCTGTCCTGGAGATCCCCTCCAAGGAGCACCCATATGACGCCGCCAAGGACTCCAT
CCTGCGCAGGGCCAGGGGCATGTTCACTGCCGAAGACCTGCGC**TAG**GGGACTCCTCATAGCCCTCAGCCCTTCCC
TCGTTTCCAGGCCTCTCCCCAGGCTTGCCATCAGCCTTCTTTACTTTTTGAGCCTCTGATTTCCAATTCCCTGCT
CCTTCCCACTCCATTAAGAGGCTAGGTGAGGCGCTTCTAGGTTGCTGGGGCTCTGCTGGTTAAGGAACAGGAAGC
CTGACCATCTCCCTCCACTACCTCTTCCCTGTGCTGTTACACAGTGTCATTGTTGATGTTAAATTAAAGTCATAT
TCTTGCTTCTCTCCAG

FIGURE 317

MAGRGKLIAVIGDEDTVTGFLLGGIGELNKNRHPNFLVVEKDTTINEIEDTFRQFLNRDDIGIILINQYIAEMVR
HALDAHQQSIPAVLEIPSKEHPYDAAKDSILRRARGMFTAEDLR

FIGURE 318

GAGCCTGACTTCAGCGCTCCCACTCTCGGCCGACACCCCTCATGGCCAACCGTTACACC**ATG**GATCTGACTGCCA
TCTACGAGAGCCTCCTGTCGCTGAGCCCTGACGTGCCCGTGCCATCCGACCATGGAGGGACTGAGTCCAGCCCAG
GCTGGGGCTCCTCGGGACCCTGGAGCCTGAGCCCCTCCGACTCCAGCCCGTCTGGGGTCACCTCCCGCCTGCCTG
GCCGCTCCACCAGCCTAGTGGAGGGCCGCAGCTGTGGCTGGGTGCCCCCACCCCCTGGCTTCGCACCGCTGGCTC
CCCGCCTGGGCCCTGAGCTGTCACCCTCACCCACTTCGCCCACTGCAACCTCCACCACCCCCTCGCGCTACAAGA
CTGAGCTATGTCGGACCTTCTCAGAGAGTGGGCGCTGCCGCTACGGGGCCAAGTGCCAGTTTGCCCATGGCCTGG
GCGAGCTGCGCCAGGCCAATCGCCACCCCAAATACAAGACGGAACTCTGTCACAAGTTCTACCTCCAGGGCCGCT
GCCCCTACGGCTCTCGCTGCCACTTCATCCACAACCCTAGCGAAGACCTGGCGGCCCCGGGCCACCCTCCTGTGC
TTCGCCAGAGCATCAGCTTCTCCGGCCTGCCCTCTGGCCGCCGGACCTCACCACCACCACCAGGCCTGGCCGGCC
CTTCCCTGTCCTCCAGCTCCTTCTCGCCCTCCAGCTCCCCACCACCACCTGGGGACCTTCCACTGTCACCCTCTG
CCTTCTCTGCTGCCCCTGGCACCCCCCTGGCTCGAAGAGACCCCACCCCAGTCTGTTGCCCCTCCTGCCGAAGGG
CCACTCCTATCAGCGTCTGGGGGCCCTTGGGTGGCCTGGTTCGGACCCCCTCTGTACAGTCCCTGGGATCCGACC
CTGATGAATATGCCAGCAGCGGCAGCAGCCTGGGGGGCTCTGACTCTCCCGTCTTCGAGGCGGGAGTTTTTGCAC
CACCCCAGCCCGTGGCAGCCCCCCGGCGACTCCCCATCTTCAATCGCATCTCTGTTTCTGAG**TGA**CAAAGTGACT
GCCCGGTCAGATCAGCTGGATCTCAGCGGGGAGCCACGTCTCTTGCACTGTGGTCTCTGCATGGACCCCAGGGCT
GTGGGGACTTGGGGGACAGTAATCAAGTAATCCCCTTTTCCAGAATGCATTAACCCACTCCCCTGACCTCACGCT
GGGGCAGGTCCCCAAGTGTGCAAGCTCAGTATTCATGATGGTGGGGGATGGAGTGTCTTCCGAGGTTCTTGGGGG
AAAAAAAATTGTAGCATATTTAAGGGAGGCAATGAACCCTCTCCCCCACCTCTTCCCTGCCCAAATCTGTCTCCT
AGAATCTTATGTGCTGTGAATAATAGGCCTTCACTGCCCCTCCAGTTTTTATAGACCTGAGGTTCCAGTGTCTCC
TGGTAACTGGAACCTCTCCTGAGGGGGAATCCTGGTGCTCAAATTACCCTCCAAAAGCAAGTAGCCAAAGCCGTT
GCCAAACCCCACCCATAAATCAATGGGCCCTTTATTTATGACGACTTTATTTATTCTAATATGATTTTATAGTAT
TTATATATATTGGGTCGTCTGCTTCCCTTGTATTTTTCTTCCTTTTTTTTGTAATATTGAAAACGACGATATAATT
ATTATAAGTAGACTATAATATATTTAGTAATATATATTATTACCTTAAAAGTCTATTTTTGTGTTTTGGGCATTT
TTAAATAAACAATCTGAGTGT

FIGURE 319

MDLTAIYESLLSLSPDVPVPSDHGGTESSPGWGSSGPWSLSPSDSSPSGVTSRLPGRSTSLVEGRSCGWVPPPPG
FAPLAPRLGPELSPSPTSPTATSTTPSRYKTELCRTFSESGRCRYGAKCQFAHGLGELRQANRHPKYKTELCHKF
YLQGRCPYGSRCHFIHNPSEDLAAPGHPPVLRQSISFSGLPSGRRTSPPPPGLAGPSLSSSSFSPSSSPPPPGDL
PLSPSAFSAAPGTPLARRDPTPVCCPSCRRATPISVWGPLGGLVRTPSVQSLGSDPDEYASSGSSLGGSDSPVFE
AGVFAPPQPVAAPRRLPIFNRISVSE

FIGURE 320

GCACG**ATG**AGCTCAATCGGCACTGGGTATGACCTGTCAGCCTCTACATTCTCTCCTGACGGAAGAGTTTTTCAAG
TTGAATATGCTATGAAGGCTGTGGAAAATAGTAGTACAGCTATTGGAATCAGATGCAAAGATGGTGTTGTCTTTG
GGGTAGAAAAATTAGTCCTTTCTAAACTTTATGAAGAAGGTTCCAACAAAAGACTTTTTAATGTTGATCGGCATG
TTGGAATGGCAGTAGCAGGTTTGTTGGCAGATGCTCGTTCTTTAGCAGACATAGCAAGAGAAGAAGCTTCCAACT
TCAGATCTAACTTTGGCTACAACATTCCACTAAAACATCTTGCAGACAGAGTGGCCATGTATGTGCATGCATATA
CACTCTACAGTGCTGTTAGACCTTTTGGCTGCAGTTTCATGTTAGGGTCTTACAGTGTGAATGACGGTGCGCAAC
TCTACATGATTGACCCATCAGGTGTTTCATACGGTTATTGGGGCTGTGCCATCGGCAAAGCCAGGCAAGCTGCAA
AGACGGAAATAGAGAAGCTTCAGATGAAAGAAATGACCTGCCGTGATATCGTTAAAGAAGTTGCAAAAATAATTT
ACATAGTACATGACGAAGTTAAGGATAAAGCTTTTGAACTAGAACTCAGCTGGGTTGGTGAATTAACTAATGGAA
GACATGAAATTGTTCCAAAAGATATAAGAGAAGAAGCAGAGAAATATGCTAAGGAATCTCTGAAGGAAGAAGATG
AATCAGATGATGATAATATG**TAA**CATTTACTCCAGCATCTATTGTATTTTAAATTTCTACTCCAGTCCAATGTAA
CTATTTAGCCCTG

FIGURE 321

MSSIGTGYDLSASTFSPDGRVFQVEYAMKAVENSSTAIGIRCKDGVVFGVEKLVLSKLYEEGSNKRLFNVDRHVG
MAVAGLLADARSLADIAREEASNFRSNFGYNIPLKHLADRVAMYVHAYTLYSAVRPFGCSFMLGSYSVNDGAQLY
MIDPSGVSYGYWGCAIGKARQAAKTEIEKLQMKEMTCRDIVKEVAKIIYIVHDEVKDKAFELELSWVGELTNGRH
EIVPKDIREEAEKYAKESLKEEDESDDDNM

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FIGURE 322

GCACGAGGCTCCGCCTCGCTTGCTCCTGCCGGGCGTGCAGGGCCCCGCCGCCGCC**ATG**TCGGGCTCGTTCGAGCT
CTCGGTGCAGGATCTCAACGACCTGCTCTCGGACGGCAGCGGCTGCTACAGCCTCCCGAGCCAGCCCTGCAACGA
GGTCACCCCGCGGATCTACGTGGGCAACGCGTCTGTGGCTCAGGACATCCCCAAGCTGCAGAAACTAGGCATCAC
CCATGTGCTGAACGCGGCTGAGGGCAGGTCCTTCATGCACGTCAACACCAATGCCAACTTCTACAAGGACTCCGG
CATCACATACCTGGGCATCAAGGCCAACGACACACAGGAGTTCAACCTCAGCGCTTACTTTGAAAGGGCTGCCGA
CTTCATTGACCAGGCTTTGGCTCAAAAGAATGGCCGGGTGCTCGTCCACTGCCGGGAAGGTTATAGCCGCTCCCC
AACGCTAGTTATCGCCTACCTCATGATGCGGCAGAAGATGGACGTCAAGTCTGCCCTGAGCATCGTGAGGCAGAA
CCGTGAGATCGGCCCCAACGATGGCTTCCTGGCCCAGCTCTGCCAGCTCAATGACAGACTAGCCAAGGAGGGGAA
GTTGAAACCC**TAG**GGCACCCCCACCGCCTCTGCTCGAGAGGTCCGTGGGGGAGGCCGTGGGCAAAGGTGTCCCGA
GCTGCCATGTTTAGGAAACACACTGTACCCTGCTCCCAGCATCACAAGGCACTTGTCTACAAGTGTGTCCCAACA
CAGTCCTGGGCCACTTTCCCCACCCTGGGGAGCACATAAAGAAGCTTGCCAAGGGGGGCGTCCTTGCTCCCCAGT
TGTCCTGTTTCTGTAACTTATGATGTCTTTTCCCTGAGATGGGGGCTCAGAGGGGGAAGGCCTGTGGCCTGCATG
CTTCCCGATGGCCCACGGCAGGAGGTGTGTGGAAGTGTAAGGCCTAAGATGCTCACAGAGGTCCCTCATGACCTC
CCTTCCCCAACTCCCGAATCCTCTCTTGAGTGTGGACCTCAACACCTTGAGCCCTAGTAAAGGAACTATGCAAAT
GCAGGCCACTCTCCCCACCACGTCTGTGCCCCGCACTGTCCCCACAGCCTTCCACACCCTGTGCATAGGCAGCCC
TCTCACGTCTTGAGGTCCGAAGCTGGGGTGGGGGTGTCCGTCAGTTATTAGTGGATGGAGATTCCCACAGCAAGG
CTGCATTTGAATGATTTCCTTAGGATGAATGGTCCCTACACAAAGAGGCCTTGTGGGCAAACCTGGAGAACCCTC
CTAAATCCATAGAGTTTTCAAAATGTGAATCTTTGGAAGCCTTGAGTTCAGAATCTGCTGCTCTGGAATATTTCC
CTTCGATCTTATCTCAGTCACTTCGTTTTTGAGAAGAGTGATGCCTTGGGTATGCTTTTTTTTTTTCTTTTTTAG
AAAACAGGGAGTTGAAGTCCAACCTATTTAAAAACCCCACCATTTGGAGAATTACAAGGGTTTTGTCCTGAATTG
TAGTGTTGGCAAGCCCAAGCCACTCGTGCTAACTGCTTTTTGTCTCGGTTGCTATTCCAAGAACAGAAGGAGGAA
GTTGGCCAATTACAGCGTGTGTGCATGGATGTGTGTGGGGGGCGTGCCTCTCAGAAACGCGGCCAGAAGACAAGC
AGGGAAGTGAAAGGTCCCAGGCACACACCCTGCCCATTGCAGGTGGCTCTTACAGCTCTCTGGTGCCAGCACGGG
ATCCCTGAAGTGACTCAGCCAGGCAGACATGAGACATGGCGGAGTGTCCAAATGGATCCTTTATTGGTGGTAGAG
CAAAAAAACCCAAACACGATAAACCTTTCAAAAGACTTTCTAAGGATGATATTGGAATGCACCAGCCCTCACATG
TGTATGCACATTTGCCAGAATATAAGAGTTTTGTTTTAAAAAAAAAAAAAAAAAA

FIGURE 323

MSGSFELSVQDLNDLLSDGSGCYSLPSQPCNEVTPRIYVGNASVAQDIPKLQKLGITHVLNAAEGRSFMHVNTNA
NFYKDSGITYLGIKANDTQEFNLSAYFERAADFIDQALAQKNGRVLVHCREGYSRSPTLVIAYLMMRQKMDVKSA
LSIVRQNREIGPNDGFLAQLCQLNDRLAKEGKLKP

FIGURE 324

GAATTCGGGCGGGCTTCTTCGCTGCCGACGTACGACGAGTGGCCGGGCTCTTGCGTCTGGTAACGCGCTGTCTCT
AACGCCAGCGCCGTCTCGCGCGCACTGCGCACAGACCACCCGCAGACGCCCGGCAGTCCGCAGGCCCAAACGCGC
ACGCGACCCCGCTCTCCGCACCGTACCCGGCCGCCTCGGC**ATG**GCGCCCCGCAGCGCCCGGCGACCCCTGCTGCT
GCTACTGCCTGTTGCTGCTGCTCGGCCTCATGCATTGTCGTCAGCAGCCATGTTTATGGTGAAAAATGGCAACGG
GACCGCGTGCATAATGGCCAACTTCTCTGCTGCCTTCTCAGTGAACTACGACACCAAGAGTGGCCCCAAGAACAT
GACCTTTGACCTGCCATCAGATGCCACAGTGGTGCTCAACCGCAGCTCCTGTGGAAAAGAGAACACTTCTGACCC
CAGTCTCGTGATTGCTTTTGGAAGAGGACATACACTCACTCTCAATTTCACGAGAAATGCAACACGTTACAGCGT
TCAGCTCATGAGTTTTGTTTATAACTTGTCAGACACACACCTTTTCCCCAATGCGAGCTCCAAAGAAATCAAGAC
TGTGGAATCTATAACTGACATCAGGGCAGATATAGATAAAAAATACAGATGTGTTAGTGGCACCCAGGTCCACAT
GAACAACGTGACCGTAACGCTCCATGATGCCACCATCCAGGCGTACCTTTCCAACAGCAGCTTCAGCAGGGGAGA
GACACGCTGTGAACAAGACAGGCCTTCCCCAACCACAGCGCCCCCTGCGCCACCCAGCCCCTCGCCCTCACCCGT
GCCCAAGAGCCCCTCTGTGGACAAGTACAACGTGAGCGGCACCAACGGGACCTGCCTGCTGGCCAGCATGGGGCT
GCAGCTGAACCTCACCTATGAGAGGAAGGACAACACGACGGTGACAAGGCTTCTCAACATCAACCCCAACAAGAC
CTCGGCCAGCGGGAGCTGCGGCGCCCACCTGGTGACTCTGGAGCTGCACAGCGAGGGCACCACCGTCCTGCTCTT
CCAGTTCGGGATGAATGCAAGTTCTAGCCGGTTTTTCCTACAAGGAATCCAGTTGAATACAATTCTTCCTGACGC
CAGAGACCCTGCCTTTAAAGCTGCCAACGGCTCCCTGCGAGCGCTGCAGGCCACAGTCGGCAATTCCTACAAGTG
CAACGCGGAGGAGCACGTCCGTGTCACGAAGGCGTTTTCAGTCAATATATTCAAAGTGTGGGTCCAGGCTTTCAA
GGTGGAAGGTGGCCAGTTTGGCTCTGTGGAGGAGTGTCTGCTGGACGAGAACAGCACGCTGATCCCCATCGCTGT
GGGTGGTGCCCTGGCGGGGCTGGTCCTCATCGTCCTCATCGCCTACCTCGTCGGCAGGAAGAGGAGTCACGCAGG
CTACCAGACTATC**TAG**CCTGGTGCACGCAGGCACAGCAGCTGCAGGGGCCTCTGTTCCTTTCTCTGGGCTTAGGG
TCCTGTCGAAGGGGAGGCACACTTTCTGCAAACGTTTCTCAAATCTGCTTCATCCAATGTGAAGTTCATCTTGCA
GCATTTACTATGCACAACAGAGTAACTATCGAAATGACGGTGTTAATTTTGCTAACTGGGTTAAATATTTTGCTA
ACTGGTTAAACATTAATATTTACCAAAGTAGGATTTTGAGGGTGGGGGTGCTCTCTCTGAGGGGGTGGGGGTGCC
GCTGTCTCTGAGGGGTGGGGGTGCCGCTGTCTGAGGGGTGGGGGTGCCGCTCTCTCTGAGGGGGTGGGGGTGCCG
CTTTCTCTGAGGGGGTGGGGGTGCCGCTCTCTCTGAGGGGGTGGGGGTGCTGCTCTCTCCGAGGGGTGGAATGCC
GCTGTCTCTGAGGGGTGGGGGTGCCGCTCTAAATTGGCTCCATATCATTGAGTTTAGGGTTCTGGTGTTTGGTTT
CTTCATTCTTTACTGCACTCAGATTTAAGCCTTACAAAGGGAAACCTCTGGCCGTCACACGTAGGACGCATGAAG
GTCACTCGTGTGAGGCTGACATGCTCACACATTACAACAGTAGAGAGGGAAAATCCTAAGACAGAGGAACTCCAG
AGATGAGTGTCTGGAGCGGCTTCAGTTCAGCTTTAAAGGCCAGGACGCGCGACACGTGGCTGGCGGCCTCGTTCC
AGTGGCGGCACGTCCTTGGCGTCTCTAATGTCTGCAGCTCAAGGGCTGGCACTTTTTTAAATATAAAAATGGTGT
TATTTTTATTTTTTTTTGTAAAGTGATTTTTGGTCTTCTGTTGACATTCGGGTGATCCTGTTCTGCGCTGTGTAC
AATGTGAGATCGGTGCGTTCTCCTGATGTTTTGCCGTGGCTTGGGGATTGTACACGGGACCAGCTCACGTAATGC
ATTGCCTGTAACAATGTAATAAAAAGCCTCTTTCTTTCAAAAAAACCCCGAATTC

FIGURE 325

MAPRSARRPLLLLLPVAAARPHALSSAAMFMVKNGNGTACIMANFSAAFSVNYDTKSGPKNMTFDLPSDATVVLN
RSSCGKENTSDPSLVIAFGRGHTLTLNFTRNATRYSVQLMSFVYNLSDTHLFPNASSKEIKTVESITDIRADIDK
KYRCVSGTQVHMNNVTVTLHDATIQAYLSNSSFSRGETRCEQDRPSPTTAPPAPPSPSPSPVPKSPSVDKYNVSG
TNGTCLLASMGLQLNLTYERKDNITVTRLLNINPNKTSASGSCGAHLVTLELHSEGTTVLLFQFGMNASSSRFFL
QGIQLNTILPDARDPAFKAANGSLRALQATVGNSYKCNAEEHVRVTKAFSVNIFKVWVQAFKVEGGQFGSVEECL
LDENSTLIPIAVGGALAGLVLIVLIAYLVGRKRSHAGYQTI

FIGURE 326A

AAGCGGCTCGGGCTGCGGCTGGCTCAGAGTGCCGCGGGGGGGCGTGGGGCGGTGCTGAGGAGCTGAAGCCGTGGCC
AGCTCGACTCCGGACAGTCCAGCGAGCAGCACGGCGGGAACCGGCAGCCGGAGCAGTCCCGGAGCAGAAGCAGCA
GCAGCAGCAGCAGCCCTCGCCGTTCGCGGAGCGCAGCCGAGCCGGCC**ATG**GCGTTGTCGATGCCGCTGAATGGGC
TGAAGGAGGAGGACAAAGAGCCCCTCATCGAGCTCTTCGTCAAGGCTGGCAGTGATGGTGAAAGCATAGGAAACT
GCCCCTTTTCCCAGAGGCTCTTCATGATTCTTTGGCTCAAAGGAGTTGTATTTAGTGTGACGACTGTTGACCTGA
AAAGGAAGCCAGCAGACCTGCAGAACTTGGCTCCCGGGACCCACCCACCATTTATAACTTTCAACAGTGAAGTCA
AAACGGATGTAAATAAGATTGAGGAATTTCTTGAAGAGGTCTTATGCCCTCCCAAGTACTTAAAGCTTTCACCAA
AACACCCAGAATCAAATACTGCTGGAATGGACATCTTTGCCAAATTCTCTGCATATATCAAGAATTCAAGGCCAG
AGGCTAATGAAGCACTGGAGAGGGGTCTCCTGAAAACCCTGCAGAAACTGGATGAATATCTGAATTCTCCTCTCC
CTGATGAAATTGATGAAAATAGTATGGAGGACATAAAGTTTTCTACACGTAAATTTCTGGATGGCAATGAAATGA
CATTAGCTGATTGCAACCTGCTGCCCAAACTGCATATTGTCAAGGTGGTGGCCAAAAAATATCGCAACTTTGATA
TTCCAAAAGAAATGACTGGCATCTGGAGATACCTAACTAATGCATACAGTAGGGACGAGTTCACCAATACCTGTC
CCAGTGATAAGGAGGTTGAAATAGCATATAGTGATGTAGCCAAAAGACTCACCAAG**TAA**AATCGCGTTTGTAAAA
GAGATGTCTTCATGTCTTCCCCTAAGAATACGCTTTTCCTAACAGGCTACTCCTTCCTGTAGAGCAGAAATTGTA
TTTTGCACGAACATGCAGTTATTGAAGATTAGGATCAAGGATAGACAAGGTATAGTAGTTATCTTAAAATATACA
CTCCTAAGCAGTATTATTTTAAAATCCTTTACCCTGGCTACCTCCCCTACCCGGGTTCCCCTCTCTTTAATTTGG
AGACACTCCACCACAAACTTTTCACTTTAGAGGTAGCTTGCCATCTCTCAGGAGCCCTCACCATTGTGTCCATTC
ACTGTGTATAGATGGCAGAACTTTTGAGGTGCAATGTTTAATTGTTAAAAATAGTAGCCACGACTTTATCAGGCA
GCCCCAAACTGGTGCATAATGCATGGTACAAGAAATATTTATGTATTTTTTGGAATTTTGTAATATTTAGTAGGA
GTATATGAAAGGATTGCTACTGTATCAGAAATATTGTTTCAATTTAGTCTATCCTGGATATGTACTAACGAATAT
TACCACCAGAGAAGAGAGCTTTCTACAAAAGTCACTACAGATTTTGCTATATTGCTTTGTAGATAGATTTTTACT
TTTGCCTAAAAGCATTTATCCTTCATACCAATTGTAACATCTGACACCATGTAGAAGCTAAAAGTTTAGAGGGAG
TGAGCGTTTTCTCAAGACCTTCCTCAAGCATTTTATCTTTAGAAGAGAAACTGATGGGCACCTGATACTCTGTCT
AAATACGTTTGTTATATGTGTTTTGCCCTGTGCCATTCATTTGGAACTTTATTGCATTCTTTATTTTAAAAAGCT
TGTTTTTACGTAATCATAGAGCTTGCTATTTGTACATCTGTTGAGCAACACTACATAACTGATTTTTAGTTGACT
TAGCTATAGCAGTACAATGATTAGTAATGTAAAAATTAACACAGAAATTAACCTAAGGAATGAAGGGTGGGTTTG
TCAAAATATCAAGTAAATTTTTGTTTCTAAAGTACATTTAATGTAGATGACCTAAAGAATGCGTTATCCATCCTA
TATAAAAGAAAGATAAAACACAGGTCACCAATTTTCTCATTTCACCCCATTTACCTTGTATAGAGGATTGTTCAT
TCCTTTGGGACTAAGTTATAGTTATGGTGAGTGTGTATTTACTGTAGTTTTGCCTGATCTCACTCATTGCACTTC
CTGGAGTTAAATTTTCCAACAGCCATGTTGAGGAATAGCACTCTGCATGTTTTTGTTTTGTTTTTCGGGGTTTTT
TTTAATTGAAGCCCTAAACCAGGAATTATTTGTGTTCTAACAGGAGGATGAACTTGCTGAAAATAAAACTTTGCT
ATGTATTTACTCTTTTTTAAAAGACAAAAGCAAAACCAGACTTTCTACGTACTACTCCAAAGACTGTGATTGTGA
CTATAATACATTTTTGGTAATTTTTTTATACCTAATTTGTATAGGAAGTGCTATTTCTCATAGGCTGTTTCTTGA
AATTTTAAGTTTATTGCTTTAAAATGGCAGTGTTTCTCCCACTTTGATATGCTAACATTTAGTAAGCACTGGCTT
TATGAAAGCGGCTTTTTATAAGTATACTGCATTTTTTGAGCCTATCATTAATTAGCTTAGTATGAAAGATAAGAA
AATCTCCATGTTGTATCCATTTGGCTCAGGAAGATTCTTTGCCTTACCTTTCTTAGAACTCTTTATTGCTTATCA
AAAGTTTGAGTACCCGCTTGGTTTTTTTTTGGTAATTAAATATTGTATGATTTATCTGGTTCAAGGAAGATGCAC
TATTCAGTTATCTATTGAGAAATTATTTTGCAGTGGTTTTAGTGGGTGAAAATGTCCCATCTGCACCAGTACACA
GGCAGGCATTATCATTCTTCACCTACTTTTTAAATAGTGGCAACTTGGGATTCTTTCTGGTGATTCTGAACCTTG
CCTCATAGCTTAAAGTATAAAAAAAGATTCAAGAGCAGTGAGGTTTGTTCTTTCCAGTGAATGGTGGACTGAGTG
GTGCGAGGTGGAGGGCTAACAAGAGGAAAGAACTACATTCTTCAGAATACAGTGATGAAAATTCATTTTGAAACT
CAAATATTTTCATTTTGGATATTCTCCTGTTTTTATTAAACCAGTGATTACACCTGGCCATCCCTCTAAATGTTC
TAGGAAGGCATGTCTATTGTGATTTTGATGAAGACAGAATTATTTTTCTCTGTAGAAACACAGATACCACTTTAT
CAGGGAAGTTAGTCAAATGAAATGGAAATTGGTAAATGGACAAAAGCTAGCTAGTAAAAAGGACGACCCAGCAAC
ATGCTTTAACCCCATTGTATGTTTGTGGAAAGAGCATAGTTTAACATCTTGAGAAATTTGGGACATAAAGTTTTC
ATGGTAGACAGTTCATGCAGTATATGAATTGACATAATGGAAATAATCTGATTTTATTTTTACAACTAACATCCA
TTCCCCTTCATTTAAACACCTTTTGTGTTTTACTTCAGTGAGGAGATTGGAGTCTGAATGGATCTGTTTTCCAAG
AGATTCTGAGAAATTTTTGTATTCAGCAGTTGGAAAGCTCTCTATTCTAGTTGATAAAACTTCCCTTTTTTGATG

FIGURE 326B

TAGATGCAGATATTCTATACAGTTCTGTTGTCTTTTACTAGGACTGTAAACTTTTGTGATAAAATTCAAATAAGA
TTTTATTTCTTTGTAATTTTGGCTTTCACAATTTATCTTTAAATCCTTGAGCAATCTGTATACAATTAAGAGATT
TCTGACATTTATTCTTACACTAAATGGATCAACTCTAGGATTTAGGCATGTTAACTTCTGTTGTGTTTTGAATCT
CTCCAGAGTTGCATGTAGATAGCATTTATTTCTGTGCCCTTAAACCCATTTAGAAAATAACTACAAAGTAAAAAT
GTAGAGGAAATAGAAATGTATTTTTTCATGAACATTTTGATACAAATTTCATCATTTAATGATTCACCAATTTCT
TGCATTAATTTGAATTTAAGCATTTAATTCAAAGAGAGGGGAGCATCCATTATTGGTACATGTGGGCTTTTAAAA
ACTCCATCCTTTATAAATAGTCAAGGTTTGGGCCACACAAAGTATATTTTTATCATGGAAAAATTTCAACTCCTC
AAGCCGTAATGTTGAACAGAATTGGAGTATTTTCTTTATAATTTCTTGAACAGGCAAATGAAAGCTTATTATAGA
ATGCATGTATTTTCTTTTATCTTTGGAACATCAGCACCAGTATATTGCTGGCAGCTATTGTATTAAAAAATAAAG
TATATTTTCACTATCAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 327

MALSMPLNGLKEEDKEPLIELFVKAGSDGESIGNCPFSQRLFMILWLKGVVFSVTTVDLKRKPADLQNLAPGTHP
PFITFNSEVKTDVNKIEEFLEEVLCPPKYLKLSPKHPESNTAGMDIFAKFSAYIKNSRPEANEALERGLLKTLQK
LDEYLNSPLPDEIDENSMEDIKFSTRKFLDGNEMTLADCNLLPKLHIVKVVAKKYRNFDIPKEMTGIWRYLTNAY
SRDEFTNTCPSDKEVEIAYSDVAKRLTK

FIGURE 328

TGCTGCGAACCACGTGGGTCCCGGGCGCGTTTCGGGTGCTGGCGGCTGCAGCCGGAGTTCAAACCTAAGCAGCTG
GAAGGAACC**ATG**GCCAACTGTGAGCGTACCTTCATTGCGATCAAACCAGATGGGGTCCAGCGGGGTCTTGTGGGA
GAGATTATCAAGCGTTTTGAGCAGAAAGGATTCCGCCTTGTTGGTCTGAAATTCATGCAAGCTTCCGAAGATCTT
CTCAAGGAACACTACGTTGACCTGAAGGACCGTCCATTCTTTGCCGGCCTGGTGAAATACATGCACTCAGGGCCG
GTAGTTGCCATGGTCTGGGAGGGGCTGAATGTGGTGAAGACGGGCCGAGTCATGCTCGGGGAGACCAACCCTGCA
GACTCCAAGCCTGGGACCATCCGTGGAGACTTCTGCATACAAGTTGGCAGGAACATTATACATGGCAGTGATTCT
GTGGAGAGTGCAGAGAAGGAGATCGGCTTGTGGTTTCACCCTGAGGAACTGGTAGATTACACGAGCTGTGCTCAG
AACTGGATCTATGAA**TGA**CAGGAGGGCAGACCACATTGCTTTTCACATCCATTTCCCCTCCTTCCCATGGGCAGA
GGACCAGGCTGTAGGAAATCTAGTTATTTACAGGAACTTCATCATAATTTGGAGGGAAGCTCTTGGAGCTGTGAG
TTCTCCCTGTACAGTGTTACCATCCCCGACCATCTGATTAAAATGCTTCCTCCCAGC

FIGURE 329

MANCERTFIAIKPDGVQRGLVGEIIKRFEQKGFRLVGLKFMQASEDLLKEHYVDLKDRPFFAGLVKYMHSGPVVA
MVWEGLNVVKTGRVMLGETNPADSKPGTIRGDFCIQVGRNIIHGSDSVESAEKEIGLWFHPEELVDYTSCAQNWI
YE

FIGURE 330A

GCGGCGGTGGCGGCGGAGACCCGAAC**ATG**GCGACCGCGCGCACCTTCGGGCCCGAGCGGGAAGCCGAGCCGGCCA
AGGAAGCGCGCGTCGTGGGCTCGGAGCTTGTGGACACTTATACGGTTTACATCATCCAGGTCACTGATGGCAGCC
ATGAGTGGACAGTAAAGCACCGCTACAGCGACTTCCATGACCTGCATGAAAAGCTCGTTGCAGAGAGAAAGATTG
ATAAAAACCTGCTTCCGCCCAAAAAGATAATTGGGAAAAACTCAAGAAGCTTGGTGGAGAAGAGGGAGAAGGATC
TGGAGGTCTACCTCCAGAAGCTCCTGGCTGCCTTCCCTGGCGTGACCCCCAGAGTACTGGCCCACTTCTTGCATT
TTCACTTCTATGAGATAAATGGCATCACCGCGGCACTGGCTGAAGAGCTCTTTGAGAAAGGAGAACAGCTCCTGG
GGGCCGGCGAGGTCTTTGCCATTGGACCCCTGCAGCTGTATGCCGTCACGGAGCAGCTGCAGCAGGGAAAGCCCA
CGTGCGCCAGTGGGGATGCCAAGACCGACCTCGGGCACATCCTGGACTTCACCTGTCGCCTTAAGTACCTTAAGG
TTTCTGGCACAGAAGGACCTTTTGGGACCAGCAACATTCAGGAGCAGCTCCTGCCGTTCGACCTATCAATATTCA
AGTCCCTGCATCAGGTGGAGATAAGTCACTGTGATGCTAAGCACATCAGAGGGCTGGTCGCATCGAAGCCCACCT
TAGCCACGCTGAGTGTCCGCTTCTCAGCAACCTCGATGAAGGAAGTCCTTGTTCCTGAAGCCTCAGAATTTGATG
AGTGGGAGCCTGAAGGCACAACCCTAGAAGGCCCTGTGACTGCCGTCATCCCCACTTGGCAGGCATTGACCACGC
TTGACCTGAGCCACAACAGCATCTCCGAGATCGACGAGTCTGTGAAACTGATCCCAAAGATTGAGTTCCTGGACC
TGAGTCACAATGGATTGCTGGTTGTGGACAATCTGCAGCACCTGTATAACCTTGTGCATCTGGACCTGTCCTACA
ACAAGCTCTCCTCCTTGGAAGGGCTTCACACCAAGCTGGGGAACATCAAGACCTTAAACCTGGCAGGCAACCTCC
TAGAGAGTCTGAGTGGCCTGCACAAGCTCTACTCACTGGTCAACCTGGATCTCCGGGACAACAGGATCGAACAGA
TGGAGGAGGTCCGGAGCATAGGCAGCCTCCCGTGTCTGGAGCACGTGTCTCTGCTGAACAACCCTCTGAGCATCA
TCCCCGACTACCGGACCAAGGTGCTGGCTCAGTTCGGAGAGAGGGCCTCAGAGGTCTGTCTGGATGACACAGTGA
CCACAGAGAAGGAGCTGGACACTGTGGAAGTGCTGAAAGCAATTCAGAAAGCCAAGGAGGTCAAGTCCAAACTGA
GCAACCCAGAGAAGAAGGGTGGTGAAGACTCCCGGCTCTCAGCTGCCCCCTGCATCAGACCCAGCAGCTCCCCTC
CCACTGTGGCTCCCGCATCTGCCTCCCTGCCCCAGCCCATCCTCTCTAACCAAGGAATCATGTTCGTTCAGGAGG
AGGCCCTGGCCAGCAGCCTCTCGTCCACTGACAGTCTGACTCCCGAGCACCAGCCCATTGCCCAGGGATGTTCTG
ATTCCTTGGAGTCCATCCCTGCGGGACAGGCAGCTTCCGATGATTTAAGGGACGTGCCAGGAGCTGTTGGTGGTG
CAAGCCCAGAACATGCCGAGCCGGAGGTCCAGGTGGTGCCGGGGTCTGGCCAGATCATCTTCCTGCCCTTCACCT
GCATTGGCTACACGGCCACCAATCAGGACTTCATCCAGCGCCTGAGCACACTGATCCGGCAGGCCATCGAGCGGC
AGCTGCCTGCCTGGATCGAGGCTGCCAACCAGCGGGAGGAGGGCCAGGGTGAACAGGGCGAGGAGGAGGATGAGG
AGGAGGAAGAAGAGGAGGACGTGGCTGAGAACCGCTACTTTGAAATGGGGCCCCCAGACGTGGAGGAGGAGGAGG
GAGGAGGCCAGGGGGAGGAAGAGGAGGAGGAAGAGGAGGATGAAGAGGCCGAGGAGGAGCGCCTGGCTCTGGAAT
GGGCCCTGGGCGCGGACGAGGACTTCCTGCTGGAGCACATCCGCATCCTCAAGGTGCTGTGGTGCTTCCTGATCC
ATGTGCAGGGCAGTATCCGCCAGTTCGCCGCCTGCCTTGTGCTCACCGACTTCGGCATCGCAGTCTTCGAGATCC
CGCACCAGGAGTCTCGGGGCAGCAGCCAGCACATCCTCTCCTCCCTGCGCTTTGTCTTTTGCTTCCCGCATGGCG
ACCTCACCGAGTTTGGCTTCCTCATGCCGGAGCTGTGTCTGGTGCTCAAGGTACGGCACAGTGAGAACACGCTCT
TCATTATCTCGGACGCCGCCAACCTGCACGAGTTCCACGCGGACCTGCGCTCATGCTTTGCACCCCAGCACATGG
CCATGCTGTGTAGCCCCATCCTCTACGGCAGCCACACCAGCCTGCAGGAGTTCCTGCGCCAGCTGCTCACCTTCT
ACAAGGTGGCTGGCGGCTGCCAGGAGCGCAGCCAGGGCTGCTTCCCCGTCTACCTGGTCTACAGTGACAAGCGCA
TGGTGCAGACGGCCGCCGGGGACTACTCAGGCAACATCGAGTGGGCCAGCTGCACACTCTGTTCAGCCGTGCGGC
GCTCCTGCTGCGCGCCCTCTGAGGCCGTCAAGTCCGCCGCCATCCCCTACTGGCTGTTGCTCACGCCCCAGCACC
TCAACGTCATCAAGGCCGACTTCAACCCCATGCCCAACCGTGGCACCCACAACTGTCGCAACCGCAACAGCTTCA
AGCTCAGCCGTGTGCCGCTCTCCACCGTGCTGCTGGACCCCACACGCAGCTGTACCCAGCCTCGGGGCGCCTTTG
CTGATGGCCACGTGCTAGAGCTGCTCGTGGGGTACCGCTTTGTCACTGCCATCTTCGTGCTGCCCCACGAGAAGT
TCCACTTCCTGCGCGTCTACAACCAGCTGCGGGCCTCGCTGCAGGACCTGAAGACTGTGGTCATCGCCAAGACCC
CCGGGACGGGAGGCAGCCCCCAGGGCTCCTTTGCGGATGGCCAGCCTGCCGAGCGCAGGGCCAGCAATGACCAGC
GTCCCCAGGAGGTCCCAGCAGAGGCTCTGGCCCCGGCCCCAGTGGAAGTCCCAGCTCCAGCCCCTGCAGCAGCCT
CAGCCTCAGGCCCAGCGAAGACTCCGGCCCCAGCAGAGGCCTCAACTTCAGCTTTGGTCCCAGAGGAGACGCCAG
TGGAAGCTCCAGCCCCACCCCCAGCCGAGGCCCCTGCCCAGTACCCGAGTGAGCACCTCATCCAGGCCACCTCGG
AGGAGAATCAGATCCCCTCGCACTTGCCTGCCTGCCCGTCGCTCCGGCACGTCGCCAGCCTGCGGGGCAGCGCCA
TCATCGAGCTCTTCCACAGCAGCATTGCTGAGGTTGAAAACGAGGAGCTGAGGCACCTCATGTGGTCCTCGGTGG
TGTTCTACCAGACCCCAGGGCTGGAGGTGACTGCCTGCGTGCTGCTCTCCACCAAGGCTGTGTACTTTGTGCTCC

FIGURE 330B

ACGACGGCCTCCGCCGCTACTTCTCAGAGCCACTGCAGGATTTCTGGCATCAGAAAAACACCGACTACAACAACA
GCCCTTTCCACATCTCCCAGTGCTTCGTGCTAAAGCTTAGTGACCTGCAGTCAGTCAATGTGGGGCTTTTCGACC
AGCATTTCCGGCTGACGGGTTCCACCCCGATGCAGGTGGTCACGTGCTTGACGCGGGACAGCTACCTGACGCACT
GCTTCCTCCAGCACCTCATGGTCGTGCTGTCCTCTCTGGAACGCACGCCCTCGCCGGAGCCTGTTGACAAGGACT
TCTACTCCGAGTTTGGGAACAAGACCACAGGGAAGATGGAGAACTACGAGCTGATCCACTCTAGTCGCGTCAAGT
TTACCTACCCCAGTGAGGAGGAGATTGGGGACCTGACGTTCACTGTGGCCCAAAAGATGGCTGAGCCAGAGAAGG
CCCCAGCCCTCAGCATCCTGCTGTACGTGCAGGCCTTCCAGGTGGGCATGCCACCCCCTGGGTGCTGCAGGGGCC
CCCTGCGCCCCAAGACACTCCTGCTCACCAGCTCCGAGATCTTCCTCCTGGATGAGGACTGTGTCCACTACCCAC
TGCCCGAGTTTGCCAAAGAGCCGCCGCAGAGAGACAGGTACCGGCTGGACGATGGCCGCCGCGTCCGGGACCTGG
ACCGAGTGCTCATGGGCTACCAGACCTACCCGCAGGCCCTCACCCTCGTCTTCGATGACGTGCAAGGTCATGACC
TCATGGGCAGTGTCACCCTGGACCACTTTGGGGAGGTGCCAGGTGGCCCGGCTAGAGCCAGCCAGGGCCGTGAAG
TCCAGTGGCAGGTGTTTGTCCCCAGTGCTGAGAGCAGAGAGAAGCTCATCTCGCTGTTGGCTCGCCAGTGGGAGG
CCCTGTGTGGCCGTGAGCTGCCTGTCGAGCTCACCGGC**TAG**CCCAGGCCACAGCCAGCCTGTCGTGTCCAGCCTG
ACGCCTACTGGGGCAGGGCAGCAGGCTTTTGTGTTCTCTAAAAATGTTTTATCCTCCCTTTGGTACCTTAATTTG
ACTGTCCTCGCAGAGAATGTGAACATGTGTGTGTGTTGTGTTAATTCTTTCTCATGTTGGGAGTGAGAATGCCGG
GCCCCTCAGGGCTGTCGGTGTGCTGTCAGCCTCCCACAGGTGGTACAGCCGTGCACACCAGTGTCGTGTCTGCTG
TTGTGGGACCGTTGTTAACACGTGACACTGTGGGTCTGACTTTCTCTTCTACACGTCCTTTCCTGAAGTGTCGAG
TCCAGTCCTTTGTTGCTGTTGCTGTTGCTGTTGCTGTTGCTGTTGGCATCTTGCTGCTAATCCTGAGGCTGGTAG
CAGAATGCACATTGGAAGCTCCCACCCCATATTGTTCTTCAAAGTGGAGGTCTCCCCTGATCCAGACAAGTGGGA
GAGCCCGTGGGGGCAGGGGACCTGGAGCTGCCAGCACCAAGCGTGATTCCTGCTGCCTGTATTCTCTATTCCAAT
AAAGCAGAGTTTGACACCGTCTTAAAAAAAAA

FIGURE 331

MATARTFGPEREAEPAKEARVVGSELVDTYTVYIIQVTDGSHEWTVKHRYSDFHDLHEKLVAERKIDKNLLPPKK
IIGKNSRSLVEKREKDLEVYLQKLLAAFPGVTPRVLAHFLHFHFYEINGITAALAEELFEKGEQLLGAGEVFAIG
PLQLYAVTEQLQQGKPTCASGDAKTDLGHILDFTCRLKYLKVSGTEGPFGTSNIQEQLLPFDLSIFKSLHQVEIS
HCDAKHIRGLVASKPTLATLSVRFSATSMKEVLVPEASEFDEWEPEGTTLEGPVTAVIPTWQALTTLDLSHNSIS
EIDESVKLIPKIEFLDLSHNGLLVVDNLQHLYNLVHLDLSYNKLSSLEGLHTKLGNIKTLNLAGNLLESLSGLHK
LYSLVNLDLRDNRIEQMEEVRSIGSLPCLEHVSLLNNPLSIIPDYRTKVLAQFGERASEVCLDDTVTTEKELDTV
EVLKAIQKAKEVKSKLSNPEKKGGEDSRLSAAPCIRPSSSPPTVAPASASLPQPILSNQGIMFVQEEALASSLSS
TDSLTPEHQPIAQGCSDSLESIPAGQAASDDLRDVPGAVGGASPEHAEPEVQVVPGSGQIIFLPFTCIGYTATNQ
DFIQRLSTLIRQAIERQLPAWIEAANQREEGQGEQGEEEDEEEEEEEDVAENRYFEMGPPDVEEEEGGGQGEEEE
EEEEDEEAEEERLALEWALGADEDFLLEHIRILKVLWCFLIHVQGSIRQFAACLVLTDFGIAVFEIPHQESRGSS
QHILSSLRFVFCFPHGDLTEFGFLMPELCLVLKVRHSENTLFIISDAANLHEFHADLRSCFAPQHMAMLCSPILY
GSHTSLQEFLRQLLTFYKVAGGCQERSQGCFPVYLVYSDKRMVQTAAGDYSGNIEWASCTLCSAVRRSCCAPSEA
VKSAAIPYWLLLTPQHLNVIKADFNPMPNRGTHNCRNRNSFKLSRVPLSTVLLDPTRSCTQPRGAFADGHVLELL
VGYRFVTAIFVLPHEKFHFLRVYNQLRASLQDLKTVVIAKTPGTGGSPQGSFADGQPAERRASNDQRPQEVPAEA
LAPAPVEVPAPAPAAASASGPAKTPAPAEASTSALVPEETPVEAPAPPPAEAPAQYPSEHLIQATSEENQIPSHL
PACPSLRHVASLRGSAIIELFHSSIAEVENEELRHLMWSSVVFYQTPGLEVTACVLLSTKAVYFVLHDGLRRYFS
EPLQDFWHQKNTDYNNSPFHISQCFVLKLSDLQSVNVGLFDQHFRLTGSTPMQVVTCLTRDSYLTHCFLQHLMVV
LSSLERTPSPEPVDKDFYSEFGNKTTGKMENYELIHSSRVKFTYPSEEEIGDLTFTVAQKMAEPEKAPALSILLY
VQAFQVGMPPPGCCRGPLRPKTLLLTSSEIFLLDEDCVHYPLPEFAKEPPQRDRYRLDDGRRVRDLDRVLMGYQT
YPQALTLVFDDVQGHDLMGSVTLDHFGEVPGGPARASQGREVQWQVFVPSAESREKLISLLARQWEALCGRELPV
ELTG

FIGURE 332

AGGCGCTGCGGCCGTCCCGGGCCGTGACTCCTCCTTTCCCCCGCCCCGCCTCCGTTCGGAGAGCCGGCGGGCGGG
CGCCTCTCGGCCAGGTACGCGGCCGGCTGGGATAGGGGTCGCGGGCGGGCTTTGGTCGCGCAGCAGCCGGTCCTC
CCCGGAGGTAGGCGGGCGCGGGCCCTGTTGGGTCTTTGGGACGCGGGTCCCGCTGGGGCCGGGGATGCTCCTCTC
TGTGAGCGCGGTCCCGTCCCCCCCTGTCCCCGGGCGGGCGCACGGGGGTCTAACCTTGGGGGGCGGCGCTCCCGC
CTGTCCCGGGTGCCGGGGTTCGCGTCCCGCGGGGCCTTCCTCGCTCTTTGTCTCTTCTGAGTGAACTTGATGACC
CCCTTCTTCCAGGAAGCGCCTCTTGGACGCGTGTGACCG**ATG**CCCAGATTGCACGACCACTTCTGGAGCTGCTCC
TGTGCGCACAGCGCGAGGCGCCGAGGCCCCCCGCGAGCCAGCACCGCGGGGCTGCCGCCCAAGGTTGGGGAGATG
ATCAACGTTTCCGTGTCCGGGCCCTCCCTGCTGGCGGCCCACGGTGCCCCGGACGCTGACCCCGCGCCCAGGGGC
CGCAGTGCTGCGATGAGCGGCCCCGAGCCCGGCAGCCCCTACCCCAACACCTGGCATCATCGCCTGTTGCAGAGG
AGCCTCGTGCTCTTCTCGGTTGGGGTGGTCCTAACCCTGGTGCTCAACCTGCTGCAGATCCAGAGGAATGTCACT
CTCTTCCCCGAGGAGGTGATCGCCACCATCTTTTCCTCCGCCTGGTGGGTCCCTCCCTGCTGCGGGACAGCAGCT
GCTGTTGTTGGCCTACTGTACCCCTGTATCGACAGTCACCTCGGAGAACCCCACAAATTTAAGAGAGAATGGGCC
AGTGTCATGCGCTGCATAGCAGGTTTTGGTGGCATTAACCACGCCAGTGCTAAATTGGATTTTGCCAATAATGTC
CAGCTGTCCTTGACTTTAGCAGCCCTATCTTTGGGCCTTTGGTGGACATTTGATCGTTCCAGAAGTGGCCTTGGG
CTGGGGATCACCATAGCTTTTCTAGCTACGCTGATCACGCAGTTTCTCGTGTATAATGGTGTCTATCAGTATACG
TCCCCAGATTTCCTCTATATTCGTTCTTGGCTCCCTTGTATATTTTTCTCAGGAGGCGTCACGGTGGGGAACATA
GGACGACAGTTAGCTATGGGTGTTCCTGAAAAGCCCCATAGTGAT**TGA**GTCTTCAAAACCACCGATTCTGAGAGC
AAGGAAGATTTTGGAAGAAAATCTGACTGTGGATTATGACAAAGATTATCTTTTTTCTTAAGTAATCTATTTAGA
TCGGGCTGACTGTACAAATGACTCCTGGAAAAAACTCGTCACCTATCTAGAAAAGTCAAGAATAGGGAGGTGGAG
AATGATGACTTACCCTGAAGTCTTCCCTTGCTACCCACACTGGCGCCTGTCTGTGCCCTGGAGCATTCTGCCCAG
CCTACGTGGGTTCAGTCAGGTGCCACCTTCCCAAGTATTCGATTTCATTCATGTGATTAAAACAAGTTGCCATAT
TTCAAAGCCTTGAGCTAAGACTCAATTACCAACCCGCAGTTTTGTGTCAGTGCCCAAAGGAGGGAGGTTGATGGT
GCTTAACAAACATGAAGTATGGTGTAATAGGAATAATATTTATCCAAAAGATTTTTAAAAATAGGGCTGTGTTTA
AAGAAGGAATCAAAACAAGAAAAGCAGCAGTGATTATAGAGAGGTCACACTCTAAGTGGGGTCGCGGCGTGGCCA
CGCTTCACGGTCACGCTCGTCCGTCCTGCAGTGGCGTGTTTACATGGTCACACGTGTGTGTATCACCAGTGGGTC
AACTGCTTGTCATTCCTCCCGCGGCAGTGTTGTGTAGACAATCTTACTGAGCAAAAGGCAATGAAAAGTCTTGGG
CTCCCACACTGCGATATATTGGAATTCCCACCTCAGTTTATGAAGTTTATTTCGAAATCCATAGTCATCTAAGAA
TGAATACCTGTCTGCCATGTATTTCAATCTTAGTGAGCCAAAATTGTTTGTTTGTTACTACAGAATAGAGATGAC
TGTTTTTTGGCACAGCCCTATGGAATTTGCAATCTGTGATTGCCTTGTAAAAAGGAGAGTGCATATGGCACTGCA
TTAAACGTGTGGTGTTTCTAGTCAATGATATTGGTGAGCACAATGTATTCATTTAATGGCATAGACCATACCAGA
CCTAATTTGCAAGTATTGGGTCTTCAAACTTCAAGTGCAATGTATTATGAAAACCAATCTGAGCCTTGTATCTCT
TAAATATTTATTCCTTCTAACGTGTGAGATGTCCCGAGAGAAGGGTTCTCCATTCATTTCAGTGCTGCCTGGAGG
AAACTCGGCAATGATTTCTTCAGTTGTGAAGTTCCTTTCGGGTTACAACCTCCACTGGAACCCTCAACCTTCGAA
ATACTCCAGTTTTGGGGGTTGGGGCCATTTACTTATAAATTTACCGCCGGGTTTTTGGAATCTACATGTCTTGGG
GGCGGGCTCAAATTCTTCGAAAGTGGTTGGATTAAAA

FIGURE 333

MPRLHDHFWSCSCAHSARRRGPPRASTAGLPPKVGEMINVSVSGPSLLAAHGAPDADPAPRGRSAAMSGPEPGSP
YPNTWHHRLLQRSLVLFSVGVVLTLVLNLLQIQRNVTLFPEEVIATIFSSAWWVPPCCGTAAAVVGLLYPCIDSH
LGEPHKFKREWASVMRCIAGFGGINHASAKLDFANNVQLSLTLAALSLGLWWTFDRSRSGLGLGITIAFLATLIT
QFLVYNGVYQYTSPDFLYIRSWLPCIFFSGGVTVGNIGRQLAMGVPEKPHSD

FIGURE 334A

GGCGAGCCCGGCCCGCGAACGTCACGTCCTGCGCGCTCCCTGCACTCTCCCGAGCTGCGCTAGGCGGGCGCCACG
GCTGCCCGGCGAAGGAAACCGAAACCGAGTCCGGGCCCGTCCCTCCGCGGCCCCATCCGCCCGGTGCACCCGGGG
TCGCGCTCGCCAGGCCGCGGAGCCCAGAGCTGCGCGCACGAACCGTGCGCCGGGAGGGCGTGGGCGTGGCGCCGA
AGGGTCCCGGGTCTTCGACGCCTCTGCGGCGGCTCCTCCCTCCTTGCAGTTGGATCCCTGGCGGGTGCGGCCCGG
CCCGGCCCGTGAGCGGCGCACAGA**ATG**GGCCGATGCTGCTTCTACACGGCGGGGACGTTGTCCCTGCTCCTGCTG
GTGACCAGCGTCACGCTGCTGGTGGCCCGGGTCTTCCAGAAGGCTGTAGACCAGAGTATCGAGAAGAAAATTGTG
TTAAGGAATGGTACTGAGGCATTTGACTCCTGGGAGAAGCCCCCTCTGCCTGTGTATACTCAGTTCTATTTCTTC
AATGTCACCAATCCAGAGGAGATCCTCAGAGGGGAGACCCCTCGGGTGGAAGAAGTGGGGCCATACACCTACAGG
GAACTCAGAAACAAAGCAAATATTCAATTTGGAGATAATGGAACAACAATATCTGCTGTTAGCAACAAGGCCTAT
GTTTTTGAACGAGACCAATCTGTTGGAGACCCTAAAATTGACTTAATTAGAACATTAAATATTCCTGTATTGACT
GTCATAGAGTGGTCCCAGGTGCACTTCCTCAGGGAGATCATCGAGGCCATGTTGAAAGCCTATCAGCAGAAGCTC
TTTGTGACTCACACAGTTGACGAATTGCTCTGGGGCTACAAAGATGAAATCTTGTCCCTTATCCATGTTTTCAGG
CCCGATATCTCTCCCTATTTTGGCCTATTCTATGAGAAAAATGGGACTAATGATGGAGACTATGTTTTTCTAACT
GGAGAAGACAGTTACCTTAACTTTACAAAAATTGTGGAATGGAATGGGAAAACGTCACTTGACTGGTGGATAACA
GACAAGTGCAATATGATTAATGGAACAGATGGAGATTCTTTTCACCCACTAATAACCAAAGATGAGGTCCTTTAT
GTCTTCCCATCTGACTTTTGCAGGTCAGTGTATATTACTTTCAGTGACTATGAGAGTGTACAGGGACTGCCTGCC
TTTCGGTATAAAGTTCCTGCAGAAATATTAGCCAATACGTCAGACAATGCCGGCTTCTGTATACCTGAGGGAAAC
TGCCTGGGCTCAGGAGTTCTGAATGTCAGCATCTGCAAGAATGGTGCACCCATCATTATGTCTTTCCCACACTTT
TACCAAGCAGATGAGAGGTTTGTTTCTGCCATAGAAGGCATGCACCCAAATCAGGAAGACCATGAGACATTTGTG
GACATTAATCCTTTGACTGGAATAATCCTAAAAGCAGCCAAGAGGTTCCAAATCAACATTTATGTCAAAAAATTA
GATGACTTTGTTGAAACGGGAGACATTAGAACCATGGTTTTCCCAGTGATGTACCTCAATGAGAGTGTTCACATT
GATAAAGAGACGGCGAGTCGACTGAAGTCTATGATTAACACTACTTTGATCATCACCAACATACCCTACATCATC
ATGGCGCTGGGTGTGTTCTTTGGTTTGGTTTTTACCTGGCTTGCATGCAAAGGACAGGGATCCATGGATGAGGGA
ACAGCGGATGAAAGAGCACCCCTCATTCGAACC**TAA**ACATTGCCTTTGCTTGGTGAAGAAACTGTGTGAGCTGTC
CTGACCTGGACGATGACGTGGGGAAACCCTCCACCTCCTTGCAGGCTTGTTGCCTGTTGAAAGAAGGAAAAAGAC
ACGGCGCTGGCAAGTGATAGGAACATTCTGGCCAGAGGTTAAAGAGCAGGCTGACATGGCTGGCCATTAAGCTTT
ATAAAATCATGTGGGCTCTGAAATTGTTCTTTTATGTGTCTAGCAAGTATTTAATAAACCCTTGTATAGTAATTT
TGTTGTTGTTGGGTGCTGGTAGCTCCAGAATTTTGTGACCACTATTGTGGGTAAAATGTCTCTGCATCACTTGTT
AATGCTACTGGTCTAACTTCATTCAGTATGCTTCATTCACCGAACTTTGTGCTCAAAATGCGTATATACCATTTT
ATGTTGTATTCCTCCATTTCACTTGCAAAACAGAAGTAAATAAGAGTTCGGGACCCAGGGTAAAATGGTAGCTTC
ATCCAATATATCATTCAAATGCATCTGATTTCTAAAACATATTACATTTTATGCTGATCTTCAGTTCATAATTCT
TCCAGGAAAACTCAGTCTTCCAACTGCAATAAAATACTGGGTAGAATCAAATGGGAAAGGGGTTGGGTGGGGCAA
TACCCATGAGTTGATAGTGATAAGCTCCTAAGGATTTTTAACTTGTACTTTTGTGAACGAAGAGAATGCATAAAT
AATGTTGGTGAGGATAAAGTACAGATATTTCATGTAGAATTAATTGCTAGTTATGATGCTTGTGGATAGTTAACT
GTTTTTTTTTTAGTCAAAATGATCATGCTACGAAAAGATGCTTCTGAGAGAATGTAATGAGTAACTGATTTTTCT
TCCTGAGTCGCCCTTGCCAAATATGTTACTGTATTAATTAATCTAATATTGAGTGATTATTTGTAAAATTATGAA
TATGGGAAATCCATCTATCTACAGCCTAAGTTACACATAAGTTTCAGAAAGTCTGATTAGACTAAAGAGATATTT
CTTCTGGGACAGCCGCCTTCTTGGTAATTTTGAAGTTCTTTTTACAAGTTCCTTCCTCAGTTTCAGTTCTTTCCA
GTGTTTTGTAGCTCACTGTCACTCACTGAATAGAGAAACGTGTGCCCTATACTTCCTGTGACAATCATTTTGCTG
ACAGAATGATGGATGTTTAAAATATTGCACAAAGTACTTTAAAGAAAGGTCTGTTAGGACCAGAAGCAGAGACAC
CACTTTTCAAAGGACTTCTTGGTTTCAGCATAACCTAAGACAGGGAATTGGGAGCCATCATATGTCACAGTGTTC
AGAATTCAAGCATATTTAAGGGCATTTTCTTTGATTCTCAAAGTTCAGCATTCATTTTGAATTGAGAAGCCTATA
CATTTAGCTGACAAAGTGCTTATAGAATTTCTTAACAACTGAACCATTCAAAAGGATTTTTTTTGTTTAAAACTG
GATTTCAATGTAAGCAAATGAAGAAAAAAATATAGATTTCATTTCCATAGCTTCTTATCCCTGTATTGAGGTAAT
AAATTGTTTTACTGACAATTTTTCCTTTTTCTACACTAAAACAATATGTGATATATTTCCCCTCTTGAAGAGGCA
ATTCATTAAACTCTCAAATTTTCTATAGAATCAAGATAGAACCTTTAGATACTCCAACTCACCAAAATGTAAAAA
AACTAACAAAAATATTTGGTCTTCAATAATGCTAAATATCTACATTTTTAGAATTTATCAACATTTAACTAGATA
ATTGGGCATGTCTTAATTATGCATGTACTTATCCATACTAATAAAATTGACAATGCTAGTGCATACTTATTGGTT

FIGURE 334B

TAGTCCTATTATCAGGATATAATCATCTGTGAGGAGGATATTTTAAATACTGTAAATGATAACAGTTAATGATAT
ACACATTTAGACTGAGTTGCACACTGGCAGGGAGACCAAAAACATTACTTCCATACTTGTGTCATGATTCTTTTT
TTTTTGAGAGAGTCTCACTCTGTCGCCAGGCTGGAGTACAG

FIGURE 335

MGRCCFYTAGTLSLLLLVTSVTLLVARVFQKAVDQSIEKKIVLRNGTEAFDSWEKPPLPVYTQFYFFNVTNPEEI
LRGETPRVEEVGPYTYRELRNKANIQFGDNGTTISAVSNKAYVFERDQSVGDPKIDLIRTLNIPVLTVIEWSQVH
FLREIIEAMLKAYQQKLFVTHTVDELLWGYKDEILSLIHVFRPDISPYFGLFYEKNGTNDGDYVFLTGEDSYLNF
TKIVEWNGKTSLDWWITDKCNMINGTDGDSFHPLITKDEVLYVFPSDFCRSVYITFSDYESVQGLPAFRYKVPAE
ILANTSDNAGFCIPEGNCLGSGVLNVSICKNGAPIIMSFPHFYQADERFVSAIEGMHPNQEDHETFVDINPLTGI
ILKAAKRFQINIYVKKLDDFVETGDIRTMVFPVMYLNESVHIDKETASRLKSMINTTLIITNIPYIIMALGVFFG
LVFTWLACKGQGSMDEGTADERAPLIRT

FIGURE 336A

GCGCGACCGTCCCGGGGGTGGGGCCGGGCGCAGCGGCGAGAGGAGGCGAAGGTGGCTGCGGTAGCAGCAGCGCGG
CAGCCTCGGACCCAGCCCGGAGCGCAGGGCGGCCGCTGCAGGTCCCCGCTCCCCTCCCCGTGCGTCCGCCC**ATG**G
CCGCCGCCGGGCAGCTGTGCTTGCTCTACCTGTCGGCGGGGCTCCTGTCCCGGCTCGGCGCAGCCTTCAACTTGG
ACACTCGGGAGGACAACGTGATCCGGAAATATGGAGACCCCGGGAGCCTCTTCGGCTTCTCGCTGGCCATGCACT
GGCAACTGCAGCCCGAGGACAAGCGGCTGTTGCTCGTGGGGGCCCCGCGCGGAGAAGCGCTTCCACTGCAGAGAG
CCAACAGAACGGGAGGGCTGTACAGCTGCGACATCACCGCCCGGGGGCCATGCACGCGGATCGAGTTTGATAACG
ATGCTGACCCCACGTCAGAAAGCAAGGAAGATCAGTGGATGGGGGTCACCGTCCAGAGCCAAGGTCCAGGGGGCA
AGGTCGTGACATGTGCTCACCGATATGAAAAAAGGCAGCATGTTAATACGAAGCAGGAATCCCGAGACATCTTTG
GGCGGTGTTATGTCCTGAGTCAGAATCTCAGGATTGAAGACGATATGGATGGGGGAGATTGGAGCTTTTGTGATG
GGCGATTGAGAGGCCATGAGAAATTTGGCTCTTGCCAGCAAGGTGTAGCAGCTACTTTTACTAAAGACTTTCATT
ACATTGTATTTGGAGCCCCGGGTACTTATAACTGGAAAGGGATTGTTCGTGTAGAGCAAAAGAATAACACTTTTT
TTGACATGAACATCTTTGAAGATGGGCCTTATGAAGTTGGTGGAGAGACTGAGCATGATGAAAGTCTCGTTCCTG
TTCCTGCTAACAGTTACTTAGGTTTTTCTTTGGACTCAGGGAAAGGTATTGTTTCTAAAGATGAGATCACTTTTG
TATCTGGTGCTCCCAGAGCCAATCACAGTGGAGCCGTGGTTTTGCTGAAGAGAGACATGAAGTCTGCACATCTCC
TCCCTGAGCACATATTCGATGGAGAAGGTCTGGCCTCTTCATTTGGCTATGATGTGGCGGTGGTGGACCTCAACA
AGGATGGGTGGCAAGATATAGTTATTGGAGCCCCACAGTATTTTGATAGAGATGGAGAAGTTGGAGGTGCAGTGT
ATGTCTACATGAACCAGCAAGGCAGATGGAATAATGTGAAGCCAATTCGTCTTAATGGAACCAAAGATTCTATGT
TTGGCATTGCAGTAAAAAATATTGGAGATATTAATCAAGATGGCTACCCAGATATTGCAGTTGGAGCTCCGTATG
ATGACTTGGGAAAGGTTTTTATCTATCATGGATCTGCAAATGGAATAAATACCAAACCAACACAGGTTCTCAAGG
GTATATCACCTTATTTTGGATATTCAATTGCTGGAAACATGGACCTTGATCGAAATTCCTACCCTGATGTTGCTG
TTGGTTCCCTCTCAGATTCAGTAACTATTTTCAGATCCCGGCCTGTGATTAATATTCAGAAAACCATCACAGTAA
CTCCTAACAGAATTGACCTCCGCCAGAAAACAGCGTGTGGGGCGCCTAGTGGGATATGCCTCCAGGTTAAATCCT
GTTTTGAATATACTGCTAACCCCGCTGGTTATAATCCTTCAATATCAATTGTGGGCACACTTGAAGCTGAAAAAG
AAAGAAGAAAATCTGGGCTATCCTCAAGAGTTCAGTTTCGAAACCAAGGTTCTGAGCCCAAATATACTCAAGAAC
TAACTCTGAAGAGGCAGAAACAGAAAGTGTGCATGGAGGAAACCCTGTGGCTACAGGATAATATCAGAGATAAAC
TGCGTCCCATTCCCATAACTGCCTCAGTGGAGATCCAAGAGCCAAGCTCTCGTAGGCGAGTGAATTCACTTCCAG
AAGTTCTTCCAATTCTGAATTCAGATGAACCCAAGACAGCTCATATTGATGTTCACTTCTTAAAAGAGGGATGTG
GAGACGACAATGTATGTAACAGCAACCTTAAACTAGAATATAAATTTTGCACCCGAGAAGGAAATCAAGACAAAT
TTTCTTATTTACCAATTCAAAAAGGTGTACCAGAACTAGTTCTAAAAGATCAGAAGGATATTGCTTTAGAAATAA
CAGTGACAAACAGCCCTTCCAACCCAAGGAATCCCACAAAAGATGGCGATGACGCCCATGAGGCTAAACTGATTG
CAACGTTTCCAGACACTTTAACCTATTCTGCATATAGAGAACTGAGGGCTTTCCCTGAGAAACAGTTGAGTTGTG
TTGCCAACCAGAATGGCTCGCAAGCTGACTGTGAGCTCGGAAATCCTTTTAAAAGAAATTCAAATGTCACTTTTT
ATTTGGTTTTAAGTACAACTGAAGTCACCTTTGACACCCCATATCTGGATATTAATCTGAAGTTAGAAACAACAA
GCAATCAAGATAATTTGGCTCCAATTACAGCTAAAGCAAAAGTGGTTATTGAACTGCTTTTATCGGTCTCGGGAG
TTGCTAAACCTTCCCAGGTGTATTTTGGAGGTACAGTTGTTGGCGAGCAAGCTATGAAATCTGAAGATGAAGTGG
GAAGTTTAATAGAGTATGAATTCAGGGTAATAAACTTAGGTAAACCTCTTACAAACCTCGGCACAGCAACCTTGA
ACATTCAGTGGCCAAAAGAAATTAGCAATGGGAAATGGTTGCTTTATTTGGTGAAAGTAGAATCCAAAGGATTGG
AAAAGGTAACTTGTGAGCCACAAAAGGAGATAAACTCCCTGAACCTAACGGAGTCTCACAACTCAAGAAAGAAAC
GGGAAATTACTGAAAAACAGATAGATGATAACAGAAAATTTTCTTTATTTGCTGAAAGAAAATACCAGACTCTTA
ACTGTAGCGTGAACGTGAACTGTGTGAACATCAGATGCCCGCTGCGGGGGCTGGACAGCAAGGCGTCTCTTATTT
TGCGCTCGAGGTTATGGAACAGCACATTTCTAGAGGAATATTCCAAACTGAACTACTTGGACATTCTCATGCGAG
CCTTCATTGATGTGACTGCTGCTGCCGAAAATATCAGGCTGCCAAATGCAGGCACTCAGGTTCGAGTGACTGTGT
TTCCCTCAAAGACTGTAGCTCAGTATTCGGGAGTACCTTGGTGGATCATCCTAGTGGCTATTCTCGCTGGGATCT
TGATGCTTGCTTTATTAGTGTTTATACTATGGAAGTGTGGTTTCTTCAAGAGAAATAAGAAAGATCATTATGATG
CCACATATCACAAGGCTGAGATCCATGCTCAGCCATCTGATAAAGAGAGGCTTACTTCTGATGCA**TAG**TATTGAT
CTACTTCTGTAATTGTGTGGATTCTTTAAACGCTCTAGGTACGATGACAGTGTTCCCCGATACCATGCTGTAAGG
ATCCGGAAAGAAGAGCGAGAGATCAAAGATGAAAAGTATATTGATAACCTTGAAAAAAAACAGTGGATCACAAAG
TGGAACAGAAATGAAAGCTACTCATAGCGGGGGCCTAAAAAAAAAAAAGCTTCACAGTACCCAAACTGCTTTTTC

FIGURE 336B

CAACTCAGAAATTCAATTTGGATTTAAAAGCCTGCTCAATCCCTGAGGACTGATTTCAGAGTGACTACACACAGT
ACGAACCTACAGTTTTAACTGTGGATATTGTTACGTAGCCTAAGGCTCCTGTTTTGCACAGCCAAATTTAAAACT
GTTGGAATGGATTTTTCTTTAACTGCCGTAATTTAACTTTCTGGGTTGCCTTTGTTTTTGGCGTGGCTGACTTAC
ATCATGTGTTGGGGAAGGGCCTGCCCAGTTGCACTCAGGTGACATCCTCCAGATAGTGTAGCTGAGGAGGCACCT
ACACTCACCTGCACTAACAGAGTGGCCGTCCTAACCTCGGGCCTGCTGCGCAGACGTCCATCACGTTAGCTGTCC
CACATCACAAGACTATGCCATTGGGGTAGTTGTGTTTCAACGGAAAGTGCTGTCTTAAACTAAATGTGCAATAGA
AGGTGATGTTGCCATCCTACCGTCTTTTCCTGTTTCCTAGCTGTGTGAATACCTGCTCACGTCAAATGCATACAA
GTTTCATTCTCCCTTTCACTAAAAACACACAGGTGCAACAGACTTGAATGCTAGTTATACTTATTTGTATATGGT
ATTTATTTTTTCTTTTCTTTACAAACCATTTTGTTATTGACTAACAGGCCAAAGAGTCTCCAGTTTACCCTTCAG
GTTGGTTTAATCAATCAGAATTAGAATTAGAGCATGGGAGGGTCATCACTATGACCTAAATTATTTACTGCAAAA
AGAAAATCTTTATAAATGTACCAGAGAGAGTTGTTTTAATAACTTATCTATAAACTATAACCTCTCCTTCATGAC
AGCCTCCACCCCACAACCCAAAAGGTTTAAGAAATAGAATTATAACTGTAAAGATGTTTATTTCAGGCATTGGAT
ATTTTTTACTTTAGAAGCCTGCATAATGTTTCTGGATTTACATACTGTAACATTCAGGAATTCTTGGAGAAGATG
GGTTTATTCACTGAACTCTAGTGCGGTTTACTCACTGCTGCAAATACTGTATATTCAGGACTTGAAAGAAATGGT
GAATGCCTATGGAACTAGTGGATCCAAACTGATCCAGTATAAGACTACTGAATCTGCTACCAAAACAGTTAATCA
GTGAGTCGAGTGTTCTATTTTTTGTTTTGTTTCCTCCCCTATCTGTATTCCCAAAAATTACTTTGGGGCTAATTT
AACAAGAACTTTAAATTGTGTTTTAATTGTAAAAATGGCAGGGGGTGGAATTATTACTCTATACATTCAACAGAG
ACTGAATAGATATGAAAGCTGATTTTTTTTAATTACCATGCTTCACAATGTTAAGTTATATGGGGAGCAACAGCA
AACAGGTGCTAATTTGTTTTGGATATAGTATAAGCAGTGTCTGTGTTTTGAAAGAATAGAACACAGTTTGTAGTG
CCACTGTTGTTTTGGGGGGGGCTTTTTTTCTTTTTCCGGAAAATCCTTAAACCTTAAGATACTAAGGACGTTGTT
TTGGTTGTACTTGGAATTCTTAGTCACAAAATATATTTTGTTTACAAAAATTTCTGTAAAACAGGTTATAACAGT
GTTTAAAGTCTCAGTTTCTTGCTTGGGGAACTTGTGTCCCTAATGTGTTAGATTGCTAGATTGCTAAGGAGCTGA
TACTTGACAGTTTTTTAGACCTGTGTTACTAAAAAAAAGATGAATGTCGGAAAAGGGTGTTGGGAGGGTGGTCAA
CAAAGAAACAAAGATGTTATGGTGTTTAGACTTATGGTTGTTAAAAATGTCATCTCAAGTCAAGTCACTGGTCTG
TTTGCATTTGATACATTTTTGTACTAACTAGCATTGTAAAATTATTTCATGATTAGAAATTACCTGTGGATATTT
GTATAAAAGTGTGAAATAAATTTTTTATAAAAGTGTTCATTGTTTCGTAACACAGCATTGTATATGTGAAGCAAA
CTCTAAAATTATAAATGACAACCTGAATTATCTATTTCATCAAAAAAAAAAAAAAAAAAAA

FIGURE 337

MAAAGQLCLLYLSAGLLSRLGAAFNLDTREDNVIRKYGDPGSLFGFSLAMHWQLQPEDKRLLLVGAPRGEALPLQ
RANRTGGLYSCDITARGPCTRIEFDNDADPTSESKEDQWMGVTVQSQGPGGKVVTCAHRYEKRQHVNTKQESRDI
FGRCYVLSQNLRIEDDMDGGDWSFCDGRLRGHEKFGSCQQGVAATFTKDFHYIVFGAPGTYNWKGIVRVEQKNNT
FFDMNIFEDGPYEVGGETEHDESLVPVPANSYLGFSLDSGKGIVSKDEITFVSGAPRANHSGAVVLLKRDMKSAH
LLPEHIFDGEGLASSFGYDVAVVDLNKDGWQDIVIGAPQYFDRDGEVGGAVYVYMNQQGRWNNVKPIRLNGTKDS
MFGIAVKNIGDINQDGYPDIAVGAPYDDLGKVFIYHGSANGINTKPTQVLKGISPYFGYSIAGNMDLDRNSYPDV
AVGSLSDSVTIFRSRPVINIQKTITVTPNRIDLRQKTACGAPSGICLQVKSCFEYTANPAGYNPSISIVGTLEAE
KERRKSGLSSRVQFRNQGSEPKYTQELTLKRQKQKVCMEETLWLQDNIRDKLRPIPITASVEIQEPSSRRRVNSL
PEVLPILNSDEPKTAHIDVHFLKEGCGDDNVCNSNLKLEYKFCTREGNQDKFSYLPIQKGVPELVLKDQKDIALE
ITVTNSPSNPRNPTKDGDDAHEAKLIATFPDTLTYSAYRELRAFPEKQLSCVANQNGSQADCELGNPFKRNSNVT
FYLVLSTTEVTFDTPYLDINLKLETTSNQDNLAPITAKAKVVIELLLSVSGVAKPSQVYFGGTVVGEQAMKSEDE
VGSLIEYEFRVINLGKPLTNLGTATLNIQWPKEISNGKWLLYLVKVESKGLEKVTCEPQKEINSLNLTESHNSRK
KREITEKQIDDNRKFSLFAERKYQTLNCSVNVNCVNIRCPLRGLDSKASLILRSRLWNSTFLEEYSKLNYLDILM
RAFIDVTAAAENIRLPNAGTQVRVTVFPSKTVAQYSGVPWWIILVAILAGILMLALLVFILWKCGFFKRNKKDHY
DATYHKAEIHAQPSDKERLTSDA

FIGURE 338

GGGGGAAGTTGCTGGCTGACTGGGCTTGCGAGGAAACCGCCTCGGAGCTGCAGCGAAGGCCAAGGAATCACTGAA
GATCGGCGAGGGAGGACAGGGGGTTCATC**ATG**GGTGGCTTTTTCTCAAGTATATTTTCCAGTCTGTTTGGAACTC
GGGAAATGAGAATTTTAATTTTGGGATTAGATGGAGCAGGAAAAACCACAATTTTGTACAGATTACAAGTGGGAG
AAGTTGTTACTACTATACCTACCATTGGATTTAATGTAGAGACGGTGACGTACAAAAACCTTAAATTCCAAGTCT
GGGATTTAGGAGGACAGACAAGTATCAGGCCATACTGGAGATGTTACTATTCAAACACAGATGCAGTCATTTATG
TAGTAGACAGTTGTGACCGAGACCGAATTGGCATTTCCAAATCAGAGTTAGTTGCCATGTTGGAGGAAGAAGAGC
TGAGAAAAGCCATTTTAGTGGTGTTTGCAAATAAACAGGACATGGAACAGGCCATGACTTCCTCAGAGATGGCAA
ATTCACTTGGGTTACCTGCCTTGAAGGACCGAAAATGGCAGATATTCAAAACGTCAGCAACCAAAGGCACCGGCC
TTGATGAGGCAATGGAATGGTTAGTTGAAACATTAAAAAGCAGACAG**TAA**TTCAGTCCATTCTTCTCCCCTGAAA
TGAAGACTACATCACCTCTCTCCCTTTGGAAACAGTCAAGTGTACTTCACACTACTAGATGTTAAAACTATATGA
TTATTGGCATATACTGACTGACTGCAATATTTGTAGTAAATAGGGAAAATAAGTATTTAGTTGGAGGGATAATTT
GATCGAATCACCTGAATGTTCTATGTAATGTAAAATATTCTTTTCTTGCTTTCTTGTGTTAAGGTATATATTCTA
TTTGTATGGAATTCTTATTCAAATACAGTTGTATTAAAGAGTATACTCCTATTGGATGAAAAAAACCT

FIGURE 339

MGGFFSSIFSSLFGTREMRILILGLDGAGKTTILYRLQVGEVVTTIPTIGFNVETVTYKNLKFQVWDLGGQTSIR
PYWRCYYSNTDAVIYVVDSCDRDRIGISKSELVAMLEEEELRKAILVVFANKQDMEQAMTSSEMANSLGLPALKD
RKWQIFKTSATKGTGLDEAMEWLVETLKSRQ

FIGURE 340A

GAATTCGTTGTTGGGAAGGACTGGGGAAACAGCTGTAACATTTGCCACCCTCAGAAGCTGCTGGTCCTGTGTCAC
ACCACCTTAGCCTCTTGATCGAGGAAGATTCTCGCTGAAGTCTGTTAATTCTACTTTTTGAGTACTT**ATG**AATAA
CCACGTGTCTTCAAAACCATCTACCATGAAGCTAAAACATACCATCAACCCTATTCTTTTATATTTTATACATTT
TCTAATATCACTTTATACTATTTTAACATACATTCCGTTTTATTTTTTCTCCGAGTCAAGACAAGAAAAATCAAA
CCGAATTAAAGCAAAGCCTGTAAATTCAAAACCTGATTCTGCATACAGATCTGTTAATAGTTTGGATGGTTTGGC
TTCAGTATTATACCCTGGATGTGATACTTTAGATAAAGTTTTTACATATGCAAAAAACAAATTTAAGAACAAAAG
ACTCTTGGGAACACGTGAAGTTTTAAATGAGGAAGATGAAGTACAACCAAATGGAAAAATTTTTAAAAAGGTTAT
TCTTGGACAGTATAATTGGCTTTCCTATGAAGATGTCTTTGTTCGAGCCTTTAATTTTGGAAATGGATTACAGAT
GTTGGGTCAGAAACCAAAGACCAACATCGCCATCTTCTGTGAGACCAGGGCCGAGTGGATGATAGCTGCACAGGC
GTGTTTTATGTATAATTTTCAGCTTGTTACATTATATGCCACTCTAGGAGGTCCAGCCATTGTTCATGCATTAAA
TGAAACAGAGGTGACCAACATCATTACTAGTAAAGAACTCTTACAAACAAAGTTGAAGGATATAGTTTCTTTGGT
CCCACGCCTGCGGCACATCATCACTGTTGATGGAAAGCCACCGACCTGGTCCGACTTCCCCAAGGGCATCATTGT
GCATACCATGGCTGCAGTGGAGGCCCTGGGAGCCAAGGCCAGCATGGAAAACCAACCTCATAGCAAACCATTGCC
CTCAGATATTGCAGTAATCATGTACACAAGTGGATCCACAGGACTTCCAAAGGGAGTCATGATCTCACATAGTAA
CATTATTGCTGGTATAACTGGGATGGCAGAAAGGATTCCAGAACTAGGAGAGGAAGATGTCTACATTGGATATTT
GCCTCTGGCCCATGTTCTAGAATTAAGTGCTGAGCTTGTCTGTCTTTCTCACGGATGCCGCATTGGTTACTCTTC
ACCACAGACTTTAGCAGATCAGTCTTCAAAAATTAAAAAAGGAAGCAAAGGGGATACATCCATGTTGAAACCAAC
ACTGATGGCAGCAGTTCCGGAAATCATGGATCGGATCTACAAAAATGTCATGAATAAAGTCAGTGAAATGAGTAG
TTTTCAACGTAATCTGTTTATTCTGGCCTATAATTACAAAATGGAACAGATTTCAAAAGGACGTAATACTCCACT
GTGCGACAGCTTTGTTTTCCGGAAAGTTCGAAGCTTGCTAGGGGGAAATATTCGTCTCCTGTTGTGTGGTGGCGC
TCCACTTTCTGCAACCACGCAGCGATTCATGAACATCTGTTTCTGCTGTCCTGTTGGTCAGGGATACGGGCTCAC
TGAATCTGCTGGGGCTGGAACAATTTCCGAAGTGTGGGACTACAATACTGGCAGAGTGGGAGCACCATTAGTTTG
CTGTGAAATCAAATTAAAAAACTGGGAGGAAGGTGGATACTTTAATACTGATAAGCCACACCCCAGGGGTGAAAT
TCTTATTGGGGGCCAAAGTGTGACAATGGGGTACTACAAAAATGAAGCAAAAACAAAAGCTGATTTCTCTGAAGA
TGAAAATGGACAAAGGTGGCTCTGTACTGGGGATATTGGAGAGTTTGAACCCGATGGATGCTTAAAGATTATTGA
TCGTAAAAAGGACCTTGTAAAACTACAGGCAGGGGAATATGTTTCTCTTGGGAAAGTAGAGGCAGCTTTGAAGAA
TCTTCCACTAGTAGATAACATTTGTGCATATGCAAACAGTTATCATTCTTATGTCATTGGATTTGTTGTGCCAAA
TCAAAAGGAACTAACTGAACTAGCTCGAAAGAAAGGACTTAAAGGGACTTGGGAGGAGCTGTGTAACAGTTGTGA
AATGGAAAATGAGGTACTTAAAGTGCTTTCCGAAGCTGCTATTTCAGCAAGTCTGGAAAAGTTTGAAATTCCAGT
AAAAATTCGTTTGAGTCCTGAACCGTGGACCCCTGAAACTGGTCTGGTGACAGATGCCTTCAAGCTGAAACGCAA
AGAGCTTAAAACACATTACCAGGCGGACATTGAGCGAATGTATGGAAGAAAA**TAA**TTATTCTCTTCTGGCATCAG
TTTGCTACAGTGAGCTCACATCAAATAGGAAAATACTTGAAATGCATGTCTCAAGCTGCAAGGCAAACTCCATTC
CTCATATTAAACTATTACTTCTCATGACGTCACCATTTTTAACTGACAGGATTAGTAAAACATTAAGACAGCAAA
CTTGTGTCTGTCTCTTCTTTCATTTTCCCCGCCACCAACTTACTTTACCACCTATGACTGTACTTGTCAGTATGA
GAATTTTTCTGAATCATATTGGGGAAGCAGTGATTTTAAAACCTCAAGTTTTTAAACATGATTTATATGTTCTGT
ATAATGTTCAGTTTGTAACTTTTTAAAAGTTTGGATGTATAGAGGGATAAATAGGAAATATAAGAATTGGTTATT
TGGGGGCTTTTTTACTTACTGTATTTAAAAATACAAGGGTATTGATATGAAATTATGTAAATTTCAAATGCTTAT
GAATCAAATCATTGTTGAACAAAAGATTTGTTGCTGTGTAATTATTGTCTTGTATGCATTTGAGAGAAATAAATA
TACCCATACTTATGTTTTAAGAAGTTGAGATCTTGTGAATATATGCCTGTCAGTGTCTTCTTTATATATTTATTT
TTTATTAGAAAAAATGAAGTTTGGTTGGTGATGCATGAAACAAAATAGCAAGAGAGGGTTATAGTTTAATAGTAA
GGGAGATAACACAGCATGTGTAGCACCAGTTGATAATTGGTCTCTAGTAGCTTACTGTCAAAATGTTCAATGAAG
TCTTCTGTTCATCTGTTGAAACTAGGAAAATACCCAAACTTAAATGGAAGAATTCTGAAAGAGAGGATAGAATTT
AAAGAACAAGAGTATATAAAGTTATTCTTTGAATATTTCGTTGACTATATGTACATTGAGTTATCTATATTTGTA
AACAAATTAGTCATGGAAAATTATTCTATTCCAAAGTCTCCTTTTAGTCTAGATAATCATTATTTCATTTTAAAA
TTAGTGTTTTTCATAGTTTGCACTGATGCGTGTATGGATGTGTGTGAGTCAGTGGTAGCTTATTTAAAAAGCACC
TTATCCTTTCTCCCATAACCTTTGTACACTAAAAAATGAAAGAATTTAGAATGTATTTGATGATAGCATTCTCAC
TAAGACACATGAGAATTTAACTTTATAACCGCGTGAGTTAAGATTTAATTCATAGGTTTTGATGTCATTGTTGAA
GTTATTTGTAATTCAGAAACCTTGCTTGTGTGATACATAGTAAGTCTCTTCATTTATTACTGCTTGCCTGTTGTT

FIGURE 340B

ATATCTGGATTATCAAAAGCAATAGTGCACCAATTAAGATGTGCTCAAATCAGGACTTAAATCATAGGCACCACA
TTTTTCATGTCAGACTAGTTACTTTGTTGATTCTCAGTTACTGTAGGCATCAAAAGGCAAAAATCA

FIGURE 341

MNNHVSSKPSTMKLKHTINPILLYFIHFLISLYTILTYIPFYFFSESRQEKSNRIKAKPVNSKPDSAYRSVNSLD
GLASVLYPGCDTLDKVFTYAKNKFKNKRLLGTREVLNEEDEVQPNGKIFKKVILGQYNWLSYEDVFVRAFNFGNG
LQMLGQKPKTNIAIFCETRAEWMIAAQACFMYNFQLVTLYATLGGPAIVHALNETEVTNIITSKELLQTKLKDIV
SLVPRLRHIITVDGKPPTWSDFPKGIIVHTMAAVEALGAKASMENQPHSKPLPSDIAVIMYTSGSTGLPKGVMIS
HSNIIAGITGMAERIPELGEEDVYIGYLPLAHVLELSAELVCLSHGCRIGYSSPQTLADQSSKIKKGSKGDTSML
KPTLMAAVPEIMDRIYKNVMNKVSEMSSFQRNLFILAYNYKMEQISKGRNTPLCDSFVFRKVRSLLGGNIRLLLC
GGAPLSATTQRFMNICFCCPVGQGYGLTESAGAGTISEVWDYNTGRVGAPLVCCEIKLKNWEEGGYFNTDKPHPR
GEILIGGQSVTMGYYKNEAKTKADFSEDENGQRWLCTGDIGEFEPDGCLKIIDRKKDLVKLQAGEYVSLGKVEAA
LKNLPLVDNICAYANSYHSYVIGFVVPNQKELTELARKKGLKGTWEELCNSCEMENEVLKVLSEAAISASLEKFE
IPVKIRLSPEPWTPETGLVTDAFKLKRKELKTHYQADIERMYGRK

FIGURE 342

AGGGGCCTTAGCGTGCCGCATCGCCGAGATCCAGCGCCCAGAGAGACACCAGAGAACCCACC**ATG**GCCCCCTTTG
AGCCCCTGGCTTCTGGCATCCTGTTGTTGCTGTGGCTGATAGCCCCCAGCAGGGCCTGCACCTGTGTCCCACCCC
ACCCACAGACGGCCTTCTGCAATTCCGACCTCGTCATCAGGGCCAAGTTCGTGGGGACACCAGAAGTCAACCAGA
CCACCTTATACCAGCGTTATGAGATCAAGATGACCAAGATGTATAAAGGGTTCCAAGCCTTAGGGGATGCCGCTG
ACATCCGGTTCGTCTACACCCCCGCCATGGAGAGTGTCTGCGGATACTTCCACAGGTCCCACAACCGCAGCGAGG
AGTTTCTCATTGCTGGAAAACTGCAGGATGGACTCTTGCACATCACTACCTGCAGTTTCGTGGCTCCCTGGAACA
GCCTGAGCTTAGCTCAGCGCCGGGGCTTCACCAAGACCTACACTGTTGGCTGTGAGGAATGCACAGTGTTTCCCT
GTTTATCCATCCCCTGCAAACTGCAGAGTGGCACTCATTGCTTGTGGACGGACCAGCTCCTCCAAGGCTCTGAAA
AGGGCTTCCAGTCCCGTCACCTTGCCTGCCTGCCTCGGGAGCCAGGGCTGTGCACCTGGCAGTCCCTGCGGTCCC
AGATAGCC**TGA**ATCCTGCCCGGAGTGGAACTGAAGCCTGCACAGTGTCCACCCTGTTCCCACTCCCATCTTTCTT
CCGGACAATGAAATAAAGAGTTACCACCCAGC

FIGURE 343

MAPFEPLASGILLLLWLIAPSRACTCVPPHPQTAFCNSDLVIRAKFVGTPEVNQTTLYQRYEIKMTKMYKGFQAL
GDAADIRFVYTPAMESVCGYFHRSHNRSEEFLIAGKLQDGLLHITTCSFVAPWNSLSLAQRRGFTKTYTVGCEEC
TVFPCLSIPCKLQSGTHCLWTDQLLQGSEKGFQSRHLACLPREPGLCTWQSLRSQIA

FIGURE 344

CAACCAGGGAGATTTCTCCATTTTCCTCTTGTCTACAGTGCGGCTACAAATCTGGGATTTTTTTATTACTTCTTT
TTTTTTCGAACTACACTTGGGCTCCTTTTTTTGTGCTCGACTTTTCCACCCTTTTTCCCTCCCTCCTGTGCTGCT
GCTTTTTGATCTCTTCGACTAAAATTTTTTTATCCGGAGTGTATTTAATCGGTTCTGTTCTGTCCTCTCCACCAC
CCCCACCCCCCTCCCTCCGGTGTGTGTGCCGCTGCCGCTGTTGCCGCCGCCGCTGCTGCTGCTGCTCGCCCCGTC
GTTACACCAACCCGAGGCTCTTTGTTTCCCCTCTTGGATCTGTTGAGTTTCTTTGTTGAAGAAGCCAGC**ATG**GGT
GCCCAGTTCTCCAAGACCGCAGCGAAGGGAGAAGCCGCCGCGGAGAGGCCTGGGGAGGCGGCTGTGGCCTCGTCG
CCTTCCAAAGCGAACGGACAGGAGAATGGCCACGTGAAGGTAAACGGCGACGCTTCGCCCGCGGCCGCCGAGTCG
GGCGCCAAGGAGGAGCTGCAGGCCAACGGCAGCGCCCCGGCCGCCGACAAGGAGGAGCCCGCGGCCGCCGGGAGC
GGGGCGGCGTCGCCCTCCTCGGCCGAGAAAGGTGAGCCGGCCGCCGCCGCTGCCCCCGAGGCCGGGGCCAGCCCG
GTAGAGAAGGAGGCCCCCGCGGAAGGCGAGGCTGCCGAGCCCGGCTCGGCCACGGCCGCGGAGGGAGAGGCCGCG
TCGGCCGCCTCCTCGACTTCTTCGCCCAAGGCCGAGGACGGGGCCACGCCCTCGCCCAGCAACGAGACCCCGAAA
AAAAAAAAGAAGCGCTTTTCCTTCAAGAAGTCTTTCAAGCTGAGCGGCTTCTCCTTCAAGAAGAACAAGAAGGAG
GCTGGAGAAGGCGGTGAGGCTGAGGCGCCCGCTGCCGAAGGCGGCAAGGACGAGGCCGCCGGGGGCGCAGCTGCG
GCCGCCGCCGAGGCGGGCGCGGCCTCCGGGGAGCAGGCAGCGGCGCCGGGCGAGGAGGCGGCAGCGGGCGAGGAG
GGGGCGGCGGGTGGCGACCCGCAGGAGGCCAAGCCCCAGGAGGCCGCTGTCGCGCCAGAGAAGCCGCCCGCCAGC
GACGAGACCAAGGCCGCCGAGGAGCCCAGCAAGGTGGAGGAGAAAAAGGCCGAGGAGGCCGGGGCCAGCGCCGCC
GCCTGCGAGGCCCCCTCCGCCGCCGGGCCCGGCGCGCCCCCGGAGCAGGAGGCAGCCCCCGCGGAGGAGCCCGCG
GCCGCCGCAGCCTCGTCAGCCTGCGCAGCCCCCTCACAGGAGGCCCAGCCCGAGTGCAGTCCAGAAGCCCCCCCA
GCGGAGGCGGCAGAG**TAA**AAGAGCAAGCTTTTGTGAGATAATCGAAGAACTTTTCTCCCCCGTTTGTTTGTTGGA
GTGGTGCCAGGTACTGTTTTGGAGAACTTGTCTACAACCAGGGATTGATTTTAAAGATGTCTTTTTTTATTTTAC
TTTTTTTTAAGCACCAAATTTTGTTGTTTTTTTTTTTCTCCCCTCCCCACAGATCCCATCTCAAATCATTCTGTT
AACCACCATTCCAACAGGTCGAGGAGAGCTTAAACACCTTCTTCCTCTGCCTTGTTTCTCTTTTATTTTTTATTT
TTTCGCATCAGTATTAATGTTTTTGCATACTTTGCATCTTTATTCAAAAGTGTAAACTTTCTTTGTCAATCTATG
GACATGCCCATATATGAAGGAGATGGGTGGGTCAAAAAGGGATATCAAATGAAGTGATAGGGGTCACAATGGGGA
AATTGAAGTGGTGCATAACATTGCCAAAATAGTGTGCCACTAGAAATGGTGTAAAGGCTGTCTTTTTTTTTTTTT
TTAAAGAAAAGTTATTACCATGTATTTTGTGAGGCAGGTTTACAACACTACAAGTCTTGAGTTAAGAAGGAAAGA
GGAAAAAAGAAAAAACACCAATACCCAGATTTAAAAAAAAAAAAAACGATCATAGTCTTAGGAGTTCATTTAAACC
ATAGGAACTTTTCACTTATCTCATGTTAGCTGTACCAGTCAGTGATTAAGTAGAACTACAAGTTGTATAGGCTTT
ATTGTTTATTGCTGGTTTATGACCTTAATAAAGTGTAATTATGTATTACCAGCAGGGTGTTTTTAACTGTGACTA
TTGTATAAAAACAAATCTTGATATCCAGAAGCACATGAAGTTTGCAACTTTCCACCCTGCCCATTTTTGTAAAAC
TGCAGTCATCTTGGACCTTTTAAAACACAAATTTTAAACTCAACCAAGCTGTGATAAGTGGAATGGTTACTGTTT
ATACTGTGGTATGTTTTTGATTACAGCAGATAATGCTTTCTTTTCCAGTCGTCTTTGAGAATAAAGGAAAAAAAA
TCTTCAGATGCAATGGTTTTGTGTAGCATCTTGTCTATCATGTTTTGTAAATACTGGAGAAGCTTTGACCAATTT
GACTTAGAGATGGAATGTAACTTTGCTTACAAAAATTGCTATTAAACTCCTGCTTAAGGTGTTCTAATTTTCTGT
GAGCACACTAAAAGCGAAAAATAAATGTGAATAAAATGT

FIGURE 345

MGAQFSKTAAKGEAAAERPGEAAVASSPSKANGQENGHVKVNGDASPAAAESGAKEELQANGSAPAADKEEPAAA
GSGAASPSSAEKGEPAAAAAPEAGASPVEKEAPAEGEAAEPGSATAAEGEAASAASSTSSPKAEDGATPSPSNET
PKKKKKRFSFKKSFKLSGFSFKKNKKEAGEGGEAEAPAAEGGKDEAAGGAAAAAAEAGAASGEQAAAPGEEAAAG
EEGAAGGDPQEAKPQEAAVAPEKPPASDETKAAEEPSKVEEKKAEEAGASAAACEAPSAAGPGAPPEQEAAPAEE
PAAAAASSACAAPSQEAQPECSPEAPPAEAAE

FIGURE 346

GTTTGAATGAGACTCGTCGCACCGAAGCCGCCGCCACCACCGCGCCTCCGCCTCGGCCGCCGCCGCAGCTGCTCC
TGGTCCCCGTCCCTTTGCCGCCCTCGTCAGGCCCAGCTCTCCTGCGCCGCCGCCTCCCGCCGCGCCCCGCC**ATG**C
CGCTCTACTCCGTTACTGTAAAATGGGGAAAGGAGAAATTTGAAGGTGTAGAATTGAATACAGATGAACCTCCAA
TGGTATTCAAGGCTCAGCTGTTTGCGTTGACTGGAGTCCAGCCTGCCAGACAGAAAGTTATGGTGAAAGGAGGAA
CGCTAAAGGATGATGATTGGGGAAACATCAAAATAAAAAATGGAATGACTCTACTAATGATGGGGTCAGCAGATG
CTCTTCCAGAAGAACCCTCAGCCAAAACTGTCTTCGTAGAAGACATGACAGAAGAACAGTTAGCATCTGCTATGG
AGTTACCATGTGGATTGACAAACCTTGGTAACACTTGTTACATGAATGCCACAGTTCAGTGTATTCGTTCTGTGC
CTGAACTCAAAGATGCCCTTAAAAGGTATGCAGGTGCCTTGAGAGCTTCAGGGGAAATGGCTTCAGCGCAGTATA
TTACTGCAGCCCTTAGAGATTTGTTTGATTCCATGGATAAAACTTCTTCCAGTATTCCACCTATTATTCTACTGC
AGTTTTTGCACATGGCTTTCCCACAGTTTGCCGAGAAAGGTGAACAAGGACAGTATCTTCAACAGGATGCTAATG
AATGTTGGATACAAATGATGCGAGTATTGCAACAGAAATTGGAAGCAATAGAGGATGATTCTGTTAAAGAGACAG
ACTCCTCATCTGCATCGGCAGCGACACCTTCTAAAAAGAAAAGTTTAATCGATCAGTTCTTCGGTGTTGAGTTTG
AAACTACCATGAAATGTACAGAATCTGAAGAAGAAGAAGTCACCAAAGGAAAGGAAAATCAACTTCAGCTTAGCT
GTTTTATCAATCAGGAAGTCAAGTATCTTTTTACAGGACTTAAATTGCGACTTCAGGAAGAAATCACCAAACAGT
CTCCAACGTTGCAAAGAAATGCCTTGTATATCAAATCTTCCAAGATCAGCCGGCTGCCTGCTTACTTGACCATTC
AGATGGTTCGATTTTTTTATAAAGAGAAGGAATCTGTGAATGCCAAAGTTCTTAAGGATGTTAAATTTCCTCTTA
TGTTGGATATGTATGAACTGTGTACACCAGAACTTCAAGAGAAAATGGTGTCTTTTCGATCCAAATTCAAGGATC
TAGAAGATAAAAAAGTGAATCAGCAGCCAAATACAAGTGACAAAAAGAGTAGTCCCCAGAAAGAAGTTAAGTATG
AACCCTTTTCTTTTGCTGATGATATTGGCTCCAATAATTGTGGATACTATGACTTACAAGCAGTACTAACACACC
AGGGAAGGTCTAGTTCTTCAGGTCATTATGTATCATGGGTGAAAAGGAAACAAGATGAATGGATTAAGTTTGATG
ATGACAAAGTCAGCATCGTAACACCAGAAGATATCTTACGGCTTTCTGGTGGTGGAGACTGGCATATCGCTTACG
TTCTACTCTATGGGCCTCGCAGAGTTGAAATAATGGAAGAGGAAAGTGAACAG**TAA**TCTTCATTTTAGTATTTAT
GCTTAGATGTGAAAATAAATGTTATTTGTTGATCATTTCTATAATCCAGAGCTTTAGAGGAAGACACATAGGTGG
GTTTATGTTTCACCTCATTTGGAACAAAAGAGGACAGAAGCAGACCACTCTGTGCACCAACCTAAAAAATTACAG
AGAAGAGAAAATTATCTTTGGATTGTGCTGCCCTATATAAAGGTGGCAGAAAGACATTTTTAAAAAGCTTATTAT
TTCTTGCATTATTTTAAAAAGTTCAGAGTTGAAATGCCTTTCAACCATTTCCTTCTGTGGTCATTTTTCTTGCTG
CCTTTTTCACCCAAGATTCAGCAGTCAGATGTTTACTGCACACCTATTACCTATTATTTGCTGTTCTTGCATGGT
TCAAACCACCATTCTGTAGCCACCCATCCTTTGCCTTATCTAACAAACATTTTTCCAGGAAGGTGGAAAAGGAAG
TGTTGCTCTCATTGTGTGACTCAGTGCTGCTGTCCATCCCATGGAAACATGGGCACAATCAAGTATTTGTCCAGC
CTATTGCAGGCTTTTCCTGACTTTAAAATAAATTGTGATCAATAATAGTACCTTTGATTATACATTTATTATTGT
GTCTCTCTCTGATGTACTGTGGATTGTACATTTAACTTTGGAATGGCTTTGTAATAATCAGTCTTAAGAAAATGT
TGACAAGCTCTGGTTGCTTATTTTTAGAAAATGAGGACATTTAATAATAATAAAAAAAAAGGGATTAATAGCTTT
TGACCTCAAGTCTTTTGTCTTCTGAGTGTTGGAGCTTGGCTGAAGACATGTTTAATACTGTACAATTTCTGAAGA
TGGTTATTAACACTGTGCTGTTAAGCATCCATTTAAAAATATTTGTTATCTTCTTTGCCTGCCTGTATTTTAAAA
AGAAATACAAAGTTGTAAAAGTAATGGATTTCTTTGGATGCTGAATGCAGTGATGTTATCAGTCAGATTCTTTCC
TTGGCTCAGTTGTGTTTGTATTTCCTTTCTTAATTCCCCAAATCTTGGCTGGGCACGGTGGCTCACGCCTGTAAT
CCCAGCACTTTGGGAGGCTGAGGCAGGTGGTTCACTGGAGGTTGAGTTCGAGACCAGCCTGGCCACATGGTGAAA
CCCTGTCTCTACTAAAGATATAAAAATTAGCTGGATGTGGTGGTGCACACCTGTGATCCCAGCTACTTGGGAGGC
TGAGGTGGGAGAATTGCTTGAACCTGGAAGGCAGAAGTTGCAGTGAGCTGAGATCACACCACTGCACTCCAGCCT
GGGTGACAGAGAGACTCTGTCTCAAAAAAAAAAAAAAAAAA

FIGURE 347

MPLYSVTVKWGKEKFEGVELNTDEPPMVFKAQLFALTGVQPARQKVMVKGGTLKDDDWGNIKIKNGMTLLMMGSA
DALPEEPSAKTVFVEDMTEEQLASAMELPCGLTNLGNTCYMNATVQCIRSVPELKDALKRYAGALRASGEMASAQ
YITAALRDLFDSMDKTSSSIPPIILLQFLHMAFPQFAEKGEQGQYLQQDANECWIQMMRVLQQKLEAIEDDSVKE
TDSSSASAATPSKKKSLIDQFFGVEFETTMKCTESEEEEVTKGKENQLQLSCFINQEVKYLFTGLKLRLQEEITK
QSPTLQRNALYIKSSKISRLPAYLTIQMVRFFYKEKESVNAKVLKDVKFPLMLDMYELCTPELQEKMVSFRSKFK
DLEDKKVNQQPNTSDKKSSPQKEVKYEPFSFADDIGSNNCGYYDLQAVLTHQGRSSSSGHYVSWVKRKQDEWIKF
DDDKVSIVTPEDILRLSGGGDWHIAYVLLYGPRRVEIMEEESEQ

FIGURE 348

GAGGAGCTCTGCGCGGCGCGGCGGGCGATCCGAGCCGGGACGGGCTGCAGGCGGGGGTGCTGCAGAGGACACGAG
GCGGCGGGCTGGAGAC**ATG**GACCGCGGCGAGCAAGGTCTGCTGAGAACAGACCCAGTCCCTGAGGAAGGAGAAGA
TGTTGCTGCCACGATCAGTGCCACAGAGACCCTCTCGGAAGAGGAGCAGGAAGAGCTAAGAAGAGAACTTGCAAA
GGTAGAAGAAGAAATCCAGACTCTGTCTCAAGTGTTAGCAGCAAAAGAGAAGCATCTAGCAGAGATCAAGCGGAA
ACTTGGAATCAATTCTCTACAGGAACTAAAACAGAACATTGCCAAAGGGTGGCAAGACGTGACAGCAACATCTGC
TTACAAGAAGACATCTGAAACCTTATCCCAGGCTGGACAGAAGGCCTCAGCTGCTTTTTCGTCTGTTGGCTCAGT
CATCACCAAAAAGCTGGAAGATGTAAAAAACTCCCCAACTTTTAAATCATTTGAAGAAAAGGTCGAAAACTTAAA
GTCTAAAGTAGGGGGAACCAAGCCTGCTGGTGGTGATTTTGGAGAAGTCTTGAATTCGGCTGCAAATGCTAGTGC
CACCACCACGGAGCCTCTTCCAGAAAAGACACAGGAGAGCCTG**TGA**GATTCCTACCTTTGTTCTGCTACCCACTG
CCAGATGCTGCAAGCGAGGTCCAAGCACATCTTGTCAACATGCATTGCCATGAATTTCTACCAGATGTGCTTTTA
TTTAGCTTTACATATTCCTTTGACCAAATAGTTTGTGGGTTAAACAAAATGAAAATATCTTCACCTCTATTCTTG
GGAAACACCCTTTAGTGTACATTTATGTTCCTTTATTTAGGAAACACCATTATAAAAACACTTATAGTAAATGGG
GACATTCACTATAATGATCTAAGAAGCTACAGATTGTCATAGTTGTTTTCCTGCTTTACAAAATTGCTCCAGATC
TGGAATGCCAGTTTGACCTTTGTCTTCTATAATATTTCCTTTTTTTCCCCTCTTTGAATCTCTGTATATTTGATT
CTTAACTAAAATTGTTCTCTTAAATATTCTGAATCCTGGTAATTAAAAGTTTGGGTGTATTTTCTTTACCTCCAA
GGAAAGAACTACTAGCTACAAAAAATATTTTGGAATAAGCATTGTTTTGGTATAAGGTACATATTTTGGTTGAAG
ACACCAGACTGAAGTAAACAGCTGTGCATCCAATTTATTATAGTTTTGTAAGTAACAATATGTAATCAAACTTCT
AGGTGACTTGAGAGTGGAACCTCCTATATCATTATTTAGCACCGTTTGTGACAGTAACCATTTCAGTGTATTGTT
TATTATACCACTTATATCAACTTATTTTTCACCAGGTTAAAATTTTAATTTCTACAAAATAACATTCTGAATCAA
GCACACTGTATGTTCAGTAGGTTGAACTATGAACACTGTCATCAATGTTCAGTTCAAAAGCCTGAAAGTTTAGAT
CTAGAAGCTGGTAAAAATGACAATATCAATCACATTAGGGGAACCATTGTTGTCTTCACTTAATCCATTTAGCAC
TATTTAAAATAAGCACACCAAGTTATATGACTAATATAACTTGAAAATTTTTTATACTGAGGGGTTGGTGATAAC
TCTTGAGGATGTAATGCATTAATAAAAATCAACTCATCATTTTCTACTTGTTTTCAATGTGTTGGAAACTGTAAA
ATGATACTGTAGAACCTGTCTCCTACTTTGAAAACTGAATGTCAGGGCTGAGTGAATCAAAGTGTCTAGACATAT
TTGCATAGAGGCCAAGGTATTCTATTCTAATAACTGCTTACTCAACACTACCACCTTTTCCTTATACTGTATATG
ATTATGGCCTACAATGTTGTATTTGTTATTTATTAAATTGTGATTGTTTTATTATTGTTTATGCCAAATGTTAAC
TGCCAAGCTTGGAGTGACCTAAAGCATTTTTTAAAAGCATGGCTAGATTTACTTCAGTATAAATTATCTTATGAA
AACCAAATTTTAAAAGCCACAGGTGTTGATTGTTATAAAATAACATGCTGCCATTCTTGATTGCTAGAGTTTTTG
TTAGTACTTTGGATGCAATTAAAACTATGTGCTATCACATGTGAAAAGCTTAATAAATTCCATCTATCAGTAGTA
TAGGTCTCAATATTTATTATGAGACCAGTGGTCTGGAAACAGCTTGTTGTACCGAATCAACTGGAGTCTATGCTT
AAAAAAAAAAATTTTTTTTTAACCATCCTTAAATTATTGCTTAATGGTATCATATTAACATATTCTAAATAAGGG
CTTTAAGGCACAGGCTGTTGAAGCATTTTCTCAGAGGAGTGGATCTGTAGAAGTCTGTCTTTCTATAGAAATATT
GTGCTTACTCAAGTGTTAAATTATTTTTTCTATGAACTAGTCTACTTCTTAAAATTCAAACATATTCTTTTGATC
ACATTGTTTCTTGAGCATCCTGCCCTGCTACTAACTTTTCAACAAGGCAAAATGGAGTAAAGTGGCAATTTCTTT
AGATGAGTGAAATACCCTCAAGTCTCTTTTCTGCCCAAAAAGGGAAAAGTGATAGAAATGGGGGTGGCAAGTGGG
GTGAGTGGATGAAGGTGGGTATTGGGGGTGGCTGTGAAAGAAAATAATGGAGAATCACTTTTCTAGACATCTACC
TATACTTAATCTAAGAAACAAAGTAATCTACTGTAAAGTACTCTGCCCCTTGAAAGAAGTATTAAAAAGAGTGAG
GATGGATTTAGAAAAAAACATGAATTTAGAAATATTCAAAATGGTTTTTGTGGCAGATTCAATATTATGAATTCA
CAGATATTTAAAGAATGAGAAACATAGTAATTAGTAGAAATGCCAGAAACAGTTCCTGGTTCCTCTTGTGTTTGA
CACTAAGAAAATAGCAAGAGTGTGAAATCTCAGATACTTATGAAATCTCACAGATGTAAGGACTCAAGTGTAGAA
GAAAATATCCCCTTCTTACAAAAAGAAATGTCAATTTATGGAGTTTGTGGGAAATAGGGCAAGAATTCTTATGCT
TATGAGAGCCAAGTAGTCAGTGGAAGAGAGTAGAGCTCAAAACTGGATTATCACCTTAGCAACTTAGAATAGTTT
GAAATAGAAAAAAAGTATTTAATTTGGATCTGGATCTGTTAAGATATGCACAGTCTATTTTTTGTATAGTATTGG
AAAATAAAAATGCTATAATTTG

FIGURE 349

MDRGEQGLLRTDPVPEEGEDVAATISATETLSEEEQEELRRELAKVEEEIQTLSQVLAAKEKHLAEIKRKLGINS
LQELKQNIAKGWQDVTATSAYKKTSETLSQAGQKASAAFSSVGSVITKKLEDVKNSPTFKSFEEKVENLKSKVGG
TKPAGGDFGEVLNSAANASATTTEPLPEKTQESL

FIGURE 350A

AGGTAGCAAG**ATG**GCCGCCGCTGAGGAAGGCTGTAGTGTCGGGGCCGAAGCGGACAGGGAATTGGAGGAGCTTCT
GGAAAGTGCTCTTGATGATTTCGATAAAGCCAAACCCTCCCCAGCACCCCCTTCTACCACCACGGCCCCTGATGC
TTCGGGGCCCCAGAAGAGATCGCCAGGAGACACTGCCAAAGATGCCCTCTTCGCTTCCCAAGAGAAGTTTTTCCA
GGAACTATTCGACAGTGAACTGGCTTCCCAAGCCACTGCGGAGTTCGAGAAGGCAATGAAGGAGTTGGCTGAGGA
AGAACCCCACCTGGTGGAGCAGTTCCAAAAGCTCTCAGAGGCTGCAGGGAGAGTGGGCAGTGATATGACCTCCCA
ACAAGAATTCACTTCTTGCCTAAAGGAAACACTAAGTGGATTAGCCAAAAATGCCACTGACCTTCAGAACTCCAG
CATGTCGGAAGAAGAGCTGACCAAGGCCATGGAGGGGCTAGGCATGGACGAAGGGGATGGGGAAGGGAACATCCT
CCCCATCATGCAGAGTATTATGCAGAACCTACTCTCCAAGGATGTGCTGTACCCATCACTGAAGGAGATCACAGA
AAAGTATCCAGAATGGTTGCAGAGTCATCGGGAATCTCTACCTCCAGAGCAGTTTGAAAAATATCAGGAGCAGCA
CAGCGTCATGTGCAAAATATGTGAGCAGTTTGAGGCAGAGACCCCCACAGACAGTGAAACCACTCAAAAGGCTCG
TTTTGAGATGGTGCTGGATCTTATGCAGCAGCTACAAGATTTAGGCCATCCTCCAAAAGAGCTGGCTGGAGAGAT
GCCTCCTGGCCTCAACTTTGACCTGGATGCCCTCAATCTTTCGGGCCCACCAGGTGCCAGTGGTGAACAGTGTCT
GATCATG**TGA**AACACAACACGTTTTCCTCTCTGAGTCCCAGCTATGGGGAACATCTGGAGTCAGCAGAACCATTG
GGACCTGAGGCAGGAGTGTCACCTGCGGGAGAAGTCTGCCCGCTGCCCTCTGTCATCCCATTCAAGATTGTGCCA
TACCAGCTGAGGTTTTTCCTCTGTCTCTCTAGGAATAGGGTCTGTTTCACAGGCCATTTCTGTGAACCCTACTCC
ATTGTGGTTTCTGCCACTATCAAAGTTCCAGCTACCTGCAAGGTGAAGGAAGGCATCCCTTTTGGGGCATGCACT
TTCTTTCCTTTCTCAAAATAATGTTATATGTGGCCACACTGATGTTCACCTTTACGTCCAGGGTCTTTGTGCCTT
GTCTCTACTCCCTCTCTTGGATCTGGGGAGGAGGGGCAGAGACCTGGGACTCTGTATTTCTATAGTTCTCCTGGC
AGAGCCTTTGAGAATGGGGAGAAACAGCCTGGGCTGGGGCTACAGGTCTGTCACTATGCTCTCTTGCCTTCAGAC
AGACCATTCTGAATTCTCTAAAGGGAAAGGGCTTTTGCATCTAATCACAATAGAGTTGAAAGAGAGGCCTTAGGA
TTCTCCTCTCTCTAGGTGCTGAGCCCTCACCTCCCTGTTCCAGGCTGAGAACTCAAATGGTTACCCTGCTTCTTC
CTACAATGCTGTGTGATATGGGTGAACCCAGCCCCTGACCTTCCTCTATCCCCTGCCCATCCTCCCTTTTACCTC
CTCTCTTTTTTAAACACCTGTTTATCCCAACCTTTTTGAGCTCAAGCTGTGATAAAGAAGGGCCCATCCTATTTC
CCCTCATCTAGTCCATTTACGATTCTCACTGACTCCCCGTCTTCCTGGCAGACACAAATAAACCCAGTGTCAGGT
CTAGGAAATTAATGGCTATTCTTCCCCAGATACATTCTGGCTTATTTGAGATACATGATTCTCTTAGAATCCTGT
CCCTTGGTTCAGGAAAGTAGCTTGGAAAAGGAGTAGGGGTATAGCTTGGGTCCCTTTTCCTGCAAGGCCCCATGG
GGCAGAATATAATAAATATTCTGAGTGAGGAGTGTGGTCTTTTTCTGATCTTCCTCAGCTTCCGTAAGTTGCAGA
GTGAGGTATATTAGGAGACTAGTTCTACACAATATTGTAATGCTGGGTTCCATCAACACCCACCTTCCACAACTC
AGTCTGCACCTCAGTTGGCAAAGGAGACTGGATGGCCATCTTTCCTCATGTTCCCTTGAGTATTTCAATGTAGAA
AGCCCTTCAAGTGGTATTATATTTTAACCTTTTACATTATTGTTATTAATGTTAGTAATATATTGTTATGTTTTC
TAAATTATTTTTCTTTAAGCTGACGTGGCTTTTTTTCTGTGGCTCCCAGTGGGTCTACGGACCTTGGCTGACATA
TGTTGGTAGGTACTCTGGTCAGCTCAGCTGGCTGTCCTGGTTCACTCAGAAGATAAGTCTCTCCAAAGCAAATTC
ACATGCATTATGAGTCGCTTTGAGCTTCTGACATGTCACTTGCCCCGAGGTTAAAACTTTTCACCCCTTGAAGAC
CTTACATGTTTTATGGTATTGGTGAGGAAGGAAATGTTCTCAAGGTCTCAGGCTATTTGGGAAATTCCAACTCCT
ATACCTTACCAGAGCATGGAAGAGCCCAGATCTGAATGTAAAACGTCTCTGTTCTGCCAGAGATGGAAAAAATAC
AGGTATACTTGTGATATAGTCATGGGGCTTCAGTGTCACTATTTTCTCCTTAAAGCTCCAGCCAAAAACTGGACA
AGGATAGAGAGGAGGAGGGAAGAACAAAAGAGCCCTTCTCTATGAACCTTGTGCCTTCTGTCCTACCAGTTTTCT
TTTACAGATTCTCACTTCTGCTAGCCTAGCCAGGGCTTACTCCAGGAATCTAAATAGATGCCCTAGTCCACTTTA
TCTTTGTTCCCAAGGCACTCATTTTTATTTTGATTTTGATTGAATGTGAGCAGGTTGACCTCAGGTCACACTTTG
TTCCAAAAACTTTTGGAATTATTCCAGGACTTGTGGTGGAGTTATGGTACTCTAGGGCAGTCTTTCTCAAACTAT
GTATGGTAAAGGACCAGGTTTTTTGTTTTCCAGTCCTTCACTTATCAATATGCATTCCTATTGCCGATGACAGGT
ATGGAGTTCACACTGTGTGCTGCCGACCCGGCAAGTTTGACAGCACCCAAACTGGCCAGACTGTTCTGTAGGTTA
AGTCCATTGATCATGTACTTGGATATCACAGCAACATTGAAATGCTAAAAAGTTTTTAAACACTCTCAATTTCTA
ATTCACCATGTCACAGACTGGTGAAAAAAAAAAAAAGGTGTTCACTGACCAGCACAAGTCTGCAGATCATCTTTG
AGTAGCACTGTTTTGGGGCCCTCGGTCTCTCTGAAGACCCTAGCAGAACTGATACCTACCTGTATCTCTTGTTCT
CTCCTATTTGAGTTTCACTTCCAGAGAACTTGTTCTTCAGCAAGAATGTGTCACTAGTAAGGACATCTCTAGCAT
TTCTCTAGCCTTCCTTTTCTGCTGCTCAAAAATAATCGTTACAAAGCTTAGGTTTAAGCTGTATATGAAATATTT
ATGCGACTCTCAAACTTTAAAGGAGTTGCTCCTTTGTTCCAAAATTAAATGTGTTAGATAAATTTGTGATTGTAT

FIGURE 350B

GGGTGGCTTCATGAATTAAGAATTGAATTAATACAGACTTTTTGATAATAAAAAAAAAAAAA

FIGURE 351

MAAAEEGCSVGAEADRELEELLESALDDFDKAKPSPAPPSTTTAPDASGPQKRSPGDTAKDALFASQEKFFQELF
DSELASQATAEFEKAMKELAEEEPHLVEQFQKLSEAAGRVGSDMTSQQEFTSCLKETLSGLAKNATDLQNSSMSE
EELTKAMEGLGMDEGDGEGNILPIMQSIMQNLLSKDVLYPSLKEITEKYPEWLQSHRESLPPEQFEKYQEQHSVM
CKICEQFEAETPTDSETTQKARFEMVLDLMQQLQDLGHPPKELAGEMPPGLNFDLDALNLSGPPGASGEQCLIM

FIGURE 352

CGCAACGCCGGTGCCTGAGGAGCG**ATG**CCGAGGGAAATCATCACCCTACAGTTGGGCCAGTGCGGCAATCAGATT
GGGTTCGAGTTCTGGAAACAGCTGTGCGCCGAGCATGGTATCAGCCCCGAGGCGATCGTGGAGGAGTTCGCCACC
GAGGGCACTGACCGCAAGGACGTCTTTTTCTACCAGGCAGACGATGAGCACTACATCCCCCGGGCCGTGCTGCTG
GACTTGGAACCCCGGGTGATCCACTCCATCCTCAACTCCCCCTATGCCAAGCTCTACAACCCAGAGAACATCTAC
CTGTCGGAACATGGAGGAGGAGCTGGCAACAACTGGGCCAGCGGATTCTCCCAGGGAGAAAAGATCCATGAGGAC
ATTTTTGACATCATAGACCGGGAGGCAGATGGTAGTGACAGTCTAGAGGGCTTTGTGCTGTGTCACTCCATTGCT
GGGGGGACAGGCTCTGGACTGGGTTCCTACCTCTTAGAACGGCTGAATGACAGGTATCCTAAGAAGCTGGTGCAG
ACATACTCAGTGTTTCCCAACCAGGACGAGATGAGCGATGTGGTGGTCCAGCCTTACAATTCACTCCTCACACTC
AAGAGGCTGACGCAGAATGCAGACTGTCTGGTGGTGCTGGACAACACAGCCCTGAACCGGATTGCCACAGACCGC
CTGCACATCCAGAACCCATCCTTCTCCCAGATCAACCAGCTGGTGTCTACCATCATGTCAGCCAGCACCACCACC
CTGCGCTACCCTGGCTACATGAACAATGACCTCATCGGCCTCATCGCCTCGCTCATTCCCACCCCACGGCTCCAC
TTCCTCATGACCGGCTACACCCCTCTCACTACGGACCAGTCAGTGGCCAGCGTGAGGAAGACCACGGTCCTGGAT
GTCATGAGGCGGCTGCTGCAGCCCAAGAACGTGATGGTGTCCACAGGCCGAGACCGCCAGACCAACCACTGCTAC
ATCGCCATCCTCAACATCATCCAGGGAGAGGTGGACCCCACCCAGGTCCACAAGAGCTTGCAGAGGATCCGGGAA
CGCAAGTTGGCCAACTTCATCCCGTGGGGCCCCGCCAGCATCCAGGTGGCCCTGTCGAGGAAGTCTCCCTACCTG
CCCTCGGCCCACCGGGTCAGCGGGCTCATGATGGCCAACCACACCAGCATCTCCTCGCTCTTCGAGAGAACCTGT
CGCCAGTATGACAAGCTGCGTAAGCGGGAGGCCTTCCTGGAGCAGTTCCGCAAGGAGGACATGTTCAAGGACAAC
TTTGATGAGATGGACACATCCAGGGAGATTGTGCAGCAGCTCATCGATGAGTACCATGCGGCCACACGGCCAGAC
TACATCTCCTGGGGCACCCAGGAGCAG**TGA**GTCCCCCAGGACAGGGGACCCTCATCTGCCTTACTGGTTGGCCCA
AGCCCTGCCTGACTGACCACCCCCTCAGAGCACAGATCAGGGACCTCACGCATCTCTTTCTCATATACATGGACT
CTCTGTTGGCCTGCAAACACATTTACTTCTCCTCTTATGAGACTATTTATCTTTAATAAAGCACTGGG

FIGURE 353

MPREIITLQLGQCGNQIGFEFWKQLCAEHGISPEAIVEEFATEGTDRKDVFFYQADDEHYIPRAVLLDLEPRVIH
SILNSPYAKLYNPENIYLSEHGGGAGNNWASGFSQGEKIHEDIFDIIDREADGSDSLEGFVLCHSIAGGTGSGLG
SYLLERLNDRYPKKLVQTYSVFPNQDEMSDVVVQPYNSLLTLKRLTQNADCLVVLDNTALNRIATDRLHIQNPSF
SQINQLVSTIMSASTTTLRYPGYMNNDLIGLIASLIPTPRLHFLMTGYTPLTTDQSVASVRKTTVLDVMRRLLQP
KNVMVSTGRDRQTNHCYIAILNIIQGEVDPTQVHKSLQRIRERKLANFIPWGPASIQVALSRKSPYLPSAHRVSG
LMMANHTSISSLFERTCRQYDKLRKREAFLEQFRKEDMFKDNFDEMDTSREIVQQLIDEYHAATRPDYISWGTQE
Q

FIGURE 354A

TTTTTAAATTTTGCATTTGACTTAAAGTGCC**ATG**AGAAAATTTGCATACTGCAAGGTGGTCCTAGCCACCTCCTT
GATTTGGGTACTCTTGGATATGTTCCTGCTGCTTTACTTCAGTGAATGCAACAAATGTGATGAAAAAAAGGAGAG
AGGACTTCCTGCTGGAGATGTTCTAGAGCCAGTACAAAAGCCTCATGAAGGTCCTGGAGAAATGGGGAAACCAGT
CGTCATTCCTAAAGAGGATCAAGAAAAGATGAAAGAGATGTTTAAAATCAATCAGTTCAATTTAATGGCAAGTGA
GATGATTGCACTCAACAGATCTTTACCAGATGTTAGGTTAGAAGGGTGTAAAACAAAGGTGTATCCAGATAATCT
TCCTACAACAAGTGTGGTGATTGTTTTCCACAATGAGGCTTGGAGCACACTTCTGCGAACTGTCCATAGTGTCAT
TAATCGCTCACCAAGACACATGATAGAAGAAATTGTTCTAGTAGATGATGCCAGTGAAAGAGACTTTTTGAAAAG
GCCTTTAGAGAGTTATGTGAAAAAACTAAAAGTACCAGTTCATGTAATTCGAATGGAACAACGTTCTGGATTGAT
CAGAGCTAGATTAAAAGGAGCTGCTGTGTCTAAAGGCCAAGTGATCACCTTCCTGGATGCCCATTGTGAGTGTAC
AGTGGGATGGCTGGAGCCTCTCTTGGCCAGGATCAAACATGACAGGAGAACAGTGGTGTGTCCCATCATCGATGT
GATCAGTGATGATACTTTTGAGTACATGGCAGGCTCTGATATGACCTATGGTGGGTTCAACTGGAAGCTCAATTT
TCGCTGGTATCCTGTTCCCCAAAGAGAAATGGACAGAAGGAAAGGTGATCGGACTCTTCCTGTCAGGACACCTAC
CATGGCAGGAGGCCTTTTTTCAATAGACAGAGATTACTTTCAGGAAATTGGAACATATGATGCTGGAATGGATAT
TTGGGGAGGAGAAAACCTAGAAATTTCCTTTAGGATTTGGCAGTGTGGAGGAACTTTGGAAATTGTTACATGCTC
ACATGTTGGACATGTGTTTCGGAAAGCTACACCTTACACGTTTCCAGGAGGCACAGGGCAGATTATCAATAAAAA
TAACAGACGACTTGCAGAAGTGTGGATGGATGAATTCAAGAATTTCTTCTATATAATTTCTCCAGGTGTTACAAA
GGTAGATTATGGAGATATATCGTCAAGAGTTGGTCTAAGACACAAACTACAATGCAAACCTTTTTCCTGGTACCT
AGAGAATATATATCCTGATTCTCAAATTCCACGTCACTATTTCTCATTGGGAGAGATACGAAATGTGGAAACGAA
TCAGTGTCTAGATAACATGGCTAGAAAAGAGAATGAAAAAGTTGGAATTTTTAATTGCCATGGTATGGGGGGTAA
TCAGGTTTTCTCTTATACTGCCAACAAAGAAATTAGAACAGATGACCTTTGCTTGGATGTTTCCAAACTTAATGG
CCCAGTTACAATGCTCAAATGCCACCACCTAAAAGGCAACCAACTCTGGGAGTATGACCCAGTGAAATTAACCCT
GCAGCATGTGAACAGTAATCAGTGCCTGGATAAAGCCACAGAAGAGGATAGCCAGGTGCCCAGCATTAGAGACTG
CAATGGAAGTCGGTCCCAGCAGTGGCTTCTTCGAAACGTCACCCTGCCAGAAATATTC**TGA**GACCAAATTTACAA
AAAAACGAAAAAAATAAGGATTGACTGGGCTACCTCAGCATACATTTCTGCCACATTCTTAAGTAGCAAAAAAGG
AAAAGTGCTTTCCTCCTCTGCAGGATGTAAGGTTTATCAGCCATTAAAACTTAGACTTCTCTAGCTTTTCACTAG
CTGTGAACCAGCCTTCCTGTCCATGGACGTGAAACTGCATAGTAATGAGACTGTGCACACTGATGTTTACAAGAT
TGAAAGAGTCTTTCTCCGAAAATCATGGTAAAGAATACTGAGACAATGAAAAAAAATCAACAAAATATGCTTTCT
GGAGAACTGTACCTTCTATGGTTTGCTTGCACATCAGTAGTTTCTGCTGAACGTGCTGTCATAATGAAGAGATTT
CCAAGATTTTTTTTCCTGATTAGAACGGGTAGCCAGTATATTAAATATTGATAGAAAAATAAAAGAACTGGAACC
AGATTCAGAATCTTGAAAACAACATTTTTTACAACAAACAAAAAAACTATATTAAACAGGGTTTAAAGGAAAATT
AAAACAGAACTATGAAGAAGTACAATTTGTTATAGTATAGTATCAAATTTCTATATAGATTTTATACCTCAGTGG
GGAAAAATAACTGATTCCAATGACATTCATTTTGTTTTCATCTGTGATAGTCATGGATGCTTTTATTTTCCTTGG
GGTGCTGAAATTGAGCTGAAAAAAAAAGGCTCTTTGAATATAGTTTTAATTTCTCTCTACAGTTTTTTTTGTTTG
GTTTGTGGGCTGTTGGAATTGTAATTTTTAATTGCCTTCTAAAAAATGGAAATTTAACAATGTCTGATCTCAGCT
GAACAAATTAGATGTTTCAGTTGCTCTTGGGTCAACTGGCTTACAGATTTACATGTGCACACACACACAAATTTC
TTATCACATTTTCGACTTCTTCACTTGACCTAACTGATTATGCGAAATACCCAAGATTCATGCTACTGTTCCACA
TTTGTTTTCACAGCAATAAATCTTCAGTTCTGTTGTTTATGATTCCACTTAACAAGGGGCCTGCAAATGTGATTT
ATTATTTGGGTATTTGGAGATAATACATTTGAGGGTTTTTTGGAAAACCTTTTTCACTCCATACTCAAATATGCT
TCATTGTCAAATGCATATTTAAATTAAATTATTGAATTGTAATGTTTATCTGCTGCTTTTTTTAAATAAAATTTG
ACTGAAAATGTTTAATTGGCATTTTTTAATGACTTACCCAAGAAAAGTGCAGCTATTATTCCATATTAATAGGCT
TGCATTTCTTTTCCTAAATCTTATTTAGGCTAAATCAGTTTTATTGTCCTCTGATTTTTTTTAATACCACAGAAA
TCACCTGAGTGTCAATTGAAAAGTTGTCAATTAAAAGGTAACCTTTTAACTCTCGTAGGAGGAATCTCATTAAGA
CATTTTTCCTGATATGTAGAGCAGTCTGTTGGCAAAAATGCATATATTTTCTTTCATATTTGTAAAATTATATTT
AATGGAATTCTTTTCTTTGATTATCAAGGACTTTCACTGCAGGCAGTGCTATTTCTTGTGCCTAAGAATGTTTCC
AAAAGTCGCATCGCTAATGATATTTGCCAAGTTGAGTGTACACAAAGTTTCTCATATCCTGTTCAAGTTAATCAA
CATCAAACACATGGGGATGCTTTAGGGTGAGTCTATAATACAAAATGCATAAACCATGTCCCCAGGAAATTTGAA
AGGAAGCAAGTGCTGAATGGAATTTTTTTCCTTTTCCATGAGCTGTGTTAATTCTATCTCCAGTAGGCCTAATGC
TTGAAATAAGCAAGATGTCTAATCAATAAATTATTTTCATGCTCAGAATTTCAGGTTTTTGTACTCCAGCATAGC

FIGURE 354B

TTGGTCTTATTTCTTACTGTATGAAAGCTTAACAGCAATGTGATTTAAGGTTTTGTTTTAAATGGGAGATGTAAG
TGATTTAATTCATGGGTACTTTTAGAACCTGATAGATAATCCCATTGCCTTTATTTTTCTAATTAAAGAATCCTA
AATACTTTGAAAATACAAAATATTCCTG

FIGURE 355

MRKFAYCKVVLATSLIWVLLDMFLLLYFSECNKCDEKKERGLPAGDVLEPVQKPHEGPGEMGKPVVIPKEDQEKM
KEMFKINQFNLMASEMIALNRSLPDVRLEGCKTKVYPDNLPTTSVVIVFHNEAWSTLLRTVHSVINRSPRHMIEE
IVLVDDASERDFLKRPLESYVKKLKVPVHVIRMEQRSGLIRARLKGAAVSKGQVITFLDAHCECTVGWLEPLLAR
IKHDRRTVVCPIIDVISDDTFEYMAGSDMTYGGFNWKLNFRWYPVPQREMDRRKGDRTLPVRTPTMAGGLFSIDR
DYFQEIGTYDAGMDIWGGENLEISFRIWQCGGTLEIVTCSHVGHVFRKATPYTFPGGTGQIINKNNRRLAEVWMD
EFKNFFYIISPGVTKVDYGDISSRVGLRHKLQCKPFSWYLENIYPDSQIPRHYFSLGEIRNVETNQCLDNMARKE
NEKVGIFNCHGMGGNQVFSYTANKEIRTDDLCLDVSKLNGPVTMLKCHHLKGNQLWEYDPVKLTLQHVNSNQCLD
KATEEDSQVPSIRDCNGSRSQQWLLRNVTLPEIF

FIGURE 356

CCGGCCGGCCGAAGAGTTCACAAGTGTGAAGCCTGAAGCCGCCGGGTGCCGCTGTGTAGAAAGAAGCTAAAGCAC
TTCCAGAGCCTGCTGAGCTCAGAGGTTCGGAAGACTTATCGACC**ATG**GAGCGCGCGTCCTGCTTGTTGCTGCTGC
TGCTGCCGCTGGTGCACGTCTCTGCGACCACGCCAGAACCTTGTGAGCTGGACGATGAAGATTTCCGCTGCGTCT
GCAACTTCTCCGAACCTCAGCCCGACTGGTCCGAAGCCTTCCAGTGTGTGTCTGCAGTAGAGGTGGAGATCCATG
CCGGCGGTCTCAACCTAGAGCCGTTTCTAAAGCGCGTCGATGCGGACGCCGACCCGCGGCAGTATGCTGACACGG
TCAAGGCTCTCCGCGTGCGGCGGCTCACAGTGGGAGCCGCACAGGTTCCTGCTCAGCTACTGGTAGGCGCCCTGC
GTGTGCTAGCGTACTCCCGCCTCAAGGAACTGACGCTCGAGGACCTAAAGATAACCGGCACCATGCCTCCGCTGC
CTCTGGAAGCCACAGGACTTGCACTTTCCAGCTTGCGCCTACGCAACGTGTCGTGGGCGACAGGGCGTTCTTGGC
TCGCCGAGCTGCAGCAGTGGCTCAAGCCAGGCCTCAAGGTACTGAGCATTGCCCAAGCACACTCGCCTGCCTTTT
CCTGCGAACAGGTTCGCGCCTTCCCGGCCCTTACCAGCCTAGACCTGTCTGACAATCCTGGACTGGGCGAACGCG
GACTGATGGCGGCTCTCTGTCCCCACAAGTTCCCGGCCATCCAGAATCTAGCGCTGCGCAACACAGGAATGGAGA
CGCCCACAGGCGTGTGCGCCGCACTGGCGGCGGCAGGTGTGCAGCCCCACAGCCTAGACCTCAGCCACAACTCGC
TGCGCGCCACCGTAAACCCTAGCGCTCCGAGATGCATGTGGTCCAGCGCCCTGAACTCCCTCAATCTGTCGTTCG
CTGGGCTGGAACAGGTGCCTAAAGGACTGCCAGCCAAGCTCAGAGTGCTCGATCTCAGCTGCAACAGACTGAACA
GGGCGCCGCAGCCTGACGAGCTGCCCGAGGTGGATAACCTGACACTGGACGGGAATCCCTTCCTGGTCCCTGGAA
CTGCCCTCCCCCACGAGGGCTCAATGAACTCCGGCGTGGTCCCAGCCTGTGCACGTTCGACCCTGTCGGTGGGGG
TGTCGGGAACCCTGGTGCTGCTCCAAGGGGCCCGGGGCTTTGCC**TAA**GATCCAAGACAGAATAATGAATGGACTC
AAACTGCCTTGGCTTCAGGGGAGTCCCGTCAGGACGTTGAGGACTTTTCGACCAATTCAACCCTTTGCCCCACCT
TTATTAAAATCTTAAAC

FIGURE 357

MERASCLLLLLLPLVHVSATTPEPCELDDEDFRCVCNFSEPQPDWSEAFQCVSAVEVEIHAGGLNLEPFLKRVDA
DADPRQYADTVKALRVRRLTVGAAQVPAQLLVGALRVLAYSRLKELTLEDLKITGTMPPLPLEATGLALSSLRLR
NVSWATGRSWLAELQQWLKPGLKVLSIAQAHSPAFSCEQVRAFPALTSLDLSDNPGLGERGLMAALCPHKFPAIQ
NLALRNTGMETPTGVCAALAAAGVQPHSLDLSHNSLRATVNPSAPRCMWSSALNSLNLSFAGLEQVPKGLPAKLR
VLDLSCNRLNRAPQPDELPEVDNLTLDGNPFLVPGTALPHEGSMNSGVVPACARSTLSVGVSGTLVLLQGARGFA

FIGURE 358

CCGCCGGCCGGGGCGCCTGGCTGCACTCAGCGCCGGAGCCGGGAGCTAGCGGCCGCCGCC**ATG**TCCCACCAGACC
GGCATCCAAGCAAGTGAAGATGTTAAAGAGATCTTTGCCAGAGCCAGAAATGGAAAGTACAGACTTCTGAAAATA
TCTATTGAAAATGAGCAACTTGTGATTGGATCATATAGTCAGCCTTCAGATTCCTGGGATAAGGATTATGATTCC
TTTGTTTTACCCCTGTTGGAGGACAAACAACCATGCTATATATTATTCAGGTTAGATTCTCAGAATGCCCAGGGA
TATGAATGGATATTCATTGCATGGTCTCCAGATCATTCTCATGTTCGTCAAAAAATGTTGTATGCAGCAACAAGA
GCAACTCTGAAGAAGGAATTTGGAGGTGGCCACATTAAAGATGAAGTATTTGGAACAGTAAAGGAAGATGTATCA
TTACATGGATATAAAAAATACTTGCTGTCACAATCTTCCCCTGCCCCACTGACTGCAGCTGAGGAAGAACTACGA
CAGATTAAAATCAATGAGGTACAGACTGACGTGGGTGTGGACACTAAGCATCAAACACTACAAGGAGTAGCATTT
CCCATTTCTCGAGAAGCCTTTCAGGCTTTGGAAAAATTGAATAATAGACAGCTCAACTATGTGCAGTTGGAAATA
GATATAAAAAATGAAATTATAATTTTGGCCAACACAACAAATACAGAACTGAAAGATTTGCCAAAGAGGATTCCC
AAGGATTCAGCTCGTTACCATTTCTTTCTGTATAAACATTCCCATGAAGGAGACTATTTAGAGTCCATAGTTTTT
ATTTATTCAATGCCTGGATACACATGCAGTATAAGAGAGCGGATGCTGTATTCTAGCTGCAAGAGCCGTCTGCTA
GAAATTGTAGAAAGACAACTACAAATGGATGTAATTAGAAAGATCGAGATAGACAATGGGGATGAGTTGACTGCA
GACTTCCTTTATGAAGAAGTACATCCCAAGCAGCATGCACACAAGCAAAGTTTTGCAAAACCAAAAGGTCCTGCA
GGAAAAAGAGGAATTCGAAGACTAATTAGGGGCCCAGCGGAAACTGAAGCTACTACTGAT**TAA**AGTCATCACATT
AAACATTGTAATACTAGTTTTTTAAAAGTCCAGCTTTTAGTACAGGAGAACTGAAATCATTCCATGTTGATATAA
AGTAGGGAAAAAAATTGTACTTTTTGGAAAATAGCACTTTTCACTTCTGTGTGTTTTTAAAATTAATGTTATAGA
AGACTCATGATTTCTATTTTTGAGTTAAAGCTAGAAAAGGGTTCAACATAATGTTTAATTTTGTCACACTGTTTT
CATAGCGTTGATTCCACACTTCAAATACTTCTTAAAATTTTATACAGTTGGGCCAGTTCTAGAAAGTCTGATGTC
TCAAAGGGTAAACTTACTACTTTCTTGTGGGACAGAAAGACCTTAAAATATTCATATTACTTAATGAATATGTTA
AGGACCAGGCTAGAGTATTTTCTAAGCTGGAAACTTAGTGTGCCTTGGAAAAGCCGCAAGTTGCTTACTCCGAGT
AGCTGTGCTAGCTCTGTCAGACTGTAGGATCATGTCTGCAACTTTTAGAAATAGTGCTTTATATTGCAGCAGTCT
TTTATATTTGACTTTTTTTTAATAGCATTAAAATTGCAGATCAGCTCACTCTGAAACTTTAAGGGTACCAGATAT
TTTCTATACTGCAGGATTTCTGATGACATTGAAAGACTTTAAACAGCCTTAGTAAATTATCTTTCTAATGCTCTG
TGAGGCCAAACATTTATGTTCAGATTGAAATTTAAATTAATATCATTCAAAAGGAAACAAAAAATGTTGAGTTTT
AAAAATCAGGATTGACTTTTTTCTCCAAAACCATACATTTATGGGCAAATTGTGTTCTTTATCACTTCCGAGCAA
ATACTCAGATTTAAAATTACTTTAAAGTCCTGGTACTTAACAGGCTAACGTAGATAAACACCTTAATAATCTCAG
TTAATACTGTATTTCAAAACACATTTAACTGTTTTCTAATGCTTTGCATTATCAGTTACAACCTAGAGAGATTTT
GAGCCTCATATTTCTTTGATACTTGAAATAGAGGGAGCTAGAACACTTAATGTTTAATCTGTTAAACCTGCTGCA
AGAGCCATAACTTTGAGGCATTTTCTAAATGAACTGTGGGGATCCAGGATTTGTAATTTCTTGATCTAAACTTTA
TGCTGCATAAATCACTTATCGGAAATGCACATTTCATAGTGTGAAGCACTCATTTCTAAACCTTATTATCTAAGG
TAATATATGCACCTTTCAGAAATTTGTGTTCGAGTAAGTAAAGCATATTAGAATAATTGTGGGTTGACAGATTTT
TAAAATAGAATTTAGAGTATTTGGGGTTTTGTTTGTTTACAAATAATCAGACTATAATATTTAAACATGCAAAAT
AACTGACAATAATGTTGCACTTGTTTACTAAAGATATAAGTTGTTCCATGGGTGTACACGTAGACAGACACACAT
ACACCCAAATTATTGCATTAAGAATCCTGGAGCAGACCATAGCTGAAGCTGTTATTTTCAGTCAGGAAGACTACC
TGTCATGAAGGTATAAAATAATTTAGAAGTGAATGTTTTTCTGTACCATCTATGTGCAATTATACTCTAAATTCC
ACTACACTACATTAAAGTAAATGGACATTCCAGAATATAGATGTGATTATAGTCTTAAACTAATTATTATTAAAC
CAATGATTGCTGAAAATCAGTGATGCATTTGTTATAGAGTATAACTCATCGTTTACAGTATGTTTTAGTTGGCAG
TATCATACCTAGATGGTGAATAACATATTCCCAGTAAATTTATATAGCAGTGAAGAATTACATGCCTTCTGGTGG
ACATTTTATAAGTGCATTTTATATCACAATAAAAATTTTTTCTCTTTAAAAAAAAAAAACAAGAAAAAAAAAAA

FIGURE 359

MSHQTGIQASEDVKEIFARARNGKYRLLKISIENEQLVIGSYSQPSDSWDKDYDSFVLPLLEDKQPCYILFRLDS
QNAQGYEWIFIAWSPDHSHVRQKMLYAATRATLKKEFGGGHIKDEVFGTVKEDVSLHGYKKYLLSQSSPAPLTAA
EEELRQIKINEVQTDVGVDTKHQTLQGVAFPISREAFQALEKLNNRQLNYVQLEIDIKNEIIILANTTNTELKDL
PKRIPKDSARYHFFLYKHSHEGDYLESIVFIYSMPGYTCSIRERMLYSSCKSRLLEIVERQLQMDVIRKIEIDNG
DELTADFLYEEVHPKQHAHKQSFAKPKGPAGKRGIRRLIRGPAETEATTD

FIGURE 360

GTCCGCGTCGCTAGCTAGTCGTTCTGAAGCGGCGGCCAGAGAAGAGTCAAGGGCACGAGCATCGGGTAGCC**ATG**C
CTTTCTTGGACATCCAGAAAAGGTTCGGCCTTAACATAGATCGATGGTTGACAATCCAGAGTGGTGAACAGCCCT
ACAAGATGGCTGGTCGATGCCATGCTTTTGAAAAAGAATGGATAGAATGTGCACATGGAATCGGTTATACTCGGG
CAGAGAAAGAGTGCAAGATAGAATATGATGATTTCGTAGAGTGTTTGCTTCGGCAGAAAACGATGAGACGTGCAG
GTACCATCAGGAAGCAGCGGGATAAGCTGATAAAGGAAGGAAAGTACACCCCTCCACCTCACCACATTGGCAAGG
GGGAGCCTCGGCCC**TGA**ACAGAGCAGCTGCTGATGTCTGGAGGCTGATTTTCCTGTTCTCTGTTCTCCACTGGAA
AGGTTGTTTACGACAAACCTCCTTGTCAAAGTGTGTAAAAATAAAGGATTGCTCCATCCTAAAAAAAAAAAAAAA
AAAAAAAAAAAAAA

FIGURE 361

MPFLDIQKRFGLNIDRWLTIQSGEQPYKMAGRCHAFEKEWIECAHGIGYTRAEKECKIEYDDFVECLLRQKTMRR
AGTIRKQRDKLIKEGKYTPPPHHIGKGEPRP

FIGURE 362

CGGACGCGTGGGGCCCGGGGGGCTGAGGCGCCCGCCGCCTGCCGCGGGGGCCGCTCGCGTCCTCC**ATG**GAGGCCG
GAGAGGAACCGCTGCTGCTGGCCGAACTCAAGCCCGGGCGCCCCCACCAGTTTGATTGGAAGTCCAGCTGTGAAA
CCTGGAGCGTCGCCTTCTCCCCAGATGGCTCCTGGTTTGCTTGGTCTCAAGGACACTGCATCGTCAAACTGATCC
CCTGGCCGTTGGAGGAGCAGTTCATCCCTAAAGGGTTTGAAGCCAAAAGCCGAAGTAGCAAAAATGAGACGAAAG
GGCGGGGCAGCCCAAAAGAGAAGACGCTGGACTGTGGTCAGATTGTCTGGGGGCTGGCCTTCAGCCCGTGGCCTT
CCCCACCCAGCAGGAAGCTCTGGGCACGCCACCACCCCCAAGTGCCCGATGTCTCTTGCCTGGTTCTTGCTACGG
GACTCAACGATGGGCAGATCAAGATCTGGGAGGTGCAGACAGGGCTCCTGCTTTTGAATCTTTCCGGCCACCAAG
ATGTCGTGAGAGATCTGAGCTTCACACCCAGTGGCAGTTTGATTTTGGTCTCCGCGTCACGGGATAAGACTCTTC
GCATCTGGGACCTGAATAAACACGGTAAACAGATTCAAGTGTTATCGGGCCACCTGCAGTGGGTTTACTGCTGTT
CCATCTCCCCAGACTGCAGCATGCTGTGCTCTGCAGCTGGAGAGAAGTCGGTCTTTCTATGGAGCATGAGGTCCT
ACACGTTAATTCGGAAGCTAGAGGGCCATCAAAGCAGTGTTGTCTCTTGTGACTTCTCCCCCGACTCTGCCCTGC
TTGTCACGGCTTCTTACGATACCAATGTGATTATGTGGGACCCCTACACCGGCGAAAGGCTGAGGTCACTCCACC
ACACCCAGGTTGACCCCGCCATGGATGACAGTGACGTCCACATTAGCTCACTGAGATCTGTGTGCTTCTCTCCAG
AAGGCTTGTACCTTGCCACGGTGGCAGATGACAGACTCCTCAGGATCTGGGCCCTGGAACTGAAAACTCCCATTG
CATTTGCTCCTATGACCAATGGGCTTTGCTGCACATTTTTTCCACATGGTGGAGTCATTGCCACAGGGACAAGAG
ATGGCCACGTCCAGTTCTGGACAGCTCCTAGGGTCCTGTCCTCACTGAAGCACTTATGCCGGAAAGCCCTTCGAA
GTTTCCTAACAACTTACCAAGTCCTAGCACTGCCAATCCCCAAGAAAATGAAAGAGTTCCTCACATACAGGACTT
TT**TAA**GCAACACCACATCTTGTGCTTCTTTGTAGCAGGGTAAATCGTCCTGTCAAAGGGAGTTGCTGGAATAATG
GGCCAAACATCTGGTCTTGCATTGAAATAGCATTTCTTTGGGATTGTGAATAGAATGTAGCAAAACCAGATTCCA
GTGTACTAGTCATGGATCTTTCTCTCCCTGGCATGTGAAAGTCAGTCTTAGAGGAAGAGATTCCACTTGCACGGC
AACAGAGCCTTACGTTAAATTTTCAGTCCAGTTATGAACAGCAAGTGTTGAACTCTTTCTGCTTGTTTTGATTCA
AAGTGCAGTTACTGATGTTGTTTTGATTATGCAACTAAGTAGGCCTCCAGAGCCTCTCTAGTGGCAGAGCAGCTC
ACACTCCCTCCGCTGGGAACGATGGCTTCTGCCTAGTACCTATCCTTGTGTTTCTGATGCAGTGGTAGCATTGGT
TCAAGTTCTCTCCTGCTGTGGTCAGAGTTGCTTCGATGTTGGCCAAGTGCTTTTCTTCTTGGGCTCCCTTCTGAC
CTGCAGGACAGTTTTCCTGGAGCCATTTGGTATGAGGTATTAATTTAGCTTAACTAAATTACAGGGGACTCAGAG
GCCGTGCTCCTGACCGATCCAGACACTATTACTGGCTTTTTTTTTTTTTTAACAATGGTGTGCATGTGCAGGAAA
TGACAAATTTGTATGTCAGATTATACAAGGATGTATTCTTAAACCGCATGACTATTCAGATGGCTACTGAGTTAT
CAGTGGCCATTTATTAGCATCATATTTATTTGTATTTTCTCAACAGATGTTAAGGTACAACTGTGTTTTTCTCGA
TTATCTAAAAACCATAGTACTTAAATTGAACAGTTGCAAAGATGTCTTAATTGTGTAAAGAATTGGTGTAGTCAT
GACTTTAGCTGATACTCTTATGTACGAGATCTGTCTCTGCTGTTTAACTTCATTGGATTAATCAGCTGGTTTCAA
CTCTACTGCGAAACAAAAATAGCTCCTTAAAAGTACTGTTCTCCTTCAGTGGCATGTAGTTATCTAATCAAGACA
CCTCATTCAAACAAAACCTGCCTTAGGAAAATTTAATATATTTTAAATTATTTTAAAAGAAATACAACATCTTAT
TCTTTAGCTTTCTTAATCGGTGCTTTATGGAGGCCAGTGTAACGTTACATGACTCGTTGAGAAAGTTGAGGAATT
TCCTCTACCACCTTTGTTGCTTGAAGAAAAACATGTCTTTTCAAAATGAGAGGCTTTCATTGAAGAAAAGAAAAA
AACAACAGTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 363

MEAGEEPLLLAELKPGRPHQFDWKSSCETWSVAFSPDGSWFAWSQGHCIVKLIPWPLEEQFIPKGFEAKSRSSKN
ETKGRGSPKEKTLDCGQIVWGLAFSPWPSPPSRKLWARHHPQVPDVSCLVLATGLNDGQIKIWEVQTGLLLLNLS
GHQDVVRDLSFTPSGSLILVSASRDKTLRIWDLNKHGKQIQVLSGHLQWVYCCSISPDCSMLCSAAGEKSVFLWS
MRSYTLIRKLEGHQSSVVSCDFSPDSALLVTASYDTNVIMWDPYTGERLRSLHHTQVDPAMDDSDVHISSLRSVC
FSPEGLYLATVADDRLLRIWALELKTPIAFAPMTNGLCCTFFPHGGVIATGTRDGHVQFWTAPRVLSSLKHLCRK
ALRSFLTTYQVLALPIPKKMKEFLTYRTF

FIGURE 364

ATATAACCGCGTGGCCCGCGCGCGCTTCCCTCCCGGCGCAGTCACCGGCGCGGTCTATGGCTGCGACTTCTCT
A**ATG**TCTGCTTTGGCTGCCCGGCTGCTGCAGCCCGCGCACAGCTGCTCCCTTCGCCTTCGCCCTTTCCACCTCGC
GGCAGTTCGAAATGAAGCTGTTGTCATTTCTGGAAGGAAACTGGCCCAGCAGATCAAGCAGGAAGTGCGGCAGGA
GGTAGAAGAGTGGGTGGCCTCAGGCAACAAACGGCCACACCTGAGTGTGATCCTGGTTGGCGAGAATCCTGCAAG
TCACTCCTATGTCCTCAACAAAACCAGGGCAGCTGCAGTTGTGGGAATCAACAGTGAGACAATTATGAAACCAGC
TTCAATTTCAGAGGAAGAATTGTTGAATTTAATCAATAAACTGAATAATGATGATAATGTAGATGGCCTCCTTGT
TCAGTTGCCTCTTCCAGAGCATATTGATGAGAGAAGGATCTGCAATGCTGTTTCTCCAGACAAGGATGTTGATGG
CTTTCATGTAATTAATGTAGGACGAATGTGTTTGGATCAGTATTCCATGTTACCGGCTACTCCATGGGGTGTGTG
GGAAATAATCAAGCGAACTGGCATTCCAACCCTAGGGAAGAATGTGGTTGTGGCTGGAAGGTCAAAAAACGTTGG
AATGCCCATTGCAATGTTACTGCACACAGATGGGGCGCATGAACGTCCCGGAGGTGATGCCACTGTTACAATATC
TCATCGATATACTCCCAAAGAGCAGTTGAAGAAACATACAATTCTTGCAGATATTGTAATATCTGCTGCAGGTAT
TCCAAATCTGATCACAGCAGATATGATCAAGGAAGGAGCAGCAGTCATTGATGTGGGAATAAATAGAGTTCACGA
TCCTGTAACTGCCAAACCCAAGTTGGTTGGAGATGTGGATTTTGAAGGAGTCAGACAAAAAGCTGGGTATATCAC
TCCAGTTCCTGGAGGTGTTGGCCCCATGACAGTGGCAATGCTAATGAAGAATACCATTATTGCTGCAAAAAAGGT
GCTGAGGCTTGAAGAGCGAGAAGTGCTGAAGTCTAAAGAGCTTGGGGTAGCCACTAAT**TAA**CTACTGTGTCTTCT
GTGTCACAAACAGCACTCCAGGCCAGCTCAAGAAGCAAAGCAGGCCAATAGAAATGCAATATTTTTAATTTATTC
TACTGAAATGGTTTAAAATGATGCCTTGTATTTATTGAAAGCTTAAATGGGTGGGTGTTTCTGCACATACCTCTG
CAGTACCTCACCAGGGAGCATTCCAGTATCATGCAGGGTCCTGTGATCTAGCCAGGAGCAGCCATTAACCTAGTG
ATTAATATGGGAGACATTACCATATGGAGGATGGATGCTTCACTTTGTCAAGCACCTCAGTTACACATTCGCCTT
TTCTAGGATTGCATTTCCCAAGTGCTATTGCAATAACAGTTGATACTCATTTTAGGTACCAGACCTTTTGAGTTC
AACTGATCAAACCAAAGGAAAAGTGTTGCTAGAGAAAATTGGGGAAAAGGTGAAAAAGAAAAAATGGTAGTAATT
GAGCAGAAAAAAATTAATTTATATATGTATTGATTGGCAACCAGATTTATCTAAGTAGAACTGAATTGGCTAGGA
AAAAAGAAAAACTGCATGTTAATCATTTTCCTAAGCTGTCCTTTTGAGGCTTAGTCAGTTTATTGGGAAAATGTT
TAGGATTATTCCTTGCTATTAGTACTCATTTTATGTATGTTACCCTTCAGTAAGTTCTCCCCATTTTAGTTTTCT
AGGACTGAAAGGATTCTTTTCTACATTATACATGTGTGTTGTCATATTTGGCTTTTGCTATATACTTTAACTTCA
TTGTTAAATTTTTGTATTGTATAGTTTCTTTGGTGTATCTTAAAACCTATTTTTGAAAAACAAACTTGGCTTGAT
AATCATTTGGGCAGCTTGGGTAAGTACGCAACTTACTTTTCCACCAAAGAACTGTCAGCAGCTGCCTGCTTTTCT
GTGATGTATGTATCCTGTTGACTTTTCCAGAAATTTTTTAAGAGTTTGAGTTACTATTGAATTTAATCAGACTTT
CTGATTAAAGGGTTTTCTTTCTTTTTTAATAAAACACATCTGTCTGGTATGGTA

FIGURE 365

MSALAARLLQPAHSCSLRLRPFHLAAVRNEAVVISGRKLAQQIKQEVRQEVEEWVASGNKRPHLSVILVGENPAS
HSYVLNKTRAAAVVGINSETIMKPASISEEELLNLINKLNNDDNVDGLLVQLPLPEHIDERRICNAVSPDKDVDG
FHVINVGRMCLDQYSMLPATPWGVWEIIKRTGIPTLGKNVVVAGRSKNVGMPIAMLLHTDGAHERPGGDATVTIS
HRYTPKEQLKKHTILADIVISAAGIPNLITADMIKEGAAVIDVGINRVHDPVTAKPKLVGDVDFEGVRQKAGYIT
PVPGGVGPMTVAMLMKNTIIAAKKVLRLEEREVLKSKELGVATN

FIGURE 366

GGTAGTTGGTTGTGGGCACTGGGTTAGAGGTATCACGTGGGGGCACTTTCGTCTTAGCTTTTGGACAAGACGCAG
GCGCAACCCACGGCTGCTGCGGGGATCCTTGTGGCCCTTCCGGTCGGTGGAACCAATCCGTGCACAGAGAAGCGG
GGCGAACTGAGGCGAGTGAAGTGGACTCTGAGGGCTACCGCTACCGCCACTGCTGCGGCAGGGGCGTGGAGGGCA
GAGGGCCGCGGAGGCCGCAGTTGCAAAC**ATG**GCTCAGAGCAGAGACGGCGGAAACCCGTTCGCCGAGCCCAGCGA
GCTTGACAACCCCTTTCAGGACCCAGCTGTGATCCAGCACCGACCCAGCCGGCAGTATGCCACGCTTGACGTCTA
CAACCCTTTTGAGACCCGGGAGCCACCACCAGCCTATGAGCCTCCAGCCCCTGCCCCATTGCCTCCACCCTCAGC
TCCCTCCTTGCAGCCCTCGAGAAAGCTCAGCCCCACAGAACCTAAGAACTATGGCTCATACAGCACTCAGGCCTC
AGCTGCAGCAGCCACAGCTGAGCTGCTGAAGAAACAGGAGGAGCTCAACCGGAAGGCAGAGGAGTTGGACCGAAG
GGAGCGAGAGCTGCAGCATGCTGCCCTGGGGGGCACAGCTACTCGACAGAACAATTGGCCCCCTCTACCTTCTTT
TTGTCCAGTTCAGCCCTGCTTTTTCCAGGACATCTCCATGGAGATCCCCCAAGAATTTCAGAAGACTGTATCCAC
CATGTACTACCTCTGGATGTGCAGCACGCTGGCTCTTCTCCTGAACTTCCTCGCCTGCCTGGCCAGCTTCTGTGT
GGAAACCAACAATGGCGCAGGCTTTGGGCTTTCTATCCTCTGGGTCCTCCTTTTCACTCCCTGCTCCTTTGTCTG
CTGGTACCGCCCCATGTATAAGGCTTTCCGGAGTGACAGTTCATTCAATTTCTTCGTTTTCTTCTTCATTTTCTT
CGTCCAGGATGTGCTCTTTGTCCTCCAGGCCATTGGTATCCCAGGTTGGGGATTCAGTGGCTGGATCTCTGCTCT
GGTGGTGCCGAAGGGCAACACAGCAGTATCCGTGCTCATGCTGCTGGTCGCCCTGCTCTTCACTGGCATTGCTGT
GCTAGGAATTGTCATGCTGAAACGGATCCACTCCTTATACCGCCGCACAGGTGCCAGCTTTCAGAAGGCCCAGCA
AGAATTTGCTGCTGGTGTCTTCTCCAACCCTGCGGTGCGAACCGCAGCTGCCAATGCAGCCGCTGGGGCTGCTGA
AAATGCCTTCCGGGCCCCG**TGA**CCCCTGACTGGGATGCCCTGGCCCTGCTACTTGAGGGAGCTGACTTAGCTCCC
GTCCCTAAGGTCTCTGGGACTTGGAGAGACATCACTAACTGATGGCTCCTCCGTAGTGCTCCCAATCCTATGGCC
ATGACTGCTGAACCTGACAGGCGTGTGGGGAGTTCACTGTGACCTAGTCCCCCCATCAGGCCACACTGCTGCCAC
CTCTCACACGCCCCAACCCAGCTTCCCTCTGCTGTGCCACGGCTGTTGCTTCGGTTATTTAAATAAAAAGAAAGT
GGAACTGGAACTGACAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 367

MAQSRDGGNPFAEPSELDNPFQDPAVIQHRPSRQYATLDVYNPFETREPPPAYEPPAPAPLPPPSAPSLQPSRKL
SPTEPKNYGSYSTQASAAAATAELLKKQEELNRKAEELDRRERELQHAALGGTATRQNNWPPLPSFCPVQPCFFQ
DISMEIPQEFQKTVSTMYYLWMCSTLALLLNFLACLASFCVETNNGAGFGLSILWVLLFTPCSFVCWYRPMYKAF
RSDSSFNFFVFFFIFFVQDVLFVLQAIGIPGWGFSGWISALVVPKGNTAVSVLMLLVALLFTGIAVLGIVMLKRI
HSLYRRTGASFQKAQQEFAAGVFSNPAVRTAAANAAAGAAENAFRAP

FIGURE 368

GAATTCCGGGTTTGAAAAGGAGTTCTAGGGAAGAAGAGAGTTAGTTAGCACATCAATGGGAGCAGGGCTCTTACC
CCACGTGGTGTTACATATATATTATTTTCATACATGGTTTCTGGCTCATAAGTTCCTTAGCCCTTGCTATAGTCT
TTTGTGTTCGGTCTTAAGGGCAGGACTGTACTCTTCCCTCACCTTTCTAATTGTGCATCTTAAGACCTTCCCCAG
AGAGGGTGGTGCCCTGTAGTTGTGGGAAGGAATGCTGGCATCATGAAGCTTCCATAAAAACCCGAGAAACGAGCT
TCTGGATAGCTGGACACATGGAGGTCCTGGAGGGTGGAGCCCAGGGAGGCATGGAAGCTCCACAGCCCTTCCCCC
ATACCTTACCCTATTTCCTCTGTATCCTTTGTAATATCCTTTATGATAAACCAGCAAATGTGTGTAAATGTTTCC
CTAAGGTCTGTGGCCACTCCAGCAAATTAATTGAACCTAAAGAGGGGGTCGTGGGAACCCCAACTTGAAGCCAGT
CAGTCAGAAGTTCTGGATGTCCAGACTTCAGACTGGTGTCTGAAAGGGTGGAGGCAGTCTTGGGGACCGAGCCCC
CAATCTATGGGATCTGACACTATCTCCAGTAGTGTTGGAATTGAGTCACCAGCGTGTCCACTGGTTAGTGTGTGA
GAAACTCCCTACCATTGGTCACAGAAGTCTTCTTCTGTGTTGATAGTTGTAGTGTGACAGCAGAGGAAAAACAAA
GTCAGAAAGAGTTTTCCCGAACACACCCAATTTCTCCATTTTACTATCCATTTCCACAAACACTGACTACAATAG
AAGTATAAAAATTACTCCACTGCATCATTCAGCTTTCCATCTCTCTCAGACACCAAGCTGCAGATCCAGGTCACT
TTGTAGGTCACCACCTAGAGGGGAGGAAGACCTCGCTTTGGAGAGTGGGAATAAAACGCTCGTGGAAAAGGGTAC
ACGCTTTTCTGGGAAAGTGAGGCCACC**ATG**GCTCTGGAGAAGTCTCTTGTCCGGCTCCTTCTGCTTGTCCTGATA
CTGCTGGTGCTGGGCTGGGTCCAGCCTTCCCTGGGCAAGGAATCCCGGGCCAAGAAATTCCAGCGGCAGCATATG
GACTCAGACAGTTCCCCCAGCAGCAGCTCCACCTACTGTAACCAAATGATGAGGCGCCGGAATATGACACAGGGG
CGGTGCAAACCAGTGAACACCTTTGTGCACGAGCCCCTGGTAGATGTCCAGAATGTCTGTTTCCAGGAAAAGGTC
ACCTGCAAGAACGGGCAGGGCAACTGCTACAAGAGCAACTCCAGCATGCACATCACAGACTGCCGCCTGACAAAC
GGCTCCAGGTACCCCAACTGTGCATACCGGACCAGCCCGAAGGAGAGACACATCATTGTGGCCTGTGAAGGGAGC
CCATATGTGCCAGTCCACTTTGATGCTTCTGTGGAGGACTCTACC**TAA**GGTCAGAGCAGCGAGATACCCCACCTC
CCTCAACCTCATCCTCTCCACAGCTGCCTCTTCCCTCTTCCTTCCCTGCTGTGAAAGAAGTAACTACAGTTAGGG
CTCCTATTCAACACACACATGCTTCCCTTTCCTGAGCCGGAATTC

FIGURE 369

MALEKSLVRLLLLVLILLVLGWVQPSLGKESRAKKFQRQHMDSDSSPSSSSTYCNQMMRRRNMTQGRCKPVNTFV
HEPLVDVQNVCFQEKVTCKNGQGNCYKSNSSMHITDCRLTNGSRYPNCAYRTSPKERHIIVACEGSPYVPVHFDA
SVEDST

FIGURE 370A

CTTCTCTCCCAGGGCGGTGCGACCCGGAGCTCCAGCGCCCGAGTCTCCACTTCGTTTGCTGAAACTTGCTTTCTA
CCAGCTAAGAACC**ATG**CTGCGAGTGATTGTGGAATCTGCCAGCAATATCCCTAAAACGAAATTTGGCAAGCCGGA
TCCTATTGTTTCTGTCATTTTTAAGGATGAGAAAAAGAAAACAAAGAAAGTTGATAATGAATTGAACCCTGTCTG
GAATGAGATTTTGGAGTTTGACTTGAGGGGTATACCACTGGACTTTTCATCTTCCCTTGGGATTATTGTGAAAGA
TTTTGAGACAATTGGACAAAATAAATTAATTGGCACGGCGACTGTAGCCCTGAAGGACCTGACTGGTGACCAGAG
CAGATCCCTGCCGTACAAGCTGATCTCCCTGCTAAATGAAAAAGGGCAAGATACTGGGGCCACCATTGACTTGGT
GATCGGCTATGATCCGCCTTCTGCTCCACATCCAAATGACCTGAGCGGGCCCAGCGTGCCAGGCATGGGAGGAGA
TGGGGAAGAAGATGAAGGTGATGAAGACAGGTTGGACAATGCAGTCAGGGGCCCTGGGCCCAAGGGGCCAGTTGG
GACGGTGTCGGAAGCTCAGCTTGCTCGGAGGCTCACCAAAGTAAAGAACAGCCGGCGGATGCTGTCAAATAAGCC
ACAGGACTTCCAGATCCGCGTCCGAGTGATTGAGGGCCGACAGTTAAGTGGTAACAACATAAGGCCTGTGGTCAA
AGTTCACGTCTGTGGCCAGACACACCGAACAAGAATCAAGAGAGGAAACAACCCTTTTTTTGATGAGTTGTTTTT
CTACAATGTCAACATGACCCCTTCTGAATTGATGGATGAGATCATCAGCATCCGGGTTTATAATTCTCACTCTCT
GCGGGCAGATTGTCTGATGGGGGAATTTAAGATTGATGTTGGATTTGTTTATGATGAACCTGGCCATGCTGTCAT
GAGAAAGTGGCTTCTTCTCAATGACCCGGAAGATACCAGTTCAGGTTCTAAAGGTTATATGAAAGTCAGCATGTT
TGTCCTGGGAACCGGAGATGAGCCTCCTCCTGAGAGACGAGATCGTGATAATGACAGTGATGATGTGGAGAGTAA
TTTGTTACTCCCTGCTGGCATTGCCCTCCGGTGGGTGACCTTCTTGCTGAAAATCTACCGAGCTGAGGACATCCC
CCAGATGGATGATGCCTTCTCACAGACAGTAAAGGAAATATTTGGAGGCAATGCAGATAAGAAAAATCTCGTGGA
TCCTTTTGTAGAAGTTTCCTTTGCTGGAAAAAAGGTTTGTACAAACATAATTGAGAAAAATGCAAACCCAGAGTG
GAATCAGGTCGTCAATCTTCAGATCAAGTTTCCTTCAGTGTGTGAAAAAATAAAACTAACAATATATGACTGGGA
CCGTCTTACTAAAAATGATGTAGTTGGAACAACATATCTACACCTCTCTAAAATTGCTGCCTCTGGTGGGGAAGT
GGAAGATTTCTCATCTTCGGGAACTGGGGCTGCATCATATACAGTAAACACAGGAGAAACAGAGGTAGGCTTTGT
TCCAACGTTTGGACCTTGTTACCTGAATCTTTATGGAAGCCCCAGGGAGTACACGGGATTCCCAGACCCCTATGA
TGAGCTGAATACTGGAAAGGGGGAAGGAGTTGCCTACAGAGGCAGGATCTTGGTTGAATTAGCCACTTTTCTTGA
GAAGACACCACCAGATAAAAAGCTTGAGCCCATTTCAAATGATGACCTGCTGGTTGTTGAGAAATACCAGCGAAG
GCGGAAGTACAGCCTGTCTGCCGTGTTTCATTCAGCCACCATGTTGCAAGATGTTGGTGAGGCCATTCAGTTTGA
AGTCAGCATTGGGAACTATGGCAACAAGTTTGACACCACCTGTAAGCCTTTGGCATCAACAACTCAGTACAGCCG
TGCTGTATTTGATGGCAACTACTATTATTACTTGCCTTGGGCCCACACCAAGCCAGTTGTTACCCTGACTTCATA
CTGGGAGGATATTAGTCATCGCCTGGATGCGGTGAACACTCTCCTAGCTATGGCAGAACGGCTGCAAACAAATAT
AGAAGCTCTAAAATCAGGGATACAAGGTAAAATTCCTGCAAACCAGCTGGCTGAATTGTGGCTGAAGCTGATAGA
TGAAGTTATAGAAGACACGAGATACACGTTGCCTCTCACAGAAGGAAAAGCCAACGTCACAGTTCTCGATACTCA
GATCCGAAAGCTGCGGTCCAGGTCTCTCTCCCAAATACATGAGGCGGCTGTGAGGATGAGGTCGGAAGCCACAGA
TGTGAAGTCCACACTGGCAGAAATTGAGGACTGGCTTGATAAATTAATGCAGCTGACTGAAGAGCCACAGAACAG
CATGCCTGACATCATCATCTGGATGATCCGGGGAGAGAAGAGACTGGCCTATGCACGAATTCCCGCACATCAGGT
CTTGTACTCCACCAGTGGTGAGAATGCATCTGGAAAATACTGTGGGAAAACCCAAACCATCTTTCTGAAGTATCC
ACAGGAGAAAAACAACGGGCCAAAGGTGCCTGTGGAGTTGCGAGTGAACATCTGGCTAGGCTTAAGTGCTGTGGA
GAAGAAGTTTAACAGCTTCGCAGAAGGAACTTTCACCGTCTTTGCTGAAATGTATGAAAATCAAGCTCTCATGTT
TGGAAAATGGGGTACTTCTGGATTAGTAGGACGTCATAAGTTTTCTGATGTCACAGGAAAAATAAAACTCAAGAG
GGAATTTTTTCTGCCTCCAAAAGGCTGGGAATGGGAAGGAGAGTGGATAGTTGATCCTGAAAGAAGCTTGCTGAC
TGAGGCAGATGCAGGTCACACGGAGTTCACTGATGAAGTCTATCAGAACGAGAGCCGCTACCCCGGGGGCGACTG
GAAGCCGGCCGAGGACACCTACACGGATGCGAACGGCGATAAAGCAGCATCACCCAGCGAGTTGACTTGTCCTCC
AGGTTGGGAATGGGAAGATGATGCATGGTCTTATGACATAAATCGAGCGGTGGATGAGAAAGGCTGGGAATATGG
AATCACCATTCCTCCTGATCATAAGCCCAAATCCTGGGTTGCAGCAGAGAAAATGTACCACACTCATAGACGGCG
AAGGCTGGTCCGAAAACGCAAGAAAGATTTAACACAGACTGCTTCAAGCACCGCAAGGGCCATGGAGGAATTGCA
AGACCAAGAGGGCTGGGAATATGCTTCTCTAATTGGCTGGAAATTTCACTGGAAACAACGTAGTTCAGATACCTT
CCGCCGCAGACGCTGGAGGAGAAAAATGGCTCCTTCAGAAACACATGGTGCAGCTGCCATCTTTAAACTTGAAGG
TGCCCTTGGGGCAGACACTACCGAAGATGGGGATGAGAAGAGCCTGGAGAAACAGAAGCACAGTGCCACCACTGT
GTTCGGAGCAAACACCCCCATTGTTTCCTGCAATTTTGACAGAGTCTACATCTACCATCTGCGCTGCTATGTCTA
TCAAGCCAGAAACCTCTTGGCTTTAGATAAGGATAGCTTTTCAGATCCATATGCTCATATCTGTTTCCTCCATCG

FIGURE 370B

GAGCAAAACCACTGAGATCATCCATTCAACCCTGAATCCCACGTGGGACCAAACAATTATATTCGATGAAGTTGA
AATCTATGGGGAACCCCAAACAGTTCTACAGAATCCACCCAAAGTTATCATGGAACTTTTTGACAATGACCAAGT
GGGCAAAGATGAATTTTTAGGACGAAGCATTTTCTCTCCTGTGGTGAAACTGAACTCAGAAATGGACATCACACC
CAAACTTCTCTGGCACCCAGTAATGAATGGAGACAAAGCCTGCGGGGATGTTCTTGTAACTGCAGAGCTGATTCT
GAGGGGCAAGGATGGCTCCAACCTTCCCATTCTTCCCCCTCAAAGGGCGCCAAATCTATACATGGTCCCCCAGGG
GATCAGGCCTGTGGTCCAGCTCACTGCCATTGAGATTCTAGCTTGGGGCTTAAGAAATATGAAAAACTTCCAGAT
GGCTTCTATCACATCCCCCAGTCTTGTTGTGGAGTGTGGAGGAGAAAGGGTGGAATCGGTGGTGATCAAAAACCT
TAAGAAGACACCCAACTTTCCAAGTTCTGTTCTCTTCATGAAAGTGTTCTTGCCCAAGGAGGAATTGTACATGCC
CCCACTGGTGATCAAGGTCATCGACCACAGGCAGTTTGGGCGGAAGCCTGTCGTCGGCCAGTGCACCATCGAGCG
CCTGGACCGCTTTCGCTGTGACCCTTATGCAGGGAAAGAGGACATCGTCCCACAGCTCAAAGCCTCCCTTCTGTC
TGCCCCACCATGCCGGGACATCGTTATCGAAATGGAAGACACCAAACCATTACTGGCTTCTAAGCTGACAGAAAA
GGAGGAAGAAATCGTGGACTGGTGGAGTAAATTTTATGCTTCCTCAGGGGAACATGAAAAATGCGGACAGTATAT
TCAGAAAGGCTATTCCAAGCTCAAGATATATAATTGTGAACTAGAAAATGTAGCAGAATTTGAGGGCCTGACAGA
CTTCTCAGATACGTTCAAGTTGTACCGAGGCAAGTCGGATGAAAATGAAGATCCTTCTGTGGTTGGAGAGTTTAA
GGGCTCCTTTCGGATCTACCCTCTGCCGGATGACCCCAGCGTGCCAGCCCCTCCCAGACAGTTTCGGGAATTACC
TGACAGCGTCCCACAGGAATGCACGGTTAGGATTTACATTGTTCGAGGCTTAGAGCTCCAGCCCCAGGACAACAA
TGGCCTGTGTGACCCTTACATAAAAATAACACTGGGCAAAAAAGTCATTGAAGACCGAGATCACTACATTCCCAA
CACTCTCAACCCAGTCTTTGGCAGGATGTACGAACTGAGCTGCTACTTACCTCAAGAAAAAGACCTGAAAATTTC
TGTCTATGATTATGACACCTTTACCCGGGATGAAAAAGTAGGAGAAACAATTATTGATCTGGAAAACCGATTCCT
TTCCCGCTTTGGGTCCCACTGCGGCATACCAGAGGAGTACTGTGTTTCTGGAGTCAATACCTGGCGAGATCAACT
GAGACCAACACAGCTGCTTCAAAATGTCGCCAGATTCAAAGGCTTCCCACAACCCATCCTTTCCGAAGATGGGAG
TAGAATCAGATATGGAGGACGAGACTACAGCTTGGATGAATTTGAAGCCAACAAAATCCTGCACCAGCACCTCGG
GGCCCCTGAAGAGCGGCTTGCTCTTCACATCCTCAGGACTCAGGGGCTGGTCCCTGAGCACGTGGAAACAAGGAC
TTTGCACAGCACCTTCCAGCCCAACATTTCCCAGGGAAAACTTCAGATGTGGGTGGATGTTTTCCCCAAGAGTTT
GGGGCCACCAGGCCCTCCTTTCAACATCACACCCCGGAAAGCCAAGAAATACTACCTGCGTGTGATCATCTGGAA
CACCAAGGACGTTATCTTGGACGAGAAAAGCATCACAGGAGAGGAAATGAGTGACATCTACGTCAAAGGCTGGAT
TCCTGGCAATGAAGAAAACAAACAGAAAACAGATGTCCATTACAGATCTTTGGATGGTGAAGGGAATTTTAACTG
GCGATTTGTTTTCCCGTTTGACTACCTTCCAGCCGAACAACTCTGTATCGTTGCGAAAAAAGAGCATTTCTGGAG
TATTGACCAAACGGAATTTCGAATCCCACCCAGGCTGATCATTCAGATATGGGACAATGACAAGTTTTCTCTGGA
TGACTACTTGGGTTTCCTAGAACTTGACTTGCGTCACACGATCATTCCTGCAAAATCACCAGAGAAATGCAGGTT
GGACATGATTCCGGACCTCAAAGCCATGAACCCCCTTAAAGCCAAGACAGCCTCCCTCTTTGAGCAGAAGTCCAT
GAAAGGATGGTGGCCATGCTACGCAGAGAAAGATGGCGCCCGCGTAATGGCTGGGAAAGTGGAGATGACATTGGA
AATCCTCAACGAGAAGGAGGCCGACGAGAGGCCAGCCGGGAAGGGGCGGGACGAACCCAACATGAACCCCAAGCT
GGACTTACCAAATCGACCAGAAACCTCCTTCCTCTGGTTCACCAACCCATGCAAGACCATGAAGTTCATCGTGTG
GCGCCGCTTTAAGTGGGTCATCATCGGCTTGCTGTTCCTGCTTATCCTGCTGCTCTTCGTGGCCGTGCTCCTCTA
CTCTTTGCCGAACTATTTGTCAATGAAGATTGTAAAGCCAAATGTGTAACAAAGGCAAAGGCTTCATTTCAAGAG
TCATCCAGCAATGAGAGAATCCTGCCTCTGTAGACCAACATCCAGTGTGATTTTGTGTCTGAGACCACACCCCAG
TAGCAGGTTACGCCATGTCACCGAGCCCCATTGATTCCCAGAGGGTCTTAGTCCTGGAAAGTCAGGCCAACAAGC
AACGTTTGCATCATGTTATCTCTTAAGTATTAAAAGTTTTATTTTCTAAAGTTTAAATCATGTTTTTCAAAATAT
TTTTCAAGGTGGCTGGTTCCATTTAAAAATCATCTTTTTATATGTGTCTTCGGTTCTAGACTTCAGCTTTTGGAA
ATTGCTAAATAGAATTCAAAAATCTCTGCATCCTGAGGTGATATACTTCATATTTGTAATCAACTGAAAGAGCTG
TGCATTATAAAATCAGTTAGAATAGTTAGAACAATTCTTATTTATGCCCACAACCATTGCTATATTTTGTATGGA
TGTCATAAAAGTCTATTTAACCTCTGTAATGAAACTAAATAAAAATGTTTCACCTTTAAAAAAAAAAAAAAAAAA
AAAA

FIGURE 371

MLRVIVESASNIPKTKFGKPDPIVSVIFKDEKKKTKKVDNELNPVWNEILEFDLRGIPLDFSSSLGIIVKDFETI
GQNKLIGTATVALKDLTGDQSRSLPYKLISLLNEKGQDTGATIDLVIGYDPPSAPHPNDLSGPSVPGMGGDGEED
EGDEDRLDNAVRGPGPKGPVGTVSEAQLARRLTKVKNSRRMLSNKPQDFQIRVRVIEGRQLSGNNIRPVVKVHVC
GQTHRTRIKRGNNPFFDELFFYNVNMTPSELMDEIISIRVYNSHSLRADCLMGEFKIDVGFVYDEPGHAVMRKWL
LLNDPEDTSSGSKGYMKVSMFVLGTGDEPPPERRDRDNDSDDVESNLLLPAGIALRWVTFLLKIYRAEDIPQMDD
AFSQTVKEIFGGNADKKNLVDPFVEVSFAGKKVCTNIIEKNANPEWNQVVNLQIKFPSVCEKIKLTIYDWDRLTK
NDVVGTTYLHLSKIAASGGEVEDFSSSGTGAASYTVNTGETEVGFVPTFGPCYLNLYGSPREYTGFPDPYDELNT
GKGEGVAYRGRILVELATFLEKTPPDKKLEPISNDDLLVVEKYQRRRKYSLSAVFHSATMLQDVGEAIQFEVSIG
NYGNKFDTTCKPLASTTQYSRAVFDGNYYYYLPWAHTKPVVTLTSYWEDISHRLDAVNTLLAMAERLQTNIEALK
SGIQGKIPANQLAELWLKLIDEVIEDTRYTLPLTEGKANVTVLDTQIRKLRSRSLSQIHEAAVRMRSEATDVKST
LAEIEDWLDKLMQLTEEPQNSMPDIIIWMIRGEKRLAYARIPAHQVLYSTSGENASGKYCGKTQTIFLKYPQEKN
NGPKVPVELRVNIWLGLSAVEKKFNSFAEGTFTVFAEMYENQALMFGKWGTSGLVGRHKFSDVTGKIKLKREFFL
PPKGWEWEGEWIVDPERSLLTEADAGHTEFTDEVYQNESRYPGGDWKPAEDTYTDANGDKAASPSELTCPPGWEW
EDDAWSYDINRAVDEKGWEYGITIPPDHKPKSWVAAEKMYHTHRRRRLVRKRKKDLTQTASSTARAMEELQDQEG
WEYASLIGWKFHWKQRSSDTFRRRRWRRKMAPSETHGAAAIFKLEGALGADTTEDGDEKSLEKQKHSATTVFGAN
TPIVSCNFDRVYIYHLRCYVYQARNLLALDKDSFSDPYAHICFLHRSKTTEIIHSTLNPTWDQTIIFDEVEIYGE
PQTVLQNPPKVIMELFDNDQVGKDEFLGRSIFSPVVKLNSEMDITPKLLWHPVMNGDKACGDVLVTAELILRGKD
GSNLPILPPQRAPNLYMVPQGIRPVVQLTAIEILAWGLRNMKNFQMASITSPSLVVECGGERVESVVIKNLKKTP
NFPSSVLFMKVFLPKEELYMPPLVIKVIDHRQFGRKPVVGQCTIERLDRFRCDPYAGKEDIVPQLKASLLSAPPC
RDIVIEMEDTKPLLASKLTEKEEEIVDWWSKFYASSGEHEKCGQYIQKGYSKLKIYNCELENVAEFEGLTDFSDT
FKLYRGKSDENEDPSVVGEFKGSFRIYPLPDDPSVPAPPRQFRELPDSVPQECTVRIYIVRGLELQPQDNNGLCD
PYIKITLGKKVIEDRDHYIPNTLNPVFGRMYELSCYLPQEKDLKISVYDYDTFTRDEKVGETIIDLENRFLSRFG
SHCGIPEEYCVSGVNTWRDQLRPTQLLQNVARFKGFPQPILSEDGSRIRYGGRDYSLDEFEANKILHQHLGAPEE
RLALHILRTQGLVPEHVETRTLHSTFQPNISQGKLQMWVDVFPKSLGPPGPPFNITPRKAKKYYLRVIIWNTKDV
ILDEKSITGEEMSDIYVKGWIPGNEENKQKTDVHYRSLDGEGNFNWRFVFPFDYLPAEQLCIVAKKEHFWSIDQT
EFRIPPRLIIQIWDNDKFSLDDYLGFLELDLRHTIIPAKSPEKCRLDMIPDLKAMNPLKAKTASLFEQKSMKGWW
PCYAEKDGARVMAGKVEMTLEILNEKEADERPAGKGRDEPNMNPKLDLPN

FIGURE 372

GGGCTGCGCTGTCCAGCTGTGGCTATGGCCCCAGCCCCGAGATGAGGAGGGAGAGAACTAGGGGCCCGCAGGCCT
GGGAATTTCCGTCCCCCACCAAGTCCGGATGCTCACTCCAAAGTCTCAGCAGGCCCCTGAGGGAGGGAGCTGTCA
GCCAGGGAAAACCGAGAACACCATCACC**ATG**ACAACCAGTCACCAGCCTCAGGACAGATACAAAGCTGTCTGGCT
TATCTTCTTCATGCTGGGTCTGGGAACGCTGCTCCCGTGGAATTTTTTCATGACGGCCACTCAGTATTTCACAAA
CCGCCTGGACATGTCCCAGAATGTGTCCTTGGTCACTGCTGAACTGAGCAAGGACGCCCAGGCGTCAGCCGCCCC
TGCAGCACCCTTGCCTGAGCGGAACTCTCTCAGTGCCATCTTCAACAATGTCATGACCCTATGTGCCATGCTGCC
CCTGCTGTTATTCACCTACCTCAACTCCTTCCTGCATCAGAGGATCCCCCAGTCCGTACGGATCCTGGGCAGCCT
GGTGGCCATCCTGCTGGTGTTTCTGATCACTGCCATCCTGGTGAAGGTGCAGCTGGATGCTCTGCCCTTCTTTGT
CATCACCATGATCAAGATCGTGCTCATTAATTCATTTGGTGCCATCCTGCAGGGCAGCCTGTTTGGTCTGGCTGG
CCTTCTGCCTGCCAGCTACACGGCCCCCATCATGAGTGGCCAGGGCCTAGCAGGCTTCTTTGCCTCCGTGGCCAT
GATCTGCGCTATTGCCAGTGGCTCGGAACTATCAGAAAGTGCCTTCGGCTACTTTATCACAGCCTGTGCTGTTAT
CATTTTGACCATCATCTGTTACCTGGGCCTGCCCCGCCTGGAATTCTACCGCTACTACCAGCAGCTCAAGCTTGA
AGGACCCGGGGAGCAGGAGACCAAGTTGGACCTCATTAGCAAAGGAGAGGAGCCAAGAGCAGGCAAAGAGGAATC
TGGAGTTTCAGTCTCCAACTCTCAGCCCACCAATGAAAGCCACTCTATCAAAGCCATCCTGAAAAATATCTCAGT
CCTGGCTTTCTCTGTCTGCTTCATCTTCACTATCACCATTGGGATGTTTCCAGCCGTGACTGTTGAGGTCAAGTC
CAGCATCGCAGGCAGCAGCACCTGGGAACGTTACTTCATTCCTGTGTCCTGTTTCTTGACTTTCAATATCTTTGA
CTGGTTGGGCCGGAGCCTCACAGCTGTATTCATGTGGCCTGGGAAGGACAGCCGCTGGCTGCCAAGCCTGGTGCT
GGCCCGGCTGGTGTTTGTGCCACTGCTGCTGCTGTGCAACATTAAGCCCCGCCGCTACCTGACTGTGGTCTTCGA
GCACGATGCCTGGTTCATCTTCTTCATGGCTGCCTTTGCCTTCTCCAACGGCTACCTCGCCAGCCTCTGCATGTG
CTTCGGGCCCAAGAAAGTGAAGCCAGCTGAGGCAGAGACCGCAGGAGCCATCATGGCCTTCTTCCTGTGTCTGGG
TCTGGCACTGGGGGCTGTTTTCTCCTTCCTGTTCCGGGCAATTGTG**TGA**CAAAGGATGGACAGAAGGACTGCCTG
CCTCCCTCCCTGTCTGCCTCCTGCCCCTTCCTTCTGCCAGGGGTGATCCTGAGTGGTCTGGCGGTTTTTTCTTCT
AACTGACTTCTGCTTTCCACGGCGTGTGCTGGGCCCGGATCTCCAGGCCCTGGGGAGGGAGCCTCTGGACGGACA
GTGGGGACATTGTGGGTTTGGGGCTCAGAGTCGAGGGACGGGGTGTAGCCTCGGCATTTGCTTGAGTTTCTCCAC
TCTTGGCTCTGACTGATCCCTGCTTGTGCAGGCCAGTGGAGGCTCTTGGGCTTGGAGAACACGTGTGTCTCTGTG
TATGTGTCTGTGTGTCTGCGTCCGTGTCTGTCAGACTGTCTGCCTGTCCTGGGGTGGCTAGGAGCTGGGTCTGAC
CGTTGTATGGTTTGACCTGATATACTCCATTCTCCCCTGCGCCTCCTCCTCTGTGTTTTTTCCATGTCCCCCTCC
CAACTCCCCATGCCCAGTTTTTACCCATCATGCACCCTGTACAGTTGCCACGTTACTGCCTTTTTTAAAAATATA
TTTGACAGAAACCAGGTGCCTTCAGAGGCTCTCTGATTTAAATAAACCTTTCTTGTTTTTTT

FIGURE 373

MTTSHQPQDRYKAVWLIFFMLGLGTLLPWNFFMTATQYFTNRLDMSQNVSLVTAELSKDAQASAAPAAPLPERNS
LSAIFNNVMTLCAMLPLLLFTYLNSFLHQRIPQSVRILGSLVAILLVFLITAILVKVQLDALPFFVITMIKIVLI
NSFGAILQGSLFGLAGLLPASYTAPIMSGQGLAGFFASVAMICAIASGSELSESAFGYFITACAVIILTIICYLG
LPRLEFYRYYQQLKLEGPGEQETKLDLISKGEEPRAGKEESGVSVSNSQPTNESHSIKAILKNISVLAFSVCFIF
TITIGMFPAVTVEVKSSIAGSSTWERYFIPVSCFLTFNIFDWLGRSLTAVFMWPGKDSRWLPSLVLARLVFVPLL
LLCNIKPRRYLTVVFEHDAWFIFFMAAFAFSNGYLASLCMCFGPKKVKPAEAETAGAIMAFFLCLGLALGAVFSF
LFRAIV

FIGURE 374

CCTGGGCCGGCCGGGCTGGATGAGCCGGGAGCTCCCTGCTGCCGGTCATACCACAGCCTTCATCTGCGCCCTGGG
GCCAGGACTGCTGCTGTCACTGCCATCCATTGGAGCCCAGCACCCCCTCCCCGCCCATCCTTCGGACAGCAACTC
CAGCCCAGCCCCGCGTCCCTGTGTCCACTTCTCCTGACCCCTCGGCCGCCACCCCAGAAGGCTGGAGCAGGGACG
CCGTCGCTCCGGCCGCCTGCTCCCCTCGGGTCCCCGTGCGAGCCCACGCCGGCCCCGGTGCCCGCCCGCAGCCCT
GCCACTGGACACAGGATAAGGCCCAGCGCACAGGCCCCCACGTGGACAGC**ATG**GACCGCGGCACGCTCCCTCTGG
CTGTTGCCCTGCTGCTGGCCAGCTGCAGCCTCAGCCCCACAAGTCTTGCAGAAACAGTCCATTGTGACCTTCAGC
CTGTGGGCCCCGAGAGGGGCGAGGTGACATATACCACTAGCCAGGTCTCGAAGGGCTGCGTGGCTCAGGCCCCCA
ATGCCATCCTTGAAGTCCATGTCCTCTTCCTGGAGTTCCCAACGGGCCCGTCACAGCTGGAGCTGACTCTCCAGG
CATCCAAGCAAAATGGCACCTGGCCCCGAGAGGTGCTTCTGGTCCTCAGTGTAAACAGCAGTGTCTTCCTGCATC
TCCAGGCCCTGGGAATCCCACTGCACTTGGCCTACAATTCCAGCCTGGTCACCTTCCAAGAGCCCCCGGGGGTCA
ACACCACAGAGCTGCCATCCTTCCCCAAGACCCAGATCCTTGAGTGGGCAGCTGAGAGGGGCCCCATCACCTCTG
CTGCTGAGCTGAATGACCCCCAGAGCATCCTCCTCCGACTGGGCCAAGCCCAGGGGTCACTGTCCTTCTGCATGC
TGGAAGCCAGCCAGGACATGGGCCGCACGCTCGAGTGGCGGCCGCGTACTCCAGCCTTGGTCCGGGGCTGCCACT
TGGAAGGCGTGGCCGGCCACAAGGAGGCGCACATCCTGAGGGTCCTGCCGGGCCACTCGGCCGGGCCCCGGACGG
TGACGGTGAAGGTGGAACTGAGCTGCGCACCCGGGGATCTCGATGCCGTCCTCATCCTGCAGGGTCCCCCCTACG
TGTCCTGGCTCATCGACGCCAACCACAACATGCAGATCTGGACCACTGGAGAATACTCCTTCAAGATCTTTCCAG
AGAAAAACATTCGTGGCTTCAAGCTCCCAGACACACCTCAAGGCCTCCTGGGGGAGGCCCGGATGCTCAATGCCA
GCATTGTGGCATCCTTCGTGGAGCTACCGCTGGCCAGCATTGTCTCACTTCATGCCTCCAGCTGCGGTGGTAGGC
TGCAGACCTCACCCGCACCGATCCAGACCACTCCTCCCAAGGACACTTGTAGCCCGGAGCTGCTCATGTCCTTGA
TCCAGACAAAGTGTGCCGACGACGCCATGACCCTGGTACTAAAGAAAGAGCTTGTTGCGCATTTGAAGTGCACCA
TCACGGGCCTGACCTTCTGGGACCCCAGCTGTGAGGCAGAGGACAGGGGTGACAAGTTTGTCTTGCGCAGTGCTT
ACTCCAGCTGTGGCATGCAGGTGTCAGCAAGTATGATCAGCAATGAGGCGGTGGTCAATATCCTGTCGAGCTCAT
CACCACAGCGGAAAAAGGTGCACTGCCTCAACATGGACAGCCTCTCTTTCCAGCTGGGCCTCTACCTCAGCCCAC
ACTTCCTCCAGGCCTCCAACACCATCGAGCCGGGGCAGCAGAGCTTTGTGCAGGTCAGAGTGTCCCCATCCGTCT
CCGAGTTCCTGCTCCAGTTAGACAGCTGCCACCTGGACTTGGGGCCTGAGGGAGGCACCGTGGAACTCATCCAGG
GCCGGGCGGCCAAGGGCAACTGTGTGAGCCTGCTGTCCCCAAGCCCCGAGGGTGACCCGCGCTTCAGCTTCCTCC
TCCACTTCTACACAGTACCCATACCCAAAACCGGCACCCTCAGCTGCACGGTAGCCCTGCGTCCCAAGACCGGGT
CTCAAGACCAGGAAGTCCATAGGACTGTCTTCATGCGCTTGAACATCATCAGCCCTGACCTGTCTGGTTGCACAA
GCAAAGGCCTCGTCCTGCCCGCCGTGCTGGGCATCACCTTTGGTGCCTTCCTCATCGGGGCCCTGCTCACTGCTG
CACTCTGGTACATCTACTCGCACACGCGTGAGTACCCCAGGCCCCCACAG**TGA**GCATGCCGGGCCCCTCCATCCA
CCCGGGGGGAGCCCAGTGAAGCCTCTGAGGGATTGAGGGGCCCTGGCAGGACCCTGACCTCCGCCCCTGCCCCCGC
TCCCGCTCCCAGGTTCCCCCAGCAAGCGGGAGCCCGTGGTGGCGGTGGCTGCCCCGGCCTCCTCGGAGAGCAGCA
GCACCAACCACAGCATCGGGAGCACCCAGAGCACCCCCTGCTCCACCAGCAGCATGGCATAGCCCCGGCCCCCCG
CGCTCGCCCAGCAGGAGAGACTGAGCAGCCGCCAGCTGGGAGCACTGGTGTGAACTCACCCTGGGAGCCAGTCCT
CCACTCGACCCAGAATGGAGCCTGCTCTCCGCGCCTACCCTTCCCGCCTCCCTCTCAGAGGCCTGCTGCCAGTGC
AGCCACTGGCTTGGAACACCTTGGGGTCCCTCCACCCCACAGAACCTTCAACCCAGTGGGTCTGGGATATGGCTG
CCCAGGAGACAGACCACTTGCCACGCTGTTGTAAAAACCCAAGTCCCTGTCATTTGAACCTGGATCCAGCACTGG
TGAACTGAGCTGGGCAGGAAGGGAGAACTTGAAACAGATTCAGGCCAGCCCAGCCAGGCCAACAGCACCTCCCCG
CTGGGAAGAGAAGAGGGCCCAGCCCAGAGCCACCTGGATCTATCCCTGCGGCCTCCACACCTGAACTTGCCTAAC
TAACTGGCAGGGGAGACAGGAGCCTAGCGGAGCCCAGCCTGGGAGCCCAGAGGGTGGCAAGAACAGTGGGCGTTG
GGAGCCTAGCTCCTGCCACATGGAGCCCCCTCTGCCGGTCGGGCAGCCAGCAGAGGGGGAGTAGCCAAGCTGCTT
GTCCTGGGCCTGCCCCTGTGTATTCACCACCAATAAATCAGACCATGAAACCTGAAAAAAAAAAAAA

FIGURE 375

MDRGTLPLAVALLLASCSLSPTSLAETVHCDLQPVGPERGEVTYTTSQVSKGCVAQAPNAILEVHVLFLEFPTGP
SQLELTLQASKQNGTWPREVLLVLSVNSSVFLHLQALGIPLHLAYNSSLVTFQEPPGVNTTELPSFPKTQILEWA
AERGPITSAAELNDPQSILLRLGQAQGSLSFCMLEASQDMGRTLEWRPRTPALVRGCHLEGVAGHKEAHILRVLP
GHSAGPRTVTVKVELSCAPGDLDAVLILQGPPYVSWLIDANHNMQIWTTGEYSFKIFPEKNIRGFKLPDTPQGLL
GEARMLNASIVASFVELPLASIVSLHASSCGGRLQTSPAPIQTTPPKDTCSPELLMSLIQTKCADDAMTLVLKKE
LVAHLKCTITGLTFWDPSCEAEDRGDKFVLRSAYSSCGMQVSASMISNEAVVNILSSSSPQRKKVHCLNMDSLSF
QLGLYLSPHFLQASNTIEPGQQSFVQVRVSPSVSEFLLQLDSCHLDLGPEGGTVELIQGRAAKGNCVSLLSPSPE
GDPRFSFLLHFYTVPIPKTGTLSCTVALRPKTGSQDQEVHRTVFMRLNIISPDLSGCTSKGLVLPAVLGITFGAF
LIGALLTAALWYIYSHTREYPRPPQ

FIGURE 376

TCGGAGGAGCCAGCCGAAATCCTGCCGCCTGCCCGGGACGAGGAGGAGGAGGAGGAAGAGGGG**ATG**GAGCAGGGG
CTGGAGGAGGAAGAAGAGGTGGATCCCCGGATCCAGGGAGAACTGGAGAAGTTAAATCAGTCCACGGATGATATC
AACAGACGGGAGACTGAACTTGAGGATGCTCGTCAGAAGTTCCGCTCTGTTCTGGTTGAAGCAACGGTGAAACTG
GATGAACTGGTGAAGAAAATTGGCAAAGCTGTGGAAGACTCCAAGCCCTACTGGGAGGCACGGAGGGTGGCGAGG
CAGGCTCAGCTGGAAGCTCAGAAAGCCACGCAGGACTTCCAGAGGGCCACAGAGGTGCTCCGTGCCGCCAAGGAG
ACCATCTCCCTGGCCGAGCAGCGGCTGCTGGAGGATGACAAGCGGCAGTTCGACTCCGCCTGGCAGGAGATGCTG
AATCACGCCACTCAGAGGGTCATGGAGGCGGAGCAGACCAAGACCAGGAGCGAGCTGGTGCATAAGGAGACGGCA
GCCAGGTACAATGCCGCCATGGGCCGCATGCGACAGCTGGAGAAGAAACTCAAGAGAGCCATCAACAAGTCCAAG
CCTTATTTTGAACTCAAGGCAAAGTACTATGTGCAGCTCGAGCAACTGAAAAAGACTGTGGATGACCTGCAGGCC
AAACTGACCCTGGCAAAAGGCGAGTACAAGATGGCCCTGAAGAACCTGGAGATGATCTCAGATGAGATCCACGAG
CGGCGGCGCTCCAGTGCCATGGGGCCTCGGGGATGCGGTGTTGGTGCTGAGGGCAGCAGCACATCTGTGGAGGAT
CTGCCAGGGAGCAAACCTGAGCCTGATGCCATTTCTGTGGCCTCGGAGGCCTTTGAAGATGACAGCTGTAGCAAC
TTTGTGTCTGAAGATGACTCGGAAACCCAGTCCGTGTCCAGCTTTAGTTCAGGACCAACAAGCCCGTCTGAGATG
CCTGACCAGTTCCCTGCGGTTGTGAGGCCTGGCAGCCTGGATCTGCCCAGCCCTGTGTCCCTGTCAGAGTTTGGG
ATGATGTTCCCAGTGTTGGGCCCTCGAAGTGAATGCAGCGGGGCCTCCTCCCCTGAATGTGAAGTAGAACGAGGA
GACAGGGCAGAAGGGGCAGAGAATAAAACAAGTGACAAAGCCAACAACAACCGGGGCCTCAGCAGTAGCAGTGGC
AGTGGTGGCAGCAGTAAGAGCCAAAGCAGCACCTCCCCTGAGGGCCAGGCCTTGGAGAACCGGATGAAGCAGCTC
TCCCTACAGTGCTCAAAGGGAAGAGATGGAATTATTGCTGACATAAAAATGGTGCAGATTGGC**TGA**TTCATCCTG
GGCCCTGGCCGATGTGCATATCAACATTTATACATGGAACTGGAGAACATTGTGCCAATAATCATTTAATATATG
CCAAATCTTACACGTCTACTCTAAACTGCTCTAATGAAGTTTCAGTGACCTTGAGGGCTAAAGATTGTTCTTCTG
GGTAAGAGCTCTTGGGCTGGTTTTTCAGAGCAGAGTTCTTGTTGTGGGTAGACTGTGACTAGGTTCACAGCCTTT
GTGGAACATTCCGTATAACGGCATTGTGGAAGCAATAACTAGTTCCTATGAAAGAACCAGAGCTGGGAAGATGGC
TGGGAAGCCAGGCCAAAGTGGGGGCAACAGCTTGCTTCTCTTTCTCTTCTCACCCTCAGTTTGTATGGGAAAATG
GAGATGTCCTCTCCACTTTATCCCACGATATCTAAATGAAAAAGAAAGAAAACCCACACACAAAGCAAAAACTCA
AGTATTAAGAGCACATATTTTTGACCCAGTGGAGGCTTAAAAAAAAAAAAAATCCAAGAACACAATTCATTTTCAC
CACCTCTGGTGTTCAGAGGGGGCTTTTAAAAAAGCGTGTATGCTGGGATACCCATTAAAACCATTTTCTAGAAGG
CTACCATGAGCTGCACTTTTTGGGGTGGGAAAGGTGAATGCCAGTGGGGATGCGGGGGGATGAGGGTAGGAGGGA
CTTATAGAAGGGGATTTGTGGCTGTGGGGGAGAAGGTTCTACAGCATAAGCCTTATCCTGCCAGCCAAGGGGATT
TATTCTAAGAGAAGTGCATGTGAAGAATGGTTGCCACTGTTATTAGATTGACAAGATGTTAATTTCTCTGTAGGT
TGTAACTTTAAAAATAAATGAAATTATTTAAGGGTTATGCTGCACTAGTATTCCTTAGAGGAAACAGTTCTTTAA
AGTTAGGAAAGGGAGTAGGCAGGCATGTGTTGGCAAAGGCTGTTAATAGTAGTTAAGTGTTAAGACTGCTTTTCT
TTAACGTTTTCATGGTAATGCATATTTAGAGCACTGTATTTTTGTCTTGTTAAGAAAATTTAGCATTTCTAAAAG
AAAAAAGCAACCCTCTTTCAAACTGTTAATTCTGTCACAGCCTGTATATTTTAGTCATTTGTAAATCTCTTCATA
CAATAGTGACTTCTTTTTTGACTGATACAGTATCTTAATTACAAGGTTATTTTGTACTTGTCTTAATACACTAAG
TGTAATAAAAACGGCTTGAG

FIGURE 377

MEQGLEEEEEVDPRIQGELEKLNQSTDDINRRETELEDARQKFRSVLVEATVKLDELVKKIGKAVEDSKPYWEAR
RVARQAQLEAQKATQDFQRATEVLRAAKETISLAEQRLLEDDKRQFDSAWQEMLNHATQRVMEAEQTKTRSELVH
KETAARYNAAMGRMRQLEKKLKRAINKSKPYFELKAKYYVQLEQLKKTVDDLQAKLTLAKGEYKMALKNLEMISD
EIHERRRSSAMGPRGCGVGAEGSSTSVEDLPGSKPEPDAISVASEAFEDDSCSNFVSEDDSETQSVSSFSSGPTS
PSEMPDQFPAVVRPGSLDLPSPVSLSEFGMMFPVLGPRSECSGASSPECEVERGDRAEGAENKTSDKANNNRGLS
SSSGSGGSSKSQSSTSPEGQALENRMKQLSLQCSKGRDGIIADIKMVQIG

FIGURE 378

GACGCCATCCCTGTGACCATGACGATGTCCTCCATCGTGATGAAGGCAGAGAGCAGAGACATCCCGATCTGGGGA
ACTCTGATCCAGTATATACGGCCTGTGTTCGTGTCCCGGTCAGACCAGGATTCTCGCAGGAAAACAGTAGAAGAA
ATCAAGAGACGGGCGCAGTCCAACGGAAAGTGGCCACAGATAATGATTTTTCCAGAAGGAACTTGTACAAACAGG
ACCTGCCTAATTACCTTCAAACCTGGTGCATTCATCCCTGGAGCGCCCGTCCAGCCTGTGGTTTTACGATATCCA
AATAAACTGGACACCATCACATGGACGTGGCAAGGACCTGGAGCGCTGGAAATCCTGTGGCTCACGCTGTGTCAG
TTTCACAACCAAGTGGAAATCGAGTTCCTTCCTGTGTACAGCCCTTCTGAGGAGGAGAAGAGGAACCCCGCGCTG
TATGCCAGCAACGTGCGGCGAGTC**ATG**GCCGAGGCCTTGGGTGTCTCCGTGACTGACTACACGTTCGAGGACTGC
CAGCTGGCCCTGGCGGAAGGACAGCTCCGTCTCCCCGCTGACACTTGCCTTTTAGAATTTGCCAGGCTCGTGCGG
GGCCTCGGGCTAAAACCAGAAAAGCTTGAAAAAGATCTGGACAGATACTCAGAAAGAGCCAGGATGAAGGGAGGA
GAGAAGATAGGTATTGCGGAGTTTGCCGCCTCCCTGGAAGTCCCCGTTTCTGACTTGCTGGAAGACATGTTTTCA
CTGTTCGACGAGAGCGGCAGCGGCGAGGTGGACCTGCGAGAGTGTGTGGTTGCCCTGTCTGTCGTCTGCCGGCCG
GCCCGGACCCTGGACACCATCCAGCTGGCTTTCAAGATGTACGGAGCGCAAGAGGACGGCAGCGTCGGCGAAGGT
GACCTGTCCTGCATCCTCAAGACGGCCCTGGGGGGTGGCAGAGCTCACCGTGACCGACCTATTCCGAGCCATTGAC
CAAGAGGAGAAGGGGAAGATCACATTCGCTGACTTCCACAGGTTTGCAGAAATGTACCCTGCCTTCGCAGAGGAA
TACCTGTACCCGGATCAGACACATTTCGAAAGCTGTGCAGAGACCTCACCTGCGCCAATCCCAAACGGCTTCTGT
GCCGATTTCAGCCCGGAAAACTCAGACGCTGGGCGGAAGCCTGTTCGCAAGAAGCTGGAT**TAG**GACCCAGGGTTG
CGGAGAGACGCGGCCCCTCCCGCGTGGACATCACCGCCATGAGCCTCTTTGCGAGTGACCTCTGGGCTCCGCTCC
TCACTCCTGCTGTACAGGCACTGTCTTCAGCCCGAGTTCCAGGGGCCTCGGGGGCTGTTTGTATCTTGTTCCTTT
GTGAAGTGTGTTGCAGAACCGACGCTTACTGTGCGAGAATCGGAGGGCGCGCACGCGGATCCCCCGCCTGGCCTG
GACCCCGTGGGGTCAGGTTCCCTGCCGGGCGGGGGGCACCGGTGCCGCCCCGTGTTCTCCCACGGGGCCCTGGTT
TCGAGTCTCTGTCACAGCCTCTTCCGGCGGCAGCGTGCACCGGGCGGGCCTCCGTGCACACTCAGCACACGCCTG
CCACACAGCGTGCGCTTGCGTGTCACTCTGGCACGAAACCTGTCTGCCTCTGTGGATCCACAGCCTGGCAGAGCC
GAGCCGTCACCTGATTTTTCAGTGTTTCTACCTGTGTGCTGGAGCTCATGAGTATTTTATAAACTCCATTTAGGT
ACTTCAGGAAACATGCAGCATTTTTTAAAAAATGAAAATTGTTTTTCTACTTCATTTTTCCTTTTAGAGTCAAAG
GATATTTATTTATAGGCCTTTTTTTTTTTAATATAGAATCTGAGGCTGTTTGGGCTTTGACTTAAATTTCCATCA
GGCCTCTCTCCAGCAGGTAATCCCTCTCCTTCCGCTGGGTCCCCTGGGGAGGTGTGAACTCAAGGGCCTAGCCCC
AAAACACTTTTTCTGCTTTTCTTAATCCTTTTCCAGTCCCCTCTTTTTTTATAAACGTTGGCAGTTTGATGTTTC
TGTTTCGGCATAACGTAATCCATTTCACTGTAGCCTAAACTCCAGTCCGAGGTTGGATATTGTTCAAATGAGCAG
GGCCCGAGCTGGAAGCGCAAGGCAGCCGCCGCCGTGCCGCTCCTCCCTTGCCCTCAGGCCAGGTCCCTGCTGGAA
GCGGCTGCATCTTCCTGTCAGCCCTGGTTTCCATGGTGACTGGCGTCACGCAGCCACCCGAGTATGGCTGACCTT
CCTGCAGAGAGAGGAGCCGCAGTCTTTTGCTTGTGGAAGGAGACGCTGGGCTGTGCGGTGCGGAGGGTGATGAGG
ATGTCTGGTGACAGCCGTGCGGACACCACTCCTCTCTGCAGCACTGCCTCCCAGCGCCAGGGTCGCGGGCACATC
CCACTGAGAGCGGGGGTCCTGCCCCATCTTAGAGTCAAAGGCAGAGGGGCTTCCAGGCCCTGGATGGGGTATTTT
GGTGTCACCTGAAGTCCCTCTGACATCACCTTGTTTCATCATTTTTTATGACAGAATTAGAAACCCATCCTTCAA
GCACAATAATCATCACAGACTTGAGTTTGCTTCCTAAAGCAAAGGCTCCGGGTTTGTTTGGAAAATTTTTTTGAT
TTCTGAAATGAATTGATTTTTATATTTGGGGCATCTCTATAGAAAGTGACCACCAAGGCCAGTAAGTACGGGAAA
AAATGTTTACTAACTTCCTCAGAGATTCGTGATACGCGTTTCTCCACTGACAGACATTTAAAAACAACCTTCAGC
TCCGTTTCAATCAATCACCTCGACTTGTTTTTTAGCATGGACACTGCCAGCAGGACAGACAGGGATGGAGTAAAC
CGAAGTCAATTTCAGGGCTCTTGGCTGTTGGACACAGAAGAAATCCTAGTGCAGCCTTTGGTAGCTAACAGTCAC
TGATTTTATAATTGGAGAATGCGTAAAGATTCATTTTTCAAGGAGAAGAGCCTGCAAATGGCCAATGAAGGAGGT
AAATAAACTAAGATATTCCGAGGGAAGGGACCCAGGCCACCTCCCTTCCGCAGGTCTGCAGATGAAGGGTTTTTT
GAATGAAATGCCACTGTGCATTTTCAGAAAAAAAAATCTCTGATAAACAGACTTTGAATGGATGTTTGTTCCTCC
TGATTCTCTTTTCTCTTCGTGGCGACTTAGAGTTGGCGGATATTCGGAACTGTGAATGTACATAGCGTTGAGTTA
AACCCCTTGTGTGTGAGACAGGACGCAGCGGGCCCCTGGTGGCCTGGGGGCCAGACCCGTGGGCAGGTGGGGCAT
GGGCCCTGGCCTGCGGGGACCTGCTGGGGTGTGAGGGCAGAGGGAGGGTTGCCATGAAGGAACTTGGGATTTTCA
ATGGAATAAGTAAAACATAAAGTCTATACTTGGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 379

MAEALGVSVTDYTFEDCQLALAEGQLRLPADTCLLEFARLVRGLGLKPEKLEKDLDRYSERARMKGGEKIGIAEF
AASLEVPVSDLLEDMFSLFDESGSGEVDLRECVVALSVVCRPARTLDTIQLAFKMYGAQEDGSVGEGDLSCILKT
ALGVAELTVTDLFRAIDQEEKGKITFADFHRFAEMYPAFAEEYLYPDQTHFESCAETSPAPIPNGFCADFSPENS
DAGRKPVRKKLD

FIGURE 380

GGCACGAGGCCGGATCCACCGTGCCTCTGCGGCCTGCGTGCCCGGAGTCCCCGCCTGTGTCGTCTCTGTCGCCGT
CCCCGTCTCCTGCCAGGCGCGGAGCCCTGCGAGCCGCGGGTGGGCCCCAGGCGCGCAGAC**ATG**GGCTGCTCCGCC
AAAGCGCGCTGGGCTGCCGGGGCGCTGGGCGTCGCGGGGCTACTGTGCGCTGTGCTGGGCGCTGTCATGATCGTG
ATGGTGCCGTCGCTCATCAAGCAGCAGGTCCTTAAGAACGTGCGCATCGACCCCAGTAGCCTGTCCTTCAACATG
TGGAAGGAGATCCCTATCCCCTTCTATCTCTCCGTCTACTTCTTTGACGTCATGAACCCCAGCGAGATCCTGAAG
GGCGAGAAGCCGCAGGTGCGGGAGCGCGGGCCCTACGTGTACAGGGAGTTCAGGCACAAAAGCAACATCACCTTC
AACAACAACGACACCGTGTCCTTCCTCGAGTACCGCACCTTCCAGTTCCAGCCCTCCAAGTCCCACGGCTCGGAG
AGCGACTACATCGTCATGCCCAACATCCTGGTCTTGGGTGCGGCGGTGATGATGGAGAATAAGCCCATGACCCTG
AAGCTCATCATGACCTTGGCATTCACCACCCTCGGCGAACGTGCCTTCATGAACCGCACTGTGGGTGAGATCATG
TGGGGCTACAAGGACCCCCTTGTGAATCTCATCAACAAGTACTTTCCAGGCATGTTCCCCTTCAAGGACAAGTTC
GGATTATTTGCTGAGCTCAACAACTCCGACTCTGGGCTCTTCACGGTGTTCACGGGGGTCCAGAACATCAGCAGG
ATCCACCTCGTGGACAAGTGGAACGGGCTGAGCAAGGTTGACTTCTGGCATTCCGATCAGTGCAACATGATCAAT
GGAACTTCTGGGCAAATGTGGCCGCCCTTCATGACTCCTGAGTCCTCGCTGGAGTTCTACAGCCCGGAGGCCTGC
CGATCCATGAAGCTAATGTACAAGGAGTCAGGGGTGTTTGAAGGCATCCCCACCTATCGCTTCGTGGCTCCCAAA
ACCCTGTTTGCCAACGGGTCCATCTACCCACCCAACGAAGGCTTCTGCCCGTGCCTGGAGTCTGGAATTCAGAAC
GTCAGCACCTGCAGGTTCAGTGCCCCCTTGTTTCTCTCCCATCCTCACTTCCTCAACGCCGACCCGGTTCTGGCA
GAAGCGGTGACTGGCCTGCACCCTAACCAGGAGGCACACTCCTTGTTCCTGGACATCCACCCGGTCACGGGAATC
CCCATGAACTGCTCTGTGAAACTGCAGCTGAGCCTCTACATGAAATCTGTCGCAGGCATTGGACAAACTGGGAAG
ATTGAGCCTGTGGTCCTGCCGCTGCTCTGGTTTGCAGAGAGCGGGGCCATGGAGGGGGAGACTCTTCACACATTC
TACACTCAGCTGGTGTTGATGCCCAAGGTGATGCACTATGCCCAGTACGTCCTCCTGGCGCTGGGCTGCGTCCTG
CTGCTGGTCCCTGTCATCTGCCAAATCCGGAGCCAAGTAGGTGCTGGCCAGAGGGCAGCCCGGGCTGACAGCCAT
TCGCTTGCCTGCTGGGGGAAAGGGGCCTCAGATCGGACCCTCTGGCCAACCGCAGCCTGGAGCCCACCTCCAGCA
GCAGTCCTGCGTCTCTGCCGGAGTGGGAGCGGTCACTGCTGGGGGCTGCGCAGCACGCTTGCGTCTTTTGCATGC
CGCGTTGCCACTACTCTGCCTGTTCTGGAAGGCCTGGGACCCTCCCTTGGAGGGGGCACAGGGTCC**TGA**GGACAC
CGTGAGCCAGCCAGGCCTGGCCGCTGGGCCTGACCGGCCCCCCAGCCCCTACACCCCGCTTCTCCCGGACTCTCC
CAGCGGACAGCCCCCCAGCCCCACAGCCTGAGCCTCCCAGCTGCCATGTGCCTGTTGCACACCTGCACACACGCC
CTGGCACACATACACACATGCGTGCAGGCTTGTGCAGACACTCAGGGATGGAGCTGCTGCTGAAGGGACTTGTAG
GGAGAGGCTCGTCAACAAGCACTGTTCTGGAACCTTCTCTCCACGTGGCCCACAGGCCTGACCACAGGGGCTGTG
GGTCCTGCGTCCCCTTCCTCGGGTGAGCCTGGCCTGTCCCGTTCAGCCGTTGGGCCCAGGCTTCCTCCCCTCCAA
GGTGAAACACTGCAGTCCCGGTGTGGTGGCTCCCCATGCAGGACGGGCCAGGCTGGGAGTGCCGCCTTCCTGTGC
CAAATTCAGTGGGGACTCAGTGCCCAGGCCCTGGCCACGAGCTTTGGCCTTGGTCTACCTGCCAGGCCAGGCAAA
GCGCCTTTACACAGGCCTCGGAAAACAATGGAGTGAGCACAAGATGCCCTGTGCAGCTGCCCGAGGGTCTCCGCC
CACCCCGGCCGGACTTTGATCCCCCCGAAGTCTTCACAGGCACTGCATCGGGTTGTCTGGCGCCCTTTTCCTCCA
GCCTAAACTGACATCATCCTATGGACTGAGCCGGCCACTCTCTGGCCGAAGTGGCCGCAGGCTGTGCCCCCGAGC
TGCCCCCACCCCCTCACAGGGTCCCTCAGATTATAGGTGCCCAGGCTGAGGTGAAGAGGCCTGGGGGCCCTGCCT
TCCGGGCGCTCCTGGACCCTGGGGCAAACCTGTGACCCTTTTCTACTGGAATAGAAATGAGTTTTATCATCTTTG
AAAAATAATTCACTCTTGAAGTAATAAACGTTTAAAAAAAAAAAAAAAAAA

FIGURE 381

MGCSAKARWAAGALGVAGLLCAVLGAVMIVMVPSLIKQQVLKNVRIDPSSLSFNMWKEIPIPFYLSVYFFDVMNP
SEILKGEKPQVRERGPYVYREFRHKSNITFNNNDTVSFLEYRTFQFQPSKSHGSESDYIVMPNILVLGAAVMMEN
KPMTLKLIMTLAFTTLGERAFMNRTVGEIMWGYKDPLVNLINKYFPGMFPFKDKFGLFAELNNSDSGLFTVFTGV
QNISRIHLVDKWNGLSKVDFWHSDQCNMINGTSGQMWPPFMTPESSLEFYSPEACRSMKLMYKESGVFEGIPTYR
FVAPKTLFANGSIYPPNEGFCPCLESGIQNVSTCRFSAPLFLSHPHFLNADPVLAEAVTGLHPNQEAHSLFLDIH
PVTGIPMNCSVKLQLSLYMKSVAGIGQTGKIEPVVLPLLWFAESGAMEGETLHTFYTQLVLMPKVMHYAQYVLLA
LGCVLLLVPVICQIRSQVGAGQRAARADSHSLACWGKGASDRTLWPTAAWSPPPAAVLRLCRSGSGHCWGLRSTL
ASFACRVATTLPVLEGLGPSLGGGTGS

FIGURE 382

AGTCAAGATGGAGGAGTACGCGCGAGAGCCTTGCCCATGGCGAATTGTGGATGACTGTGGTGGGGCCTTTACGAT
GGGTACCATTGGTGGTGGTATCTTTCAAGCAATCAAAGGTTTTCGCAATTCTCCAGTGGGAGTAAACCACAGACT
ACGAGGGAGTTTGACAGCTATTAAAACCAGGGCTCCACAGTTAGGAGGTAGCTTTGCAGTTTGGGGAGGGCTGTT
TTCCATGATTGACTGTAGTATGGTTCAAGTCAGAGGAAAGGAAGATCCCTGGAACTCCATCACAAGTGGTGCCTT
AACGGGAGCCATACTGGCAGCAAGAAATGGACCAGTGGCCATGGTTGGGTCAGCCGCAATGGGTGGCATTCTCCT
AGCTTTAATTGAAGGAGCTGGTATCTTGTTGACAAGATTTGCCTCTGCACAGTTTCCCAATGGTCCTCAGTTTGC
AGAAGACCCCTCCCAGTTGCCTTCAACTCAGTTACCTTCCTCACCTTTTGGAGACTATCGACAATATCAGTAGGA
CTTCTTTCCTAGGATTTCTTTAACAGAACGAGTTGTGGTTCGAGAAGGATTTCAGAAGATCAAGTTACAGTCTGT
TTTTAAAACCATAGGTGGGACAGCTATGGCCAATAGGCTATAAAGAGACATTTAGCACTTTTTTCTATTTAAAGG
AACAAGCGGGGAAGGGTGCTAAAAGATAATACGTTTATTTATTCACACTTGAATTGCATTTGTGATCAAAATAAA
TGTTTAAATCGCTAAAGGAAAATACAGTAAGTGCTTGAAAGATGAAGGACCAAAAGGCCAAAAAACAGTGAAATA
TGATCATCATCTCTTGCGGACTTCTCTGCCTGGTTTTGTGTGTTCTGTTATTCAAACAATAAAAAGCTGGTGGAA
CTTACTCTTTCTTTTAAGATAAGTTGTAGACTTCGATGTTTCATGCTCATGTACTTCAAATAATGCATGTTTTAT
AGTTAGTCCCTCATCACTTGAAGTGACTTCTGAGAATTATGCAGAGTCAACATGGATCATTTCACAGTGAGATGC
TTTATGGATTGAAGGATATGGTAAAATGTTTATAGTTTACTTTGAAAGTAAAATATACTATGTCTTGGTTTTGAG
GATATTGGATACAAAACTCTCTTCCTTTAGGGCTACTGAGTCTTGATTCCTGATCATCAGAAATTTCACCAGAAA
CAACTTGCTTCCAATATACCCAATTCTATATGAAGAATTCATGGAGAGTGTACTGGCACTGGAAGAGTTTAGTGT
TTCTTGTATGCTTGAAAATAAAGTATGTACTGTTTTGAATGTGTTCCAAGTCCTCTGCATAAACGATGTATTTTG
GGGTCTGGTTGGGCCTGGAAAATGGATGAGCACTTCAGAACAGGTCATTTTCCTGATATTGGAAGTGACATGTGG
CCCTATAGGAGGCATGATGTTAGTTAATTACACATTTGCCTACATCTGTGGGAAATGGAGAACAAAGCCATGTGG
GTACTGTAAACACACGTTTATCTTTTGGCCCAATGCCATACATATGGTAGGCATTTAATTACTGATTGTGTTTGG
ATAATTTGGGAATTTTCGACTGTGGTAAAATATACATAAAATAATACTTATTAAAAAAAAAAAAAAAAAA

FIGURE 383

MEEYAREPCPWRIVDDCGGAFTMGTIGGGIFQAIKGFRNSPVGVNHRLRGSLTAIKTRAPQLGGSFAVWGGLFSM
IDCSMVQVRGKEDPWNSITSGALTGAILAARNGPVAMVGSAAMGGILLALIEGAGILLTRFASAQFPNGPQFAED
PSQLPSTQLPSSPFGDYRQYQ

FIGURE 384

ATGGCGACGGAGCAGAGGCCTTTCCACCTGGTGGTGTTCGGCGCGTCTGGCTTCACCGGCCAGTTCGTGACCGAG
GAGGTGGCCCGGGAGCAGGTGGACCCGGAGCGGACCCAGCCTGCCCTGGGCGTGGCGGGCCGCTCCCGGGAGAAG
CTGCAGCGGGTGCTGGAGAAGGCGGCCCTGAAGCTGGGAAGACCAACACTGTCATCTGAAGTTGGAATCATCATC
TGTGATATTGCTAATCCAGCCTCGCTTGATGAAATGGCTAAACAGGCAACAGTTGTCCTCAATTGCGTAGGACCA
TATCGGTTTTATGGAGAACCTGTAATAAAAGCATGTATTGAAAATGGAGCCAGTTGTATCGACATCAGTGGAGAA
CCTCAGTTTCTGGAACTAATGCAACTGAAGTATCATGAGAAAGCTGCAGACAAAGGGGTTTATATCATTGGAAGC
AGCGGCTTTGACTCCATTCCAGCAGATCTGGGAGTAATATATACCAGAAATAAAATGAATGGTACTTTGACTGCT
GTGGAAAGTTTCCTGACTATACATTCAGGACCTGAGGGGTTGAGCATTCATGATGGTACCTGGAAGTCAGCAATT
TATGGTTTTGGAGATCAGAGTAATTTGAGAAAACTAAGAAATGTATCAAATCTGAAACCTGTCCCGCTCATTGGT
CCAAAATTGAAGAGAAGGTGGCCAATTTCTTATTGTCGGGAACTCAAAGGTTATTCCATTCCTTTTATGGGATCT
GATGTGTCTGTTGTAAGGAGGACTCAACGTTACTTGTATGAAAATTTAGAGGAATCACCAGTTCAGTATGCTGCG
TATGTAACTGTGGGAGGCATCACCTCTGTTATTAAGCTGATGTTTGCAGGACTTTTCTTTTTGTTCTTTGTGAGG
TTTGGAATTGGAAGGCAACTTCTCATAAAATTCCCATGGTTCTTCTCCTTTGGCTATTTTTCAAAACAAGGCCCA
ACACAAAAACAGATTGATGCTGCCTCATTCACGCTGACATTCTTTGGTCAAGGATACAGCCAAGGCACTGGTACA
GATAAGAACAAACCAAATATCAAAATTTGTACTCAGGTGAAAGGACCAGAGGCTGGCTATGTGGCTACCCCCATA
GCTATGGTTCAGGCAGCCATGACTCTTCTAAGTGATGCTTCTCATCTGCCTAAGGCGGGCGGGGTCTTCACACCT
GGAGCAGCTTTTTCCAAAACAAAGTTGATTGACAGACTCAACAAACACGGTATTGAGTTTAGTGTTATTAGCAGC
TCTGAAGTCTAAACACTGGAAGAATTAACTGAAGTCATAACGTGCGTGAATTAACAGCTTCTCTATTTGATATTT
GAAATTCTTCTGTAAGCCTGTCTGAGTGTATGTGGAAACGATTGTCAAATCTAAAATATCTATATATTAAAAAGT
AGGAAATTGTCCTAGCTTACCCTAAATTTCAAATCTGAGTTGATTTTGTGATTTTATTGCTTATAACAGAGAACT
CATATTTGACATATTTTTTTCATTGATGTGTTCCTGGTAGATTTTCACGAATGAGCTGGCAGGTCTAATGGGGGA
GGCGGCGTCCCAGTCTGTGTTGCAGCAGCATTCTCATCGGGGGTGCGCACACCATCGTTACTGTCGGGCAGTAAC
TGCCGCTTGCCTTGCCGCAGTAGGAGGGAAATCTCACCTTCCTTCCACATACTGTCTTGAGCCTTTGCTAAATTA
AACTGCACTTTTTGCTGTTTTTGCCTAGTTTTTCGCCAATCTACACTGATTTTGGACTGTTACCTAAGTTGAAAA
ATAAAAGGTTGTCAATCGAATGGTGGTTAATGTTGGACCTGCCGATGTATTTGTATAGTGGTAGAAACATGCTGC
TTAAGTGGCCTAACCTGTTTCTTGCCAATAAGTAGGCTTATCATTTTATTTTTACGTAATTCTATATCTGTGACT
AGGTTTTTAAGGATACAGCTTATAAGTTGCTATCAATTTTCACTACCTAAGCAGAATTTTTCTCTAATTTACTTT
TTGTATTTTAACTAGGTTTTACATGGAAGCCCTAAAATAAGGCAAAAGACTTTTTCTTTTGTAATAAGCATATAA
TAAACACGTATATACATAGCAAATTGA

FIGURE 385

MATEQRPFHLVVFGASGFTGQFVTEEVAREQVDPERTQPALGVAGRSREKLQRVLEKAALKLGRPTLSSEVGIII
CDIANPASLDEMAKQATVVLNCVGPYRFYGEPVIKACIENGASCIDISGEPQFLELMQLKYHEKAADKGVYIIGS
SGFDSIPADLGVIYTRNKMNGTLTAVESFLTIHSGPEGLSIHDGTWKSAIYGFGDQSNLRKLRNVSNLKPVPLIG
PKLKRRWPISYCRELKGYSIPFMGSDVSVVRRTQRYLYENLEESPVQYAAYVTVGGITSVIKLMFAGLFFLFFVR
FGIGRQLLIKFPWFFSFGYFSKQGPTQKQIDAASFTLTFFGQGYSQGTGTDKNKPNIKICTQVKGPEAGYVATPI
AMVQAAMTLLSDASHLPKAGGVFTPGAAFSKTKLIDRLNKHGIEFSVISSSEV

FIGURE 386

CTCAAACACCGCCTGCTAAAAATACCCGACTGGAGGAGCATAAAAGCGCAGCCGAGCCCAGCGCCCCGCACTTTT
CTGAGCAGACGTCCAGAGCAGAGTCAGCCAGC**ATG**ACCGAGCGCCGCGTCCCCTTCTCGCTCCTGCGGGGCCCCA
GCTGGGACCCCTTCCGCGACTGGTACCCGCATAGCCGCCTCTTCGACCAGGCCTTCGGGCTGCCCCGGCTGCCGG
AGGAGTGGTCGCAGTGGTTAGGCGGCAGCAGCTGGCCAGGCTACGTGCGCCCCCTGCCCCCCGCCGCCATCGAGA
GCCCCGCAGTGGCCGCGCCCGCCTACAGCCGCGCGCTCAGCCGGCAACTCAGCAGCGGGGTCTCGGAGATCCGGC
ACACTGCGGACCGCTGGCGCGTGTCCCTGGATGTCAACCACTTCGCCCCGGACGAGCTGACGGTCAAGACCAAGG
ATGGCGTGGTGGAGATCACCGGCAAGCACGAGGAGCGGCAGGACGAGCATGGCTACATCTCCCGGTGCTTCACGC
GGAAATACACGCTGCCCCCCGGTGTGGACCCCACCCAAGTTTCCTCCTCCCTGTCCCCTGAGGGCACACTGACCG
TGGAGGCCCCCATGCCCAAGCTAGCCACGCAGTCCAACGAGATCACCATCCCAGTCACCTTCGAGTCGCGGGCCC
AGCTTGGGGGCCCAGAAGCTGCAAAATCCGATGAGACTGCCGCCAAG**TAA**AGCCTTAGCCTGGATGCCCACCCCT
GCTGCCGCCACTGGCTGTGCCTCCCCCGCCACCTGTGTGTTCTTTTGATACATTTATCTTCTGTTTTTCTCAAAT
AAAGTTCAAAGCAACCACCTGTAAAAAAAAAAAAAAAAAA

FIGURE 387

MTERRVPFSLLRGPSWDPFRDWYPHSRLFDQAFGLPRLPEEWSQWLGGSSWPGYVRPLPPAAIESPAVAAPAYSR
ALSRQLSSGVSEIRHTADRWRVSLDVNHFAPDELTVKTKDGVVEITGKHEERQDEHGYISRCFTRKYTLPPGVDP
TQVSSSLSPEGTLTVEAPMPKLATQSNEITIPVTFESRAQLGGPEAAKSDETAAK

FIGURE 388

ACTGCGACTCGAGACAGCGGCCCGGCAGGACAGCTCCAGA**ATG**AAAATGCGGTTCTTGGGGTTGGTGGTCTGTTT
GGTTCTCTGGCCCCTGCATTCTGAGGGGTCTGGAGGGAAACTGACAGCTGTGGATCCTGAAACAAACATGAATGT
GAGTGAAATTATCTCTTACTGGGGATTCCCTAGTGAGGAATACCTAGTTGAGACAGAAGATGGATATATTCTGTG
CCTTAACCGAATTCCTCATGGGAGGAAGAACCATTCTGACAAAGGTCCCAAACCAGTTGTCTTCCTGCAACATGG
CTTGCTGGCAGATTCTAGTAACTGGGTCACAAACCTTGCCAACAGCAGCCTGGGCTTCATTCTTGCTGATGCTGG
TTTTGACGTGTGGATGGGCAACAGCAGAGGAAATACCTGGTCTCGGAAACATAAGACACTCTCAGTTTCTCAGGA
TGAATTCTGGGCTTTCAGTTATGATGAGATGGCAAAATATGACCTACCAGCTTCCATTAACTTCATTCTGAATAA
AACTGGCCAAGAACAAGTGTATTATGTGGGTCATTCTCAAGGCACCACTATAGGTTTTATAGCATTTTCACAGAT
CCCTGAGCTGGCTAAAAGGATTAAAATGTTTTTTGCCCTGGGTCCTGTGGCTTCCGTCGCCTTCTGTACTAGCCC
TATGGCCAAATTAGGACGATTACCAGATCATCTCATTAAGGACTTATTTGGAGACAAAGAATTTCTTCCCCAGAG
TGCGTTTTTGAAGTGGCTGGGTACCCACGTTTGCACTCATGTCATACTGAAGGAGCTCTGTGGAAATCTCTGTTT
TCTTCTGTGTGGATTTAATGAGAGAAATTTAAATATGTCTAGAGTGGATGTATATACAACACATTCTCCTGCTGG
AACTTCTGTGCAAAACATGTTACACTGGAGCCAGGCTGTTAAATTCCAAAAGTTTCAAGCCTTTGACTGGGGAAG
CAGTGCCAAGAATTATTTTCATTACAACCAGAGTTATCCTCCCACATACAATGTGAAGGACATGCTTGTGCCGAC
TGCAGTCTGGAGCGGGGGTCACGACTGGCTTGCAGATGTCTACGACGTCAATATCTTACTGACTCAGATCACCAA
CTTGGTGTTCCATGAGAGCATTCCGGAATGGGAGCATCTTGACTTCATTTGGGGCCTGGATGCCCCTTGGAGGCT
TTATAATAAAATTATTAATCTAATGAGGAAATATCAG**TGA**AAGCTGGACTTGAGCTGTGTACCACCAAGTCAATG
ATTATGTCATGTGAAAATGTGTTTGCTTCATTTCTGTAAAACACTTGTTTTTCTTTCCCAGGTCTTTTGTTTTTT
TATATCCAAGAAAATGATAACTTTGAAGATGCCCAGTTCACTCTAGTTTCAATTAGAAACATACTAGCTATTTTT
TCTTTAATTAGGGCTGGAATAGGAAGCCAGTGTCTCAACCATAGTATTGTCTCTTTAAGTCTTTTAAATATCACT
GATGTGTAAAAAGGTCATTATATCCATTCTGTTTTTAAAATTTAAAATATATTGACTTTTTGCCCTTCATAGGAC
AAAGTAATATATGTGTTGGAATTTTAAAATTGTGTTGTCATTGGTAAATCTGTCACTGACTTAAGCGAGGTATAA
AAGTACGCAGTTTTCATGTCCTTGCCTTAAAGAGCTCTCTAGTCTAACGGTCTTGTAGTTAGAGATCTAAATGAC
ATTTTATCATGTTTTCCTGCAGCAGGTGCATAGTCAAATCCAGAAATATCACAGCTGTGCCAGTAATAAGGATGC
TAACAATTAATTTTATCAAACCTAACTGTGACAGCTGTGATTTGACACGTTTTAATTGCTCAGGTTAAATGAAAT
AGTTTTCCGGCGTCTTCAAAAACAAATTGCACTGATAAAACAAAAACAAAAGTATGTTTTAAATGCTTTGAAGAC
TGATACACTCAACCATCTATATTCATGAGCTCTCAATTTCATGGCAGGCCATAGTTCTACTTATCTGAGAAGCAA
ATCCCTGTGGAGACTATACCACTATTTTTTCTGAGATTAATGTACTCTTGGAGCCCGCTACTGTCGTTATTGATC
ACATCTGTGTGAAGCCAAAGCCCCGTGGTTGCCCATGAGAAGTGTCCTTGTTCATTTTCACCCAAATGAAGTGTG
AACGTGATGTTTTCGGATGCAAACTCAGCTCAGGGATTCATTTTGTGTCTTAGTTTTATATGCATCCTTATTTTT
AATACACCTGCTTCACGTCCCTATGTTGGGAAGTCCATATTTGTCTGCTTTTCTTGCAGCATCATTTCCTTACAA
TACTGTCCGGTGGACAAAATGACAATTGATATGTTTTTCTGATATAATTACTTTAGCTGCACTAACAGTACAATG
CTTGTTAATGGTTAATATAGGCAGGGCGAATACTACTTTGTAACTTTTAAAGTCTTAAACTTTTCAATAAAATTG
AGTGAGACTTATAGGCCC

FIGURE 389

MKMRFLGLVVCLVLWPLHSEGSGGKLTAVDPETNMNVSEIISYWGFPSEEYLVETEDGYILCLNRIPHGRKNHSD
KGPKPVVFLQHGLLADSSNWVTNLANSSLGFILADAGFDVWMGNSRGNTWSRKHKTLSVSQDEFWAFSYDEMAKY
DLPASINFILNKTGQEQVYYVGHSQGTTIGFIAFSQIPELAKRIKMFFALGPVASVAFCTSPMAKLGRLPDHLIK
DLFGDKEFLPQSAFLKWLGTHVCTHVILKELCGNLCFLLCGFNERNLNMSRVDVYTTHSPAGTSVQNMLHWSQAV
KFQKFQAFDWGSSAKNYFHYNQSYPPTYNVKDMLVPTAVWSGGHDWLADVYDVNILLTQITNLVFHESIPEWEHL
DFIWGLDAPWRLYNKIINLMRKYQ

FIGURE 390

CGCAGGCTGGAAGGAAGACGAACCTACGAAGCAGAGATCTGAAGACAGC**ATG**TACACAGCCATTCCCCAGAGTGG
CTCTCCATTCCCAGGCTCAGTGCAGGATCCAGGCCTGCATGTGTGGCGGGTGGAGAAGCTGAAGCCGGTGCCTGT
GGCGCAAGAGAACCAGGGCGTCTTCTTCTCGGGGGACTCCTACCTAGTGCTGCACAATGGCCCAGAAGAGGTTTC
CCATCTGCACCTGTGGATAGGCCAGCAGTCATCCCGGGATGAGCAGGGGGCCTGTGCCGTGCTGGCTGTGCACCT
CAACACGCTGCTGGGAGAGCGGCCTGTGCAGCACCGCGAGGTGCAGGGCAATGAGTCTGACCTCTTCATGAGCTA
CTTCCCACGGGGCCTCAAGTACCAGGAAGGTGGTGTGGAGTCAGCATTTCACAAGACCTCCACAGGAGCCCCAGC
TGCCATCAAGAAACTCTACCAGGTGAAGGGGAAGAAGAACATCCGTGCCACCGAGCGGGCACTGAACTGGGACAG
CTTCAACACTGGGGACTGCTTCATCCTGGACCTGGGCCAGAACATCTTCGCCTGGTGTGGTGGAAAGTCCAACAT
CCTGGAACGCAACAAGGCGAGGGACCTGGCCCTGGCCATCCGGGACAGTGAGCGACAGGGCAAGGCCCAGGTGGA
GATTGTCACTGATGGGGAGGAGCCTGCTGAGATGATCCAGGTCCTGGGCCCCAAGCCTGCTCTGAAGGAGGGCAA
CCCTGAGGAAGACCTCACAGCTGACAAGGCAAATGCCCAGGCCGCAGCTCTGTATAAGGTCTCTGATGCCACTGG
ACAGATGAACCTGACCAAGGTGGCTGACTCCAGCCCCTTTGCCCTTGAACTGCTGATATCTGATGACTGCTTTGT
GCTGGACAACGGGCTCTGTGGCAAGATCTATATCTGGAAGGGGCGAAAAGCGAATGAGAAGGAGCGGCAGGCAGC
CCTGCAGGTGGCCGAGGGCTTCATCTCGCGCATGCAGTACGCCCCGAACACTCAGGTGGAGATTCTGCCTCAGGG
CCGTGAGAGTCCCATCTTCAAGCAATTTTTCAAGGACTGGAAA**TGA**GGGTGGGCGTCTTCCTGCCCCATGCTCCC
CTGCCCCCCCACCACCTGCCTGCTTGCTTCTCTGGCTGCCTGGTCAGTGCAGAGGTGCCCCCTGCAGATGTTCAAT
AAAGGAGACAAGTGCTTTCCC

FIGURE 391

MYTAIPQSGSPFPGSVQDPGLHVWRVEKLKPVPVAQENQGVFFSGDSYLVLHNGPEEVSHLHLWIGQQSSRDEQG
ACAVLAVHLNTLLGERPVQHREVQGNESDLFMSYFPRGLKYQEGGVESAFHKTSTGAPAAIKKLYQVKGKKNIRA
TERALNWDSFNTGDCFILDLGQNIFAWCGGKSNILERNKARDLALAIRDSERQGKAQVEIVTDGEEPAEMIQVLG
PKPALKEGNPEEDLTADKANAQAAALYKVSDATGQMNLTKVADSSPFALELLISDDCFVLDNGLCGKIYIWKGRK
ANEKERQAALQVAEGFISRMQYAPNTQVEILPQGRESPIFKQFFKDWK

FIGURE 392

CCGGTCCTGAGACACGCTGTGTGGCTGAAAAGTGAAGGCAAGAGCTCATTTGGCCTCTGTGCTCCCCTCCGCAAG
GGATCGTTTCTCCAGAAGAGCTGGATATTCTTTCGCCCAGTT**ATG**GCAGACAAGTTAACGAGAATTGCTATTGTC
AACCATGACAAATGTAAACCTAAGAAATGTCGACAGGAATGCAAAAAGAGTTGTCCTGTAGTTCGAATGGGAAAA
TTATGCATAGAGGTTACACCCCAGAGCAAAATAGCATGGATTTCCGAAACTCTTTGTATTGGTTGTGGTATCTGT
ATTAAGAAATGCCCCTTTGGCGCCTTATCAATTGTCAATCTACCAAGCAACTTGGAAAAAGAAACCACACATCGA
TATTGTGCCAATGCCTTCAAACTTCACAGGTTGCCTATCCCTCGTCCAGGTGAAGTTTTGGGATTAGTTGGAACT
AATGGTATTGGAAAGTCAGCTGCTTTAAAAATTTTAGCAGGAAAACAAAAGCCAAACCTTGGAAAGTACGATGAT
CCTCCTGACTGGCAGGAGATTTTGACTTATTTCCGTGGATCTGAATTACAAAATTACTTTACAAAGATTCTAGAA
GATGACCTAAAAGCCATCATCAAACCTCAATATGTAGCCAGATTCCTAAGGCTGGCAAAGGGGACAGTGGGATCT
ATTTTGGACCGAAAAGATGAAACAAAGACACAGGCAATTGTATGTCAGCAGCTTGATTTAACCCACCTAAAAGAA
CGAAATGTTGAAGATCTTTCAGGAGGAGAGTTGCAGAGATTTGCTTGTGCTGTCGTTTGCATACAGAAAGCTGAT
ATTTTCATGTTTGATGAGCCTTCTAGTTACCTAGATGTCAAGCAGCGTTTAAAGGCTGCTATTACTATACGATCT
CTAATAAATCCAGATAGATATATCATTGTGGTGGAACATGATCTAAGTGTATTAGACTATCTCTCCGACTTCATC
TGCTGTTTATATGGTGTACCAAGCGCCTATGGAGTTGTCACTATGCCTTTTAGTGTAAGAGAAGGCATAAACATT
TTTTTGGATGGCTATGTTCCAACAGAAAACTTGAGATTCAGAGATGCATCACTTGTTTTTAAAGTGGCTGAGACA
GCAAATGAAGAAGAAGTTAAAAAGATGTGTATGTATAAATATCCAGGAATGAAGAAAAAAATGGGAGAATTTGAG
CTAGCAATTGTAGCTGGAGAGTTTACAGATTCTGAAATTATGGTGATGCTGGGGGAAAATGGAACGGGTAAAACG
ACATTTATCAGAATGCTTGCTGGAAGACTTAAACCTGATGAAGGAGGAGAAGTACCAGTTCTAAATGTCAGTTAT
AAGCCACAGAAAATTAGTCCCAAATCAACTGGAAGTGTTCGCCAGTTACTACATGAAAAGATAAGAGATGCTTAT
ACTCACCCACAATTTGTGACCGATGTAATGAAGCCTCTGCAAATTGAAAACATCATTGATCAAGAGGTGCAGACA
TTATCTGGTGGTGAACTACAGCGAGTACGTTTACGCCTTTGCTTGGGCAAACCTGCTGATGTCTATTTAATTGAT
GAACCATCTGCATATTTGGATTCTGAGCAAAGACTGATGGCAGCTCGAGTTGTCAAACGTTTCATACTCCATGCA
AAAAAGACAGCCTTTGTTGTGGAACATGACTTCATCATGGCCACCTATCTAGCGGATCGCGTCATCGTTTTTGAT
GGTGTTCCATCTAAGAACACAGTTGCAAACAGTCCTCAAACCCTTTTGGCTGGCATGAATAAATTTTTGTCTCAG
CTTGAAATTACATTCAGAAGAGATCCAAACAACTATAGGCCACGAATAAACAAACTTAATTCAATTAAGGATGTA
GAACAAAAGAAGAGTGGAAACTACTTTTTCTTGGATGAT**TAG**ACTGACTCTGAGAATATTGATAAGCCATTTATT
AAAAGGAGTATTTACTAGAATTTTTTGTCATATAAAACTTGAATCAGGATTTTATGCCCCACATACTCTGGAACT
TGAAGTATAATATACTTAATATAACATAAAAAGCCAGTTGGGTTCTAAATTGTAGTTGAAACACAGAAAATGCCA
CTTTTCTGTTCCTGAAGAGGCTCTTTTGTGCATAATATTCTAAAATGAAGACATTTCAAGCTATACAAATTACTT
CCAAGTTTTCATGATGTATGGGAAGATTTTCAGTAGGTGTATTATATTCACGGTACCAAATGCTGACCAGTGTTG
CTCCATTTTTTAAATCTTGAAAAGGGTTTCTGTACTTACCTGGTTTGCCAAGTATGCCAGTGTAATGAAACTGCC
CTTATTTTAAAAGCCAGTCAAAGATTCCACTGATTGACATTTGATAAATAAACATCAGGATTATGTTTATTGTTT
GTTTTCAGTCTTTGCACTATATTACCAGTATATGGTTTCCGAGGAAGATTATCTACTGCAAAACACCACTGTTGG
AAAAATAGGTATTTTTAAATTGTTTTTAATCCTTTTTTGGTGCTTTTAAACATGTTTAAGCAAAAACCAATTCAG
TCCATTCCCCGCAAAAAACCCCTAACTTTACTCTGAACTTTTTTTGTTTTTGCATTCCATGAGGTTCTGTATTCA
GTCATTCTCTAGGTAATGTCATTTTTGTACACATATATTTATATAATCACTGATTGAGATTTAGGAAAAAGCATT
TCTAAAGAATATTTGCTTCCCTTAGAACTACAGACTCGAAATCTTTAAAGATGGTGCCTAAGCATCTATGTATTT
TTTTTAAGTTCCACAGATTTTTCTGTTGGGCAGGCCAAGGATTATAAACCACTTCCCTAAAGGCAACATTAATGC
AAAAGTCCCCAGATGGCAATACAAAGTATCCCCTGGTACCACATATATTCATTTGTGAGTTTGGATATAGAGCAC
ATTATCTAAACCATTTTGTAGTTCCAAAAACCCATCTAAATTTCTTGAGTTCCTGAATTTTGAACAGGATTACCT
GGAGCCTGGAGCCACTTTAAGTTGTACTTCTGACTAAACTGGAATTATGAGTGAGGAAGAGTGTTTACTAAATAA
ATGACTGGGGCAAGCAAAATTGAGGAGGAAATTAGAAACTGTTTGACAAACTTTAAGAGCTACTTGAAATAACAG
AAGTCTTGATTAATATGCAAATAATGGCTAGAAAGTATGGTTTAACTGGACCCTATTATGCCTTTTAAAAATAAT
TTCAGTAACCCATAAATACATGTTGTAAAAAATTCAAATATACAGAATGGAATAAAAAAATGATCTCCCTTTATT
ACCCTCCCAAAGGTTACCAGCGTTTGAATTTAATAATGTATATTCTTTCATGCTTTTTTCTGTGCACTTACCTAA
GTGTGAATATGTAAAGGGTTTGTTTTGTATACAAATGGGATTATACTAAAATAAGTAATGCCTATTTTTAAGGAT
AGGTTAAATTTGTGAATGATCATTTCAAATATATTGAATAAAATAAGCAAAAGCTATTGTTATTTACTGATCCTG
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 393

MADKLTRIAIVNHDKCKPKKCRQECKKSCPVVRMGKLCIEVTPQSKIAWISETLCIGCGICIKKCPFGALSIVNL
PSNLEKETTHRYCANAFKLHRLPIPRPGEVLGLVGTNGIGKSAALKILAGKQKPNLGKYDDPPDWQEILTYFRGS
ELQNYFTKILEDDLKAIIKPQYVARFLRLAKGTVGSILDRKDETKTQAIVCQQLDLTHLKERNVEDLSGGELQRF
ACAVVCIQKADIFMFDEPSSYLDVKQRLKAAITIRSLINPDRYIIVVEHDLSVLDYLSDFICCLYGVPSAYGVVT
MPFSVREGINIFLDGYVPTENLRFRDASLVFKVAETANEEEVKKMCMYKYPGMKKKMGEFELAIVAGEFTDSEIM
VMLGENGTGKTTFIRMLAGRLKPDEGGEVPVLNVSYKPQKISPKSTGSVRQLLHEKIRDAYTHPQFVTDVMKPLQ
IENIIDQEVQTLSGGELQRVRLRLCLGKPADVYLIDEPSAYLDSEQRLMAARVVKRFILHAKKTAFVVEHDFIMA
TYLADRVIVFDGVPSKNTVANSPQTLLAGMNKFLSQLEITFRRDPNNYRPRINKLNSIKDVEQKKSGNYFFLDD

FIGURE 394

AGAGCGATC**ATG**TCGCACAAACAAATTTACTATTCGGACAAATACGACGACGAGGAGTTTGAGTATCGACATGTC
ATGCTGCCCAAGGACATAGCCAAGCTGGTCCCTAAAACCCATCTGATGTCTGAATCTGAATGGAGGAATCTTGGC
GTTCAGCAGAGTCAGGGATGGGTCCATTATATGATCCATGAACCAGAACCTCACATCTTGCTGTTCCGGCGCCCA
CTACCCAAGAAACCAAAGAAA**TGA**AGCTGGCAAGCTACTTTTCAGCCTCAAGCTTTACACAGCTGTCCTTACTTC
CTAACATCTTTCTGATAACATTATTATGTTGCCTTCTTGTTTCTCACTTTGATATTTAAAAGATGTTCAATACAC
TGTTTGAATGTGCTGGTAACTGCTTTGCTTCTTGAGTAGAGCCACCACCACCATAGCCCAGCCAGATGAGTGCTC
TGTGGACCCACAGCCTAAGCTGAGTGTGACCCCAGAAGCCACGATGTGCTCTGTATCCAGAACACACTTGGCAGA
TGGAGGAAGCATCTGAGTTTGAGACCATGGCTGTTACAGGGATCATGTAAACTTGCTGTTTTTGTTTTTTCTGCC
GGGTGTTGTATGTGTGGTGACTTGCGGATTTATGTTTCAGTGTACTGGAAACTTTCCATTTTATTCAAGAAATCT
GTTCATGTTAAAAGCCTTGATTAAAGAGGAAGTTTTTATAAT

FIGURE 395

MSHKQIYYSDKYDDEEFEYRHVMLPKDIAKLVPKTHLMSESEWRNLGVQQSQGWVHYMIHEPEPHILLFRRPLPK
KPKK

FIGURE 396

AGCCAGAAATGTGAAGTGCTAGCTGAAGGATGAGCAGCAGCTAGCCAGGCAAAGGGGGCA**ATG**GCGGCTTCCTGT
GTTCTACTGCACACTGGGCAGAAGATGCCTCTGATTGGTCTGGGTACCTGGAAGAGTGAGCCTGGTCAGGTAAAA
GCAGCTGTTAAGTATGCCCTTAGCGTAGGCTACCGCCACATTGATTGTGCTGCTATCTACGGCAATGAGCCTGAG
ATTGGGGAGGCCCTGAAGGAGGACGTGGGACCAGGCAAGGCGGTGCCTCGGGAGGAGCTGTTTGTGACATCCAAG
CTGTGGAACACCAAGCACCACCCCGAGGATGTGGAGCCTGCCCTCCGGAAGACTCTGGCTGACCTCCAGCTGGAG
TATCTGGACCTGTACCTGATGCACTGGCCTTATGCCTTTGAGCGGGGAGACAACCCCTTCCCCAAGAATGCTGAT
GGGACTATATGCTACGACTCCACCCACTACAAGGAGACTTGGAAGGCTCTGGAGGCACTGGTGGCTAAGGGGCTG
GTGCAGGCGCTGGGCCTGTCCAACTTCAACAGTCGGCAGATTGATGACATACTCAGTGTGGCCTCCGTGCGTCCA
GCTGTCTTGCAGGTGGAATGCCACCCATACTTGGCTCAAAATGAGCTAATTGCCCACTGCCAAGCACGTGGCTTG
GAGGTAACTGCTTATAGCCCTTTGGGCTCCTCTGATCGTGCATGGCGTGATCCTGATGAGCCTGTCCTGCTGGAG
GAACCAGTAGTCCTGGCATTGGCTGAAAAGTATGGCCGATCTCCAGCTCAGATCTTGCTCAGGTGGCAGGTCCAG
CGGAAAGTGATCTGCATCCCCAAAAGTATCACTCCTTCTCGAATCCTTCAGAACATCAAGGTGTTTGACTTCACC
TTTAGCCCAGAAGAGATGAAGCAGCTAAATGCCCTGAACAAAAATTGGAGATATATTGTGCCTATGCTTACGGTG
GATGGGAAGAGAGTCCCAAGGGATGCAGGGCATCCTCTGTACCCCTTTAATGACCCGTAC**TGA**GACCACAGCTTC
TTGGCCTCCCTTCCAGCTCTGCAGCTAATGAGGTCCTGCCACAACGGAAAGAGGGAGTTAATAAAGCCATTGGAG
CATCCAT

FIGURE 397

MAASCVLLHTGQKMPLIGLGTWKSEPGQVKAAVKYALSVGYRHIDCAAIYGNEPEIGEALKEDVGPGKAVPREEL
FVTSKLWNTKHHPEDVEPALRKTLADLQLEYLDLYLMHWPYAFERGDNPFPKNADGTICYDSTHYKETWKALEAL
VAKGLVQALGLSNFNSRQIDDILSVASVRPAVLQVECHPYLAQNELIAHCQARGLEVTAYSPLGSSDRAWRDPDE
PVLLEEPVVLALAEKYGRSPAQILLRWQVQRKVICIPKSITPSRILQNIKVFDFTFSPEEMKQLNALNKNWRYIV
PMLTVDGKRVPRDAGHPLYPFNDPY

FIGURE 398

GCGGCGCTCGCGCCAAGGGACGTGTTTCTGCGCTCGCGTGGTC**ATG**GAGGCGCTGCCGCTGCTAGCCGCGACAAC
TCCGGACCACGGCCGCCACCGAAGGCTGCTTCTGCTGCCGCTACTGCTGTTCCTGCTGCCGGCTGGAGCTGTGCA
GGGCTGGGAGACAGAGGAGAGGCCCCGGACTCGCGAAGAGGAGTGCCACTTCTACGCGGGTGGACAAGTGTACCC
GGGAGAGGCATCCCGGGTATCGGTCGCCGACCACTCCCTGCACCTAAGCAAAGCGAAGATTTCCAAGCCAGCGCC
CTACTGGGAAGGAACAGCTGTGATCGATGGAGAATTTAAGGAGCTGAAGTTAACTGATTATCGTGGGAAATACTT
GGTTTTCTTCTTCTACCCACTTGATTTCACATTTGTGTGTCCAACTGAAATTATCGCTTTTGGCGACAGACTTGA
AGAATTCAGATCTATAAATACTGAAGTGGTAGCATGCTCTGTTGATTCACAGTTTACCCATTTGGCCTGGATTAA
TACCCCTCGAAGACAAGGAGGACTTGGGCCAATAAGGATTCCACTTCTTTCAGATTTGACCCATCAGATCTCAAA
GGACTATGGTGTATACCTAGAGGACTCAGGCCACACTCTTAGAGGTCTCTTCATTATTGATGACAAAGGAATCCT
AAGACAAATTACTCTGAATGATCTTCCTGTGGGTAGATCAGTGGATGAGACACTACGTTTGGTTCAAGCATTCCA
GTACACTGACAAACACGGAGAAGTCTGCCCTGCTGGCTGGAAACCTGGTAGTGAAACAATAATCCCAGATCCAGC
TGGAAAGCTGAAGTATTTCGATAAACTGAAT**TGA**GAAATACTTCTTCAAGTTATGATGCTTGAAAGTTCTCAATA
AAGTTCACGGTTTCATTACCA

FIGURE 399

MEALPLLAATTPDHGRHRRLLLLPLLLFLLPAGAVQGWETEERPRTREEECHFYAGGQVYPGEASRVSVADHSLH
LSKAKISKPAPYWEGTAVIDGEFKELKLTDYRGKYLVFFFYPLDFTFVCPTEIIAFGDRLEEFRSINTEVVACSV
DSQFTHLAWINTPRRQGGLGPIRIPLLSDLTHQISKDYGVYLEDSGHTLRGLFIIDDKGILRQITLNDLPVGRSV
DETLRLVQAFQYTDKHGEVCPAGWKPGSETIIPDPAGKLKYFDKLN

FIGURE 400

CCGCTGGGCGTAGCTGCGACTCGGCGGAGTCCCGGCGGCGCGTCCTTGTTCTAACCCGGCGCGCC**ATG**ACCGTCG
CGCGGCCGAGCGTGCCCGCGGCGCTGCCCCTCCTCGGGGAGCTGCCCCGGCTGCTGCTGCTGGTGCTGTTGTGCC
TGCCGGCCGTGTGGGGTGACTGTGGCCTTCCCCCAGATGTACCTAATGCCCAGCCAGCTTTGGAAGGCCGTACAA
GTTTTCCCGAGGATACTGTAATAACGTACAAATGTGAAGAAAGCTTTGTGAAAATTCCTGGCGAGAAGGACTCAG
TGATCTGCCTTAAGGGCAGTCAATGGTCAGATATTGAAGAGTTCTGCAATCGTAGCTGCGAGGTGCCAACAAGGC
TAAATTCTGCATCCCTCAAACAGCCTTATATCACTCAGAATTATTTTCCAGTCGGTACTGTTGTGGAATATGAGT
GCCGTCCAGGTTACAGAAGAGAACCTTCTCTATCACCAAAACTAACTTGCCTTCAGAATTTAAAATGGTCCACAG
CAGTCGAATTTTGTAAAAAGAAATCATGCCCTAATCCGGGAGAAATACGAAATGGTCAGATTGATGTACCAGGTG
GCATATTATTTGGTGCAACCATCTCCTTCTCATGTAACACAGGGTACAAATTATTTGGCTCGACTTCTAGTTTTT
GTCTTATTTCAGGCAGCTCTGTCCAGTGGAGTGACCCGTTGCCAGAGTGCAGAGAAATTTATTGTCCAGCACCAC
CACAAATTGACAATGGAATAATTCAAGGGGAACGTGACCATTATGGATATAGACAGTCTGTAACGTATGCATGTA
ATAAAGGATTCACCATGATTGGAGAGCACTCTATTTATTGTACTGTGAATAATGATGAAGGAGAGTGGAGTGGCC
CACCACCTGAATGCAGAGGAAAATCTCTAACTTCCAAGGTCCCACCAACAGTTCAGAAACCTACCACAGTAAATG
TTCCAACTACAGAAGTCTCACCAACTTCTCAGAAAACCACCACAAAAACCACCACACCAAATGCTCAAGCAACAC
GGAGTACACCTGTTTCCAGGACAACCAAGCATTTTCATGAAACAACCCCAAATAAAGGAAGTGGAACCACTTCAG
GTACTACCCGTCTTCTATCTGGGCACACGTGTTTCACGTTGACAGGTTTGCTTGGGACGCTAGTAACCATGGGCT
TGCTGACT**TAG**CCAAAGAAGAGTTAAGAAGAAAATACACACAAGTATACAGACTGTTCCTAGTTTCTTAGACTTA
TCTGCATATTGGATAAAATAAATGCAATTGTGCTCTTCATTTAGGATGCTTTCATTGTCTTTAAGATGTGTTAGG
AATGTCAACAGAGCAAGGAGAAAAAAGGCAGTCCTGGAATCACATTCTTAGCACACCTACACCTCTTGAAAATAG
AACAACTTGCAGAATTGAGAGTGATTCCTTTCCTAAAAGTGTAAGAAAGCATAGAGATTTGTTCGTATTTAGAAT
GGGATCACGAGGAAAAGAGAAGGAAAGTGATTTTTTTCCACAAGATCTGTAATGTTATTTCCACTTATAAAGGAA
ATAAAAAATGAAAAACATTATTTGGATATCAAAAGCAAATAAAAACCCAATTCAGTCTCTTCTAAGCAAAATTGC
TAAAGAGAGATGAACCACATTATAAAGTAATCTTTGGCTGTAAGGCATTTTCATCTTTCCTTCGGGTTGGCAAAA
TATTTTAAAGGTAAAACATGCTGGTGAACCAGGGGTGTTGATGGTGATAAGGGAGGAATATAGAATGAAAGACTG
AATCTTCCTTTGTTGCACAAATAGAGTTTGGAAAAAGCCTGTGAAAGGTGTCTTCTTTGACTTAATGTCTTTAAA
AGTATCCAGAGATACTACAATATTAACATAAGAAAAGATTATATATTATTTCTGAATCGAGATGTCCATAGTCAA
ATTTGTAAATCTTATTCTTTTGTAATATTTATTTATATTTATTTATGACAGTGAACATTCTGATTTTACATGTAA
AACAAGAAAAGTTGAAGAAGATATGTGAAGAAAAATGTATTTTTCCTAAATAGAAATAAATGATCCCATTTTTTG
GT

FIGURE 401

MTVARPSVPAALPLLGELPRLLLLVLLCLPAVWGDCGLPPDVPNAQPALEGRTSFPEDTVITYKCEESFVKIPGE
KDSVICLKGSQWSDIEEFCNRSCEVPTRLNSASLKQPYITQNYFPVGTVVEYECRPGYRREPSLSPKLTCLQNLK
WSTAVEFCKKKSCPNPGEIRNGQIDVPGGILFGATISFSCNTGYKLFGSTSSFCLISGSSVQWSDPLPECREIYC
PAPPQIDNGIIQGERDHYGYRQSVTYACNKGFTMIGEHSIYCTVNNDEGEWSGPPPECRGKSLTSKVPPTVQKPT
TVNVPTTEVSPTSQKTTTKTTTPNAQATRSTPVSRTTKHFHETTPNKGSGTTSGTTRLLSGHTCFTLTGLLGTLV
TMGLLT

FIGURE 402

ATGTTCCGAGCGGCGGCTCCGGGGCAGCTCCGGCGGGCGGCCTCATTGCTACGATTTCAGAGTACCCTGGTAATA
GCTGAGCATGCAAATGATTCCCTAGCACCCATTACTTTAAATACCATTACTGCAGCCACACGCCTTGGAGGTGAA
GTGTCCTGCTTAGTAGCTGGAACCAAATGTGACAAGGTGGCACAAGATCTCTGTAAAGTAGCAGGCATAGCAAAA
GTTCTGGTGGCTCAGCATGATGTGTACAAAGGCCTACTTCCAGAGGAACTGACACCATTGATTTTGGCAACTCAG
AAGCAGTTCAATTACACACACATCTGTGCTGGAGCATCTGCCTTCGGAAAGAACCTTTTGCCCAGAGTAGCAGCC
AAACTTGAGGTTGCCCCGATTTCTGACATCATTGCAATCAAGTCACCTGACACATTTGTGAGAACTATTTATGCA
GGAAATGCTCTATGTACAGTGAAGTGTGATGAGAAAGTGAAAGTGTTTTCTGTCCGTGGAACATCCTTTGATGCT
GCAGCAACAAGTGGCGGTAGTGCCAGTTCAGAAAAGGCATCAAGTACTTCACCAGTGGAAATATCAGAGTGGCTT
GACCAGAAATTAACAAAAAGTGATCGACCAGAGCTAACAGGTGCCAAAGTGGTGGTATCTGGTGGTCGAGGCTTG
AAGAGTGGAGAGAACTTTAAGTTGTTATATGACTTGGCAGATCAACTACATGCTGCAGTTGGTGCTTCCCGTGCT
GCTGTTGATGCTGGCTTTGTTCCCAATGACATGCAAGTTGGACAGACGGGAAAAATAGTAGCACCAGAACTTTAT
ATTGCTGTTGGAATATCTGGAGCCATCCAACATTTAGCTGGGATGAAAGACAGCAAGACAATTGTGGCAATTAAT
AAAGACCCAGAAGCTCCAATTTTCCAAGTGGCAGATTATGGAATAGTTGCAGATTTATTTAAGGTAGTTCCTGAA
ATGACTGAGATATTGAAGAAAAAA**TGA**ATCAGGATCATGCCTTAAAAAGAAAACTTTTGTTAAAGTATTCCACTG
AAATCACAGATATTTGTGGGTATTATAACAATCATTGGAAAGCATGGAGAGCTACATTTCATAATTTGAGGGAAA
ATTTCTAACAGATGCCAGAATGCTTGTTTATGGGATTGCTGTGTTTCCTTTTAATTATTTGTGGTTCCAAACAAT
TATTGTTTGAACTTTTTTAATTCTGTACTAAAATCTATAATAAAGCTTTTCCACAGCTTTAAAACT

FIGURE 403

MFRAAAPGQLRRAASLLRFQSTLVIAEHANDSLAPITLNTITAATRLGGEVSCLVAGTKCDKVAQDLCKVAGIAK
VLVAQHDVYKGLLPEELTPLILATQKQFNYTHICAGASAFGKNLLPRVAAKLEVAPISDIIAIKSPDTFVRTIYA
GNALCTVKCDEKVKVFSVRGTSFDAAATSGGSASSEKASSTSPVEISEWLDQKLTKSDRPELTGAKVVVSGGRGL
KSGENFKLLYDLADQLHAAVGASRAAVDAGFVPNDMQVGQTGKIVAPELYIAVGISGAIQHLAGMKDSKTIVAIN
KDPEAPIFQVADYGIVADLFKVVPEMTEILKKK

FIGURE 404

CTGATCCGGGCCGGGCGGGAAGTCGGGTCCCGAGGCTCCGGCTCGGCAGACCGGGCGGAAAGCAGCCGAGCGGCC
ATGGAGCTGTGCGGGCTGGGGCTGCCCCGGCCGCCCATGCTGCTGGCGCTGCTGTTGGCGACACTGCTGGCGGCG
ATGTTGGCGCTGCTGACTCAGGTGGCGCTGGTGGTGCAGGTGGCGGAGGCGGCTCGGGCCCCGAGCGTCTCGGCC
AAGCCGGGGCCGGCGCTGTGGCCCCTGCCGCTCTCGGTGAAGATGACCCCGAACCTGCTGCATCTCGCCCCGGAG
AACTTCTACATCAGCCACAGCCCCAATTCCACGGCGGGCCCCTCCTGCACCCTGCTGGAGGAAGCGTTTCGACGA
TATCATGGCTATATTTTTGGTTTCTACAAGTGGCATCATGAACCTGCTGAATTCCAGGCTAAAACCCAGGTTCAG
CAACTTCTTGTCTCAATCACCCTTCAGTCAGAGTGTGATGCTTTCCCCAACATATCTTCAGATGAGTCTTATACT
TTACTTGTGAAAGAACCAGTGGCTGTCCTTAAGGCCAACAGAGTTTGGGGAGCATTACGAGGTTTAGAGACCTTT
AGCCAGTTAGTTTATCAAGATTCTTATGGAACTTTCACCATCAATGAATCCACCATTATTGATTCTCCAAGGTTT
TCTCACAGAGGAATTTTGATTGATACATCCAGACATTATCTGCCAGTTAAGATTATTCTTAAAACTCTGGATGCC
ATGGCTTTTAATAAGTTTAATGTTCTTCACTGGCACATAGTTGATGACCAGTCTTTCCCATATCAGAGCATCACT
TTTCCTGAGTTAAGCAATAAAGGAAGCTATTCTTTGTCTCATGTTTATACACCAAATGATGTCCGTATGGTGATT
GAATATGCCAGATTACGAGGAATTCGAGTCCTGCCAGAATTTGATACCCCTGGGCATACACTATCTTGGGGAAAA
GGTCAGAAAGACCTCCTGACTCCATGTTACAGTAGACAAAACAAGTTGGACTCTTTTGGACCTATAAACCCTACT
CTGAATACAACATACAGCTTCCTTACTACATTTTTCAAAGAAATTAGTGAGGTGTTTCCAGATCAATTCATTCAT
TTGGGAGGAGATGAAGTGGAATTTAAATGTTGGGAATCAAATCCAAAAATTCAAGATTTCATGAGGCAAAAAGGC
TTTGGCACAGATTTTAAGAAACTAGAATCTTTCTACATTCAAAAGGTTTTGGATATTATTGCAACCATAAACAAG
GGATCCATTGTCTGGCAGGAGGTTTTTGATGATAAAGCAAAGCTTGCGCCGGGCACAATAGTTGAAGTATGGAAA
GACAGCGCATATCCTGAGGAACTCAGTAGAGTCACAGCATCTGGCTTCCCTGTAATCCTTTCTGCTCCTTGGTAC
TTAGATTTGATTAGCTATGGACAAGATTGGAGGAAATACTATAAAGTGGAACCTCTTGATTTTGGCGGTACTCAG
AAACAGAAACAACTTTTCATTGGTGGAGAAGCTTGTCTATGGGGAGAATATGTGGATGCAACTAACCTCACTCCA
AGATTATGGCCTCGGGCAAGTGCTGTTGGTGAGAGACTCTGGAGTTCCAAAGATGTCAGAGATATGGATGACGCC
TATGACAGACTGACAAGGCACCGCTGCAGGATGGTCGAACGTGGAATAGCTGCACAACCTCTTTATGCTGGATAT
TGTAACCATGAGAACATG**TAA**AAAATGGAGGGGAAAAAGGCCACAGCAATCTGTACTACAATCAACTTTATTTTG
AAATCATGTAAAATAAGATATTAGACTTTTTTGAATAAAATATTTTTATTGATTGAA

FIGURE 405

MELCGLGLPRPPMLLALLLATLLAAMLALLTQVALVVQVAEAARAPSVSAKPGPALWPLPLSVKMTPNLLHLAPE
NFYISHSPNSTAGPSCTLLEEAFRRYHGYIFGFYKWHHEPAEFQAKTQVQQLLVSITLQSECDAFPNISSDESYT
LLVKEPVAVLKANRVWGALRGLETFSQLVYQDSYGTFTINESTIIDSPRFSHRGILIDTSRHYLPVKIILKTLDA
MAFNKFNVLHWHIVDDQSFPYQSITFPELSNKGSYSLSHVYTPNDVRMVIEYARLRGIRVLPEFDTPGHTLSWGK
GQKDLLTPCYSRQNKLDSFGPINPTLNTTYSFLTTFFKEISEVFPDQFIHLGGDEVEFKCWESNPKIQDFMRQKG
FGTDFKKLESFYIQKVLDIIATINKGSIVWQEVFDDKAKLAPGTIVEVWKDSAYPEELSRVTASGFPVILSAPWY
LDLISYGQDWRKYYKVEPLDFGGTQKQKQLFIGGEACLWGEYVDATNLTPRLWPRASAVGERLWSSKDVRDMDDA
YDRLTRHRCRMVERGIAAQPLYAGYCNHENM

FIGURE 406

CTGGTCCCGAGCACGAGCTGTGAGGGGATTCACTTGTGTGCGGAACTCCTCGGAACC**ATG**GCGTCCCTTTCCCTT
GCACCTGTTAACATCTTTAAGGCAGGAGCTGATGAAGAGAGAGCAGAGACAGCTCGTCTGACTTCTTTTATTGGT
GCCATCGCCATTGGAGACTTGGTAAAGAGCACCTTGGGACCCAAAGGCATGGACAAAATTCTTCTAAGCAGTGGA
CGAGATGCCTCTCTTATGGTAACCAATGATGGTGCCACTATTCTAAAAAACATTGGTGTTGACAATCCAGCAGCT
AAAGTTTTAGTTGATATGTCAAGGGTTCAAGATGATGAAGTTGGTGATGGCACTACCTCTGTTACCGTTTTAGCA
GCAGAATTATTAAGGGAAGCAGAATCTTTAATTGCAAAAAAGATTCATCCACAGACCATCATAGCGGGTTGGAGA
GAAGCCACGAAGGCTGCAAGAGAGGCGCTGTTGAGTTCTGCAGTTGATCATGGTTCCGATGAAGTTAAATTCCGT
CAAGATTTAATGAATATTGCGGGCACAACATTATCCTCAAAACTTCTTACTCATCACAAAGACCACTTTACAAAG
TTAGCTGTAGAAGCAGTTCTCAGACTGAAAGGCTCTGGCAACCTGGAGGCAATTCATATTATCAAGAAGCTAGGA
GGAAGTTTGGCAGATTCCTATTTAGATGAAGGCTTCCTGTTGGATAAAAAAATTGGAGTAAATCAACCAAAACGA
ATTGAAAATGCTAAAATTCTTATTGCAAATACTGGTATGGATACAGACAAAATAAAGATATTTGGTTCCCGGGTA
AGAGTTGACTCTACAGCAAAGGTTGCAGAAATAGAACATGCGGAAAAGGAAAAAATGAAGGAGAAAGTTGAACGT
ATTCTTAAGCATGGAATAAATTGCTTTATTAACAGGCAATTAATTTATAATTATCCTGAACAGCTCTTTGGTGCT
GCTGGTGTCATGGCTATTGAGCATGCAGATTTTGCAGGTGTGGAACGCCTAGCTCTTGTCACAGGTGGTGAAATT
GCCTCTACCTTTGATCACCCAGAACTGGTGAAGCTTGGAAGTTGCAAACTTATCGAGGAAGTCATGATTGGAGAA
GACAAACTCATTCACTTTTCTGGGGTTGCCCTTGGTGAGGCTTGTACCATTGTTTTGCGTGGTGCCACTCAACAA
ATTTTAGATGAAGCAGAAAGATCATTGCATGATGCTCTTTGTGTTCTTGCGCAAACTGTAAAGGACTCTAGAACA
GTTTATGGAGGAGGCTGTTCTGAGATGTTGATGGCTCATGCTGTGACACAGCTTGCCAATAGAACACCAGGCAAA
GAAGCTGTTGCAATGGAGTCTTATGCTAAAGCACTGAGAATGTTGCCAACCATCATAGCTGACAATGCAGGCTAT
GACAGTGCAGACCTGGTGGCACAGCTCAGGGCTGCTCACAGTGAAGGCAATACCACTGCTGGATTGGATATGAGG
GAAGGCACCATTGGAGATATGGCTATCCTGGGTATAACAGAAAGTTTTCAAGTGAAGCGACAGGTTCTTCTGAGT
GCAGCTGAAGCAGCAGAGGTGATTCTGCGTGTGGACAACATCATCAAAGCGGCACCCAGGAAACGTGTCCCTGAT
CACCACCCCTGT**TAA**GCATTCCCACGTGCTGTCGATCTTTGGACCAGTTTCTAGCAAAGTTGTGTTTGAAAGATA
CTCTATTAAAGAAGACTGTGGAATCTGTTTATCGGTGCCCATTATATCCTTAAGTTTGGATATTTAGCTGACCTT
CGCTTTAACATAGGTCTAATTTATTTGCCGTGTCATTTTCCATACAAATCAGTTGATTTAAAGGAGTTCATTTCG
CATACTGGGCATTAAAATAAAAATTTGAACAATGAAAGGAAAAAAAGGAGAAAAAAAAAA

FIGURE 407

MASLSLAPVNIFKAGADEERAETARLTSFIGAIAIGDLVKSTLGPKGMDKILLSSGRDASLMVTNDGATILKNIG
VDNPAAKVLVDMSRVQDDEVGDGTTSVTVLAAELLREAESLIAKKIHPQTIIAGWREATKAAREALLSSAVDHGS
DEVKFRQDLMNIAGTTLSSKLLTHHKDHFTKLAVEAVLRLKGSGNLEAIHIIKKLGGSLADSYLDEGFLLDKKIG
VNQPKRIENAKILIANTGMDTDKIKIFGSRVRVDSTAKVAEIEHAEKEKMKEKVERILKHGINCFINRQLIYNYP
EQLFGAAGVMAIEHADFAGVERLALVTGGEIASTFDHPELVKLGSCKLIEEVMIGEDKLIHFSGVALGEACTIVL
RGATQQILDEAERSLHDALCVLAQTVKDSRTVYGGGCSEMLMAHAVTQLANRTPGKEAVAMESYAKALRMLPTII
ADNAGYDSADLVAQLRAAHSEGNTTAGLDMREGTIGDMAILGITESFQVKRQVLLSAAEAAEVILRVDNIIKAAP
RKRVPDHHPC

FIGURE 408A

GAATCCAAGGGGGCCAGTTCCTGCCGTCTGCTCTTCTGCCTCTTGATCTCCGCCACCGTCTTCAGGCCAGGCCTT
GGATGGTATACTGTAAATTCAGCATATGGAGATACCATTATCATACCTTGCCGACTTGACGTACCTCAGAATCTC
ATGTTTGGCAAATGGAAATATGAAAAGCCCGATGGCTCCCCAGTATTTATTGCCTTCAGATCCTCTACAAAGAAA
AGTGTGCAGTACGACGATGTACCAGAATACAAAGACAGATTGAACCTCTCAGAAAACTACACTTTGTCTATCAGT
AATGCAAGGATCAGTGATGAAAAGAGATTTGTGTGCATGCTAGTAACTGAGGACAACGTGTTTGAGGCACCTACA
ATAGTCAAGGTGTTCAAGCAACCATCTAAACCTGAAATTGTAAGCAAAGCACTGTTTCTCGAAACAGAGCAGCTA
AAAAAGTTGGGTGACTGCATTTCAGAAGACAGTTATCCAGATGGCAATATCACATGGTACAGGAATGGAAAAGTG
CTACATCCCCTTGAAGGAGCGGTGGTCATAATTTTTAAAAAGGAAATGGACCCAGTGACTCAGCTCTATACCATG
ACTTCCACCCTGGAGTACAAGACAACCAAGGCTGACATACAAATGCCATTCACCTGCTCGGTGACATATTATGGA
CCATCTGGCCAGAAAACAATTCATTCTGAACAGGCAGTATTTGATATTTACTATCCTACAGAGCAGGTGACAATA
CAAGTGCTGCCACCAAAAAATGCCATCAAAGAAGGGGATAACATCACTCTTAAATGCTTAGGGAATGGCAACCCT
CCCCCAGAGGAATTTTTGTTTTACTTACCAGGACAGCCCGAAGGAATAAGAAGCTCAAATACTTACACACTGACG
GATGTGAGGCGCAATGCAACAGGAGACTACAAGTGTTCCCTGATAGACAAAAAAAGCATGATTGCTTCAACAGCC
ATCACAGTTCACTATTTGGATTTGTCCTTAAACCCAAGTGGAGAAGTGACTAGACAGATTGGTGATGCCCTACCC
GTGTCATGCACAATATCTGCTAGCAGGAATGCAACTGTGGTATGGATGAAAGATAACATCAGGCTTCGATCTAGC
CCGTCATTTTCTAGTCTTCATTATCAGGATGCTGGAAACTATGTCTGCGAAACTGCTCTGCAGGAGGTTGAAGGA
CTAAAGAAAAGAGAGTCATTGACTCTCATTGTAGAAGGCAAACCTCAAATAAAAATGACAAAGAAAACTGATCCC
AGTGGACTATCTAAAACAATAATCTGCCATGTGGAAGGTTTTCCAAAGCCAGCCATTCAGTGGACAATTACTGGC
AGTGGAAGCGTCATAAACCAAACAGAGGAATCTCCTTATATTAATGGCAGGTATTATAGTAAAATTATCATTTCC
CCTGAAGAGAATGTTACATTAACTTGCACAGCAGAAAACCAACTGGAGAGAACAGTAAACTCCTTGAATGTCTCT
GCTATAAGTATTCCAGAACACGATGAGGCAGACGAGATAAGTGATGAAAACAGAGAAAAGGTGAATGACCAGGCA
AAACTAATTGTGGGAATCGTTGTTGGTCTCCTCCTTGCTGCCCTTGTTGCTGGTGTCGTCTACTGGCTGTACATG
AAGAAGTCAAAGACTGCATCAAAACATGTAAACAAGGACCTCGGTAATATGGAAGAAAACAAAAAGTTAGAAGAA
AACAATCACAAAACTGAAGCCTAAGAGAGAAACTGTCCTAGTTGTCCAGAGATAAAAATCATATAGACCAATTGA
AGCATGAACGTGGATTGTATTTAAGACATAAACAAAGACATTGACAGCAATTCATGTTCAAGTATTAAGCAGTTC
ATTCTACCAAGCTGTCACAGGTTTTCAGAGAATTATCTCAAGTAAAACAAATGAAATTTAATTACAAACAATAAG
AACAAGTTTTGGCAGCCATGATAATAGGTCATATGTTGTGTTTGGTTCAATTTTTTTTCCGTAAATGTCTGCACT
GAGGATTTCTTTTTGGTTTGCCTTTTATGTAAATTTTTTACGTAGCTATTTTTATACACTGTAAGCTTTGTTCTG
GGAGTTGCTGTTAATCTGATGTATAATGTAATGTTTTTATTTCAATTGTTTATATGGATAATCTGAGCAGGTACA
TTTCTGATTCTGATTGCTATCAGCAATGCCCCAAACTTTCTCATAAGCACCTAAAACCCAAAGGTGGCAGCTTGT
GAAGATTGGGGACACTCATATTGCCCTAATTAAAAACTGTGATTTTTATCACAAGGGAGGGGAGGCCGAGAGTCA
GACTGATAGACACCATAGGAGCCGACTCTTTGATATGCCACCAGCGAACTCTCAGAAATAAATCACAGATGCATA
TAGACACACATACATAATGGTACTCCCAAACTGACAATTTTACCTATTCTGAAAAAGACATAAAACAGAATTTGG
TAGCACTTACCTCTACAGACACCTGCTAATAAATTATTTTCTGTCAAAAGAAAAAACACAAGCATGTGTGAGAGA
CAGTTTGGAAAAATCATGGTCAACATTCCCATTTTCATAGATCACAATGTAAATCACTATAATTACAAATTGGTG
TTAAATCCTTTGGGTTATCCACTGCCTTAAAATTATACCTATTTCATGTTTAAAAAGATATCAATCAGAATTGGA
GTTTTTAACAGTGGTCATTATCAAAGCTGTGTTATTTTCCACAGAATATAGAATATATATTTTTTTCGTGTGTGT
TTTTGTTAACTACCCTACAGATATTGAATGCACCTTGAGATAATTTAGTGTTTTAACTGATACATAATTTATCAA
GCAGTACATGAAAGTGTAATAATAAAATGTCTATGTATCTTTAGTTACATTCAAATTTGTAACTTTATAAACATG
TTTTATGCTTGAGGAAATTTTTAAGGTGGTAGTATAAATGGAAACTTTTTGAAGTAGACCAGATATGGGCTACTT
GTGACTAGACTTTTAAACTTTGCTCTTTCAAGCAGAAGCCTGGTTTCTGGGAGAACACTGCACAGTGATTTCTTT
CCCAGGATTTACACAACTTTAAAGGGAAGATAAATGAACATCAGATTTCTAGGTATAGAACTATGTTATTGAAAG
GAAAAGGAAAACTGGTGTTTGTTTCTTAGACTCATGAAATAAAAAATTATGAAGGCAATGAAAAATAAATTGAAA
ATTAAAGTCAGATGAGAATAGGAATAATACTTTGCCACTTCTGCATTATTTAGAAACATACGTTATTGTACATTT
GTAAACCATTTACTGTCTGGGCAATAGTGACTCCGTTTAATAAAAGCTTCCGTAGTGCATTGGTATGGATTAAAT
GCATAAAATATCTTAGACTCGATGCTGTATAAAATATTATGGGAAAAAAGAAATACGTTATTTTGCCTCTAAACT
TTTATTGAAGTTTTATTTGGCAGGAAAAAAAATTGAATCTTGGTCAACATTTAAACCAAAGTAAAAGGGGAAAAA
CCAAAGTTATTTGTTTTGCATGGCTAAGCCATTCTGTTATCTCTGTAAATACTGTGATTTCTTTTTTATTTTCTC

FIGURE 408B

TTTAGAATTTTGTTAAAGAAATTCTAAAATTTTTAAACACCTGCTCTCCACAATAAATCACAAACACTAAAATAA
AATTACTTCCATATAAATATTATTTTCTCTTTTGGTGTGGGAGATCAAAGGTTTAAAGTCTAACTTCTAAGATAT
ATTTGCAGAAAGAAGCAACATGACAATAGAGAGAGTTATGCTACATTATTTCTTGGTTTCCACTTGCAATGGTTA
ATTAAGTCCAAAAACAGCTGTCAGAACCTCGAGAGCAGAACATGAGAAACTCAGAGCTCTGGACCGAAAGCAGAA
AGTTTGCCGGAAAAAAAAAGACCACATTATTACCATCGATTCAGTGCCTGGATAAAGAGGAAAGCTTACTTGTTT
AATGGCAGCCACATGCACGAAGATGCTAAGAAGAAAAAGAATTCCAAATCCTCAACTTTTGAGGTTTCGGCTCTC
CAATTTAACTCTTTGGCAACAGGAAACAGGTTTTGCAAGTTCAAGGTTCACTCCCTATATGTGATTATAGGAATT
GTTTGTGGAAATGGATTAACATACCCGTCTATGCCTAAAAGATAATAAGAAAACTGAAATATGTCTTCAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 409A

TCAACACAGGACA**ATG**CAAGCCCATGAGCTGTTCCGGTATTTTCGAATGCCAGAGCTGGTTGACTTCCGACAGTA
CGTGCGTACTCTTCCGACCAACACGCTTATGGGCTTCGGAGCTTTTGCAGCACTCACCACCTTCTGGTACGCCAC
GAGACCCAAACCCCTGAAGCCGCCATGCGACCTCTCCATGCAGTCAGTGGAAGTGGCGGGTAGTGGTGGTGCACG
AAGATCCGCACTACTTGACAGCGACGAGCCCTTGGTGTATTTCTATGATGATGTCACAACATTATACGAAGGTTT
CCAGAGGGGAATACAGGTGTCAAATAATGGCCCTTGTTTAGGCTCTCGGAAACCAGACCAACCCTATGAATGGCT
TTCATATAAACAGGTTGCAGAATTGTCGGAGTGCATAGGCTCAGCACTGATCCAGAAGGGCTTCAAGACTGCCCC
AGATCAGTTCATTGGCATCTTTGCTCAAAATAGACCTGAGTGGGTGATTATTGAACAAGGATGCTTTGCTTATTC
GATGGTGATCGTTCCACTTTATGATACCCTTGGAAATGAAGCCATCACGTACATAGTCAACAAAGCTGAACTCTC
TCTGGTTTTTGTTGACAAGCCAGAGAAGGCCAAACTCTTATTAGAGGGTGTAGAAAATAAGTTAATACCAGGCCT
TAAAATCATAGTTGTCATGGATGCCTACGGCAGTGAACTGGTGGAACGAGGCCAGAGGTGTGGGGTGGAAGTCAC
CAGCATGAAGGCGATGGAGGACCTGGGAAGAGCCAACAGACGGAAGCCCAAGCCTCCAGCACCTGAAGATCTTGC
AGTAATTTGTTTCACAAGTGGAACTACAGGCAACCCCAAAGGAGCAATGGTCACTCACCGAAACATAGTGAGCGA
TTGTTCAGCTTTTGTGAAAGCAACAGAGAATACAGTCAATCCTTGCCCAGATGATACTTTGATATCTTTCTTGCC
TCTCGCCCATATGTTTGAGAGAGTTGTAGAGTGTGTAATGCTGTGTCATGGAGCTAAAATCGGATTTTTCCAAGG
AGATATCAGGCTGCTCATGGATGACCTCAAGGTGCTTCAACCCACTGTCTTCCCCGTGGTTCCAAGACTGCTGAA
CCGGATGTTTGACCGAATTTTCGGACAAGCAAACACCACGCTGAAGCGATGGCTCTTGGACTTTGCCTCCAAGAG
GAAAGAAGCAGAGCTTCGCAGCGGCATCATCAGAAACAACAGCCTGTGGGACCGGCTGATCTTCCACAAAGTACA
GTCGAGCCTGGGCGGAAGAGTCCGGCTGATGGTGACAGGAGCCGCCCCGGTGTCTGCCACTGTGCTGACGTTCCT
CAGAGCAGCCCTGGGCTGTCAGTTTTATGAAGGATACGGACAGACAGAGTGCACTGCCGGGTGCTGCCTAACCAT
GCCTGGAGACTGGACCGCAGGCCATGTTGGGGCCCCGATGCCGTGCAATTTGATAAAACTTGTTGATGTGGAAGA
AATGAATTACATGGCTGCCGAGGGCGAGGGCGAGGTGTGTGTGAAAGGGCCAAATGTATTTCAGGGCTACTTGAA
GGACCCAGCGAAAACAGCAGAAGCTTTGGACAAAGACGGCTGGTTACACACAGGGGACATTGGAAAATGGTTACC
AAATGGCACCTTGAAAATTATCGACCGGAAAAAGCACATATTTAAGCTGGCACAAGGAGAATACATAGCCCCTGA
AAAGATTGAAAATATCTACATGCGAAGTGAGCCTGTTGCTCAGGTGTTTGTCCACGGAGAAAGCCTGCAGGCATT
TCTCATTGCAATTGTGGTACCAGATGTTGAGACATTATGTTCCTGGGCCCAAAAGAGAGGATTTGAAGGGTCGTT
TGAGGAACTGTGCAGAAATAAGGATGTCAAAAAAGCTATCCTCGAAGATATGGTGAGACTTGGGAAGGATTCTGG
TCTGAAACCATTTGAACAGGTCAAAGGCATCACATTGCACCCTGAATTATTTTCTATCGACAATGGCCTTCTGAC
TCCAACAATGAAGGCGAAAAGGCCAGAGCTGCGGAACTATTTCAGGTCGCAGATAGATGACCTCTATTCCACTAT
CAAGGTT**TAG**TGTGAAGAAGAAAGCTCAGAGGAAATGGCACAGTTCCACAATCTCTTCTCCTGCTGATGGCCTTC
ATGTTGTTAATTTTGAATACAGCAAGTGTAGGGAAGGAAGCGTTCGTGTTTGACTTGTCCATTCGGGGTTCTTCT
CATAGGAATGCTAGAGGAAACAGAACACCGCCTTACAGTCACCTCATGTTGCAGACCATGTTTATGGTAATACAC
ACTTTCCAAAATGAGCCTTAAAAATTGTAAAGGGGATACTATAAATGTGCTAAGTTATTTGAGACTTCCTCAGTT
TAAAAAGTGGGTTTTAAATCTTCTGTCTCCCTGCTTTTCTAATCAAGGGGTTAGGACTTTGCTATCTCTGAGATG
TCTGCTACTTGCTGCAAATTCTGCAGCTGTCTGCTGCTCTAAAGAGTACAGTGCACTAGAGGGAAGTGTTCCCTT
TAAAAATAAGAACAACTGTCCTGGCTGGAGAATCTCACAAGCGGACCAGAGATCTTTTTAAATCCCTGCTACTGT
CCCTTCTCACAGGCATTCACAGAACCCTTCTGATTCGTAAGGGTTACGAAACTCATGTTCTTCTCCAGTCCCCTG
TGGTTTCTGTTGGAGCATAAGGTTTCCAGTAAGCGGGAGGGCAGATCCAACTCAGAACCATGCAGATAAGGAGCC
TCTGGCAAATGGGTGCTCATCAGAACGCGTGGATTCTCTTTCATGGCAGAATGCTCTTGGACTCGGTTCTCCAGG
CCTGATTCCCCGACTCCATCCTTTTTCAGGGGTTATTTAAAAATCTGCCTTAGATTCTATAGTGAAGACAAGCAT
TTCAAGAAAGAGTTACCTGGATCAGCCATGCTCAGCTGTGACGCCTGAATAACTGTCTACTTTATCTTCACTGAA
CCACTCACTCTGTGTAAAGGCCAACAGATTTTTAATGTGGTTTTCATATCAAAAGATCATGTTGGGATTAACTTG
CCTTTTTCCCCAAAAAATAAACTCTCAGGCAAGCATTTCTTTAAAGCTATTAAGGGAGTATATACTTGAGTACTT
ATTGAAATGGACAGTAATAAGCAAATGTTCTTATAATGCTACCTGATTTCTATGAAATGTGTTTGACAAGCCAAA
ATTCTAGGATGTAGAAATCTGGAAAGTTCATTTCCTGGGATTCACTTCTCCAGGGATTTTTTAAAGTTAATTTGG
GAAATTAACAGCAGTTCACTTTATTGTGAGTCTTTGCCACATTTGACTGAATTGAGCTGTCATTTGTACATTTAA
AGCAGCTGTTTTGGGGTCTGTGAGAGTACATGTATTATATACAAGCACAACAGGGCTTGCACTAAAGAATTGTCA
TTGTAATAACACTACTTGGTAGCCTAACTTCATATATGTATTCTTAATTGCACAAAAAGTCAATAATTTGTCACC
TTGGGGTTTTGAATGTTTGCTTTAAGTGTTGGCTATTTCTATGTTTTATAAACCAAAACAAAATTTCCAAAAACA

FIGURE 409B

ATGAAGGAAACCAAAATAAATATTTCTGCATTTCG

FIGURE 410

MQAHELFRYFRMPELVDFRQYVRTLPTNTLMGFGAFAALTTFWYATRPKPLKPPCDLSMQSVEVAGSGGARRSAL
LDSDEPLVYFYDDVTTLYEGFQRGIQVSNNGPCLGSRKPDQPYEWLSYKQVAELSECIGSALIQKGFKTAPDQFI
GIFAQNRPEWVIIEQGCFAYSMVIVPLYDTLGNEAITYIVNKAELSLVFVDKPEKAKLLLEGVENKLIPGLKIIV
VMDAYGSELVERGQRCGVEVTSMKAMEDLGRANRRKPKPPAPEDLAVICFTSGTTGNPKGAMVTHRNIVSDCSAF
VKATENTVNPCPDDTLISFLPLAHMFERVVECVMLCHGAKIGFFQGDIRLLMDDLKVLQPTVFPVVPRLLNRMFD
RIFGQANTTLKRWLLDFASKRKEAELRSGIIRNNSLWDRLIFHKVQSSLGGRVRLMVTGAAPVSATVLTFLRAAL
GCQFYEGYGQTECTAGCCLTMPGDWTAGHVGAPMPCNLIKLVDVEEMNYMAAEGEGEVCVKGPNVFQGYLKDPAK
TAEALDKDGWLHTGDIGKWLPNGTLKIIDRKKHIFKLAQGEYIAPEKIENIYMRSEPVAQVFVHGESLQAFLIAI
VVPDVETLCSWAQKRGFEGSFEELCRNKDVKKAILEDMVRLGKDSGLKPFEQVKGITLHPELFSIDNGLLTPTMK
AKRPELRNYFRSQIDDLYSTIKV

FIGURE 411

GAGAATGGCTCAACTCTCCAAATAGAGAGAATTTCTATCAGTTGCAAGTACGAAAATTTCCTGCCGATTATATAA
AATACTGGGAGTTTGCAGTTTATCTGGAAGAATGTGAACTGGCTAAACAGCTTTATCCAAAGGAAAACGATTTGG
TGTTTTTAGCTCCTGAGAGAATAAATGAAGAGAAGAAAGATACAGAGAGAAATGACATACAAGATCTCCACGAAT
ATCATTCTGGTTATGTTCATAAATTTCGCCGCACGTCAGTC**ATG**CGTAATGGGAAAACTGAGTGTTACCTTTCCA
TCCAGACTCAAGAGAACTTTCCGGCCAATTTAAACGAACTTGTGAATTGTATTGTAATCAGTTCTCTGGTAACTA
CACAAAGGAAGTTGAAAGCCATGTCTCTGTTGGGTAGTCGGAACCAACTGGCTAGAGCTGTTCTGAATCCAAACC
CTATGGACTTCTGTACAAAAGATTTACTGACTACAACATCTGAGAGAATTATTGCGTACTTAAGAGATTTCAATG
AAGATCAAAAGAAAGCAATAGAAACTGCATATGCTATGGTGAAACACTCACCATCAGTTGCCAAAATCTGCTTGA
TTCATGGACCACCTGGAACAGGAAAATCAAAAACTATTGTTGGCCTCCTCTATCGTCTACTGACAGAGAACCAGA
GGAAGGGGCATTCAGACGAAAACTCCAATGCCAAAATCAAACAAAACCGTGTCCTCGTGTGTGCACCTTCCAATG
CAGCTGTTGATGAACTCATGAAAAAAATTATCCTTGAATTCAAAGAAAAATGTAAAGACAAGAAGAATCCTTTAG
GAAACTGTGGAGATATAAATTTAGTACGACTGGGTCCAGAAAAGTCTATTAATAGTGAGGTTCTAAAGTTCAGTT
TGGACAGCCAAGTAAACCACAGAATGAAAAAAGAGTTACCTTCTCATGTTCAGGCGATGCATAAAAGAAAGGAAT
TTCTAGATTATCAGCTGGATGAGCTTTCCCGGCAGCGAGCTCTATGCCGAGGTGGACGGGAAATACAGAGGCAAG
AATTAGATGAAAACATTTCCAAAGTTTCTAAGGAAAGGCAGGAACTTGCTTCTAAAATTAAAGAGGTTCAAGGAC
GCCCACAGAAAACACAGAGTATCATCATCTTAGAGTCCCATATCATCTGCTGCACGTTGAGCACAAGTGGTGGTT
TACTACTTGAGTCTGCTTTCCGTGGGCAAGGGGGTGTCCCCTTCAGCTGTGTCATTGTTGATGAGGCTGGACAGT
CTTGTGAAATTGAGACTCTTACTCCACTCATCCATCGCTGCAATAAGCTCATCCTAGTAGGAGATCCTAAGCAGC
TCCCTCCGACAGTCATCTCTATGAAAGCACAGGAGTATGGCTACGACCAGTCAATGATGGCTCGCTTCTGCAGAC
TGCTGGAAGAGAATGTAGAACACAACATGATCAGCAGGCTGCCCATTCTACAGCTCACTGTTCAGTACAGGATGC
ATCCAGACATATGCCTCTTCCCTTCTAATTATGTTTATAACAGAAACTTAAAAACAAATAGACAGACAGAAGCCA
TTCGATGTTCATCAGATTGGCCATTTCAGCCATACCTTGTGTTTGATGTTGGAGATGGTTCAGAAAGACGGGATA
ATGACTCATATATAAATGTTCAAGAAATAAAACTGGTGATGGAAATAATTAAGCTTATTAAAGACAAAAGAAAGG
ATGTTAGTTTTCGAAACATTGGCATAATAACTCATTACAAGGCCCAGAAGACGATGATTCAGAAGGATTTGGACA
AAGAGTTCGATAGAAAAGGACCAGCAGAAGTAGACACTGTGGATGCATTCCAGGGTCGGCAGAAGGATTGTGTTA
TTGTTACGTGTGTCAGAGCAAATAGCATCCAAGGTTCAATTGGATTCCTGGCAAGTTTGCAGAGATTGAATGTCA
CCATCACACGAGCCAAGTACAGCCTCTTCATCCTCGGACATTTGAGGACCCTGATGGAAAACCAGCATTGGAATC
AGCTGATTCAGGATGCTCAGAAGCGTGGTGCCATTATTAAGACCTGTGACAAAAACTATAGACATGATGCAGTGA
AGATTCTGAAACTCAAGCCTGTGCTGCAGAGAAGTCTCACTCACCCTCCTACCATAGCCCCAGAGGGGTCCAGAC
CCCAGGGTGGTTTGCCCAGCAGCAAGCTAGACAGTGGATTTGCCAAGACATCTGTTGCTGCTTCTCTATACCACA
CACCCTCTGACTCCAAGGAAATTACTCTTACTGTTACTTCAAAGGACCCTGAAAGACCTCCTGTTCATGACCAAC
TTCAGGACCCACGACTGCTGAAGAGGATGGGCATTGAGGTCAAAGGAGGAATATTCCTTTGGGATCCACAACCCT
CGAGCCCCCAGCATCCTGGAGCAACACCTCCTACGGGCGAGCCGGGCTTCCCTGTCGTTCACCAGGACCTGAGCC
ATATACAGCAGCCCGCTGCTGTAGTGGCTGCTCTGAGCAGCCACAAACCTCCCGTGCGGGGCGAACCTCCAGCTG
CCAGTCCCGAGGCTTCCACGTGTCAGAGCAAATGTGATGACCCGGAAGAGGAGCTCTGTCACAGGAGAGAGGCCA
GGGCTTTCAGTGAAGGGGAGCAGGAGAAGTGTGGTTCCGAGACCCATCACACCAGGAGGAACTCTAGGTGGGACA
AGAGGACACTGGAGCAGGAGGACAGCAGTTCCAAGAAAAGAAAGCTTTTA**TAG**GAAAGCCCAGTGACATGGGCCA
GCAGCCACAGCATATTGTAAACTGAAGATGACCAGCTCGTGGGACCATCTAGATAAGCTTGTTTTTTGTAAGGAG
TTTGTGTGCTGTTGGAAAACATGGAAAATGCATCCTTAACACCTGAGCCTCTGGTCATCTTCAGTATTTTCTGTC
ATTTGCAAAAGCTTTCAGAGGGCATTGTGTATCCGTAATAATGTCCTTGAAGTCAGAGACTGGAAATGTTGATCT
CTTAGTCTTCTATAGACAAGGAGGTCAGACTGGAGTGAATGTTGTAAAAGTTGAAATGTATATTTGTATAGCAAA
TAACAAAATCCTTTTAAAATTT

FIGURE 412

MRNGKTECYLSIQTQENFPANLNELVNCIVISSLVTTQRKLKAMSLLGSRNQLARAVLNPNPMDFCTKDLLTTTS
ERIIAYLRDFNEDQKKAIETAYAMVKHSPSVAKICLIHGPPGTGKSKTIVGLLYRLLTENQRKGHSDENSNAKIK
QNRVLVCAPSNAAVDELMKKIILEFKEKCKDKKNPLGNCGDINLVRLGPEKSINSEVLKFSLDSQVNHRMKKELP
SHVQAMHKRKEFLDYQLDELSRQRALCRGGREIQRQELDENISKVSKERQELASKIKEVQGRPQKTQSIIILESH
IICCTLSTSGGLLLESAFRGQGGVPFSCVIVDEAGQSCEIETLTPLIHRCNKLILVGDPKQLPPTVISMKAQEYG
YDQSMMARFCRLLEENVEHNMISRLPILQLTVQYRMHPDICLFPSNYVYNRNLKTNRQTEAIRCSSDWPFQPYLV
FDVGDGSERRDNDSYINVQEIKLVMEIIKLIKDKRKDVSFRNIGIITHYKAQKTMIQKDLDKEFDRKGPAEVDTV
DAFQGRQKDCVIVTCVRANSIQGSIGFLASLQRLNVTITRAKYSLFILGHLRTLMENQHWNQLIQDAQKRGAIIK
TCDKNYRHDAVKILKLKPVLQRSLTHPPTIAPEGSRPQGGLPSSKLDSGFAKTSVAASLYHTPSDSKEITLTVTS
KDPERPPVHDQLQDPRLLKRMGIEVKGGIFLWDPQPSSPQHPGATPPTGEPGFPVVHQDLSHIQQPAAVVAALSS
HKPPVRGEPPAASPEASTCQSKCDDPEEELCHRREARAFSEGEQEKCGSETHHTRRNSRWDKRTLEQEDSSSKKR
KLL

FIGURE 413A

GCGGCGCTGGGTCGGTGGCGGAGGCTGAGGAGAAGGAGGAGCGGGCCGTGGAGGCTTCGCCGCCTAGGTACTGCT
ATAACCAGAATTTGGTAGAAAAAGGATTTACTTGTTGGGGCCCTCTTGATAAAAAGAG**ATG**TGGGGGGATTCTCG
ACCTGCTAACAGAACTGGACCTTTTCGTGGGAGCCAAGAAGAAAGGTTTGCTCCCGGGTGGAACAGGGATTATCC
TCCTCCTCCCCTTAAGAGTCATGCTCAAGAGAGACACTCTGGCAACTTTCCTGGCAGAGATTCACTTCCCTTTGA
TTTCCAGGGGCATTCGGGGCCTCCTTTTGCAAATGTAGAGGAGCATTCTTTCAGCTATGGAGCTAGAGACGGACC
GCATGGTGACTATCGAGGAGGGGAGGGACCTGGACATGATTTCAGGGGGGGAGATTTTTCGTCTTCTGATTTCCA
GAGCAGAGATTCATCACAGTTGGACTTCAGGGGTAGGGACATACATTCTGGGGATTTTCGGGATAGAGAAGGACC
ACCTATGGACTATAGGGGTGGAGATGGTACTTCTATGGATTATAGAGGTAGGGAGGCACCTCATATGAACTACAG
AGACAGGGATGCTCACGCTGTTGACTTCAGAGGTAGGGATGCTCCTCCATCTGACTTCAGGGGCCGGGGCACTTA
TGATTTAGATTTTAGAGGCCGGGATGGATCCCATGCAGATTTTAGGGGAAGGGATTTATCAGATTTGGATTTTAG
GGCCAGAGAACAGTCCCGTTCTGATTTTAGGAATAGAGATGTATCTGATTTGGACTTTAGAGACAAAGACGGAAC
ACAAGTAGACTTTAGAGGCCGAGGTTCAGGTACTACTGATCTAGACTTTAGGGACAGGGATACGCCACATTCAGA
TTTCAGAGGTAGACACCGATCTAGGACTGATCAGGATTTTAGGGGCAGAGAGATGGGATCTTGTATGGAATTTAA
AGATAGGGAGATGCCCCCTGTGGATCCAAATATTTTGGATTACATTCAGCCCTCTACACAAGATAGAGAACATTC
TGGTATGAATGTGAACAGGAGAGAAGAATCCACACATGACCATACGATAGAAAGGCCTGCTTTTGGCATTCAGAA
GGGAGAATTTGAGCATTCAGAAACAAGAGAAGGAGAAACACAAGGTGTAGCCTTTGAACATGAGTCTCCAGCAGA
CTTTCAGAACAGCCAAAGTCCAGTTCAAGACCAAGATAAGTCACAGCTTTCTGGACGTGAAGAGCAGAGTTCAGA
TGCTGGTCTGTTTAAAGAAGAAGGCGGTCTGGACTTTCTTGGGCGGCAAGACACCGATTACAGAAGCATGGAGTA
CCGTGATGTGGATCATAGGCTGCCAGGAAGCCAGATGTTTGGCTATGGCCAGAGCAAGTCTTTTCCAGAGGGCAA
AACTGCCCGAGATGCCCAACGGGACCTTCAGGATCAAGATTATAGGACCGGCCCAAGTGAGGAGAAACCCAGCAG
GCTTATTCGATTAAGTGGGGTACCTGAAGATGCCACAAAAGAAGAGATTCTTAATGCTTTTCGGACTCCTGATGG
CATGCCTGTAAAGAACTTGCAGTTGAAGGAGTATAACACAGGTTACGACTATGGCTATGTCTGCGTGGAGTTTTC
ACTCTTGGAAGATGCCATCGGATGCATGGAGGCCAACCAGGGAACTCTAATGATCCAGGACAAAGAAGTTACCCT
GGAGTATGTATCAAGCCTGGATTTTTGGTACTGCAAACGATGTAAGGCAAACATTGGTGGGCACCGATCTTCCTG
TTCATTCTGCAAGAACCCAAGAGAAGTGACAGAGGCCAAGCAAGAATTAATAACCTACCCTCAGCCTCAGAAAAC
ATCCATACCAGCACCATTGGAAAAACAGCCCAACCAGCCCCTAAGACCAGCTGATAAGGAACCTGAACCCAGGAA
GAGGGAAGAAGGCCAAGAGTCACGCTTAGGACATCAAAAGAGAGAAGCAGAAAGGTATCTGCCTCCTTCTCGAAG
GGAAGGGCCAACTTTCCGAAGAGACCGAGAGAGGGAGTCATGGTCTGGAGAGACACGCCAGGATGGAGAGAGCAA
AACTATCATGCTAAAGCGTATCTATCGTTCCACACCACCTGAGGTGATAGTGGAAGTGCTGGAGCCCTATGTCCG
CCTTACTACTGCCAACGTCCGTATCATCAAGAACAGAACAGGCCCTATGGGGCATACCTATGGCTTTATTGACCT
CGACTCCCATGCGGAAGCTCTTCGTGTGGTGAAGATCTTACAGAACCTTGATCCGCCATTTAGCATTGATGGGAA
GATGGTAGCTGTAAACCTGGCCACTGGAAAACGAAGAAATGATTCTGGGGACCATTCTGACCACATGCATTACTA
TCAGGGTAAAAAATATTTCCGAGATAGGAGGGGAGGTGGCAGAAATTCAGACTGGTCTTCAGATACAAATCGACA
AGGACAACAGTCATCATCTGACTGCTACATATATGATTCTGCTACTGGCTACTATTATGACCCCTTGGCAGGAAC
TTATTATGACCCCAATACCCAGCAAGAAGTCTATGTGCCCCAGGATCCTGGATTACCTGAGGAAGAAGAGATCAA
GGAAAAAAAACCCACCAGTCAAGGAAAGTCAAGTAGCAAGAAGGAAATGTCTAAAAGAGATGGCAAGGAGAAAAA
AGACAGAGGAGTGACGAGGTTTCAGGAAAATGCCAGTGAAGGGAAGGCCCCTGCAGAAGACGTCTTTAAGAAGCC
CCTGCCTCCTACTGTGAAGAAGGAAGAGAGTCCCCCTCCACCTAAAGTGGTAAACCCACTGATCGGCCTCTTGGG
TGAATATGGAGGAGACAGTGACTATGAGGAGGAAGAAGAGGAGGAACAGACCCCTCCCCCACAGCCCCGCACAGC
ACAGCCCCAGAAGCGAGAGGAGCAAACCAAGAAGGAGAATGAAGAAGACAAACTCACTGACTGGAATAAACTGGC
TTGTCTGCTTTGCAGAAGGCAGTTTCCCAATAAAGAAGTTCTGATCAAACACCAGCAGCTGTCAGACCTGCACAA
GCAAAACCTGGAAATCCACCGGAAGATAAAACAGTCTGAGCAGGAGCTAGCCTATCTGGAAAGGAGAGAACGAGA
GGGAAAGTTTAAAGGAAGAGGAAATGATCGCAGGGAAAAGCTCCAGTCTTTTGACTCTCCAGAAAGGAAACGGAT
TAAGTACTCCAGGGAAACTGACAGTGATCGTAAACTTGTTGATAAAGAAGATATCGACACTAGCAGCAAAGGAGG
CTGTGTCCAACAGGCTACTGGCTGGAGGAAAGGGACAGGCCTGGGATATGGCCATCCTGGATTGGCTTCATCAGA
GGAGGCTGAAGGCCGGATGAGGGGCCCCAGTGTTGGAGCCTCAGGAAGAACCAGCAAAAGACAGTCCAACGAGAC
TTATCGAGATGCTGTTCGAAGAGTCATGTTTGCTCGATATAAAGAACTCGAT**TAA**GAAAGGAGACAAGTTCCATG
GGATACAACCTCCCTCTTGTTTTGTTTGTCTCTCCTTTTCTTTTGTTACTGTTCTTGCTGCTAGAACTTTTTTAA

FIGURE 413B

ATAAACTTTTTTTCAATGTGAAAAAAAAAAAAAAAAAA

FIGURE 414

MWGDSRPANRTGPFRGSQEERFAPGWNRDYPPPPLKSHAQERHSGNFPGRDSLPFDFQGHSGPPFANVEEHSFSY
GARDGPHGDYRGGEGPGHDFRGGDFSSSDFQSRDSSQLDFRGRDIHSGDFRDREGPPMDYRGGDGTSMDYRGREA
PHMNYRDRDAHAVDFRGRDAPPSDFRGRGTYDLDFRGRDGSHADFRGRDLSDLDFRAREQSRSDFRNRDVSDLDF
RDKDGTQVDFRGRGSGTTDLDFRDRDTPHSDFRGRHRSRTDQDFRGREMGSCMEFKDREMPPVDPNILDYIQPST
QDREHSGMNVNRREESTHDHTIERPAFGIQKGEFEHSETREGETQGVAFEHESPADFQNSQSPVQDQDKSQLSGR
EEQSSDAGLFKEEGGLDFLGRQDTDYRSMEYRDVDHRLPGSQMFGYGQSKSFPEGKTARDAQRDLQDQDYRTGPS
EEKPSRLIRLSGVPEDATKEEILNAFRTPDGMPVKNLQLKEYNTGYDYGYVCVEFSLLEDAIGCMEANQGTLMIQ
DKEVTLEYVSSLDFWYCKRCKANIGGHRSSCSFCKNPREVTEAKQELITYPQPQKTSIPAPLEKQPNQPLRPADK
EPEPRKREEGQESRLGHQKREAERYLPPSRREGPTFRRDRERESWSGETRQDGESKTIMLKRIYRSTPPEVIVEV
LEPYVRLTTANVRIIKNRTGPMGHTYGFIDLDSHAEALRVVKILQNLDPPFSIDGKMVAVNLATGKRRNDSGDHS
DHMHYYQGKKYFRDRRGGGRNSDWSSDTNRQGQQSSSDCYIYDSATGYYYDPLAGTYYDPNTQQEVYVPQDPGLP
EEEEIKEKKPTSQGKSSSKKEMSKRDGKEKKDRGVTRFQENASEGKAPAEDVFKKPLPPTVKKEESPPPPKVVNP
LIGLLGEYGGDSDYEEEEEEEQTPPPQPRTAQPQKREEQTKKENEEDKLTDWNKLACLLCRRQFPNKEVLIKHQQ
LSDLHKQNLEIHRKIKQSEQELAYLERREREGKFKGRGNDRREKLQSFDSPERKRIKYSRETDSDRKLVDKEDID
TSSKGGCVQQATGWRKGTGLGYGHPGLASSEEAEGRMRGPSVGASGRTSKRQSNETYRDAVRRVMFARYKELD

FIGURE 415A

GACAGCCTCTGGGTCCTCGGTCGGTACAGTCTCTGCACCTCGCGCCCCAGCAGGTAAACTAACATT**ATG**GATTTT
TCCAAGCTACCCAAAATACTCGATGAAGATAAAGAAAGCACATTTGGTTATGTGCATGGGGTCTCAGGACCTGTG
GTTACAGCCTGTGACATGGCGGGTGCAGCCATGTATGAGCTGGTGAGAGTGGGCCACAGCGAATTGGTTGGAGAG
ATTATTCGATTGGAGGGTGACATGGCTACTATTCAGGTGTATGAAGAAACTTCTGGTGTGTCTGTTGGAGATCCT
GTACTTCGCACTGGTAAACCCCTCTCTGTAGAGCTTGGTCCTGGCATTATGGGAGCCATTTTTGATGGTATTCAA
AGACCTTTGTCGGATATCAGCAGTCAGACCCAAAGCATCTACATCCCCAGAGGAGTAAACGTGTCTGCTCTTAGC
AGAGATATCAAATGGGACTTTACACCTTGCAAAAACCTACGGGTTGGTAGTCATATCACTGGCGGAGACATTTAT
GGAATTGTCAGTGAGAACTCGCTTATCAAACACAAAATCATGTTACCCCCACGAAACAGAGGAACTGTAACTTAC
ATTGCTCCACCTGGGAATTATGATACCTCTGATGTTGTCTTGGAGCTTGAATTTGAAGGTGTAAAGGAGAAGTTC
ACCATGGTGCAAGTATGGCCTGTACGTCAAGTTCGACCTGTCACTGAGAAGCTGCCAGCCAATCATCCTCTGTTG
ACTGGCCAGAGAGTCCTTGATGCCCTTTTTCCGTGTGTCCAGGGAGGAACTACTGCTATCCCTGGAGCCTTTGGC
TGTGGAAAGACAGTGATATCACAGTCTCTATCCAAGTATTCTAACAGTGATGTAATCATCTATGTAGGATGTGGT
GAAAGAGGAAATGAGATGTCTGAAGTCCTCCGGGACTTCCCAGAGCTCACAATGGAGGTTGATGGTAAGGTAGAG
TCAATTATGAAGAGGACAGCTTTGGTAGCCAATACCTCCAATATGCCTGTTGCTGCTAGAGAAGCCTCTATTTAT
ACTGGAATCACACTGTCAGAGTACTTCCGTGACATGGGCTATCATGTCAGTATGATGGCTGACTCTACCTCTAGA
TGGGCTGAGGCCCTTAGAGAAATCTCTGGTCGTTTAGCTGAAATGCCTGCAGATAGTGGATATCCAGCCTATCTT
GGTGCCCGTCTGGCCTCGTTTTATGAACGAGCAGGCAGGGTGAAATGTCTTGGAAATCCTGAAAGAGAAGGGAGT
GTCAGCATTGTAGGAGCAGTTTCTCCACCTGGTGGTGATTTTTCTGATCCAGTTACATCTGCCACTCTTGGTATC
GTTCAGGTGTTCTGGGGCTTAGATAAGAAACTAGCTCAACGTAAGCATTTCCCCTCTGTCAATTGGCTCATCAGC
TACAGCAAGTATATGCGTGCCTTGGATGAATACTATGACAAACACTTCACAGAGTTCGTTCCTCTGAGGACGAAA
GCTAAGGAAATTCTGCAGGAAGAAGAAGACCTGGCAGAAATTGTACAGCTTGTGGGAAAGGCTTCTTTGGCAGAA
ACAGATAAAATCACTCTGGAGGTAGCAAAACTTATCAAAGATGATTTCCTACAACAAAATGGATATACTCCTTAT
GACAGGTTCTGCCCATTCTACAAGACAGTAGGGATGCTGTCCAACATGATTGCATTTTATGATATGGCTCGTAGA
GCTGTTGAAACCACTGCCCAGAGTGACAATAAAATCACATGGTCCATTATTCGTGAGCACATGGGAGACATCCTC
TATAAACTTTCCTCCATGAAATTCAAGGATCCACTGAAAGATGGTGAGGCAAAGATCAAAAGCGACTATGCACAA
CTTCTTGAAGACATGCAGAATGCATTCCGTAGCCTTGAAGAT**TAG**AAGCCTTGAAGATTACAACTGTGATTTCCT
TTTCCTCAGCAAGCTCCTATGTGTATATTTTCCTGAATTTCTCATCTCAAACCCTTTGCTTCTTTATTGTGCAGC
TTTGAGACTAGTGCCTATGTGTGTTATTTGTTTCCCTGTTTTTTTGGTAGGTCTTATATAAAACAAACATTCCTT
TGTTCTAGTGTTGTGAAGGGCCTCCCTCTTCCTTTATCTGAAGTGGTGAATATAGTAAATATACATTCTGGTTAC
ACTACTGTAAACTTGTATGTAGGGTGATGACCCTCTTTGTCCTAGGTGTACCCTTTCCTCATCTCTATTAAATTG
TAAACAGGACTACTGCATGTACTCTCTTTGCAGTGAATTTGGAATGGAAGGCCAGGTTTCTATAACTTTTGAACA
GGTACTTTGTGAAATGACTCAATTTCTATTGTGGTAAGCTCATTGGCAGCTTAGCATTTTGCAAAGGAATTGCTT
TGCAGGAAATATTTAATTTTCAAAAACATAATGATTAATGTTCCAATTATGCATCACTTCCCCCAGTATAAATCA
GGAATGTTTGTGAGAAACCATTGGGAACTATACTCTTTTTATTTTTATTTTTTATTTTTTTTTATTATTTTTTTT
TGGGGACGGAGTGTCCCTCTTGTTGCCCAGGCTGGAGTGCAATGGCGTGATCTTGGCTCACTGCAGCCTTCGCCT
CCCGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTACAGGCATGCTCCACCATGCCCAGCT
AATTTTGTATTTTTAGTAGAAACGGGGTTTCACCATATTGGTCAGGCTGGTCTCGAACTCCAGACCTCAGGTGAT
CCGCCCACCTCGGCCTCCCAAACTGCTGGGATTACAGGCGTGAGCCACCGCGCCTGGCCAGGGACTATACTCTTT
TTAAAATAGACATTTGTGGGGCTCACACAATATATGAAATAGTACCCTCTAAAAAAGAGAAAAAAAAAATCAGGC
GGTCAAACTTAGAGCAACATTGTCTTATTAAAGCATAGTTTATTTCACTAGAAAAAATTTAATATCAAGGACTAT
TACATACTTCATTACTAGGAAGTTCTTTTTAAAATGACACTTAAAACAATCACTGAAAACTTGATCCACATCACA
CCCTGTTTATTTTCCTTAAACATCTTGGAAGCCTAAGCTTCTGAGAATCATGTGGCAAGTGTGATGGGCAGTAAA
ATACCAGAGAAGATGTTTAGTAGCAATTAAAGGCTGTTTGCACCTTTAAGGACCAGCTGGGCTGTAGTGATTCCT
GGGGCCAGAGTGGCATTATGTTTTTACAAAATAATGACATATGTCACATGTTTGCATGTTTGTTTGCTTGTTGAA
TTTTTGAACAGCCAGTTGACCAATCATAGAAAGTATTACTTTCTTTCATATGGTTTTTGGTTCACTGGCTTAAGA
GGTTTCTCAGAATATCTATGGCCACAGCAGCATACCAGTTTCCATCCTAATAGGAATGAAATTAATTTTGTATCT
ACTGATAACAGAATCTGGGTCACATGAAAAAAAATCATTTTATCCGTCTTTTAAGTATATGTTTAAAATAATAAT
TTATGTGTCTGCATATTGCAGAACAGCTCTGAGAGCAACAGTTTCCCATTAACTCTTTCTGACCAATAGTGCTGG

FIGURE 415B

CACCGTTGCTTCCTCTTTGGGAAGAGGAAAGGGTGTGTGAACATGGCTAACAATCTTCAAATACCCAAATTGTGA
TAGCATAAATAAAGTATTTATTTTATGCCTCAGTATATTATTATTTAATTTTTTAGGTAATGCCTATCTCTTGGT
CTATTAAGGAAAGAAGCAATCAGTAGAGAATTCAGGATAGTTTTGTTTAAATTCTTGCAGATTACATGTTTTTAC
AGTGGCCTGCTATTGAGGAAAGGTATTCTTCTATACAACTTGTTTTAACCTTTGAGAACATTGACAGAAATTATG
CAATGGTTTGTTGAGATACGGACTTGATGGTGCTGTTTAATCAGTTTGCTTCCAAAGTGGCCTACTCAAGAGGCC
CTAAGACTGGTAGAAATTAAAAGGATTTCAAAAACTTTCTATTCCTTTCTTAAACCTACCAGCAAACTAGGATTG
TGATAGCAATGAATGGTATGATGAAGAAAGTTTGACCAAATTTGTTTTTTTGTTGTTGTTGTTGTTTTGAATTTG
AAATCATTCTTATTCCCTTTAAGAATGTTTATGTATGAGTGTGAAGATGCTAGCGAACCTATGCTCAGATATTCA
TCGTAAGTCTCCCTTCACCTGTTACAGAGTTTCAGATCGGTCACTGATAGTATGTATTTCTTTAGTAAGAATGTG
TTAAAATTACAATGATCTTTTAAAAAGATGATGCAGTTCTGTATTTATTGTGCTGTGTCTGGTCCTAAGTGGAGC
CAATTAAACAAGTTTCATATGTATTTTTCCAGTGTTGAATCTCACACACTGTACTTTGAAAATTTCCTTCCATCC
TGAATAACGAATAGAAGAGGCCATATATATTGCCTCCTTATCCTTGAGATTTCACTACCTTTATGTTAAAAGTTG
TGTATAATTGTTAAAATCTGTGAAAGAATAAAAAGTGGATTTAAATTAAAAAAAAAAAAAAAAAAAA

FIGURE 416

MDFSKLPKILDEDKESTFGYVHGVSGPVVTACDMAGAAMYELVRVGHSELVGEIIRLEGDMATIQVYEETSGVSV
GDPVLRTGKPLSVELGPGIMGAIFDGIQRPLSDISSQTQSIYIPRGVNVSALSRDIKWDFTPCKNLRVGSHITGG
DIYGIVSENSLIKHKIMLPPRNRGTVTYIAPPGNYDTSDVVLELEFEGVKEKFTMVQVWPVRQVRPVTEKLPANH
PLLTGQRVLDALFPCVQGGTTAIPGAFGCGKTVISQSLSKYSNSDVIIYVGCGERGNEMSEVLRDFPELTMEVDG
KVESIMKRTALVANTSNMPVAAREASIYTGITLSEYFRDMGYHVSMMADSTSRWAEALREISGRLAEMPADSGYP
AYLGARLASFYERAGRVKCLGNPEREGSVSIVGAVSPPGGDFSDPVTSATLGIVQVFWGLDKKLAQRKHFPSVNW
LISYSKYMRALDEYYDKHFTEFVPLRTKAKEILQEEEDLAEIVQLVGKASLAETDKITLEVAKLIKDDFLQQNGY
TPYDRFCPFYKTVGMLSNMIAFYDMARRAVETTAQSDNKITWSIIREHMGDILYKLSSMKFKDPLKDGEAKIKSD
YAQLLEDMQNAFRSLED

FIGURE 417

CACGTCGGCTGCTGGGAAGATCTGGATTCTCGTTTCAGGTCACCATCAGAAAAGCTAAGTTTGCTGTATAGTGAG
GATCAGGAGATCTGATCCTGATTGCAGAACCTTCCCTGATTACAGAATCTTGGATGATTTCACAAAAGTTCATCT
TCATTGCAGATACCTGCCTTTCTTTCTAGGTTGTATCTCCCACTTCACCCTTCTAGACCATCCCAGAAGATCTAT
AAGATTTCATCTGGGAAATCACTAGGAGTTCTTGGAAGGGAAAGAAGGAAGATTGTTGGTTGGAATAAAAACAGG
GTTGA**ATG**AGTTCCAGAAAGCAGGGTTCTCAACCTCGTGGACAGCAATCTGCAGAAGAAGAGAACTTCAAAAAAC
CAACTAGAAGCAACATGCAGAGAAGTAAAATGAGAGGGGCCTCCTCAGGAAAGAAGACAGCTGGTCCACAGCAGA
AAAATCTTGAACCAGCTCTCCCAGGAAGATGGGGTGGTCGCTCTGCAGAGAACCCCCCTTCAGGATCCGTGAGGA
AGACCAGAAAGAACAAGCAGAAGACTCCTGGAAACGGAGATGGTGGCAGTACCAGCGAAGCACCTCAGCCCCCTC
GGAAGAAAAGGGCCCGGGCAGACCCCACTGTTGAAAGTGAGGAGGCGTTTAAGAATAGAATGGAGGTTAAAGTGA
AGATTCCTGAAGAATTAAAACCATGGCTTGTTGAGGACTGGGACTTAGTTACCAGGCAGAAGCAGCTGTTTCAAC
TCCCTGCCAAGAAAAATGTAGATGCAATTCTGGAGGAGTATGCAAATTGCAAGAAATCGCAGGGAAATGTTGATA
ATAAGGAATATGCGGTTAATGAAGTTGTGGCAGGAATAAAAGAATATTTCAATGTGATGTTGGGCACTCAGCTGC
TCTACAAATTTGAGAGGCCCCAGTATGCTGAAATCCTCTTGGCTCACCCTGATGCTCCAATGTCCCAGGTTTATG
GAGCACCACACCTACTGAGATTATTTGTAAGAATTGGAGCAATGTTGGCCTATACGCCCCTTGATGAGAAAAGCC
TTGCATTATTGTTGGGCTATTTGCATGATTTCCTAAAATATCTGGCAAAGAATTCTGCATCTCTCTTTACTGCCA
GTGATTACAAAGTGGCTTCTGCTGAGTACCACCGCAAAGCCCTG**TGA**GCGTCTACAGACAGCTCACCATTTTTGT
CCTGTATCTGTAAACACTTTTTGTTCTTAGTCTTTTTCTTGTAAAATTGATGTTCTTTAAAATCGTTAATGTATA
ACAGGGCTTATGTTTCAGTTTGTTTTCCGTTCTGTTTTAAACAGAAAATAAAAGGAGTGTAAGCTCCTTTTCTCA
TTTCAAAGTTGCTACCAGTGTATGCAGTAATTAGAACAAAGAAGAAACATTCAGTAGAACATTTTATTGCCTAGT
TGACAACATTGCTTGAATGCTGGTGGTTCCTATCCCTTTGACACTACACAATTTTCTAATATGTGTTAATGCTAT
GTGACAAAACGCCCTGATTCCTAGTGCCAAAGGTTCAACTTAATGTATATACCTGAAAACCCATGCATTTGTGCT
CTTTTTTTTTTTATGGTGCTTGAAGTAAAACAGCCCATCCTCTGCAAGTCCATCTATGTTGTTCTTAGGCATTCT
ATCTTTGCTCAAATTGTTGAAGGATGGTGATTTGTTTCATGGTTTTTGTATTTGAGTCTAATGCACGTTCTAACA
TGATAGAGGCAATGCATTATTGTGTAGCCACGGTTTTCTGGAAAAGTTGATATTTTAGGAATTGTATTTCAGATC
TTAAATAAAATTTGTTTCTAAATTTC

FIGURE 418

MSSRKQGSQPRGQQSAEEENFKKPTRSNMQRSKMRGASSGKKTAGPQQKNLEPALPGRWGGRSAENPPSGSVRKT
RKNKQKTPGNGDGGSTSEAPQPPRKKRARADPTVESEEAFKNRMEVKVKIPEELKPWLVEDWDLVTRQKQLFQLP
AKKNVDAILEEYANCKKSQGNVDNKEYAVNEVVAGIKEYFNVMLGTQLLYKFERPQYAEILLAHPDAPMSQVYGA
PHLLRLFVRIGAMLAYTPLDEKSLALLLGYLHDFLKYLAKNSASLFTASDYKVASAEYHRKAL

FIGURE 419

GCGACCGAACGCGGCGGTCGGCAGCGTTCGCGCGGGGGCCTGCGAAGCGCTGCTCGGGGCCGGCACTGCCCGCGG
GGAGGACGCGCCGCCGCCGCCACCCAGCGCCGCCGCCGCCGCCGCCTCCAGCCGGGCCGCCGCGCGTCCCGGGGG
CCGGCCCCGCGAGCGCAGGAGTAAACACCGCCGGAGTCTTGGAGCCGCTGCAGAAGGGAATAAAGAGAGATGCAG
GGATTTGTGAGGTTACGGCGCCCCAGCTGCAAGATGCACTAGCCGGCTGAACCCGGGATCGGCTGACTTGTTGGA
ACCGGAGTGCTCTGCACGGAGAGTGGTGGATGAGTTGAAGTTGCCTTCCCGGGGCTCATTTTCCACGCTGCCGAG
AGGAATCCGAGAGGCAAGGCAATCACTTCGTCTTGCCATTGATTGGGTATCGGGAGCTTTTTTTTTCTCCCCTCT
CTCTTTCTTTTCCTCCGTCTTGTTGCATGCAAGAAAATTACAGTCCGCTGCTCGCCCGCCCTGGGTGCGAGATAT
TCAGCCCCGCTCTCTCCCGTGCATTGTGCAACCCAAAGATGAAAGACCGAAGGGGAGAAAGTTAAAGAAATCGCC
CACATGCGCTGGATCAGTCCACGGCTTGGGGAAAGGCATCCAGAGAAGGTGGGAGCGGAGAGTTTGAAGTCTTTA
CAGGCGGGAAGATGGCGGACTGGAGCTGAAAGTGTTGATTGGGAAACTTGGGTGATTCTTGTGTTTATTTACAAT
CCTCTTGACCCAGGCAGGACAC**ATG**CAGGCCAAAAAACGCTATTTCATCCTGCTCTCAGCTGGCTCTTGTCTCGC
CCTTTTGTTTTATTTCGGAGGCTTGCAGTTTAGGGCATCGAGGAGCCACAGCCGGAGAGAAGAACACAGCGGTAG
GAATGGCTTGCACCACCCCAGTCCGGATCATTTCTGGCCCCGCTTCCCGGAGCCTCTGCGCCCCTTCGTTCCTTG
GGATCAATTGGAAAACGAGGATTCCAGCGTGCACATTTCCCCCCGGCAGAAGCGAGATGCCAACTCCAGCATCTA
CAAAGGCAAGAAGTGCCGCATGGAGTCCTGCTTCGATTTCACCCTTTGCAAGAAAAACGGCTTCAAAGTCTACGT
ATACCCACAGCAAAAAGGGGAGAAAATCGCCGAAAGTTACCAAAACATTCTAGCGGCCATCGAGGGCTCCAGGTT
CTACACCTCGGACCCCAGCCAGGCGTGCCTCTTTGTCCTGAGTCTGGATACTTTAGACAGAGACCAGTTGTCACC
TCAGTATGTGCACAATTTGAGATCCAAAGTGCAGAGTCTCCACTTGTGGAACAATGGTAGGAATCATTTAATTTT
TAATTTATATTCCGGCACTTGGCCTGACTACACCGAGGACGTGGGGTTTGACATCGGCCAGGCGATGCTGGCCAA
AGCCAGCATCAGTACTGAAAACTTCCGACCCAACTTTGATGTTTCTATTCCCCTCTTTTCTAAGGATCATCCCAG
GACAGGAGGGGAGAGGGGGTTTTTGAAGTTCAACACCATCCCTCCTCTCAGGAAGTACATGCTGGTATTCAAGGG
GAAGAGGTACCTGACAGGGATAGGATCAGACACCAGGAATGCCTTATATCACGTCCATAACGGGGAGGACGTTGT
GCTCCTCACCACCTGCAAGCATGGCAAAGACTGGCAAAAGCACAAGGATTCTCGCTGTGACAGAGACAACACCGA
GTATGAGAAGTATGATTATCGGGAAATGCTGCACAATGCCACTTTCTGTCTGGTTCCTCGTGGTCGCAGGCTTGG
GTCCTTCAGATTCCTGGAGGCTTTGCAGGCTGCCTGCGTCCCTGTGATGCTCAGCAATGGATGGGAGTTGCCATT
CTCTGAAGTGATTAATTGGAACCAAGCTGCCGTCATAGGCGATGAGAGATTGTTATTACAGATTCCTTCTACAAT
CAGGTCTATTCATCAGGATAAAATCCTAGCACTTAGACAGCAGACACAATTCTTGTGGGAGGCTTATTTTTCTTC
AGTTGAGAAGATTGTATTAACTACACTAGAGATTATTCAGGACAGAATATTCAAGCACATATCACGTAACAGTTT
AATATGGAACAAACATCCTGGAGGATTGTTCGTACTACCACAGTATTCATCTTATCTGGGAGATTTTCCTTACTA
CTATGCTAATTTAGGTTTAAAGCCCCCCTCCAAATTCACTGCAGTCATCCATGCGGTGACCCCCCTGGTCTCTCA
GTCCCAGCCAGTGTTGAAGCTTCTCGTGGCTGCAGCCAAGTCCCAGTACTGTGCCCAGATCATAGTTCTATGGAA
TTGTGACAAGCCCCTACCAGCCAAACACCGCTGGCCTGCCACTGCTGTGCCTGTCGTCGTCATTGAAGGAGAGAG
CAAGGTTATGAGCAGCCGTTTTCTGCCCTACGACAACATCATCACAGACGCCGTGCTCAGCCTTGACGAGGACAC
GGTGCTTTCAACAACAGAGGTGGATTTCGCCTTCACAGTGTGGCAGAGCTTCCCTGAGAGGATTGTGGGGTACCC
CGCGCGCAGCCACTTCTGGGATAACTCTAAGGAGCGGTGGGGATACACATCAAAGTGGACGAACGACTACTCCAT
GGTGTTGACAGGAGCTGCTATTTACCACAAATATTATCACTACCTATACTCCCATTACCTGCCAGCCAGCCTGAA
GAACATGGTGGACCAATTGGCCAATTGTGAGGACATTCTCATGAACTTCCTGGTGTCTGCTGTGACAAAATTGCC
TCCAATCAAAGTGACCCAGAAGAAGCAGTATAAGGAGACAATGATGGGACAGACTTCTCGGGCTTCCCGTTGGGC
TGACCCTGACCACTTTGCCCAGCGACAGAGCTGCATGAATACGTTTGCCAGCTGGTTTGGCTACATGCCGCTGAT
CCACTCTCAGATGAGGCTCGACCCCGTCCTCTTTAAAGACCAGGTCTCTATTTTGAGGAAGAAATACCGAGACAT
TGAGCGACTT**TGA**GGAATCCGGCTGAGTGGGGGAGGGGAAGCAAGAAGGGATGGGGGTCAAGCTGCTCTCTCTTC
CCAGTGCAGATCCACTCATCAGCAGAGCCAGATTGTGCCAACTATCCAAAAACTTAGATGAGCAGAATGACAAAA
AAAAAAAAGGCCAATGAGAACTCAACTCCTGGCTCCTGGGACTGCACCAGACTGCTCCAAACTCACCTCACTGGC
TTCTGTGTCCCAAGACTAGGTTGGTACAGTTTAATTATGGAACATTAAATAATTATTTTTGAAAAAAAAAAAAAA
AAAA

FIGURE 420

MQAKKRYFILLSAGSCLALLFYFGGLQFRASRSHSRREEHSGRNGLHHPSPDHFWPRFPEPLRPFVPWDQLENED
SSVHISPRQKRDANSSIYKGKKCRMESCFDFTLCKKNGFKVYVYPQQKGEKIAESYQNILAAIEGSRFYTSDPSQ
ACLFVLSLDTLDRDQLSPQYVHNLRSKVQSLHLWNNGRNHLIFNLYSGTWPDYTEDVGFDIGQAMLAKASISTEN
FRPNFDVSIPLFSKDHPRTGGERGFLKFNTIPPLRKYMLVFKGKRYLTGIGSDTRNALYHVHNGEDVVLLTTCKH
GKDWQKHKDSRCDRDNTEYEKYDYREMLHNATFCLVPRGRRLGSFRFLEALQAACVPVMLSNGWELPFSEVINWN
QAAVIGDERLLLQIPSTIRSIHQDKILALRQQTQFLWEAYFSSVEKIVLTTLEIIQDRIFKHISRNSLIWNKHPG
GLFVLPQYSSYLGDFPYYYANLGLKPPSKFTAVIHAVTPLVSQSQPVLKLLVAAAKSQYCAQIIVLWNCDKPLPA
KHRWPATAVPVVVIEGESKVMSSRFLPYDNIITDAVLSLDEDTVLSTTEVDFAFTVWQSFPERIVGYPARSHFWD
NSKERWGYTSKWTNDYSMVLTGAAIYHKYYHYLYSHYLPASLKNMVDQLANCEDILMNFLVSAVTKLPPIKVTQK
KQYKETMMGQTSRASRWADPDHFAQRQSCMNTFASWFGYMPLIHSQMRLDPVLFKDQVSILRKKYRDIERL

FIGURE 421A

TGAGCTGCGAGGCCCGAGAGTCAGAACCTGGGGGAGAGGGATGGTCTCTGCACGGGGGGGAGCCGGAGGAGCCGC
CGCCGCTGCCGACGCCACCGCCGCAGCCGCCGCCGCCGCCGCCCCGGCACCCGCCTCCCGGCGCTGACGGTCTCG
TACGAAGCCGGCGAGGGGGAGCCAGCAGCGGCGGTCGCCGGCACGCCGCCCAGC**ATG**GTCCGGGAAACCAGGCAT
CTCTGGGTGGGCAACTTACCCGAGAACGTGCGGGAAGAGAAGATCATCGAGCATTTCAAACGATATGGCCGCGTG
GAAAGTGTCAAAATTCTTCCCAAGAGGGGATCTGAAGGAGGAGTGGCTGCCTTTGTGGATTTTGTGGACATCAAA
AGTGCACAGAAAGCTCACAACTCGGTCAACAAAATGGGTGACAGAGACCTACGCACGGATTATAATGAACCAGGC
ACCATCCCGAGTGCTGCTCGGGGATTGGATGATACAGTTTCCATAGCATCTCGTAGTAGAGAGGTTTCTGGGTTC
AGAGGAGGTGGTGGAGGGCCTGCTTATGGTCCCCCACCGTCACTTCATGCACGAGAAGGACGTTATGAGCGGAGA
CTTGATGGGGCTTCAGATAACAGGGAGCGTGCTTATGAACATAGTGCCTATGGACACCATGAACGGGGGACGGGA
GGATTTGATCGGACAAGACATTACGATCAGGATTACTATAGAGATCCTCGAGAGCGGACTTTACAACATGGGCTC
TATTACGCTTCTCGGAGTCGAAGTCCAAATCGCTTTGATGCTCATGACCCCCGATATGAACCTAGGGCTCGCGAG
CAGTTTACACTGCCCAGTGTGGTACACAGGGATATCTACAGGGATGATATTACCCGGGAGGTACGAGGCAGAAGG
CCAGAGCGGAATTACCAGCACAGCAGGAGTCGGTCACCACATTCATCCCAGTCTAGAAATCAGTCTCCTCAGAGA
CTGGCTAGCCAAGCATCTAGACCCACAAGGTCCCCTAGCGGCAGCGGCTCTAGAAGTAGATCCTCCAGTAGTGAT
TCAATCAGCAGCAGCAGTAGTACCAGCAGTGACAGCAGTGATTCCAGCAGTAGTTCAAGTGATGATTCTCCAGCT
CGATCAGTTCAGTCTGCAGCAGTCCCTGCACCCACTTCCCAGTTGCTTTCATCTCTGGAAAAAGATGAGCCCCGT
AAAAGTTTTGGCATCAAGGTCCAGAATCTTCCAGTACGCTCTACAGATACAAGCCTTAAAGATGGCCTTTTCCAT
GAATTTAAGAAATTTGGAAAAGTAACTTCAGTGCAGATACATGGAACTTCAGAAGAGAGGTATGGTCTGGTATTC
TTTCGGCAGCAAGAGGACCAAGAAAAAGCCTTGACTGCATCAAAAGGAAAACTTTTCTTTGGCATGCAGATTGAA
GTAACAGCATGGATAGGTCCAGAAACAGAAAGTGAAAATGAATTTCGCCCCTTGGATGAAAGGATAGATGAATTT
CACCCCAAAGCAACAAGAACTCTCTTTATTGGCAACCTTGAAAAAACCACTACTTACCATGACCTTCGCAACATC
TTCCAGCGCTTTGGAGAAATTGTGGATATTGACATTAAGAAAGTAAATGGAGTTCCTCAGTATGCGTTTCTGCAA
TACTGTGATATTGCTAGCGTTTGTAAAGCTATTAAGAAGATGGATGGGGAATATCTTGGAAATAATCGCCTCAAG
CTGGGTTTTGGAAAGAGCATGCCTACAAACTGCGTGTGGCTAGATGGGCTTTCTTCGAATGTGTCAGATCAGTAT
TTAACACGACATTTCTGCCGATATGGGCCTGTGGTAAAGGTGGTGTTTGACCGCTTAAAAGGCATGGCCCTGGTT
CTCTACAATGAAATTGAATATGCACAAGCAGCTGTAAAAGAGACCAAAGGGAGGAAAATCGGTGGGAATAAAATT
AAGGTGGATTTTGCAAATCGGGAAAGTCAGCTGGCTTTTTATCACTGCATGGAGAAATCTGGTCAAGACATCAGA
GACTTTTATGAAATGTTAGCCGAAAGAAGAGAGGAACGAAGGGCATCCTACGACTATAACCAAGATCGTACATAT
TATGAGAGTGTTCGAACTCCAGGCACTTATCCTGAGGATTCCAGGCGGGACTATCCAGCTCGAGGGAGAGAGTTT
TATTCAGAATGGGAAACTTACCAAGGAGACTACTATGAATCACGATACTACGATGATCCTCGGGAATACAGGGAT
TACAGGAATGATCCTTATGAACAAGATATTAGGGAATATAGTTACAGGCAAAGGGAACGAGAAAGAGAACGTGAA
AGATTTGAGTCTGACCGGGACAGAGACCATGAGAGGAGGCCGATTGAACGAAGTCAAAGTCCTGTTCACTTGCGA
CGTCCACAGAGTCCTGGAGCGTCTCCCTCTCAGGCAGAGAGGTTGCCGAGTGATTCTGAGAGGAGGCTTTACAGC
CGATCCTCAGACCGGAGTGGAAGCTGTAGCTCACTCTCCCCTCCAAGATATGAGAAACTGGACAAGTCTCGTTTG
GAGCGCTATACAAAAAATGAAAAGACAGATAAAGAACGAACTTTTGATCCGGAGAGAGTGGAGAGAGAGAGACGC
TTAATACGGAAGGAAAAAGTGGAAAAGGACAAAACTGACAAGCAGAAACGCAAAGGAAAGGTTCACTCCCCTAGT
TCTCAGTCTTCAGAAACGGACCAAGAAAATGAGCGAGAGCAAAGCCCTGAAAAGCCCAGGAGTTGTAATAAACTG
AGCAGAGAGAAAGCTGACAAAGAGGGAATAGCGAAAAACCGCCTGGAACTCATGCCTTGCGTGGTTTTGACTCGA
GTGAAAGAGAAAGAGGGAAAGGTCATTGACCACACTCCTGTGGAAAAGTTGAAAGCCAAGCTTGATAATGACACT
GTCAAATCTTCTGCCCTGGACCAGAAACTTCAGGTCTCTCAGACGGAGCCTGCAAAATCTGACTTGTCTAAACTG
GAATCAGTTAGAATGAAAGTACCAAAGGAAAAGGGGCTTTCAAGCCATGTTGAAGTGGTGGAGAAGGAAGGCAGG
CTTAAAGCCAGGAAGCACCTCAAGCCTGAGCAGCCTGCAGATGGGGTAAGTGCTGTGGATCTGGAGAAGCTGGAA
GCCAGGAAAAGGCGCTTTGCAGATTCCAATTTAAAAGCAGAAAAGCAAAAACCAGAGGTCAAGAAAAGCAGTCCA
GAGATGGAGGATGCTCGCGTGCTTTCAAAAAAGCAGCCTGACGTGTCCTCTAGAGAGGTCATTCTGCTGAGGGAA
GGAGAGGCTGAAAGAAAGCCTGTGAGGAAAGAAATTCTTAAAAGAGAATCTAAAAAAATCAAACTGGACAGACTT
AATACTGTTGCCAGCCCCAAAGACTGTCAGGAGCTTGCCAGTATTTCTGTTGGGTCTGGCTCAAGGCCCAGCTCA
GACCTACAAGCAAGACTGGGAGAACTAGCAGGTGAATCTGTGGAAAATCAAGAAGTCCAATCAAAAAAGCCCATT
CCCTCAAAACCACAGCTCAAACAGCTGCAGGTATTAGATGATCAAGGACCAGAGAGAGAAGACGTTAGGAAAAAC

FIGURE 421B

TATTGCAGTCTTCGTGATGAAACACCTGAACGTAAATCAGGCCAAGAGAAATCACATTCAGTAAATACTGAAGAA
AAAATTGGCATTGACATCGATCACACGCAGAGTTACCGAAAACAAATGGAACAGAGTCGTAGGAAACAGCAGATG
GAAATGGAAATAGCCAAGTCTGAGAAGTTTGGCAGTCCTAAAAAAGATGTAGATGAATATGAAAGACGTAGCCTC
GTTCACGAGGTAGGCAAACCCCCTCAAGATGTCACTGATGACTCTCCTCCTAGCAAAAAGAAAAGGATGGATCAT
GTCGATTTTGATATCTGCACCAAGCGAGAACGGAATTACAGAAGTTCACGCCAAATCAGCGAAGATTCTGAAAGG
ACTGGTGGTTCTCCCAGTGTCCGACATGGTTCCTTCCATGAAGATGAGGATCCCATAGGCTCCCCTAGGCTACTG
TCAGTAAAAGGGTCTCCTAAAGTAGATGAAAAAGTCCTCCCCTATTCTAACATAACAGTCAGGGAAGAGTCTTTA
AAATTTAATCCTTATGATTCTAGCAGGAGAGAACAGATGGCAGATATGGCCAAAATAAAACTATCTGTCTTGAAT
TCTGAAGATGAACTAAATCGTTGGGACTCTCAGATGAAACAGGATGCTGGCAGATTTGATGTGAGTTTCCCAAAC
AGCATAATTAAGAGAGATAGCCTTCGAAAAAGGTCTGTACGAGATCTGGAACCTGGTGAGGTGCCTTCTGATTCT
GACGAAGATGGTGAACACAAATCCCACTCACCCAGAGCCTCTGCATTATATGAAAGTTCTCGATTGTCTTTTTTA
TTGAGGGACAGAGAAGACAAGCTACGTGAGCGAGATGAAAGACTCTCTAGTTCTTTAGAAAGGAACAAATTTTAC
TCTTTTGCATTGGATAAGACAATCACACCAGACACTAAAGCTTTGCTTGAAAGAGCTAAATCCCTCTCTTCATCT
CGTGAAGAAAATTGGTCTTTTCTTGATTGGGACTCCCGATTTGCAAATTTTCGAAACAACAAAGATAAAGAAAAG
GTTGACTCTGCTCCAAGACCTATTCCATCCTGGTACATGAAAAAGAAGAAAATTAGGACTGATTCAGAAGGGAAA
ATGGATGATAAGAAAGAGGACCATAAAGAAGAAGAGCAAGAGAGGCAGGAATTGTTTGCTTCTCGTTTTTTACAC
AGCTCAATCTTTGAACAAGATTCCAAGCGATTGCAGCATCTAGAGAGAAAAGAGGAAGATTCTGACTTCATTTCT
GGTAGGATCTATGGGAAGCAGACATCTGAGGGAGCAAACAGCACAACTGATTCCATTCAAGAACCAGTAGTTCTG
TTCCATAGCAGATTTATGGAGCTCACACGGATGCAACAGAAAGAAAAAGAAAAAGACCAGAAACCCAAAGAGGTT
GAGAAACAGGAAGATACAGAGAATCATCCCAAGACCCCAGAATCTGCTCCTGAGAATAAAGATTCAGAACTGAAA
ACTCCACCTTCCGTTGGGCCTCCAAGTGTCACAGTCGTAACTCTAGAATCAGCCCCATCAGCACTAGAGAAGACC
ACTGGTGACAAAACGGTAGAGGCGCCTTTGGTAACAGAAGAGAAGACTGTGGAGCCAGCTACCGTCTCAGAAGAA
GCAAAGCCTGCATCTGAACCTGCTCCTGCCCCTGTGGAACAGCTGGAACAAGTAGACCTGCCCCCAGGAGCAGAC
CCCGATAAAGAAGCTGCCATGATGCCTGCGGGTGTTGAGGAAGGTTCATCAGGTGACCAGCCGCCTTATCTGGAT
GCCAAGCCTCCAACTCCCGGGGCCTCGTTTTCCCAGGCAGAGAGCAACGTAGATCCAGAGCCTGACAGTACCCAG
CCACTTTCAAAACCAGCTCAGAAGTCTGAGGAAGCCAATGAGCCAAAGGCCGAAAAGCCAGACGCCACTGCAGAT
GCTGAGCCTGATGCAAACCAGAAAGCCGAAGCTGCTCCTGAGTCTCAGCCCCCAGCTTCTGAAGATTTAGAGGTT
GATCCTCCAGTTGCTGCAAAGGATAAAAAGCCAAACAAAAGCAAGCGTTCAAAGACCCCTGTTCAGGCAGCTGCA
GTGAGTATCGTGGAGAAGCCCGTCACAAGGAAGAGTGAGAGGATAGACCGGGAAAAACTCAAGCGGTCCAATTCT
CCTCGGGGAGAAGCACAGAAGCTTTTGGAATTGAAGATGGAGGCAGAGAAGATTACAAGGACTGCTTCTAAAAAC
TCTGCTGCAGACCTTGAACATCCCGAACCAAGTTTGCCTCTCAGCCGAACAAGGCGCCGGAATGTAAGGAGCGTC
TATGCAACCATGGGTGACCATGAAAACCGCTCTCCTGTCAAAGAGCCCGTTGAGCAACCAAGAGTGACCAGAAAG
AGATTGGAGCGAGAGCTTCAGGAGGCTGCAGCGGTTCCCACCACCCCTCGGAGGGGAAGGCCTCCAAAGACACGC
CGGCGAGCCGATGAAGAGGAGGAGAACGAGGCCAAGGAACCTGCAGAAACACTCAAGCCACCTGAGGGATGGCGG
TCGCCAAGGTCCCAGAAAACTGCAGCTGGTGGTGGACCCCAAGGGAAAAAGGGAAAAAATGAACCGAAGGTGGAT
GCTACACGTCCTGAGGCCACCACTGAGGTGGGCCCCCAAATAGGCGTGAAAGAGAGCTCCATGGAACCCAAGGCT
GCTGAGGAGGAGGCAGGGAGTGAACAGAAACGTGACAGAAAAGATGCTGGCACAGACAAAAACCCCCCTGAAACC
GCCCCTGTTGAAGTTGTAGAGAAAAAACCGGCCCCTGAAAAAAACTCCAAATCAAAGAGAGGAAGATCTCGAAAC
TCCAGGTTAGCAGTGGACAAATCTGCAAGTCTGAAAAATGTGGATGCTGCTGTCAGTCCCAGGGGGGCTGCAGCA
CAGGCAGGGGAGAGGGAATCTGGGGTGGTGGCAGTCTCCCCTGAGAAAAGTGAGAGTCCCCAAAAGGAGGATGGT
TTATCATCCCAGTTGAAAAGTGATCCAGTTGATCCAGACAAGGAACCAGAGAAAGAAGACGTGTCTGCCTCTGGG
CCGTCCCCAGAAGCCACCCAGTTAGCCAAGCAGATGGAGCTGGAGCAGGCCGTGGAACACATCGCAAAGCTCGCT
GAGGCCTCTGCCTCTGCTGCCTATAAGGCAGATGCACCAGAGGGCCTTGCCCCAGAGGACAGGGACAAGCCTGCA
CACCAAGCAAGTGAAACAGAGCTGGCTGCGGCCATCGGCTCCATCATCAATGACATTTCTGGGGAGCCAGAAAAC
TTCCCAGCACCTCCACCTTATCCTGGAGAATCCCAGACAGATCTGCAACCCCCCGCAGGTGCACAGGCGCTGCAG
CCTTCTGAGGAAGGAATGGAGACAGATGAGGCTGTATCTGGCATCCTGGAAACTGAGGCTGCTACAGAATCTTCT
AGGCCTCCAGTCAATGCTCCTGACCCCTCAGCCGGCCCAACAGATACCAAGGAAGCCAGAGGAAATAGCAGTGAA
ACCTCACACTCAGTGCCAGAAGCCAAAGGGTCTAAAGAAGTGGAAGTCACTCTTGTTCGGAAAGACAAAGGGCGC

FIGURE 421C

CAGAAAACAACCCGATCACGCCGCAAGCGAAACACAAACAAGAAAGTGGTGGCTCCTGTAGAGAGCCATGTCCCT
GAATCCAACCAAGCTCAAGGTGAGAGTCCTGCTGCAAATGAGGGGACAACAGTACAGCACCCCGAAGCCCCACAG
GAAGAAAAGCAGAGTGAGAAACCCCATTCCACTCCTCCTCAGTCATGTACTTCTGACCTAAGCAAGATTCCCTCC
ACAGAGAATTCGTCCCAAGAAATCAGTGTTGAGGAAAGGACTCCAACCAAAGCATCTGTGCCCCCAGACCTTCCC
CCACCTCCCCAGCCAGCACCGGTGGATGAGGAGCCTCAAGCCAGGTTCAGGGTGCATTCCATCATTGAAAGTGAC
CCGGTGACCCCACCCAGCGATCCAAGCATCCCCATACCCACACTGCCTTCTGTAACTGCAGCAAAGCTCTCACCT
CCTGTCGCCTCTGGGGGGATCCCACACCAGAGCCCCCCTACTAAGGTGACAGAGTGGATCACAAGGCAGGAGGAG
CCACGGGCTCAGTCTACTCCATCTCCAGCTCTTCCCCCAGACACAAAGGCCTCTGATGTTGACACCAGCTCCAGC
ACCCTGAGGAAGATTCTCATGGACCCCAAGTATGTGTCTGCCACAAGTGTCACTTCCACAAGTGTCACCACAGCC
ATTGCAGAGCCTGTCAGTGCTGCCCCTTGCCTACATGAGGCCCCGCCCCCGCCAGTTGACTCTAAAAAGCCTTTA
GAAGAAAAAACAGCACCTCCAGTGACAAACAACTCTGAGATACAAGCCTCGGAGGTGCTGGTAGCTGCTGACAAG
GAAAAGGTGGCTCCAGTCATTGCTCCCAAAATTACCTCTGTTATTAGCCGGATGCCTGTCAGCATTGACCTGGAA
AATTCACAGAAGATAACCTTGGCAAAACCAGCTCCTCAAACCCTCACTGGTCTGGTGAGCGCACTCACTGGCCTG
GTGAACGTCTCCCTGGTCCCGGTGAATGCCCTGAAAGGCCCCGTGAAGGGCTCAGTGACCACACTGAAAAGTTTG
GTGAGCACCCCTGCTGGGCCCGTGAACGTCCTGAAAGGGCCTGTGAATGTTCTTACGGGGCCAGTGAATGTTCTC
ACCACTCCAGTGAACGCCACGGTGGGCACAGTGAATGCCGCCCCAGGCACAGTCAATGCCGCTGCGAGTGCAGTG
AATGCCACAGCAAGTGCAGTGACCGTCACAGCGGGTGCGGTTACTGCTGCATCTGGTGGTGTAACGGCCACAACA
GGCACGGTGACAATGGCAGGGGCAGTGATTGCGCCGTCAACAAAGTGCAAACAGAGAGCGAGTGCTAATGAAAAC
AGTCGGTTCCACCCAGGGTCCATGCCTGTGATCGACGATCGTCCGGCAGACGCGGGCTCAGGGGCGGGGCTGCGT
GTGAACACTTCTGAAGGGGTTGTGCTCCTGAGTTACTCAGGGCAGAAGACCGAAGGCCCACAGCGGATCAGCGCC
AAGATCAGCCAGATCCCCCCGGCCAGTGCAATGGACATTGAATTTCAGCAGTCAGTGTCCAAGTCCCAGGTCAAA
CCTGATTCTGTCACAGCATCGCAGCCTCCATCCAAAGGCCCTCAAGCTCCTGCAGGCTATGCGAACGTGGCCACC
CATTCCACGTTGGTACTGACCGCCCAGACATATAATGCCTCTCCTGTGATTTCGTCTGTGAAGGCCGATAGGCCA
TCCTTGGAGAAGCCCGAGCCCATTCACCTCTCGGTGTCCACGCCTGTCACCCAGGGAGGCACAGTGAAGGTTCTC
ACCCAGGGGATCAACACACCCCCTGTGCTGGTTCACAACCAGCTGGTCCTCACCCCAAGCATTGTCACCACAAAC
AAGAAGCTTGCTGACCCCGTCACCCTTAAAATCGAGACCAAGGTCCTTCAGCCGGCCAACCTGGGGTCCACGCTC
ACGCCCCACCACCCTCCTGCTCTGCCCAGCAAACTGCCTACAGAAGTCAACCATGTCCCCTCGGGGCCCAGCATC
CCAGCAGATCGAACTGTCTCCCATTTGGCAGCTGCAAAGCTAGATGCTCATTCTCCTCGACCAAGTGGACCCGGG
CCATCCTCATTCCCAAGGGCAAGCCACCCCAGCAGTACTGCATCTACGGCGCTCTCCACCAACGCCACAGTCATG
CTGGCTGCAGGCATCCCAGTGCCCCAGTTCATCTCCAGCATCCACCCAGAGCAGTCTGTCATCATGCCACCCCAC
AGCATCACCCAGACTGTGTCCCTGAGCCACCTCTCCCAGGGCGAGGTGAGAATGAACACTCCCACGCTGCCCAGT
ATCACCTACAGCATCCGGCCAGAAGCGCTTCACTCTCCTCGGGCTCCGCTGCAGCCCCAGCAAATAGAGGTCAGG
GCCCCACAGCGTGCCAGCACCCCGCAGCCAGCCCCAGCTGGTGTGCCTGCACTGGCCTCCCAGCACCCTCCCGAG
GAGGAAGTGCATTATCACCTTCCTGTCGCTCGAGCCACAGCCCCTGTGCAGTCAGAGGTACTAGTCATGCAGTCT
GAGTACCGACTGCACCCCTATACTGTGCCACGGGATGTGAGGATCATGGTGCATCCACATGTGACGGCAGTCAGC
GAGCAGCCCAGGGCCGCGGATGGGGTGGTGAAGGTGCCACCAGCCAGCAAGGCCCCTCAGCAGCCAGGGAAGGAA
GCTGCCAAGACACCAGATGCCAAAGCTGCCCCCACCCCCACCCCTGCCCCCGTCCCTGTCCCTGTCCCCCTTCCT
GCCCCTGCTCCTGCCCCTCATGGTGAGGCCCGTATCCTCACAGTTACCCCCAGTAACCAACTCCAGGGGCTGCCT
CTGACCCCTCCTGTGGTGGTGACCCATGGGGTGCAGATTGTGCACTCCAGCGGGGAGCTGTTTCAAGAGTACCGG
TACGGCGACATCCGCACCTACCACCCCCCGGCCCAGCTCACACACACTCAGTTTCCCGCCGCTTCCTCTGTTGGC
CTGCCTTCCCGGACCAAGACAGCTGCTCAGGGCCCTCCTCCTGAAGGTGAGCCCCTGCAGCCTCCTCAGCCTGTG
CAGTCCACACAGCCTGCCCAGCCTGCACCACCCTGCCCGCCCTCCCAGCTCGGTCAGCCCGGCCAGCCACCAAGC
AGCAAGATGCCTCAAGTGTCCCAGGAGGCAAAGGGGACCCAGACGGGAGTAGAGCAGCCTCGCCTCCCAGCTGGA
CCTGCAAACAGGCCACCTGAGCCTCACACCCAGGTTCAGAGGGCACAAGCAGAAACAGGCCCGACTTCCTTCCCC
TCCCCTGTGTCTGTCTCCATGAAGCCTGACCTTCCAGTCTCTCTTCCCACTCAGACTGCCCCAAAACAGCCGTTG
TTTGTCCCAACAACCTCTGGCCCCAGCACCCCACCAGGACTGGTTCTGCCACACACTGAATTCCAGCCAGCCCCC
AAACAAGATTCCTCTCCACACCTGACTTCCCAGAGACCCGTGGATATGGTTCAACTTCTGAAGAAGTACCCCATC
GTGTGGCAGGGCCTGCTGGCCCTCAAGAATGACACAGCTGCTGTGCAGCTCCACTTCGTCTCTGGCAACAACGTC

FIGURE 421D

CTGGCCCATCGGTCCCTGCCCCTTTCTGAAGGAGGGCCCCCACTAAGGATCGCCCAGAGGATGCGGCTGGAGGCA
ACGCAGCTGGAAGGGGTTGCCCGAAGGATGACGGTGGAGACAGATTACTGTCTGCTGCTGGCTCTGCCCTGTGGC
CGTGACCAAGAGGATGTTGTGAGCCAGACCGAGTCCCTCAAGGCTGCCTTCATCACTTACCTGCAGGCCAAGCAG
GCGGCAGGGATCATCAACGTTCCCAACCCTGGCTCCAATCAGCCTGCCTACGTGCTGCAGATCTTCCCGCCCTGT
GAGTTCTCTGAGAGTCACCTGTCCCGCCTGGCCCCTGACCTCCTTGCCAGCATCTCCAACATCTCTCCCCACCTC
ATGATTGTCATTGCCTCCGTGTGAGCCACTGAGTGGTTATCACCTCAGTGAATCTTCCCAGGGCTCTGCAGTAAA
AACAAAGGACAACCCAGCCAAGCAGAGGAAGAAGCTGCCGAAGGGGACAGACTCCACTGCCAGACGGCCAGCCGT
TTGCTGTCCTGCCGCCCGGCTCAGTCGGCCAGACTTCCTCTAGGAGTGGTGCTGCTACCTTGTATGTTTACATAA
TGCTTTAGCCCAAGGACACATCACCAACCCATGGACTCGCAGACACCGGGGCTGGGTTTCTCTTTCCTCTTTTTG
GAGAAAAGGAACAGGGCAGTGGAATGAAAATTTTTTGTTTGTTTGTTTTTAAGAAACAAGAAAACAGAACTGCCT
TTGCACTAAATTAGTGACTTGGACTTTTGCCCAGTGAAGACAGGCTGTGACACTCTGGATGTCTTGGTGTGTGTA
GACACACATTGCAGACTCTTAACGCAGGAAGGACTTCAAACTTCTGCTGAGACCTTGGGGTCAAGGAACATTTCA
TTGGTTTTTTTTGTCCACCCCCATCTCCCTTGCTCATTTGGATGCGTCACCTTAATTCTCCTGCTGCCACCGTCT
TTGATTCACCGGGATGTACAGTTTACAGTTGAAGAGCAAACAGAAAGGTTTTCTCTTGGTGGGATATGCAGAACT
TGGGATGTGTGTATATATAAATATATAATATATATAAATATATATAATACTGACTTAAAAAATCAAATCCCCCGA
CATACGTTTTTTTTAATCTGTGCCAAAAATGTGTTTTCAGAGGAAATCTTATTTTCATATTCAGACTTTGTATTG
CCCACTCATTTGTATAAGTGCGCTTCGGTACAGCACGGGTCCTGCTCCCGCGATGTGGAAGTGTCACACGGCACC
TGTACAAAAAGACTGGCTAACCCCTCTTCCTATTACCTTGATCTCTTCCCCCAACTTCCTAACACTTATTAATTT
ATGAAACTGTTTTTCTCAGCGCAGTTTTGTTTTGTGTGTCCATTGGATTACAAACTTTATTAAAAAATATAAAAC
AC

FIGURE 422

MVRETRHLWVGNLPENVREEKIIEHFKRYGRVESVKILPKRGSEGGVAAFVDFVDIKSAQKAHNSVNKMGDRDLR
TDYNEPGTIPSAARGLDDTVSIASRSREVSGFRGGGGGPAYGPPPSLHAREGRYERRLDGASDNRERAYEHSAYG
HHERGTGGFDRTRHYDQDYYRDPRERTLQHGLYYASRSRSPNRFDAHDPRYEPRAREQFTLPSVVHRDIYRDDIT
REVRGRRPERNYQHSRSRSPHSSQSRNQSPQRLASQASRPTRSPSGSGSRSRSSSSDSISSSSSTSSDSSDSSSS
SSDDSPARSVQSAAVPAPTSQLLSSLEKDEPRKSFGIKVQNLPVRSTDTSLKDGLFHEFKKFGKVTSVQIHGTSE
ERYGLVFFRQQEDQEKALTASKGKLFFGMQIEVTAWIGPETESENEFRPLDERIDEFHPKATRTLFIGNLEKTTT
YHDLRNIFQRFGEIVDIDIKKVNGVPQYAFLQYCDIASVCKAIKKMDGEYLGNNRLKLGFGKSMPTNCVWLDGLS
SNVSDQYLTRHFCRYGPVVKVVFDRLKGMALVLYNEIEYAQAAVKETKGRKIGGNKIKVDFANRESQLAFYHCME
KSGQDIRDFYEMLAERREERRASYDYNQDRTYYESVRTPGTYPEDSRRDYPARGREFYSEWETYQGDYYESRYYD
DPREYRDYRNDPYEQDIREYSYRQRERERERERFESDRDRDHERRPIERSQSPVHLRRPQSPGASPSQAERLPSD
SERRLYSRSSDRSGSCSSLSPPRYEKLDKSRLERYTKNEKTDKERTFDPERVERERRLIRKEKVEKDKTDKQKRK
GKVHSPSSQSSETDQENEREQSPEKPRSCNKLSREKADKEGIAKNRLELMPCVVLTRVKEKEGKVIDHTPVEKLK
AKLDNDTVKSSALDQKLQVSQTEPAKSDLSKLESVRMKVPKEKGLSSHVEVVEKEGRLKARKHLKPEQPADGVSA
VDLEKLEARKRRFADSNLKAEKQKPEVKKSSPEMEDARVLSKKQPDVSSREVILLREGEAERKPVRKEILKRESK
KIKLDRLNTVASPKDCQELASISVGSGSRPSSDLQARLGELAGESVENQEVQSKKPIPSKPQLKQLQVLDDQGPE
REDVRKNYCSLRDETPERKSGQEKSHSVNTEEKIGIDIDHTQSYRKQMEQSRRKQQMEMEIAKSEKFGSPKKDVD
EYERRSLVHEVGKPPQDVTDDSPPSKKKRMDHVDFDICTKRERNYRSSRQISEDSERTGGSPSVRHGSFHEDEDP
IGSPRLLSVKGSPKVDEKVLPYSNITVREESLKFNPYDSSRREQMADMAKIKLSVLNSEDELNRWDSQMKQDAGR
FDVSFPNSIIKRDSLRKRSVRDLEPGEVPSDSDEDGEHKSHSPRASALYESSRLSFLLRDREDKLRERDERLSSS
LERNKFYSFALDKTITPDTKALLERAKSLSSSREENWSFLDWDSRFANFRNNKDKEKVDSAPRPIPSWYMKKKKI
RTDSEGKMDDKKEDHKEEEQERQELFASRFLHSSIFEQDSKRLQHLERKEEDSDFISGRIYGKQTSEGANSTTDS
IQEPVVLFHSRFMELTRMQQKEKEKDQKPKEVEKQEDTENHPKTPESAPENKDSELKTPPSVGPPSVTVVTLESA
PSALEKTTGDKTVEAPLVTEEKTVEPATVSEEAKPASEPAPAPVEQLEQVDLPPGADPDKEAAMMPAGVEEGSSG
DQPPYLDAKPPTPGASFSQAESNVDPEPDSTQPLSKPAQKSEEANEPKAEKPDATADAEPDANQKAEAAPESQPP
ASEDLEVDPPVAAKDKKPNKSKRSKTPVQAAAVSIVEKPVTRKSERIDREKLKRSNSPRGEAQKLLELKMEAEKI
TRTASKNSAADLEHPEPSLPLSRTRRRNVRSVYATMGDHENRSPVKEPVEQPRVTRKRLERELQEAAAVPTTPRR
GRPPKTRRRADEEEENEAKEPAETLKPPEGWRSPRSQKTAAGGGPQGKKG

FIGURE 423

GATGGCGGGGAGCGGCGTCCGCCAAGCTACTTCTACCGCCAGCACCTTCGTGAAGCCCATTTTCAGTCGGGACAT
GAACGAGGCCAAGCGGAGGGTGCGCGAGCTCTACCGCGCCTGGTATCGGGAGGTGCCGAACACTGTGCACCAATT
CCAGCTGGACATCACTGTGAAAATGGGACGGGATAAAGTCCGAGAAATGTTTATGAAGAATGCCCATGTCACAGA
CCCCAGGGTGGTTGATCTTCTGGTCATTAAGGGAAAGATCGAACTGGAAGAAACAATTAAAGTATGGAAGCAGCG
GACACATGTTATGCGGTTCTTCCATGAAACAGAAGCGCCAAGGCCAAAGGATTTCCTATCCAAGTTCTATGTTGG
CCACGATCCATGAAGTCATTCAGTGGAAAGATGCACGTTGATACTATTTTAGAGCACAAATAAACTCACTATACA
ATGGTCACTTTGTGATAGAATTCCATTGATGAACCAATTTTCTGCAGCCTCTTTTTGCCTGAGCAAGTGGGACCT
TGGTATACACATCACCTGTTCTTTCCCTTTTCTTGAAATGTGGTGTTTGCTGTAAATTGGATTGAATTATTTTTC
TCAGAGCCTTGCATGTCAGTAAACAGGAAGGAAGGAGGCCATCTGTTCAAAAATTGTGACATTGGGCATGAGGCT
GGACGACTTGTTAATGTAGTTGTTTCTATAGCCCCTATGATTAGACACTTCAGTGTCAGGGCACAGATTATCTAA
AATTAGCCAGCTCTTCCTGTCAGGGATCAGGGCAGCACTAACAGGCGCAAAAGTAGAGCTGTCAAGATGGGCTAG
TTTTCCTTGGGTTCTGAAGAAAATGGATGTGCAAAGGCTTGGCTCCGCTACTTGTAACAAGCTCCAGCCCTTAAA
ATGAAATTAACTTCCTACTCAGGCACCCTGCTTAGGTGCACAGCTGTTCAATATACACAGAGAACAGAAATATTC
CTACTGTCTTTGGAAACCCTGGTGTACCTCTCAGTGGCAGAATAAACATCAACACAGGTTCAAGAACTGAAAAAA
AAAAAAAAAAAAA

FIGURE 424

MAGSGVRQATSTASTFVKPIFSRDMNEAKRRVRELYRAWYREVPNTVHQFQLDITVKMGRDKVREMFMKNAHVTD
PRVVDLLVIKGKIELEETIKVWKQRTHVMRFFHETEAPRPKDFLSKFYVGHDP

FIGURE 425

GCGTCCCCCACACCACAGACCCGCGCCGCCGACGACCCAGCAGCCGCC**ATG**CGTCTGCTCCGAGGTGTGTTTGTA
GTTGCTGCTAAGCGAACGCCCTTTGGAGCTTACGGAGGCCTTCTGAAAGACTTCACTGCTACTGACTTGTCTGAA
TTTGCTGCCAAGGCTGCCTTGTCTGCTGGCAAAGTCTCACCTGAAACAGTTGACAGTGTGATTATGGGCAATGTC
CTGCAGAGTTCTTCAGATGCTATATATTTGGCAAGGCATGTTGGTTTGCGTGTGGGAATCCCAAAGGAGACCCCA
GCTCTCACGATTAATAGGCTCTGTGGTTCTGGTTTTCAGTCCATTGTGAATGGATGTCAGGAAATTTGTGTTAAA
GAAGCTGAAGTTGTTTTATGTGGAGGAACCGAAAGCATGAGCCAAGCTCCCTACTGTGTCAGAAATGTGCGTTTT
GGAACCAAGCTTGGATCAGATATCAAGCTGGAAGATTCTTTATGGGTATCATTAACAGATCAGCATGTCCAGCTC
CCCATGGCAATGACTGCAGAGAATCTTACTGTAAAACACAAAATAAGCAGAGAAGAATGTGACAAATATGCCCTG
CAGTCACAGCAGAGATGGAAAGCTGCTAATGATGCTGGCTACTTTAATGATGAAATGGCACCAATTGAAGTGAAG
ACAAAGAAAGGAAAACAGACAATGCAGGTAGACGAGCATGCTCGGCCCCAAACCACCCTGGAACAGTTACAGAAA
CTTCCTCCAGTATTCAAGAAAGATGGAACTGTTACTGCAGGGAATGCATCGGGTGTAGCTGATGGTGCTGGAGCT
GTTATCATAGCTAGTGAAGATGCTGTTAAGAAACATAACTTCACACCACTGGCAAGAATTGTGGGCTACTTTGTA
TCTGGATGTGATCCCTCTATCATGGGTATTGGTCCTGTCCCTGCTATCAGTGGGGCACTGAAGAAAGCAGGACTG
AGTCTTAAGGACATGGATTTGGTAGAGGTGAATGAAGCTTTTGCTCCCCAGTACTTGGCTGTTGAGAGGAGTTTG
GATCTTGACATAAGTAAAACCAATGTGAATGGAGGAGCCATTGCTTTGGGTCACCCACTGGGAGGATCTGGATCA
AGAATTACTGCACACCTGGTTCACGAATTAAGGCGTCGAGGTGGAAAATATGCCGTTGGATCAGCTTGCATTGGA
GGTGGCCAAGGTATTGCTGTCATCATTCAGAGCACAGCC**TGA**AGAGACCAGTGAGCTCACTGTGACCCATCCTTA
CTCTACTTGGCCAGGCCACAGTAAAACAAGTGACCTTCAGAGCAGCTGCCACAACTGGCCATGCCCTGCCATTGA
AACAGTGATTAAGTTTGATCAAGCCATGGTGACACAAAAATGCATTGATCATGAATAGGAGCCCATGCTAGAAGT
ACATTCTCTCAGATTTGAACCAGTGAAATATGATGTATTTCTGAGCTAAAACTCAACTATAGAAGACATTAAAAG
AAATCGTATTCTTGCCAAGTAACCACCACTTCTGCCTTAGATAATATGATTATAAGGAAATCAAATAAATGTTGC
CTTAACTTC

FIGURE 426

MRLLRGVFVVAAKRTPFGAYGGLLKDFTATDLSEFAAKAALSAGKVSPETVDSVIMGNVLQSSSDAIYLARHVGL
RVGIPKETPALTINRLCGSGFQSIVNGCQEICVKEAEVVLCGGTESMSQAPYCVRNVRFGTKLGSDIKLEDSLWV
SLTDQHVQLPMAMTAENLTVKHKISREECDKYALQSQQRWKAANDAGYFNDEMAPIEVKTKKGKQTMQVDEHARP
QTTLEQLQKLPPVFKKDGTVTAGNASGVADGAGAVIIASEDAVKKHNFTPLARIVGYFVSGCDPSIMGIGPVPAI
SGALKKAGLSLKDMDLVEVNEAFAPQYLAVERSLDLDISKTNVNGGAIALGHPLGGSGSRITAHLVHELRRRGGK
YAVGSACIGGGQGIAVIIQSTA

FIGURE 427

CGCGCCAGGGCGAGGGCACCGCCGCCGGTCGGGCGCGCTGGGCCTGCCCGGAATCCCGCCGCCTGCGCCCCGCGC
CCCGCGCCCTGCGGGCCATGGGAGCCGGCCGCCGGCAGGGACGACGCCTGTGAGACCCGCGAGCGGCCTCGGGGA
CC**ATG**GGGAGCGATCGGGCCCGCAAGGGCGGAGGGGGCCCGAAGGACTTCGGCGCGGGACTCAAGTACAACTCCC
GGCACGAGAAAGTGAATGGCTTGGAGGAAGGCGTGGAGTTCCTGCCAGTCAACAACGTCAAGAAGGTGGAAAAGC
ATGGCCCGGGGCGCTGGGTGGTGCTGGCAGCCGTGCTGATCGGCCTCCTCTTGGTCTTGCTGGGGATCGGCTTCC
TGGTGTGGCATTTGCAGTACCGGGACGTGCGTGTCCAGAAGGTCTTCAATGGCTACATGAGGATCACAAATGAGA
ATTTTGTGGATGCCTACGAGAACTCCAACTCCACTGAGTTTGTAAGCCTGGCCAGCAAGGTGAAGGACGCGCTGA
AGCTGCTGTACAGCGGAGTCCCATTCCTGGGCCCCTACCACAAGGAGTCGGCTGTGACGGCCTTCAGCGAGGGCA
GCGTCATCGCCTACTACTGGTCTGAGTTCAGCATCCCGCAGCACCTGGTGGAGGAGGCCGAGCGCGTCATGGCCG
AGGAGCGCGTAGTCATGCTGCCCCCGCGGGCGCGCTCCCTGAAGTCCTTTGTGGTCACCTCAGTGGTGGCTTTCC
CCACGGACTCCAAAACAGTACAGAGGACCCAGGACAACAGCTGCAGCTTTGGCCTGCACGCCCGCGGTGTGGAGC
TGATGCGCTTCACCACGCCCGGCTTCCCTGACAGCCCCTACCCCGCTCATGCCCGCTGCCAGTGGGCCCTGCGGG
GGGACGCCGACTCAGTGCTGAGCCTCACCTTCCGCAGCTTTGACCTTGCGTCCTGCGACGAGCGCGGCAGCGACC
TGGTGACGGTGTACAACACCCTGAGCCCCATGGAGCCCCACGCCCTGGTGCAGTTGTGTGGCACCTACCCTCCCT
CCTACAACCTGACCTTCCACTCCTCCCAGAACGTCCTGCTCATCACACTGATAACCAACACTGAGCGGCGGCATC
CCGGCTTTGAGGCCACCTTCTTCCAGCTGCCTAGGATGAGCAGCTGTGGAGGCCGCTTACGTAAAGCCCAGGGGA
CATTCAACAGCCCCTACTACCCAGGCCACTACCCACCCAACATTGACTGCACATGGAACATTGAGGTGCCCAACA
ACCAGCATGTGAAGGTGCGCTTCAAATTCTTCTACCTGCTGGAGCCCGGCGTGCCTGCGGGCACCTGCCCCAAGG
ACTACGTGGAGATCAATGGGGAGAAATACTGCGGAGAGAGGTCCCAGTTCGTCGTCACCAGCAACAGCAACAAGA
TCACAGTTCGCTTCCACTCAGATCAGTCCTACACCGACACCGGCTTCTTAGCTGAATACCTCTCCTACGACTCCA
GTGACCCATGCCCGGGGCAGTTCACGTGCCGCACGGGGCGGTGTATCCGGAAGGAGCTGCGCTGTGATGGCTGGG
CCGACTGCACCGACCACAGCGATGAGCTCAACTGCAGTTGCGACGCCGGCCACCAGTTCACGTGCAAGAACAAGT
TCTGCAAGCCCCTCTTCTGGGTCTGCGACAGTGTGAACGACTGCGGAGACAACAGCGACGAGCAGGGGTGCAGTT
GTCCGGCCCAGACCTTCAGGTGTTCCAATGGGAAGTGCCTCTCGAAAAGCCAGCAGTGCAATGGGAAGGACGACT
GTGGGGACGGGTCCGACGAGGCCTCCTGCCCCAAGGTGAACGTCGTCACTTGTACCAAACACACCTACCGCTGCC
TCAATGGGCTCTGCTTGAGCAAGGGCAACCCTGAGTGTGACGGGAAGGAGGACTGTAGCGACGGCTCAGATGAGA
AGGACTGCGACTGTGGGCTGCGGTCATTCACGAGACAGGCTCGTGTTGTTGGGGGCACGGATGCGGATGAGGGCG
AGTGGCCCTGGCAGGTAAGCCTGCATGCTCTGGGCCAGGGCCACATCTGCGGTGCTTCCCTCATCTCTCCCAACT
GGCTGGTCTCTGCCGCACACTGCTACATCGATGACAGAGGATTCAGGTACTCAGACCCCACGCAGTGGACGGCCT
TCCTGGGCTTGCACGACCAGAGCCAGCGCAGCGCCCCTGGGGTGCAGGAGCGCAGGCTCAAGCGCATCATCTCCC
ACCCCTTCTTCAATGACTTCACCTTCGACTATGACATCGCGCTGCTGGAGCTGGAGAAACCGGCAGAGTACAGCT
CCATGGTGCGGCCCATCTGCCTGCCGGACGCCTCCCATGTCTTCCCTGCCGGCAAGGCCATCTGGGTCACGGGCT
GGGGACACACCCAGTATGGAGGCACTGGCGCGCTGATCCTGCAAAAGGGTGAGATCCGCGTCATCAACCAGACCA
CCTGCGAGAACCTCCTGCCGCAGCAGATCACGCCGCGCATGATGTGCGTGGGCTTCCTCAGCGGCGGCGTGGACT
CCTGCCAGGGTGATTCCGGGGGACCCCTGTCCAGCGTGGAGGCGGATGGGCGGATCTTCCAGGCCGGTGTGGTGA
GCTGGGGAGACGGCTGCGCTCAGAGGAACAAGCCAGGCGTGTACACAAGGCTCCCTCTGTTTCGGGACTGGATCA
AAGAGAACACTGGGGTA**TAG**GGGCCGGGGCCACCCAAATGTGTACACCTGCGGGGCCACCCATCGTCCACCCCAG
TGTGCACGCCTGCAGGCTGGAGACTGGACCGCTGACTGCACCAGCGCCCCCAGAACATACACTGTGAACTCAATC
TCCAGGGCTCCAAATCTGCCTAGAAAACCTCTCGCTTCCTCAGCCTCCAAAGTGGAGCTGGGAGGTAGAAGGGGA
GGACACTGGTGGTTCTACTGACCCAACTGGGGGCAAAGGTTTGAAGACACAGCCTCCCCCGCCAGCCCCAAGCTG
GGCCGAGGCGCGTTTGTGTATATCTGCCTCCCCTGTCTGTAAGGAGCAGCGGGAACGGAGCTTCGGAGCCTCCTC
AGTGAAGGTGGTGGGGCTGCCGGATCTGGGCTGTGGGGCCCTTGGGCCACGCTCTTGAGGAAGCCCAGGCTCGGA
GGACCCTGGAAAACAGACGGGTCTGAGACTGAAATTGTTTTACCAGCTCCCAGGGTGGACTTCAGTGTGTGTATT
TGTGTAAATGAGTAAAACATTTTATTTCTTTTTAAAAAAAAAAA

FIGURE 428

MGSDRARKGGGGPKDFGAGLKYNSRHEKVNGLEEGVEFLPVNNVKKVEKHGPGRWVVLAAVLIGLLLVLLGIGFL
VWHLQYRDVRVQKVFNGYMRITNENFVDAYENSNSTEFVSLASKVKDALKLLYSGVPFLGPYHKESAVTAFSEGS
VIAYYWSEFSIPQHLVEEAERVMAEERVVMLPPRARSLKSFVVTSVVAFPTDSKTVQRTQDNSCSFGLHARGVEL
MRFTTPGFPDSPYPAHARCQWALRGDADSVLSLTFRSFDLASCDERGSDLVTVYNTLSPMEPHALVQLCGTYPPS
YNLTFHSSQNVLLITLITNTERRHPGFEATFFQLPRMSSCGGRLRKAQGTFNSPYYPGHYPPNIDCTWNIEVPNN
QHVKVRFKFFYLLEPGVPAGTCPKDYVEINGEKYCGERSQFVVTSNSNKITVRFHSDQSYTDTGFLAEYLSYDSS
DPCPGQFTCRTGRCIRKELRCDGWADCTDHSDELNCSCDAGHQFTCKNKFCKPLFWVCDSVNDCGDNSDEQGCSC
PAQTFRCSNGKCLSKSQQCNGKDDCGDGSDEASCPKVNVVTCTKHTYRCLNGLCLSKGNPECDGKEDCSDGSDEK
DCDCGLRSFTRQARVVGGTDADEGEWPWQVSLHALGQGHICGASLISPNWLVSAAHCYIDDRGFRYSDPTQWTAF
LGLHDQSQRSAPGVQERRLKRIISHPFFNDFTFDYDIALLELEKPAEYSSMVRPICLPDASHVFPAGKAIWVTGW
GHTQYGGTGALILQKGEIRVINQTTCENLLPQQITPRMMCVGFLSGGVDSCQGDSGGPLSSVEADGRIFQAGVVS
WGDGCAQRNKPGVYTRLPLFRDWIKENTGV

FIGURE 429

TAGGAATTTCAAGGTGTAGGTCAGATATT**TGA**GAATAGGGGATTTTTTTGATGTGCCTTAAATTATACCAAAGAT
TACTAATTATTCCTCTTTGCCCAAAATACTTGCATCCAAGGTTCTAGTCTCTGTTGCTGTGCTGGTCTTTAGCCC
CACTGCTTGCACTGATGTCCCTCCTTTTCACGGAGACCTATCTGAGGTACAGGATGGGGCTGGCACCAGATGATG
TCCCACCACAGTCCCTCACCTCCGGCCTCCACATGACAGAACCAATTTACACTCAACCATGACCTCACCCCTCCT
TGGTTTCTCCCTCGATCTGTGGCCCTTTTTGGATGTATTCTTATCTAACAACACAATCCGGAAAGACTGAATTGA
ATATTTATACTAATGGTTCATATCCTTTATTGCTCAATGATCTAATTAAAGGGATCATTGCCACATTTCATGTTT
ATATTTCTACAATTTGTTTAGAAAACATCTCCTGACCATATCAGTAGCTCGTGTTATCTTTTTATCAACTGCTTC
CCAGAGTCCTAAAACAATAGAAATTTTGGATTGAAAAGTTCAGCATAAGGAGTTTGAGTCAGTAAAGGATGGGAT
AAAGGAGTCGAGATGATTCAATGAAAAGTATCACAAAAAAGAGATTGATCAACAAGAGAAATAAAAAAGCCCAAG
AGGAAGTGGTAGGGGAAGGAATTTAAGAACAGCAATAAGTAAAACTCTTAAGTAACTCCAAAAAGAAAATGGTAC
ATTTTGCCAAAGACCACTTATACTTGAGAACATGGAAGAATTTGCCTGATACTCTCTTTGGGGAAAAGAGTCTCT
CCTCTTTTCCTCAAACCCCAGTACACTCAGCCTCTCTGCCCCACCTTCTCCTGACTTTGTCCTCACTTGCTTCTG
CAGTACATTGGAACCTGAATTGAAAGAAAGTCTTCCTTGAATAATTGGAGTTTGTCTTGAGAGGCAAATATAGCC
CCAAGAATCACAAGATTCGAGGACCATGTAGGTCTTTTACGTAGCCCAAATCCATAAATTAGTCTCACTTTTTGT
ATTTATCGTTTCATATTAAACCCTCTATATCAAATGTTCATCATGATTTTGTATGATTTTTATAACTATTTTATT
CATTTTATTAGATTTATTCTAAAATTTTTTAATGGTAAATTCTTAAACTGTGGAAACCACTGAAGGTGCTTATTA
ACTGTTCTCCCAGATTTGTACAAGTATTGGATGATTCCTTGAGTTTACAGCTGTACAAATAGTGTGGAAAATAAA
CTTTTTTTAAAAAAGA

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FIGURE 430

GISRCRSDI

FIGURE 431

CTGACTTGGCAGGACTGTGCAATTGTCAGAAGGCCGTGGGGAGTGGGGGCCAGTGCCTGCAGCCTGCCCTGCCTC
TCTCACAGGCCCTTAGAGCATCGCCAGGTGCAGAGCTCCACAGCTCTCTTTCCCAAGGAGTAATCAGAGGGTGAG
AACGTGGAGCCTGGTGGACAGGTGAAAGCACTGGGATCTTTCTGCCCAGAAAGGGGAAAGTTGCACATTTATATC
CTAGAGGGAAGCGACAGCAGTGCTTCTCCCTGTGCTGAGGTACAGGAGCC**ATG**TGGCTAGAAATCCTCCTCACTT
CAGTGCTGGGCTTTGCCATCTACTGGTTCATCTCCCGGGACAAAGAGGAAACTTTGCCACTTGAAGATGGGTGGT
GGGGGCCAGGCACGAGGTCCGCAGCCAGGGAGGACGACAGCATCCGCCCTTTCAAGGTGGAAACGTCAGATGAGG
AGATCCACGACTTACACCAGAGGATCGATAAGTTCCGTTTCACCCCACCTTTGGAGGACAGCTGCTTCCACTATG
GCTTCAACTCCAACTACCTGAAGAAAGTCATCTCCTACTGGCGGAATGAATTTGACTGGAAGAAGCAGGTGGAGA
TTCTCAACAGATACCCTCACTTCAAGACTAAGATTGAAGGGCTGGACATCCACTTCATCCACGTGAAGCCCCCCC
AGCTGCCCGCAGGCCATACCCCGAAGCCCTTGCTGATGGTGCACGGCTGGCCCGGCTCTTTCTACGAGTTTTATA
AGATCATCCCACTCCTGACTGACCCCAAGAACCATGGCCTGAGCGATGAGCACGTTTTTGAAGTCATCTGCCCTT
CCATCCCTGGCTATGGCTTCTCAGAGGCATCCTCCAAGAAGGGGTTCAACTCGGTGGCCACCGCCAGGATCTTTT
ACAAGCTGATGCTGCGGCTGGGCTTCCAGGAATTCTACATTCAAGGAGGGGACTGGGGGTCCCTGATCTGCACTA
ATATGGCCCAGCTGGTGCCCAGCCACGTGAAAGGCCTGCACTTGAACATGGCTTTGGTTTTAAGCAACTTCTCTA
CCCTGACCCTCCTCCTGGGACAGCGTTTCGGGAGGTTTCTTGGCCTCACTGAGAGGGATGTGGAGCTGCTGTACC
CCGTCAAGGAGAAGGTATTCTACAGCCTGATGAGGGAGAGCGGCTACATGCACATCCAGTGCACCAAGCCTGACA
CCGTAGGCTCTGCTCTGAATGACTCTCCTGTGGGTCTGGCTGCCTATATTCTAGAGAAGTTTTCCACCTGGACCA
ATACGGAATTCCGATACCTGGAGGATGGAGGCCTGGAAAGGAAGTTCTCCCTGGACGACCTGCTGACCAACGTCA
TGCTCTACTGGACAACAGGCACCATCATCTCCTCCCAGCGCTTCTACAAGGAGAACCTGGGACAGGGCTGGATGA
CCCAGAAGCATGAGCGGATGAAGGTCTATGTGCCCACTGGCTTCTCTGCCTTCCCTTTTGAGCTATTGCACACGC
CTGAAAAGTGGGTGAGGTTCAAGTACCCAAAGCTCATCTCCTATTCCTACATGGTTCGTGGGGGCCACTTTGCGG
CCTTTGAGGAGCCGGAGCTGCTCGCCCAGGACATCCGCAAGTTCCTGTCGGTGCTGGAGCGGCAA**TGA**CCCACCC
CTCTCCCCCCGCCTGCCACCTCCCCCCACAAGTGCCCTCCAGGCTTTTCTTGGGGAAGATACCCCTTTTCTGAGG
AATGAGTTTGCCTCCGTCCCCTGCCCATGCTGGGAGCCCACGCTCACCCCCTCACCCCTCCAAGCTCACTCCCCA
ACCCCCAACTCCGTGTGGTAAGCAACATGGCTTTGATGATAAACGACTTTACTCTA

FIGURE 432

MWLEILLTSVLGFAIYWFISRDKEETLPLEDGWWGPGTRSAAREDDSIRPFKVETSDEEIHDLHQRIDKFRFTPP
LEDSCFHYGFNSNYLKKVISYWRNEFDWKKQVEILNRYPHFKTKIEGLDIHFIHVKPPQLPAGHTPKPLLMVHGW
PGSFYEFYKIIPLLTDPKNHGLSDEHVFEVICPSIPGYGFSEASSKKGFNSVATARIFYKLMLRLGFQEFYIQGG
DWGSLICTNMAQLVPSHVKGLHLNMALVLSNFSTLTLLLGQRFGRFLGLTERDVELLYPVKEKVFYSLMRESGYM
HIQCTKPDTVGSALNDSPVGLAAYILEKFSTWTNTEFRYLEDGGLERKFSLDDLLTNVMLYWTTGTIISSQRFYK
ENLGQGWMTQKHERMKVYVPTGFSAFPFELLHTPEKWVRFKYPKLISYSYMVRGGHFAAFEEPELLAQDIRKFLS
VLERQ

FIGURE 433

CGGCACGAGCGCCGCCGAGGATTCAGCAGCCTCCCCCTTGAGCCCCCTCGCTTCCCGACGTTCCGTTCCCCCCTG
CCCGCCTTCTCCCGCCACCGCCGCCGCCGCCTTCCGCAGGCCGTTTCCACCGAGGAAAAGGAATCGTATCGT**ATG**

TCCGCTATCCAGAACCTCCACTCTTTCGACCCCTTTGCTGATGCAAGTAAGGGTGATGACCTGCTTCCTGCTGGC
ACTGAGGATTATATCCATATAAGAATTCAACAGAGAAACGGCAGGAAGACCCTTACTACTGTCCAAGGGATCGCT
GATGATTACGATAAAAAGAAACTAGTGAAGGCGTTTAAGAAAAAGTTTGCCTGCAATGGTACTGTAATTGAGCAT
CCGGAATATGGAGAAGTAATTCAGCTACAGGGTGACCAACGCAAGAACATATGCCAGTTCCTCGTAGAGATTGGA
CTGGCTAAGGACGATCAGCTGAAGGTTCATGGGTTT**TAA**GTGCTTGTGGCTCACTGAAGCTTAAGTGAGGATTTC
CTTGCAATGAGTAGAATTTCCCTTCTCTCCCTTGTCACAGGTTTAAAAACCTCACAGCTTGTATAATGTAACCAT
TTGGGGTCCGCTTTTAACTTGGACTAGTGTAACTCCTTCATGCAATAAACTGAAAAGAGCCATGCTGTCTAGTCT
TGAAGTCCCTCATTTAAACAGAGGTCAAGCAATAGGCGCCTGGCAGTGTCAAGCCTGAAACCAAGCAATACCGTC
ATGTTTCAGCCAAGCCCAGAGCCCTAAGATTACAAACAACTATGGCCGGAACCTCCTCAGCTCTCCCTCTGCAGA
GTTCCCTACCCTAAGAGAATGTTACCACCTGAACAGTCCTCGGTGAATCTGAGAGGAGAGGATGGGGTAAGGCAG
AAGCACCAGCTGTACTACTAGAAGGGAGCTTTTGGTGGTAGATCCCCTGGTGTCTCCAACCTGACTAGGTGGACA
GAGCTCAAAGAGGCCCTCTTACCGCTAGCGAGGTGATAGGACATCTGGCTTGCCACAAAGGTCTGTTCGACCAGA
CATATCCTAGCTAAGGGATGTCCAAACATCAGAATGTGAGGCCAACCTTCTATCAGAGTTAAACTTTTGACAAGG
GAACAAATCTCAAACTGATCCATCAGTCATGTAGCTAGCTGTAGAGCTTGCAACTTAATAGCAGCAGCTGCCCAA
TGCCATGTGAAGTAACAAACTGGTTTTTGGTTTTTTTTTCCCCTTCAGTTTTAATGTTATGTGTAATGTATTTAA
ACCCTTATTTAAATAAAACTTGTTTTCAGAAAAAAAAAAAAAAAAAAA

FIGURE 434

MSAIQNLHSFDPFADASKGDDLLPAGTEDYIHIRIQQRNGRKTLTTVQGIADDYDKKKLVKAFKKKFACNGTVIE
HPEYGEVIQLQGDQRKNICQFLVEIGLAKDDQLKVHGF

FIGURE 435A

GAGGAAGCGATTCTGGGGTTTCTGTGTTGAACGGTTCTTGTCCGCGAAGATGCGCTTCGGCCTCTGTCAGGGGAC
TTGAACGGGCTTAGTGGGCTTCAGCCAGCTTTTCTCCACCGGTTCCCCACGGGGACCCCCCCCCCCCGGCCGTTG
CA**ATG**GCGGGCGTGGGGCCGGGGGGCTACGCGGCGGAGTTCGTGCCACCGCCAGAGTGCCCCGTCTTTGAGCCGA
GTTGGGAGGAGTTCACAGATCCGCTCAGCTTTATCGGCCGCATCCGGCCTTTGGCGGAGAAAACCGGCATCTGCA
AAATTCGGCCGCCCAAGGACTGGCAGCCTCCATTTGCCTGTGAAGTAAAAAGCTTTCGTTTCACTCCAAGAGTCC
AGCGCCTGAATGAACTTGAGGCAATGACCAGAGTGAGATTGGATTTCTTGGATCAACTAGCAAAATTTTGGGAAC
TTCAAGGATCTACTCTGAAGATCCCTGTGGTAGAGAGAAAAATCCTGGATCTGTATGCTTTGAGCAAGATTGTTG
CCAGCAAAGGAGGTTTTGAAATGGTCACCAAAGAGAAGAAATGGTCTAAAGTGGGTAGTCGCTTGGGATATCTGC
CAGGAAAAGGAACTGGGTCTCTTTTGAAGTCACATTATGAAAGAATTCTCTACCCATATGAGCTTTTCCAGTCTG
GTGTGAGCCTTATGGGTGTGCAGATGCCTAATTTAGATCTTAAAGAAAAAGTGGAGCCTGAGGTTCTCAGCACTG
ATACCCAAACTTCCCCAGAGCCAGGCACAAGGATGAACATTCTGCCGAAGAGAACAAGACGTGTGAAGACTCAGT
CAGAATCTGGAGATGTGAGTAGAAACACGGAACTGAAGAAACTTCAGATTTTTGGGGCTGGGCCCAAGGTTGTGG
GCTTGGCAATGGGAACAAAAGATAAAGAAGATGAGGTCACCCGAAGACGAAAAGTTACCAACAGGTCAGACGCAT
TTAACATGCAAATGAGACAACGGAAAGGCACTCTCTCTGTTAACTTTGTTGATCTCTATGTTTGTATGTTTTGTG
GTCGGGGAAACAATGAAGATAAATTGCTTTTGTGTGATGGATGTGATGACAGCTATCATACATTTTGTCTAATTC
CTCCACTACCTGATGTGCCCAAAGGAGACTGGAGGTGTCCTAAATGTGTCGCCGAGGAATGTAGCAAACCTCGAG
AAGCCTTTGGATTTGAACAAGCTGTACGAGAGTATACACTTCAGAGCTTTGGAGAGATGGCAGATAATTTTAAGT
CTGATTATTTTAATATGCCAGTCCATATGGTTCCCACAGAACTAGTAGAAAAGGAATTTTGGCGGCTGGTAAGCA
GCATTGAAGAAGATGTTATTGTGGAATATGGAGCAGATATCTCCTCAAAAGACTTTGGAAGTGGATTTCCGGTGA
AGGATGGGCGGAGAAAGATTCTGCCAGAAGAAGAGGAATATGCACTTTCTGGTTGGAATTTGAATAACATGCCTG
TCCTGGAACAGTCTGTTCTTGCACATATTAATGTGGACATCTCTGGTATGAAAGTGCCGTGGCTCTATGTGGGAA
TGTGCTTCTCTTCTTTTTGCTGGCACATTGAGGATCACTGGAGTTATTCCATCAACTACTTGCACTGGGGGGAGC
CAAAGACATGGTATGGTGTGCCATCTCATGCTGCAGAGCAACTGGAGGAGGTGATGAGAGAGCTGGCCCCCGAGT
TATTTGAATCCCAGCCTGATCTTCTGCATCAGTTAGTTACCATCATGAACCCCAACGTGCTAATGGAGCATGGTG
TGCCTGTGTACAGGACCAATCAGTGTGCTGGCGAGTTTGTTGTGACATTTCCTCGTGCCTATCACTCTGGATTTA
ACCAGGGCTACAACTTTGCTGAAGCTGTGAACTTCTGTACTGCTGACTGGTTGCCCATTGGACGTCAATGTGTAA
ATCATTACCGACGCCTAAGGCGCCACTGTGTCTTTTCACACGAGGAACTAATTTTCAAGATGGCAGCAGATCCAG
AATGCTTAGATGTGGGGCTGGCTGCCATGGTCTGCAAAGAATTGACTCTCATGACTGAAGAAGAAACACGATTAA
GAGAGTCTGTTGTACAGATGGGTGTCCTGATGTCAGAAGAAGAAGTGTTTGAACTTGTTCCTGATGATGAGCGGC
AGTGTTCAGCATGCAGAACCACATGTTTTCTCTCTGCTCTCACATGTTCCTGTAATCCTGAGCGGCTTGTATGTC
TCTACCATCCAACTGATCTGTGCCCCTGCCCCATGCAGAAGAAATGTCTTAGATATCGCTACCCATTAGAAGACC
TCCCTTCTCTGCTATATGGTGTAAAAGTCAGGGCACAGTCCTATGACACTTGGGTCAGTCGTGTTACAGAAGCAT
TGTCTGCTAACTTCAACCACAAAAAAGATTTGATTGAATTGCGAGTAATGCTGGAAGATGCTGAGGATAGGAAAT
ACCCAGAGAATGATCTCTTTCGAAAACTCAGGGATGCTGTAAAAGAAGCTGAGACCTGTGCTTCTGTGGCTCAGC
TGCTTCTGAGCAAAAAGCAGAAACACAGACAGAGCCCAGATAGTGGGAGGACTCGGACCAAACTGACAGTGGAAG
AATTGAAGGCCTTTGTCCAACAACTTTTTAGTCTTCCGTGTGTCATCAGCCAAGCTCGGCAAGTAAAGAATCTGC
TAGATGATGTGGAAGAGTTTCATGAACGTGCTCAGGAGGCCATGATGGATGAAACCCCAGATTCTTCCAAACTCC
AGATGTTGATAGATATGGGCTCTAGTCTCTATGTGGAACTCCCTGAATTACCACGACTGAAGCAAGAGCTACAAC
AGGCTCGGTGGTTGGACGAAGTAAGACTGACCTTATCAGATCCGCAACAAGTCACTTTGGATGTCATGAAGAAGC
TGATAGACTCTGGGGTAGGGTTGGCACCCCACCATGCTGTGGAGAAAGCAATGGCTGAACTACAGGAGCTCCTTA
CAGTCTCTGAACGATGGGAAGAAAAGGCTAAGGTCTGCCTACAGGCAAGACCGAGGCACAGTGTGGCAAGTTTAG
AAAGCATTGTGAATGAAGCCAAGAACATTCCAGCCTTTCTACCCAATGTGTTGTCCTTGAAAGAAGCCTTACAAA
AGGCTCGAGAATGGACCGCTAAAGTGGAAGCTATTCAGAGTGGCAGCAATTACGCTTATTTGGAGCAGCTTGAGA
GCTTGTCTGCGAAAGGACGCCCTATTCCTGTGCGTCTTGAAGCACTGCCGCAAGTGGAATCACAGGTAGCAGCAG
CACGGGCATGGAGAGAACGGACTGGGCGGACGTTTCTTAAGAAGAATTCTAGCCATACATTGTTACAGGTGCTGA
GCCCCCGGACCGACATTGGTGTATATGGGAGTGGCAAAAATAGGAGGAAAAAAGTAAAAGAACTAATAGAAAAAG
AAAAAGAAAAGGATCTGGACCTGGAGCCTCTGAGTGATCTGGAGGAAGGATTGGAGGAAACCAGAGATACAGCCA
TGGTGGTGGCAGTTTTCAAAGAACGGGAGCAAAAAGAGATTGAAGCCATGCATTCTCTCAGAGCAGCCAACCTAG

FIGURE 435B

CCAAGATGACAATGGTGGACCGCATAGAAGAAGTAAAATTTTGCATTTGCCGCAAGACAGCCAGTGGGTTTATGC
TACAGTGTGAGCTCTGCAAAGACTGGTTCCATAACAGCTGTGTTCCTCTTCCTAAATCAAGTTCCCAAAAAAAAG
GATCCAGCTGGCAAGCTAAAGAAGTAAAATTCCTTTGCCCTCTTTGTATGCGGTCTCGAAGGCCCAGGCTAGAGA
CTATTCTGTCACTCCTGGTATCCCTTCAGAAGTTGCCCGTACGGTTGCCTGAAGGAGAGGCCCTGCAGTGTTTGA
CAGAACGTGCTATGAGTTGGCAAGATAGAGCGCGGCAGGCTCTAGCCACAGATGAACTATCCTCTGCCCTGGCCA
AACTATCTGTGTTGAGCCAGCGTATGGTGGAACAGGCGGCTCGAGAAAAAACTGAAAAGATCATCAGTGCAGAAC
TCCAAAAAGCAGCTGCCAATCCAGACTTACAGGGACACTTACCTAGTTTCCAGCAGTCTGCTTTTAACCGGGTGG
TGAGCAGTGTGTCATCTTCTCCTCGACAAACAATGGACTATGATGATGAAGAAACAGACTCTGATGAAGACATTC
GAGAGACATATGGCTACGACATGAAGGACACAGCCAGTGTGAAGTCCTCTAGTAGTCTTGAACCCAATCTTTTTT
GTGATGAAGAGATTCCCATCAAATCCGAGGAGGTGGTGACCCACATGTGGACAGCACCTTCATTTTGTGCAGAGC
ATGCTTATTCTTCTGCTTCTAAGAGTTGTTCTCAAGTATTTTTTGGGAAAGGTTCTAGCACCCCAAGGAAACAAC
CTCGGAAGAGCCCTTTGGTGCCCCGAAGTTTGGAACCTCCAGTGCTGGAGTTGTCACCTGGAGCTAAGGCACAAC
TGGAAGAACTTATGATGGTTGGAGATCTCCTGGAAGTATCTCTGGACGAGACTCAACACATATGGCGGATTTTGC
AGGCCACACACCCACCCTCTGAAGACAGATTCTTGCATATCATGGAGGATGACAGCATGGAAGAGAAACCACTAA
AAGTGAAAGGAAAGGACTCTTCAGAGAAGAAACGGAAACGGAAGCTAGAAAAGGTAGAGCAACTTTTTGGAGAAG
GAAAACAGAAGTCCAAGGAGTTAAAGAAAATGGACAAACCTAGAAAGAAGAAATTAAAATTAGGTGCAGACAAAT
CAAAGAAGCTGAATAAACTGGCCAAGAAACTAGCAAAAGAAGAAGAGAGAAAGAAAAAGAAGGAGAAGGCTGCTG
CAGCCAAAGTTGAACTTGTGAAAGAGAGCACTGAAAAGAAAAGAGAGAAAAAGGTGCTGGACATCCCCTCAAAGT
ATGACTGGTCAGGAGCAGAGGAGTCTGATGATGAGAATGCTGTGTGCGCAGAACCAGACTGCCAAAGGCCCTGCA
AGGACAAGGGAGTTGTATTTGTAACGAAGAAGAGAGAGATAAAAAATATTAGTTTTAAAAGTGTCCTATGTGACT
GCTTTTCTAAAAAGGTAGACTGGGTACAATGTGATGGTGGCTGTGATGAGTGGTTTCATCGGGTTTGTGTGGGTG
TATCTCCAGAAATGGCTGAAAATGAAGATTACATCTGTATAAACTGTGCAAAGAAGCAGGGGCCAGTTAGCCCAG
GTCCAGCACCACCTCCTTCCTTCATAATGAGCTACAAACTACCAATGGAGGATCTTAAAGAGACCAGT**TAG**CAGA
TGCTTGGTTAGTTTGGGACATGGGGGGACATGGACCACATTGAGACCTTAGTCATCAAGTAGAGTGGTTTATATC
ACTTGGAATGTTGCTTCTAAAGATGAATGGCCTTCAGAGAAAGTCCCCTTAGTGCTGGCTTCCTCTTTGCATGGA
CTCTGTGGGTTACATTGCTCTATCAACATATCTATGCAGAGGGTGTCTTCTTTGGTACAACAGCCAATATCTCAT
GTCTCCTTTGAGTGTGGTTTACTGCATTAAGGCCAGATGCTTAATTGAGCTCTAGGGTGGCTGGTTAGTATTAAT
ACATTGGTGTGCTAACAGGGCATATAGGATGTGGCTTTTGTCCAGCTGATAGTAGTTAGAGGCTTACAACTTAGG
AGCAGCACCAACTGAAGGTGCTAATTGCTTGGATCTCCTTCATTAGGATAGTTGGAGAGGGATTGGAGTACCACT
TTCTTCCACTGTTACCAGGTACTTAATGCCCTAAAGATACAACTAGGAGTAACAGGGCCAAAGTTATTTCTGTTA
GACGTCAAGGAATGGTATCACAGTCTATTGACCTCAGCGATTTGTGCTTGTTTGTGCTAGAAGAACATCCCAAAT
AGGAGAACCTCTCACAAGCTGGGGCAGGTCACCTTATCTTTGTAAGATGAGGATATCATCTAGATCAGAAATCTG
ACTAGATTGGATTCTGAGGAGAAGAACCTACTACAAGGCAAGGAGCCGTTTTTTGGCTTTGAAAAGTCTTGCTGT
CTTGGGTCTACATTTTAGGGAAGAGCAGGTACATGGATCCAGGCTTCTGCCAAAAAAAAAAAGAGAAGAAGATGA
CGAGTATGACCAGTCGTACTATCTTACTGAGCCACAGTGATGCATGCTTTTCGGGGAAAACTTCATTCACAAGTA
TTCCAGACACCAGGCTTCAGGCATGGCCATGAGCAAGACCAGCAAATAACAGCTTTTTCCCTTGCAGCCCTGACC
CCAATGTCTGCTGTTTCCAACACTGGTGATTTCTAACTACGGCCCACAGCAGATGCTGTTGAATAACACCATGGC
TTCATCAGAGGATGTGGGGTTGTAGTACCTCTGGGTGATGAAGTTGTTTTAGCAAATCCATTTTTAAAAAAAAAA
AAAAA

FIGURE 436

MAGVGPGGYAAEFVPPPECPVFEPSWEEFTDPLSFIGRIRPLAEKTGICKIRPPKDWQPPFACEVKSFRFTPRVQ
RLNELEAMTRVRLDFLDQLAKFWELQGSTLKIPVVERKILDLYALSKIVASKGGFEMVTKEKKWSKVGSRLGYLP
GKGTGSLLKSHYERILYPYELFQSGVSLMGVQMPNLDLKEKVEPEVLSTDTQTSPEPGTRMNILPKRTRRVKTQS
ESGDVSRNTELKKLQIFGAGPKVVGLAMGTKDKEDEVTRRRKVTNRSDAFNMQMRQRKGTLSVNFVDLYVCMFCG
RGNNEDKLLLCDGCDDSYHTFCLIPPLPDVPKGDWRCPKCVAEECSKPREAFGFEQAVREYTLQSFGEMADNFKS
DYFNMPVHMVPTELVEKEFWRLVSSIEEDVIVEYGADISSKDFGSGFPVKDGRRKILPEEEEYALSGWNLNNMPV
LEQSVLAHINVDISGMKVPWLYVGMCFSSFCWHIEDHWSYSINYLHWGEPKTWYGVPSHAAEQLEEVMRELAPEL
FESQPDLLHQLVTIMNPNVLMEHGVPVYRTNQCAGEFVVTFPRAYHSGFNQGYNFAEAVNFCTADWLPIGRQCVN
HYRRLRRHCVFSHEELIFKMAADPECLDVGLAAMVCKELTLMTEEETRLRESVVQMGVLMSEEEVFELVPDDERQ
CSACRTTCFLSALTCSCNPERLVCLYHPTDLCPCPMQKKCLRYRYPLEDLPSLLYGVKVRAQSYDTWVSRVTEAL
SANFNHKKDLIELRVMLEDAEDRKYPENDLFRKLRDAVKEAETCASVAQLLLSKKQKHRQSPDSGRTRTKLTVEE
LKAFVQQLFSLPCVISQARQVKNLLDDVEEFHERAQEAMMDETPDSSKLQMLIDMGSSLYVELPELPRLKQELQQ
ARWLDEVRLTLSDPQQVTLDVMKKLIDSGVGLAPHHAVEKAMAELQELLTVSERWEEKAKVCLQARPRHSVASLE
SIVNEAKNIPAFLPNVLSLKEALQKAREWTAKVEAIQSGSNYAYLEQLESLSAKGRPIPVRLEALPQVESQVAAA
RAWRERTGRTFLKKNSSHTLLQVLSPRTDIGVYGSGKNRRKKVKELIEKEKEKDLDLEPLSDLEEGLEETRDTAM
VVAVFKEREQKEIEAMHSLRAANLAKMTMVDRIEEVKFCICRKTASGFMLQCELCKDWFHNSCVPLPKSSSQKKG
SSWQAKEVKFLCPLCMRSRRPRLETILSLLVSLQKLPVRLPEGEALQCLTERAMSWQDRARQALATDELSSALAK
LSVLSQRMVEQAAREKTEKIISAELQKAAANPDLQGHLPSFQQSAFNRVVSSVSSSPRQTMDYDDEETDSDEDIR
ETYGYDMKDTASVKSSSSLEPNLFCDEEIPIKSEEVVTHMWTAPSFCAEHAYSSASKSCSQVFFGKGSSTPRKQP
RKSPLVPRSLEPPVLELSPGAKAQLEELMMVGDLLEVSLDETQHIWRILQATHPPSEDRFLHIMEDDSMEEKPLK
VKGKDSSEKKRKRKLEKVEQLFGEGKQKSKELKKMDKPRKKKLKLGADKSKKLNKLAKKLAKEEERKKKKEKAAA
AKVELVKESTEKKREKKVLDIPSKYDWSGAEESDDENAVCAEPDCQRPCKDKGVVFVTKKREIKNISFKSVLCDC
FSKKVDWVQCDGGCDEWFHRVCVGVSPEMAENEDYICINCAKKQGPVSPGPAPPPSFIMSYKLPMEDLKETS

FIGURE 437A

GAAGCGGCGGGCGGGGTGGAGCAGCCAGCTGGGTCCGGGGAGCGCCGCCGCCGCCTCGATGGGGTGTTGAAAAGT
CTCCTCTAGAGCTTTGGAAGGCTGAATGCACTAAAC**ATG**AAGAGCTTGAAAGCGAAGTTCAGGAAGAGTGACACC
AATGAGTGGAACAAGAATGATGACCGGCTACTGCAGGCCGTGGAGAATGGAGATGCGGAGAAGGTGGCCTCACTG
CTCGGCAAGAAGGGGGCCAGTGCCACCAAACACGACAGTGAGGGCAAGACCGCTTTCCATCTTGCTGCTGCAAAA
GGACACGTGGAATGCCTCAGGGTCATGATTACACATGGTGTGGATGTGACAGCCCAAGATACTACCGGACACAGC
GCCTTACATCTCGCAGCCAAGAACAGCCACCATGAATGCATCAGGAGGCTGCTTCAGTCTAAATGCCCAGCCGAA
AGTGTCGACAGCTCTGGGAAAACAGCTTTACATTATGCAGCGGCTCAGGGCTGCCTTCAAGCTGTGCAGATTCTC
TGCGAACACAAGAGCCCCATAAACCTCAAAGATTTGGATGGGAATATACCGCTGCTTCTTGCTGTACAAAATGGT
CACAGTGAGATCTGTCACTTTCTCCTGGATCATGGAGCAGATGTCAATTCCAGGAACAAAAGTGGAAGAACTGCT
CTCATGCTGGCCTGTGAGATTGGCAGCTCTAACGCTGTGGAAGCCTTAATTAAAAAGGGTGCAGACCTAAACCTT
GTAGATTCTCTTGGATACAATGCCTTACATTATTCCAAACTCTCAGAAAATGCAGGAATTCAAAGCCTTCTATTA
TCAAAAATCTCTCAGGATGCTGATTTAAAGACCCCAACAAAACCAAAGCAGCATGACCAAGTCTCTAAAATAAGC
TCAGAAAGAAGTGGAACTCCAAAAACACGCAAAGCTCCACCACCTCCTATCAGTCCTACCCAGTTGAGTGATGTC
TCTTCCCCAAGATCAATAACTTCGACTCCACTATCGGGAAAGGAATCGGTATTTTTTGCTGAACCACCCTTCAAG
GCTGAGATCAGTTCTATACGAGAAAACAAAGACAGACTAAGTGACAGTACTACAGGTGCTGATAGCTTATTGGAT
ATAAGTTCTGAAGCTGACCAACAAGATCTTCTCTCTCTATTGCAAGCAAAAGTTGCTTCCCTTACCTTACACAAT
AAGGAGTTACAAGATAAATTACAGGCCAAATCACCCAAGGAGGCGGAAGCAGACCTAAGCTTTGACTCATACCAT
TCCACCCAAACTGACTTGGGCCCATCCCTGGGAAAACCTGGTGAAACCTCTCCCCCAGACTCCAAATCATCTCCA
TCTGTCTTAATACATTCTTTAGGTAAATCCACTACTGACAATGATGTCAGAATTCAGCAACTGCAAGAGATTTTG
CAAGATCTACAGAAGAGATTAGAGAGCTCTGAAGCAGAGAGAAAACAGCTACAGGTCGAACTCCAATCCCGAAGG
GCAGAACTGGTATGCTTAAACAACACTGAGATTTCAGAGAACAGCTCTGACCTCAGCCAGAAACTTAAAGAAACT
CAGAGCAAATACGAGGAGGCTATGAAAGAAGTCCTTAGTGTGCAGAAGCAGATGAAACTCGGTCTTGTCTCACCT
GAAAGCATGGATAATTATTCACATTTCCACGAGCTGAGGGTCACGGAAGAGGAAATAAATGTGCTAAAGCAGGAT
CTGCAGAATGCATTAGAAGAAAGTGAAAGAAATAAAGAGAAAGTGAGAGAGTTAGAGGAAAAACTGGTAGAGAGG
GAGAAAGGTACAGTGATTAAGCCACCTGTGGAAGAGTACGAGGAAATGAAAAGTTCATATTGCTCTGTTATTGAG
AATATGAATAAGGAGAAAGCATTTTTGTTTGAGAAATACCAAGAAGCCCAAGAAGAAATCATGAAATTAAAAGAC
ACACTAAAAAGTCAGATGACACAGGAAGCCAGTGATGAAGCTGAGGACATGAAAGAAGCCATGAATAGGATGATA
GATGAACTCAATAAACAGGTGAGCGAGCTGTCACAGCTGTACAAAGAAGCCCAGGCTGAGCTGGAGGATTACAGG
AAGAGGAAATCTCTAGAGGATGTCACAGCTGAATATATCCATAAAGCAGAGCATGAGAAACTGATGCAATTGACA
AACGTGTCCAGGGCTAAAGCAGAAGATGCACTGTCTGAAATGAAGTCTCAGTATTCAAAAGTGTTGAATGAGTTG
ACCCAGCTCAAACAACTGGTGGATGCACAAAAAGAGAACTCTGTCTCTATCACAGAACATTTGCAAGTGATAACC
ACGCTGCGGACTGCAGCAAAAGAGATGGAAGAAAAAATAAGCAATCTTAAGGAACACCTTGCAAGCAAGGAAGTG
GAAGTAGCAAAGCTGGAGAAACAACTCTTAGAAGAGAAAGCTGCTATGACTGATGCAATGGTACCTCGGTCTTCC
TATGAAAAACTCCAGTCATCCTTAGAGAGTGAAGTGAGTGTGTTGGCATCGAAATTAAAGGAATCTGTGAAAGAG
AAAGAGAAGGTCCATTCAGAGGTTGTCCAGATTAGAAGTGAGGTCTCACAGGTGAAAAGAGAAAAGGAAAATATT
CAGACTCTCTTGAAATCCAAAGAGCAAGAAGTAAATGAACTTCTGCAAAAATTCCAGCAAGCTCAGGAAGAACTT
GCAGAAATGAAAAGATACGCTGAGAGCTCTTCAAAACTGGAGGAAGATAAAGATAAAAAGATAAATGAGATGTCG
AAGGAAGTCACCAAATTGAAGGAGGCCTTGAACAGCCTCTCCCAGCTCTCCTACTCAACAAGCTCATCCAAAAGG
CAGAGTCAGCAGCTGGAGGCGCTGCAGCAGCAAGTCAAACAGCTCCAGAACCAGCTGGCGGAATGCAAGAAACAA
CACCAGGAGGTCATATCAGTTTACAGAATGCATCTTCTGTATGCTGTGCAGGGCCAGATGGATGAAGATGTCCAG
AAAGTACTGAAGCAAATCCTTACCATGTGTAAAAACCAGTCTCAAAAGAAG**TAA**AGTGGATTCCTTGGCAGGACA
CTGCCCCTTGTCATCTGTCTTTGTGTTAGATCCAGAGTTGTCGGCAGCCGCTGCCATTGTTCTCATTCGTGGTAT
GCACTGTGGCCTAGCGTAGCTTCTTCCCTTTCCAAAGGTTTCTGAGGACTTCTCCCAGGAGAAGACTGCCCGCCT
CAGAACTGCTTAGAGACTTCAAACCAGCAGAGGTGAAAGTCCCTGTCATCCCTTCAGATTCCAGAGCTGGGATCA
GCCATGCCCAGAGGTCTGGTCCTGATGCTGGCAGGGGGGCCCCCTCCTCCATCCCTGACTGGCTGAGTGGCTTTA
TCACCACCGAGTGATGTGCTGAGGCCTCCTGCAGTGAATGCTCCTTCCATTCCTGTACTCGGGCAGTGCCATTCA
GCACAGGAGAGCTCTTTTTGCCTTTGGCTTTCAATTCCAAAACATGATTTAATTTCTAACTAAATTAGTATGGCA
CTAGTTATGAAGTATCTGCTTAAAACCCTTCATCATGATATCCTGTGGATTTAAAAACTCTAATTCCATGTTTTC

FIGURE 437B

TTCCCATCTGCCTTATATATCTCATCACCCTGCTTATCAATATTCAGTTTGATGAGCACTATTAACTAAAATATG
AAACTTAAAAACAAAAGCAAGTTGTCCTTAAAAGTTCTTTTTTTAAGTAAATTGTTGACATACTGCAAATTTTCT
ATGCAAACTTGCCTCCTGCTGTTATCTGTGAAGCTCAGGAAATCCAAACATTTGTGTTTCAACAAGGGACAGTAA
ACTGTGTGTTTACAGCCAAAAGAAATGCCTCATAGTTCTTAACCTCAACTTTTGTAGAAGTATTTTTTTCTCTGT
AATATTTTTATTGGCTCATAAAGATGTTTTCATATCTGAACTCCTAAATAAGTGAAATTACAGTAGATTATATTA
ACAAAATACTTTTTAGGTAGCCATGCTTGAGACTTTTTAAAAATATAACTTTTTCCTTAAAGTTTTCAGCTATAG
CAAAAGGTAGTTATGTATGCCAGACCTAATATGAGCTGCCACCAACACCCCTAGAACTTTCAGCCATGGTGTCTT
CAGAATTGTAGCGCATTTCTGAATCTAGCAAATCCTCCTTTTACCCGTTGAATGTTTTGAATGCCCTGACTCTAC
CAGCGCCCATAAATGATCTCTAGAAGGACTGTTAGTACCAATCTGTTTTTCAACTTTGAAGCTAAAAACCCTGAT
ATGGTAATATTATGGTGCATAGCAGAGGTCTCGGAAAAAAAATATTTCTGTTCACTTTACTTTCAGGTTAAAAAT
GTTTCTAACACGCTTGCAACTTCCCTTATGGCATTAATCTTGTTGAGGGAGAGAGACAGAATCCTGGACTCTCCA
AAGTATTTAACTGAAAGTAGGGCCTGCTCTGACAGGGCCCATGTCCCACAAGGCTGCTTGGCCTCAGTGGGTGCT
TGGCTGTGCTGGATGATATGTTGATCTGTATTGGATAAGGACCAATGACAGCAAAGCAAAAATGGCTTTAAAGCT
TGGTGTTACTTTTCTTAAGTTGTTTAATTATAGTTAAGCAATTTCAAAAATGCTCCAAAGAAATGTGAAAGGACC
TTTTGTCACAGCACTTCAGAAAATACACAACAGCCCCTTCTGCCCCCGCACAGAAATGCTGCAGAGTATATAAAA
CTTGAGACATTTTTGTAGGATGCCTGACGAGGTGTAGCCTTTTATCTTGTTTCCGGATGCATATTTATTACGAGT
ACTCTGGTTAAATATTGAAAAGTTATATGCTGTAGTTTTTAGTATTTTGTCTTTGTAATTTACAGAAGTTATTGG
AGAAAATAAACTTGTTTCATTTTGCAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 438

MKSLKAKFRKSDTNEWNKNDDRLLQAVENGDAEKVASLLGKKGASATKHDSEGKTAFHLAAAKGHVECLRVMITH
GVDVTAQDTTGHSALHLAAKNSHHECIRRLLQSKCPAESVDSSGKTALHYAAAQGCLQAVQILCEHKSPINLKDL
DGNIPLLLAVQNGHSEICHFLLDHGADVNSRNKSGRTALMLACEIGSSNAVEALIKKGADLNLVDSLGYNALHYS
KLSENAGIQSLLLSKISQDADLKTPTKPKQHDQVSKISSERSGTPKTRKAPPPPISPTQLSDVSSPRSITSTPLS
GKESVFFAEPPFKAEISSIRENKDRLSDSTTGADSLLDISSEADQQDLLSLLQAKVASLTLHNKELQDKLQAKSP
KEAEADLSFDSYHSTQTDLGPSLGKPGETSPPDSKSSPSVLIHSLGKSTTDNDVRIQQLQEILQDLQKRLESSEA
ERKQLQVELQSRRAELVCLNNTEISENSSDLSQKLKETQSKYEEAMKEVLSVQKQMKLGLVSPESMDNYSHFHEL
RVTEEEINVLKQDLQNALEESERNKEKVRELEEKLVEREKGTVIKPPVEEYEEMKSSYCSVIENMNKEKAFLFEK
YQEAQEEIMKLKDTLKSQMTQEASDEAEDMKEAMNRMIDELNKQVSELSQLYKEAQAELEDYRKRKSLEDVTAEY
IHKAEHEKLMQLTNVSRAKAEDALSEMKSQYSKVLNELTQLKQLVDAQKENSVSITEHLQVITTLRTAAKEMEEK
ISNLKEHLASKEVEVAKLEKQLLEEKAAMTDAMVPRSSYEKLQSSLESEVSVLASKLKESVKEKEKVHSEVVQIR
SEVSQVKREKENIQTLLKSKEQEVNELLQKFQQAQEELAEMKRYAESSSKLEEDKDKKINEMSKEVTKLKEALNS
LSQLSYSTSSSKRQSQQLEALQQQVKQLQNQLAECKKQHQEVISVYRMHLLYAVQGQMDEDVQKVLKQILTMCKN
QSQKK

FIGURE 439A

AGTGGGACTCAGCGGGCGTGGAGGTCGCGGCGGACGGAGCGAGCCCTGGGCGAGTGAATTGTGGCTGTGGGTTGA
CGGTGGAGACACCCCCCGGAGAGGCGGAGGGAAGGGAGGCGAGGCTGCACCTGCATGCTTCCCGCCTCCCACTCC
CCAGCGCCCCCGGACCGTGCAGTTCTCTGCAGGACCAGGCC**ATG**GAGCTCGAAGTCCGGCGGGTCCGACAGGCGT
TCCTGTCCGGCCGGTCGCGACCTCTGCGGTTTCGGCTGCAGCAGCTGGAGGCCCTGCGGAGGATGGTGCAGGAGC
GCGAGAAGGATATCCTGACGGCCATCGCCGCCGACCTGTGCAAGAGTGAATTCAATGTGTACAGTCAGGAAGTCA
TTACTGTCCTTGGGGAAATTGATTTTATGCTTGAGAATCTTCCTGAATGGGTTACTGCTAAACCAGTTAAGAAGA
ACGTGCTCACCATGCTGGATGAGGCCTATATTCAGCCACAGCCTCTGGGAGTGGTGCTGATAATCGGAGCTTGGA
ATTACCCCTTCGTTCTCACCATTCAGCCACTGATAGGAGCCATCGCTGCAGGAAATGCTGTGATTATAAAGCCTT
CTGAACTGAGTGAAAATACAGCCAAGATCTTGGCAAAGCTTCTCCCTCAGTATTTAGACCAGGATCTCTATATTG
TTATTAATGGTGGTGTTGAGGAAACCACGGAGCTCCTGAAGCAGCGATTTGACCACATTTTCTATACGGGAAACA
CTGCGGTTGGCAAAATTGTCATGGAAGCTGCTGCCAAGCATCTGACCCCTGTGACTCTTGAACTGGGAGGGAAAA
GTCCATGTTATATTGATAAAGATTGTGACCTGGACATTGTTTGCAGACGCATAACCTGGGGAAAATACATGAATT
GTGGCCAAACCTGCATTGCACCCGACTATATTCTCTGTGAAGCATCCCTCCAAAATCAAATTGTATGGAAGATTA
AGGAAACAGTGAAGGAATTTTATGGAGAAAATATAAAAGAGTCTCCTGATTATGAAAGGATCATCAATCTTCGTC
ATTTTAAGAGGATACTAAGTTTGCTTGAAGGACAAAAGATAGCTTTTGGTGGGGAGACTGATGAGGCCACACGCT
ACATAGCCCCAACAGTACTTACCGATGTTGATCCTAAAACCAAGGTGATGCAAGAAGAAATTTTTGGACCAATTC
TTCCAATAGTGCCTGTGAAAAATGTAGATGAGGCCATAAATTTCATAAATGAACGTGAAAAGCCTCTGGCTCTTT
ATGTATTTTCGCATAACCATAAGCTCATCAAACGGATGATTGATGAGACATCCAGTGGAGGTGTCACAGGCAATG
ACGTCATTATGCACTTCACGCTCAACTCTTTCCCATTTGGAGGAGTGGGTTCCAGTGGGATGGGAGCTTATCACG
GAAAACATAGTTTTGATACTTTTTCTCATCAGCGTCCCTGTTTATTAAAAAGTTTAAAGAGAGAAGGTGCTAACA
AACTCAGATATCCTCCCAACAGCCAGTCAAAGGTGGATTGGGGGAAATTTTTTCTCTTGAAACGGTTCAACAAAG
AAAAACTCGGTCTCCTGTTGCTCACTTTCCTGGGTATTGTAGCCGCTGTGCTTGTCAAGGCAGAATATTAC**TGA**A
GAATGATCCTGTTCAACCTCCTAGTGCCTCTACTGAATTATTCCTCTTTTAAATGGTTAATGAACCAATAATTTT
TAAATCATACCAAAAATAGTAAGAAAATATGCAAACACTCTGTGATCAAACTTAAAAGTCATTGCCATTCATCAT
TAATAAAAGTTGCCATTTCAACTACGTCCCAACATTCCCTAATAGGGTATTCAGGGAACCTGTCTTAAATTGTGC
TTATCTAAATCTTGGAACTTTGAGCTAGGGGAGGAGAATGTATTAGACTAAATACAAACTGCGGGGTTGTAAGGG
AGTCTCAGAACCTCACTGAATCCTTCACTCCAGTTAATGGCACTGCTCACTTCCTGCCTCTGCTGCCACCATCAC
TGTGTGAAGCTTTCAAGAGCTTGGTACTTCCCAGGGCTACCGGCAGTCCTCTGTAGTCCAGAGAGGTGAGATTAG
ATCTTCTTGGTTCCCTGTGAGGTTTCAGGCACTAAAACTCTATGTGGGGAAGGGAGGGGTTACTCCTCCTCCAAT
GGGACTCAAGGACTTGACCTCCAGGAGTAGGCCCCTGGTCAGAAGTGCCATCTCACCAGTGGTCTTCATTCTTCC
TCATTCATTCTTTATCATCCTGTGTTCTGTTTAGTTGCAACAATCTCTTGTGACTAATGTCACTCAAAGCATCTT
GTAACCTAGGGCTTCCTGGAAGTTAGTTGCCAAAGTCATGCAAGCATCACCTGTCATTCTTGTGTTGGAGTTATA
GAATTCTACATCTTATAAAACCTAACTGGCATTTAAAAAATACTGTGGCCGGGCGTGGTGGCTCATGCCTGTAAT
CCCAGCACTTTGGGAGGCCGAGGTGGGAGGATTGCTTGAGTCCAGGAATTTGAGACCAGCCTGGACAACACAGTG
AGACCTCATCTCTATCAAAAAATAAAAATTAGCTAGATGTGGTGGCATGAGCCTGTGTTCCCAGCTGCTTAGGAG
GCTGAAGCAGGAGGATTGATTGAGCCTGCGAGGCCAAGGCTGCAGCAGGCTGTGATTGCACCACTGCACTTCAGC
TTGGGCAACAGAGCAAGACCCTGTCTCCGAAACAAATAAAAAATACTGTAATAAAAGTACTTATAAACATACTAA
TCCTCTTTCAGGACCCTAAAGTTGCAGGTTAGTAGGTCTTCAAGGACAAATCTGTAAGTTTCTTTTCTGTAGTGC
AAGTAAAATTTCACTTTTTGAAACTATAGAGAGATCCCTTTCTGATTAGCCTACAGAACTTAAAGTGAGGGAACC
ATTTCCTCTCACAGACAAAGAGGCCTGGGATATTAGGACTTTGGGGTTTGAGAGCATCATGGGGCAGACAGATGG
TGGATGGTCTGGACAAGAAGCGAGTAAGCCACTGCGGTTGGTCATACTGAAGGGAATTGATGGCAAGAGGATCCC
CTGAGCAAGTCAGAAGTTACTCTCATCAGTCGTTCATGGTCACAACCTGAGGTACTCTGCTGAGTGGGCAAGGCT
GAAGTAAGAGGCCTGTGGAATGCAGCATTACCTGCTGGACAGAGCAGGGCAGGCAGTTCTATGCCTTGGAGCTCC
TGACTGCAGGGACTCTGTCCCCACACTCAGAAAGACTCAGCTCACTCAATGAGAGAATGTGATTTACTTTATAGA
ACGTATAATCAACTTTGTTGAATAATTTGTTCTATTAAGGCTGTCTAAAATGTGATGTCTTCATCATAGTATGAA
GTGTTGAAAATTAATAACGAGCCTAGTTTAGGAAAAAGCTGCTTAAAACTGTGGCTCTAAGAGAGTAATCATAAA
ATACCTTAGATAAAATTGCACTATGGAATTTTCATTGAGTATGTTTAAATTATTGGCTTGTCTACTAATACATCT
GCTTCAAAATGAACATATTTCATAAAATTGGCATCAATTTTAATGACGCTCCTGGTATGGAACCTCAGATATACC

FIGURE 439B

CTATTGGAGACAATCCTTTGATCATAAATTCTCCCCAACTATAAATCATTTTATGTCTTTAAAAAAAAAAAAA

FIGURE 440

MELEVRRVRQAFLSGRSRPLRFRLQQLEALRRMVQEREKDILTAIAADLCKSEFNVYSQEVITVLGEIDFMLENL
PEWVTAKPVKKNVLTMLDEAYIQPQPLGVVLIIGAWNYPFVLTIQPLIGAIAAGNAVIIKPSELSENTAKILAKL
LPQYLDQDLYIVINGGVEETTELLKQRFDHIFYTGNTAVGKIVMEAAAKHLTPVTLELGGKSPCYIDKDCDLDIV
CRRITWGKYMNCGQTCIAPDYILCEASLQNQIVWKIKETVKEFYGENIKESPDYERIINLRHFKRILSLLEGQKI
AFGGETDEATRYIAPTVLTDVDPKTKVMQEEIFGPILPIVPVKNVDEAINFINEREKPLALYVFSHNHKLIKRMI
DETSSGGVTGNDVIMHFTLNSFPFGGVGSSGMGAYHGKHSFDTFSHQRPCLLKSLKREGANKLRYPPNSQSKVDW
GKFFLLKRFNKEKLGLLLLTFLGIVAAVLVKAEYY

FIGURE 441

GCGCGCCTTCTCCAGTCCGCGGTGCC**ATG**GCCCCCGCCCGTCTGTTCGCGCTGCTGCTGCTCTTCGTAGGCGGAG
TCGCCGAGTCGATCCGAGAGACTGAGGTCATCGACCCCCAGGACCTCCTAGAAGGCCGATACTTCTCCGGAGCCC
TACCAGACGATGAGGATGTAGTGGGGCCCGGGCAGGAATCTGATGACTTTGAGCTGTCTGGCTCTGGAGATCTGG
ATGACTTGGAAGACTCCATGATCGGCCCTGAAGTTGTCCATCCCTTGGTGCCTCTAGATAACCATATCCCTGAGA
GGGCAGGGTCTGGGAGCCAAGTCCCCACCGAACCCAAGAAACTAGAGGAGAATGAGGTTATCCCCAAGAGAATCT
CACCCGTTGAAGAGAGTGAGGATGTGTCCAACAAGGTGTCAATGTCCAGCACTGTGCAGGGCAGCAACATCTTTG
AGAGAACGGAGGTCCTGGCAGCTCTGATTGTGGGTGGCATCGTGGGCATCCTCTTTGCCGTCTTCCTGATCCTAC
TGCTCATGTACCGTATGAAGAAGAAGGATGAAGGCAGCTATGACCTGGGCAAGAAACCCATCTACAAGAAAGCCC
CCACCAATGAGTTCTACGCG**TGA**AGCTTGCTTGTGGGCACTGGCTTGGACTTTAGCGGGGAGGGAAGCCAGGGGA
TTTTGAAGGGTGGACATTAGGGTAGGGTGAGGTCAACCTAATACTGACTTGTCAGTATCTCCAGCTCTGATTACC
TTTGAAGTGTTCAGAAGAGACATTGTCTTCTACTGTTCTGCCAGGTTCTTCTTGAGCTTTGGGCCTCAGTTGCCC
TGGCAGAAAAATGGATTCAACTTGGCCTTTCTGAAGGCAAGACTGGGATTGGATCACTTCTTAAACTTCCAGTTA
AGAATCTAGGTCCGCCCTCAAGCCCATACTGACCATGCCTCATCCAGAGCTCCTCTGAAGCCAGGGGGCTAACGG
ATGTTGTGTGGAGTCCTGGCTGGAGGTCCTCCCCCAGTGGCCTTCCTCCCTTCCTTTCACAGCCGGTCTCTCTGC
CAGGAAATGGGGGAAGGAACTAGAACCACCTGCACCTTGAGATGTTTCTGTAAATGGGTACTTGTGATCACACTA
CGGGAATCTCTGTGGTATATACCTGGGGCCATTCTAGGCTCTTTCAAGTGACTTTTGGAAATCAACCTTTTTTAT
TTGGGGGGGAGGATGGGGAAAAGAGCTGAGAGTTTATGCTGAAATGGATTTATAGAATATTTGTAAATCTATTTT
TAGTGTTTGTTCGTTTTTTTAACTGTTCATTCCTTTGTGCAGAGTGTATATCTCTGCCTGGGCAAGAGTGTGGAG
GTGCCGAGGTGTCTTCATTCTCTCGCACATTTCCACAGCACCTGCTAAGTTTGTATTTAATGGTTTTTGTTTTTG
TTTTTGTTTGTTTCTTGAAAATGAGAGAAGAGCCGGAGAGATGATTTTTATTAATTTTTTTTTTTTTTTTTTT
TACTATTTATAGCTTTAGATAGGGCCTCCCTTCCCCTCTTCTTTCTTTGTTCTCTTTCATTAAACCCCTTCCCCA
GTTTTTTTTTTATACTTTAAACCCCGCTCCTCATGGCCTTGGCCCTTTCTGAAGCTGCTTCCTCTTATAAAATAG
CTTTTGCCGAAACATAGTTTTTTTTTAGCAGATCCCAAAATATAATGAAGGGGATGGTGGGATATTTGTGTCTGT
GTTCTTATAATATATTATTATTCTTCCTTGGTTCTAGAAAAATAGATAAATATATTTTTTTCAGGAAATAGTGTG
GTGTTTCCAGTTTGATGTTGCTGGGTGGTTGAGTGAGTGAATTTTCATGTGGCTGGGTGGGTTTTTGCCTTTTTC
TCTTGCCCTGTTCCTGGTGCCTTCTGATGGGGCTGGAATAGTTGAGGTGGATGGTTCTACCCTTTCTGCCTTCTG
TTTGGGACCCAGCTGGTGTTCTTTGGTTTGCTTTCTTCAGGCTCTAGGGCTGTGCTATCCAATACAGTAACCACA
TGCGGCTGTTTAAAGTTAAGCCAATTAAAATCACATAAGATTAAAAATTCCTTCCTCAGTTGCACTAACCACGTT
TCTAGAGGCGTCACTGTATGTAGTTCATGGCTACTGTACTGACAGCGAGAGCATGTCCATCTGTTGGACAGCACT
ATTCTAGAGAACTAAACTGGCTTAACGAGTCACAGCCTCAGCTGTGCTGGGACGACCCTTGTCTCCCTGGGTAGG
GGGGGGGGAATGGGGGAGGGCTGATGAGGCCCCAGCTGGGGCCTGTTGTCTGGGACCCTCCCTCTCCTGAGAGGG
GAGGCCTGGTGGCTTAGCCTGGGCAGGTCGTGTCTCCTCCTGACCCCAGTGGCTGCGGTGAGGGGAACCACCCTC
CCTTGCTGCACCAGTGGCCATTAGCTCCCGTCACCACTGCAACCCAGGGTCCCAGCTGGCTGGGTCCTCTTCTGC
CCCCAGTGCCCTTCCCCTTGGGCTGTGTTGGAGTGAGCACCTCCTCTGTAGGCACCTCTCACACTGTTGTCTGTT
ACTGATTTTTTTTGATAAAAAGATAATAAAACCTGGTACTTTCTAAAAAAAAAAAAAAAAAA

FIGURE 442

MAPARLFALLLLFVGGVAESIRETEVIDPQDLLEGRYFSGALPDDEDVVGPGQESDDFELSGSGDLDDLEDSMIG
PEVVHPLVPLDNHIPERAGSGSQVPTEPKKLEENEVIPKRISPVEESEDVSNKVSMSSTVQGSNIFERTEVLAAL
IVGGIVGILFAVFLILLLMYRMKKKDEGSYDLGKKPIYKKAPTNEFYA

FIGURE 443A

CCTGGTCAGCGTCCCATCCCGGTCGGGAGTTCTCTCCAGGCGGCACGATGCCGAGGAAACAGTGACCCTGAGCGA
ACCAAGCCGGGCGGCAGGTGTGGCTTTGATAGCTGGTGGTGCCACTTCCTGGCCTTGGATGAGCCGTACGCCTCT
GTAAACCCAACTTCCTCACCTTTGAAACAGCTGCCTGGTTCAGCATTAATGAAGATTAGTCAGTGACAGGCCTGG
TGTGCTGAGTCCGCACATAGAAGAATCAAAAATGTCCAAAATGTAACTGGAGAGAAAGTGGGCAACTTTTGGGAG
TGACTTTTCCACAGGAACTTCTGCA**ATG**TCCCATCAACCTCTCAGCTGCCTCACTGAAAAGGAGGACAGCCCCAG
TGAAAGCACAGGAAATGGACCCCCCCACCTGGCCCACCCAAACCTGGACACGTTTACCCCGGAGGAGCTGCTGCA
GCAGATGAAAGAGCTCCTGACCGAGAACCACCAGCTGAAAGAAGCCATGAAGCTAAATAATCAAGCCATGAAAGG
GAGATTTGAGGAGCTTTCGGCCTGGACAGAGAAACAGAAGGAAGAACGCCAGTTTTTTGAGATACAGAGCAAAGA
AGCAAAAGAGCGTCTAATGGCCTTGAGTCATGAGAATGAGAAATTGAAGGAAGAGCTTGGAAAACTAAAAGGGAA
ATCAGAAAGGTCATCTGAGGACCCCACTGATGACTCCAGGCTTCCCAGGGCCGAAGCGGAGCAGGAAAAGGACCA
GCTCAGGACCCAGGTGGTGAGGCTACAAGCAGAGAAGGCAGACCTGTTGGGCATCGTGTCTGAACTGCAGCTCAA
GCTGAACTCCAGCGGCTCCTCAGAAGATTCCTTTGTTGAAATTAGGATGGCTGAAGGAGAAGCAGAAGGGTCAGT
AAAAGAAATCAAGCATAGTCCTGGGCCCACGAGAACAGTCTCCACTGGCACGGCATTGTCTAAATATAGGAGCAG
ATCTGCAGATGGGGCCAAGAATTACTTCGAACATGAGGAGTTAACTGTGAGCCAGCTCCTGCTGTGCCTAAGGGA
AGGGAATCAGAAGGTGGAGAGACTTGAAGTTGCACTCAAGGAGGCCAAAGAAAGAGTTTCAGATTTTGAAAAGAA
AACAAGTAATCGTTCTGAGATTGAAACCCAGACAGAGGGGAGCACAGAGAAAGAGAATGATGAAGAGAAAGGCCC
GGAGACTGTTGGAAGCGAAGTGGAAGCACTGAACCTCCAGGTGACATCTCTGTTTAAGGAGCTTCAAGAGGCTCA
TACAAAACTCAGCGAAGCTGAGCTAATGAAGAAGAGACTTCAAGAAAAGTGTCAGGCCCTTGAAAGGAAAAATTC
TGCAATTCCATCAGAGTTGAATGAAAAGCAAGAGCTTGTTTATACTAACAAAAAGTTAGAGCTACAAGTGGAAAG
CATGCTATCAGAAATCAAAATGGAACAGGCTAAAACAGAGGATGAAAAGTCCAAATTAACTGTGCTACAGATGAC
ACACAACAAGCTTCTTCAAGAACATAATAATGCATTGAAAACAATTGAGGAACTAACAAGAAAAGAGTCAGAAAA
AGTGGACAGGGCAGTGCTGAAGGAACTGAGTGAAAAACTGGAACTGGCAGAGAAGGCTCTGGCTTCCAAACAGCT
GCAAATGGATGAAATGAAGCAAACCATTGCCAAGCAGGAAGAGGACCTGGAAACCATGACCATCCTCAGGGCTCA
GATGGAAGTTTACTGTTCTGATTTTCATGCTGAAAGAGCAGCGAGAGAGAAAATTCATGAGGAAAAGGAGCAACT
GGCATTGCAGCTGGCAGTTCTGCTGAAAGAGAATGATGCTTTCGAAGACGGAGGCAGGCAGTCCTTGATGGAGAT
GCAGAGTCGTCATGGGGCGAGAACAAGTGACTCTGACCAGCAGGCTTACCTTGTTCAAAGAGGAGCTGAGGACAG
GGACTGGCGGCAACAGCGGAATATTCCGATTCATTCCTGCCCCAAGTGTGGAGAGGTTCTGCCTGACATAGACAC
GTTACAGATTCACGTGATGGATTGCATCATT**TAA**GTGTTGATGTATCACCTCCCCAAAACTGTTGGTAAATGTCA
GATTTTTTCCTCCAAGAGTTGTGCTTTTGTGTTATTTGTTTTCACTCAAATATTTTGCCTCATTATTCTTGTTTN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNAGAAGGAAGGAAGGAGAAGAAAAGGTACCTGTTCTACGTAGAACACCTT
TGGTGGAGTTCCATCAACTCGCAAAGTAGAATCCTTACCTACTACTCTTCTGATAATAATTTTAATATTTTTTAT
GTTTGGTTGATGCGAGCAGCTGCACTGCTCATGCAGTTAGCTAGCATGTGACATCATGTGACAAAGTTCATGTAA
TTAGATGGAAGAAACCTCACTGATTAATTTTAAGAACCTTTTAGGGATGCAGGAACAATGAAGTGGCCACAGTAT
GTGCTGTTTTTGAAGCATTTTTAAAAACGAATTGTAGTTGTTTTTCTTCATTTAAAATGGATCTGTTGGAGGTTA
TGTGTGTATGTTGTAGTTTTATTGCAGCCACAATAATTTTACCAAAGTTTTCACATAGGCAGTTAGCCTTTACTT
AATATCAAGACAAGTGAAAAAATATTGGCATCGATGAAACCGATAACATTGGCCTCATTGGATTTCTTTACCCAT
TCACAGTGTAAAGAAGTTACCTTCATGCTTTCATTGTACCTGCAGGCCTGTGGGCTTGTACAGTAGATAATTAAT
TTCTAAAAAGAACAGCTGCCTATTTTCTTCCTAGGTTAGGTTATATCTTCATAATCACAAGAATTAGTGATGGCA
AAATAAAATTTTGCTTATGAATCTTTTACATTGTTTATATATGATTAATATCATCATATATATTTTCTGTATTAA
GCTCATTTGGCTTCATTTAAGCTGTATACTTAGTCATATATCTTTCATTAGTTCTATGGATATGAGCAGATCCCT
TTACTGGAGCCCAGTATGTGCTGTGTGAGTTAGAAGTCATTCTTGCTGAGAAGGTGAATAGGTAGGGATTTGCCT
TGTTTTGTAAGTCTACAATTTGCCAAGAGTAAATAACACTGGACCAGCTGTAAAAGTAAACAGTGTGTTTATGCA
TTGAGATACTAAAGCATTTAAGAAAAAATTAAAAGATCTCTTTTGTTTAAATTTGTCTTAAGAATCTCTCCTAGA
CAAACTTGACTATACACACACACACTTCAATAAGAATCAAAATAGTTCATTATATCTTCATGCCAAGAGAACACA

FIGURE 443B

TGATACAAATTCAACAGTAATTTCAATTAAACGAGTCCCCTACCACACCTCAGGGAGAATATTTGTTAAAGACAT
TTCTAAAGTAACTCTGACATTTTTACTTTTCTTTGTTATGGTTTCTAATGTAAATTTTTTTCCCTTATCATCTTA
TACTGGAGGAAATATATTTCTATAGTCTCCTAAACAGAGAAGGAAACCAAATGGTTTCACATTTAAAGTTATTGG
ACATAATCCTTTTACTTTGTTCAAGTAAAAATATTCAGCAAAGCCAGACTGAAATAATAACATGAATGGGCTTAT
TAAA

FIGURE 444

MSHQPLSCLTEKEDSPSESTGNGPPHLAHPNLDTFTPEELLQQMKELLTENHQLKEAMKLNNQAMKGRFEELSAW
TEKQKEERQFFEIQSKEAKERLMALSHENEKLKEELGKLKGKSERSSEDPTDDSRLPRAEAEQEKDQLRTQVVRL
QAEKADLLGIVSELQLKLNSSGSSEDSFVEIRMAEGEAEGSVKEIKHSPGPTRTVSTGTALSKYRSRSADGAKNY
FEHEELTVSQLLLCLREGNQKVERLEVALKEAKERVSDFEKKTSNRSEIETQTEGSTEKENDEEKGPETVGSEVE
ALNLQVTSLFKELQEAHTKLSEAELMKKRLQEKCQALERKNSAIPSELNEKQELVYTNKKLELQVESMLSEIKME
QAKTEDEKSKLTVLQMTHNKLLQEHNNALKTIEELTRKESEKVDRAVLKELSEKLELAEKALASKQLQMDEMKQT
IAKQEEDLETMTILRAQMEVYCSDFHAERAAREKIHEEKEQLALQLAVLLKENDAFEDGGRQSLMEMQSRHGART
SDSDQQAYLVQRGAEDRDWRQQRNIPIHSCPKCGEVLPDIDTLQIHVMDCII

FIGURE 445

GGCACGAGGGGCTGCCCCCTCCGCCACCGCCGCCGCCCGCCGGCAGGTTCCCTGGTCAGCGTCCCATCCCGGTCG
GGAGTTCTCTCCAGGCGGCACGATGCCGAGGAAACAGTGACCCTGAGCGAAGCCAAGCCGGGCGGCAGGAACTTC
TGCA**ATG**TCCCATCAACCTCTCAGCTGCCTCACTGAAAAGGAGGACAGCCCCAGTGAAAGCACAGGAAATGGACC
CCCCCACCTGGCCCACCCAAACCTGGACACGTTTACCCCGGAGGAGCTGCTGCAGCAGATGAAAGAGCTCCTGAC
CGAGAACCACCAGCTGAAAGAAGCCATGAAGCTAAATAATCAAGCCATGAAAGGGAGATTTGAGGAGCTTTCGGC
CTGGACAGAGAAACAGAAGGAAGAACGCCAGTTTTTTGAGATACAGAGCAAAGAAGCAAAAGAGCGTCTAATGGC
CTTGAGTCATGAGAATGAGAAATTGAAGGAAGAGCTTGGAAAACTAAAAGGGAAATCAGAAAGGTCATCTGAGGA
CCCCACTGATGACTCCAGGCTTCCCAGGGCCGAAGCGGAGCAGGAAAAGGACCAGCTCAGGACCCAGGTGGTGAG
GCTACAAGCAGAGAAGGCAGACCTGTTGGGCATCGTGTCTGAACTGCAGCTCAAGCTGAACTCCAGCGGCTCCTC
AGAAGATTCCTTTGTTGAAATTAGGATGGCTGAAGGAGAAGCAGAAGGGTCAGTAAAAGAAATCAAGCATAGTCC
TGGGCCCACGAGAACAGTCTCCACTGGCACGGCATTGTCTAAATATAGGAGCAGATCTGCAGATGGGGCCAAGAA
TTACTTCGAACATGAGGAGTTAACTGTGAGCCAGCTCCTGCTGTGCCTAAGGGAAGGGAATCAGAAGGTGGAGAG
ACTTGAAGTTGCACTCAAGGAGGCCAAAGAAAGAGTTTCAGATTTTGAAAAGAAAACAAGTAATCGTTCTGAGAT
TGAAACCCAGACAGAGGGGAGCACAGAGAAAGAGAATGATGAAGAGAAAGGCCCGGAGACTGTTGGAAGCGAAGT
GGAAGCACTGAACCTCCAGGTGACATCTCTGTTTAAGGAGCTTCAAGAGGCTCATACAAAACTCAGCGAAGCTGA
GCTAATGAAGAAGAGACTTCAAGAAAAGTGTCAGGCCCTTGAAAGGAAAAATTCTGCAATTCCATCAGAGTTGAA
TGAAAAGCAAGAGCTTGTTTATACTAACAAAAAGTTAGAGCTACAAGTGGAAAGCATGCTATCAGAAATCAAAAT
GGAACAGGCTAAAACAGAGGATGAAAAGTCCAAATTAACTGTGCTACAGATGACACACAACAAGCTTCTTCAAGA
ACATAATAATGCATTGAAAACAATTGAGGAACTAACAAGAAAAGAGTCAGAAAAAGTGGACAGGGCAGTGCTGAA
GGAACTGAGTGAAAAACTGGAACTGGCAGAGAAGGCTCTGGCTTCCAAACAGCTGCAAATGGATGAAATGAAGCA
AACCATTGCCAAGCAGGAAGAGGACCTGGAAACCATGACCATCCTCAGGGCTCAGATGGAAGTTTACTGTTCTGA
TTTTCATGCTGAAAGAGCAGCGAGAGAGAAAATTCATGAGGAAAAGGAGCAACTGGCATTGCAGCTGGCAGTTCT
GCTGAAAGAGAATGATGCTTTCGAAGACGGAGGCAGGCAGTCCTTGATGGAGATGCAGAGTCGTCATGGGGCGAG
AACAAGTGACTCTGACCAGCAGGCTTACCTTGTTCAAAGAGGAGCTGAGGACAGGGACTGGCGGCAACAGCGGAA
TATTCCGATTCATTCCTGCCCCAAGTGTGGAGAGGTTCTGCCTGACATAGACACGTTACAGATTCACGTGATGGA
TTGCATCATT**TAA**GTGTTGATGTATCACCTCCCCAAAACTGTTGGTAAATGTCAGATTTTTTCCTCCAAGAGTTG
TGCTTTTGTGTTATTTGTTTTCACTCAAATATTTTGCCTCATTATTCTTGTTTTAAAAGAAAGAAAACAGGCCGG
GCACAGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGTCGAGGTGGGTGGATCACTTGGGGTCAGGGTTTGA
GACCAGCCTGGCCAACATGGCGGAACCCTGTCTCTACCAAAATTACAAAAATTAGCCGAGCATGGTGGCGCATGC
CTGTAGTCGCAGCTACTCGCGAGGTTGAGGCAGGAGAATTGCTTGAACCCAGGAAGTGGCAGTTGCAGTGAGCCG
AGACGACACCACTGCACTCCAGCCTGGGTGACAGAGGGAGACTCTGTCTCGAAAGAAAAAAAAAAAAAAAAAAA
AA

FIGURE 446

MSHQPLSCLTEKEDSPSESTGNGPPHLAHPNLDTFTPEELLQQMKELLTENHQLKEAMKLNNQAMKGRFEELSAW
TEKQKEERQFFEIQSKEAKERLMALSHENEKLKEELGKLKGKSERSSEDPTDDSRLPRAEAEQEKDQLRTQVVRL
QAEKADLLGIVSELQLKLNSSGSSEDSFVEIRMAEGEAEGSVKEIKHSPGSTRTVSTGTALSHYRRRSADGAKNY
FEHEELTVSQLLLCLREGNQKVERLEVALKEAKERVSDFEKKTSNRSEIETQTEGSTEKENDEEKGPETVGSEVE
ALNLQVTSLFKELQEAHTKLSEAELMKKRLQEKCQALERKNSAIPSELNEKQELVYPNKKLELQVESMLSEIKME
QAKTEDEKSKLTVLQMTHNKLLQEHNNALKTIEELTRKESEKVDRAVLKELSEKLELAEKALASKQLQMDEMKQT
IAKQEEDLETMTILRAQMEVYCSDFHAERAAREKIHEEKEQLALQLAVLLKENDAFEDGGRQSLMEMQSRHGART
SDSDQQAYLVQRGAEDRDWRQQRNIPIHSCPKCGEVLPDIDTLQIHVMDCII

FIGURE 447

GGTTTGTGTAGAGAGGCGTGCAGAGCCCGTTGTCCGGAGTGCACCTGCTGCCTGTTCTGTCCCTCCCGGGAGCCC
CCGCCGCTGTCGCCGTCGAGTCGCC**ATG**GAAGTGCAGAAAGAGGCACAGCGCATCATGACCCTGTCGGTGTGGAA
GATGTATCACTCCCGCATGCAGCGCGGTGGCCTGCGGCTGCACCGGAGTCTGCAGCTGTCGCTGGTCATGCGCAG
CGCCCGGGAGCTCTACCTCTCGGCCAAGGTGGAGGCCCTCGAGCCCGAGGTGTCGTTGCCGGCCGCCCTCCCCTC
TGACCCTCGCCTGCACCCGCCCCGAGAAGCCGAGTCCACGGCCGAGACAGCGACCCCCGACGGTGAGCACCCGTT
TCCGGAGCCAATGGACACGCAGGAGGCGCCGACAGCCGAGGAGACCTCCGCCTGCTGTGCCCCGCGCCCCGCCAA
AGTCAGCCGCAAACGACGCAGCAGCAGCCTGAGCGACGGCGGGGACGTTGGACTGGTCCCGAGCAAGAAAGCCCG
TCTGGAAGAAAAGGAAGAAGAGGAGGGAGCGTCATCCGAAGTCGCCGATCGCCTGCAGCCCCCTCCGGGCCAAGC
GGAGGGCGCCTTTCCCAACCTGGCCCGCGTCCTGCAGAGGCGCTTCTCCGGCCTCCTGAACTGCAGCCCCGCGGC
CCCTCCGACGGCGCCGCCCGCGTGCGAGGCAAAGCCCGCTTGCCGCCCGGCGGACAGCATGCTCAACGTGCTCGT
GCGGGCCGTGGTGGCCTTC**TGA**GGACCCCGAGCGGCGCTGCCGGAGCCCAGAGCGCGCGTCGAACCGTCGGCCCG
AGGGCGCAGACCTGAGGCGAGGCCACCCCCCTCCATCCTGGGGGAAGCGCCCGCGAAAACCGTGGAGAGAAGCCG
CCGCCCGGGCTGCTGAGAGGCCCGGAGAGGACTCTGTCCCCGGGGAGCCATCGCCTTCAGTGTGCAGGGACGGCA
CCGAGGAGTCTGAGCCGGGCGCGGGCGCCTTCCGCAGAGACCTGCGCCCACAGGTGCTGTCTTAGTGGACTGGGA
CGTGAACCTTTCGCTCTCCTTCTGGACTGGGAGAAGGGAGGCTTGGGTGTTGTGTTTTTTGTTTTGTTTGTTTGT
TTGTTTTTAAAGATCTCCTCAGGGTCGGACTTCATTTTGTACTGTGGGCTGTGCTGGCCCTTTCAAGGTTTTTCA
AGAGTTGGTTTTGCGTTTCCAACCTCGGAGAATTCCAGGCACTCCCCTTCCCCCTCCGCTGACATACTTGTATAA
GCGGTCATCGTTGCGTCATGGGGCAGGCGTGGGGAGCTTCCTGTCGCCTTGGCTGGGTGTGGGCCTGGAGGAAGG
TCCTGGGGCGTGCACTCGCCTGGGCAGTGGGGAGGAGAGTGGCCTGAGTTACTTCACCCCCGCGTGCTGCTGGTT
AATGTCCCGCGTCTCTGCACCTTCGGGTGGGAGCGGGGACTGATCTACTTTCACATTCTCAAGTTTTTCTCATCT
GCATTAGAGGTCCCCAGTAGGTTCCCAGGTTCCAGCGTGCCCCTCCCTCAGACACACGGACACAATCAGCCGAGA
AGTTCCTGGTCTGAATCACGAGAATGTGGAGGGGTGGGGGGTGTCAGTGGAAAGGCATAAGGCTGAGCTGAGACC
AGTTGCTGGTGAAACTGGGCCAATCTGGGGAGGGGAACATCCTTGCCAGGGAGTTTCTGAGGGTCTGCTTTGTTT
ACCTTTCGTGCGGTGGATTCTTTTTAACTCCGTCTACCTGGCGTTTTGTTAGAAATGTCAGATAGGAAAATAAAA
ACCATTTGAGT

FIGURE 448

MEVQKEAQRIMTLSVWKMYHSRMQRGGLRLHRSLQLSLVMRSARELYLSAKVEALEPEVSLPAALPSDPRLHPPR
EAESTAETATPDGEHPFPEPMDTQEAPTAEETSACCAPRPAKVSRKRRSSSLSDGGDVGLVPSKKARLEEKEEEE
GASSEVADRLQPPPGQAEGAFPNLARVLQRRFSGLLNCSPAAPPTAPPACEAKPACRPADSMLNVLVRAVVAF

FIGURE 449

GCCGGCCGAACCCAGACCCGAGGTTTTAGAAGCAGAGTCAGGCGAAGCTGGGCCAGAACCGCGACCTCCGCAACC
TTGAGCGGCATCCGTGGAGTGCGCCTGCGCAGCTACGACCGCAGCAGGAAAGCGCCGCCGGCCAGGCCCAGCTGT
GGCCGGACAGGGACTGGAAGAGAGGACGCGGTCGAGTAGGTGTGCACCAGCCCTGGCAACGAGAGCGTCTACCCC
GAACTCTGCTGGCCTTGAGGTGGGGAAGCCGGGGAGGGCAGTTGAGGACCCCGCGGAGGCGCGTGACTGGTTGAG
CGGGCAGGCCAGCCTCCGAGCCGGGTGGACACAGGTTTTAAAAC**ATG**AATCCTACACTCATCCTTGCTGCCTTTT
GCCTGGGAATTGCCTCAGCTACTCTAACATTTGATCACAGTTTAGAGGCACAGTGGACCAAGTGGAAGGCGATGC
ACAACAGATTATACGGCATGAATGAAGAAGGATGGAGGAGAGCAGTGTGGGAGAAGAACATGAAGATGATTGAAC
TGCACAATCAGGAATACAGGGAAGGGAAACACAGCTTCACAATGGCCATGAACGCCTTTGGAGACATGACCAGTG
AAGAATTCAGGCAGGTGATGAATGGCTTTCAAAACCGTAAGCCCAGGAAGGGGAAAGTGTTCCAGGAACCTCTGT
TTTATGAGGCCCCCAGATCTGTGGATTGGAGAGAGAAAGGCTACGTGACTCCTGTGAAGAATCAGGGTCAGTGTG
GTTCTTGTTGGGCTTTTAGTGCTACTGGTGCTCTTGAAGGACAGATGTTCCGGAAAACTGGGAGGCTTATCTCAC
TGAGTGAGCAGAATCTGGTAGACTGCTCTGGGCCTCAAGGCAATGAAGGCTGCAATGGTGGCCTAATGGATTATG
CTTTCCAGTATGTTCAGGATAATGGAGGCCTGGACTCTGAGGAATCCTATCCATATGAGGCAACAGAAGAATCCT
GTAAGTACAATCCCAAGTATTCTGTTGCTAATGACACCGGCTTTGTGGACATCCCTAAGCAGGAGAAGGCCCTGA
TGAAGGCAGTTGCAACTGTGGGGCCCATTTCTGTTGCTATTGATGCAGGTCATGAGTCCTTCCTGTTCTATAAAG
AAGGCATTTATTTTGAGCCAGACTGTAGCAGTGAAGACATGGATCATGGTGTGCTGGTGGTTGGCTACGGATTTG
AAAGCACAGAATCAGATAACAATAAATATTGGCTGGTGAAGAACAGCTGGGGTGAAGAATGGGGCATGGGTGGCT
ACGTAAAGATGGCCAAAGACCGGAGAAACCATTGTGGAATTGCCTCAGCAGCCAGCTACCCCACTGTG**TGA**GCTG
GTGGACGGTGATGAGGAAGGACTTGACTGGGGATGGCGCATGCATGGGAGGAATTCATCTTCAGTCTACCAGCCC
CCGCTGTGTCGGATACACACTCGAATCATTGAAGATCCGAGTGTGATTTGAATTCTGTGATATTTTCACACTGGT
AAATGTTACCTCTATTTTAATTACTGCTATAAATAGGTTTATATTATTGATTCACTTACTGACTTTGCATTTTCG
TTTTTAAAAGGATGTATAAATTTTTACCTGTTTAAATAAAATTTAATTTCAAATGTA

FIGURE 450

MNPTLILAAFCLGIASATLTFDHSLEAQWTKWKAMHNRLYGMNEEGWRRAVWEKNMKMIELHNQEYREGKHSFTM
AMNAFGDMTSEEFRQVMNGFQNRKPRKGKVFQEPLFYEAPRSVDWREKGYVTPVKNQGQCGSCWAFSATGALEGQ
MFRKTGRLISLSEQNLVDCSGPQGNEGCNGGLMDYAFQYVQDNGGLDSEESYPYEATEESCKYNPKYSVANDTGF
VDIPKQEKALMKAVATVGPISVAIDAGHESFLFYKEGIYFEPDCSSEDMDHGVLVVGYGFESTESDNNKYWLVKN
SWGEEWGMGGYVKMAKDRRNHCGIASAASYPTV

FIGURE 451

AATTCCGCGGAATCATCGGAATCCTTCACC**ATG**GCATCCAGCCCGGCCCAGCGTCGGCGAGGCAATGATCCTCTC
ACCTCCAGCCCTGGCCGAAGCTCCCGGCGTACTGATGCCCTCACCTCCAGCCCTGGCCGTGACCTTCCACCATTT
GAGGATGAGTCCGAGGGGCTCCTAGGCACAGAGGGGCCCCTGGAGGAAGAAGAGGATGGAGAGGAGCTCATTGGA
GATGGCATGGAAAGGGACTACCGCGCCATCCCAGAGCTGGACGCCTATGAGGCCGAGGGACTGGCTCTGGATGAT
GAGGACGTAGAGGAGCTGACGGCCAGTCGAAGGGAGGCAGCAGACGGGCCATGCGGCACGGTGACCGGGAGCTGG
CCGGGGCTGGGCGCATGCGCCGTGGGCTCCTGTATGACAGCGATGAGGAGGACGAGGAGCGCCCTGCCCGCAAGC
GCCGCCAGTGGAGCCGGCACGGAGGACGGCGAGGAGGACGAGCAGATGATTGAGAGCATCGAGAACCTGGAGGAT
CTCAAAGGCCACTCTGTGCGCGAGTGGGTGAGCATGGCGGGCCCCCGGCTGGAGATCCACCACCGCTTCAAGAAC
TTCCTGCGCACTCACGTCGACAGCCACGGCCACAACGTCTTCAAGGAGCGCATCAGCGACATGTGCAAAGAGAAC
CGTGAGAGCCTGGTGGTGAACTATGAGGACTTGGCAGCCAGGGAGCACGTGCTGGCCTACTTCCTGCCTGAGGCA
CCGGCGGAGCTGCTGCAGATCTTTGATGAGGCTGCCCTGGAGGTGGTACTGGCCATGTACCCCAAGTACGACCGC
ATCACCAACCACATCCATGTCCGCATCTCCCACCTGCCTCTGGTGGAGGAGCTGCGCTCGCTGAGGCAGCTGCAT
CTGAACCAGCTGATCCGCACCAGTGGGGTGGTGACCAGCTGCACTGGCGTCCTGCCCCAGCTCAGCATGGTCAAG
TACAACTGCAACAAGTGCAATTTCGTCCTGGGTCCTTTCTGCCAGTCCCAGAACCAGGAGGTGAAACCAGGCTCC
TGTCCTGAGTGCCAGTCGGCCGGCCCCTTTGAGGTCAACATGGAGGAGACCATCTATCAGAACTACCAGCGTATC
CGAATCCAGGAGAGTCCAGGCAAAGTGGCGGCTCGGCGGCTGCCCCGCTCCAAGGACGCCATTCTCCTCGCAGAT
CTGGTGGACAGCTGCAACGCAGGAGACGAGATAGAGCTGACTGGCATCTATCACAACAACTATGATGGCTCCCTC
AACACTGCCAATGGCTTCCCTGTCTTTGCCACTGTCATCCTAGCCAACCACGTGGCCAAGAAGGACAACAAGGTT
GCTGTAGGGGAACTGACCGATGAAGATGTGAAGATGATCACTAGCCTCTCCAAGGATCAGCAGATCGGAGAGAAG
ATCTTTGCCAGCATTGCTCCTTCCATCTATGGTCATGAAGACATCAAGAGAGGCCCTGCTCTGGCCCTGTTCGGA
GGGGAGCCCAAAAACCCAGGTGGCAAGCACAAGGTACGTGGTGATATCAACGTGCTCTTGTGCGGAGACCCTGGC
ACAGCGAAGTCGCAGTTTCTCAAGTATATTGAGAAAGTGTCCAGCCGAGCCATCTTCACCACTGGCCAGGGGGCG
TCGGCTGTGGCCGTCACGGCGTATGTCCAGCGGCACCCTGTCAGCAGGGAGTGGACCTTGGAGGCTGGGGCCCTG
GTTCTGGCTGACCGAGGAGTGTGTCTCATTGATGAATTTGACAAGATGAATGACCAGGACAGAACCAGCATCCAT
GAGGCCATGGAGCAACAGAGCATCTCCATCTCGAAGGCTGGCATCGTCACCTCCCTGCAGGCTCGCTGCACGGTC
ATTGCTGCCGCCAACCCCATAGGAGGGCGCTACGACCCCTCGCTGACTTTCTCTGAGAACGTGGACCTCACAGAG
CCCATCATCTCACGCTTTGACATCCTGTGTGTGGTGAGGGACACCGTGGACCCAGTCCAGGACGAGATGCTGGCC
CGCTTCGTGGTGGGCAGCCACGTCAGACACCACCCCAGCAACAAGGAGGAGGAGGGGCTGGCCAATGGCAGCGCT
GCTGAGCCCGCCATGCCCAACACGTATGGCGTGGAGCCCCTGCCCCAGGAGGTCCTGAAGAAGTACATCATCTAC
GCCAAGGAGAGGGTCCACCCGAAGCTCAACCAGATGGACCAGGACAAGGTGGCCAAGATGTACAGTGACCTGAGG
AAAGAATCTATGGCGACAGGCAGCATCCCCATTACGGTGCGGCACATCGAGTCCATGAGTCATGGCGGAGGCCCA
CGCGCGCATCCATCTGCGGGACTATGTGATCGAAGACGACGTCAACATGGCCATCCGCGTGATGCTGGAGAGCTT
CATAGACACACAGAAGTTCAGCGTCATCGCAGCATGCGCAAGACTTTTGCCCGCTACCTTTCATTCCGGCGTGAC
AACAATGAGCTGTTGCTCTTCATACTGAAGCAGTTAGTGGCAGAGCAGGTGACATATCAGCGCAACCGCTTTGGG
GCCCAGCAGGACACTATTGAGGTCCCTGAGAAGGACTTGGTGGATAAGGCTCGTCAGATCAACATCCACAACCTC
TCTGCATTTTATGACAGTGAGCTCTTCAGGATGAACAAGTTCAGCCACGACCTGAAAAGGAAAATGATCCTGCAG
CAGTTC**TGA**GGCCCTATGCCATCCATAAGGATTCCTTGGGATTCTGGTTTGGGGTGGTCAGTGCCCTCTGTGCTT
TATGGACACAAAACCAGAGCACTTGATGAACTCGGGGTACTAGGGTCAGGGCTTATAGCAGGATGTCTGGCTGCA
CCTGGCATGACTGTTTGTTTCTCCAAGCCTGCTTTGTGCTTCTCACCTTTGGGTGGGATGCCTTGCCAGTGTGTC
TTACTTGGTTGCTGAACATCTTGCCACCTCCGAGTGCTTTGTCTCCACTCAGTACCTTGGATCAGAGCTGCTGAG
TTCAGGATGCCTGCGTGTGGTTTAGGTGTTAGCCTTCTTACATGGATGTCAGGAGAGCTGCTGCCCTCTTGGCGT
GAGTTGCGTATTCAGGCTGCTTTTGCTCGCTTTGGCCAGAGAGCTGGTTGAAGATGTTTGTAATCGTTTTCAGTC
TCCTGCAGGTTTCTGTGCCCCTGTGGTGGAAGAGGCACGACAGTGCCAGCGCAGCGTTCTGGGCTCCTCAGTCGC
AGGGGTGGGATGTGAGTCATGCGGATTATCCACTCGCCACAGTTATCAGCTGCCATTGCTCCCTGTCTGTTTCCC
CACTCTCTTATTTGTGCATTCGGTTTGGTTTCTGTAGTTTTAATTTTTAATAAAGTTGAATAAAATATAAAAAAA
AAAA

FIGURE 452

MASSPAQRRRGNDPLTSSPGRSSRRTDALTSSPGRDLPPFEDESEGLLGTEGPLEEEEDGEELIGDGMERDYRAI
PELDAYEAEGLALDDEDVEELTASRREAADGPCGTVTGSWPGLGACAVGSCMTAMRRTRSALPASAASGAGTEDG
EEDEQMIESIENLEDLKGHSVREWVSMAGPRLEIHHRFKNFLRTHVDSHGHNVFKERISDMCKENRESLVVNYED
LAAREHVLAYFLPEAPAELLQIFDEAALEVVLAMYPKYDRITNHIHVRISHLPLVEELRSLRQLHLNQLIRTSGV
VTSCTGVLPQLSMVKYNCNKCNFVLGPFCQSQNQEVKPGSCPECQSAGPFEVNMEETIYQNYQRIRIQESPGKVA
ARRLPRSKDAILLADLVDSCNAGDEIELTGIYHNNYDGSLNTANGFPVFATVILANHVAKKDNKVAVGELTDEDV
KMITSLSKDQQIGEKIFASIAPSIYGHEDIKRGPALALFGGEPKNPGGKHKVRGDINVLLCGDPGTAKSQFLKYI
EKVSSRAIFTTGQGASAVAVTAYVQRHPVSREWTLEAGALVLADRGVCLIDEFDKMNDQDRTSIHEAMEQQSISI
SKAGIVTSLQARCTVIAAANPIGGRYDPSLTFSENVDLTEPIISRFDILCVVRDTVDPVQDEMLARFVVGSHVRH
HPSNKEEEGLANGSAAEPAMPNTYGVEPLPQEVLKKYIIYAKERVHPKLNQMDQDKVAKMYSDLRKESMATGSIP
ITVRHIESMSHGGGPRAHPSAGLCDRRRRQHGHPRDAGELHRHTEVQRHRSMRKTFARYLSFRRDNNELLLFILK
QLVAEQVTYQRNRFGAQQDTIEVPEKDLVDKARQINIHNLSAFYDSELFRMNKFSHDLKRKMILQQF

FIGURE 453

CCGGTGCCGGGCGAAC**ATG**GCGGCGGCCACCGGACCCTCGTTTTGGCTGGGGAATGAAACCCTGAAGGTGCCGCT
GGCGCTCTTTGCCTTGAACCGGCAGCGCCTGTGTGAGCGGCTGCGGAAGAACCCTGCTGTGCAGGCCGGCTCCAT
CGTGGTCCTGCAGGGCGGGGAGGAGACTCAGCGCTACTGCACCGACACCGGGGTCCTCTTCCTCCAGGAGTCCTT
CTTTCACTGGGCGTTCGGTGTCACTGAGCCAGGCTGCTATGGTGTCATCGATGTTGACACTGGGAAGTCGACCCT
GTTTGTGCCCAGGCTTCCTGCCAGCCATGCCACCTGGATGGGAAAGATCCATTCCAAGGAGCACTTCAAGGAGAA
GTATGCCGTGGACGACGTCCAGTACGTAGATGAGATTGCCAGCGTCCTGACGTCACAGAAGCCCTCTGTCCTCCT
CACTTTGCGTGGCGTCAACACGGACAGCGGCAGTGTCTGCAGGGAGGCCTCCTTTGACGGCATCAGCAAGTTCGA
AGTCAACAATACCATTCTTCACCCAGAGATCGTTGAGAGCCGAGTGTTTAAGACGGATATGGAGCTGGAGGTTCT
GCGCTATACCAATAAAATCTCCAGCGAGGCCCACCGTGAGGTAATGAAGGCTGTAAAAGTGGGAATGAAAGAATA
TGGGTTGGAAAGCCTCTTCGAGCACTACTGCTACTCCCGGGGCGGCATGCGCCACAGCTCCTACACCTGCATCTG
CGGCAGTGGTGAGAACTCAGCCGTGCTACACTACGGACACGCCGGAGCTCCCAACGACCGAACGATCCAGAATGG
GGATATGTGCCTGTTCGACATGGGCGGTGAGTATTACTCTGTCGCTTCCGACATCACCTGCTCCTTTCCCCGCAA
CGGCAAGTTCACTGCAGACCAGAAGGCCGTCTATGAGGCAGTGCTGCTGAGCTCCCGTGCCGTCATGGGTGCCAT
GAAGCCAGGTGACTGGTGGCCTGACATCGACCGCCTGGCTGACCGCATCCACCTGGAGGAGCTGGCCCACATGGG
CATCCTGAGCGGCAGCGTGGACGCCATGGTCCAGGCTCACCTGGGGGCCGTGTTTATGCCTCACGGGCTTGGCCA
CTTCCTGGGCATTGACGTGCACGACGTGGGAGGCTACCCAGAGGGCGTGGAGCGCATCGACGAGCCCGGCCTGCG
GAGCCTGCGCACTGCACGGCACCTGCAGCCAGGCATGGTGCTCACCGTGGAGCCGGGCATCTACTTCATCGACCA
CCTCCTGGATGAGGCCCTGGCGGACCCGGCCCGCGCCTCCTTCCTTAACCGCGAGGTCCTGCAGCGCTTTCGCGG
TTTTGGCGGGGTCCGCATCGAGGAGGACGTCGTGGTGATCGACAGCGGCATAGAGCTGCTGACCTGCGTGCCCCG
CACTGTGGAAGAGATTGAAGCATGCATGGCAGGCTGTGACAAGGCCTTTACCCCCTTCTCTGGCCCCAAG**TAG**AG
CCAGCCAGAAATCCCAGCGCACCTGGGGGCCTGGCCTTGCAACCTCTTTTCGTGATGGGCAGCCTGCTGGTCAGC
ACTCCAGTAGCGAGAGACGGCACCCAGAATCAGATCCCAGCTTCGGCATTTGATCAGACCAAACAGTGCTGTTTC
CCGGGGAGGAAACACTTTTTTAATTACCCTTTTGCAGGCACCACCTTTAATCTGTTTTATACCTTGCTTATTAAA
TGAGCGACTTAAAATGATTGAAAATAATGCTGTCCTTTAGTAGCAAGTAAAATGTGTCTTGCTGTCATTTATATT
CCTTTTCCCAGGAAAGAAGCATTTCTGATACTTTCTGTCAAAAATCAATATGCAGAATGGCATTTGCAATAAAAG
GTTTCCTAAAATG

FIGURE 454

MAAATGPSFWLGNETLKVPLALFALNRQRLCERLRKNPAVQAGSIVVLQGGEETQRYCTDTGVLFLQESFFHWAF
GVTEPGCYGVIDVDTGKSTLFVPRLPASHATWMGKIHSKEHFKEKYAVDDVQYVDEIASVLTSQKPSVLLTLRGV
NTDSGSVCREASFDGISKFEVNNTILHPEIVESRVFKTDMELEVLRYTNKISSEAHREVMKAVKVGMKEYGLESL
FEHYCYSRGGMRHSSYTCICGSGENSAVLHYGHAGAPNDRTIQNGDMCLFDMGGEYYSVASDITCSFPRNGKFTA
DQKAVYEAVLLSSRAVMGAMKPGDWWPDIDRLADRIHLEELAHMGILSGSVDAMVQAHLGAVFMPHGLGHFLGID
VHDVGGYPEGVERIDEPGLRSLRTARHLQPGMVLTVEPGIYFIDHLLDEALADPARASFLNREVLQRFRGFGGVR
IEEDVVVIDSGIELLTCVPRTVEEIEACMAGCDKAFTPFSGPK

FIGURE 455A

GTGATAACCCCCGTGAGGACAGGCCATGGCTACGTATACGAGTACCCATCCAGATACCAAAAGGACGTCTATGAT
ATCCCTCCTTCTCATACCACTCAAGGGGTATACGACATCCCTCCCTCATCAGCAAAAGGCCCTGTGTTTTCAGTT
CCAGTGGGAGAGATAAAACCTCAAGGGGTGTATGACATCCCGCCTACAAAAGGGGTATATGCCATTCCGCCCTCT
GCTTGCCGGGATGAAGCAGGGCTTAGGGAAAAAGACTATGACTTCCCCCCTCCCATGAGACAAGCTGGAAGGCCG
GACCTCAGACCGGAGGGGGTTTATGACATTCCTCCAACCTGCACCAAGCCAGCAGGGAAGGACCTTCATGTAAAA
TACAACTGTGACATTCCAGGAGCTGCAGAACCGGTGGCTCGAAGGCACCAGAGCCTGTCCCCGAATCACCCACCC
CCGCAACTCGGACAGTCAGTGGGCTCTCAGAACGACGCATATGATGTCCCCCGAGGCGTTCAGTTTCTTGAGCCA
CCAGCAGAAACCAGTGAGAAAGCAAACCCCCAGGAAAGGGATGGTGTTTATGATGTCCCTCTGCATAACCCGCCA
GATGCTAAAGGCTCTCGGGACTTGGTGGATGGGATCAACCGATTGTCTTTCTCCAGTACAGGCAGCACCCGGAGT
AACATGTCCACGTCTTCCACCTCCTCCAAGGAGTCCTCACTGTCAGCCTCCCCAGCTCAGGACAAAAGGCTCTTC
CTGGATCCAGACACAGCTATTGAGAGACTTCAGCGGCTCCAGCAGGCCCTTGAGATGGGTGTCTCCAGCCTAATG
GCACTGGTCACTACCGACTGGCGGTGTTACGGATATATGGAAAGACACATCAATGAAATACGCACAGCAGTGGAC
AAGGTGGAGCTGTTCCTGAAGGAGTACCTCCACTTTGTCAAGGGAGCTGTTGCAAATGCTGCCTGCCTCCCGGAA
CTCATCCTCCACAACAAGATGAAGCGGGAGCTGCAACGAGTTGAAGACTCCCACCAGATCCTGAGTCAAACCAGC
CATGACTTAAATGAGTGCAGCTGGTCCCTGAATATCTTGGCCATCAACAAGCCCCAGAACAAGTGTGACGATCTG
GACCGGTTTGTGATGGTGGCAAAGACGGTGCCCGATGACGCCAAGCAGCTCACCACAACCATCAACACCAACGCA
GAGGCCCTCTTCAGACCCGGCCCTGGCAGCTTGCATCTGAAGAATGGGCCGGAGAGCATCATGAACTCAACGGAG
TACCCACACGGTGGCTCCCAGGGACAGCTGCTGCATCCTGGTGACCACAAGGCCCAGGCCCACAACAAGGCACTG
CCCCCAGGCCTGAGCAAGGAGCAGGCCCCTGACTGTAGCAGCAGTGATGGTTCTGAGAGGAGCTGGATGGATGAC
TACGATTACGTCCACCTACAGGGTAAGGAGGAGTTTGAGAGGCAACAGAAAGAGCTATTGGAAAAAGAGAATATC
ATGAAACAGAACAAGATGCAGCTGGAACATCATCAGCTGAGCCAGTTCCAGCTGTTGGAACAAGAGATTACAAAG
CCCGTGGAGAATGACATCTCGAAGTGGAAGCCCTCTCAGAGCCTACCCACCACAAACAGTGGCGTGAGTGCTCAG
GATCGGCAGTTGCTGTGCTTCTACTATGACCAATGTGAGACCCATTTCATTTCCCTTCTCAACGCCATTGACGCA
CTCTTCAGTTGTGTCAGCTCAGCCCAGCCCCCGCGAATCTTCGTGGCACACAGCAAGTTTGTCATCCTCAGTGCA
CACAAACTGGTGTTCATTGGAGACACGCTGACACGGCAGGTGACTGCCCAGGACATTCGCAACAAAGTCATGAAC
TCCAGCAACCAGCTCTGCGAGCAGCTCAAGACCATAGTCATGGCAACCAAGATGGCCGCCCTCCATTACCCCAGC
ACCACGGCCCTGCAGGAAATGGTGCACCAAGTGACAGACCTTTCTAGAAATGCCCAGCTGTTCAAGCGCTCTTTG
CTGGAGATGGCAACGTTC**TGA**GAAGAAAAAAAAAGAGGAAGGGGACTGCGTTAACGGTTACTAAGGAAAACTGGAA
ATACTGTCTGGTTTTTGTAAATGTTATCTATTTTTGTAGATATTTTATATAAAAATGAAATATTTTAACATTTTA
TGGGTCAGTCAACTTTCAGAAATTCAGGGAGCTGGAGAGGGAAATCTTTTTTTTTCCCCCTGAGTGGTTCTTATG
TATACATAGAAGTATCTGAGACATAAACTGTACAGAAAACTTGTCCACGTGCTTTTGTATGCCCATGTATTCATG
TTTGTTTGTAGATGTTTGTCTGATGCATTTCATTAAAAAAAAAACCATGAATTACGAAGCACCTTAGTAAGCACC
TTCTAATGCTGCATTTTTTTTGTTGTTGTTAAAAACATACCAGCTGGTTATAATATTGTTCTCCACGTCCTTGTG
ATGATTCTGAGCCTGGCACTCCCAAATCTGGGAAGCATAGTTTATTTGCAAGTGTTCACCTTCCAAATCATGAGG
CATAGCATGACTTATTCTTGTTTGGAAAACTCTTTTCAAAACTGACCATCTTAAACACATGATGGCCAAGTGCCC
AAAAGCCCTCTTGCGGAGCAAATTTCAGAATATATATGTGGATCCAAGCTCTGATAGTTCAGGTGCTGGAGGGAA
GAGAGACCTGTGTGTTTAGAGGCCAGGACCACAGTTAGGATTGGGTTGTTTCAATACTGAGAGACAGCTACAATA
AAAGGAGAGCAATTGCCTCCCTGGGGCTGTTCAATCTTCTGCATTTGTGAGTGGTTCAGTCATGAGGTTTTCCAA
AAGATGTTTTTAGAGTTGTAAAAACCATATTTGCAGCAAAGATTTACAAAGGCGTATCAGACTATGATTGTTCAC
CAAAATAGGGGAATGGTTTGATCCGCCAGTTGCAAGTAGAGGCCTTTCTGACTCTTAATATTCACTTTGGTGCTA
CTACCCCCATTACCTGAGGGAAACTGGCCAGGTCCTTGATCATGGAACTATAGAGCTACCAGGACATATCCTGCT
CTCTAAGGGAATTTATTGCTATCTTGCACCTTCTTTAAAACTCACATATGCAGACCTGACACTCAAGAGTGGCTA
GCTACACAGAGTCCATCTAATTTTTGCAACTTCCTGTGGCCAGTGTGTATAACCCCTTCCACTATCTCACAGATA
GTCACAGCGTCCATTCCATAGTCTGTCTCCTCACATCTGTTAGTATTGACACAGCACAGACACCACAAGCCATCA
GGTTCTTCATGGGGCAGGTGAAATACTTCTACCCCATGGGTAAATGTATTCACATATTACCAAGAGAAGAAGCAC
ATTATCTATGATCTTTTGGCCCAGTTCTTATTTAGCATTTTTATTCCAGCCTACTTGGAAACATGTTTTTATTTG
CAATATATGCCTGACTGAATTAAGCTTGCTTGTTTTAAACAACCAAATCATTGGAACAGAAAAGGATTTAAAAAA
CAAGAATGCATGATCTCAGAGTGATTAAAAAAAAATCAGTGGAAATAAATGATCATAGAAGGTGCTTTTCAAAAC

FIGURE 455B

AACTGCTATTATAATTCTCAAAGTCCTACTCTGCCAAAAGAAGATTAAAAGTCATACATTACATTACAAGGAAAT
GTTCATGTGGGAAGAGGGTTGCTGAAAATCAACAACGCTTGAAGTTAAAAAGTGTGTCTTTGTAGATTTCATTGT
ATAATGTGTATTTCTTAGGAGATGGCTGACTTGATTGATCTACGCTAAGTGGAGACATTTCACATTTTTAAAACC
AAATGTTCAATCTGTATTACTCTTTGCCGTCTTGTATGTAGAGGCTATTTTTAAATCATTAAATTTTTAGATCTC
TGTTTTCATA

FIGURE 456

VITPVRTGHGYVYEYPSRYQKDVYDIPPSHTTQGVYDIPPSSAKGPVFSVPVGEIKPQGVYDIPPTKGVYAIPPS
ACRDEAGLREKDYDFPPPMRQAGRPDLRPEGVYDIPPTCTKPAGKDLHVKYNCDIPGAAEPVARRHQSLSPNHPP
PQLGQSVGSQNDAYDVPRGVQFLEPPAETSEKANPQERDGVYDVPLHNPPDAKGSRDLVDGINRLSFSSTGSTRS
NMSTSSTSSKESSLSASPAQDKRLFLDPDTAIERLQRLQQALEMGVSSLMALVTTDWRCYGYMERHINEIRTAVD
KVELFLKEYLHFVKGAVANAACLPELILHNKMKRELQRVEDSHQILSQTSHDLNECSWSLNILAINKPQNKCDDL
DRFVMVAKTVPDDAKQLITTTINTNAEALFRPGPGSLHLKNGPESIMNSTEYPHGGSQGQLLHPGDHKAQAHNKAL
PPGLSKEQAPDCSSSDGSERSWMDDYDYVHLQGKEEFERQQKELLEKENIMKQNKMQLEHHQLSQFQLLEQEITK
PVENDISKWKPSQSLPTTNSGVSAQDRQLLCFYYDQCETHFISLLNAIDALFSCVSSAQPPRIFVAHSKFVILSA
HKLVFIGDTLTRQVTAQDIRNKVMNSSNQLCEQLKTIVMATKMAALHYPSTTALQEMVHQVTDLSRNAQLFKRSL
LEMATF

FIGURE 457

CGCAGGGACCGTGCTCCGCCGTCTCCGCCGCATCTTCCACCCTCGCCGCCGCCGCAGCTCCCCGCGCTCGTGCCA
CCGCCGCCGCGTCCACCCTCAGCGCCACCGCC**ATG**CGGGAGATCGTGCACCTGCAGGCCGGCCAGTGCGGCAACC
AGATCGGGGCCAAGTTTTGGGAGGTTATCAGTGACGAACATGGCATCGACCCCACAGGCACATACCATGGGGACA
GTGACCTGCAACTGGAGAGGATCAACGTGTACTACAACGAGGCCACAGGAGGAAATTATGTCCCCAGAGCGGTGC
TGGTGGACCTGGAACCCGGCACCATGGACTCTGTCCGTTCTGGCCCCTTCGGTCAGATCTTTCGGCCGGACAACT
TCGTGTTTGGCCAATCCGGAGCCGGCAACAACTGGGCAAAGGGGCACTACACGGAGGGCGCAGAGCTGGTGGACG
CTGTCCTGGACGTAGTCCGGAAGGAGGCCGAGAGCTGCGACTGCCTTCAGGGCTTCCAGCTGACCCACTCGCTGG
GGGGTGGCACGGGGTCCGGAATGGGCACGCTGCTCATCAGTAAGATCCGCGAGGAGTTCCCAGACCGCATCATGA
ACACCTTCAGCGTGGTGCCCTCGCCCAAAGTGTCAGACACGGTGGTGGAGCCCTACAACGCCACGCTGTCTGTGC
ACCAGCTGGTGGAGAATACGGATGAGACCTACTGCATCGACAACGAGGCACTCTACGACATCTGTTTCCGCACCC
TCAAGCTGACCACCCCCACCTACGGGGACCTCAACCACCTGGTGTCGGCCACCATGAGCGGGGTCACCACCTGCC
TGCGCTTCCCGGGCCAGCTGAACGCCGACCTGCGCAAGCTGGCCGTCAACATGGTTCCCTTTCCTCGCCTGCACT
TCTTCATGCCCGGCTTCGCACCCCTGACCAGCCGGGGCAGCCAGCAGTACCGGGCCCTGACGGTGCCCGAGCTCA
CCCAGCAGATGTTCGATGCCAAGAACATGATGGCGGCGTGCGACCCGCGCCACGGCCGCTACCTGACCGTGGCCG
CCGTGTTCCGGGGCCGCATGTCCATGAAGGAGGTGGACGAGCAGATGCTGAGCGTGCAGAGCAAGAACAGCAGCT
ACTTCGTGGAGTGGATCCCCAACAACGTGAAGACGGCCGTGTGCGACATCCCGCCCCGCGGCCTGAAGATGGCCG
CGACCTTCATCGGCAACAGCACGGCCATCCAGGAGCTGTTCAAGCGCATCTCCGAGCAGTTCACGGCCATGTTCC
GGCGCAAGGCCTTCTTGCACTGGTACACGGGCGAGGGCATGGACGAGATGGAGTTCACCGAGGCCGAGAGCAACA
TGAATGACCTGGTATCTGAGTACCAGCAGTACCAGGACGCCACGGCCGAGGAGGGCGAGTTCGAGGAGGAGGCGG
AGGAGGAGGTGGCC**TAG**GCTGCTCCCATCGCTTCCCACCTGTCCCCTCGAGGCTTCTGACCTTTGATCCGCTAGG
CCCCCCATCTCTGAACCCTAGAGCCCCGCTTTCCCTCCAAGGCTGACTCCCCGCTGACCCTAACAATACCTTTGG
AGCTCGCTTTACCTCTGGCTACTTCATCTCCGACCCTGGCTCCCCTTTGAGCCCTAATTTATCTTTAACCCCCTT
GAGCTCTTCCAACCTTGACATTCCCAGGAGGAGCCCCGCTTCACCCCTTCTGACTCTGGAAACCGCACCTTTAAC
TTTGCAGACCTTCCTTCACCCCTGACTTCTGCTTCACCTTTGACCTCTGCCCCCCATGAATCCCATTTTACCTCT
AGACCTATAAGTTCTGGTTTATGTTTGACCCCTCCCTCTGAGCTGCACTTCACCGCTGACCTTGCCTCACCTTTA
ACCCCCCACCTGAGCCCCAGCTCCTACCTCTGACCCCAACTTCTCTTTGATCTCTGAATCCCCTCTGACTCCAAC
TTCTCTTTCACCCTCTATGAGTCCCATTTTACTTCTACACCTGCAAGTCCTGGTTTATATTGGACCCCTCCCTCC
GAGCTGCAGTTCACCTTTGACCTTGCCTCACCTTTCACCCCCCACCCCCCACAGCGTCAGCTCCTACCTCTGACC
CCAGCTTCTCTCTGATTCCCACAGGCCCCATGCATCCTCCCTGCCTCACTCCCCTCAGCCCCTGCCGACCTTAGC
TTATCTGGGAGAGAAACAAGGCCTGGTGCCTGTGAGGAAGAGAGGTCACCCCTACCCTCCCTCCCCGCTTCCCTG
CCTCACCCTCAATAAATAAATTAATTGTTGTCATGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 458

MREIVHLQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLERINVYYNEATGGNYVPRAVLVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDAVLDVVRKEAESCDCLQGFQLTHSLGGGTGSGMGTL
LISKIREEFPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTTPTYGDL
NHLVSATMSGVTTCLRFPGQLNADLRKLAVNMVPFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQMFDAKNMM
AACDPRHGRYLTVAAVFRGRMSMKEVDEQMLSVQSKNSSYFVEWIPNNVKTAVCDIPPRGLKMAATFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEGEFEEEAEEEVA

FIGURE 459A

TGAGGAATCAACAGCCGCCATCTTGTCGCGGACCCGACCGGGGCTTCGAGCGCGATCTACTCGGCCCCGCCGGTC
CCGGGCCCCACAACCGCCCGCGCTCGCTCCTCTCCCTCGCAGCCGGCAGGGCCCCCGACCCCCGTCCGGGCCCTC
GCCGGCCCGGCCGCCCGTGCCCGGGGCTGTTTTCGCGAGCAGGTGAAA**ATG**GCTGAGAACTTGCTGGACGGACCG
CCCAACCCCAAAAGAGCCAAACTCAGCTCGCCCGGTTTCTCGGCGAATGACAGCACAGATTTTGGATCATTGTTT
GACTTGGAAAATGATCTTCCTGATGAGCTGATACCCAATGGAGGAGAATTAGGCCTTTTAAACAGTGGGAACCTT
GTTCCAGATGCTGCTTCCAAACATAAACAACTGTCGGAGCTTCTACGAGGAGGCAGCGGCTCTAGTATCAACCCA
GGAATAGGAAATGTGAGCGCCAGCAGCCCCGTGCAGCAGGGCCTGGGTGGCCAGGCTCAAGGGCAGCCGAACAGT
GCTAACATGGCCAGCCTCAGTGCCATGGGCAAGAGCCCTCTGAGCCAGGGAGATTCTTCAGCCCCCAGCCTGCCT
AAACAGGCAGCCAGCACCTCTGGGCCCACCCCCGCTGCCTCCCAAGCACTGAATCCGCAAGCACAAAAGCAAGTG
GGGCTGGCGACTAGCAGCCCTGCCACGTCACAGACTGGACCTGGTATCTGCATGAATGCTAACTTTAACCAGACC
CACCCAGGCCTCCTCAATAGTAACTCTGGCCATAGCTTAATTAATCAGGCTTCACAAGGGCAGGCGCAAGTCATG
AATGGATCTCTTGGGGCTGCTGGCAGAGGAAGGGGAGCTGGAATGCCGTACCCTACTCCAGCCATGCAGGGCGCC
TCGAGCAGCGTGCTGGCTGAGACCCTAACGCAGGTTTCCCCGCAAATGACTGGTCACGCGGGACTGAACACCGCA
CAGGCAGGAGGCATGGCCAAGATGGGAATAACTGGGAACACAAGTCCATTTGGACAGCCCTTTAGTCAAGCTGGA
GGGCAGCCAATGGGAGCCACTGGAGTGAACCCCCAGTTAGCCAGCAAACAGAGCATGGTCAACAGTTTGCCCACC
TTCCCTACAGATATCAAGAATACTTCAGTCACCAACGTGCCAAATATGTCTCAGATGCAAACATCAGTGGGAATT
GTACCCACACAAGCAATTGCAACAGGCCCCACTGCAGATCCTGAAAAACGCAAACTGATACAGCAGCAGCTGGTT
CTACTGCTTCATGCTCATAAGTGTCAGAGACGAGAGCAAGCAAACGGAGAGGTTCGGGCCTGCTCGCTCCCGCAT
TGTCGAACCATGAAAAACGTTTTGAATCACATGACGCATTGTCAGGCTGGGAAAGCCTGCCAAGTTGCCCATTGT
GCATCTTCACGACAAATCATCTCTCATTGGAAGAACTGCACACGACATGACTGTCCTGTTTGCCTCCCTTTGAAA
AATGCCAGTGACAAGCGAAACCAACAAACCATCCTGGGGTCTCCAGCTAGTGGAATTCAAAACACAATTGGTTCT
GTTGGCACAGGGCAACAGAATGCCACTTCTTTAAGTAACCCAAATCCCATAGACCCCAGCTCCATGCAGCGAGCC
TATGCTGCTCTCGGACTCCCCTACATGAACCAGCCCCAGACGCAGCTGCAGCCTCAGGTTCCTGGCCAGCAACCA
GCACAGCCTCAAACCCACCAGCAGATGAGGACTCTCAACCCCCTGGGAAATAATCCAATGAACATTCCAGCAGGA
GGAATAACAACAGATCAGCAGCCCCCAAACTTGATTTCAGAATCAGCTCTTCCGACTTCCCTGGGGGCCACAAAC
CCACTGATGAACGATGGCTCCAACTCTGGTAACATTGGAACCCTCAGCACTATACCAACAGCAGCTCCTCCTTCT
AGCACCGGTGTAAGGAAAGGCTGGCACGAACATGTCACTCAGGACCTGCGGAGCCATCTAGTGCATAAACTCGTC
CAAGCCATCTTCCCAACACCTGATCCCGCAGCTCTAAAGGATCGCCGCATGGAAAACCTGGTAGCCTATGCTAAG
AAAGTGGAAGGGGACATGTACGAGTCTGCCAACAGCAGGGATGAATATTATCACTTATTAGCAGAGAAAATCTAC
AAGATACAAAAAGAACTAGAAGAAAAACGGAGGTCGCGTTTACATAAACAAGGCATCTTGGGGAACCAGCCAGCC
TTACCAGCCCCGGGGGCTCAGCCCCCTGTGATTCCACAGGCACAACCTGTGAGACCTCCAAATGGACCCCTGTCC
CTGCCAGTGAATCGCATGCAAGTTTCTCAAGGGATGAATTCATTTAACCCCATGTCCTTGGGGAACGTCCAGTTG
CCACAAGCACCCATGGGACCTCGTGCAGCCTCCCCAATGAACCACTCTGTCCAGATGAACAGCATGGGCTCAGTG
CCAGGGATGGCCATTTCTCCTTCCCGAATGCCTCAGCCTCCGAACATGATGGGTGCACACACCAACAACATGATG
GCCCAGGCGCCCGCTCAGAGCCAGTTTCTGCCACAGAACCAGTTCCCGTCATCCAGCGGGGCGATGAGTGTGGGC
ATGGGGCAGCCGCCAGCCCAAACAGGCGTGTCACAGGGACAGGTGCCTGGTGCTGCTCTTCCTAACCCTCTCAAC
ATGCTGGGGCCTCAGGCCAGCCAGCTACCTTGCCCTCCAGTGACACAGTCACCACTGCACCCAACACCGCCTCCT
GCTTCCACGGCTGCTGGCATGCCATCTCTCCAGCACACGACACCACCTGGGATGACTCCTCCCCAGCCAGCAGCT
CCCACTCAGCCATCAACTCCTGTGTCGTCTTCCGGGCAGACTCCCACCCCGACTCCTGGCTCAGTGCCCAGTGCT
ACCCAAACCCAGAGCACCCCTACAGTCCAGGCAGCAGCCCAGGCCCAGGTGACCCCGCAGCCTCAAACCCCAGTT
CAGCCCCCGTCTGTGGCTACCCCTCAGTCATCGCAGCAACAGCCGACGCCTGTGCACGCCCAGCCTCCTGGCACA
CCGCTTTCCCAGGCAGCAGCCAGCATTGATAACAGAGTCCCTACCCCCTCCTCGGTGGCCAGCGCAGAAACCAAT
TCCCAGCAGCCAGGACCTGACGTACCTGTGCTGGAAATGAAGACGGAGACCCAAGCAGAGGACACTGAGCCCGAT
CCTGGTGAATCCAAAGGGGAGCCCAGGTCTGAGATGATGGAGGAGGATTTGCAAGGAGCTTCCCAAGTTAAAGAA
GAAACAGACATAGCAGAGCAGAAATCAGAACCAATGGAAGTGGATGAAAAGAAACCTGAAGTGAAAGTAGAAGTT
AAAGAGGAAGAAGAGAGTAGCAGTAACGGCACAGCCTCTCAGTCAACATCTCCTTCGCAGCCGCGCAAAAAAATC
TTTAAACCAGAGGAGTTACGCCAGGCCCTCATGCCAACCCTAGAAGCACTGTATCGACAGGACCCAGAGTCATTA
CCTTTCCGGCAGCCTGTAGATCCCCAGCTCCTCGGAATTCCAGACTATTTTGACATCGTAAAGAATCCCATGGAC

FIGURE 459B

CTCTCCACCATCAAGCGGAAGCTGGACACAGGGCAATACCAAGAGCCCTGGCAGTACGTGGACGACGTCTGGCTC
ATGTTCAACAATGCCTGGCTCTATAATCGCAAGACATCCCGAGTCTATAAGTTTTGCAGTAAGCTTGCAGAGGTC
TTTGAGCAGGAAATTGACCCTGTCATGCAGTCCCTTGGATATTGCTGTGGACGCAAGTATGAGTTTTCCCCACAG
ACTTTGTGCTGCTATGGGAAGCAGCTGTGTACCATTCCTCGCGATGCTGCCTACTACAGCTATCAGAATAGGTAT
CATTTCTGTGAGAAGTGTTTCACAGAGATCCAGGGCGAGAATGTGACCCTGGGTGACGACCCTTCACAGCCCCAG
ACGACAATTTCAAAGGATCAGTTTGAAAAGAAGAAAAATGATACCTTAGACCCCGAACCTTTCGTTGATTGCAAG
GAGTGTGGCCGGAAGATGCATCAGATTTGCGTTCTGCACTATGACATCATTTGGCCTTCAGGTTTTGTGTGCGAC
AACTGCTTGAAGAAAACTGGCAGACCTCGAAAAGAAAACAAATTCAGTGCTAAGAGGCTGCAGACCACAAGACTG
GGAAACCACTTGGAAGACCGAGTGAACAAATTTTTGCGGCGCCAGAATCACCCTGAAGCCGGGGAGGTTTTTGTC
CGAGTGGTGGCCAGCTCAGACAAGACGGTGGAGGTCAAGCCCGGGATGAAGTCACGGTTTGTGGATTCTGGGGAA
ATGTCTGAATCTTTCCCATATCGAACCAAAGCTCTGTTTGCTTTTGAGGAAATTGACGGCGTGGATGTCTGCTTT
TTTGGAATGCACGTCCAAGAATACGGCTCTGATTGCCCCCCTCCAAACACGAGGCGTGTGTACATTTCTTATCTG
GATAGTATTCATTTCTTCCGGCCACGTTGCCTCCGCACAGCCGTTTACCATGAGATCCTTATTGGATATTTAGAG
TATGTGAAGAAATTAGGGTATGTGACAGGGCACATCTGGGCCTGTCCTCCAAGTGAAGGAGATGATTACATCTTC
CATTGCCACCCACCTGATCAAAAAATACCCAAGCCAAAACGACTGCAGGAGTGGTACAAAAAGATGCTGGACAAG
GCGTTTGCAGAGCGGATCATCCATGACTACAAGGATATTTTCAAACAAGCAACTGAAGACAGGCTCACCAGTGCC
AAGGAACTGCCCTATTTTGAAGGTGATTTCTGGCCCAATGTGTTAGAAGAGAGCATTAAGGAACTAGAACAAGAA
GAAGAGGAGAGGAAAAAGGAAGAGAGCACTGCAGCCAGTGAAACCACTGAGGGCAGTCAGGGCGACAGCAAGAAT
GCCAAGAAGAAGAACAACAAGAAAACCAACAAGAACAAAAGCAGCATCAGCCGCGCCAACAAGAAGAAGCCCAGC
ATGCCCAACGTGTCCAATGACCTGTCCCAGAAGCTGTATGCCACCATGGAGAAGCACAAGGAGGTCTTCTTCGTG
ATCCACCTGCACGCTGGGCCTGTCATCAACACCCTGCCCCCCCATCGTCGACCCCGACCCCCTGCTCAGCTGTGAC
CTCATGGATGGGCGCGACGCCTTCCTCACCCTCGCCAGAGACAAGCACTGGGAGTTCTCCTCCTTGCGCCGCTCC
AAGTGGTCCACGCTCTGCATGCTGGTGGAGCTGCACACCCAGGGCCAGGACCGCTTTGTCTACACCTGCAACGAG
TGCAAGCACCACGTGGAGACGCGCTGGCACTGCACTGTGTGCGAGGACTACGACCTCTGCATCAACTGCTATAAC
ACGAAGAGCCATGCCCATAAGATGGTGAAGTGGGGGCTGGGCCTGGATGACGAGGGCAGCAGCCAGGGCGAGCCA
CAGTCAAAGAGCCCCCAGGAGTCACGCCGGGTGAGCATCCAGCGCTGCATCCAGTCGCTGGTGCACGCGTGCCAG
TGCCGCAACGCCAACTGCTCGCTGCCATCCTGCCAGAAGATGAAGCGGGTGGTGCAGCACACCAAGGGCTGCAAA
CGCAAGACCAACGGGGGCTGCCCGGTGTGCAAGCAGCTCATCGCCCTCTGCTGCTACCACGCCAAGCACTGCCAA
GAAAACAAATGCCCCGTGCCCTTCTGCCTCAACATCAAACACAAGCTCCGCCAGCAGCAGATCCAGCACCGCCTG
CAGCAGGCCCAGCTCATGCGCCGGCGGATGGCCACCATGAACACCCGCAACGTGCCTCAGCAGAGTCTGCCTTCT
CCTACCTCAGCACCGCCCGGGACCCCCACACAGCAGCCCAGCACACCCCAGACGCCGCAGCCCCCTGCCCAGCCC
CAACCCTCACCCGTGAGCATGTCACCAGCTGGCTTCCCCAGCGTGGCCCGGACTCAGCCCCCCACCACGGTGTCC
ACAGGGAAGCCTACCAGCCAGGTGCCGGCCCCCCCACCCCCGGCCCAGCCCCCTCCTGCAGCGGTGGAAGCGGCT
CGGCAGATCGAGCGTGAGGCCCAGCAGCAGCAGCACCTGTACCGGGTGAACATCAACAACAGCATGCCCCCAGGA
CGCACGGGCATGGGGACCCCGGGGAGCCAGATGGCCCCCGTGAGCCTGAATGTGCCCCGACCCAACCAGGTGAGC
GGGCCCGTCATGCCCAGCATGCCTCCCGGGCAGTGGCAGCAGGCGCCCCTTCCCCAGCAGCAGCCCATGCCAGGC
TTGCCCAGGCCTGTGATATCCATGCAGGCCCAGGCGGCCGTGGCTGGGCCCCGGATGCCCAGCGTGCAGCCACCC
AGGAGCATCTCACCCAGCGCTCTGCAAGACCTGCTGCGGACCCTGAAGTCGCCCAGCTCCCCTCAGCAGCAACAG
CAGGTGCTGAACATTCTCAAATCAAACCCGCAGCTAATGGCAGCTTTCATCAAACAGCGCACAGCCAAGTACGTG
GCCAATCAGCCCGGCATGCAGCCCCAGCCTGGCCTCCAGTCCCAGCCCGGCATGCAACCCCAGCCTGGCATGCAC
CAGCAGCCCAGCCTGCAGAACCTGAATGCCATGCAGGCTGGCGTGCCGCGGCCCGGTGTGCCTCCACAGCAGCAG
GCGATGGGAGGCCTGAACCCCCAGGGCCAGGCCTTGAACATCATGAACCCAGGACACAACCCCAACATGGCGAGT
ATGAATCCACAGTACCGAGAAATGTTACGGAGGCAGCTGCTGCAGCAGCAGCAGCAACAGCAGCAGCAACAACAG
CAGCAACAGCAGCAGCAGCAAGGGAGTGCCGGCATGGCTGGGGGCATGGCGGGGCACGGCCAGTTCCAGCAGCCT
CAAGGACCCGGAGGCTACCCACCGGCCATGCAGCAGCAGCAGCGCATGCAGCAGCATCTCCCCCTCCAGGGCAGC
TCCATGGGCCAGATGGCGGCTCAGATGGGACAGCTTGGCCAGATGGGGCAGCCGGGGCTGGGGGCAGACAGCACC
CCCAACATCCAGCAAGCCCTGCAGCAGCGGATTCTGCAGCAACAGCAGATGAAGCAGCAGATTGGGTCCCCAGGC
CAGCCGAACCCCATGAGCCCCCAGCAACACATGCTCTCAGGACAGCCACAGGCCTCGCATCTCCCTGGCCAGCAG

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FIGURE 459C

ATCGCCACGTCCCTTAGTAACCAGGTGCGGTCTCCAGCCCCTGTCCAGTCTCCACGGCCCCAGTCCCAGCCTCCA
CATTCCAGCCCGTCACCACGGATACAGCCCCAGCCTTCGCCACACCACGTCTCACCCCAGACTGGTTCCCCCCAC
CCCGGACTCGCAGTCACCATGGCCAGCTCCATAGATCAGGGACACTTGGGGAACCCCGAACAGAGTGCAATGCTC
CCCCAGCTGAACACCCCCAGCAGGAGTGCGCTGTCCAGCGAACTGTCCCTGGTCGGGGACACCACGGGGGACACG
CTAGAGAAGTTTGTGGAGGGCTTGTAGCATTGTGAGAGCATCACCTTTTCCCTTTCATGTTCTTGGACCTTTTGT
ACTGAAAATCCAGGCATCTAGGTTCTTTTTATTCCTAGATGGAACTGCGACTTCCGAGCCATGGAAGGGTGGATT
GATGTTTAAAGAAACAATACAAAGAATATATTTTTTTGTTAAAAACCAGTTGATTTAAATATCTGGTCTCTCTCT
TTGGTTTTTTTTTGGCGGGGGGGTGGGGGGGGTTCTTTTTTTTCCGTTTTGTTTTTGTTTGGGGGGAGGGGGGTT
TTGTTTGGATTCTTTTTGTCGTCATTGCTGGTGACTCATGCCTTTTTTTAACGGGAAAAACAAGTTCATTATATT
CATATTTTTTATTTGTATTTTCAAGACTTTAAACATTTATGTTTAAAAGTAAGAAGAAAAATAATATTCAGAACT
GATTCCTGAAATAATGCAAGCTTATAATGTATCCCGATAACTTTGTGATGTTTCGGGAAGATTTTTTTCTATAGT
GAACTCTGTGGGCGTCTCCCAGTATTACCCTGGATGATAGGAATTGACTCCGGCGTGCACACACGTACACACCCA
CACACATCTATCTATACATAATGGCTGAAGCCAAACTTGTCTTGCAGATGTAGAAATTGTTGCTTTGTTTCTCTG
ATAAAACTGGTTTTAGACAAAAAATAGGGATGATCACTCTTAGACCATGCTAATGTTACTAGAGAAGAAGCCTTC
TTTTCTTTCTTCTATGTGAAACTTGAAATGAGGAAAAGCAATTCTAGTGTAAATCATGCAAGCGCTCTAATTCCT
ATAAATACGAAACTCGAGAAGATTCAATCACTGTATAGAATGGTAAAATACCAACTCATTTCTTATATCATATTG
TTAAATAAACTGTGTGCAACAGACAAAAAGGGTGGTCCTTCTTGAATTCATGTACATGGTATTAACACTTAGTGT
TCGGGGTTTTTTGTTATGAAAATGCTGTTTTCAACATTGTATTTGGACTATGCATGTGTTTTTTCCCCATTGTAT
ATAAAGTACCGCTTAAAATTGATATAAATTACTGAGGTTTTTAACATGTATTCTGTTCTTTAAGATCCCCTGTAA
GAATGTTTAAGGTTTTTATTTATTTATATATATTTTTTGGTCTGTTCTTTGTAAAAAAAAAAAAAAAAA

FIGURE 460

MAENLLDGPPNPKRAKLSSPGFSANDSTDFGSLFDLENDLPDELIPNGGELGLLNSGNLVPDAASKHKQLSELLR
GGSGSSINPGIGNVSASSPVQQGLGGQAQGQPNSANMASLSAMGKSPLSQGDSSAPSLPKQAASTSGPTPAASQA
LNPQAQKQVGLATSSPATSQTGPGICMNANFNQTHPGLLNSNSGHSLINQASQGQAQVMNGSLGAAGRGRGAGMP
YPTPAMQGASSSVLAETLTQVSPQMTGHAGLNTAQAGGMAKMGITGNTSPFGQPFSQAGGQPMGATGVNPQLASK
QSMVNSLPTFPTDIKNTSVTNVPNMSQMQTSVGIVPTQAIATGPTADPEKRKLIQQQLVLLLHAHKCQRREQANG
EVRACSLPHCRTMKNVLNHMTHCQAGKACQVAHCASSRQIISHWKNCTRHDCPVCLPLKNASDKRNQQTILGSPA
SGIQNTIGSVGTGQQNATSLSNPNPIDPSSMQRAYAALGLPYMNQPQTQLQPQVPGQQPAQPQTHQQMRTLNPLG
NNPMNIPAGGITTDQQPPNLISESALPTSLGATNPLMNDGSNSGNIGTLSTIPTAAPPSSTGVRKGWHEHVTQDL
RSHLVHKLVQAIFPTPDPAALKDRRMENLVAYAKKVEGDMYESANSRDEYYHLLAEKIYKIQKELEEKRRSRLHK
QGILGNQPALPAPGAQPPVIPQAQPVRPPNGPLSLPVNRMQVSQGMNSFNPMSLGNVQLPQAPMGPRAASPMNHS
VQMNSMGSVPGMAISPSRMPQPPNMMGAHTNNMMAQAPAQSQFLPQNQFPSSSGAMSVGMGQPPAQTGVSQGQVP
GAALPNPLNMLGPQASQLPCPPVTQSPLHPTPPPASTAAGMPSLQHTTPPGMTPPQPAAPTQPSTPVSSSGQTPT
PTPGSVPSATQTQSTPTVQAAAQAQVTPQPQTPVQPPSVATPQSSQQQPTPVHAQPPGTPLSQAAASIDNRVPTP
SSVASAETNSQQPGPDVPVLEMKTETQAEDTEPDPGESKGEPRSEMMEEDLQGASQVKEETDIAEQKSEPMEVDE
KKPEVKVEVKEEEESSSNGTASQSTSPSQPRKKIFKPEELRQALMPTLEALYRQDPESLPFRQPVDPQLLGIPDY
FDIVKNPMDLSTIKRKLDTGQYQEPWQYVDDVWLMFNNAWLYNRKTSRVYKFCSKLAEVFEQEIDPVMQSLGYCC
GRKYEFSPQTLCCYGKQLCTIPRDAAYYSYQNRYHFCEKCFTEIQGENVTLGDDPSQPQTTISKDQFEKKKNDTL
DPEPFVDCKECGRKMHQICVLHYDIIWPSGFVCDNCLKKTGRPRKENKFSAKRLQTTRLGNHLEDRVNKFLRRQN
HPEAGEVFVRVVASSDKTVEVKPGMKSRFVDSGEMSESFPYRTKALFAFEEIDGVDVCFFGMHVQEYGSDCPPPN
TRRVYISYLDSIHFFRPRCLRTAVYHEILIGYLEYVKKLGYVTGHIWACPPSEGDDYIFHCHPPDQKIPKPKRLQ
EWYKKMLDKAFAERIIHDYKDIFKQATEDRLTSAKELPYFEGDFWPNVLEESIKELEQEEEERKKEESTAASETT
EGSQGDSKNAKKKNNKKTNKNKSSISRANKKKPSMPNVSNDLSQKLYATMEKHKEVFFVIHLHAGPVINTLPPIV
DPDPLLSCDLMDGRDAFLTLARDKHWEFSSLRRSKWSTLCMLVELHTQGQDRFVYTCNECKHHVETRWHCTVCED
YDLCINCYNTKSHAHKMVKWGLGLDDEGSSQGEPQSKSPQESRRVSIQRCIQSLVHACQCRNANCSLPSCQKMKR
VVQHTKGCKRKTNGGCPVCKQLIALCCYHAKHCQENKCPVPFCLNIKHKLRQQQIQHRLQQAQLMRRRMATMNTR
NVPQQSLPSPTSAPPGTPTQQPSTPQTPQPPAQPQPSPVSMSPAGFPSVARTQPPTTVSTGKPTSQVPAPPPPAQ
PPPAAVEAARQIEREAQQQQHLYRVNINNSMPPGRTGMGTPGSQMAPVSL

FIGURE 461A

GAGGATGCAGAGTGGGAGACCTTAAAACCGTCTGATCTGGCTGCTAAAGCGAGTGTCTGACGACCACCCATTAAC
ACCAGCGAGTAGCGTTTGCTCACGGCTTTAGGATAAGAAGCCTGGA**ATG**GTCCCCCCTCCGCCGGGAGAAGAAAG
CCAGACGGTCATCCTTCCACCTGGCTGGCAGAGCTACCTGTCGCCTCAGGGCCGGCGGTACTATGTCAACACGAC
CACCAATGAGACCACCTGGGAACGTCCCAGCAGTTCTCCTGGGATTCCAGCCAGCCCTGGCTCTCACAGGAGCTC
TCTGCCTCCAACAGTGAATGGATACCACGCATCAGGGACCCCAGCGCACCCTCCAGAGACTGCCCACATGAGTGT
CCGAAAATCCACCGGTGATTCCCAGAACCTGGGATCCTCATCGCCAAGCAAAAAGCAGAGCAAGGAAAACACCAT
CACAATAAACTGTGTGACGTTCCCTCACCCAGACACGATGCCGGAACAGCAGCTGCTGAAACCAACCGAGTGGAG
CTACTGCGACTACTTCTGGGCTGATAAGAAGGACCCCCAAGGCAACGGCACGGTGGCTGGGTTTGAACTACTGCT
CCAGAAACAGCTGAAGGGCAAACAAATGCAGAAGGAAATGTCAGAATTCATCCGGGAAAGGATAAAGATTGAAGA
AGACTATGCGAAGAACTTAGCTAAGCTCTCTCAGAACTCCTTGGCTTCACAGGAGGAAGGCTCCTTGGGAGAGGC
GTGGGCCCAGGTGAAGAAGAGCCTGGCGGACGAAGCAGAAGTTCACCTCAAGTTCTCTGCCAAGCTTCACAGCGA
GGTGGAGAAGCCCCTGATGAACTTCCGTGAGAACTTCAAGAAAGACATGAAGAAGTGCGACCACCACATTGCCGA
CCTTCGCAAGCAGCTCGCCAGCCGCTATGCCTCGGTGGAGAAGGCCCGGAAAGCCCTCACAGAGCGGCAGAGAGA
CCTGGAGATGAAGACCCAGCAGCTGGAGATCAAGCTGAGCAACAAGACAGAGGAGGACATCAAGAAGGCGCGGAG
AAAGTCCACACAGGCTGGAGACGACCTCATGCGCTGTGTGGATCTCTACAACCAGGCCCAGTCCAAATGGTTTGA
AGAGATGGTGACCACCACATTGGAGCTAGAGCGGCTGGAGGTGGAGAGGGTAGAGATGATCCGGCAGCACCTGTG
CCAGTACACGCAGCTGCGGCATGAAACAGACATGTTCAACCAAAGCACAGTCGAGCCCGTGGATCAGCTGCTTCG
AAAAGTGGACCCGGCCAAAGACAGGGAGCTGTGGGTCAGAGAGCACAAGACGGGCAACATCCGCCCTGTGGACAT
GGAGATC**TAG**ATGGGCCTGTGCAGCTTCGGGGGGGTCCTGCTGGGGAGGGGGGCTGGGCTCCCACCATGGGGCCCA
TGCCGAGTGGATGCCCCCCACCCTCTCTCCTGGGCCACTGAGGAGAGGGGAGAGAGCTGGTGATTCCAGAAGGGT
GACCCGGACAGCCTAGCTGGGGGCTCCCCCATATTCCCAGGCCCAGAAGACAGACCCACAGCCCTGCCCTTGTCT
CTGAGGCTGAAGACCCCCTGACTCCCATGCTGTGCTTGCCGCTCTGAAACAAACAGAGGCTGGAACTTTGTGGTC
CTTGCCGAGTTTTGTAGGGGTCACTGTCACATGCTTGTGCCCTGGAAGCCCCAAGGCTCTTCCTCCAGCTGGCTC
CCTTGTCTCCAGGGCTTTGGAGGATCAGGGTAGGGAGGGCTCTGTCTCTAAGCCAGGTGTCAGGATCAGAATCAT
GGGTAGAAGGTGCCATTCAGCTCACAGCCGCACCCAGAATCCTTTGCAGCCCTCCTTCTTTATTTTTTTCCCATT
GCATTCTGGGAGTCCACATCTGGCTTTCTCAGCCACTGTTCATCACCAGGGGTTTTAGGAGGAAGGCTTGGCTCC
TGTCTTCCCAGACCCACCATGCCTGGAGAGGTCAGGATGGAACTACCTCATTCGGCAAATTAGCCCCAAATTGAG
CGCTGAATCGTGTCCCATGAGATCAGGCGCCATCTGTAAAGTCTCCTCTGGAAATGCCAATCCATCCTTCCCCCA
GCTGCTTCCTCGGGGAGGCCCCTGCCCCCACCCTGCCAGCCCTTCCCAGTCTCATTAGAGGAAGCTTTCCAAAGT
TCTCAGTTATCAAGACCTCATCCAGCTCGTCCAAAGGCTTCAGGGATGGAAACAAACCAGCTCGTCTCAGAGGCC
AGCAAGCTGGGGCCTGTCCGCCACGGTGCCCTGTGCACCTTTGGGCTGCCCTGGCCCCCACTCTCCCGGGCCGCC
CACCACAGGCTCTTAATGGGGCCGGGTCAGTCCTACATGTGAGATGGGTTAGGGCAAGTCTTTGCCATCCCCCAG
ATGGCTCTGTCTTCTTGTGTATGGCAGGGCTGGGACTGCTGTCCCTTGTACAGTTTTCTGTCACTGGTGGGCACT
GGACAGGCATAGCAGACTCTCTTGTGGCCACACTAGGTTGTCGCCTTTCAGGCAGTGTCCCGCCACCTTTGCTTC
CCGCTCCTTCTGGACATTCCAGAGCCCTGCACCAAACCCTTACTTGGTGTCTGCACCTCCTTTCCCTCTCTCCAT
CTTCCAATCCCTGGAAAAGTCTGGTCTGAGTGTGACTTGGGAAGCTTTCAGTGCTGCTGTTTGGCCCAGCTCATT
ACTTTCTCCCTTTCTCTACCACAGCAAACACATTCTCCACCATGTCAGTCTAAAGAGTCTAAAGGGGCCGGGAGA
AGCATGAGCGAGGGGCAGATTCTAGTCGGGAGCCCATGCCCTGGAAATCCATCTTTCTTCATCTTTCCCATTGAC
CACTTTGGGTTTGACCTGCACATCTGCAGTGAGGGCAGAATTCAACAAGCACAACTCACTGGTCTTTCAGTCAAC
GTGCTAGAAACCGATGACTTATTAATCTCTAATTTTTTGGCGCCTCTTTCATTGAATGAGAATTGCTTTCGTATA
GTTCACATTAGAAAAATGCCTAATATACTAAAGTAAACCAAACGTTGTCACTTTTCTCTTGTTCTTGAAACATTG
CAACCAAAAAGGTCAGCACAAAGGCCTTCACCTACGTGAAGACCTCCTGGTAGGATCTGTCCATGGGATGGAGAA
CCACTCTGTCCAGATCTGGGGTTGGGTCATGACACCAGCTACCAATTTTAGAATATTATTTCTTGGTTTCTTTAT
GAAAAATGGGTGCTAGTGGTAATTGCTTTGTGGCTTAGTAAACTACTCTGTGGATGATTTCCAAACATTCAAAGC
CAATAGCCTTGTTATTAACAAGATATTTTGAGTACAATATGGCTCATTGACTTTTCCATTACATCTGAGGATTCC
AGAGTCCTCTGTTCATCCCTGGGATAGAGTGAGCCCTCTTGCGTCTTCCAGGGTAGCTCAGGTTGGCCCAGTTTG
GGCCAGTCCATTTTTGGAGGTCACTCTTTCCCCCCTCATCCCCTCACCTCCTTCTCTTTACCCCCTTCACGTACT
TCCTTTCTTTCTTCCCTCTGTTATTCATTCATCAAGCAGGTTAAAGCCATTGTGCTAAGATCTAATCTGAGGACA

FIGURE 461B

CTATAATGGCCCTGTCGTCAGGGAAGCCCGTGATCGCTCGTTTTCAGGGGTCTTACCGGTCAGCAACCTTGGCAT
TGATACATAGGCACTCTACAGAATTTAAGTTTTCAGAGGTAAGTCTGTTGTTCTGATTAATCTGCATTCATTCAG
CGAATGCTCAAGACAAGCCAGGCATGCTGAGAAGCGGCGCTCTAGTTGTATGTAAGATGGGCATTCCTCTGCTCT
CCTCTATTCTCCATGTCGACTGAGAAGAGTATAATAAGAACATTGTACCCTCTCCACACTTAACCCTCTGGGATT
CTTTATTATAATATAAACCACCGTCGTGAGGCATTTACCTGTTGGATGGAAGGTAGACAGCAACAAGATTTTAAT
CACCTGGTCACCAGACCCTCACGGCCCATATCCAATTCGAATTTCAGAAATTTCTCTGTTTGCTTTAAATAACTC
TTTACAAATAAGGGTCGGGCACGGTGGCTCACGCCTGTAATCCCAGCTCTTTGGGAGGCCGAGGTGGGCAGATCA
CGAGGTCAGGAGATCGAGACCATCCTGGCTAACATGGTGAAACCCCGTCTCTGCTAAAAATACAAAAAATTAGCC
AGATGTGGTGGTGCACACCTGTAGTCCCAACTATTCGGCAGGCTGAGGCAGTAGAATCGCTTGAACCTGGGAGGC
GGAGATTGCAGTGAACCAAGATCGGGCCACTGCACTCCAGCTTGGGTGACAGAGCAAGACTCCATCTCAAAAAAA
TTATAAATAACTCTTTGCAAATAGGAAAGTGAAGCTCAAGGGTAACCAGTGAGGCTATGAAATTGCCAGTGAATT
AAGACCAGGGCTAGAGTCAACAGTCCAGAACCCCTATCCGTATGAACAGGGGCCCGTTTCTGGTTGAAATCAAGG
TTAGGATGCAACTGAGAAAATAAAAGACTGCACTTTGGAGAGGCAAGCACGCTATCCGGGTTGTTGTTTTGTTTT
ATGTCTTGGTGCTTAGGTGAGGACTTAGCTGGGTTTATTCAAAGTGGGCGGGTCTGGGCTATTCTTGAGAATGTC
CCTTCCATTTCTGAGAACAAGTCAGCCCCTTCTACCTGCCTCCACCCAGGAGACTGATGCACAAGATCTGTTTGT
GAAAGCCTGATTTAAAAAGAAAAAAAAAATTCCTTAAGCCAAATGGTGTTCCAAGTTGGTTGCTGTGACAACCTC
CAGGAAGAGCCACTTGTTACCCTCTATTCTTTCTAGTGCTTTCAGTCAGTGGCAACACATAGGCCCCTTGGACCG
TGGGGATGGCGGCCCTGAGATTCTGTCAGTGGGACCACCCTGGGCCTCCTTTCTACCTCCACTCAGCACCCTGTT
GGCCAAGGAGAATTTCTGCGGTGGGAGGCAGTGCTCTGCTAGTCAGGATTGATAAACAGCTGGGCACACCGAAAC
AGTGTACCAACGAATTCACCAACCAGGGGTTTCTTTCCCTACCCTTTGTGAAAACCAATCAATTACTAGATGAGT
GGATGGATGCAGAAAAATCTGGGCTGAGCCAAAGTCCCTTTTGGAAATACAAGCCATAACATTCGAAGGACATCA
GCGACCTTGGCTTGTTTAGGTGATTTTACTTCCAGCTGCAGGTAGTCTTGACAAGGAGTGTTTAAACAGAAGGCT
CAAGATGCATTCCTTGTGTAGGTCGGAGAGAGCACTTCTAATGTTAAGTGGGGTACAGATCAGCTGCCCCCCCAC
GTAGCCTGGACATCGTCTTATCCCCATAATCCTTGCCATCCCTACAAGGCCCATCGCCACCACCTTTTCCCAGGT
TTATTGAGGTATGATTGACATCCAGTAAAATTCACCCTTTGGAAATATACAGCTCTGTGAATTTTGACAAATTTA
GTGTCTTGTGACCATCACCAAGATCAACCTGTTTTTAACCCTCCAAAAAATTCCCTTCTCCTGCCCTCTTTCCCT
GGCAACCCTGATTGATTATCTGATCCTATAATTTTGCCTTTTCTAGAATGTCATATAAATGGAGTCACACTGATG
TCGCCTTTTGAGTCTGGCATCTTTCCCTCAGCTTAATGCTTTTGAGTCATTCATGATGTGTGCGTGTGGTTTGTT
CCTTCTCCTTGCCGGGAAGTATTTCATTGCATGGGCGTACTACTCTGCTTCTTTATTTTTACACTGAGCCTTTCG
CCCTGGAAGTTCTTGGCCCAGGGTCTTCAACTTGTTTGCACGACCACTTCCAGCTTGCTGCTTCCTTCAGTTCCC
CAGGCTCCTCCTCCAAATGCCAGCTGTGCCCACAAGCTGTTCTTAGGGCTCACACTCGCCTTTTGGCGCGTGGTG
GGTTTTTGGTAGTGCAGAAAGAATCCAGGGATGGGAGGGGAAGGGACGGATGGGTGCTCAATTGCTGCTCACGTC
TGCTGCAACCTGAAGCTTGCATCTCAGCCAGCAGATCTGCTCCCTTCTGGGACCCAGGCTTCAGTGTCACACGGT
CCTTGGCTATGTATTGGGCGTTGGAGGCTTTGAAAGGCGAGCAGAAGCAGCATGGACAAGAAGGCTGGGGCTGGC
CCTGGGGCTCATCATGATGCTTTCCTGGATCTGTTGCTTCATCTGCAAGCTGAGGGTGTTTGTTCTAGATGAGTG
TCTCAGGCCACCGGCAACTGCATGTACCTCCTCCCTTTCTCATTTCCAATGATGTACCCTGTACACGTGTTCATG
CTGTGTCTGGCTCTCATCTGCACAATCGTGCATAGAATTGCCTCAAGTCCTGGTGAGAGAGATGCCGTGGTACTT
TTCCATTTAGATTCAAATGGAGCTAAAATTAAGAGTTTTATGAGCTGTTAAGAATGAGGTAGTTTCTCCTAGGAC
CCCCCAAAGACAGTGCAAGTAATGACCGTTTGGATCTCATTCGTCGATCTTTGATAGTATGTTCTGGAGTCTACT
CCCCAGGAGCCAGGACAGGCGTGAAGATGGAGTCCTTGTCGCAGCTGGAGCCTTGCCTAGCTGGTGATCACACAG
CCTGGCCTGTACCTGCACCCCACTGGATGGTGGTACATGGTGGCAGGGACAGGACCACACCCAGTTAAGGCCAGA
CCAGGCTGAGTGTGACCCCTGAGGTAAACACTCCACTAAGCTGTGTCTTGTTCATGCCCCCTGCTCAGTGAAAGG
TGAGTCCCGAGACCAGTTGGGTACCTCTCTATGCGAACCAGAGACATTTCTGGATCCAGGCCAGGTGAAGATTAG
GGCCAGGAAGCCTGAGCCCCCGGGGCCTCAAGGTAGGGAGCCGAAGAGGCTGCCAGGACTCTGCTGGGTTGAAAT
TTGCCGGGGAGGACTCTTGTCTCCCCCTCAGGAGTATTTTTGTTGAGGCTTTCCTGGAGGTGAAGAAGCAATTCC
CATTGCAGCAGGTTAGAGCGAGAATCAGACAGAGGGCAAAAACCAATTCGCTTCTCCCCACGTTCTAAATGCTGG
GGCATGGCTGTCAGGAGGGCTTCCTGGGAGGTGTCTCTGGGGGTGGGGTGAGGTTGGGGCGATGGCCTTTGGAGA
TTGCGTGTGGTGTTCAGGACTGTTCCTTGGTGTTTGAGGGAAACTTTAGTGGGATTGCAGTGGAATGTAAGGTCA

FIGURE 461C

GGGCACGTGGGTGCTCTCTCGGGGTGGGGTGACTGGGAGACCTAGAGGGAAAGCCTGCTATGCAGGGGGAGAGCA
CAGGACTGGCCCTGCTCTGCGGCCTCCTTTGTCCCATAACCTGAAGTTAAGTCACATCCCCTGTCGGGACCTCCG
TGCACTCATCTGTCAAGTGGGGGCGCTTCCCTTCCAGCATCACCTGCAGCAGACGGGCTCTCGGGAGTCGTGGGT
TCCAGGCAGCTGTGTGGACCCAGGGACAGACATTCAAAGGGACGCCAGCCATCCTTAGTGACAGGGGCCCCAACT
TAGCATCCCTTCCCTTCCGTTAGGAAGGAGATGACCGGAAGCAACCCCTTCACAGACACGAGCACATCGGCAAAC
CCTATGAAAGTGGAATTTTCTAACAAAATAAACTTGCTTGTTTGATCTGTTTTCTGTAACTTTTGCTAAATACTT
TATACATTTTTCATGTTAAAGAGCCGTGTCTCCCGCCAGCACTCCTCACCCCGGTATGAATGTGTTTCCTCCACA
TTGTATATCCTTCCACCCTCTGGCTGCCTAGATCAGTAAATAAAATTGATGTAATATAATTTATAAGTAACACTG
TTGAAACCCTGATCCCAGTGGAGGCTGTAACCCACCTGCCCCCGCACCACCCCCCTGACCCCTGTTACCGCATTT
GTGTGTATTAATGCTGAAGAATTAAATGTTTAAAGAGTTTAAATTTTGAAGGCGTTTGCTATATACAGTTGTCCT
GCATTATTATAAAGAGTTTTCAGGAAGTT

FIGURE 462

MVPPPPGEESQTVILPPGWQSYLSPQGRRYYVNTTTNETTWERPSSSPGIPASPGSHRSSLPPTVNGYHASGTPA
HPPETAHMSVRKSTGDSQNLGSSSPSKKQSKENTITINCVTFPHPDTMPEQQLLKPTEWSYCDYFWADKKDPQGN
GTVAGFELLLQKQLKGKQMQKEMSEFIRERIKIEEDYAKNLAKLSQNSLASQEEGSLGEAWAQVKKSLADEAEVH
LKFSAKLHSEVEKPLMNFRENFKKDMKKCDHHIADLRKQLASRYASVEKARKALTERQRDLEMKTQQLEIKLSNK
TEEDIKKARRKSTQAGDDLMRCVDLYNQAQSKWFEEMVTTTLELERLEVERVEMIRQHLCQYTQLRHETDMFNQS
TVEPVDQLLRKVDPAKDRELWVREHKTGNIRPVDMEI

FIGURE 463

TGCGACGTGACTGGCTAGCTGCGTGGGTACTGGAACAAGCAAACGAGGCAGCGAGCGAAGGACGGGAGCCGGACC
CTGGGCCCCGTGGAACTCCAGCCTGCGCCACCACGTCACGCACACGCTCGGCGCTGCGATCCGCGCATATAACGA
TATTTGGATTTGACCTGCATTTTGGAATTTATCTACACTTAAA**ATG**CCACCAGCAGTTGGAGGTCCAGTTGGATA
CACCCCCCCAGATGGAGGCTGGGGCTGGGCAGTGGTAATTGGAGCTTTCATTTCCATCGGCTTCTCTTATGCATT
TCCCAAATCAATTACTGTCTTCTTCAAAGAGATTGAAGGTATATTCCATGCCACCACCAGCGAAGTGTCATGGAT
ATCCTCCATAATGTTGGCTGTCATGTATGGTGGAGGTCCTATCAGCAGTATCCTGGTGAATAAATATGGAAGTCG
TATAGTCATGATTGTTGGTGGCTGCTTGTCAGGCTGTGGCTTGATTGCAGCTTCTTTCTGTAACACCGTACAGCA
ACTATACGTCTGTATTGGAGTCATTGGAGGTCTTGGGCTTGCCTTCAACTTGAATCCAGCTCTGACCATGATTGG
CAAGTATTTCTACAAGAGGCGACCATTGGCCAACGGACTGGCCATGGCAGGCAGCCCTGTGTTCCTCTGTACTCT
GGCCCCCCTCAATCAGGTTTTCTTCGGTATCTTTGGATGGAGAGGAAGCTTTCTAATTCTTGGGGGCTTGCTACT
AAACTGCTGTGTTGCTGGAGCCCTCATGCGACCAATCGGGCCCAAGCCAACCAAGGCAGGGAAAGATAAGTCTAA
AGCATCCCTTGAGAAAGCTGGAAAATCTGGTGTGAAAAAAGATCTGCATGATGCAAATACAGATCTTATTGGAAG
ACACCCTAAACAAGAGAAACGATCAGTCTTCCAAACAATTAATCAGTTCCTGGACTTAACCCTATTCACCCACAG
AGGCTTTTTGCTATACCTCTCTGGAAATGTGATCATGTTTTTTGGACTCTTTGCACCTTTGGTGTTTCTTAGTAG
TTATGGGAAGAGTCAGCATTATTCTAGTGAGAAGTCTGCCTTCCTTCTTTCCATTCTGGCTTTTGTTGACATGGT
AGCCCGACCATCTATGGGACTTGTAGCCAACACAAAGCCAATAAGACCTCGAATTCAGTATTTCTTTGCGGCTTC
CGTTGTTGCAAATGGAGTGTGTCATATGCTAGCACCTTTATCCACTACCTATGTTGGATTCTGTGTCTATGCGGG
ATTCTTTGGATTTGCCTTCGGGTGGCTCAGCTCCGTATTGTTTGAAACATTGATGGACCTTGTTGGACCCCAGAG
GTTCTCCAGCGCTGTGGGATTGGTGACCATTGTGGAATGCTGTCCTGTCCTCCTGGGGCCACCACTTTTAGGTCG
GCTCAATGACATGTATGGAGACTACAAATACACATACTGGGCATGTGGCGTCGTCCTAATTATTTCAGGTATCTA
TCTCTTCATTGGCATGGGCATCAATTATCGACTTTTGGCAAAAGAACAGAAAGCAAACGAGCAGAAAAAGGAAAG
TAAAGAGGAAGAGACCAGTATAGATGTTGCTGGGAAGCCAAATGAAGTTACCAAAGCAGCAGAATCTCCGGACCA
GAAAGACACAGAAGGAGGGCCCAAGGAGGAGGAAAGTCCAGTC**TGA**ATCCATGGGGCTGAAGGGTAAATTGAGCA
GTTCATGACCCAGGATATCTGAAAATATTCTACTGGCCTGTAATCTACCAGTGGTGCTCAATGCAAATAGTAGAC
ATTTGTGTGGAAATCATACCAGTTGTTCATTGATGGGATTTTTGTTTGACTCCTTACCAATAGCCTGAATTTGAG
GAGGGAATGATTGGTAGCAAAGGATGGGGGAAAGAAGTAGGTTCTGTTTTGTTTTGTTTTAATCTTAGCTTTTAA
TAGTGTCATAAAGATTATAATATGTGCCTTAAGTTTTAGTCTTTAGAACTCTAGAGAGCCTTAACTTCTTAAACC
ATTTTTGCTGAATTCATCTATTTCGAGTGTTGTGTTAAAAGGAAAAATAACAACTAACTTGTTTGAGGCAAATCT
AAAATTTAAAATTAATCTTGCTTCATTGTTACATGTAATATATTTCAGACATTTTCACTGGAAGATTTATGAACA
GAAATATTGGTTGAAAGTTAGAGATTTTACAAAATGCTGACAAAAATATTTTCCTAGCATCAGTAGATTTCTGGC
ATATGTTTCTGCTAGCTATATATTTAGGAAATTCAAAGCATAAAACTTTGGCAACATCTTGGCTGTTCTAGACAC
AGTGTACTTGTCAACCCCTCTCAGGTACCTTTTCTTGGGATGCTTATTAGAAGCCAAGTAAAGTGCTTAAGGTTT
GTTTTCATTAAATTAGCTATTTCTGCTCCCCTGTTCAAAGATGCATTTTGAGTGTTTATAGATCACTGCCCTTTT
TGAAATCACCTGGTATTATTTTTCTTACTGGAAAAGTTAGTATTAAAATCTACAGAACTACATATTTGTGCCTCC
TTGGTAAATACAACACATCTAATTAAATGTAGACAGATATTTCAAACATCAGCTGAATTCACTTAAGTTTTTCCA
AAACCTCAGTTAAACTGTGAAGCTATTGGAATTTTTTTTTCCTGGAATTTTTCCCCTTTGATTCACAGTGGTCCC
ATTTATATCTGCTTCTAGCTTAGTGCTATGTGTGAGATATGTGTGTGTTTGGTGTTTTTGTTTTTTTGTTTTTTT
TTTTTTAAGGTTTGCAAATTAAAAAGGGCCAGAAAAATTTGGCACCAGGCAAACGAATAAAGATAGGATTGGGAA
AGAAGTTGCTAAGTGTGCTTAGTTTTAATAAGTAATTCCTTCTCTTTTTTCAGAGAAGGCCTTACAGAAAATTGT
TGTGCTTAGAATTGCTGGATGCATTTTTACCCTCCACACAAACCTAAAAATTTTGTGACCCCTTTCACTTACCTG
AAAAGTAGAGAAATGGATTCAGTATAAGGATAAGGAGGGAAGGTGGACCAGAATGAAAACTGTAAATATTTTTTT
AACCTAATATCACTTAAATCGAGGCAGAAAGATATAGACATTCAATGAATTATATTCAATGCATTTAAAATACCA
CTGTAATTGACAGAGTAAAAGTATAGATACAAAACCTTGTGTAAGAGGCTGACTTTTCCAAATAAACATTTTTTA
AGAAAACATTTCTTCTCCCAAATGTCTATTTTCTTGAGGAAAATATTGCTGTGTCTTCATTTTCATTACCAGGTT
TCATTTTGGGCCTTGCTAAATTGATTGAATTAAATCCTCCAGCTTTTGAACCTTGAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAGAAAAAAAAAAAAAAAAG

FIGURE 464

MPPAVGGPVGYTPPDGGWGWAVVIGAFISIGFSYAFPKSITVFFKEIEGIFHATTSEVSWISSIMLAVMYGGGPI
SSILVNKYGSRIVMIVGGCLSGCGLIAASFCNTVQQLYVCIGVIGGLGLAFNLNPALTMIGKYFYKRRPLANGLA
MAGSPVFLCTLAPLNQVFFGIFGWRGSFLILGGLLLNCCVAGALMRPIGPKPTKAGKDKSKASLEKAGKSGVKKD
LHDANTDLIGRHPKQEKRSVFQTINQFLDLTLFTHRGFLLYLSGNVIMFFGLFAPLVFLSSYGKSQHYSSEKSAF
LLSILAFVDMVARPSMGLVANTKPIRPRIQYFFAASVVANGVCHMLAPLSTTYVGFCVYAGFFGFAFGWLSSVLF
ETLMDLVGPQRFSSAVGLVTIVECCPVLLGPPLLGRLNDMYGDYKYTYWACGVVLIISGIYLFIGMGINYRLLAK
EQKANEQKKESKEEETSIDVAGKPNEVTKAAESPDQKDTEGGPKEEESPV

FIGURE 465

GGCACGAGGGAGAACTAGTCTCGATTTTTTTTTTTTTTTTTTCTTTGTTTTGTTTTTCCTGTATAAAAAAGGAC
CCCAAATATAAAGGTAGGGAAAGGGACAAGAGGGAACATACCCCTTAGTGTAGAGAAATGGGAAGGAGAAGGAGA
AGCCTCAAAAGGAGAGGTGGGAGGGGAATGTCATTAAGGCAGCAAAGTAATCTCTGTAGAAAGATGGAGGAGGAC
CCTCCATAGCCTCAGAGATAAAGGCAAAGATTGCCCTCTCAGTGTCCAGAAGGGAAATGGCAGCTTTTCTTCCTT
CCATGGCAGCCACTCCATTGCTCACTCCGGATTACCTTCATCCTTATGTAGATAAGAGTGCTGCAGAGCTCGAAA
GGCAGAGATTCGCTTGTGTGGGTTAAAAGTCAGCATTTCCAGCAGCAGCTGTGCTCCCGACTCCTCCATCTCAGG
TACCACCGACTGCACTGGGCGGGGCCCTCTGGGGGGAAAGGCTCCACGGGGCAGGGATACATCTCGAGGCCAGTC
ATCCTCTGGAGGCAGCCCAATCAGGTCAAAGATTTTGCCCAACTGGTCGGCTTCAGAGTTTCCACAGAAGAGAGG
CTTTCGACGAAACATCTCTGCAAAGATACAGCCAACACTCCAC**ATG**TCCACAGGTGTTGCATATGTGGACTGCAG
AAGAACTTCGGGAGCTCGGTACCAGAGTGTAACAACCACGGGTGTAAGTGCCATCTGG**TAG**CTGTAGATTCTGGC
CAGGCCAAAGTCAGCCAGCTTGACTGTTCCACCACTTGTCACCAGAATGTTCTCTGGCTTCAGATCTCGGTGAAC
GATGCAATTGGCATGAAGGAAATCTAGGCCTCTTAGAAACTGGCGCATCAGATCCTTGATCGTTTCGGCTGGCAA
GCCTGGTGGGGGTGCCTTGTCCAGATATGTCCTTAGGTCCTGGTCTACATGCTCAAACACCAGGGTTACCTTGAT
CTCCCGGTCAGTTCGGGATGTGGCACAGACGTCCATCAGCCGGACAACATTGGGATGCTCAAAAGCCTCCAGTCG
CCTCAGTAAAGCCACCTCACGAACTGTGCTGATGGGAAGGCCTCCTCCACCTCCTCCTCCATTGGGGACTCTCAC
ACTCTTGAGGGCCACAAAGTGGCCACTGTGGGGATCACGGGCCTTGTACACTGTCCCATAGGCACCGACACCAAT
TTCAGCCACTGGCTCATATCGAGAGGTAGCCATTCTCAGATCAAGGGAGACCCTCACGCCAGCCCGGGGTGCTGT
GGGGGCGGCCCGTTATCGGGGCCCCGGAGCCGGTTCCTACGGCCCCATACACCCGAGCTCGGTCCGGAGCAG

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FIGURE 466

MSTGVAYVDCRRTSGARYQSVTTTGVSAIW

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FIGURE 467

GAATTCGAGGATCCGGGTACCATGGGAGGAAAACTTCTTCCTGGCCTGGGCTCCGTGCCGCTCTGTTTGCCAACC
GTCCAGTCCCGCCTACCAGTGCCGGGCGCTCCCCACCCCTCCCCCGGCTCCCCCGGTGTCCGCC**ATG**GCCAAAGC
CTACGACCACCTCTTCAAGTTGCTGCTGATCGGGGACTCGGGGGTGGGCAAGACTTGTCTGATCATTCGCTTTGC
AGAGGACAACTTCAACAACACTTACATCTCCACCATCGGAATTGATTTCAAGATCCGCACTGTGGATATAGAGGG
GAAGAAGATCAAACTACAAGTCTGGGACACGGCTGGCCAAGAGCGGTTCAAGACAATAACTACTGCCTACTACCG
TGGAGCCATGGGCATTATCCTAGTATACGACATCACGGATGAGAAATCTTTCGAGAATATTCAGAACTGGATGAA
AAGCATCAAGGAGAATGCCTCGGCTGGGGTGGAGCGCCTCTTGCTGGGGAACAAATGTGACATGGAGGCCAAGAG
GAAGGTGCAGAAGGAGCAGGCCGATAAGTTGGCTCGAGAGCATGGAATCCGATTTTTCGAAACTAGTGCTAAATC
CAGTATGAATGTGGATGAGGCTTTTAGTTCCCTGGCCCGGGACATCTTGCTCAAGTCAGGAGGCCGGAGATCAGG
AAACGGCAACAAGCCTCCCAGTACTGACCTGAAAACTTGTGACAAGAAGAACACCAACAAGTGCTCCCTGGGC**TG**
AGGACCCTTTCTTGCCTCCCCACCCCGGAAGCTGAACCTGAGGGAGACAACGGCAGAGGGAGTGAGCAGGGGAGA
AATAGCAGAGGGGCTTGGAGGGTCACATAGGTAGATGGTAAAGAGAATGAGGAGAAAAAGGAGAAAAGGGAAAAG
CAGAAAGGAAAAAAAGGAAGAGAGAGGAAGGGAGAAGGGAGAGGAATGAATTGAGGAAGTGAAAGAAGGCAAGGA
GGTAGGAAGAGAGGGAGGAGGAAAGGAAGGAGAGAGATGCCTCAGGCTTCAGACCTTACCTGGGTTTTCAGGGCA
AACATAAATGTAAATACACTGATTTATTCTGTTACTAGATCAGGTTTTAGGGTCCTGCAAAAGGCTAGCTCGGCA
CTACACTAGGGAATTTGCTCCTGTTCTGTCACTTGTCATGGTCTTTCTTGGTATTAAAGGCCACCATTTGCACAA
AAAAAAAAAAAAACCATGGTACCCGGATCCTCGAATTC

FIGURE 468

MAKAYDHLFKLLLIGDSGVGKTCLIIRFAEDNFNNTYISTIGIDFKIRTVDIEGKKIKLQVWDTAGQERFKTITT
AYYRGAMGIILVYDITDEKSFENIQNWMKSIKENASAGVERLLLGNKCDMEAKRKVQKEQADKLAREHGIRFFET
SAKSSMNVDEAFSSLARDILLKSGGRRSGNGNKPPSTDLKTCDKKNTNKCSLG

FIGURE 469A

GGTGTGGACGTTGTCTAAATTTCGGTAGCCATGGCACAAGAATATAAGAAAGCATGGGATTATGGCAACCACAGA
ATCTCAGTAGTACAAGTTCCATTCAGTTTTTTCTGAAAGAAAGCCCTCTGTTAAAGTGAAGCAAAGAAACTGTTG
TGGATTATAACGTTTAGAAGTTCCAATTTTTCAGTGCTTTACAAATAAAGCATCATTTAACCTTTTAAATGAAAA
AGATTAAGATCTCATGCAACTGTTGTATTTTCTGGAAGCCATTCTCCAAAAGGGAAGTGCACATTTAAAACACAG
ATATGATGGTCCTTGCTGCAGGGATTTAAGTCTACTTGCTTTTACATC**ATG**ACCAGCTTGAAACGGTCACAGACA
GAAAGGCCTCTTGCCACTGACAGGGCCTCTGTTGTTGGCACAGACGGCACCCCCAAAGTCCACACTGATGATTTC
TACATGCGGCGCTTCCGGTCCCAAAATGGCAGCTTAGGATCATCAGTTATGGCTCCTGTAGGACCCCCCCGAAGT
GAAGGTTCTCACCATATAACCTCAACCCCCGGAGTCCCAAAAATGGGGGTAAGGGCAAGGATTGCAGATTGGCCC
CCAAGAAAGGAAAACATAAAAGAATCTAGCCGTTCAAGCCAGGAAATAGAAACCTCAAGTTGCCTTGATAGCCTG
TCCTCCAAAAGCAGTCCTGTGAGTCAGGGAAGTTCTGTTAGCCTCAATTCCAATGACTCAGCCATGCTGAAAAGC
ATACAGAACACGCTGAAAAACAAGACAAGACCGTCGGAGAACATGGACTCCAGATTTCTCATGCCTGAAGCCTAC
CCCAGCTCCCCCAGAAAAGCTCTTCGCAGAATACGCCAGCGAAGCAACAGTGATATCACCATAAGTGAACTTGAT
GTGGATAGCTTTGATGAATGTATCTCACCTACATACAAGACTGGACCATCACTGCACAGGGAATATGGTAGCACA
TCTTCAATTGATAAACAGGGAACATCTGGAGAAAGCTTTTTTGATTTGTTAAAGGGCTACAAAGATGACAAATCT
GATCGAGGTCCAACTCCAACCAAGCTCAGTGACTTTCTCATTACTGGTGGTGGCAAGGGTTCTGGTTTCTCTTTG
GATGTAATAGACGGGCCTATCTCACAGAGAGAGAACCTCAGGCTTTTTAAGGAAAGGGAAAAACCACTCAAGCGA
CGTTCAAAATCTGAAACTGGAGACTCCTCTATTTTTCGTAAATTGCGCAATGCCAAAGGTGAAGAACTTGGGAAG
TCATCAGATCTTGAAGATAACCGATCAGAAGACTCTGTCAGGCCCTGGACATGTCCAAAGTGCTTTGCCCACTAT
GATGTCCAGAGTATATTATTTGATTTGAATGAGGCAATTATGAACAGGCACAATGTTATTAAGAGGAGAAACACC
ACCACTGGAGCTTCCGCAGCTGCCGTGGCATCCTTGGTCTCTGGACCTCTGTCTCATTCAGCCAGTTTTAGCTCC
CCAATGGGCAGCACAGAGGACCTGAATTCCAAAGGAAGCCTCAGCATGGACCAGGGAGATGATAAAAGCAATGAG
CTTGTAATGAGCTGTCCATATTTTCGGAATGAGATAGGTGGAGAAGGGGAGAGGAAAATCAGCCTTTCAAAATCA
AATTCTGGCTCCTTTAGTGGATGTGAAAGTGCCTCCTTTGAGTCTACCCTTAGTTCCCATTGCACAAATGCAGGA
GTGGCAGTACTTGAAGTGCCCAAGGAGAACTTGGTGTTGCACCTAGATAGAGTGAAAAGATACATCGTGGAACAC
GTAGATCTGGGTGCATACTATTATAGAAAATTTTTCTACCAGAAGGAACACTGGAACTATTTTGGGGCTGATGAG
AATCTTGGTCCAGTGGCTGTGAGCATTCGAAGGGAAAAACCAGATGAAATGAAAGAAAATGGATCTCCGTACAAC
TACCGAATAATTTTTAGAACTAGTGAGCTCATGACACTGAGAGGTTCGGTCCTGGAGGACGCCATTCCGTCGACA
GCCAAGCACTCGACAGCCAGAGGCCTGCCTCTCAAAGAAGTGCTGGAGCACGTGGTTCCTGAGCTCAATGTCCAG
TGCCTGCGGTTGGCCTTCAACACACCCAAGGTCACAGAGCAGCTCATGAAACTGGATGAACAAGGGCTGAACTAC
CAGCAGAAAGTAGGCATCATGTACTGCAAAGCTGGACAGAGCACTGAAGAAGAGATGTACAACAATGAGTCAGCT
GGCCCAGCCTTTGAAGAATTCCTTCAACTATTGGGAGAGCGAGTTCGGCTCAAAGGATTTGAGAAGTATCGAGCA
CAGCTTGATACCAAAACTGACTCCACTGGAACCCATTCTCTGTACACAACATACAAAGATTATGAAATTATGTTC
CATGTTTCTACCATGCTGCCATACACACCCAACAACAAACAACAGCTCCTGAGGAAGCGGCACATTGGAAATGAT
ATCGTAACAATTGTTTTCCAAGAGCCTGGAGCACAGCCATTCAGCCCAAAAAACATCCGATCCCACTTCCAGCAC
GTTTTCGTCATCGTCAGGGTGCACAATCCGTGCTCTGACAGTGTCTGTTATAGTGTGGCTGTTACCAGGTCCAGA
GATGTGCCTTCCTTTGGGCCTCCCATTCCTAAAGGGGTCACTTTCCCTAAGTCAAATGTGTTCAGGGACTTCCTT
TTGGCGAAAGTGATTAATGCAGAAAATGCTGCTCATAAATCGGAGAAGTTTCGGGCCATGGCAACTCGGACCCGC
CAGGAATACCTGAAAGATCTGGCAGAAAAGAATGTCACCAACACCCCTATCGACCCTTCTGGCAAGTTTCCGTTC
ATCTCTCTGGCTTCCAAGAAGAAGGAAAAGTCTAAGCCATATCCAGGAGCCGAGCTCAGCAGCATGGGGGCCATT
GTATGGGCAGTCCGGGCTGAAGACTACAACAAGGCCATGGAACTAGACTGCCTTTTAGGGATCTCCAATGAGTTC
ATTGTGCTCATTGAACAGGAAACAAAGAGCGTGGTCTTCAATTGTTCCTGTAGAGATGTGATAGGGTGGACTTCA
ACTGACACCAGCCTCAAAATCTTCTATGAACGAGGAGAATGTGTTTCAGTGGGTAGTTTTATTAACATTGAGGAG
ATCAAAGAGATTGTCAAAAGGTTGCAGTTTGTTTCAAAAGGCTGTGAATCGGTGGAGATGACTCTGCGAAGAAAT
GGGCTAGGACAGCTTGGCTTCCATGTCAACTATGAGGGCATTGTGGCGGATGTGGAGCCCTACGGTTATGCCTGG
CAGGCAGGGCTGAGGCAGGGCAGTCGCCTGGTGGAGATCTGCAAGGTGGCGGTAGCCACTCTGAGCCATGAGCAG
ATGATCGACCTCCTGAGAACATCTGTCACGGTGAAGGTTGTCATCATTCCCCCGCATGATGACTGCACCCCGCGG
AGGAGTTGCTCTGAAACCTACCGCATGCCAGTGATGGAGTACAAAATGAATGAAGGTGTTTCATACGAATTCAAG
TTTCCCTTCCGAAATAATAACAAGTGGCAGAGGAACGCCAGCAAGGGGCCTCATTCACCTCAAGTCCCGTCCCAG

FIGURE 469B

GTGCAGAGTCCCATGACCTCGCGGCTGAATGCTGGAAAAGGAGATGGGAAGATGCCTCCTCCAGAAAGAGCCGCC
AACATCCCTCGAAGCATCTCCAGTGACGGGCGCCCACTAGAGAGGCGGCTGTCTCCTGGTTCGGACATCTATGTG
ACGGTCTCATCCATGGCTTTAGCAAGATCCCAGTGTCGGAACTCTCCTAGCAACTTGTCTTCATCCAGTGATACT
GGTTCTGTGGGGGGCACTTACAGGCAGAAGTCCATGCCCGAAGGGTTTGGAGTGAGCCGTAGATCCCCAGCCTCC
ATTGACAGGCAGAACACCCAGTCAGATATTGGTGGCAGCGGAAAATCCACGCCTAGCTGGCAAAGAAGTGAGGAT
AGCATTGCTGACCAGATGGCTTACAGTTATAGAGGACCTCAGGATTTCAATTCTTTTGTCCTCGAGCAGCATGAA
TATACAGAGCCAACATGCCATCTCCCAGCAGTATCAAAGGTACTGCCAGCTTTCCGAGAGAGCCCCAGTGGGAGA
TTAATGCGGCAGGATCCAGTGGTTCATTTGTCTCCAAACAAACAAGGGCATTCTGATAGCCACTACTCGAGCCAC
TCCAGTAGCAATACTCTCTCCAGCAATGCGTCAAGTGCCCATAGTGATGAGAAGTGGTACGATGGGGACCGCACA
GAATCCGAACTCAACAGCTATAACTATCTGCAAGGCACCTCTGCTGACAGTGGCATTGACACCACCTCTTATGGC
CCCAGCCACGGCAGCACAGCCTCGCTGGGGGCTGCCACATCGTCACCTCGCTCAGGGCCAGGCAAGGAGAAAGTG
GCACCCCTATGGCACAGCTCCAGTGAAGTAATCTCCATGGCAGATCGGACTTTGGAGACAGAGAGCCACGGCCTG
GACCGGAAAACAGAGTCTTCCCTGAGCTTAGACATACACAGCAAGAGCCAAGCCGGCTCGACCCCTCTGACAAGG
GAGAACAGCACCTTCAGTATAAACGATGCTGCTTCCCACACAAGTACCATGAGCTCCCGACACTCTGCCAGCCCA
GTGGTTTTCACCAGTGCCCGGAGTTCACCTAAAGAAGAGCTTCATCCAGCTGCCCCCTCACAGCTCGCACCATCC
TTCTCCTCCTCTTCCTCCTCCTCCTCTGGTCCTAGGAGTTTTTACCCTCGCCAGGGCGCTACTAGCAAGTACCTG
ATTGGATGGAAAAAACCCGAAGGAACCATAAACTCCGTGGGATTTATGGACACGAGAAAGCGTCATCAGAGCGAT
GGCAATGAAATAGCCCACACCAGGCTGCGTGCCTCAACCAGAGACCTCCGGGCATCTCCTAAGCCAACCTCCAAG
TCCACCATTGAAGAAGATCTAAAGAAACTAATTGATCTTGAAAGCCCAACTCCTGAATCACAGAAGAGTTTTAAG
TTCCACGCACTCTCCTCTCCTCAGTCTCCTTTCCCCAGCACCCCCACCTCACGGCGGGCCTTGCACAGAACACTG
TCGGACGAGAGCATTTACAATAGCCAGAGGGAGCACTTTTTCACCTCCAGGGCGTCACTTCTGGACCAAGCCCTG
CCCAACGACGTCCTCTTCAGTAGCACGTACCCTTCTCTCCCCAAGTCGCTCCCGTTGAGGAGGCCTTCTTACACC
TTAGGAATGAAATCGCTGCATGGAGAGTTCTCAGCCTCGGACAGCTCCCTCACTGACATCCAGGAGACCCGCAGG
CAGCCTATGCCCGACCCTGGCCTGATGCCCCTGCCTGACACTGCTGCAGACTTGGATTGGTCCAACCTGGTAGAT
GCTGCCAAAGCCTATGAGGTCCAGAGAGCCTCATTTTTTGCTGCTAGTGATGAAAACCATCGCCCCTTGAGTGCT
GCATCCAACAGTGATCAGCTGGAGGACCAGGCTCTGGCCCAGATGAAGCCTTACAGCAGCAGTAAAGACTCCTCT
CCCACTCTGGCTTCTAAAGTGGACCAGCTGGAAGGTATGCTGAAGATGCTTCGGGAAGATTTGAAGAAGGAAAAA
GAAGACAAAGCTCACCTTCAGGCGGAGGTGCAGCACCTGCGAGAGGACAACCTGAGGCTACAGGAGGAGTCCCAG
AACGCCTCGGACAAGCTGAAGAAGTTCACAGAATGGGTCTTCAACACCATAGACATGAGC**TAG**GGAAGGCTGAGG
AGGACAGGAGAAGGGCCCAGACACTCCCTCCAGTGAGTGTCCTGCAGCCCTTATTCCCTCCATAGAAAGCATCCT
CAGAGCACCTTCCCTGGCTTCCTACTCTGCCCCCTTTCGGGGAGTGCACAACACAATAGTTGCAGATCAACAATC
ATCACCTGCCTTTTGTAGAAAAGAAAAACAAAAAAAGTAAATAAAAATTTTAAACAGTAAAATAAAAGTTTAACT
GCTAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 470

MTSLKRSQTERPLATDRASVVGTDGTPKVHTDDFYMRRFRSQNGSLGSSVMAPVGPPRSEGSHHITSTPGVPKMG
VRARIADWPPRKENIKESSRSSQEIETSSCLDSLSSKSSPVSQGSSVSLNSNDSAMLKSIQNTLKNKTRPSENMD
SRFLMPEAYPSSPRKALRRIRQRSNSDITISELDVDSFDECISPTYKTGPSLHREYGSTSSIDKQGTSGESFFDL
LKGYKDDKSDRGPTPTKLSDFLITGGGKGSGFSLDVIDGPISQRENLRLFKEREKPLKRRSKSETGDSSIFRKLR
NAKGEELGKSSDLEDNRSEDSVRPWTCPKCFAHYDVQSILFDLNEAIMNRHNVIKRRNTTTGASAAAVASLVSGP
LSHSASFSSPMGSTEDLNSKGSLSMDQGDDKSNELVMSCPYFRNEIGGEGERKISLSKSNSGSFSGCESASFEST
LSSHCTNAGVAVLEVPKENLVLHLDRVKRYIVEHVDLGAYYYRKFFYQKEHWNYFGADENLGPVAVSIRREKPDE
MKENGSPYNYRIIFRTSELMTLRGSVLEDAIPSTAKHSTARGLPLKEVLEHVVPELNVQCLRLAFNTPKVTEQLM
KLDEQGLNYQQKVGIMYCKAGQSTEEEMYNNESAGPAFEEFLQLLGERVRLKGFEKYRAQLDTKTDSTGTHSLYT
TYKDYEIMFHVSTMLPYTPNNKQQLLRKRHIGNDIVTIVFQEPGAQPFSPKNIRSHFQHVFVIVRVHNPCSDSVC
YSVAVTRSRDVPSFGPPIPKGVTFPKSNVFRDFLLAKVINAENAAHKSEKFRAMATRTRQEYLKDLAEKNVTNTP
IDPSGKFPFISLASKKKEKSKPYPGAELSSMGAIVWAVRAEDYNKAMELDCLLGISNEFIVLIEQETKSVVFNCS
CRDVIGWTSTDTSLKIFYERGECVSVGSFINIEEIKEIVKRLQFVSKGCESVEMTLRRNGLGQLGFHVNYEGIVA
DVEPYGYAWQAGLRQGSRLVEICKVAVATLSHEQMIDLLRTSVTVKVVIIPPHDDCTPRRSCSETYRMPVMEYKM
NEGVSYEFKFPFRNNNKWQRNASKGPHSPQVPSQVQSPMTSRLNAGKGDGKMPPPERAANIPRSISSDGRPLERR
LSPGSDIYVTVSSMALARSQCRNSPSNLSSSSDTGSVGGTYRQKSMPEGFGVSRRSPASIDRQNTQSDIGGSGKS
TPSWQRSEDSIADQMAYSYRGPQDFNSFVLEQHEYTEPTCHLPAVSKVLPAFRESPSGRLMRQDPVVHLSPNKQG
HSDSHYSSHSSSNTLSSNASSAHSDEKWYDGDRTESELNSYNYLQGTSADSGIDTTSYGPSHGSTASLGAATSSP
RSGPGKEKVAPLWHSSSEVISMADRTLETESHGLDRKTESSLSLDIHSKSQAGSTPLTRENSTFSINDAASHTST
MSSRHSASPVVFTSARSSPKEELHPAAPSQLAPSFSSSSSSSSGPRSFYPRQGATSKYLIGWKKPEGTINSVGFM
DTRKRHQSDGNEIAHTRLRASTRDLRASPKPTSKSTIEEDLKKLIDLESPTPESQKSFKFHALSSPQSPFPSTPT
SRRALHRTLSDESIYNSQREHFFTSRASLLDQALPNDVLFSSTYPSLPKSLPLRRPSYTLGMKSLHGEFSASDSS
LTDIQETRRQPMPDPGLMPLPDTAADLDWSNLVDAAKAYEVQRASFFAASDENHRPLSAASNSDQLEDQALAQMK
PYSSSKDSSPTLASKVDQLEGMLKMLREDLKKEKEDKAHLQAEVQHLREDNLRLQEESQNASDKLKKFTEWVFNT
IDMS

FIGURE 471

CGGAGGTGAGGTTTGTTACCGCGATTCTGAGAGGTGGGCTTTTAGTCCCTCCAGACCTCGGCTTTAGTGCTGTCT
CCGCTTTTCTTTCACCTTCACAGAGGTTCGTGTCTTCCTAAAAGAAGGTTTTATTGGGAGGTAAAGGTCAATGCG
TAGGGGTAGAGTAAG**ATG**TCTTATGGTGAAATTGAAGGTAAATTCTTGGGACCTAGAGAAGAAGTAACGAGTGAG
CCACGCTGTAAAAAATTGAAGTCAACCACAGAGTCGTATGTTTTTCACAATCATAGTAATGCTGATTTTCACAGA
ATCCAAGAGAAAACTGGAAATGATTGGGTCCCTGTGACCATCATTGATGTCAGAGGACATAGTTATTTGCAGGAG
AACAAAATCAAAACTACAGATTTGCATAGACCTTTGCATGATGAGATGCCTGGTAATAGACCAGATGTTATTGAA
TCCATTGATTCACAGGTTTTACAGGAAGCACGTCCTCCATTAGTATCCGCAGACGATGAGATATATAGCACAAGT
AAAGCATTTATAGGACCCATTTACAAACCCCCTGAGAAAAAGAAACGTAATGAAGGGAGGAATGAGGCACATGTT
CTAAATGGTATAAATGACAGAGGAGGACAAAAAGAGAAACAGAAATTTAACTCTGAAAAATCAGAGATTGACAAT
GAATTATTCCAGTTTTACAAAGAAATTGAAGAGCTTGAAAAGGAAAAAGATGGTTTTGAGAACAGTTGTAAAGAA
TCTGAACCTTCTCAGGAACAATTTGTTCCATTTTATGAGGGTCATAATAATGGTCTCTTAAAACCTGATGAAGAA
AAGAAAGATCTTAGTAATAAAGCTATGCCATCACATTGTGATTATCAGCAGAACTTGGGGAATGAGCCAGACAAA
TATCCCTGTAATGGACAAGTAATACCTACATTTTGTGACACTTCATTTACTTCTTTCAGGCCTGAATGGCAGTCA
GTATATCCTTTTATAGTGCCCTATGGTCCCCCTCTTCCCAGTTTGAACTATCATTTAAACATTCAGAGATTCAGT
GGTCCACCAAATCCACCATCAAATATTTTCCAAGCCCAAGATGACTCTCAGATACAAAATGGATATTATGTAAAT
AATTGTCATGTTAACTGGAATTGCATGACTTTTGATCAGAACAATGAATATACTGACTGTAGTGAGAATAGGAGT
AGTGTTCATCCCTCTGGAAATGGCTGCAGTATGCAAGATCGATATGTGAGTAATGGTTTCTGTGAAGTCAGAGAA
AGATGCTGGAAAGATCATTGTATGGACAAGCATAATGGAACAGACAGGTTTGTGAACCAGCAGTTTCAAGAGGAA
AAGTTAAATAAATTGCAGAAGTTACTTATTCTTTTAAGAGGTCTGCCTGGTTCTGGGAAAACAACATTGTCTCGA
ATTCTGCTTGGTCAGAATCGTGATGGCATTGTGTTCAGCACTGATGACTATTTTCACCATCAAGATGGGTACAGG
TATAATGTTAATCAACTTGGTGATGCCCATGACTGGAACCAGAACAGAGCAAAACAAGCTATCGATCAGGGAAGA
TCTCCAGTTATAATAGATAACACTAATATACAAGCTTGGGAAATGAAGCCATATGTGGAAGTGGCCATAGGAAAA
GGATACAGAGTAGAGTTTCATGAACCTGAAACTTGGTGGAAATTTGATCCTGAAGAATTAGAAAAGAGGAATAAA
CATGGTGTGTCTCGAAAGAAGATTGCTCAGATGTTGGATCGTTATGAATATCAAATGTCCATTTCTATTGTAATG
AATTCAGTGGAACCATCACACAAAAGCACACAAAGACCTCCTCCTCCACAGGGGAGACAGAGGTGGGGAGGCTCT
CTTGGCTCACATAATCGTGTCTGTGTCACAAATAATCAT**TAA**ATTAGCTATTTTCAGCTAACACATTTGTTGTTG
CACTTGAAAAAGAGTTAGTGAGCCTGTCTTGGAGTTTAAGTAGTTTCAAATAAAAAAAGGCTACAGTGCCTCACA
AAGGATGTTCCCAGCAAGTTGTTTAAATTCCCAGCAAGTTGTTAAAGTGTAAATAAAAATATATGAAATTGTATT
TTAAATGTTTTTATATTCTCTTGTTGTAATACTCTTGGCTGTTATGGAAGCACCTGAGTAATAGAGTGGTGGGTA
GGAGCTAGGATGTTTTTCTACAATCGAATTTTAAACTAATTTATCTATTTTATAGACACTATTGAACAGTTTTTT
AATAGTTCATATCTAAATCTAACTTTTCATAAAACTTTACGGTTTTTCCTTCACTACCTTAAATATGCAAGAAAT
ACTGACTTGGTATAGGGTACCTTAGTTTTCTCTATTCATTAGACAGGTAAAATTATATTTCAGCTGATTGATCTG
TGTGACAAAATTATTTCTTAGCTATAATCAGCACATCACTTAGTTCAAACAAAATTCCCCAGCAAATGTTAGATA
GTAGGTATATCAGTCACCTGGGGAGTTTTCTTCATAATATGCATATTCATCTTGTAATGCATACATAGTTATCAT
CCTCCTTCTCAACCCATCTCCCTAACCCCACATGCTTGCCAGTTCTTGAAGGGATAAAGTGATTCTAATAATGTT
TTACTTCTCTCTGTTCAATTTAATGTGATATAATTCTAGTATAAAAATATTTTGGACAGTTGCTTAACATGGTCA
TAAGAGGATTTGTACTATAGAATATCTTCTAGTACTAATTTTTCTGTAGAGCAAATTATATTTCTCTCACTGGAT
AGTTTTTAGATGTGTTTCTTCATATAAAATTAAAAACTGAGATGGAATTC

FIGURE 472

MSYGEIEGKFLGPREEVTSEPRCKKLKSTTESYVFHNHSNADFHRIQEKTGNDWVPVTIIDVRGHSYLQENKIKT
TDLHRPLHDEMPGNRPDVIESIDSQVLQEARPPLVSADDEIYSTSKAFIGPIYKPPEKKKRNEGRNEAHVLNGIN
DRGGQKEKQKFNSEKSEIDNELFQFYKEIEELEKEKDGFENSCKESEPSQEQFVPFYEGHNNGLLKPDEEKKDLS
NKAMPSHCDYQQNLGNEPDKYPCNGQVIPTFCDTSFTSFRPEWQSVYPFIVPYGPPLPSLNYHLNIQRFSGPPNP
PSNIFQAQDDSQIQNGYYVNNCHVNWNCMTFDQNNEYTDCSENRSSVHPSGNGCSMQDRYVSNGFCEVRERCWKD
HCMDKHNGTDRFVNQQFQEEKLNKLQKLLILLRGLPGSGKTTLSRILLGQNRDGIVFSTDDYFHHQDGYRYNVNQ
LGDAHDWNQNRAKQAIDQGRSPVIIDNTNIQAWEMKPYVEVAIGKGYRVEFHEPETWWKFDPEELEKRNKHGVSR
KKIAQMLDRYEYQMSISIVMNSVEPSHKSTQRPPPPQGRQRWGGSLGSHNRVCVTNNH

FIGURE 473

GGCGGCGGCAGCGGGTTCGGTTGCGCGTGGCGCACGGGGTGGGAGCGGAGCCCAGGCCGGGAGCAGGCGCCGCCG
CCAGCGACC**ATG**GGGAACGTGTTGGCTGCCAGCTCGCCGCCCGCAGGGCCGCCACCGCCGCCTGCGCCGGCCCTC
GTGGGGCTGCCGCCACCTCCGCCCTCGCCGCCGGGCTTCACGCTGCCGCCGCTGGGAGGCAGCCTGGGCGCCGGC
ACCAGTACGAGTCGAAGTTCGGAACGGACCCCCGGGGCTGCAACCGCCAGCGCCTCAGGGGCCGCCGAGGATGGG
GCCTGCGGCTGCCTGCCCAACCCGGGCACATTCGAGGAGTGCCACCGGAAGTGCAAGGAGCTGTTTCCCATTCAG
ATGGAGGGTGTCAAGCTCACAGTCAACAAAGGGTTGAGTAACCATTTTCAGGTCAACCACACAGTAGCCCTCAGC
ACAATCGGGGAGTCCAACTACCACTTCGGGGTCACATATGTGGGGACAAAGCAGCTGAGTCCCACAGAGGCGTTC
CCTGTACTGGTGGGTGACATGGACAACAGTGGCAGTCTCAACGCTCAGGTCATTCACCAGCTGGGCCCCGGTCTC
AGGTCCAAGATGGCCATCCAGACCCAGCAGTCGAAGTTTGTGAACTGGCAGGTGGACGGGGAGTATCGGGGCTCT
GACTTCACAGCAGCCGTCACCCTGGGGAACCCAGACGTCCTCGTGGGTTCAGGAATCCTCGTAGCCCACTACCTC
CAGAGCATCACGCCTTGCCTGGCCCTGGGTGGAGAGCTGGTCTACCACCGGCGGCCTGGAGAGGAGGGCACTGTC
ATGTCTCTAGCTGGGAAATACACATTGAACAACTGGTTGGCAACGGTAACGTTGGGCCAGGCGGGCATGCACGCA
ACATACTACCACAAAGCCAGTGACCAGCTGCAGGTGGGTGTGGAGTTTGAGGCCAGCACAAGGATGCAGGACACC
AGCGTCTCCTTCGGGTACCAGCTGGACCTGCCCAAGGCCAACCTCCTCTTCAAAGGCTCTGTGGATAGCAACTGG
ATCGTGGGTGCCACGCTGGAGAAGAAGCTCCCACCCCTGCCCCTGACACTGGCCCTTGGGGCCTTCCTGAATCAC
CGCAAGAACAAGTTTCAGTGTGGCTTTGGCCTCACCATCGGC**TGA**GCCCTCCTGGCCCCCGCCTTCCACGCCCTT
CCGATTCCACCTCCACCTCCACCTCCCCCTGCCACAGAGGGGAGACCTGAGCCCCCCTCCCTTCCCTCCCCCCTT
GGGGGTCGGGGGGGGACATTGGAAAGGAGGGACCCCGCCACCCCAGCAGCTGAGGAGGGGATTCTGGAACTGAAT
GGCGCTTCGGGATTCTGAGTAGCAGGGGCAGCATGCCCAGTGGGCCTGGGGTCCCGGGAGGGATTCCGGAATTGA
GGGGCACGCAGGATTCTGAGCACCAGGGGCAGAGGCGGCCAGACAACCTCAGGGAGGAGTGTCCTGGCGTCCCCA
TCCTCCAAAGGGCCTGGGCCCGCCCCGAGGGGGCAGCGAGAGGAGCTTCCCCATCCCCGGTCAGTCCACCCTGCC
CCGTCCACTTTCCCATCTCCTCGGTATAAATCATGTTTATAAGTTATGGAAGAACCGGGACATTTTACAGAAAAA
AAACAAAAAACAACAAAAAATATACGTGGGAAAAAAAAAAAAAAAAAAA

FIGURE 474

MGNVLAASSPPAGPPPPPAPALVGLPPPPPSPPGFTLPPLGGSLGAGTSTSRSSERTPGAATASASGAAEDGACG
CLPNPGTFEECHRKCKELFPIQMEGVKLTVNKGLSNHFQVNHTVALSTIGESNYHFGVTYVGTKQLSPTEAFPVL
VGDMDNSGSLNAQVIHQLGPGLRSKMAIQTQQSKFVNWQVDGEYRGSDFTAAVTLGNPDVLVGSGILVAHYLQSI
TPCLALGGELVYHRRPGEEGTVMSLAGKYTLNNWLATVTLGQAGMHATYYHKASDQLQVGVEFEASTRMQDTSVS
FGYQLDLPKANLLFKGSVDSNWIVGATLEKKLPPLPLTLALGAFLNHRKNKFQCGFGLTIG

FIGURE 475

GCAGAGGCGCAGGTAG**ATG**GAGTTGGGGAGTTGCCTGGAGGGCGGGAGGGAGGCGGCGGAGGAAGAGGGCGAGCC
TGAGGTGAAAAAGCGGCGACTTCTGTGTGTGAGGTTTGCCTCGGTCGCAAGCTGCGATGCCGCAGTGGCTCAGTG
CTTCCTGGCCGAGAACGACTGGGAGATGGAAAGGGCTCTGAACTCCTACTTCGAGCCTCCGGTGGAGGAGAGCGC
CTTGGAACGCCGACCTGAAACCATCTCTGAGCCCAAGACCTATGTTGACCTAACCAATGAAGAAACAACTGATTC
CACCACTTCTAAAATCAGCCCATCTGAAGATACTCAGCAAGAAAATGGCAGCATGTTCTCTCTCATTACCTGGAA
TATTGATGGATTAGATCTAAACAATCTGTCAGAGAGGGCTCGAGGGGTGTGTTCCTACTTAGCTTTGTACAGCCC
AGATGTGATATTTCTACAGGAAGTTATTCCCCCATATTATAGCTACCTAAAGAAGAGATCAAGTAATTATGAGAT
TATTACAGGTCATGAAGAAGGATATTTCACAGCTATAATGTTGAAGAAATCAAGAGTGAAATTAAAAAGCCAAGA
GATTATTCCTTTTCCAAGTACCAAAATGATGAGAAACCTTTTATGTGTGCATGTGAACGTGTCAGGAAATGAGCT
TTGCCTTATGACATCCCATTTGGAGAGCACCAGAGGGCATGCTGCGGAACGAATGAATCAGTTAAAAATGGTTTT
AAAGAAAATGCAAGAGGCTCCAGAGTCAGCTACAGTTATATTTGCAGGAGATACAAATCTAAGGGATCGAGAGGT
TACCAGATGTGGTGGTTTACCCAACAACATTGTGGATGTCTGGGAGTTTTTGGGCAAACCTAAACATTGCCAGTA
TACATGGGATACACAAATGAACTCTAATCTTGGAATAACTGCTGCTTGTAAACTTCGTTTTGATCGAATATTTTT
CAGAGCAGCAGCAGAAGAGGGACACATTATTCCCCGAAGTTTGGACCTTCTTGGATTAGAAAAACTGGACTGTGG
TAGATTTCCTAGTGATCACTGGGGTCTTCTGTGCAACTTAGATATAATATTG**TAA**AATGCTTTTCAAGTGTGGGT
TTTGCCCTGATTGTTGCAAATACAATTTCCACCTTCTGGAAAGGTAGGTTTGCTGTGGAGGAAATAATGTACTAG
ATCATTGTCACAGAAAAACCAACTATGATTTATGGTTGTGTTTTCAGAATTCAACATTAAAGATTAATGTTTATT
TAAACGAACACATTCCTGCATTCAGGATGTGAGGCCATTTAATAAAAAGGGCACAAAGCCTGTCAGAGTTTTCAA
CGGTGCTTATAGCTGCCAGCTGGATTCCAAACAGGTACCCCATTGTCTCTGAGCTAATGTTTATATTTTTCCATT
CAGGCACCGAAATAGTTAATATTTAAAATAAGTCTTCAAAAGAAAACATAAGAGATTATTGAGTTCTTGGGACTG
GATCCTTTATTTCATAAGTTCAGATCATCTTAAATGAAAATGCCATGATTATCTGCAGTTAAGTAGATGACAGCT
ATTCTACATCAGACTTGATTTTTGTCAGCTAATTACATAATTGGTAAGCTATAATTGAAACCTTATGGCTTAAAA
TTCCTTAACTCCTTTTTGATTCATGTTTGTAGTCATGTTGTCAACAGAGGCAAAGTTAAGCTTGATGATGGTTAA
AATCGGTTTGATAGCACCATGGGACATTTTTCTAACAAAAATAAATGCATGAAGAGACATAGCCTTTTAGTTTTG
CTAATTGTGAAATGGAAATGCTTTACAGGAAGTAAATGCAAATTACTTTTAAGTGTGCTTTAAAGAAAAATATTT
TCCCCACAAGAGAAATTTAAATAAAGAATTTTATTTGTTTAAAAAAAAAAAAAAAAAAAA

FIGURE 476

MELGSCLEGGREAAEEEGEPEVKKRRLLCVRFASVASCDAAVAQCFLAENDWEMERALNSYFEPPVEESALERRP
ETISEPKTYVDLTNEETTDSTTSKISPSEDTQQENGSMFSLITWNIDGLDLNNLSERARGVCSYLALYSPDVIFL
QEVIPPYYSYLKKRSSNYEIITGHEEGYFTAIMLKKSRVKLKSQEIIPFPSTKMMRNLLCVHVNVSGNELCLMTS
HLESTRGHAAERMNQLKMVLKKMQEAPESATVIFAGDTNLRDREVTRCGGLPNNIVDVWEFLGKPKHCQYTWDTQ
MNSNLGITAACKLRFDRIFFRAAAEEGHIIPRSLDLLGLEKLDCGRFPSDHWGLLCNLDIIL

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FIGURE 477

CGCGCTTGTGGAGCTGGTGGCGGCGCTCCGCAGGGGCTCGGCTGTTTTCCGCGCGGCAGGCGCGGCC**ATG**GCGCA
GCTGGGAAAGCTGCTCAAGGAGCAGAAGTACGACCGGCAGCTGAGGTTGTGGGGTGATCATGGGCAAGAGGCTTT
AGAATCTGCTCATGTTTGCCTAATAAATGCAACAGCCACAGGAACTGAAATTCTTAAAAACTTGGTACTACCAGG
TATTGGTTCGTTTACAATTATTGATGGAAATCAGGTCAGCGGAGAAGATGCTGGAAACAATTTCTTCCTTCAAAG
AAGCAGTATCGGCAAGAACCGAGCTGAAGCTGCCATGGAATTCTTACAAGAATTAAATAGCGATGTCTCTGGAAG
TTTTGTGGAAGAGAGTCCAGAAAACCTTCTAGACAATGATCCCTCATTTTTCTGTAGGTTTACTGTTGTAGTTGC
AACTCAGCTTCCTGAAAGCACTTCACTACGCTTAGCAGATGTCCTCTGGAATTCCCAGATTCCTCTTTTGATCTG
TAGGACATATGGACTAGTTGGTTATATGAGGATCATTATAAAAGAACATCCAGTAATAGAATCTCATCCAGATAA
TGCATTAGAGGATCTACGACTAGATAAGCCATTTCCTGAACTGAGAGAACATTTTCAGTCCTATGATTTGGATCA
TATGGAAAAAAAGGACCACAGTCATACTCCATGGATTGTGATCATAGCTAAATATTTAGCACAGTGGTATAGTGA
AACAAATGGACGAATACCTAAAACGTATAAAGAAAAAGAGGACTTCAGAGATTTGATTAGACAAGGAATTCTAAA
AAATGAAAATGGGGCTCCAGAAGATGAAGAGAATTTTGAAGAAGCTATTAAAAATGTGAACACAGCACTAAATAC
AACTCAGATCCCAAGCAGTATTGAAGATATATTTAATGATGATCGCTGCATAAATATCACCAAACAGACTCCATC
ATTTTGGATTTTAGCTCGTGCCTTAAAGGAATTTGTGGCCAAAGAGGGTCAAGGAAATTTACCTGTTCGAGGCAC
AATTCCTGATATGATTGCAGATTCAGGCAAATATATAAAACTGCAAAACGTTTACCGTGAAAAAGCAAAGAAAGA
TGCTGCCGCTGTGGGTAATCATGTTGCCAAATTGCTGCAGTCCATTGGCCAGGCACCAGAGTCCATTTCAGAGAA
AGAATTAAAATTACTCTGCAGCAATTCTGCATTTCTTCGAGTGGTAAGATGTCGATCCTTAGCTGAAGAATATGG
TTTGGATACAATTAACAAGGATGAAATTATTTCTAGCATGGACAATCCAGATAATGAAATAGTGTTGTACTTAAT
GTTACGGGCTGTTGATAGATTTCATAAACAACAGGGTAGATATCCAGGAGTATCTAACTATCAAGTTGAAGAAGA
TATAGGAAAGTTGAAGTCTTGTCTCACTGGCTTCCTTCAGGAATATGGTTTATCTGTAATGGTGAAAGATGATTA
TGTCCACGAATTTTGCCGATATGGAGCTGCTGAGCCACATACCATTGCTGCATTCTTGGGGGGGAGCTGCTGCTCA
AGAGGTCATCAAAATAATCACCAAACAATTTGTAATTTTTAATAATACTTACATTTACAGTGGCATGTCACAAAC
TTCAGCAACTTTCCAGTTG**TAG**AGTAAGCAAGCACCTTAAGTAGTGTGTTAATGATTGAAACTGTAATTGCCTTC
GGGTTGTGCTTTAGTCTGTAAAATTCTAAAGGAGAGCTGCTAAATTGTTTTCTTAATAAACATTTTTCTCATTTG
TAAAAAAAAA

FIGURE 478

MAQLGKLLKEQKYDRQLRLWGDHGQEALESAHVCLINATATGTEILKNLVLPGIGSFTIIDGNQVSGEDAGNNFF
LQRSSIGKNRAEAAMEFLQELNSDVSGSFVEESPENLLDNDPSFFCRFTVVVATQLPESTSLRLADVLWNSQIPL
LICRTYGLVGYMRIIIKEHPVIESHPDNALEDLRLDKPFPELREHFQSYDLDHMEKKDHSHTPWIVIIAKYLAQW
YSETNGRIPKTYKEKEDFRDLIRQGILKNENGAPEDEENFEEAIKNVNTALNTTQIPSSIEDIFNDDRCINITKQ
TPSFWILARALKEFVAKEGQGNLPVRGTIPDMIADSGKYIKLQNVYREKAKKDAAAVGNHVAKLLQSIGQAPESI
SEKELKLLCSNSAFLRVVRCRSLAEEYGLDTINKDEIISSMDNPDNEIVLYLMLRAVDRFHKQQGRYPGVSNYQV
EEDIGKLKSCLTGFLQEYGLSVMVKDDYVHEFCRYGAAEPHTIAAFLGGAAAQEVIKIITKQFVIFNNTYIYSGM
SQTSATFQL

FIGURE 479

AGGGACAGCCCAGAGGAGGCGTGGCCACGCTGCCGGCGGAAGTGGAGCCCTCCGCGAGCGCGCGAGGCCGCCGGG
GCAGGCGGGGAAACCGGACAGTAGGGGCGGGGCCGGGCCGGCGATGGGGATGCGGGAGCACTACGCGGAGCTGCA
CCCGTGCCCGCCGGAATTGGGGATGCAGAGCAGCGGCAGCGGGTATGGCAGGCAGCCGGCGGGCCGGCCTCCAGC
GCAGGTGCCCGAGAGGCAGGGGCTGGCCTGGGATGCGCGCGCACCTGCCCTCGCCCCGCCCCGCCCGCACGAGGG
GTGGTGGCCGAGGCCCCGCCCCGCACGCCTCGCCTGAGGCGGGTCCGCTCAGCCCAGGCGCCCGCCCCCGCCCCC
GCCGATTAAATGGGCCGGCGGGGCTCAGCCCCCGGAAACGGTCGTAACTTCGGGGCTGCGAGCGCGGAGGGCGAC
GACGACGAAGCGCAGACAGCGTC**ATG**GCAGAGCAGGTGGCCCTGAGCCGGACCCAGGTGTGCGGGATCCTGCGGG
AAGAGCTTTTCCAGGGCGATGCCTTCCATCAGTCGGATACACACATATTCATCATCATGGGTGCATCGGGTGACC
TGGCCAAGAAGAAGATCTACCCCACCATCTGGTGGCTGTTCCGGGATGGCCTTCTGCCCGAAAACACCTTCATCG
TGGGCTATGCCCGTTCCCGCCTCACAGTGGCTGACATCCGCAAACAGAGTGAGCCCTTCTTCAAGGCCACCCCAG
AGGAGAAGCTCAAGCTGGAGGACTTCTTTGCCCGCAACTCCTATGTGGCTGGCCAGTACGATGATGCAGCCTCCT
ACCAGCGCCTCAACAGCCACATGGATGCCCTCCACCTGGGGTCACAGGCCAACCGCCTCTTCTACCTGGCCTTGC
CCCCGACCGTCTACGAGGCCGTCACCAAGAACATTCACGAGTCCTGCATGAGCCAGATAGGCTGGAACCGCATCA
TCGTGGAGAAGCCCTTCGGGAGGGACCTGCAGAGCTCTGACCGGCTGTCCAACCACATCTCCTCCCTGTTCCGTG
AGGACCAGATCTACCGCATCGACCACTACCTGGGCAAGGAGATGGTGCAGAACCTCATGGTGCTGAGATTTGCCA
ACAGGATCTTCGGCCCCATCTGGAACCGGGACAACATCGCCTGCGTTATCCTCACCTTCAAGGAGCCCTTTGGCA
CTGAGGGTCGCGGGGGCTATTTCGATGAATTTGGGATCATCCGGGACGTGATGCAGAACCACCTACTGCAGATGC
TGTGTCTGGTGGCCATGGAGAAGCCCGCCTCCACCAACTCAGATGACGTCCGTGATGAGAAGGTCAAGGTGTTGA
AATGCATCTCAGAGGTGCAGGCCAACAATGTGGTCCTGGGCCAGTACGTGGGGAACCCCGATGGAGAGGGCGAGG
CCACCAAAGGGTACCTGGACGACCCCACGGTGCCCCGCGGGTCCACCACCGCCACTTTTGCAGCCGTCGTCCTCT
ATGTGGAGAATGAGAGGTGGGATGGGGTGCCCTTCATCCTGCGCTGCGGCAAGGCCCTGAACGAGCGCAAGGCCG
AGGTGAGGCTGCAGTTCCATGATGTGGCCGGCGACATCTTCCACCAGCAGTGCAAGCGCAACGAGCTGGTGATCC
GCGTGCAGCCCAACGAGGCCGTGTACACCAAGATGATGACCAAGAAGCCGGGCATGTTCTTCAACCCCGAGGAGT
CGGAGCTGGACCTGACCTACGGCAACAGATACAAGAACGTGAAGCTCCCTGACGCCTACGAGCGCCTCATCCTGG
ACGTCTTCTGCGGGAGCCAGATGCACTTCGTGCGCAGCGACGAGCTCCGTGAGGCCTGGCGTATTTTCACCCCAC
TGCTGCACCAGATTGAGCTGGAGAAGCCCAAGCCCATCCCCTATATTTATGGCAGCCGAGGCCCCACGGAGGCAG
ACGAGCTGATGAAGAGAGTGGGTTTCCAGTATGAGGGCACCTACAAGTGGGTGAACCCCCACAAGCTC**TGA**GCCC
TGGGCACCCACCTCCACCCCCGCCACGGCCACCCTCCTTCCCGCCGCCCGACCCCGAGTCGGGAGGACTCCGGGA
CCATTGACCTCAGCTGCACATTCCTGGCCCCGGGCTCTGGCCACCCTGGCCCGCCCCTCGCTGCTGCTACTACCC
GAGCCCAGCTACATTCCTCAGCTGCCAAGCACTCGAGACCATCCTGGCCCCTCCAGACCCTGCCTGAGCCCAGGA
GCTGAGTCACCTCCTCCACTCACTCCAGCCCAACAGAAGGAAGGAGGAGGGCGCCCATTCGTCTGTCCCAGAGCT
TATTGGCCACTGGGTCTCACTCCTGAGTGGGGCCAGGGTGGGAGGGAGGGACAAGGGGGAGGAAAGGGGCGAGCA
CCCACGTGAGAGAATCTGCCTGTGGCCTTGCCCGCCAGCCTCAGTGCCACTTGACATTCCTTGTCACCAGCAACA
TCTCGAGCCCCCTGGATGTCCCCTGTCCCACCAACTCTGCACTCCATGGCCACCCCGTGCCACCCGTAGGCAGCC
TCTCTGCTATAAGAAAAGCAGACGCAGCAGCTGGGACCCCTCCCAACCTCAATGCCCTGCCATTAAATCCGCAAA
CAGCCAAAAAAAAAAAAAAAAAAAA

FIGURE 480

MAEQVALSRTQVCGILREELFQGDAFHQSDTHIFIIMGASGDLAKKKIYPTIWWLFRDGLLPENTFIVGYARSRL
TVADIRKQSEPFFKATPEEKLKLEDFFARNSYVAGQYDDAASYQRLNSHMDALHLGSQANRLFYLALPPTVYEAV
TKNIHESCMSQIGWNRIIVEKPFGRDLQSSDRLSNHISSLFREDQIYRIDHYLGKEMVQNLMVLRFANRIFGPIW
NRDNIACVILTFKEPFGTEGRGGYFDEFGIIRDVMQNHLLQMLCLVAMEKPASTNSDDVRDEKVKVLKCISEVQA
NNVVLGQYVGNPDGEGEATKGYLDDPTVPRGSTTATFAAVVLYVENERWDGVPFILRCGKALNERKAEVRLQFHD
VAGDIFHQQCKRNELVIRVQPNEAVYTKMMTKKPGMFFNPEESELDLTYGNRYKNVKLPDAYERLILDVFCGSQM
HFVRSDELREAWRIFTPLLHQIELEKPKPIPYIYGSRGPTEADELMKRVGFQYEGTYKWVNPHKL

FIGURE 481

AGCTGAGGTGTGAGCAGCTGCCGAAGTCAGTTCCTTGTGGAGCCGGAGCTGGGCGCGGATTCGCCGAGGCACCGA
GGCACTCAGAGGAGGTGAGAGAGCGGCGGCAGACAACAGGGGACCCCGGGCCGGCGGCCCAGAGCCGAGCCAAGC
GTGCCCGCGTGTGTCCCTGCGTGTCCGCGAGGATGCGTGTTCGCGGGTGTGTGCTGCGTTCACAGGTGTTTCTGC
GGCAGGCGCC**ATG**TCAGAACCGGCTGGGGATGTCCGTCAGAACCCATGCGGCAGCAAGGCCTGCCGCCGCCTCTT
CGGCCCAGTGGACAGCGAGCAGCTGAGCCGCGACTGTGATGCGCTAATGGCGGGCTGCATCCAGGAGGCCCGTGA
GCGATGGAACTTCGACTTTGTCACCGAGACACCACTGGAGGGTGACTTCGCCTGGGAGCGTGTGCGGGGCCTTGG
CCTGCCCAAGCTCTACCTTCCCACGGGGCCCCGGCGAGGCCGGGATGAGTTGGGAGGAGGCAGGCGGCCTGGCAC
CTCACCTGCTCTGCTGCAGGGGACAGCAGAGGAAGACCATGTGGACCTGTCACTGTCTTGTACCCTTGTGCCTCG
CTCAGGGGAGCAGGCTGAAGGGTCCCCAGGTGGACCTGGAGACTCTCAGGGTCGAAAACGGCGGCAGACCAGCAT
GACAGATTTCTACCACTCCAAACGCCGGCTGATCTTCTCCAAGAGGAAGCCC**TAA**TCCGCCCACAGGAAGCCTGC
AGTCCTGGAAGCGCGAGGGCCTCAAAGGCCCGCTCTACATCTTCTGCCTTAGTCTCAGTTTGTGTGTCTTAATTA
TTATTTGTGTTTTAATTTAAACACCTCCTCATGTACATACCCTGGCCGCCCCCTGCCCCCCAGCCTCTGGCATTA
GAATTATTTAAACAAAAACTAGGCGGTTGAATGAGAGGTTCCTAAGAGTGCTGGGCATTTTTATTTTATGAAATA
CTATTTAAAGCCTCCTCATCCCGTGTTCTCCTTTTCCTCTCTCCCGGAGGTTGGGTGGGCCGGCTTCATGCCAGC
TACTTCCTCCTCCCCACTTGTCCGCTGGGTGGTACCCTCTGGAGGGGTGTGGCTCCTTCCCATCGCTGTCACAGG
CGGTTATGAAATTCACCCCCTTTCCTGGACACTCAGACCTGAATTCTTTTTCATTTGAGAAGTAAACAGATGGCA
CTTTGAAGGGGCCTCACCGAGTGGGGGCATCATCAAAAACTTTGGAGTCCCCTCACCTCCTCTAAGGTTGGGCAG
GGTGACCCTGAAGTGAGCACAGCCTAGGGCTGAGCTGGGGACCTGGTACCCTCCTGGCTCTTGATACCCCCCTCT
GTCTTGTGAAGGCAGGGGGAAGGTGGGGTCCTGGAGCAGACCACCCCGCCTGCCCTCATGGCCCCTCTGACCTGC
ACTGGGGAGCCCGTCTCAGTGTTGAGCCTTTTCCCTCTTTGGCTCCCCTGTACCTTTTGAGGAGCCCCAGCTACC
CTTCTTCTCCAGCTGGGCTCTGCAATTCCCCTCTGCTGCTGTCCCTCCCCCTTGTCCTTTCCCTTCAGTACCCTC
TCAGCTCCAGGTGGCTCTGAGGTGCCTGTCCCACCCCCACCCCCAGCTCAATGGACTGGAAGGGGAAGGGACACA
CAAGAAGAAGGGCACCCTAGTTCTACCTCAGGCAGCTCAAGCAGCGACCGCCCCCTCCTCTAGCTGTGGGGGTGA
GGGTCCCATGTGGTGGCACAGGCCCCCTTGAGTGGGGTTATCTCTGTGTTAGGGGTATATGATGGGGGAGTAGAT
CTTTCTAGGAGGGAGACACTGGCCCCTCAAATCGTCCAGCGACCTTCCTCATCCACCCCATCCCTCCCCAGTTCA
TTGCACTTTGATTAGCAGCGGAACAAGGAGTCAGACATTTTAAGATGGTGGCAGTAGAGGCTATGGACAGGGCAT
GCCACGTGGGCTCATATGGGGCTGGGAGTAGTTGTCTTTCCTGGCACTAACGTTGAGCCCCTGGAGGCACTGAAG
TGCTTAGTGTACTTGGAGTATTGGGGTCTGACCCCAAACACCTTCCAGCTCCTGTAACATACTGGCCTGGACTGT
TTTCTCTCGGCTCCCCATGTGTCCTGGTTCCCGTTTCTCCACCTAGACTGTAAACCTCTCGAGGGCAGGGACCAC
ACCCTGTACTGTTCTGTGTCTTTCACAGCTCCTCCCACAATGCTGAATATACAGCAGGTGCTCAATAAATGATTC
TTAGTGACTTTAAAAAAAAAAAAAAAAAAA

FIGURE 482

MSEPAGDVRQNPCGSKACRRLFGPVDSEQLSRDCDALMAGCIQEARERWNFDFVTETPLEGDFAWERVRGLGLPK
LYLPTGPRRGRDELGGGRRPGTSPALLQGTAEEDHVDLSLSCTLVPRSGEQAEGSPGGPGDSQGRKRRQTSMTDF
YHSKRRLIFSKRKP

FIGURE 483

GTGGAACCTCGATATTGGTGGTGTCCATCGTGGGCAGCGGACTAATAAAGGCC**ATG**GCGCCAGCAGAAATCCTGA
ACGGGAAGGAGATCTCCGCGCAAATAAGGGCGAGACTGAAAAATCAAGTCACTCAGTTGAAGGAGCAAGTACCTG
GTTTCACACCACGCCTGGCAATATTACAGGTTGGCAACAGAGATGATTCCAATCTTTATATAAATGTGAAGCTGA
AGGCTGCTGAAGAGATTGGGATCAAAGCCACTCACATTAAGTTACCAAGAACAACCACAGAATCTGAGGTGATGA
AGTACATTACATCTTTGAATGAAGACTCTACTGTACATGGGTTCTTAGTGCAGCTACCTTTAGATTCAGAGAATT
CCATTAACACTGAAGAAGTGATCAATGCTATTGCACCCGAGAAGGATGTGGATGGATTGACTAGCATCAATGCTG
GGAGACTTGCTAGAGGTGACCTCAATGACTGTTTCATTCCTTGTACGCCTAAGGGATGCTTGGAACTCATCAAAG
AGACAGGGGTGCCGATTGCCGGAAGGCATGCTGTGGTGGTTGGGCGCAGTAAAATAGTTGGGGCCCCGATGCATG
ACTTGCTTCTGTGGAACAATGCCACAGTGACCACCTGCCACTCCAAGACTGCCCATCTGGATGAGGAGGTAAATA
AAGGTGACATCCTGGTGGTTGCAACTGGTCAGCCTGAAATGGTTAAAGGGGAGTGGATCAAACCTGGGGCAATAG
TCATCGACTGTGGAATCAATTATGTCCCAGATGATAAAAAACCAAATGGGAGAAAAGTTGTGGGTGATGTGGCAT
ACGACGAGGCCAAAGAGAGGGCGAGCTTCATCACTCCTGTTCCTGGCGGCGTAGGGCCCATGACAGTTGCAATGC
TCATGCAGAGCACAGTAGAGAGTGCCAAGCGTTTCCTGGAGAAATTTAAGCCAGGAAAGTGGATGATTCAGTATA
ACAACCTTAACCTCAAGACACCTGTTCCAAGTGACATTGATATATCACGATCTTGTAAACCGAAGCCCATTGGTA
AGCTGGCTCGAGAAATTGGTCTGCTGTCTGAAGAGGTAGAATTATATGGTGAAACAAAGGCCAAAGTTCTGCTGT
CAGCACTAGAACGCCTGAAGCACCGGCCTGATGGGAAATACGTGGTGGTGACTGGAATAACTCCAACACCCCTGG
GAGAAGGGAAAAGCACAACTACAATCGGGCTAGTGCAAGCCCTTGGTGCCCATCTCTACCAGAATGTCTTTGCGT
GTGTGCGACAGCCTTCTCAGGGCCCCACCTTTGGAATAAAAGGTGGCGCTGCAGGAGGCGGCTACTCCCAGGTCA
TTCCTATGGAAGAGTTTAATCTCCACCTCACAGGTGACATCCATGCCATCACTGCAGCTAATAACCTCGTTGCTG
CGGCCATTGATGCTCGGATATTTCATGAACTGACCCAGACAGACAAGGCTCTCTTTAATCGTTTGGTGCCATCAG
TAAATGGAGTGAGAAGGTTCTCTGACATCCAAATCCGAAGGTTAAAGAGACTAGGCATTGAAAAGACTGACCCTA
CCACACTGACAGATGAAGAGATAAACAGATTTGCAAGATTGGACATTGATCCAGAAACCATAACTTGGCAAAGAG
TGTTGGATACCAATGATAGATTCCTGAGGAAGATCACGATTGGACAGGCTCCAACGGAGAAGGGTCACACACGGA
CGGCCCAGTTTGATATCTCTGTGGCCAGTGAAATTATGGCTGTCCTGGCTCTCACCACTTCTCTAGAAGACATGA
GAGAGAGACTGGGCAAAATGGTGGTGGCATCCAGTAAGAAAGGAGAGCCCGTCAGTGCCGAAGATCTGGGGGTGA
GTGGTGCACTGACAGTGCTTATGAAGGACGCAATCAAGCCCAATCTCATGCAGACACTGGAGGGCACTCCAGTGT
TTGTCCATGCTGGCCCGTTTGCCAACATCGCACATGGCAATTCCTCCATCATTGCAGACCAGATCGCACTCAAGC
TTGTTGGCCCAGAAGGGTTTGTAGTGACGGAAGCAGGATTTGGAGCAGACATTGGAATGGAAAAGTTTTTTAACA
TCAAATGCCGGTATTCCGGCCTCTGCCCCCACGTGGTGGTGCTTGTTGCCACTGTCAGGGCTCTCAAGATGCACG
GGGGCGGCCCCACGGTCACTGCTGGACTGCCTCTTCCCAAGGCTTACATACAGGAGAACCTGGAGCTGGTTGAAA
AAGGCTTCAGTAACTTGAAGAAACAAATTGAAAATGCCAGAATGTTTGGAATTCCAGTAGTAGTGGCCGTGAATG
CATTCAAGACGGATACAGAGTCTGAGCTGGACCTCATCAGCCGCCTTTCCAGAGAACATGGGGCTTTTGATGCCG
TGAAGTGCACTCACTGGGCAGAAGGGGGCAAGGGTGCCTTAGCCCTGGCTCAGGCCGTCCAGAGAGCAGCACAAG
CACCCAGCAGCTTCCAGCTCCTTTATGACCTCAAGCTCCCAGTTGAGGATAAAATCAGGATCATTGCACAGAAGA
TCTATGGAGCAGATGACATTGAATTACTTCCCGAAGCTCAACACAAAGCTGAAGTCTACACGAAGCAGGGCTTTG
GGAATCTCCCCATCTGCATGGCTAAAACACACTTGTCTTTGTCTCACAACCCAGAGCAAAAAGGTGTCCCTACAG
GCTTCATTCTGCCCATTCGCGACATCCGCGCCAGCGTTGGGGCTGGTTTTCTGTACCCCTTAGTAGGAACGATGA
GCACAATGCCTGGACTCCCCACCCGGCCCTGTTTTTATGATATTGATTTGGACCCTGAAACAGAACAGGTGAATG
GATTATTC**TAA**ACAGATCACCATCCATCTTCAAGAAGCTACTTTGAAAGTCTGGCCAGTGTCTATTCAGGCCCAC
TGGGAGTTAGGAAGTATAAGTAAGCCAAGAGAAGTCAGCCCCTGCCCAGAAGATCTGAAACTAATAGTAGGAGTT
TCCCCAGAAGTCATTTTCAGCCTTAATTCTCATCATGTATAAATTAACATAAATCATGCATGTCTGTTTACTTTA
GTGACGTTCCACAGAATAAAAGGAAACAAGTTTGC

FIGURE 484

MAPAEILNGKEISAQIRARLKNQVTQLKEQVPGFTPRLAILQVGNRDDSNLYINVKLKAAEEIGIKATHIKLPRT
TTESEVMKYITSLNEDSTVHGFLVQLPLDSENSINTEEVINAIAPEKDVDGLTSINAGRLARGDLNDCFIPCTPK
GCLELIKETGVPIAGRHAVVVGRSKIVGAPMHDLLLWNNATVTTCHSKTAHLDEEVNKGDILVVATGQPEMVKGE
WIKPGAIVIDCGINYVPDDKKPNGRKVVGDVAYDEAKERASFITPVPGGVGPMTVAMLMQSTVESAKRFLEKFKP
GKWMIQYNNLNLKTPVPSDIDISRSCKPKPIGKLAREIGLLSEEVELYGETKAKVLLSALERLKHRPDGKYVVVT
GITPTPLGEGKSTTTIGLVQALGAHLYQNVFACVRQPSQGPTFGIKGGAAGGGYSQVIPMEEFNLHLTGDIHAIT
AANNLVAAAIDARIFHELTQTDKALFNRLVPSVNGVRRFSDIQIRRLKRLGIEKTDPTTLTDEEINRFARLDIDP
ETITWQRVLDTNDRFLRKITIGQAPTEKGHTRTAQFDISVASEIMAVLALTTSLEDMRERLGKMVVASSKKGEPV
SAEDLGVSGALTVLMKDAIKPNLMQTLEGTPVFVHAGPFANIAHGNSSIIADQIALKLVGPEGFVVTEAGFGADI
GMEKFFNIKCRYSGLCPHVVVLVATVRALKMHGGGPTVTAGLPLPKAYIQENLELVEKGFSNLKKQIENARMFGI
PVVVAVNAFKTDTESELDLISRLSREHGAFDAVKCTHWAEGGKGALALAQAVQRAAQAPSSFQLLYDLKLPVEDK
IRIIAQKIYGADDIELLPEAQHKAEVYTKQGFGNLPICMAKTHLSLSHNPEQKGVPTGFILPIRDIRASVGAGFL
YPLVGTMSTMPGLPTRPCFYDIDLDPETEQVNGLF

FIGURE 485

CGCGATTCTCAGGGATTGATCCGCCTCTTCAGGTAAGTTATCTTCCGGCCCCGTACCACTGTGCCACAGGCGCAG
CCCGCTTCCTCAGGTGCCCTATCCCGCGCAGAAGACCACGGCTTCACAGAGTGTTATTTAAGGGCGTGGCCAGCG
GAACATCCCGCCCCATTCTGTGACGCACGGGGTGGCGCGCGTGGGACCCGAGGGGTGGGGCTGGGTTTAGTAGGA
GACCTGGGGCAAGGCCCCCTGTGGACGACCATCTGCCAGCTTCTCTCGTTCCGTCGATTGGGAGGAGCGGTGGCG
ACCTCGGCCTTCAGTGTTTCCGACGGAGTGA**ATG**GCGGCGGCGGCTGGGATGCTGCTGCTGGGCTTGCTGCAGGC
GGGTGGGTCGGTGCTGGGCCAGGCGATGGAGAAGGTGACAGGCGGCAACCTCTTGTCCATGCTGCTGATCGCCTG
CGCCTTCACCCTCAGCCTGGTCTACCTGATCCGTCTGGCCGCCGGCCACCTGGTCCAGCTGCCCGCAGGGGTGAA
AAGTCCTCCATACATTTTCTCCCCAATTCCATTCCTTGGGCATGCCATAGCATTTGGGAAAAGTCCAATTGAATT
TCTAGAAAATGCATATGAGAAGTATGGACCTGTATTTAGTTTTACCATGGTAGGCAAGACATTTACTTACCTTCT
GGGGAGTGATGCTGCTGCACTGCTTTTTAATAGTAAAAATGAAGACCTGAATGCAGAAGATGTCTACAGTCGCCT
GACAACACCTGTGTTTGGGAAGGGAGTTGCATACGATGTGCCTAATCCAGTTTTCTTGGAGCAGAAGAAAATGTT
AAAAAGTGGCCTTAACATAGCCCACTTTAAACAGCATGTTTCTATAATTGAAAAAGAAACAAAGGAATACTTTGA
GAGTTGGGGAGAAAGTGGAGAAAAAAATGTGTTTGAAGCTCTTTCTGAGCTCATAATTTTAACAGCTAGCCATTG
TTTGCATGGAAAGGAAATCAGAAGTCAACTCAATGAAAAGGTAGCACAGCTGTATGCAGATTTGGATGGAGGTTT
CAGCCATGCAGCCTGGCTCTTACCAGGTTGGCTGCCTTTGCCTAGTTTCAGACGCAGGGACAGAGCTCATCGGGA
AATCAAGGATATTTTCTATAAGGCAATCCAGAAACGCAGACAGTCTCAAGAAAAAATTGATGACATTCTCCAAAC
TTTACTAGATGCTACATACAAGGATGGGCGTCCTTTGACTGATGATGAAGTAGCAGGGATGCTTATTGGATTACT
CTTGGCAGGGCAGCATACATCCTCAACTACTAGTGCTTGGATGGGCTTCTTTTTGGCCAGAGACAAAACACTTCA
AAAAAAATGTTATTTAGAACAGAAAACAGTCTGTGGAGAGAATCTGCCTCCTTTAACTTATGACCAGCTCAAGGA
TCTAAATTTACTTGATCGCTGTATAAAAGAAACATTAAGACTTAGACCTCCTATAATGATCATGATGAGAATGGC
CAGAACTCCTCAGACTGTGGCAGGGTATACCATTCCTCCAGGACATCAGGTGTGTGTTTCTCCCACTGTCAATCA
AAGACTTAAAGACTCATGGGTAGAACGCCTGGACTTTAATCCTGATCGCTACTTACAGGATAACCCAGCATCAGG
GGAAAAGTTTGCCTATGTGCCATTTGGAGCTGGGCGTCATCGTTGTATTGGGGAAAATTTTGCCTATGTTCAAAT
TAAGACAATTTGGTCCACTATGCTTCGTTTATATGAATTTGATCTCATTGATGGATACTTTCCCACTGTGAATTA
TACAACTATGATTCACACCCCTGAGAACCCAGTTATCCGTTACAAACGAAGATCAAAA**TGA**AAAAGGTTGCAAGG
AACGAATATATGTGATTATCACTGTAAGCCACAAAGGCATTCGAAGAGAATGAAGTGTACAAAACAACTCTTGTA
GTTTACTGTTTTTTTAAGTGTGTAATTCTAAAAGCCAGTTTATGATTTAGGATTTTGTTAACTGAATGGTTCTAT
CAAATATAATAGCATTTGACACATTTTCTAATAGTTATGATACTTATACATGTGCTTTCAGGAAGTTCCTTGGTG
AAACAATTGTTGAGGGGGGATCTAGGTAATTGGCAGATTCTAAATAATATAATTTCCAGATAGTAATTTTAAGAG
TACTCATCGCTCTTGCCAAATAAGTTCAGGGTATTCAAATCTTGGACTAGTCCTGCAAGGTATAAAGAATAAAAA
TCCCAGTGAGATACTTGGAAACCACAGTTTATTATTATTTATCTGGGCAATTATTGTGTGTGTGAGGATGGAAGG
GTAGGGAATAATCGAACATCTAAAGCCTTGAATAAGAGAATACTAATTGTTTTGGTATGATGATACTCAGAAATG
GAGATATTATAGGAAAAAGAAATCCTTTGGAATTTTAACTAAAATCACTGCATATGGGAAATTAAGAGATCCAGG
ACCATATTTGATAAGAGTTCCTAAAAATAATGTAATTATTAATGCTAAAGACTGCTCATGTATCTTGATCTAATT
ACTAAATAAATTACATATTTATTTACCTGATAAATATGTATCTAGTTCTACAAGGTCACATTTATGTGGAAGTCC
AAAGTCAAGTCCTTAGGGGATAATTTTGTTTTGGGCTCAGTTGTTCCCTGCTTCCTTTTTTTTTTTTTTTTTT
TTGAGATGGAGTCTCGCTCTGTTGCCCAGGCTGGAGTGCAGTGGTGCGATCTCAGCTCACTGCATCCTCTGCCTC
CCGGGTTCAAGCAATTCTCTGCCTCAGCCTCCCAAGTAGTTGGGATTACAGGCACCTGCCACCATGCCTGGCTAA
TTTTTTGTATTTTTAGTAGAGACGGGGGTTTCACTATGTTGGCTAGGCTGGTCTTGAACTCCTGAGCCTCGTGAG
TCCACCCGCCTTGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCGCACCTGGCCTTCCCTGCTTCCTCT
CTAGAATCCAATTAGGGATGTTTGTTACTACTCATATTGATTAAAACAGTTAACAAACTTTTTTCTTTTTAAAAT
GTGAGATCAGTGAACTCTGGTTTTAAGATAATCTGAAACAAGGTCCTTGGGAGTAATAAAATTGGTCACATTCTG
TAAAGCACATTCTGTTTAGGAATCAACTTATCTCAAATTGTAACTCGGGGCCTAACTATATGAGATGGCTGAAAA
AATACCACATCGTCTGTTTTCACTAGGTGATGCCAAAATATTTTGCTTTATGTATATTACAGTTCTTTTTAAAAC
ACTGGAAGACTCATGTTAAACTCTAATTGTGAAGGCAGAATCTCTGCTAATTTTTCAGATTAAAATTCTCTTTGA
AAAAAT

FIGURE 486

MAAAAGMLLLGLLQAGGSVLGQAMEKVTGGNLLSMLLIACAFTLSLVYLIRLAAGHLVQLPAGVKSPPYIFSPIP
FLGHAIAFGKSPIEFLENAYEKYGPVFSFTMVGKTFTYLLGSDAAALLFNSKNEDLNAEDVYSRLTTPVFGKGVA
YDVPNPVFLEQKKMLKSGLNIAHFKQHVSIIEKETKEYFESWGESGEKNVFEALSELIILTASHCLHGKEIRSQL
NEKVAQLYADLDGGFSHAAWLLPGWLPLPSFRRRDRAHREIKDIFYKAIQKRRQSQEKIDDILQTLLDATYKDGR
PLTDDEVAGMLIGLLLAGQHTSSTTSAWMGFFLARDKTLQKKCYLEQKTVCGENLPPLTYDQLKDLNLLDRCIKE
TLRLRPPIMIMMRMARTPQTVAGYTIPPGHQVCVSPTVNQRLKDSWVERLDFNPDRYLQDNPASGEKFAYVPFGA
GRHRCIGENFAYVQIKTIWSTMLRLYEFDLIDGYFPTVNYTTMIHTPENPVIRYKRRSK

FIGURE 487

ACCGCCGACGCAGACCCCTCTCTGCACGCCAGCCCGCCCGCACCCACC**ATG**GCCACAGTTCAGCAGCTGGAAGGA
AGATGGCGCCTGGTGGACAGCAAAGGCTTTGATGAATACATGAAGGAGCTAGGAGTGGGAATAGCTTTGCGAAAA
ATGGGCGCAATGGCCAAGCCAGATTGTATCATCACTTGTGATGGTAAAAACCTCACCATAAAAACTGAGAGCACT
TTGAAAACAACACAGTTTTCTTGTACCCTGGGAGAGAAGTTTGAAGAAACCACAGCTGATGGCAGAAAAACTCAG
ACTGTCTGCAACTTTACAGATGGTGCATTGGTTCAGCATCAGGAGTGGGATGGGAAGGAAAGCACAATAACAAGA
AAATTGAAAGATGGGAAATTAGTGGTGGAGTGTGTCATGAACAATGTCACCTGTACTCGGATCTATGAAAAAGTA
GAA**TAA**AAATTCCATCATCACTTTGGACAGGAGTTAATTAAGAGAATGACCAAGCTCAGTTCAATGAGCAAATCT
CCATACTGTTTCTTTCTTTTTTTTTTCATTACTGTGTTCAATTATCTTTATCATAAACATTTTACATGCAGCTAT
TTCAAAGTGTGTTGGATTAATTAGGATCATCCCTTTGGTTAATAAATAAATGTGTTTGTGCT

FIGURE 488

MATVQQLEGRWRLVDSKGFDEYMKELGVGIALRKMGAMAKPDCIITCDGKNLTIKTESTLKTTQFSCTLGEKFEE
TTADGRKTQTVCNFTDGALVQHQEWDGKESTITRKLKDGKLVVECVMNNVTCTRIYEKVE

FIGURE 489

TTTTTTTTTTTTTACCATATGCTTATGTTTATTGTACAGTCACAAGTTACATGTTGTAAATCAAGCAGAACACTG
TACCAGTTTTCACTAACTCAAATCAAGTTAGCAAATTACAAATTTTAGAACAGATTCATTTTCTGTCTCACCCAA
TGTGGGTGACCACAAAGATATTTACTTTCTATGTTATTAGGTAGCAAATTAATTTGATATACTACACAGCTTCCA
AGTTACCTTAGGATATTTCAAAGTGTTTCAAAACTGGTAAAGAATAATTCATTTCCAGCCTGAAATACAATGCAG
AATGGACCATTTAGGGGTAAATAACCTCACTTAATCACTCTTTCCTGGCTAACAAAAATAATACCAAATATTTGG
GTTATAATTAGGGCTTACTAAAATTAATGGXCCACTTTGGAAATTATCCAGGATTGGGXTACATTGGGTAAAATG
GCCCCTGGGGGACCATTGGCXAAAAAC

FIGURE 490

TGGCCGAAGCAGGGGGACAGCAAGGGACGCTCAGGCGGGGACC**ATG**GCGGACGGCGGCTCGGAGCGGGCTGACGG
GCGCATCGTCAAGATGGAGGTGGACTACAGCGCCACGGTGGATCAGCGCCTACCCGAGTGTGCGAAGCTAGCCAA
GGAAGGAAGACTTCAAGAAGTCATTGAAACCCTTCTCTCTCTGGAAAAGCAGACTCGTACTGCTTCCGATATGGT
ATCGACATCCCGTATCTTAGTTGCAGTAGTGAAGATGTGCTATGAGGCTAAAGAATGGGATTTACTTAATGAAAA
TATTATGCTTTTGTCCAAAAGGCGGAGTCAGTTAAAACAAGCTGTTGCCAAAATGGTTCAACAGTGCTGTACTTA
TGTTGAGGAAATCACAGACCTTCCTATCAAACTTCGATTAATTGATACTCTACGAATGGTTACCGAAGGCAAGAT
TTATGTTGAAATTGAGCGTGCGCGACTGACTAAAACATTAGCAACTATAAAAGAACAAAATGGTGATGTGAAAGA
GGCAGCCTCCATTTTACAGGAGTTACAGGTGGAAACCTACGGGTCAATGGAAAAGAAAGAGCGAGTGGAATTTAT
TTTGGAGCAAATGAGGCTCTGCCTAGCTGTGAAGGATTACATTCGAACACAAATCATCAGCAAGAAAATTAACAC
CAAATTTTTCCAGGAAGAAAATACAGAGAAATTAAAGTTGAAGTACTATAATTTAATGATTCAGCTGGATCAACA
TGAGGGATCCTATTTGTCTATTTGTAAGCACTACAGAGCAATATATGATACTCCCTGTATACAGGCAGAAAGTGA
AAAATGGCAGCAGGCTCTGAAGAGTGTTGTACTCTATGTTATCCTGGCTCCTTTTGACAATGAACAGTCAGATTT
GGTTCACCGAATAAGTGGTGACAAGAAGTTAGAAGAAATTCCCAAATACAAGGATCTTTTAAAGCTTTTTACCAC
AATGGAGTTGATGCGTTGGTCCACACTTGTTGAGGACTATGGAATGGAATTAAGAAAAGGTTCCCTTGAGAGTCC
TGCAACGGATGTTTTTGGTTCTACAGAGGAAGGTGAAAAAAGGTGGAAAGACTTGAAGAACAGAGTTGTTGAACA
TAATATTAGAATAATGGCCAAGTATTATACTCGGATAACAATGAAAAGGATGGCACAGCTTCTGGATCTATCTGT
TGATGAGTCCGAAGCCTTTCTCTCAAATCTAGTAGTTAACAAGACCATCTTTGCTAAAGTAGACAGATTAGCAGG
AATTATCAACTTCCAGAGACCCAAGGATCCAAATAATTTATTAAATGACTGGTCTCAGAAACTGAACTCATTAAT
GTCTCTGGTTAACAAAACTACGCATCTCATAGCCAAAGAGGAGATGATACATAATCTACAA**TAA**GGGTCTTAGTG
CTTTAGAAAAAAGTTAAAATTGGAAGTCATTAAAAAAAGACTGTTATAATGGTGTATATGTTGGGGTTTTTTTTC
TAAGCTTCTTTGTCTTAAATTTTAAAATAGTGAATATGTTTGAGACTCCCTTTGACCTTTCAGTTCCCCAAGTTC
ATTGTTAACTTTGCATTTGCAATTGGTGCAAAAATACAGATTTCTGTCGTCTGAATACACAAAAAGTTGTGTCAT
AACTTACCCAGATATGTTTTTCTATCATTTGAAACCTTTTTAGCTACTGTTTGTTTTCATTCAACTAACAAACAT
ATTCCAATAATAAAAGCAGTATATACATATTTCCTTTCTACAGTTACCTCTGATTCTCAACATTTTGTGGGGTAG
TGATTTGGCAAGTGTTTTTTAAATAAAACAAATCTCATTGTAAAGTTATCAGTCATTTAGTAGAATAGAAAAGCA
ACATAGAGCATACAAGAACATTTGGGATAGAGTTGTGATTTGTGAAGAATTTGTACTTTGATATTGTGGCGGAAA
GTCTAGACTGAGTGTGTATGCTGGTAAACTGTAGACTTTTTTTTTTTTTTTGAGTCCGGCTGGTTCCAATCACA
GTAGCTTGATTGCTTTCAGCCCTCATCCTCTCACTTGATCAGTTGTTCAACAGAATCAGCTGACATAATTGACAC
AGTTTATTGGGTGTTAAGTCCGCTCTATAGGGATAGTGACTACTTTTTTTTTTTTTTTTTTTTGCTCTTCTTC
CTCTCCCCTTTCTTTATATGGGTTTAAATTTAACATAAAGTTGTTTTTATAAGGCTTATTTGTGGCTTTAACTTG
TAAGTCTGATTACATCATTATTGTTCCAAATTCATTATCTCTGTAGGAACTTTTAGTTCCATTATATGAACACTG
GATAACCTAATTTTTTTTAATGCTTTAAAAAAATGGCAAAAAGACGTCAGGCCACCCTCATAGTAAGTGGTGTAG
TATTAAAATATTTTCACGGAATTAAAAGTAGCTTGCTGTCAAAGAAACACCTGAGATGAATTGGTGTGAACGAAT
TTTGCAAGTTTAATTTGATTTATTTCAGAGAAAATAGAAAAAACAATGTTAGAAGGTTATTTAAAATGATACTTA
AATAAAGAAAGTGTGAGGTCTACTTTAAAAAAATTCAAATGAAGAGAAAAAGAAAAACAGCATTCTAGAAATGGC
ATTTCTCCTAATTAATTTTCCACTTAATGGAAGATTATCAATTGTCCTATTTTATGATCCCAGGACTGAAGACAG
TTGTGGGATATCTGTCATATTTATCCTGTGAGTCATTGTGAATAATGACATACAGTACTGAAGTAATCTGATTTT
ATTCTTTGGAAATTCAATGCATTGGTCACACTAATAACATCAACATCTGCTATCACTTATCTTTTTAAAACTAAC
CAAAAAAGGCTGGGATTACAGGCATGAGCCACTGCACCCAACTCCTCTTTCGTCTTTCTTTAACACACACTAGGC
TCTTTGTGTATTATGATTCAGTGCTATTTGTAACTGTGTCCCAGTGACCAAATTGCACTCGACTCGATCAGCTGT
TCATCCATTTCGTGTTTTTTCCTGTCAAACATTAATCCAGCAAATATATGAGGTATTTACCAATTTATTTTCTTA
GTATTACAAAATAATTCATTAGCATAAAGTACAATAGTGAAATATTTGAGTTGTTCGGAACCTCAATTAATCCTG
TTTTACATTTCAGACCTAAAGCTGGCAATCAGGAGAAGAAGCACTTTGTTTTAAATGTGGAGAAGATAACACTTG
ATTCCATTTCATTGTCATTAGTGTATTAACCAGCAGGAGAGGTGATGAGCCATTTTTCAAATGAAATACCTTTTA
TTTCCATATAATTTTTTTATTTTAGAGTTCAATAGCTGTTTCTATGATTATCCTCAATTTCCATATGTTACTGAA
TCTGAAAAACATCTTTAAAATTCAAACAGTTCCATTTTCTCTCTTGTAAGTGTTAAATGTGATAAAAGTACATAT
TTTAAATTGTTTTCAGCTCTTGGATATAGCAGCAATAAAAACACTAATTTGTGGGTATTTAAGAAAACCTGGAGA
ATAAACTCATACTTTAAAAGATC

FIGURE 491

MADGGSERADGRIVKMEVDYSATVDQRLPECAKLAKEGRLQEVIETLLSLEKQTRTASDMVSTSRILVAVVKMCY
EAKEWDLLNENIMLLSKRRSQLKQAVAKMVQQCCTYVEEITDLPIKLRLIDTLRMVTEGKIYVEIERARLTKTLA
TIKEQNGDVKEAASILQELQVETYGSMEKKERVEFILEQMRLCLAVKDYIRTQIISKKINTKFFQEENTEKLKLK
YYNLMIQLDQHEGSYLSICKHYRAIYDTPCIQAESEKWQQALKSVVLYVILAPFDNEQSDLVHRISGDKKLEEIP
KYKDLLKLFTTMELMRWSTLVEDYGMELRKGSLESPATDVFGSTEEGEKRWKDLKNRVVEHNIRIMAKYYTRITM
KRMAQLLDLSVDESEAFLSNLVVNKTIFAKVDRLAGIINFQRPKDPNNLLNDWSQKLNSLMSLVNKTTHLIAKEE
MIHNLQ

FIGURE 492

TTGGTCTAAGACATGGGCTGACAAACTTTTTCCATAAAGGGCCAGAAAGTAAATATTTCAGGCTTTGTGGGATAT
CTATTTATGATTTATTTTACTCCTAGTATTATTTCATCTTTTATACAGGTTATTAAGGTTAGTATTGCTGCATAA
CAAATTACTCCAAAATTTAATCATTTATATTCAAGAAGAGTTCAGCTGCTAGGTTCTTATTTTGGGACTCTCATG
ATGCTGAGGTCAAG**ATG**CCAGCTGGAGGCCAGGCGCCGCAGCTCACGCCTGTAATCCCAGCGTTTTGGGAGGCCA
GGGGCCTCCCAAATTCAAAAGGAAGAGACAAAGTCCACATCTGTCAATGCGAAGAATGGAAAGGTCACATATCAT
ATGTGGAGCGGGACATAACAACTTCGGAAATTAAATCTCTTCCCCAGGTCAGTGTGCGGGCCTTCCACGCTGCCA
GCGGAACACTGGAATGGCGGAAGGGGAACGGGTACGGCAGGGGGAAAGGCTGGGGGTGGGGTCGGGTCGAGTCGA
GGGAAGCTGGCCCGAGTGTGGACAGAGATGGCGGTCTGCGCGTCTGTTGTTCCCAGCGCTCTGCGAAGCCTGAAA
AGGAGGAGCAACCTGTCCAGAATCCCCGCAGGTCCGTGAAAGACAGGAAAAGGAGGGGAAATCTCGACATGGAAA
AACTCTACAGTGAAAATGAAGGAATGGCTTCAAACCAAGGAAAGATGGAAAATGAAGAACAGCCACAAGACGAGA
GAAAGCCAGAAGTAACTTGTACTCTGGAAGACAAGAAGTTAGAAAACGAGGGAAAGACAGAAAACAAGGGCAAAA
CAGGAGATGAGGAAATGTTAAAGGATAAAGGAAAGCCAGAGAGTGAGGGAGAGGCAAAAGAAGGAAAGTCAGAGA
GGGAGGGAGAGTCAGAGATGGAGGGAGGATCAGAGAGAGAGGGAAAACCAGAGATAGAGGGAAAGCCAGAGAGTG
AAGGAGAGCCAGGGAGTGAAACAAGGGCTGCAGGAAAGCGCCCAGCTGAGGATGATGTACCCAGGAAAGCCAAAA
GAAAAACTAATAAGGGGCTGGCTCATTACCTCAAGGAGTATAAAGAGGCCATACATGATATGAATTTCAGCAATG
AGGACATGATAAGAGAATTTGACAATATGGCTAAGGTGCAGGATGAGAAGAGAAAAAGCAAACAGAAATTGGGGG
CGTTTTTGTGGATGCAAAGAAATTTACAGGACCCCTTCTACCCTAGAGGTCCAAGGGAATTCAGGGGTGGCTGCA
GGGCCCCACGAAGGGACATTGAAGACATTCCTTATGTG**TAG**TGTCCCTGGCAGGCATTTACCAGGCCATGTGCTT
TAACGTTACGGTAATACTTTACTTTAGGCATCCCTCCTGTTGCTAGCAGCCTTTTGACCTATCTGCAATGCAGTG
TTCTCAGTAGGAAATGTTCATCTGTTACATGGAAAAAATGTTGATGGTGCATTGTAAAATTAAAAAACACAACTT
GCAGAACCAAAAAAAA

FIGURE 493

MPAGGQAPQLTPVIPAFWEARGLPNSKGRDKVHICQCEEWKGHISYVERDITTSEIKSLPQVSVRAFHAASGTLE
WRKGNGYGRGKGWGWGRVESREAGPSVDRDGGLRVCCSQRSAKPEKEEQPVQNPRRSVKDRKRRGNLDMEKLYSE
NEGMASNQGKMENEEQPQDERKPEVTCTLEDKKLENEGKTENKGKTGDEEMLKDKGKPESEGEAKEGKSEREGES
EMEGGSEREGKPEIEGKPESEGEPGSETRAAGKRPAEDDVPRKAKRKTNKGLAHYLKEYKEAIHDMNFSNEDMIR
EFDNMAKVQDEKRKSKQKLGAFLWMQRNLQDPFYPRGPREFRGGCRAPRRDIEDIPYV

FIGURE 494

ATAAATATTGGAAATGACAACTTTAACAATTCTATATGTACACAGGACACTGAAAACATAAAATCATGAACAAGG
CCAAAAAATAACGTTGCACATTAACCCTTTAGTTATTACTTTCTATTTTCCAGTCCCAGCATCATACCTGCTAAT
TACTCAGATCACAAGCCTCAAGGATTAAGTGTTTTGAATGTATTTCAGTTTCATACTTTAACAATGCTTAAAGAC
TATTGGTTGTATTCTGATCAAATGGTTCTCCTTCCCATATTTCCCTTTCTCAATAGATCTTANACAAAAAGGTGA
GCAGGGAAAACTGTGATTACAGGATCCAACATGACAGGTATACCCAATGATTCATTTAAGGGTGGCATAAAGTTA
TATAGAAAAGACCTACAGGACGGAAGACAAGTACATCAACATGTAGTGAAATTAAGCAGTTCACCCACTGCGTGC
TTACATGGCTCCTATATCTCTTCGGGAAGAAGCCAGAGCCGTAGAAGAAGTCAGGGCAAACCAGAACTGTTGAGG
AGTATGGGTGGGGGGGCAGAAGGAAGGGACTGGGGGAAAA

FIGURE 495A

GTACTCTCGCGGTATTTGTCCCGACTCTCGCGGGGTTTAGCGTGGCATTGGGAGGCCCGGCCTGGGGGAGGAGAC
GGCGTTCCGTTAGCGGCGTTGGGGTTTGGCTGCAGTGGCAGTGCTTTCTCTTCTGCTCACGGGGACCCGCTCAGG
CTGGAGGCCAGCCAGCTCTTGCCGCCACCTCGGTCGCG**ATG**GGGGCGCAGGACCGGCCGCAGTGCCACTTCGACA
TCGAGATCAACCGGGAGCCGGTTGGTCGCATTATGTTTCAGCTCTTCTCAGACATATGTCCAAAAACATGCAAAA
ACTTCCTTTGCTTGTGCTCAGGAGAGAAAGGCCTTGGGAAAACAACTGGGAAGAAGTTATGTTATAAAGGTTCTA
CGTTCCATCGTGTGGTTAAAAACTTTATGATTCAGGGTGGGGACTTCAGTGAAGGTAATGGAAAAGGTGGAGAAT
CAATTTATGGTGGATATTTTAAAGATGAAAACTTTATTCTCAAACATGACAGAGCGTTCCTTTTATCAATGGCAA
ATCGAGGGAAACATACCAATGGTTCCCAGTTTTTCATTACCACAAAGCCTGCTCCACACCTGGATGGGGTGCATG
TAGTCTTTGGACTGGTTATTTCTGGTTTTGAAGTAATCGAACAAATTGAAAATCTGAAGACCGATGCTGCAAGCA
GACCATATGCAGATGTGCGAGTTATTGACTGTGGAGTACTTGCCACAAAATCAATAAAAGATGTTTTTGAGAAAA
AAAGGAAGAAACCAACTCATTCAGAAGGCTCGGATTCCTCTTCCAATTCCTCCTCTTCTTCAGAATCATCTTCAG
AAAGTGAACTTGAACATGAGAGAAGCAGAAGGAGGAAACATAAGAGGAGGCCAAAAGTTAAACGTTCTAAAAAGA
GGCGAAAGGAAGCAAGCAGTTCAGAAGAGCCAAGGAATAAACATGCAATGAACCCAAAAGGTCACTCTGAGAGGA
GTGATACCAATGAAAAAAGGTCAGTTGATTCCAGTGCTAAAAGGGAAAAACCTGTGGTCCGCCCAGAAGAGATTC
CTCCAGTGCCTGAGAACCGATTTTTACTGAGAAGAGATATGCCTGTTGTTACTGCAGAACCTGAACCGAAGATTC
CTGATGTTGCACCCATTGTAAGTGATCAGAAACCATCTGTATCAAAGTCTGGACGGAAGATTAAAGGAAGGGGCA
CAATTCGCTATCACACACCTCCAAGATCAAGATCCTGTTCTGAGTCAGATGATGATGACAGCAGTGAAACTCCTC
CTCACTGGAAAGAGGAAATGCAGAGATTAAGAGCATATAGACCACCTAGTGGAGAAAAATGGAGTAAAGGAGATA
AGTTAAGTGACCCCTGTTCAAGCCGATGGGATGAAAGAAGCTTGTCTCAGAGATCCAGATCATGGTCCTATAATG
GATATTATTCAGACCTTAGTACAGCAAGACACTCTGGCCACCATAAAAAACGCAGAAAAGAAAAAAAGGTTAAGC
ATAAAAAGAAAGGGAAAAAGCAGAAACACTGCAGAAGACACAAACAAACAAAGAAGAGAAGGATTCTTATACCGT
CTGACATAGAATCCTCAAAATCTTCCACTCGAAGAATGAAATCCTCTTGTGATAGAGAAAGGAGTTCTCGTTCTT
CCTCATTGTCATCTCATCACTCATCAAAGAGAGACTGGTCTAAATCTGATAAGGATGTCCAGAGCTCTTTAACCC
ATTCCAGCAGAGACTCATACAGATCAAAATCTCACTCACAGTCTTATTCTAGAGGAAGCTCAAGATCAAGGACTG
CGTCAAAGTCCTCATCACATTCTCGAAGTAGATCAAAGTCCAGATCTAGTTCCAAGTCTGGGCACCGAAAGAGAG
CATCAAAATCACCAAGAAAAACAGCTTCTCAGTTAAGTGAAAATAAACCAGTTAAAACAGAACCTTTAAGAGCAA
CCATGGCACAAAATGAAAATGTAGTAGTACAACCAGTTGTAGCAGAAAATATTCCTGTAATACCACTGAGTGACA
GTCCCCCCCCTTCAAGATGGAAGCCTGGACAGAAACCTTGGAAGCCCTCTTATGAGCGAATTCAGGAAATGAAAG
CTAAAACAACCCATTTGCTACCCATCCAAAGCACTTACAGTTTAGCAAATATTAAAGAGACTGGTAGCTCATCAT
CCTACCATAAAAGAGAAAAAAATTCGGAAAGTGATCAGAGCACTTATTCAAAATACAGTGATAGAAGTTCAGAAA
GCTCACCAAGGTCAAGGAGCAGATCTTCTAGGAGTAGATCTTATTCCAGATCATATACAAGATCACGTAGTCTAG
CTAGTTCACATTCAAGGTCTAGGTCTCCATCATCTAGATCTCATTCACGAAATAAATACAGTGATCATTCACAGT
GTAGTAGATCATCTTCATATACTTCTATTAGCAGTGATGATGGAAGGCGAGCTAAGAGGAGACTTAGATCCAGTG
GGAAAAAAAATAGCGTTTCACATAAAAAGCATAGCAGCAGCTCTGAAAAGACACTTCACAGTAAATATGTCAAAG
GTAGAGACAGGTCTTCATGTGTGAGAAAGTATAGCGAGAGCAGATCATCTTTAGATTATTCTTCAGACAGTGAGC
AGTCAAGTGTTCAGGCCACACAGTCAGCCCAGGAAAAAGAGAAGCAGGGCCAAATGGAAAGAACACATAATAAAC
AAGAAAAAAACAGAGGTGAAGAAAAATCCAAGTCTGAACGGGAATGCCCTCATTCAAAAAAAAGAACTTTGAAAG
AGAATCTTTCTGATCACCTTAGAAATGGCAGTAAGCCCAAAAGGAAGAATTATGCTGGTAGTAAATGGGACTCTG
AGTCAAATTCAGAACGAGATGTCACTAAAAACAGTAAAAATGACTCCCATCCATCCTCTGACAAGGAAGAAGGTG
AGGCCACATCCGATTCTGAATCAGAGGTTAGTGAAATTCACATCAAAGTCAAACCCACAACCAAGTCGTCCACAA
ATACTTCACTGCCTGATGATAATGGTGCTTGGAAATCAAGCAAACAGCGCACATCAACTTCTGACTCTGAGGGGT
CCTGTTCCAATTCGGAAAACAATAGGGGAAAGCCACAAAAGCACAAACATGGGTCAAAGGAAAATCTTAAAAGAG
AACACACCAAAAAAGTGAAAGAGAAATTGAAAGGGAAAAAAGACAAAAAGCATAAGGCTCCAAAACGAAAGCAAG
CATTTCACTGGCAGCCTCCACTAGAATTTGGTGAAGAGGAGGAGGAGGAGATTGATGACAAGCAAGTTACTCAGG
AATCAAAAGAGAAAAAAGTTTCTGAAAACAATGAAACCATAAAAGATAATATTCTAAAAACTGAGAAATCCAGTG
AAGAGGACCTTTCAGGTAAACATGATACAGTGACTGTTTCATCAGATCTTGATCAGTTTACTAAAGATGATAGTA
AACTCAGTATTTCTCCCACAGCTTTAAATACTGAGGAAAATGTGGCCTGTTTACAAAACATTCAGCACGTTGAAG
AAAGTGTTCCCAATGGAGTGGAAGATGTGCTTCAAACAGATGACAACATGGAGATCTGCACTCCTGATAGGAGTT

FIGURE 495B

CCCCAGCAAAAGTAGAGGAGACTTCCCCTCTAGGAAATGCACGGCTTGATACCCCAGATATAAACATTGTTTTGA
AGCAGGATATGGCAACGGAACATCCTCAAGCAGAGGTAGTAAAACAGGAAAGCAGCATGTCCGAAAGTAAAGTGT
TGGGTGAAGTGGGGAAACAGGACAGCAGCTCTGCTAGCTTGGCTAGTGCTGGAGAAAGTACCGGGAAGAAGGAGG
TGGCTGAGAAGAGCCAGATCAACCTCATTGATAAGAAATGGAAGCCCCTGCAAGGTGTGGGGAACCTGGCAGCAC
CTAATGCTGCCACATCCAGTGCTGTGGAAGTTAAGGTGTTGACCACTGTGCCTGAAATGAAACCACAAGGCTTGA
GAATAGAAATTAAAAGCAAAAATAAAGTTCGGCCTGGGTCTCTCTTTGATGAAGTAAGAAAGACAGCACGCTTAA
ACCGTAGACCAAGAAATCAGGAGAGTTCAAGTGATGAGCAGACGCCTAGTCGGGATGATGATAGCCAGTCCAGGA
GTCCAAGTAGATCTCGAAGTAAATCTGAAACCAAATCAAGACACAGAACAAGGTCTGTCTCCTATAGTCACTCAA
GAAGTCGATCGAGAAGTTCCACATCATCTTATCGATCAAGAAGCTACTCTAGAAGTCGGAGCAGAGGATGGTACA
GCAGAGGCCGAACCAGAAGCCGGAGCAGTTCCTACCGGAGTTACAAAAGTCACAGGACGTCCAGCAGGAGCAGAT
CCAGGAGCAGCTCATATGATCCCCACAGTCGATCCAGGTCCTACACCTACGATAGCTACTATAGCAGGAGTCGGA
GTCGAAGTAGAAGCCAGAGAAGTGACAGTTACCACCGAGGCAGAAGTTATAATCGGCGGTCCAGGAGTTGTAGAT
CTTATGGCTCTGACAGTGAAAGTGACCGAAGTTACTCTCATCACCGGAGCCCCAGTGAGAGCAGCAGATACAGT**T**
GAAAACGTCCGGATACAAATTATATCTTATTTGTAAATATCTGGCAACTTAGCTTAAGAAATGTAATGACAGTCT
GTTGTTCTATTTCAATATCAGAGGTGAATTTCAAAAATAGACACTTCTTAATTGTTACTGGTTCATTTACATGTG
GGGAGAAGAATTTAAAATACAGATATGTCTCCTAAAAATATTTTTATGCCACATTTTACAGTAGCCAACTATGGA
AATGAATTTCATTTTCTTGAATCAAGAAATCGTGAAATTTATCTATGTATAATTTGCAATATTATTTTAAGTCTA
TTTCACTCTATCTTACGTATCCCTTAGAATACAGATTCTTTTTGCCTGTTTTTCCAGTTTTAGCATATATGCTGC
CAAGCATAGAACTGTGAAGGAGAACTGTTAAAGGCGGCCAAATATTTATATACTGATTACATAGAGTCTTGTACA
TATGTGCTCTAAAAACAAACCACCCAGAATTGATACTGTTGGTAACCAGGAGTATAAGGCAGTGGCTCTGGGGTT
CTTAATTCATTCCTAACTTCTTTGATACTTCACAGGATTAGGAAAGTGGTCATCATACATCCCACACAGTCTGTA
TTACTTCAGGCTTGTGGGCAAGGTTAGGAAGAATCAATCAGCCTTAACTATAAATACCTGCACTGTCTCTGAGGA
CTTACTATTTTATGTTCTTTTTAATCAATACCGATCAGAAGTTTAGGTTATAAAAACAATTCTACTTCATGCTTT
GGTGCTTGGTAATTTTTGGTGCGTCTTTAAGCATTACTCTTATATATCATATATTAAAATACCATAAAAATGAAA
TTCAGACAAAATCACTGGCACCAAAAATGGTTTATTCTGAGCTGTCTTCACTTTGACTATTTGGGGGGCTTCTCT
CAAGTACAGATGTGGGTTGGGGTCCCCTGGAGCAGGCAGGATTGGCAGTAAGAGATATTGGCCACTCAAGTCTAC
TGTGTGTGTGTGCCTCTGGAAGAGTGAAGAATGGACTTCAAAAGTAACATCAAAAATCTAACTGCCACCATCCTG
GAGACATTTTGCAGGGCTTTCCTTTCAAGTCTTTCAAGTACAGGATATTACCACAACAGCAGCTGAACTGTTGTA
ACCAGCATGTTTTTCCTATTTCCACTGTGACCTGCAGCTGACTCAAAGCCTTGCGTGACCTGACCCAGGTGCAAG
AGACAGGGGAAGAGGGATAGAGGGTATAGCATAAATTACATATTTTCATGGCTTTGGGTGGTTCCTCCAAAAATA
ATTGGACCTGTAAAAACTAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGGTTTTTTTTTTTAATCTTTAC
TTTGAATTTGTTCCCCAAGTGTACTTAATCACCTTAGTGCCAGTTTAATCCAGTTATGCAGAAGAAATTCATATT
GGTTGCCTGATGTAGAGCTCAGCACCACCCTACCACAGGCCTTGTCTGGTGTATTTGGGAAGTGGAAAAGAGCCC
TCAGTTGGAGGGAGCTGACAACCCTTGGTGGAGGGAGGGTGCCCTTGAATGTATTAAAACTATCACCCAAAGAAG
GTATGAAAACAGGGTAAGGTGGTCAGTTGTTTGCCAGGTCAATAGACAGAAAGTACATTAGAAAACAGGACTTAG
GCCAAACAAACAATACTGGATACTGAATACAAAACAGTATGATTTATATTAAAGGTTTCCAAAGGTTGCCTGCAA
AGGAGAATATTACTACTAGTCAGCAGGAAAAAAATGCATTCAGAACCCAAGCAGAAACTGCCAAATGTAATTAGG
TTAAGAAAAGTTACCCTTGGGCAGTGTATTAGTTTTCTATTGCTGTGTGACAAATTACCCCAAATTTAGCAGTTT
AAAAAACAATACCCATAGCAGTTCTGTAGCTCATGAGTCTGGCACAGTGTGGCTGGATTCTCTGCTCAGGGTCTT
AAAGGCTGAAATAAGGGTTGGCAGGACAACATTCCTTCATGGAGGCTCTGGGGAAGAATCTGCTTCTAAGTTCAT
TCAGGTTGTTGGCGGAATTCAGTTCTTTGCTGGCTCTCAGCTGGAGGCCCCTCTCTCACCTCAAGGCTGCCTGCA
TTCCTTCTTATGTGGTCCCCTCCAGCTTCAAACCAGCCTTCCTGCTCTTTCTCATGCTTCATATCTCTCTCCCGT
CCTCCTGTTTTAGGGGCATATGATTAGCTCAAGCCCACAGATATATTTTAAGGTTGATTGTGCGATAGAACATAA
TTGCAGGAGTACTGTCTCATCTCATCATATTCACGGGTTCTGGAGATTAGCTCATTGAAAGTGGGAGGGGCATTT
TCAAATTCTGCCTACCACAGGCAATAACTGCCCATCTCAGCTGTAGGTGGAATTTTTACCCAGAAAAGATAGGCC
CTAGAAGCCTCATTTCTTTTCTCCATGGAAAAGGACAGCCCTCTGCTGCAGCGTTCAACTTGTGTGTTTACTGAC
AGAGTGAACTACAGAAATAGCTTTTCTTCCTAAAGGGGATTGTTCTACATTTTGAAGTTATTTTTTAATAAAATT
GAATTATGTTGT

FIGURE 496

MGAQDRPQCHFDIEINREPVGRIMFQLFSDICPKTCKNFLCLCSGEKGLGKTTGKKLCYKGSTFHRVVKNFMIQG
GDFSEGNGKGGESIYGGYFKDENFILKHDRAFLLSMANRGKHTNGSQFFITTKPAPHLDGVHVVFGLVISGFEVI
EQIENLKTDAASRPYADVRVIDCGVLATKSIKDVFEKKRKKPTHSEGSDSSSNSSSSSESSSESELEHERSRRRK
HKRRPKVKRSKKRRKEASSSEEPRNKHAMNPKGHSERSDTNEKRSVDSSAKREKPVVRPEEIPPVPENRFLLRRD
MPVVTAEPEPKIPDVAPIVSDQKPSVSKSGRKIKGRGTIRYHTPPRSRSCSESDDDDSSETPPHWKEEMQRLRAY
RPPSGEKWSKGDKLSDPCSSRWDERSLSQRSRSWSYNGYYSDLSTARHSGHHKKRRKEKKVKHKKKGKKQKHCRR
HKQTKKRRILIPSDIESSKSSTRRMKSSCDRERSSRSSSLSSHHSSKRDWSKSDKDVQSSLTHSSRDSYRSKSHS
QSYSRGSSRSRTASKSSSHSRSRSKSRSSSKSGHRKRASKSPRKTASQLSENKPVKTEPLRATMAQNENVVVQPV
VAENIPVIPLSDSPPPSRWKPGQKPWKPSYERIQEMKAKTTHLLPIQSTYSLANIKETGSSSSYHKREKNSESDQ
STYSKYSDRSSESSPRSRSRSSRSRSYSRSYTRSRSLASSHSRSRSPSSRSHSRNKYSDHSQCSRSSSYTSISSD
DGRRAKRRLRSSGKKNSVSHKKHSSSSEKTLHSKYVKGRDRSSCVRKYSESRSSLDYSSDSEQSSVQATQSAQEK
EKQGQMERTHNKQEKNRGEEKSKSERECPHSKKRTLKENLSDHLRNGSKPKRKNYAGSKWDSESNSERDVTKNSK
NDSHPSSDKEEGEATSDSESEVSEIHIKVKPTTKSSTNTSLPDDNGAWKSSKQRTSTSDSEGSCSNSENNRGKPQ
KHKHGSKENLKREHTKKVKEKLKGKKDKKHKAPKRKQAFHWQPPLEFGEEEEEEIDDKQVTQESKEKKVSENNET
IKDNILKTEKSSEEDLSGKHDTVTVSSDLDQFTKDDSKLSISPTALNTEENVACLQNIQHVEESVPNGVEDVLQT
DDNMEICTPDRSSPAKVEETSPLGNARLDTPDINIVLKQDMATEHPQAEVVKQESSMSESKVLGEVGKQDSSSAS
LASAGESTGKKEVAEKSQINLIDKKWKPLQGVGNLAAPNAATSSAVEVKVLTTVPEMKPQGLRIEIKSKNKVRPG
SLFDEVRKTARLNRRPRNQESSSDEQTPSRDDDSQSRSPSRSRSKSETKSRHRTRSVSYSHSRSRSRSSTSSYRS
RSYSRSRSRGWYSRGRTRSRSSSYRSYKSHRTSSRSRSRSSSYDPHSRSRSYTYDSYYSRSRSRSRSQRSDSYHR
GRSYNRRSRSCRSYGSDSESDRSYSHHRSPSESSRYS

FIGURE 497A

CGGCAGGGTTGGAAAATGATGGAAGAGGCGGAGGTGGAGGCGACCGAGTGCTGAGAGGAACCTGCGGAATCGGCC
GAG**ATG**GGGTCTGGCGCGCGCTTTCCCTCGGGGACCCTTCGTGTCCGGTGGTTGCTGTTGCTTGGCCTGGTGGGC
CCAGTCCTCGGTGCGGCGCGGCCAGGCTTTCAACAGACCTCACATCTTTCTTCTTATGAAATTATAACTCCTTGG
AGATTAACTAGAGAAAGAAGAGAAGCCCCTAGGCCCTATTCAAAACAAGTATCTTATGTTATTCAGGCTGAAGGA
AAAGAGCATATTATTCACTTGGAAAGGAACAAAGACCTTTTGCCTGAAGATTTTGTGGTTTATACTTACAACAAG
GAAGGGACTTTAATCACTGACCATCCCAATATACAGAATCATTGTCATTATCGGGGCTATGTGGAGGGAGTTCAT
AATTCATCCATTGCTCTTAGCGACTGTTTTGGACTCAGAGGATTGCTGCATTTAGAGAATGCGAGTTATGGGATT
GAACCCCTGCAGAACAGCTCTCATTTTGAGCACATCATTTATCGAATGGATGATGTCTACAAAGAGCCTCTGAAA
TGTGGAGTTTCCAACAAGGATATAGAGAAAGAAACTGCAAAGGATGAAGAGGAAGAGCCTCCCAGCATGACTCAG
CTACTTCGAAGAAGAAGAGCTGTCTTGCCACAGACCCGGTATGTGGAGCTGTTCATTGTCGTAGACAAGGAAAGG
TATGACATGATGGGAAGAAATCAGACTGCTGTGAGAGAAGAGATGATTCTCCTGGCAAACTACTTGGATAGTATG
TATATTATGTTAAATATTCGAATTGTGCTAGTTGGACTGGAGATTTGGACCAATGGAAACCTGATCAACATAGTT
GGGGGTGCTGGTGATGTGCTGGGGAACTTCGTGCAGTGGCGGGAAAAGTTTCTTATCACACGTCGGAGACATGAC
AGTGCACAGCTAGTTCTAAAGAAAGGTTTTGGTGGAACTGCAGGAATGGCATTTGTGGGAACAGTGTGTTCAAGG
AGCCACGCAGGCGGGATTAATGTGTTTGGACAAATCACTGTGGAGACATTTGCTTCCATTGTTGCTCATGAATTG
GGTCATAATCTTGGAATGAATCACGATGATGGGAGAGATTGTTCCTGTGGAGCAAAGAGCTGCATCATGAATTCA
GGAGCATCGGGTTCCAGAAACTTTAGCAGTTGCAGTGCAGAGGACTTTGAGAAGTTAACTTTAAATAAAGGAGGA
AACTGCCTTCTTAATATTCCAAAGCCTGATGAAGCCTATAGTGCTCCCTCCTGTGGTAATAAGTTGGTGGACGCT
GGGGAAGAGTGTGACTGTGGTACTCCAAAGGAATGTGAATTGGACCCTTGCTGCGAAGGAAGTACCTGTAAGCTT
AAATCATTTGCTGAGTGTGCATATGGTGACTGTTGTAAAGACTGTCGGTTCCTTCCAGGAGGTACTTTATGCCGA
GGAAAAACCAGTGAGTGTGATGTTCCAGAGTACTGCAATGGTTCTTCTCAGTTCTGTCAGCCAGATGTTTTTATT
CAGAATGGATATCCTTGCCAGAATAACAAAGCCTATTGCTACAACGGCATGTGCCAGTATTATGATGCTCAATGT
CAAGTCATCTTTGGCTCAAAAGCCAAGGCTGCCCCCAAAGATTGTTTCATTGAAGTGAATTCTAAAGGTGACAGA
TTTGGCAATTGTGGTTTCTCTGGCAATGAATACAAGAAGTGTGCCACTGGGAATGCTTTGTGTGGAAAGCTTCAG
TGTGAGAATGTACAAGAGATACCTGTATTTGGAATTGTGCCTGCTATTATTCAAACGCCTAGTCGAGGCACCAAA
TGTTGGGGTGTGGATTTCCAGCTAGGATCAGATGTTCCAGATCCTGGGATGGTTAACGAAGGCACAAAATGTGGT
GCTGGAAAGATCTGTAGAAACTTCCAGTGTGTAGATGCTTCTGTTCTGAATTATGACTGTGATGTTCAGAAAAAG
TGTCATGGACATGGGGTATGTAATAGCAATAAGAATTGTCACTGTGAAAATGGCTGGGCTCCCCCAAATTGTGAG
ACTAAAGGATACGGAGGAAGTGTGGACAGTGGACCTACATACAATGAAATGAATACTGCATTGAGGGACGGACTT
CTGGTCTTCTTCTTCCTAATTGTTCCCCTTATTGTCTGTGCTATTTTTATCTTCATCAAGAGGGATCAACTGTGG
AGAAGCTACTTCAGAAAGAAGAGATCACAAACATATGAGTCAGATGGCAAAAATCAAGCAAACCCTTCTAGACAG
CCGGGGAGTGTTCCTCGACATGTTTCTCCAGTGACACCTCCCAGAGAAGTTCCTATATATGCAAACAGATTTGCA
GTACCAACCTATGCAGCCAAGCAACCTCAGCAGTTCCCATCAAGGCCACCTCCACCACAACCGAAAGTATCATCT
CAGGGAAACTTAATTCCTGCCCGTCCTGCTCCTGCACCTCCTTTATATAGTTCCCTCACT**TGA**TTTTTTTAACCT
TCTTTTTGCAAATGTCTTCAGGGAACTGAGCTAATACTTTTTTTTTTTCTTGATGTTTTCTTGAAAAGCCTTTCT
GTTGCAACTATGAATGAAAACAAAACACCACAAAACAGACTTCACTAACACAGAAAAACAGAAACTGAGTGTGAG
AGTTGTGAAATACAAGGAAATGCAGTAAAGCCAGGGAATTTACAATAACATTTCCGTTTCCATCATTGAATAAGT
CTTATTCAGTCATCGGTGAGGTTAATGCACTAATCATGGATTTTTTGAACATGTTATTGCAGTGATTCTCAAATT
AACTGTATTGGTGTAAGATTTTTGTCATTAAGTGTTTAAGTGTTATTCTGAATTTTCTACCTTAGTTATCATTAA
TGTAGTTCCTCATTGAACATGTGATAATCTAATACCTGTGAAAACTGACTAATCAGCTGCCAATAATATCTAATA
TTTTTCATCATGCACGAATTAATAATCATCATACTCTAGAATCTTGTCTGTCACTCACTACATGAATAAGCAAAT
ATTGTCTTCAAAAGAATGCACAAGAACCACAATTAAGATGTCATATTATTTTGAAAGTACAAAATATACTAAAAG
AGTGTGTGTGTATTCACGCAGTTACTCGCTTCCATTTTTATGACCTTTCAACTATAGGTAATAACTCTTAGAGAA
ATTAATTTAATATTAGAATTTCTATTATGAATCATGTGAAAGCATGACATTCGTTCACAATAGCACTATTTTAAA
TAAATTATAAGCTTTAAGGTACGAAGTATTTAATAGATCTAATCAAATATGTTGATTCATGGCTATAATAAAGCA
GGAGCAATTATAAAATCTTCAATCAATTGAACTTTTACAAAACCACTTGAGAATTTCATGAGCACTTTAAAATCT
GAACTTTCAAAGCTTGCTATTAAATCATTTAGAATGTTTACATTTACTAAGGTGTGCTGGGTCATGTAAAATATT
AGACACTAATATTTTCATAGAAATTAGGCTGGAGAAAGAAGGAAGAAATGGTTTTCTTAAATACCTACAAAAAAG

FIGURE 497B

TTACTGTGGTATCTATGAGTTATCATCTTAGCTGTGTTAAAAATGAATTTTTACTATGGCAGATATGGTATGGAT
CGTAAAATTTTAAGCACTAAAAATTTTTTCATAACCTTTCATAATAAAGTTTAATAATAGGTTTATTAACTGAAT
TTCATTAGTTTTTTAAAAGTGTTTTTGGTTTGTGTATATATACATATACAAATACAACATTTACAATAAATAAAA
TACTTGAAATTCTCAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 498

MGSGARFPSGTLRVRWLLLLGLVGPVLGAARPGFQQTSHLSSYEIITPWRLTRERREAPRPYSKQVSYVIQAEGK
EHIIHLERNKDLLPEDFVVYTYNKEGTLITDHPNIQNHCHYRGYVEGVHNSSIALSDCFGLRGLLHLENASYGIE
PLQNSSHFEHIIYRMDDVYKEPLKCGVSNKDIEKETAKDEEEEPPSMTQLLRRRRAVLPQTRYVELFIVVDKERY
DMMGRNQTAVREEMILLANYLDSMYIMLNIRIVLVGLEIWTNGNLINIVGGAGDVLGNFVQWREKFLITRRRHDS
AQLVLKKGFGGTAGMAFVGTVCSRSHAGGINVFGQITVETFASIVAHELGHNLGMNHDDGRDCSCGAKSCIMNSG
ASGSRNFSSCSAEDFEKLTLNKGGNCLLNIPKPDEAYSAPSCGNKLVDAGEECDCGTPKECELDPCCEGSTCKLK
SFAECAYGDCCKDCRFLPGGTLCRGKTSECDVPEYCNGSSQFCQPDVFIQNGYPCQNNKAYCYNGMCQYYDAQCQ
VIFGSKAKAAPKDCFIEVNSKGDRFGNCGFSGNEYKKCATGNALCGKLQCENVQEIPVFGIVPAIIQTPSRGTKC
WGVDFQLGSDVPDPGMVNEGTKCGAGKICRNFQCVDASVLNYDCDVQKKCHGHGVCNSNKNCHCENGWAPPNCET
KGYGGSVDSGPTYNEMNTALRDGLLVFFFLIVPLIVCAIFIFIKRDQLWRSYFRKKRSQTYESDGKNQANPSRQP
GSVPRHVSPVTPPREVPIYANRFAVPTYAAKQPQQFPSRPPPPQPKVSSQGNLIPARPAPAPPLYSSLT

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FIGURE 499

CGTCCGTGACAAG**ATG**AAGCTCATCATCCTGGAGCACTATTCTCAGGCGAGCGAGTGGGCGGCTAAATACATCAG
GAACCGTATCATCCAGTTTAACCCAGGGCCAGAGAAGTACTTCACCCTGGGGCTCCCCACTGGGAGTACCCCACT
TGGCTGCTACAAGAAGCTGATTGAATACTATAAGAATGGGGACCTGTCCTTTAAATATGTGAAGACCTTCAACAT
GGATGAGTACGTGGGCCTTCCTCGAGACCACCCGGAGAGTTACCACTCCTTCATGTGGAACAACTTCTTCAAGCA
CATTGACATCCACCCAGAAAACACCCACATTCTGGATGGGAATGCAGTCGACCTACAGGCAGAATGTGATGCCTT
TGAAGAGAAGATCAAGGCTGCAGGTGGGATCGAGCTATTTGTTGGAGGCATCGGCCCTGATGGACACATTGCCTT
CAACGAGCCAGGCTCCAGTCTGGTGTCCAGGACCCGTGTGAAGACGCTGGCCATGGATACCATCCTGGCCAATGC
TAGGTTCTTCGATGGAGAACTCACCAAGGTGCCCACCATGGCCTTGACGGTGGGGGTGGGCACTGTCATGGATGC
TAGAGAGGTGATGATCCTTATCACAGGTGCTCACAAGGCATTTGCTCTGTACAAGGCCATCGAGGAGGGAGTGAA
CCACATGTGGACCGTGTCTGCCTTCCAGCAGCATCCCCGCACCGTGTTTGTGTGTGACGAGGATGCCACCTTGGA
GCTGAAAGTGAAGACTGTCAAGTATTTCAAAGGTTTAATGCTTGTTCATAACAAGTTGGTGGACCCCTTGTACAG
TATCAAAGAGAAAGAAACTGAGAAAAGCCAATCTTCGAAGAAACCATACAGCGAT**TAG**CCTGTGCTGGGACCTAG
TGTCAAGTACCCATAGGGAAAGGCAGGTCTTTCTGGAAATTGTCTTTAGAAGAAAGAATTGTATTTCTTTAATCT
AGTATGGTTACTCCAGATAAGTGGGTGAACTTATTGTTCTTGGCCATGAGGCTGGGAGCCTAGTCACGGAGTTTA
GCTATAGGGAGAATGTTTGTAACTTAATCAGAAAAAAAATATCTGCAAAATGTACTCCATCATTTTGATGTCTGC
CAAACCCAGGTTGGGAGTTTTAAACTTTTTGTTCTGCTTCAGCCATGGTTCACACATATGACACACTCCCGTCAG
GAATTTCTCTCCTTACACGCACTGATTTTCAAGTGGGAGGGAATTAGGGGCTTATGTATATTGGATACCACCTCT
TGAGAGTCCTTCTTGCACAGGCCTGCCCCTTGGTTGAGAACCATTGTTCCAAGTGAAGGCACAAACTCTCAATAT
CTAAAATAAGTGCAAGGAAGCAGTCTCTTTGGTCAGTAACAAGTGCAATGGAAAGAAAACGATCCCTTCCTTCTT
CCACTTTCACAGCTTTTCTCTGAACTAGGAGAACCTGGGGGTGGATTTGGGTGGGTGGGGCCAAAGAGGAGGCTT
CTATTGATAAATCCAGAGCCTCAAGGGGCCCAGCCACGTCAAACTTCTCTCCCTCAGGGACTCTCCAGCACCAAA
AGGCAGAAGGTGGAAGCCGTTTTTCCCCCAGAGCCCTGTGTTTTTGTGAAAGGCCTCACTGTGGCTCCTCTGTTT
TACATACTCATTAGTAAGTGGGAGGTCCACTGGGGCAACAGACACTGCCACAATTTCAGTGTTGTGTTCAGCCAA
GGGGACGGTCTGGACAGGCAGCTTAAGTGTGAGTTTAGTCACAACTCCTGAGTGTCCCGCTCTCCTGCTTACCTA
GGAGGTGAGTGCCAGGAAAATACACCAAATGCTTCTAGTATTGTTTCCCCACTTAAAATAGTCCTGCTTAAATTC
ACATGGTGTGGTCTGATGTTCTGAGAGCATCAGGAAATACAACCCTTTTGCCCATTTACCCTTCTCCCCGGATCC
CAAGGTGGTCTGTTGCTCTGGCTTCCTTTCATTGTCTTAGGCCTTCATGGAGTGGATGCTGCCTCCTCCTGGCTG
TTTTTGTGCCTGTTTGAAGCTACTGCTGCCTCCATTTCTGGGAAAGACCTTTGAGAGCCTAGCCCAGGCCTAAGG
GCTATGTTTGGTACCAGTGTTTTGTCTTTAGCTTTTCTATGTGATTGTGCCGTCATTCTGTTTTAAGCTCATGGA
TCAATGGATTTGTTTACAATGTGATATTTTCTATTAAATCCAGTATTTTCAAAAAAAAAAAAAA

FIGURE 500

MKLIILEHYSQASEWAAKYIRNRIIQFNPGPEKYFTLGLPTGSTPLGCYKKLIEYYKNGDLSFKYVKTFNMDEYV
GLPRDHPESYHSFMWNNFFKHIDIHPENTHILDGNAVDLQAECDAFEEKIKAAGGIELFVGGIGPDGHIAFNEPG
SSLVSRTRVKTLAMDTILANARFFDGELTKVPTMALTVGVGTVMDAREVMILITGAHKAFALYKAIEEGVNHMWT
VSAFQQHPRTVFVCDEDATLELKVKTVKYFKGLMLVHNKLVDPLYSIKEKETEKSQSSKKPYSD

FIGURE 501

AAAACAGCCGGGGCTCCAGCGGGAGAACGATA**ATG**CAAAGTGCTATGTTCTTGGCTGTTCAACACGACTGCAGAC
CCATGGACAAGAGCGCAGGCAGTGGCCACAAGAGCGAGGAGAAGCGAGAAAAGATGAAACGGACCCTTTTAAAAG
ATTGGAAGACCCGTTTGAGCTACTTCTTACAAAATTCCTCTACTCCTGGGAAGCCCAAAACCGGCAAAAAAAGCA
AACAGCAAGCTTTCATCAAGCCTTCTCCTGAGGAAGCACAGCTGTGGTCAGAAGCATTTGACGAGCTGCTAGCCA
GCAAATATGGTCTTGCTGCATTCAGGGCTTTTTTAAAGTCGGAATTCTGTGAAGAAAATATTGAATTCTGGCTGG
CCTGTGAAGACTTCAAAAAAACCAAATCACCCCAAAAGCTGTCCTCAAAAGCAAGGAAAATATATACTGACTTCA
TAGAAAAGGAAGCTCCAAAAGAGATAAACATAGATTTTCAAACCAAAACTCTGATTGCCCAGAATATACAAGAAG
CTACAAGTGGCTGCTTTACAACTGCCCAGAAAAGGGTATACAGCTTGATGGAGAACAACTCTTATCCTCGTTTCT
TGGAGTCAGAATTCTACCAGGACTTGTGTAAAAAGCCACAAATCACCACAGAGCCTCATGCTACA**TGA**AATGTAA
AAGGGAGCCCAGAAATGGAGGACATTTCATTCTTTTTCCTGAGGGGAAGGACTGTGACCTGCCATAAAGACTGAC
CTTGAATTCAGCCTGGGTGTTCAGGAAACATCACTCAGAACTATTGATTCAAAGTTGGGTAGTGAATCAGGAAGC
CAGTAACTGACTAGGAGAAGCTGGTATCAGAACAGCTTCCCTCACTGTGTACAGAACGCAAGAAGGGAATAGGTG
GTCTGAACGTGGTGTCTCACTCTGAAAAGCAGGAATGTAAGATGATGAAAGAGACAATGTAATACTGTTGGTCCA
AAAGCATTTAAAATCAATAGATCTGGGATTATGTGGCCTTAGGTAGCTGGTTGTACATCTTTCCCTAAATCGATC
CATGTTACCACATAGTAGTTTTAGTTTAGGATTCAGTAACAGTGAAGTGTTTACTATGTGCAAGGGTATTGAAGT
TCTTATGACCACAGATCATCAGTACTGTTGTCTCATGTAATGCTAAAACTGAAATGGTCCGTGTTTGCATTGTTA
AAAATGATGTGTGAAATAGAATGAGTGCTATGGTGTTGAAAACTGCAGTGTCCGTTATGAGTGCCAAAAATCTGT
CTTGAAGGCAGCTACACTTTGAAGTGGTCTTTGAATACTTTTAATAAATTTATTTTGATAAATAATATTG

FIGURE 502

MQSAMFLAVQHDCRPMDKSAGSGHKSEEKREKMKRTLLKDWKTRLSYFLQNSSTPGKPKTGKKSKQQAFIKPSPE
EAQLWSEAFDELLASKYGLAAFRAFLKSEFCEENIEFWLACEDFKKTKSPQKLSSKARKIYTDFIEKEAPKEINI
DFQTKTLIAQNIQEATSGCFTTAQKRVYSLMENNSYPRFLESEFYQDLCKKPQITTEPHAT

FIGURE 503

CAGACGGCGCTGAGCGCGGCGGCGGCGGGAGCGGCGTCGAGTGTCTCCGTGCGCCCGTCTGTGGCCAAGCAGCCA
GCAGCCTAGCAGCCAGTCAGCTTGCCGCCGGCGGCCAAGCAGCCAACC**ATG**CTCAACTTCGGTGCCTCTCTCCAG
CAGACTGCGGAGGAAAGAATGGAAATGATTTCTGAAAGGCCAAAAGAGAGTATGTATTCCTGGAACAAAACTGCA
GAGAAAAGTGATTTTGAAGCTGTAGAAGCACTTATGTCAATGAGCTGCAGTTGGAAGTCTGATTTTAAGAAATAC
GTTGAAAACAGACCTGTTACACCAGTATCTGATTTGTCAGAGGAAGAGAATCTGCTTCCGGGAACACCTGATTTT
CATACAATCCCAGCATTTTGTTTGACTCCACCTTACAGTCCTTCTGACTTTGAACCCTCTCAAGTGTCAAATCTG
ATGGCACCAGCGCCATCTACTGTACACTTCAAGTCACTCTCAGATACTGCCAAACCTCACATTGCCGCACCTTTC
AAAGAGGAAGAAAAGAGCCCAGTATCTGCCCCCAAACTCCCCAAAGCTCAGGCAACAAGTGTGATTCGTCATACA
GCTGATGCCCAGCTATGTAACCACCAGACCTGCCCAATGAAAGCAGCCAGCATCCTCAACTATCAGAACAATTCT
TTTAGAAGAAGAACCCACCTAAATGTTGAGGCTGCAAGAAAGAACATACCATGTGCCGCTGTGTCACCAAACAGA
TCCAAATGTGAGAGAAACACAGTGGCAGATGTTGATGAGAAAGCAAGTGCTGCACTTTATGACTTTTCTGTGCCT
TCCTCAGAGACGGTCATCTGCAGGTCTCAGCCAGCCCCTGTGTCCCCACAACAGAAGTCAGTGTTGGTCTCTCCA
CCTGCAGTATCTGCAGGGGGAGTGCCACCTATGCCGGTCATCTGCCAGATGGTTCCCCTTCCTGCCAACAACCCT
GTTGTGACAACAGTCGTTCCCAGCACTCCTCCCAGCCAGCCACCAGCCGTTTGCCCCCCTGTTGTGTTCATGGGC
ACACAAGTCCCCAAAGGCGCTGTCATGTTTGTGGTACCCCAGCCCGTTGTGCAGAGTTCAAAGCCTCCGGTGGTG
AGCCCGAATGGCACCAGACTCTCTCCCATTGCCCCTGCTCCTGGGTTTTCCCCTTCAGCAGCAAAAGTCACTCCT
CAGATTGATTCATCAAGGATAAGGAGTCACATCTGTAGCCACCCAGGATGTGGCAAGACATACTTTAAAAGTTCC
CATCTGAAGGCCCACACGAGGACGCACACAGGAGAAAAGCCTTTCAGCTGTAGCTGGAAAGGTTGTGAAAGGAGG
TTTGCCCGTTCTGATGAACTGTCCAGACACAGGCGAACCCACACGGGTGAGAAGAAATTTGCGTGCCCCATGTGT
GACCGGCGGTTCATGAGGAGTGACCATTTGACCAAGCATGCCCGGCGCCATCTATCAGCCAAGAAGCTACCAAAC
TGGCAGATGGAAGTGAGCAAGCTAAATGACATTGCTCTACCTCCAACCCCTGCTCCCACACAG**TGA**CAGACCGGA
AAGTGAAGAGTCAGAACTAACTTTGGTCTCAGCGGGAGCCAGTGGTGATGTAAAAATGCTTCCACTGCAAGTCTG
TGGCCCCACAACGTGGGCTTAAAGCAGAAGCCCCACAGCCTGGCACGAAGGCCCCGCCTGGGTTAGGTGACTAAA
AGGGCTTCGGCCACAGGCAGGTCACAGAAAGGCAGGTTTCATTTCTTATCACATAAGAGAGATGAGAAAGCTTTT
ATTCCTTTGAATATTTTTTGAAGGTTTCAGATGAGGTCAACACAGGTAGCACAGATTTTGAATCTGTGTGCATAT
TTGTTACTTTACTTTTGCTGTTTATACTTGAGACCAACTTTTCAATGTGATTCTTCTAAAGCACTGGTTTCAAGA
ATATGGAGGCTGGAAGGAAATAAACATTACGGTACAGACATGGAGATGTAAAATGAGTTTGTATTATTACAAATA
TTGTCATCTTTTTCTAGAGTTATCTTCTTTATTATTCCTAGTCTTTCCAGTCAACATCGTGGATGTAGTGATTAA
ATATATCTAGAACTATCATTTTTACACTATTGTGAATATTTGGAATTGAACGACTGTATATTGCTAAGAGGGCCC
AAAGAATTGGAATCCTCCTTAATTTAATTGCTTTGAAGCATAGCTACAATTTGTTTTTGCATTTTTGTTTTGAAA
GTTTAACAAATGACTGTATCTAGGCATTTCATTATGCTTTGAACTTTAGTTTGCCTGCAGTTTCTTGTGTAGATT
TGAAAATTGTATACCAATGTGTTTTCTGTAGACTCTAAGATACACTGCACTTTGTTTAGAAAAAAAACTGAAGAT
GAAATATATATTGTAAAGAAGGGATATTAAGAATCTTAGATAACTTCTTGAAAAAGATGGCTTATGTCATCAGTA
AAGTACCTTTATGTTATGAGGATATAATGTGTGCTTTATTGAATTAGAAAATTAGTGACCATTATTCACAGGTGG
ACAAATGTTGTCCTGTTAATTTATAGGAGTTTTTTGGGGATGTGGAGGTAGTTGGGTAGAAAAATTATTAGAACA
TTCACTTTTGTTAACAGTATTTCTCTTTTATTCTGTTATATAGTGGATGATATACACAGTGGCAAAACAAAAGTA
CATTGCTTAAAATATATAGTGAAAAATGTCACTATATCTTCCCATTTAACATTGTTTTTGTATATTGGGTGTAGA
TTTCTGACATCAAAACTTGGACCCTTGGAAAACAAAAGTTTTAATTAAAAAAAATCCTTGTGACTTACAATTTGC
ACAATATTTCTTTTGTTGTACTTTATATCTTGTTTACAATAAAGAATTC

FIGURE 504

MLNFGASLQQTAEERMEMISERPKESMYSWNKTAEKSDFEAVEALMSMSCSWKSDFKKYVENRPVTPVSDLSEEE
NLLPGTPDFHTIPAFCLTPPYSPSDFEPSQVSNLMAPAPSTVHFKSLSDTAKPHIAAPFKEEEKSPVSAPKLPKA
QATSVIRHTADAQLCNHQTCPMKAASILNYQNNSFRRRTHLNVEAARKNIPCAAVSPNRSKCERNTVADVDEKAS
AALYDFSVPSSETVICRSQPAPVSPQQKSVLVSPPAVSAGGVPPMPVICQMVPLPANNPVVTTVVPSTPPSQPPA
VCPPVVFMGTQVPKGAVMFVVPQPVVQSSKPPVVSPNGTRLSPIAPAPGFSPSAAKVTPQIDSSRIRSHICSHPG
CGKTYFKSSHLKAHTRTHTGEKPFSCSWKGCERRFARSDELSRHRRTHTGEKKFACPMCDRRFMRSDHLTKHARR
HLSAKKLPNWQMEVSKLNDIALPPTPAPTQ

560/2825

FIGURE 505

GGGACAGCGGGCAGGGAAAGCCGCGGGAAGGGTACTCCAGGCGAGAGGCGGACGCGAGTCGTCGTGGCAGGAAAA
GTGACTAGCTCCCCTTCGTTGTCAGCCAGGGACGAGAACACAGCCACGCTCCCACCCGGCTGCCAACGATCCCTC
GGCGGCG**ATG**TCGGCCGCCGGTGCCCGAGGCCTGCGGGCCACCTACCACCGGCTCCTCGATAAAGTGGAGCTGAT
GCTGCCCGAGAAATTGAGGCCGTTGTACAACCATCCAGCAGGTCCCAGAACAGTTTTCTTCTGGGCTCCAATTAT
GAAATGGGGGTTGGTGTGTGCTGGATTGGCTGATATGGCCAGACCTGCAGAAAAACTTAGCACAGCTCAATCTGC
TGTTTTGATGGCTACAGGGTTTATTTGGTCAAGATACTCACTTGTAATTATTCCAAAAAATTGGAGTCTGTTTGC
TGTTAATTTCTTTGTGGGGGCAGCAGGAGCCTCTCAGCTTTTTCGTATTTGGAGATATAACCAAGAACTAAAAGC
TAAAGCACACAAA**TAA**AAGAGTTCCTGATCACCTGAACAATCTAGATGTGGACAAAACCATTGGGACCTAGTTTA
TTATTTGGTTATTGATAAAGCAAAGCTAACTGTGTGTTTAGAAGGCACTGTAACTGGTAGCTAGTTCTTGATTCA
ATAGAAAAATGCAGCAAACTTTTAATAACAGTCTCTCTACATGACTTAAGGAACTTATCTATGGATATTAGTAAC
ATTTTTCTACCATTTGTCCGTAATAAACCATACTTGCTCGTAAAAAAAAAAAAAAAAAAAA

FIGURE 506

MSAAGARGLRATYHRLLDKVELMLPEKLRPLYNHPAGPRTVFFWAPIMKWGLVCAGLADMARPAEKLSTAQSAVL
MATGFIWSRYSLVIIPKNWSLFAVNFFVGAAGASQLFRIWRYNQELKAKAHK

562/2825

FIGURE 507

ATGTGGGGCGACCTCTGGCTCCTCCCGCCTGCCTCTGCCAATCCGGGCACTGGGACAGAGGCTGAGTTTGAGAAA
GCTGCAGAGGAGGTTAGGCACCTTAAGACCAAGCCATCGGATGAGGAGATGCTGTTCATCTATGGCCACTACAAA
CAAGCAACTGTGGGCGACATAAATACAGAACGGCCCGGGATGTTGGACTTCACGGGCAAGGCCAAGTGGGATGCC
TGGAATGAGCTGAAAGGGACTTCCAAGGAAGATGCCATGAAAGCTTACATCAACAAAGTAGAAGAGCTAAAGAAA
AAATACGGGATA**TGA**GAGACTGGATTTGGTTACTGTGCCATGTGTTTATCCTAAACTGAGACAATGCCTTGTTTT
TTTCTAATACCGTGGATGGTGGGAATTCGGGAAAATAACCAGTTAAACCAGCTACTCAAGGCTGCTCACCATACG
GCTCTAACAGATTAGGGGCTAAAACGATTACTGACTTTCCTTGAGTAGTTTTTATCTGAAATCAATTAAAAGTGT
ATTTGTTACTTT

FIGURE 508

MWGDLWLLPPASANPGTGTEAEFEKAAEEVRHLKTKPSDEEMLFIYGHYKQATVGDINTERPGMLDFTGKAKWDA
WNELKGTSKEDAMKAYINKVEELKKKYGI

FIGURE 509A

ACTCTGGAGTGGGAGTGGGAGCGAGCGCTTCTGCGACTCCAGTTGTGAGAGCCGCAAGGGCATGGGAATTGACGC
CACTCACCGACCCCCAGTCTCAATCTCAACGCTGTGAGGAAACCTCGACTTTGCCAGGTCCCCAAGGGCAGCGGG
GCTCGGCGAGCGAGGCACCCTTCTCCGTCCCCATCCCAATCCAAGCGCTCCTGGCACTGACGACGCCAAGAGACT
CGAGTGGGAGTTAAAGCTTCCAGTGAGGGCAGCAGGTGTCCAGGCCGGGCCTGCGGGTTCCTGTTGACGTCTTGC
CCTAGGCAAAGGTCCCAGTTCCTTCTCGGAGCCGGCTGTCCCGCGCCACTGGAAACCGCACCTCCCCGCAGC**ATG**

GGCACCAGCCTCAGCCCGAACGACCCTTGGCCGCTAAACCCGCTGTCCATCCAGCAGACCACGCTCCTGCTACTC
CTGTCGGTGCTGGCCACTGTGCATGTGGGCCAGCGGCTGCTGAGGCAACGGAGGCGGCAGCTCCGGTCCGCGCCC
CCGGGCCCGTTTGCGTGGCCACTGATCGGAAACGCGGCGGCGGTGGGCCAGGCGGCTCACCTCTCGTTCGCTCGC
CTGGCGCGGCGCTACGGCGACGTTTTCCAGATCCGCCTGGGCAGCTGCCCCATAGTGGTGCTGAATGGCGAGCGC
GCCATCCACCAGGCCCTGGTGCAGCAGGGCTCGGCCTTCGCCGACCGGCCGGCCTTCGCCTCCTTCCGTGTGGTG
TCCGGCGGCCGCAGCATGGCTTTCGGCCACTACTCGGAGCACTGGAAGGTGCAGCGGCGCGCAGCCCACAGCATG
ATGCGCAACTTCTTCACGCGCCAGCCGCGCAGCCGCCAAGTCCTCGAGGGCCACGTGCTGAGCGAGGCGCGCGAG
CTGGTGGCGCTGCTGGTGCGCGGCAGCGCGGACGGCGCCTTCCTCGACCCGAGGCCGCTGACCGTCGTGGCCGTG
GCCAACGTCATGAGTGCCGTGTGTTTCGGCTGCCGCTACAGCCACGACGACCCCGAGTTCCGTGAGCTGCTCAGC
CACAACGAAGAGTTCGGGCGCACGGTGGGCGCGGGCAGCCTGGTGGACGTGATGCCCTGGCTGCAGTACTTCCCC
AACCCGGTGCGCACCGTTTTCCGCGAATTCGAGCAGCTCAACCGCAACTTCAGCAACTTCATCCTGGACAAGTTC
TTGAGGCACTGCGAAAGCCTTCGGCCCGGGGCCGCCCCCCGCGACATGATGGACGCCTTTATCCTCTCTGCGGAA
AAGAAGGCGGCCGGGGACTCGCACGGTGGTGGCGCGCGGCTGGATTTGGAGAACGTACCGGCCACTATCACTGAC
ATCTTCGGCGCCAGCCAGGACACCCTGTCCACCGCGCTGCAGTGGCTGCTCCTCCTCTTCACCAGGTATCCTGAT
GTGCAGACTCGAGTGCAGGCAGAATTGGATCAGGTCGTGGGGAGGGACCGTCTGCCTTGTATGGGTGACCAGCCC
AACCTGCCCTATGTCCTGGCCTTCCTTTATGAAGCCATGCGCTTCTCCAGCTTTGTGCCTGTCACTATTCCTCAT
GCCACCACTGCCAACACCTCTGTCTTGGGCTACCACATTCCCAAGGACACTGTGGTTTTTGTCAACCAGTGGTCT
GTGAATCATGACCCAGTGAAGTGGCCTAACCCGGAGAACTTTGATCCAGCTCGATTCTTGGACAAGGATGGCCTC
ATCAACAAGGACCTGACCAGCAGAGTGATGATTTTTTCAGTGGGCAAAAGGCGGTGCATTGGCGAAGAACTTTCT
AAGATGCAGCTTTTTCTCTTCATCTCCATCCTGGCTCACCAGTGCGATTTCAGGGCCAACCCAAATGAGCCTGCG
AAAATGAATTTCAGTTATGGTCTAACCATTAAACCCAAGTCATTTAAAGTCAATGTCACTCTCAGAGAGTCCATG
GAGCTCCTTGATAGTGCTGTCCAAAATTTACAAGCCAAGGAAACTTGCCAA**TAA**GAAGCAAGAGGCAAGCTGAAA
TTTTAGAAATATTCACATCTTCGGAGATGAGGAGTAAAATTCAGTTTTTTTCCAGTTCCTCTTTTGTGCTGCTTC
TCAATTAGCGTTTAAGGTGAGCATAAATCAACTGTCCATCAGGTGAGGTGTGCTCCATACCCAGCGGTTCTTCAT
GAGTAGTGGGCTATGCAGGAGCTTCTGGGAGATTTTTTTGAGTCAAAGACTTAAAGGGCCCAATGAATTATTATA
TACATACTGCATCTTGGTTATTTCTGAAGGTAGCATTCTTTGGAGTTAAAATGCACATATAGACACATACACCCA
AACACTTACACCAAACTACTGAATGAAGAAGTATTTTGGTAACCAGGCCATTTTTGGTGGGAATCCAAGATTGGT
CTCCCATATGCAGAAATAGACAAAAAGTATATTAAACAAAGTTTCAGAGTATATTGTTGAAGAGACAGAGACAAG
TAATTTCAGTGTAAAGTGTGTGATTGAAGGTGATAAGGGAAAAGATAAAGACCAGAAATTCCCTTTTCACCTTTT
CAGGAAAATAACTTAGACTCTAGTATTTATGGGTGGATTTATCCTTTTGCCTTCTGGTATACTTCCTTACTTTTA
AGGATAAATCATAAAGTCAGTTGCTCAAAAAGAAATCAATAGTTGAATTAGTGAGTATAGTGGGGTTCCATGAGT
TATCATGAATTTTAAAGTATGCATTATTAAATTGTAAAACTCCAAGGTGATGTTGTACCTCTTTTGCTTGCCAAA
GTACAGAATTTGAATTATCAGCAAAGAAAAAAAAAAAAGCCAGCCAAGCTTTAAATTATGTGACCATAATGTACT
GATTTCAGTAAGTCTCATAGGTTAAAAAAAAAAGTCACCAAATAGTGTGAAATATATTACTTAACTGTCCGTAAG
CAGTATATTAGTATTATCTTGTTCAGGAAAAGGTTGAATAATATATGCCTTGTGTAATATTGAAAATTGAAAAGT
ACAACTAACGCAACCAAGTGTGCTAAAAATGAGCTTGATTAAATCAACCACCTATTTTTGACATGGAAATGAAGC
AGGGTTTCTTTTCTTCACTCAAATTTTGGCGAATCTCAAAATTAGATCCTAAGATGTGTTCTTATTTTTATAACA
TCTTTATTGAAATTCTATTTATAATACAGAATCTTGTTTTGAAAATAACCTAATTAATATATTAAAATTCCAAAT
TCATGGCATGCTTAAATTTTAACTAAATTTTAAAGCCATTCTGATTATTGAGTTCCAGTTGAAGTTAGTGGAAAT
CTGAACATTCTCCTGTGGAAGGCAGAGAAATCTAAGCTGTGTCTGCCCAATGAATAATGGAAAATGCCATGAATT
ACCTGGATGTTCTTTTTACGAGGTGACAAGAGTTGGGGACAGAACTCCCATTACAACTGACCAAGTTTCTCTTCT
AGATGATTTTTTGAAAGTTAACATTAATGCCTGCTTTTTGGAAAGTCAGAATCAGAAGATAGTCTTGGAAGCTGT
TTGGAAAAGACAGTGGAGATGAGGTCAGTTGTGTTTTTTAAGATGGCAATTACTTTGGTAGCTGGGAAAGCATAA

FIGURE 509B

AGCTCAAATGAAATGTATGCATTCACATTTAGAAAAGTGAATTGAAGTTTCAAGTTTTAAAGTTCATTGCAATTA
AACTTCCAAAGAAAGTTCTACAGTGTCCTAAGTGCTAAGTGCTTATTACATTTTATTAAGCTTTTTGGAATCTTT
GTACCAAAATTTTAAAAAAGGGAGTTTTTGATAGTTGTGTGTATGTGTGTGTGGGGTGGGGGGATGGTAAGAGAA
AAGAGAGAAACACTGAAAAGAAGGAAAGATGGTTAAACATTTTCCCACTCATTCTGAATTAATTAATTTGGAGCA
CAAAATTCAAAGCATGGACATTTAGAAGAAAGATGTTTGGCGTAGCAGAGTTAAATCTCAAATAGGCTATTAAAA
AAGTCTACAACATAGCAGATCTGTTTTGTGGTTTGGAATATTAAAAAACTTCATGTAATTTTATTTTAAAATTTC
ATAGCTGTACTTCTTGAATATAAAAAATCATGCCAGTATTTTTAAAGGCATTAGAGTCAACTACACAAAGCAGGC
TTGCCCAGTACATTTAAATTTTTTGGCACTTGCCATTCCAAAATATTATGCCCCACCAAGGCTGAGACAGTGAAT
TTGGGCTGCTGTAGCCTATTTTTTTAGATTGAGAAATGTGTAGCTGCAAAAATAATCATGAACCAATCTGGATGC
CTCATTATGTCAACCAGGTCCAGATGTGCTATAATCTGTTTTTACGTATGTAGGCCCAGTCGTCATCAGATGCTT
GCGGCAAAAGAAAGCTGTGTTTATATGGAAGAAAGTAAGGTGCTTGGAGTTTACCTGGCTTATTTAATATGCTTA
TAACCTAGTTAAAGAAAGGAAAAGAAAACAAAAAACGAATGAAAATAACTGAATTTGGAGGCTGGAGTAATCAGA
TTACTGCTTTAATCAGAAACCCTCATTGTGTTTCTACCGGAGAGAGAATGTATTTGCTGACAACCATTAAAGTCA
GAAGTTTTACTCCAGGTTATTGCAATAAAGTATAATGTTTATTAAATGCTTCATTTGTATGTCAAAGCTTTGACT
CTATAAGCAAATTGCTTTTTTCCAAAACAAAAAGATGTCTCAGGTTTGTTTTGTGAATTTTCTAAAAGCTTTCAT
GTCCCAGAACTTAGCCTTTACCTGTGAAGTGTTACTACAGCCTTAATATTTTCCTAGTAGATCTATATTAGATCA
AATAGTTGCATAGCAGTATATGTTAATTTGTGTGTTTTTAGCTGTGACACAACTGTGTGATTAAAAGGTATACTT
TAGTAGACATTTATAACTCAAGGATACCTTCTTATTTAATCTTTTCTTATTTTTGTACTTTATCATGAATGCTTT
TAGTGTGTGCATAATAGCTACAGTGCATAGTTGTAGACAAAGTACATTCTGGGGAAACAACATTTATATGTAGCC
TTTACTGTTTGATATACCAAATTAAAAAAAAATTGTATCTCATTACTTATACTGGGACACCATTACCAAAATAAT
AAAAATCACTTTCATAATCTTGAAAAAA

FIGURE 510

MGTSLSPNDPWPLNPLSIQQTTLLLLLSVLATVHVGQRLLRQRRRQLRSAPPGPFAWPLIGNAAAVGQAAHLSFA
RLARRYGDVFQIRLGSCPIVVLNGERAIHQALVQQGSAFADRPAFASFRVVSGGRSMAFGHYSEHWKVQRRAAHS
MMRNFFTRQPRSRQVLEGHVLSEARELVALLVRGSADGAFLDPRPLTVVAVANVMSAVCFGCRYSHDDPEFRELL
SHNEEFGRTVGAGSLVDVMPWLQYFPNPVRTVFREFEQLNRNFSNFILDKFLRHCESLRPGAAPRDMMDAFILSA
EKKAAGDSHGGGARLDLENVPATITDIFGASQDTLSTALQWLLLLFTRYPDVQTRVQAELDQVVGRDRLPCMGDQ
PNLPYVLAFLYEAMRFSSFVPVTIPHATTANTSVLGYHIPKDTVVFVNQWSVNHDPVKWPNPENFDPARFLDKDG
LINKDLTSRVMIFSVGKRRCIGEELSKMQLFLFISILAHQCDFRANPNEPAKMNFSYGLTIKPKSFKVNVTLRES
MELLDSAVQNLQAKETCQ

FIGURE 511A

GCGACCGAGAAG**ATG**CCCGCCCTGCGCCCCGCTCTGCTGTGGGCGCTGCTGGCGCTCTGGCTGTGCTGCGCGACC
CCCGCGCATGCATTGCAGTGTCGAGATGGCTATGAACCCTGTGTAAATGAAGGAATGTGTGTTACCTACCACAAT
GGCACAGGATACTGCAAATGTCCAGAAGGCTTCTTGGGGGAATATTGTCAACATCGAGACCCCTGTGAGAAGAAC
CGCTGCCAGAATGGTGGGACTTGTGTGGCCCAGGCCATGCTGGGGAAAGCCACGTGCCGATGTGCCTCAGGGTTT
ACAGGAGAGGACTGCCAGTACTCGACATCTCATCCATGCTTTGTGTCTCGACCCTGCCTGAATGGCGGCACATGC
CATATGCTCAGCCGGGATACCTATGAGTGCACCTGTCAAGTCGGGTTTACAGGTAAGGAGTGCCAATGGACCGAT
GCCTGCCTGTCTCATCCCTGTGCAAATGGAAGTACCTGTACCACTGTGGCCAACCAGTTCTCCTGCAAATGCCTC
ACAGGCTTCACAGGGCAGAAATGTGAGACTGATGTCAATGAGTGTGACATTCCAGGACACTGCCAGCATGGTGGC
ACCTGCCTCAACCTGCCTGGTTCCTACCAGTGCCAGTGCCTTCAGGGCTTCACAGGCCAGTACTGTGACAGCCTG
TATGTGCCCTGTGCACCCTCGCCTTGTGTCAATGGAGGCACCTGTCGGCAGACTGGTGACTTCACTTTTGAGTGC
AACTGCCTTCCAGGTTTTGAAGGGAGCACCTGTGAGAGGAATATTGATGACTGCCCTAACCACAGGTGTCAGAAT
GGAGGGGTTTGTGTGGATGGGGTCAACACTTACAACTGCCGCTGTCCCCCACAATGGACAGGACAGTTCTGCACA
GAGGATGTGGATGAATGCCTGCTGCAGCCCAATGCCTGTCAAAATGGGGGCACCTGTGCCAACCGCAATGGAGGC
TATGGCTGTGTATGTGTCAACGGCTGGAGTGGAGATGACTGCAGTGAGAACATTGATGATTGTGCCTTCGCCTCC
TGTACTCCAGGCTCCACCTGCATCGACCGTGTGGCCTCCTTCTCTTGCATGTGCCCAGAGGGGAAGGCAGGTCTC
CTGTGTCATCTGGATGATGCATGCATCAGCAATCCTTGCCACAAGGGGGCACTGTGTGACACCAACCCCCTAAAT
GGGCAATATATTTGCACCTGCCCACAAGGCTACAAAGGGGCTGACTGCACAGAAGATGTGGATGAATGTGCCATG
GCCAATAGCAATCCTTGTGAGCATGCAGGAAAATGTGTGAACACGGATGGCGCCTTCCACTGTGAGTGTCTGAAG
GGTTATGCAGGACCTCGTTGTGAGATGGACATCAATGAGTGCCATTCAGACCCCTGCCAGAATGATGCTACCTGT
CTGGATAAGATTGGAGGCTTCACATGTCTGTGCATGCCAGGTTTCAAAGGTGTGCATTGTGAATTAGAAATAAAT
GAATGTCAGAGCAACCCTTGTGTGAACAATGGGCAGTGTGTGGATAAAGTCAATCGTTTCCAGTGCCTGTGTCCT
CCTGGTTTCACTGGGCCAGTTTGCCAGATTGATATTGATGACTGTTCCAGTACTCCGTGTCTGAATGGGGCAAAG
TGTATCGATCACCCGAATGGCTATGAATGCCAGTGTGCCACAGGTTTCACTGGTGTGTTGTGTGAGGAGAACATT
GACAACTGTGACCCCGATCCTTGCCACCATGGTCAGTGTCAGGATGGTATTGATTCCTACACCTGCATCTGCAAT
CCCGGGTACATGGGCGCCATCTGCAGTGACCAGATTGATGAATGTTACAGCAGCCCTTGCCTGAACGATGGTCGC
TGCATTGACCTGGTCAATGGCTACCAGTGCAACTGCCAGCCAGGCACGTCAGGGGTTAATTGTGAAATTAATTTT
GATGACTGTGCAAGTAACCCTTGTATCCATGGAATCTGTATGGATGGCATTAATCGCTACAGTTGTGTCTGCTCA
CCAGGATTCACAGGGCAGAGATGTAACATTGACATTGATGAGTGTGCCTCCAATCCCTGTCGCAAGGGTGCAACA
TGTATCAACGGTGTGAATGGTTTCCGCTGTATATGCCCCGAGGGACCCCATCACCCCAGCTGCTACTCACAGGTG
AACGAATGCCTGAGCAATCCCTGCATCCATGGAAACTGTACTGGAGGTCTCAGTGGATATAAGTGTCTCTGTGAT
GCAGGCTGGGTTGGCATCAACTGTGAAGTGGACAAAAATGAATGCCTTTCGAATCCATGCCAGAATGGAGGAACT
TGTGACAATCTGGTGAATGGATACAGGTGTACTTGCAAGAAGGGCTTTAAAGGCTATAACTGCCAGGTGAATATT
GATGAATGTGCCTCAAATCCATGCCTGAACCAAGGAACCTGCTTTGATGACATAAGTGGCTACACTTGCCACTGT
GTGCTGCCATACACAGGCAAGAATTGTCAGACAGTATTGGCTCCCTGTTCCCCAAACCCTTGTGAGAATGCTGCT
GTTTGCAAAGAGTCACCAAATTTTGAGAGTTATACTTGCTTGTGTGCTCCTGGCTGGCAAGGTCAGCGGTGTACC
ATTGACATTGACGAGTGTATCTCCAAGCCCTGCATGAACCATGGTCTCTGCCATAACACCCAGGGCAGCTACATG
TGTGAATGTCCACCAGGCTTCAGTGGTATGGACTGTGAGGAGGACATTGATGACTGCCTTGCCAATCCTTGCCAG
AATGGAGGTTCCTGTATGGATGGAGTGAATACTTTCTCCTGCCTCTGCCTTCCGGGTTTCACTGGGGATAAGTGC
CAGACAGACATGAATGAGTGTCTGAGTGAACCCTGTAAGAATGGAGGGACCTGCTCTGACTACGTCAACAGTTAC
ACTTGCAAGTGCCAGGCAGGATTTGATGGAGTCCATTGTGAGAACAACATCAATGAGTGCACTGAGAGCTCCTGT
TTCAATGGTGGCACATGTGTTGATGGGATTAACTCCTTCTCTTGCTTGTGCCCTGTGGGTTTCACTGGATCCTTC
TGCCTCCATGAGATCAATGAATGCAGCTCTCATCCATGCCTGAATGAGGGAACGTGTGTTGATGGCCTGGGTACC
TACCGCTGCAGCTGCCCCCTGGGCTACACTGGGAAAAACTGTCAGACCCTGGTGAATCTCTGCAGTCGGTCTCCA
TGTAAAAACAAAGGTACTTGCGTTCAGAAAAAAGCAGAGTCCCAGTGCCTATGTCCATCTGGATGGGCTGGTGCC
TATTGTGACGTGCCCAATGTCTCTTGTGACATAGCAGCCTCCAGGAGAGGTGTGCTTGTTGAACACTTGTGCCAG
CACTCAGGTGTCTGCATCAATGCTGGCAACACGCATTACTGTCAGTGCCCCCTGGGCTATACTGGGAGCTACTGT
GAGGAGCAACTCGATGAGTGTGCGTCCAACCCCTGCCAGCACGGGGCAACATGCAGTGACTTCATTGGTGGATAC
AGATGCGAGTGTGTCCCAGGCTATCAGGGTGTCAACTGTGAGTATGAAGTGGATGAGTGCCAGAATCAGCCCTGC

FIGURE 511B

CAGAATGGAGGCACCTGTATTGACCTTGTGAACCATTTCAAGTGCTCTTGCCCACCAGGCACTCGGGGCCTACTC
TGTGAAGAGAACATTGATGACTGTGCCCGGGGTCCCCATTGCCTTAATGGTGGTCAGTGCATGGATAGGATTGGA
GGCTACAGTTGTCGCTGCTTGCCTGGCTTTGCTGGGGAGCGTTGTGAGGGAGACATCAACGAGTGCCTCTCCAAC
CCCTGCAGCTCTGAGGGCAGCCTGGACTGTATACAGCTCACCAATGACTACCTGTGTGTTTGCCGTAGTGCCTTT
ACTGGCCGGCACTGTGAAACCTTCGTCGATGTGTGTCCCCAGATGCCCTGCCTGAATGGAGGGACTTGTGCTGTG
GCCAGTAACATGCCTGATGGTTTCATTTGCCGTTGTCCCCCGGGATTTTCCGGGGCAAGGTGCCAGAGCAGCTGT
GGACAAGTGAAATGTAGGAAGGGGGAGCAGTGTGTGCACACCGCCTCTGGACCCCGCTGCTTCTGCCCCAGTCCC
CGGGACTGCGAGTCAGGCTGTGCCAGTAGCCCCTGCCAGCACGGGGGCAGCTGCCACCCTCAGCGCCAGCCTCCT
TATTACTCCTGCCAGTGTGCCCCACCATTCTCGGGTAGCCGCTGTGAACTCTACACGGCACCCCCCAGCACCCCT
CCTGCCACCTGTCTGAGCCAGTATTGTGCCGACAAAGCTCGGGATGGCGTCTGTGATGAGGCCTGCAACAGCCAT
GCCTGCCAGTGGGATGGGGGTGACTGTTCTCTCACCATGGAGAACCCCTGGGCCAACTGCTCCTCCCCACTTCCC
TGCTGGGATTATATCAACAACCAGTGTGATGAGCTGTGCAACACGGTCGAGTGCCTGTTTGACAACTTTGAATGC
CAGGGGAACAGCAAGACATGCAAGTATGACAAATACTGTGCAGACCACTTCAAAGACAACCACTGTGACCAGGGG
TGCAACAGTGAGGAGTGTGGTTGGGATGGGCTGGACTGTGCTGCTGACCAACCTGAGAACCTGGCAGAAGGTACC
CTGGTTATTGTGGTATTGATGCCACCTGAACAACTGCTCCAGGATGCTCGCAGCTTCTTGCGGGCACTGGGTACC
CTGCTCCACACCAACCTGCGCATTAAGCGGGACTCCCAGGGGGAACTCATGGTGTACCCCTATTATGGTGAGAAG
TCAGCTGCTATGAAGAAACAGAGGATGACACGCAGATCCCTTCCTGGTGAACAAGAACAGGAGGTGGCTGGCTCT
AAAGTCTTTCTGGAAATTGACAACCGCCAGTGTGTTCAAGACTCAGACCACTGCTTCAAGAACACGGATGCAGCA
GCAGCTCTCCTGGCCTCTCACGCCATACAGGGGACCCTGTCATACCCTCTTGTGTCTGTCGTCAGTGAATCCCTG
ACTCCAGAACGCACTCAGCTCCTCTATCTCCTTGCTGTTGCTGTTGTCATCATTCTGTTTATTATTCTGCTGGGG
GTAATCATGGCAAAACGAAAGCGTAAGCATGGCTCTCTCTGGCTGCCTGAAGGTTTCACTCTTCGCCGAGATGCA
AGCAATCACAAGCGTCGTGAGCCAGTGGGACAGGATGCTGTGGGGCTGAAAAATCTCTCAGTGCAAGTCTCAGAA
GCTAACCTAATTGGTACTGGAACAAGTGAACACTGGGTCGATGATGAAGGGCCCCAGCCAAAGAAAGTAAAGGCT
GAAGATGAGGCCTTACTCTCAGAAGAAGATGACCCCATTGATCGACGGCCATGGACACAGCAGCACCTTGAAGCT
GCAGACATCCGTAGGACACCATCGCTGGCTCTCACCCCTCCTCAGGCAGAGCAGGAGGTGGATGTGTTAGATGTG
AATGTCCGTGGCCCAGATGGCTGCACCCCATTGATGTTGGCTTCTCTCCGAGGAGGCAGCTCAGATTTGAGTGAT
GAAGATGAAGATGCAGAGGACTCTTCTGCTAACATCATCACAGACTTGGTCTACCAGGGTGCCAGCCTCCAGGCC
CAGACAGACCGGACTGGTGAGATGGCCCTGCACCTTGCAGCCCGCTACTCACGGGCTGATGCTGCCAAGCGTCTC
CTGGATGCAGGTGCAGATGCCAATGCCCAGGACAACATGGGCCGCTGTCCACTCCATGCTGCAGTGGCAGCTGAT
GCCCAAGGTGTCTTCCAGATTCTGATTCGCAACCGAGTAACTGATCTAGATGCCAGGATGAATGATGGTACTACA
CCCCTGATCCTGGCTGCCCGCCTGGCTGTGGAGGGAATGGTGGCAGAACTGATCAACTGCCAAGCGGATGTGAAT
GCAGTGGATGACCATGGAAAATCTGCTCTTCACTGGGCAGCTGCTGTCAATAATGTGGAGGCAACTCTTTTGTTG
TTGAAAAATGGGGCCAACCGAGACATGCAGGACAACAAGGAAGAGACACCTCTGTTTCTTGCTGCCCGGGAGGGG
AGCTATGAAGCAGCCAAGATCCTGTTAGACCATTTTGCCAATCGAGACATCACAGACCATATGGATCGTCTTCCC
CGGGATGTGGCTCGGGATCACATGCACCATGACATTGTGCGCCTTCTGGATGAATACAATGTGACCCCAAGCCCT
CCAGGCACCGTGTTGACTTCTGCTCTCTCACCTGTCATCTGTGGGCCCAACAGATCTTTCCTCAGCCTGAAGCAC
ACCCCAATGGGCAAGAAGTCTAGACGGCCCAGTGCCAAGAGTACCATGCCTACTAGCCTCCCTAACCTTGCCAAG
GAGGCAAAGGATGCCAAGGGTAGTAGGAGGAAGAAGTCTCTGAGTGAGAAGGTCCAACTGTCTGAGAGTTCAGTA
ACTTTATCCCCTGTTGATTCCCTAGAATCTCCTCACACGTATGTTTCCGACACCACATCCTCTCCAATGATTACA
TCCCCTGGGATCTTACAGGCCTCACCCAACCCTATGTTGGCCACTGCCGCCCCTCCTGCCCCAGTCCATGCCCAG
CATGCACTATCTTTTTCTAACCTTCATGAAATGCAGCCTTTGGCACATGGGGCCAGCACTGTGCTTCCCTCAGTG
AGCCAGTTGCTATCCCACCACCACATTGTGTCTCCAGGCAGTGGCAGTGCTGGAAGCTTGAGTAGGCTCCATCCA
GTCCCAGTCCCAGCAGATTGGATGAACCGCATGGAGGTGAATGAGACCCAGTACAATGAGATGTTTGGTATGGTC
CTGGCTCCAGCTGAGGGCACCCATCCTGGCATAGCTCCCCAGAGCAGGCCACCTGAAGGGAAGCACATAACCACC
CCTCGGGAGCCCTTGCCCCCCATTGTGACTTTCCAGCTCATCCCTAAAGGCAGTATTGCCCAACCAGCGGGGGCT
CCCCAGCCTCAGTCCACCTGCCCTCCAGCTGTTGCGGGCCCCCTGCCCACCATGTACCAGATTCCAGAAATGGCC
CGTTTGCCCAGTGTGGCTTTCCCCACTGCCATGATGCCCCAGCAGGACGGGCAGGTAGCTCAGACCATTCTCCCA
GCCTATCATCCTTTCCCAGCCTCTGTGGGCAAGTACCCCACACCCCCTTCACAGCACAGTTATGCTTCCTCAAAT

FIGURE 511C

GCTGCTGAGCGAACACCCAGTCACAGTGGTCACCTCCAGGGTGAGCATCCCTACCTGACACCATCCCCAGAGTCT
CCTGACCAGTGGTCAAGTTCATCACCCCACTCTGCTTCTGACTGGTCAGATGTGACCACCAGCCCTACCCCTGGG
GGTGCTGGAGGAGGTCAGCGGGGACCTGGGACACACATGTCTGAGCCACCACACAACAACATGCAGGTTTATGCG
TGAGAGAGTCCACCTCCAGTGTAGAGACATAACTGACTTTTGTAAATGCTGCTGAGGAACAAATGAAGGTCATCC
GGGAGAGAAATGAAGAAATCTCTGGAGCCAGCTTCTAGAGGTAGGAAAGAGAAGATGTTCTTATTCAGATAATGC
AAGAGAAGCAATTCGTCAGTTTCACTGGGTATCTGCAAGGCTTATTGATTATTCTAATCTAATAAGACAAGTTTG
TGGAAATGCAAGATGAATACAAGCCTTGGGTCCATGTTTACTCTCTTCTATTTGGAGAATAAGATGGATGCTTAT
TGAAGCCCAGACATTCTTGCAGCTTGGACTGCATTTTAAGCCCTGCAGGCTTCTGCCATATCCATGAGAAGATTC
TACACTAGCGTCCTGTTGGGAATTATGCCCTGGAATTCTGCCTGAATTGACCTACGCATCTCCTCCTCCTTGGAC
ATTCTTTTGTCTTCATTTGGTGCTTTTGGTTTTGCACCTCTCCGTGATTGTAGCCCTACCAGCATGTTATAGGGC
AAGACCTTTGTGCTTTTGATCATTCTGGCCCATGAAAGCAACTTTGGTCTCCTTTCCCCTCCTGTCTTCCCGGTA
TCCCTTGGAGTCTCACAAGGTTTACTTTGGTATGGTTCTCAGCACAAACCTTTCAAGTATGTTGTTTCTTTGGAA
AATGGACATACTGTATTGTGTTCTCCTGCATATATCATTCCTGGAGAGAGAAGGGGAGAAGAATACTTTTCTTCA
ACAAATTTTGGGGGCAGGAGATCCCTTCAAGAGGCTGCACCTTAATTTTTCTTGTCTGTGTGCAGGTCTTCATAT
AAACTTTACCAGGAAGAAGGGTGTGAGTTTGTTGTTTTTCTGTGTATGGGCCTGGTCAGTGTAAAGTTTTATCCT
TGATAGTCTAGTTACTATGACCCTCCCCACTTTTTTAAAACCAGAAAAAGGTTTGGAATGTTGGAATGACCAAGA
GACAAGTTAACTCGTGCAAGAGCCAGTTACCCACCCACAGGTCCCCCTACTTCCTGCCAAGCATTCCATTGACTG
CCTGTATGGAACACATTTGTCCCAGATCTGAGCATTCTAGGCCTGTTTCACTCACTCACCCAGCATATGAAACTA
GTCTTAACTGTTGAGCCTTTCCTTTCATATCCACAGAAGACACTGTCTCAAATGTTGTACCCTTGCCATTTAGGA
CTGAACTTTCCTTAGCCCAAGGGACCCAGTGACAGTTGTCTTCCGTTTGTCAGATGATCAGTCTCTACTGATTAT
CTTGCTGCTTAAAGGCCTGCTCACCAATCTTTCTTTCACACCGTGTGGTCCGTGTTACTGGTATACCCAGTATGT
TCTCACTGAAGACATGGACTTTATATGTTCAAGTGCAGGAATTGGAAAGTTGGACTTGTTTTCTATGATCCAAAA
CAGCCCTATAAGAAGGTTGGAAAAGGAGGAACTATATAGCAGCCTTTGCTATTTTCTGCTACCATTTCTTTTCCT
CTGAAGCGGCCATGACATTCCCTTTGGCAACTAACGTAGAAACTCAACAGAACATTTTCCTTTCCTAGAGTCACC
TTTTAGATGATAATGGACAACTATAGACTTGCTCATTGTTCAGACTGATTGCCCCTCACCTGAATCCACTCTCTG
TATTCATGCTCTTGGCAATTTCTTTGACTTTCTTTTAAGGGCAGAAGCATTTTAGTTAATTGTAGATAAAGAATA
GTTTTCTTCCTCTTCTCCTTGGGCCAGTTAATAATTGGTCCATGGCTACACTGCAACTTCCGTCCAGTGCTGTGA
TGCCCATGACACCTGCAAAATAAGTTCTGCCTGGGCATTTTGTAGATATTAACAGGTGAATTCCCGACTCTTTTG
GTTTGAATGACAGTTCTCATTCCTTCTATGGCTGCAAGTATGCATCAGTGCTTCCCACTTACCTGATTTGTCTGT
CGGTGGCCCCATATGGAAACCCTGCGTGTCTGTTGGCATAATAGTTTACAAATGGTTTTTTCAGTCCTATCCAAA
TTTATTGAACCAACAAAAATAATTACTTCTGCCCTGAGATAAGCAGATTAAGTTTGTTCATTCTCTGCTTTATTC
TCTCCATGTGGCAACATTCTGTCAGCCTCTTTCATAGTGTGCAAACATTTTATCATTCTAAATGGTGACTCTCTG
CCCTTGGACCCATTTATTATTCACAGATGGGGAGAACCTATCTGCATGGACCTCTGTGGACCACAGCGTACCTGC
CCCTTTCTGCCCTCCTGCTCCAGCCCCACTTCTGAAAGTATCAGCTACTGATCCAGCCACTGGATATTTTATATC
CTCCCTTTTCCTTAAGCACAATGTCAGACCAAATTGCTTGTTTCTTTTTCTTGGACTACTTTAATTTGGATCCTT
TGGGTTTGGAGAAAGGGAATGTGAAAGCTGTCATTACAGACAACAGGTTTCAGTGATGAGGAGGACAACACTGCC
TTTCAAACTTTTTACTGATCTCTTAGATTTTAAGAACTCTTGAATTGTGTGGTATCTAATAAAAGGGAAGGTAAG
ATGGATAATCACTTTCTCATTTGGGTTCTGAATTGGAGACTCAGTTTTTATGAGACACATCTTTTATGCCATGTA
TAGATCCTCCCCTGCTATTTTTGGTTTATTTTTATTGTTATAAATGCTTTCTTTCTTTGACTCCTCTTCTGCCTG
CCTTTGGGGATAGGTTTTTTTGTTTGTTTATTTGCTTCCTCTGTTTTGTTTTAAGCATCATTTTCTTATGTGAGG
TGGGGAAGGGAAAGGTATGAGGGAAAGAGAGTCTGAGAATTAAAATATTTTAGTATAAGCAATTGGCTGTGATGC
TCAAATCCATTGCATCCTCTTATTGAATTTGCCAATTTGTAATTTTTGCATAATAAAGAACCAAAGGTGTAATGT
TTTGTTGAGAGGTGGTTTAGGGATTTTGGCCCTAACCAATACATTGAATGTATGATGACTATTTGGGAGGACACA
TTTATGTACCCAGAGGCCCCCACTAATAAGTGGTACTATGGTTACTTCCTTGTGTACATTTCTCTTAAAAGTGAT
ATTATATCTGTTTGTATGAGAAACCCAGTAACCAATAAAATGACCGCATATTCCTGACTAAACGTAGTAAGGAAA
ATGCACACTTTGTTTTTACTTTTCCGTTTCATTCTAAAGGTAGTTAAGATGAAATTTATATGAAAGCATTTTTAT
CACAAAATAAAAAAGGTTTGCCAAGCTCAGTGGTGTTGTATTTTTTATTTTCCAATACTGCATCCATGGCCTGGC
AGTGTTACCTCATGATGTCATAATTTGCTGAGAGAGCAAATTTTCTTTTCTTTCTGAATCCCACAAAGCCTAGCA

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FIGURE 511D

CCAAACTTCTTTTTTTCTTCCTTTAATTAGATCATAAATAAATGATCCTGGGGAAAAAGCATCTGTCAAATAGGA
AACATCACAAAACTGAGCACTCTTCTGTGCACTAGCCATAGCTGGTGACAAACAGATGGTTGCTCAGGGACAAGG
TGCCTTCCAATGGAAATGCGAAGTAGTTGCTATAGCAAGAATTGGGAACTGGGATATAAGTCATAATATTAATTA
TGCTGTTATGTAAATGATTGGTTTGTAACATTCCTTAAGTGAAATTTGTGTAGAACTTAATATACAGGATTATAA
AATAATATTTTGTGTATAAATTTGTTATAAGTTCACATTCATACATTTATTTATAAAGTCAGTGAGATATTTGAA
CATGAAAAAAAAAA

FIGURE 512

MPALRPALLWALLALWLCCATPAHALQCRDGYEPCVNEGMCVTYHNGTGYCKCPEGFLGEYCQHRDPCEKNRCQN
GGTCVAQAMLGKATCRCASGFTGEDCQYSTSHPCFVSRPCLNGGTCHMLSRDTYECTCQVGFTGKECQWTDACLS
HPCANGSTCTTVANQFSCKCLTGFTGQKCETDVNECDIPGHCQHGGTCLNLPGSYQCQCLQGFTGQYCDSLYVPC
APSPCVNGGTCRQTGDFTFECNCLPGFEGSTCERNIDDCPNHRCQNGGVCVDGVNTYNCRCPPQWTGQFCTEDVD
ECLLQPNACQNGGTCANRNGGYGCVCVNGWSGDDCSENIDDCAFASCTPGSTCIDRVASFSCMCPEGKAGLLCHL
DDACISNPCHKGALCDTNPLNGQYICTCPQGYKGADCTEDVDECAMANSNPCEHAGKCVNTDGAFHCECLKGYAG
PRCEMDINECHSDPCQNDATCLDKIGGFTCLCMPGFKGVHCELEINECQSNPCVNNGQCVDKVNRFQCLCPPGFT
GPVCQIDIDDCSSTPCLNGAKCIDHPNGYECQCATGFTGVLCEENIDNCDPDPCHHGQCQDGIDSYTCICNPGYM
GAICSDQIDECYSSPCLNDGRCIDLVNGYQCNCQPGTSGVNCEINFDDCASNPCIHGICMDGINRYSCVCSPGFT
GQRCNIDIDECASNPCRKGATCINGVNGFRCICPEGPHHPSCYSQVNECLSNPCIHGNCTGGLSGYKCLCDAGWV
GINCEVDKNECLSNPCQNGGTCDNLVNGYRCTCKKGFKGYNCQVNIDECASNPCLNQGTCFDDISGYTCHCVLPY
TGKNCQTVLAPCSPNPCENAAVCKESPNFESYTCLCAPGWQGQRCTIDIDECISKPCMNHGLCHNTQGSYMCECP
PGFSGMDCEEDIDDCLANPCQNGGSCMDGVNTFSCLCLPGFTGDKCQTDMNECLSEPCKNGGTCSDYVNSYTCKC
QAGFDGVHCENNINECTESSCFNGGTCVDGINSFSCLCPVGFTGSFCLHEINECSSHPCLNEGTCVDGLGTYRCS
CPLGYTGKNCQTLVNLCSRSPCKNKGTCVQKKAESQCLCPSGWAGAYCDVPNVSCDIAASRRGVLVEHLCQHSGV
CINAGNTHYCQCPLGYTGSYCEEQLDECASNPCQHGATCSDFIGGYRCECVPGYQGVNCEYEVDECQNQPCQNGG
TCIDLVNHFKCSCPPGTRGLLCEENIDDCARGPHCLNGGQCMDRIGGYSCRCLPGFAGERCEGDINECLSNPCSS
EGSLDCIQLTNDYLCVCRSAFTGRHCETFVDVCPQMPCLNGGTCAVASNMPDGFICRCPPGFSGARCQSSCGQVK
CRKGEQCVHTASGPRCFCPSPRDCESGCASSPCQHGGSCHPQRQPPYYSCQCAPPFSGSRCELYTAPPSTPPATC
LSQYCADKARDGVCDEACNSHACQWDGGDCSLTMENPWANCSSPLPCWDYINNQCDELCNTVECLFDNFECQGNS
KTCKYDKYCADHFKDNHCDQGCNSEECGWDGLDCAADQPENLAEGTLVIVVLMPPEQLLQDARSFLRALGTLLHT
NLRIKRDSQGELMVYPYYGEKSAAMKKQRMTRRSLPGEQEQEVAGSKVFLEIDNRQCVQDSDHCFKNTDAAAALL
ASHAIQGTLSYPLVSVVSESLTPERTQLLYLLAVAVVIILFIILLGVIMAKRKRKHGSLWLPEGFTLRRDASNHK
RREPVGQDAVGLKNLSVQVSEANLIGTGTSEHWVDDEGPQPKKVKAEDEALLSEEDDPIDRRPWTQQHLEAADIR
RTPSLALTPPQAEQEVDVLDVNVRGPDGCTPLMLASLRGGSSDLSDEDEDAEDSSANIITDLVYQGASLQAQTDR
TGEMALHLAARYSRADAAKRLLDAGADANAQDNMGRCPLHAAVAADAQGVFQILIRNRVTDLDARMNDGTTPLIL
AARLAVEGMVAELINCQADVNAVDDHGKSALHWAAAVNNVEATLLLLKNG

FIGURE 513

GAAACAAGCACTGGATTCCATATCCCACTGCCAAAACCGCATGGTTCAGATTATCGCTATTGCAGCTTTCATCAT
AATACACACCTTTGCTGCCGAAACGAAGCCAGACAACAGATTTCCATCAGCAGG**ATG**TGGGGGCTCAAGGTTCTG
CTGCTACCTGTGGTGAGCTTTGCTCTGTACCCTGAGGAGATACTGGACACCCACTGGGAGCTATGGAAGAAGACC
CACAGGAAGCAATATAACAACAAGGTGGATGAAATCTCTCGGCGTTTAATTTGGGAAAAAAACCTGAAGTATATT
TCCATCCATAACCTTGAGGCTTCTCTTGGTGTCCATACATATGAACTGGCTATGAACCACCTGGGGGACATGACC
AGTGAAGAGGTGGTTCAGAAGATGACTGGACTCAAAGTACCCCTGTCTCATTCCCGCAGTAATGACACCCTTTAT
ATCCCAGAATGGGAAGGTAGAGCCCCAGACTCTGTCGACTATCGAAAGAAAGGATATGTTACTCCTGTCAAAAAT
CAGGGTCAGTGTGGTTCCTGTTGGGCTTTTAGCTCTGTGGGTGCCCTGGAGGGCCAACTCAAGAAGAAAACTGGC
AAACTCTTAAATCTGAGTCCCCAGAACCTAGTGGATTGTGTGTCTGAGAATGATGGCTGTGGAGGGGGCTACATG
ACCAATGCCTTCCAATATGTGCAGAAGAACCGGGGTATTGACTCTGAAGATGCCTACCCATATGTGGGACAGGAA
GAGAGTTGTATGTACAACCCAACAGGCAAGGCAGCTAAATGCAGAGGGTACAGAGAGATCCCCGAGGGGAATGAG
AAAGCCCTGAAGAGGGCAGTGGCCCGAGTGGGACCTGTCTCTGTGGCCATTGATGCAAGCCTGACCTCCTTCCAG
TTTTACAGCAAAGGTGTGTATTATGATGAAAGCTGCAATAGCGATAATCTGAACCATGCGGTTTTGGCAGTGGGA
TATGGAATCCAGAAGGGAAACAAGCACTGGATAATTAAAAACAGCTGGGGAGAAAACTGGGGAAACAAAGGATAT
ATCCTCATGGCTCGAAATAAGAACAACGCCTGTGGCATTGCCAACCTGGCCAGCTTCCCCAAGATG**TGA**CTCCAG
CCAGCCAAATCCATCCTGCTCTTCCATTTCTTCCACGATGGTGCAGTGTAACGATGCACTTTGGAAGGGAGTTGG
TGTGCTATTTTTGAAGCAGATGTGGTGATACTGAGATTGTCTGTTCAGTTTCCCCATTTGTTTGTGCTTCAAATG
ATCCTTCCTACTTTGCTTCTCTCCACCCATGACCTTTTTCACTGTGGCCATCAGGACTTTCCCTGACAGCTGTGT
ACTCTTAGGCTAAGAGATGTGACTACAGCCTGCCCCTGACTGTGTTGTCCCAGGGCTGATGCTGTACAGGTACAG
GCTGGAGATTTTCACATAGGTTAGATTCTCATTCACGGGACTAGTTAGCTTTAAGCACCCTAGAGGACTAGGGTA
ATCTGACTTCTCACTTCCTAAGTTCCCTTCTATATCCTCAAGGTAGAAATGTCTATGTTTTCTACTCCAATTCAT
AAATCTATTCATAAGTCTTTGGTACAAGTTTACATGATAAAAAGAAATGTGATTTGTCTTCCCTTCTTTGCACTT
TTGAAATAAAGTATTTATC

FIGURE 514

MWGLKVLLLPVVSFALYPEEILDTHWELWKKTHRKQYNNKVDEISRRLIWEKNLKYISIHNLEASLGVHTYELAM
NHLGDMTSEEVVQKMTGLKVPLSHSRSNDTLYIPEWEGRAPDSVDYRKKGYVTPVKNQGQCGSCWAFSSVGALEG
QLKKKTGKLLNLSPQNLVDCVSENDGCGGGYMTNAFQYVQKNRGIDSEDAYPYVGQEESCMYNPTGKAAKCRGYR
EIPEGNEKALKRAVARVGPVSVAIDASLTSFQFYSKGVYYDESCNSDNLNHAVLAVGYGIQKGNKHWIIKNSWGE
NWGNKGYILMARNKNNACGIANLASFPKM

FIGURE 515

GCGCCGCGGCGCGGAGTCCCGGCTGCGGGATAGACCGAGGGCC**ATG**GCCGCCTCTCCCGGACCCGCCGGCGTTGG
CGGCGCCGGAGCAGTCTACGGCTCCGGCTCTTCGGGCTTCGCCCTCGACTCGGGACTGGAGATCAAAACTCGCTC
GGTGGAGCAGACGCTACTCCCGCTGGTTTCTCAGATCACCACGCTTATTAATCATAAAGATAATACCAAAAAGTC
TGATAAAACTCTGCAAGCAATTCAGCGTGTAGGACAAGCTGTCAACTTGGCAGTTGGAAGATTTGTTAAAGTAGG
AGAAGCTATAGCCAATGAAAACTGGGATTTGAAAGAAGAAATAAATATTGCTTGTATTGAAGCTAAACAAGCAGG
AGAAACAATTGCAGCACTTACAGACATAACCAACTTGAACCATCTGGAATCTGATGGGCAGATCACAATTTTTAC
AGACAAAACAGGAGTGATAAAGGCTGCAAGATTACTTCTTTCTTCAGTGACAAAAGTGTTGTTGCTGGCAGACCG
AGTAGTCATTAAACAGATAATAACATCAAGAAATAAGGTTCTCGCAACTATGGAAAGACTAGAGAAAGTGAATAG
CTTTCAAGAGTTTGTCCAAATATTCAGTCAATTTGGAAATGAAATGGTGGAGTTTGCACATCTGAGTGGAGATAG
ACAAAATGATTTGAAAGATGAAAAGAAAAAGGCAAAAATGGCAGCAGCTAGGGCAGTTCTTGAAAAGTGTACAAT
GATGCTTCTCACAGCTTCAAAGACATGTCTGAGGCATCCTAACTGCGAATCAGCCCATAAAAACAAAGAAGGAGT
ATTTGACCGTATGAAAGTGGCATTGGATAAGGTCATTGAAATTGTGACTGACTGTAAACCGAATGGAGAGACTGA
CATTTCATCTATCAGTATTTTTACTGGAATTAAGGAATTCAAGATGAATATTGAAGCTCTTCGGGAGAATCTTTA
TTTTCAGTCCAAAGAGAACCTTTCTGTGACATTGGAAGTCATCTTGGAGCGTATGGAGGACTTTACTGATTCTGC
CTACACCAGCCATGAGCACAGAGAACGCATCTTGGAACTGTCAACTCAGGCGAGAATGGAACTGCAGCAGTTAAT
TTCTGTGTGGATTCAAGCTCAAAGCAAGAAAACAAAAAGCATCGCTGAAGAACTGGAACTCAGTATTTTGAAAAT
CAGTCACAGTCTTAATGAACTTAAGAAAGAACTTCATAGTACAGCGACACAGCTGGCAGCAGATCTATTAAAATA
CCATGCTGATCATGTGGTTCTAAAAGCATTAAAACTTACTGGAGTAGAAGGAAATTTAGAAGCTTTGGCTGAATA
TGCCTGTAAACTCTCTGAACAGAAAGAGCAGCTTGTTGAGACCTGTCGATTGTTACGACACATATCTGGGACAGA
ACCTCTGGAAATAACCTGTATACATGCAGAGGAGACATTTCAGGTGACTGGCCAACAGATAATTTCTGCTGCTGA
AACATTGACATTGCATCCATCTAGTAAAATTGCTAAAGAAAACCTAGATGTATTTTGTGAAGCTTGGGAATCCCA
AATTAGTGACATGTCAACACTGCTGAGAGAAATCAATGACGTGTTTGAAGGAAGACGAGGAGAGAAGTATGGCTA
CCTTTCACTTCCAAAGCCAATGAAGAATAATGCAAACCTGAAATCATTAAAGCCAGACAAGCCTGACTCTGAGGA
GCAAGCCAAGATAGCAAAGCTTGGACTTAAGCTGGGTTTGCTCACCTCTGACGCTGACTGCGAAATTGAGAAGTG
GGAAGATCAGGAGAATGAGATTGTTCAATATGGACGGAACATGTCCAGTATGGCCTATTCTCTGTATTTATTTAC
TAGAGGAGAGGGGCCACTGAAAACTTCCCAGGATTTAATTCATCAACTAGAGGTTTTTGCTGCAGAGGGTTTAAA
GCTTACTTCCAGTGTTCAAGCTTTTTCAAAACAGCTGAAAGACGATGACAAGCTTATGCTTCTCCTGGAAATAAA
CAAGCTAATTCCTCTATGCCACCAGCTCCAGACAGTAACTAAGACTTCTTTGCAGAATAAAGTATTTCTAAAGGT
TGACAAGTGTATTACGAAGACAAGATCCATGATGGCTCTCTTAGTCCAACTTCTTTCACTTTGTTATAAACTGCT
GAAGAAGCTTCAGATGGAAAATAACGGATGGGTCTCAGTTACAAATAAGGACACTATGGATAGTAAAACT**TGA**GA
AGCTTTTGGGGTCAGATCTCTGGAACATCATGTGATGAAGCTGACATTTTTAAAAATCAAATGATCCTTTATCTT
TTCAGAAATTCATCAATTTTATAAAGAAAACAATATTGAAATTTTGCTCTATTTTCTGATCATGAAACTGATTGT
AAAGCTTTTTGACAACTAATAAATGTCTTGGTAATTGCTAGATTCT

FIGURE 516

MAASPGPAGVGGAGAVYGSGSSGFALDSGLEIKTRSVEQTLLPLVSQITTLINHKDNTKKSDKTLQAIQRVGQAV
NLAVGRFVKVGEAIANENWDLKEEINIACIEAKQAGETIAALTDITNLNHLESDGQITIFTDKTGVIKAARLLLS
SVTKVLLLADRVVIKQIITSRNKVLATMERLEKVNSFQEFVQIFSQFGNEMVEFAHLSGDRQNDLKDEKKKAKMA
AARAVLEKCTMMLLTASKTCLRHPNCESAHKNKEGVFDRMKVALDKVIEIVTDCKPNGETDISSISIFTGIKEFK
MNIEALRENLYFQSKENLSVTLEVILERMEDFTDSAYTSHEHRERILELSTQARMELQQLISVWIQAQSKKTKSI
AEELELSILKISHSLNELKKELHSTATQLAADLLKYHADHVVLKALKLTGVEGNLEALAEYACKLSEQKEQLVET
CRLLRHISGTEPLEITCIHAEETFQVTGQQIISAAETLTLHPSSKIAKENLDVFCEAWESQISDMSTLLREINDV
FEGRRGEKYGYLSLPKPMKNNANLKSLKPDKPDSEEQAKIAKLGLKLGLLTSDADCEIEKWEDQENEIVQYGRNM
SSMAYSLYLFTRGEGPLKTSQDLIHQLEVFAAEGLKLTSSVQAFSKQLKDDDKLMLLLEINKLIPLCHQLQTVTK
TSLQNKVFLKVDKCITKTRSMMALLVQLLSLCYKLLKKLQMENNGWVSVTNKDTMDSKT

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FIGURE 517

GGCACGAGCAGGCCCTGGCCGTGGCGAAAGAGCCGGCGGAGCCGGAGACCCGCTCCCGGAGACGCCGCCTCGCGA
TCCCCGCGCGGGCGGGACCGGGCGGCCGGCATC**ATG**ACCCTGTTTCACTTCGGGAACTGCTTCGCTCTTGCCTAC
TTCCCCTACTTCATCACCTACAAGTGCACCGACCTATCCGAGTACAACGCCTTCTGGAAATGCGTCCAGGCTGGA
GTCACCTACCTCTTTGTCCAACTCTGCAAGATGCTGTTCTTGGCCACTTTCTTTCCCACCTGGGAAGGCGGCATC
TATGACTTCATTGGGGAGTTCATGAAGGCCAGCGTGGATGTGGCAGACCTGATAGGTCTAAACCTTGTCATGTCC
CGGAATGCCGGCAAGGGAGAGTACAAGATCATGGTTGCTGCCCTGGGCTGGGCCACTGCTGAGCTTATTATGTCC
CGCTGCATTCCCCTATGGGTCGGAGCCCGGGGCATTGAGTTTGACTGGAAGTACATCCAGATGAGCATAGACTCC
AACATCAGTCTGGGTCCATACATCGTCGCGTCTGCTCAGGTCTGGATGATAACACGCTATGATCTGTACCACACC
TTCCGGCCAGCTGTCCTCCTGCTGATGTTCCTCAGAGTTTACAAGGCCTTTGTTATGGAGACGTTTGTCCACCTA
TGCTCGCTGGGCAGTTGGGCAGTTTTAATGGCGGGAGTAGTGGTTAAGGGGCTGCTGGTTATCAGAAATTTGGCC
ATGTATGTTGCCGTTGTCAATGTGCACTCC**TAG**GCTTGGTGTCTCAGACATTGATGTACCTTTTCCCTGCCTCGC
TCCAGGTTTTAGTGAAGTAAACAGTATTTGGAAAGTT

FIGURE 518

MTLFHFGNCFALAYFPYFITYKCTDLSEYNAFWKCVQAGVTYLFVQLCKMLFLATFFPTWEGGIYDFIGEFMKAS
VDVADLIGLNLVMSRNAGKGEYKIMVAALGWATAELIMSRCIPLWVGARGIEFDWKYIQMSIDSNISLGPYIVAS
AQVWMITRYDLYHTFRPAVLLLMFLRVYKAFVMETFVHLCSLGSWAVLMAGVVVKGLLVIRNLAMYVAVVNVHS

FIGURE 519

CGTATTGCTCGGCCCGGGGAGTTTCGCCCCCTGCCCGGCTCCGCGGCGCGGAGG**ATG**GCGTGGAAACGGCTGGGC
GCGCTGGTGATGTTCCCTCTACAGATGATCTATCTGGTGGTGAAAGCAGCCGTCGGACTGGTGCTGCCCGCCAAG
CTGCGGGACCTGTCGCGGGAGAACGTCCTCATCACCGGCGGCGGGAGAGGCATCGGGCGTCAGCTCGCCCGCGAG
TTCGCGGAGCGCGGCGCCAGAAAGATTGTTCTCTGGGGCCGGACTGAGAAATGCCTGAAGGAGACGACGGAGGAG
ATCCGGCAGATGGGCACTGAGTGCCATTACTTCATCTGTGATGTGGGCAACCGGGAGGAGGTGTACCAGACGGCC
AAGGCCGTCCGGGAGAAGGTGGGTGACATCACCATCCTGGTGAACAATGCCGCCGTGGTCCATGGGAAGAGCCTA
ATGGACAGTGATGATGATGCCCTCCTCAAGTCCCAACACATCAACACCCTGGGCCAGTTCTGGACCACCAAGGCC
TTCCTGCCGCGTATGCTGGAGCTGCAGAATGGCCACATCGTGTGCCTCAACTCCGTGCTGGCACTGTCTGCCATC
CCCGGTGCCATCGACTACTGCACATCCAAAGCGTCAGCCTTCGCCTTCATGGAGAGCCTGACCCTGGGGCTGCTG
GACTGTCCGGGAGTCAGCGCCACCACAGTGCTGCCCTTCCACACCAGCACCGAGATGTTCCAGGGCATGAGAGTC
AGGTTTCCCAACCTCTTTCCCCCACTGAAGCCGGAGACGGTGGCCCGGAGGACAGTGGAAGCTGTGCAGCTCAAC
CAGGCCCTCCTCCTCCTCCCATGGACAATGCATGCCCTCGTTATCTTGAAAAGCATACTTCCACAGGCTGCACTC
GAGGAGATCCACAAATTCTCAGGAACCTACACCTGCATGAACACTTTCAAAGGGCGGACA**TAG**AGACAGGATGAA
GACATGCTTGAGGAGCCACGGAGTTTGGGGGCCACAGCACCTGGGCACACACCCGAGCACCTGTCCATTGGCATG
CTTCTGCTGGGTGAGCAGGACAGCTCCTGTCCCCAGCGAAGAATCCGGCTGCCCCTGGGCCAGTCCCAGGACCTT
TGCACAGGACTGATGGGTGTAACTGACCCCCACAGGGAGGCAGGAAAACAGCCAGAAGCCACCTTGACACTTTTG
AACATTTCCAGTTCTGTAGAGTTTATTGTCAATTGCTTCTCAAGTCTAACCAGCCTCAGCAGTGTGCATAGACCA
TTTCCAGGAGGGTCTGTCCCCAGATGCTCTGCCTCCCGTTCCAAAACCCACTCATCCTCAGCTTGCACAAACTGG
TTGAACGGCAGGAATGAAAAATAAAGAGAGATGGCTTTTGTGAAAAAAAAA

FIGURE 520

MAWKRLGALVMFPLQMIYLVVKAAVGLVLPAKLRDLSRENVLITGGGRGIGRQLAREFAERGARKIVLWGRTEKC
LKETTEEIRQMGTECHYFICDVGNREEVYQTAKAVREKVGDITILVNNAAVVHGKSLMDSDDDALLKSQHINTLG
QFWTTKAFLPRMLELQNGHIVCLNSVLALSAIPGAIDYCTSKASAFAFMESLTLGLLDCPGVSATTVLPFHTSTE
MFQGMRVRFPNLFPPLKPETVARRTVEAVQLNQALLLLPWTMHALVILKSILPQAALEEIHKFSGTYTCMNTFKG
RT

FIGURE 521A

GTGGGGTGGGGTGGGGCTGGGGGCTTGTCGCCCTTTCAGGCTCCACCCTTTGCGGAGATTATAAATAGTCATGAT
CCCAGCGAGACCCAGAGATGCCTGTAATGGTGAGACTTTGGATCCTTCCTGAGGACGTGGAGAAAACTTTCTGCT
GAGAAGGACATTTTGAAGGTTTTGTTGGCTGAAAAAGCTGTTTCTGGAATCACCCCTAGATCTTTCTTGAAGACT
TGAATTAGATTACAGCG**ATG**GGGACACAGAAGGTCACCCCAGCTCTGATATTTGCCATCACAGTTGCTACAATCG
GCTCTTTCCAATTTGGCTACAACACTGGGGTCATCAATGCTCCTGAGAAGATCATAAAGGAATTTATCAATAAAA
CTTTGACGGACAAGGGAAATGCCCCACCCTCTGAGGTGCTGCTCACGTCTCTCTGGTCCTTGTCTGTGGCCATAT
TTTCCGTCGGGGGTATGATCGGCTCCTTTTCCGTCGGACTCTTCGTCAACCGCTTTGGCAGGCGCAATTCAATGC
TGATTGTCAACCTGTTGGCTGTCACTGGTGGCTGCTTTATGGGACTGTGTAAAGTAGCTAAGTCGGTTGAAATGC
TGATCCTGGGTCGCTTGGTTATTGGCCTCTTCTGCGGACTCTGCACAGGTTTTGTGCCCATGTACATTGGAGAGA
TCTCGCCTACTGCCCTGCGGGGTGCCTTTGGCACTCTCAACCAGCTGGGCATCGTTGTTGGAATTCTGGTGGCCC
AGATCTTTGGTCTGGAATTCATCCTTGGGTCTGAAGAGCTATGGCCGCTGCTACTGGGTTTTACCATCCTTCCTG
CTATCCTACAAAGTGCAGCCCTTCCATTTTGCCCTGAAAGTCCCAGATTTTTGCTCATTAACAGAAAAGAAGAGG
AGAATGCTAAGCAGATCCTCCAGCGGTTGTGGGGCACCCAGGATGTATCCCAAGACATCCAGGAGATGAAAGATG
AGAGTGCAAGGATGTCACAAGAAAAGCAAGTCACCGTGCTAGAGCTCTTTAGAGTGTCCAGCTACCGACAGCCCA
TCATCATTTCCATTGTGCTCCAGCTCTCTCAGCAGCTCTCTGGGATCAATGCTGTGTTCTATTACTCAACAGGAA
TCTTCAAGGATGCAGGTGTTCAAGAGCCCATCTATGCCACCATCGGCGCGGGTGTGGTTAATACTATCTTCACTG
TAGTTTCTCTATTTCTGGTGGAAAGGGCAGGAAGAAGGACTCTGCATATGATAGGCCTTGGAGGGATGGCTTTTT
GTTCCACGCTCATGACTGTTTCTTTGTTATTAAAGGATAACTATAATGGGATGAGCTTTGTCTGTATTGGGGCTA
TCTTGGTCTTTGTAGCCTTCTTTGAAATTGGACCAGGCCCCATTCCCTGGTTTATTGTGGCCGAACTCTTCAGCC
AGGGCCCCCGCCCAGCTGCGATGGCAGTGGCCGGCTGCTCCAACTGGACCTCCAACTTCCTAGTCGGATTGCTCT
TCCCCTCCGCTGCTCACTATTTAGGAGCCTACGTTTTTATTATCTTCACCGGCTTCCTCATTACCTTCTTGGCTT
TTACCTTCTTCAAAGTCCCTGAGACCCGTGGCAGGACTTTTGAGGATATCACACGGGCCTTTGAAGGGCAGGCAC
ACGGTGCAGATAGATCTGGAAAGGACGGCGTCATGGAGATGAACAGCATCGAGCCTGCTAAGGAGACCACCACCA
ATGTC**TAA**GTCGTGCCTCCTTCCACCTCCCTCCCGGCATGGGAAAGCCACCTCTCCCTCAACAAGGGAGAGACCT
CATCAGGATGAACCCAGGACGCTTCTGAATGCTGCTACTTAATTCCTTTCTCATCCCACGCACTCCATGAGCACC
CCAAGGCTGCGGTTTGTTGGATCTTCAATGGCTTTTTAAATTTTATTTCCTGGACATCCTCTTCTGCTTAGGAGA
GACCGAGTGAACCTACCTTCATTTCAGGAGGGATTGGCCGCTTGGCACATGACAACTTTGCCAGCTTTTCCTCCC
TTGGGTTCTGATATTGCCGCACTAGGGGATATAGGAGAGGAAAAGTAAGGTGCAGTTCCCCCAACCTCAGACTTA
CCAGGAAGCAGATACATATGAGTGTGGAAGCCGGAGGGTGTTTATGTAAGAGCACCTTCCTCACTTCCATACAGC
TCTACGTGGCAAATTAACTTGAGTTTTATTTATTTTATCCTCTGGTTTAATTACATAATTTTTTTTTTTTACTT
TAAGTTTCAGGATACATGTGCCGAATGTGCAGGTTTGTTACATAGGTATATATATGCCATGATGGAAATATTTAT
TTTTTTAAGCGTAATTTTGCCAAATAATAAAAACAGAAGGAAATTGAGATTAGAGGGAGGTGTTTAAAGAGAGGT
TATAGAGTAGAAGATTTGATGCTGGAGAGGTTAAGGTGCAATAAGAATTTAGGGAGAAATGTTGTTCATTATTGG
AGGGTAAATGATGTGGTGCCTGAGGTCTGTACGTTACCTCTTAACAATTTCTGTCCTTCAGATGGAAACTCTTTA
ACTTCTCGTAAAAGTCATATACCTATATAATAAAGCTACTGATTTCCTTGGAGCTTTTTTCTTTAAGATAATAGT
TTACATGTAGTAGTACTTGAAATCTAGGATTATTAACTAATATGGGCATTGTAGTTAATGATGGTTGATGGGTTC
TAATTTTGGATGGAGTCCAGGGAAGAGAAAGTGATTTCTAGAAAGCCTGTTCCCCTCACTGGATGAAATAACTCC
TTCTTGTAGTAGTCTCATTACTTTTGAAGTAATCCCGCCACCTATCTCGTGGGAGAGCCATCCAAATAAGAAACC
TAAAATAATTGGTTCTTGGTAGAGATTCATTATTTTTCCACTTTGTTCTTTAGGAGATTTTAGGTGTTGATTTTC
TGTTGTATTTTAACTCATACCTTTAAAGGAATTCCCCAAAGAATGTTTATAGCAAACTTGGAATTTGTAACCTCA
GCTCTGGGAGAGGATTTTTTTCTGAGCGATTATTATCTAAAGTGTGTTGTTGCTTTAGGCTCACGGCACGCTTGC
GTATGTCTGTTACCATGTCACTGTGGTCCTATGCCGAATGCCCTCAGGGGACTTGAATCTTTCCAATAAACCAGG
TTTAGACAGTATGAGTCAATGTGCAGTGTAGCCCACACTTGAGAGGATGAATGTATGTGCACTGTCACTTTGCTC
TGGGTGGAAGTACGTTATTGTTGACTTATTTTCTCTGTGTTTGTTCCTACAGCCCCTTTTTCATATGTTGCTCAG
TCTCCCTTTCCCTTCTTGGTGCTTACACATCTCAGACCCTTTAGCCAAACCCTTGTCAGTGACAGTATTTTGGTT
CTTAGTTCTCACTGTTCCCTCTGCTCCTGGAGCCTTTGAATAAAAATGCACGTAGCTGAGGCCGGATGCGGTGGC
TCACGCCTGTAATCCCAGCACTTTGGGAGGCCTAGGCGGGCGGTCAGGGGTTCGAGACCAGTCTGGCCAACATCG
TGAAACCCTGTCTCTACTAAAAATGCAAAAATTAGCCGGGCGTGGTGGCGGGCGCCTGTAATCCCAGCTACTTGG

FIGURE 521B

GAAGCTGAGGCGGGAGAATCATGTGAACCCGGGACGCAGGGGTTGCAGTGAGCGGAGATCGCATCATTGCACTCT
AGCCTGGGCCACAGGGCGAGACTCCGTCTCAAAAAAAAAAAAAATGCACATAGCTATCGAGTGTGCTTTAGCTTGA
AAAGGTGACCTTGCAACTTCATGTCAACTTTCTGGCTCCTCAAACAGTAGGTTGGCAGTAAGGCAGGGTCCCATT
TCTCACTGAGAAGATTGTGAATATTTCCATATGGATTTTCTATTGTTACTCTGGTTCTTTGTTTTAAAATAAAAA
TTCTGAATGTACACG

FIGURE 522

MGTQKVTPALIFAITVATIGSFQFGYNTGVINAPEKIIKEFINKTLTDKGNAPPSEVLLTSLWSLSVAIFSVGGM
IGSFSVGLFVNRFGRRNSMLIVNLLAVTGGCFMGLCKVAKSVEMLILGRLVIGLFCGLCTGFVPMYIGEISPTAL
RGAFGTLNQLGIVVGILVAQIFGLEFILGSEELWPLLLGFTILPAILQSAALPFCPESPRFLLINRKEEENAKQI
LQRLWGTQDVSQDIQEMKDESARMSQEKQVTVLELFRVSSYRQPIIISIVLQLSQQLSGINAVFYYSTGIFKDAG
VQEPIYATIGAGVVNTIFTVVSLFLVERAGRRTLHMIGLGGMAFCSTLMTVSLLLKDNYNGMSFVCIGAILVFVA
FFEIGPGPIPWFIVAELFSQGPRPAAMAVAGCSNWTSNFLVGLLFPSAAHYLGAYVFIIFTGFLITFLAFTFFKV
PETRGRTFEDITRAFEGQAHGADRSGKDGVMEMNSIEPAKETTTNV

FIGURE 523

CGGCGCCGGGGACCGCTGCCACCCCGCCTAGCGCAGCGCCCCGTCCTTCCGCAGCCCAACCGCCTCTTCCCGCCC
CGCCCCATCCCGCCCACGGGCTCCAGTGGGCGGGACCAGAGGAGTCCCGCGTTCGGGGAGTATGTCAAGGCCGTG
ACCCGTGTATTATTGTCCGAGTGGCCGGAACGGGAGCCAAC**ATG**GCAGCGGGGTTCGGGCGATGCTGCAGGGTCC
TGAGAAGTATTTCTCGTTTTCATTGGAGATCACAGCATACAAAAGCCAATCGACAACGTGAACCAGGATTAGGAT
TTAGTTTTGAGTTCACCGAACAGCAGAAAGAATTTCAAGCTACTGCTCGTAAATTTGCCAGAGAGGAAATCATCC
CAGTGGCTGCAGAATATGATAAAACTGGTGAATATCCAGTCCCCCTAATTAGAAGAGCCTGGGAACTTGGTTTAA
TGAACACACACATTCCAGAGAACTGTGGAGGTCTTGGACTTGGAACTTTTGATGCTTGTTTAATTAGTGAAGAAT
TGGCTTATGGATGTACAGGGGTTCAGACTGCTATTGAAGGAAATTCTTTGGGGCAAATGCCTATTATTATTGCTG
GAAATGATCAACAAAAGAAGAAGTATTTGGGGAGAATGACTGAGGAGCCATTGATGTGTGCTTATTGTGTAACAG
AACCTGGAGCAGGCTCTGATGTAGCTGGTATAAAGACCAAAGCAGAAAAGAAAGGAGATGAGTATATTATTAATG
GTCAGAAGATGTGGATAACCAACGGAGGAAAAGCTAATTGGTATTTTTTATTGGCACGTTCTGATCCAGATCCTA
AAGCTCCTGCTAATAAAGCCTTTACTGGATTCATTGTGGAAGCAGATACCCCAGGAATTCAGATTGGGAGAAAGG
AATTAAACATGGGCCAGCGATGTTCAGATACTAGAGGAATTGTCTTCGAAGATGTGAAAGTGCCTAAAGAAAATG
TTTTAATTGGTGACGGAGCTGGTTTCAAAGTTGCAATGGGAGCTTTTGATAAAACCAGACCTGTAGTAGCTGCTG
GTGCTGTTGGATTAGCACAAAGAGCTTTGGATGAAGCTACCAAGTATGCCCTGGAAAGGAAAACTTTCGGAAAGC
TACTTGTAGAGCACCAAGCAATATCATTTATGCTGGCTGAAATGGCAATGAAAGTTGAACTAGCTAGAATGAGTT
ACCAGAGAGCAGCTTGGGAGGTTGATTCTGGTCGTCGAAATACCTATTATGCTTCTATTGCAAAGGCATTTGCTG
GAGATATTGCAAATCAGTTAGCTACTGATGCTGTGCAGATACTTGGAGGCAATGGATTTAATACAGAATATCCTG
TAGAAAAACTAATGAGGGATGCCAAAATCTATCAGATTTATGAAGGTACTTCACAAATTCAAAGACTTATTGTAG
CCCGTGAACACATTGACAAGTACAAAAAT**TAA**AAAAATTACTGTAGAAATATTGAATAACTAGAACACAAGCCAC
TGTTTCAGCTCCAGAAAAAAGAAAGGGCTTTAACGTTTTTTCCAGTGAAAACAAATCCTCTTATATTAAATCTAA
GCAACTGCTTATTATAGTAGTTTATACTTTTGCTTAACTCTGTTATGTCTCTTAAGCAGGTTTGGTTTTTATTAA
AATGATGTGTTTTCTTTAGTACCACTTTACTTGAATTACATTAACCTAGAAAACTACATAGGTTATTTTGATCTC
TTAAGATTAATGTAGCAGAAATTTCTTGGAATTTTATTTTTGTAATGACAGAAAAGTGGGCTTAGAAAGTATTCA
AGATGTTACAAAATTTACATTTAGAAAATATTGTAGTATTTGAATACTGTCAACTTGACAGTAACTTTGTAGACT
TAATGGTATTATTAAAGTTCTTTTTATTGCAGTTTGGAAAGCATTTGTGAAACTTTCTGTTTGGCACAGAAACAG
TCAAAATTTTGACATTCATATTCTCCTATTTTACAGCTACAAGAACTTTCTTGAAAATCTTATTTAATTCTGAGC
CCATATTTCACTTACCTTATTTAAAATAAATCAATAAAGCTTGCCTTAAATTATTTTTATATGACTGTTGGTCTC
TAGGTAGCCTTTGGTCTATTGTACACAATCTCATTTCATATGTTTGCATTTTGGCAAAGAACTTAATAAAATTGT
TCAGTGCTTATTATCAT

FIGURE 524

MAAGFGRCCRVLRSISRFHWRSQHTKANRQREPGLGFSFEFTEQQKEFQATARKFAREEIIPVAAEYDKTGEYPV
PLIRRAWELGLMNTHIPENCGGLGLGTFDACLISEELAYGCTGVQTAIEGNSLGQMPIIIAGNDQQKKKYLGRMT
EEPLMCAYCVTEPGAGSDVAGIKTKAEKKGDEYIINGQKMWITNGGKANWYFLLARSDPDPKAPANKAFTGFIVE
ADTPGIQIGRKELNMGQRCSDTRGIVFEDVKVPKENVLIGDGAGFKVAMGAFDKTRPVVAAGAVGLAQRALDEAT
KYALERKTFGKLLVEHQAISFMLAEMAMKVELARMSYQRAAWEVDSGRRNTYYASIAKAFAGDIANQLATDAVQI
LGGNGFNTEYPVEKLMRDAKIYQIYEGTSQIQRLIVAREHIDKYKN

FIGURE 525A

CCAGGGTGATGCTGAAGATGATGACCTTCTTCCAAGGCCTCTAGAGCCATCAGCCTGTGCCAGGCACCCTCGACT
TGCCTAGAGGCCCCCAAAAGTTGCAGTCCACATCAGAGGCAGAGTCAGAGGCCTCC**ATG**TCGGAGGCCTCCTCTG
AGGACCTGGTGCCACCCCTGGAGGCTGGGGCAGCCCCATATAGGGAGGAGGAAGAGGCGGCGAAGAAGAAGAAGG
AGAAGAAGAAGAAGTCCAAAGGCCTGGCCAATGTGTTCTGCGTCTTCACCAAAGGGAAGAAGAAGAAGGGTCAGC
CCAGCTCAGCGGAGCCCGAGGACGCAGCCGGGTCCAGGCAGGGGCTGGATGGCCCGCCCCCCACAGTGGAGGAGC
TGAAGGCGGCGCTGGAGCGCGGGCAGCTGGAGGCGGCGCGGCCGCTGCTGGCGCTGGAGCGGGAGCTGGCGGCGG
CGGCGGCGGCGGGCGGTGTGAGCGAGGAGGAGCTGGTGCGGCGCCAGAGCAAGGTGGAGGCGCTGTACGAGCTGC
TGCGCGACCAGGTGCTGGGCGTGCTGCGGCGGCCGCTGGAGGCGCCGCCCGAGCGGCTGCGCCAGGCGCTGGCCG
TGGTGGCGGAGCAGGAGCGCGAGGACCGCCAGGCGGCGGCGGCGGGGCCGGGGACCTCGGGGCTGGCGGCCACGC
GCCCGCGGCGCTGGCTGCAGCTGTGGCGGCGCGGCGTGGCGGAGGCGGCCGAGGAGCGCATGGGCCAGCGGCCGG
CCGCGGGCGCCGAGGTCCCCGAGAGCGTCTTTCTGCACTTGGGCCGCACCATGAAGGAGGACCTGGAGGCCGTGG
TGGAGCGGCTGAAGCCGCTGTTCCCCGCCGAGTTCGGCGTCGTGGCGGCCTACGCCGAGAGCTACCACCAGCACT
TCGCGGCCCACCTGGCCGCCGTGGCGCAGTTCGAGCTGTGCGAGCGCGACACCTACATGCTGCTGCTCTGGGTGG
AGAACCTCTACCCCAATGACATCATCAACAGCCCCAAGCTGGTGGGTGAGCTGCAGGGTATGGGGCTCGGGAGCC
TCCTGCCCCCCAGGCAGATCCGACTGCTGGAGGCCACATTCCTGTCCAGTGAGGCGGCCAATGTGAGGGAGTTGA
TGGACCGAGCTCTGGAGCTAGAGGCACGGCGCTGGGCTGAGGATGTGCCTCCCCAGAGGCTGGACGGCCACTGCC
ACAGCGAGCTGGCCATCGACATCATCCAGATCACCTCCCAGGCCCAGGCCAAGGCCGAGAGCATCACGCTGGACT
TGGGCTCACAGATAAAGCGGGTGCTGCTGGTGGAGCTGCCTGCGTTCCTGAGGAGCTACCAGCGCGCCTTTAATG
AATTTCTGGAGAGAGGCAAGCAGCTGACGAATTACAGGGCCAATGTTATTGCCAACATCAACAACTGCCTGTCCT
TCCGGATGTCCATGGAGCAGAATTGGCAGGTACCCCAGGACACCCTGAGCCTCCTGCTGGGCCCCCTGGGTGAGC
TCAAGAGCCACGGCTTTGACACCCTGCTCCAGAACCTGCATGAGGACCTGAAGCCACTGTTCAAGAGGTTCACGC
ACACCCGCTGGGCGGCCCCTGTGGAGACCCTGGAAAACATCATCGCCACTGTAGACACGAGGCTGCCTGAGTTCT
CAGAGCTGCAGGGCTGTTTCCGGGAGGAGCTCATGGAGGCCTTGCACCTGCACCTGGTGAAGGAGTACATCATCC
AACTCAGCAAGGGGCGCCTGGTCCTCAAGACGGCCGAGCAGCAGCAGCAGCTGGCTGGGTACATCCTGGCCAATG
CTGACACCATCCAGCACTTCTGCACCCAGCACGGCTCCCCGGCGACCTGGCTGCAGCCTGCTCTCCCTACGCTGG
CCGAGATCATTCGCCTGCAGGACCCCAGTGCCATCAAGATTGAGGTGGCCACTTATGCCACCTGCTACCCTGACT
TCAGCAAAGGCCACCTGAGCGCTATCCTGGCCATCAAGGGGAACCTATCCAACAGTGAGGTCAAGCGCATCCGGA
GCATCTTGGACGTCAGCATGGGGGCGCAGGAGCCCTCCCGGCCCCTATTTTCCCTTATAAAGGTTGGT**TAG**CTTT
TCCTGTGGCCTGACCTGCCTGTGAGTGCCCAGCAAGCCTTGGGCACACCCCGCTGGGAGCTGTTAAGAGCAGCGC
TGGTTCTCGGTTCCTCCCGGGTCTCCTGTGCTCTGATGCTACTTCTGCCTAGCCCTGGCGGAGGTGCAGGCCCTG
TCAGCTGGAACTGGACAGACCTTGGTTTGTTTACATGTCCGATGGGGGCAGGAGCTCCCATCCTGGGCAGCCAAC
CAGGCAACACCAAGGACTCTTTGTAAACGATAGCTGATCGTGTGCACGCAAGGAAAGAACCAGGAGGGAGAGTGC
AGCCAGGCTCAGGGATCCCCGGACACCTCTGTCCAGAGCCCCTCCACAGTCGGCCTCATGACTGTCCTCCTCGTG
GGTGGGGCCGAGGGCCCTCTTCAGCTCTCTGGAGACAGGGGCCGAGCCTCACCCATCTGCCCTCTGCAGCCCAGG
GCCGCCGTGAGCGGGATTCAGCAATGGTGGAATGGAAGACAGAACTGGAAGAGAAAGAAGGAAAAGATGAGCTCT
CGTCTGGCAGGGGCTTTTAGGGTCCTGTGGCGAGCTGTGAGCACCGCCAGCGTTAGACGTCACATCCAGGTGGCC
CCACGGCCCCTACAGGCTGGCCCTGCAATGGGGCCCTGAGCCCTCCCTCTTCATCCCCCAAGGCCTCAACTAGAG
GGTGGTCCCCCGAGGGCTTGGTGTCTACTACCGAAGGGCCCAAGACCTCCTGGGTCCTCTCAGGCTCCCCCTTCC
CCAAGGCAGGGACAGGCCCTGGGGGTGCCACCGTGGGCCCTGCCACCCAGAAGTCTGGCTGAGGTCTGGGCAGGG
GCAGGGCAAGCTTGACCTCTCACTGTTGACCCTTTGGCCTCTGTATTTGTTTCCTATTGCCGTGACAGGTTTCCA
CAAACTTCGTGGATCAAAACGAGGTCTTCCAGTTCTGCGGGTCAGAAGGCTGACCTGGGGCTCAAATCTGGGTGT
CGGCAGTCCTGCACTCCTTCTGGAGGCTCTAGGGGAGAATTCATTTCTGGCCTTTTCATTTTTAGAGGCTGACCG
TAATTCTTGACTTCAGGCTCCTCCATCTTCAGAGCCAGCTGTGGGTAGTTGAATCTTTTTCCCGTCACCTCATTG
AGGCCTCCCCTCTCCTGCCTCCCTCCACCACTTTTTTTTTTTTTTTTTTGAGACAGGGTCTTGCTGTGTTGCCCA
GGCTGGAGTGCAGTGGCCTGGTCATGGCATCAAGGCTCACTGCAGCCTGGACCTCCTGGTTCAAGTGATCCTCTT
GTCTCAGTCCCCTGAGACAATCCCCCACGCCCAGCTACATATTTTTGTGGATACAGGGTCTCATTCTGTTGCCTA
GGCTTGTCTGGAACTCCTGGGCTCAAGGGATCTTGTAGCCTTAGCCTCCTAAAGTGCTGGGATTATAGGCATGAG
TCACTCGTACCCGGCCTGCTCTACCGCTTTTAAGGACGCTTATGATCACATTGCGCCTACCCAGAGAACCCAGGT

FIGURE 525B

CGTCTTTCTATTTTCAGGTCAGCTGATTAGCCACCTTAGTTCCATCTGCAACTTTAGTTCCCACTGGCTGTGTAA
CCTAACATAGTCACAGGCTCTGGGGACTGTCACGTGGACATCTTTGGGAGGCCGTTATTCTGCCCACCGCACCCT
CCGTTCATCCCCTGCCCTGCCGGGCACCTCGCTCTACCCCAGGAAAATGTGAGCTCGTTTTCCTGCTCGGCATGT
GCTCCCCCTAAGGCTCTGCTCCTCCCTGGGCCTGAAAGTTCCTTCTCAGCCTGAGAGGGGGCCCTTCGATCTCAG
GCATGACTCAGCCCGGCTGATGCCTCTGCAGTGCTGAGTCAGGATTTGGGGCCGGCTCTCTTGGGTCTGTCCCCT
TTTCCCAGGTACTGCCTTACAAAGCTGTGGCCAGGAAGTGGCCGGTATAAAGGATGCCCAAGGTCTTTGTACGTG
TGTAGGAGTTAGCGTGTTTGATATTGTTAATATAATAATAATTATTTTTTAGAGTACTGCTTTTGTATGTATGTT
GAACAGGATCCAGGTTTTTATAGCTTGATATAAAACAGAATTCAAAAGTGAAAAA

FIGURE 526

MSEASSEDLVPPLEAGAAPYREEEEAAKKKKEKKKKSKGLANVFCVFTKGKKKKGQPSSAEPEDAAGSRQGLDGP
PPTVEELKAALERGQLEAARPLLALERELAAAAAAGGVSEEELVRRQSKVEALYELLRDQVLGVLRRPLEAPPER
LRQALAVVAEQEREDRQAAAAGPGTSGLAATRPRRWLQLWRRGVAEAAEERMGQRPAAGAEVPESVFLHLGRTMK
EDLEAVVERLKPLFPAEFGVVAAYAESYHQHFAAHLAAVAQFELCERDTYMLLLWVENLYPNDIINSPKLVGELQ
GMGLGSLLPPRQIRLLEATFLSSEAANVRELMDRALELEARRWAEDVPPQRLDGHCHSELAIDIIQITSQAQAKA
ESITLDLGSQIKRVLLVELPAFLRSYQRAFNEFLERGKQLTNYRANVIANINNCLSFRMSMEQNWQVPQDTLSLL
LGPLGELKSHGFDTLLQNLHEDLKPLFKRFTHTRWAAPVETLENIIATVDTRLPEFSELQGCFREELMEALHLHL
VKEYIIQLSKGRLVLKTAEQQQQLAGYILANADTIQHFCTQHGSPATWLQPALPTLAEIIRLQDPSAIKIEVATY
ATCYPDFSKGHLSAILAIKGNLSNSEVKRIRSILDVSMGAQEPSRPLFSLIKVG

FIGURE 527

GACTCTCCAGTCCTCAGTCACCTTGGACAAAGAAGTGTGGATCCTCAGATTCCATCTTTTCCAACTCCAAGGTGC
C**ATG**GCAGAGAAGGTGCTGGTAACAGGTGGGGCTGGCTACATTGGCAGCCACACGGTGCTGGAGCTGCTGGAGGC
TGGCTACTTGCCTGTGGTCATCGATAACTTCCATAATGCCTTCCGTGGAGGGGGCTCCCTGCCTGAGAGCCTGCG
GCGGGTCCAGGAGCTGACAGGCCGCTCTGTGGAGTTTGAGGAGATGGACATTTTGGACCAGGGAGCCCTACAGCG
TCTCTTCAAAAAGTACAGCTTTATGGCGGTCATCCACTTTGCGGGGCTCAAGGCCGTGGGCGAGTCGGTGCAGAA
GCCTCTGGATTATTACAGAGTTAACCTGACCGGGACCATCCAGCTTCTGGAGATCATGAAGGCCCACGGGGTGAA
GAACCTGGTGTTCAGCAGCTCAGCCACTGTGTACGGGAACCCCCAGTACCTGCCCCTTGATGAGGCCCACCCCAC
GGGTGGTTGTACCAACCCTTACGGCAAGTCCAAGTTCTTCATCGAGGAAATGATCCGGGACCTGTGCCAGGCAGA
CAAGACTTGGAACGTAGTGCTGCTGCGCTATTTCAACCCCACAGGTGCCCATGCCTCTGGCTGCATTGGTGAGGA
TCCCCAGGGCATACCCAACAACCTCATGCCTTATGTCTCCCAGGTGGCGATCGGGCGACGGGAGGCCCTGAATGT
CTTTGGCAATGACTATGACACAGAGGATGGCACAGGTGTCCGGGATTACATCCATGTCGTGGATCTGGCCAAGGG
CCACATTGCAGCCTTAAGGAAGCTGAAAGAACAGTGTGGCTGCCGGATCTACAACCTGGGCACGGGCACAGGCTA
TTCAGTGCTGCAGATGGTCCAGGCTATGGAGAAGGCCTCTGGGAAGAAGATCCCGTACAAGGTGGTGGCACGGCG
GGAAGGTGATGTGGCAGCCTGTTACGCCAACCCCAGCCTGGCCCAAGAGGAGCTGGGGTGGACAGCAGCCTTAGG
GCTGGACAGGATGTGTGAGGATCTCTGGCGCTGGCAGAAGCAGAATCCTTCAGGCTTTGGCACGCAAGCC**TGA**GG
ACCCTCCCCTACCAAGGACCAGGAAAAGCAGCAGCTGCCTGCTCTCCAGCCTCTGGAGGAACTCAGGGCCCTGGA
GCTGCTGGGGCCAAGCCAAGGGCCTCCCCTACCTCAAACCCCAGCTGGGCCCGCTTAGCCCACCAGGCATGAGGC
CAAGGCTCCACTGACCAGGAGGCCGAGGTCTCTAACTCTTATCTTCCACAGGGTCCAAGAGTTCATCAGGACCCC
CAAGAGTGAGTGAGGGGGCAAGGCTCTGGCACAAAACCTCCTCCTCCCAGGCACTCATTTATATTGCTCTGAAAG
AGCTTTCCAAAGTATTTAAAAATAAAAACAAGTTTTCTTACACTGG

FIGURE 528

MAEKVLVTGGAGYIGSHTVLELLEAGYLPVVIDNFHNAFRGGGSLPESLRRVQELTGRSVEFEEMDILDQGALQR
LFKKYSFMAVIHFAGLKAVGESVQKPLDYYRVNLTGTIQLLEIMKAHGVKNLVFSSSATVYGNPQYLPLDEAHPT
GGCTNPYGKSKFFIEEMIRDLCQADKTWNVVLLRYFNPTGAHASGCIGEDPQGIPNNLMPYVSQVAIGRREALNV
FGNDYDTEDGTGVRDYIHVVDLAKGHIAALRKLKEQCGCRIYNLGTGTGYSVLQMVQAMEKASGKKIPYKVVARR
EGDVAACYANPSLAQEELGWTAALGLDRMCEDLWRWQKQNPSGFGTQA

FIGURE 529

CGAGCCCCGCCGAACCGAGGCCACCCGGAGCCGTGCCCAGTCCACGCCGGCCGTGCCCGGCGGCCTTAAGAACCA
GGCAACCTCTGCCTTCTTCCCTCTTCCACTCGGAGTCGCGCTCCGCGCGCCCTCACTGCAGCCCCTGCGTCGCCG
GGACCCTCGCGCGCGACCAGCCGAATCGCTCCTGCAGCAGAGCCAAC**ATG**CCCATCACTCGGATGCGCATGAGAC
CCTGGCTAGAGATGCAGATTAATTCCAACCAAATCCCGGGGCTCATCTGGATTAATAAAGAGGAGATGATCTTCC
AGATCCCATGGAAGCATGCTGCCAAGCATGGCTGGGACATCAACAAGGATGCCTGTTTGTTCCGGAGCTGGGCCA
TTCACACAGGCCGATACAAAGCAGGGGAAAAGGAGCCAGATCCCAAGACGTGGAAGGCCAACTTTCGCTGTGCCA
TGAACTCCCTGCCAGATATCGAGGAGGTGAAAGACCAGAGCAGGAACAAGGGCAGCTCAGCTGTGCGAGTGTACC
GGATGCTTCCACCTCTCACCAAGAACCAGAGAAAAGAAAGAAAGTCGAAGTCCAGCCGAGATGCTAAGAGCAAGG
CCAAGAGGAAGTCATGTGGGGATTCCAGCCCTGATACCTTCTCTGATGGACTCAGCAGCTCCACTCTGCCTGATG
ACCACAGCAGCTACACAGTTCCAGGCTACATGCAGGACTTGGAGGTGGAGCAGGCCCTGACTCCAGCACTGTCGC
CATGTGCTGTCAGCAGCACTCTCCCCGACTGGCACATCCCAGTGGAAGTTGTGCCGGACAGCACCAGTGATCTGT
ACAACTTCCAGGTGTCACCCATGCCCTCCACCTCTGAAGCTACAACAGATGAGGATGAGGAAGGGAAATTACCTG
AGGACATCATGAAGCTCTTGGAGCAGTCGGAGTGGCAGCCAACAAACGTGGATGGGAAGGGGTACCTACTCAATG
AACCTGGAGTCCAGCCCACCTCTGTCTATGGAGACTTTAGCTGTAAGGAGGAGCCAGAAATTGACAGCCCAGGGG
GGGATATTGGGCTGAGTCTACAGCGTGTCTTCACAGATCTGAAGAACATGGATGCCACCTGGCTGGACAGCCTGC
TGACCCCAGTCCGGTTGCCCTCCATCCAGGCCATTCCCTGTGCACCG**TAG**CAGGGCCCCTGGGCCCCTCTTATTC
CTCTAGGCAAGCAGGACCTGGCATCATGGTGGATATGGTGCAGAGAAGCTGGACTTCTGTGGGCCCCTCAACAGC
CAAGTGTGACCCCACTGCCAAGTGGGGATGGGCCTCCCTCCTTGGGTCATTGACCTCTCAGGGCCTGGCAGGCCA
GTGTCTGGGTTTTTCTTGTGGTGTAAAGCTGGCCCTGCCTCCTGGGAAGATGAGGTTCTGAGACCAGTGTATCAG
GTCAGGGACTTGGACAGGAGTCAGTGTCTGGCTTTTTCCTCTGAGCCCAGCTGCCTGGAGAGGGTCTCGCTGTCA
CTGGCTGGCTCCTAGGGGAACAGACCAGTGACCCCAGAAAAGCATAACACCAATCCCAGGGCTGGCTCTGCACTA
AGCGAAAATTGCACTAAATGAATCTCGTTCCAAAGAACTACCCCTTTTCAGCTGAGCCCTGGGGACTGTTCCAAA
GCCAGTGAATGTGAAGGAAACTCCCCTCCTTCGGGGCAATGCTCCCTCAGCCTCAGAGGAGCTCTACCCTGCTCC
CTGCTTTGGCTGAGGGGCTTGGGAAAAAAACTTGGCACTTTTTCGTGTGGATCTTGCCACATTTCTGATCAGAGG
TGTACACTAACATTTCCCCCGAGCTCTTGGCCTTTGCATTTATTTATACAGTGCCTTGCTCGGGGCCCACCACCC
CCTCAAGCCCCAGCAGCCCTCAACAGGCCCAGGGAGGGAAGTGTGAGCGCCTTGGTATGACTTAAAATTGGAAAT
GTCATCTAACCATTAAGTCATGTGTGAACACATAAGGACGTGTGTAAATATGTACATTTGTCTTTTTATAAAAAG
TAAAATTGTT

FIGURE 530

MPITRMRMRPWLEMQINSNQIPGLIWINKEEMIFQIPWKHAAKHGWDINKDACLFRSWAIHTGRYKAGEKEPDPK
TWKANFRCAMNSLPDIEEVKDQSRNKGSSAVRVYRMLPPLTKNQRKERKSKSSRDAKSKAKRKSCGDSSPDTFSD
GLSSSTLPDDHSSYTVPGYMQDLEVEQALTPALSPCAVSSTLPDWHIPVEVVPDSTSDLYNFQVSPMPSTSEATT
DEDEEGKLPEDIMKLLEQSEWQPTNVDGKGYLLNEPGVQPTSVYGDFSCKEEPEIDSPGGDIGLSLQRVFTDLKN
MDATWLDSLLTPVRLPSIQAIPCAP

FIGURE 531A

CTGGGCCAGGCGCCGGGGCAGGAAGGGAGGCGGCCGCCGTGGCCATTCTTAAAGGCGCCCGAGTGTAGGCGACAG
GCCGCTGACGGCGGGAAGGAAA**ATG**AGTGAGTCTTTGGTTGTTTGTGATGTTGCCGAAGATTTAGTGGAAAAGCT
GAGAAAGTTTCGTTTTCGCAAAGAAACGAACAACGCTGCTATTATAATGAAGATTGACAAGGATAAACGCCTGGT
GGTACTGGATGAGGAGCTTGAGGGCATTTCACCAGATGAACTTAAAGATGAACTACCTGAACGACAACCTCGCTT
CATTGTGTATAGTTATAAATATCAACATGATGATGGAAGAGTTTCATATCCTCTGTGCTTTATTTTCTCCAGTCC
TGTTGGATGTAAGCCTGAACAACAGATGATGTATGCTGGAAGTAAGAATAAGCTAGTCCAGACAGCTGAACTAAC
CAAGGTATTTGAAATAAGAAATACCGAAGACCTAACTGAAGAATGGTTACGTGAGAAACTTGGATTTTTTCAC**TA**
ATGTGAACTTCTGTGTTTCTAAAGTATTTATGTATTAACCTGACCATACTGGAATCAGACATAAATACTTATTTA
TGCCTAAAAATGCACTGTTACTTACAGTTTGTTTCCTGCAGTAAAGAAAAATTCTTCATTTGTGCAAAATTTGAA
CAAAGAGGAAATCATCTTCATAGTAATGAAACTTTGTAAAGTGTTTCCTTATATTGGTAATTGTTAGGTGGACTA
CTTTTCTCCAGGGACTTTTTGCACTCTTGTGACTAATTTCTATAACTTATGGTTCGGAATTTGTTACTATTTACA
GACACCATTGGAAAGTGGATATATTAGATTGTGAGAGACAACAGTTGCCTCCTTTTGACAAATACTGGATATTAG
CAGTTTATTTATGAAAATAGCGTATTATCACTTGTCAAATCATTGAAATTCATTTGGGGTCAAAGACTTGAGTGA
CCCAGTATTGAGCCATGAATAATTTAGTGTAACCTGTATTACAAGTACATTGATGAATTCTGTATCTTCTTTGGT
TTCCTGTATCTTTTTAATCAAGTCTAGAAACTATGTTCATCAGTCACTCATTTTTAAGGTCGGGAGTTAGATTTT
ATGATAGAATTATGACTGTTAGCTTTTCTCCTTATAGCATCTTAGTCTTAGAAATTGGTGGGTTGTAATAATCAA
GGGCTTCATTCCTTTTATGTCATTTCTAGACAGTTTTGAATCTAGGTTAATAACACTTTATTTATAAAGCACCTC
AATGTCCTGTGAACACTAATTATTTTAAATGTGTTAATACTGTGCCTTTGATTTGTTAGCTTTAAAGTTAGTTTA
AGACTTTTACACTGCCAGTATTCCACATTTGGTGAAATTAATACTTTTTTAAAGGGTCCAAATAAAATAATTTTC
TAATGTGTATATCTGAAATTTGTAATAAAATCAACTTCATATTTTAAAAATTCCAACTATCTGCTTGCATTGGTG
TAATATATGGCAGTCGAGAGTTATAATTTTGGGTATACTTGTGGTTAGTTTTGTGCCATAGGAAAAAATTATCTT
AAAACTTTGGCCATAGTTAATAACATTAACACTTCAATAGCAATCACATCTTATATCCTAAATGTCAGAAGATAT
TCTGAACTGGATGCCTGAATAGTTAACTAAACCAGTCTTGGTTAGATGATGGTACTCTTGGCATAAAGCGTAGGA
TTCTGATATTTGGCATACTTGTAAAAACAAATACATAAGTAACCATTGAACATTAATTTGATAATAGGTCTAGAG
ACTCTAAAAACTAACCAAACTTGGTGAGTGTATTCTTATATTAAGAATATCTTAGTCATCTCAAAACTAGCAAAA
TTTAAATTTTGGCATGTTTTCCATTCATATGTTCTTTGCATTTTATTTTTGAGGTTTCTGTGAGAAGTAAAGATA
GTTGGAATTTTTGCGATATTGAATAGAACATCTTCTGTTCCCAACACTGTTTGGCTTCACTAATTTAGAAGTCAG
GAAGCAATAGAAAGTTGGAGATGAGGAAGTGCTAGAGTAGGTGTTTGTTTTGGTTCTTGGAGGGAAAAGATTCTT
TATTCCAATTTCCAGAGAGAAGAGAAAACTCACCCAGGAAGTTTAAAAATTCTTTAAACAGGTATTTTGATATTG
GAGAATAACATGCATATAATTCTGTAGGAATGCACATGTAATCCAAGTGAGTGGAGAGTGTTTTTAATGTTTTTG
AATGAAGGAAATGAGGTTTTGTTTCACCTGTTTTGCAGCAGTAAGAGAAACTAGTGCTGCAAGAATGTATTTTTT
AATGAAGTTCCTTATTTTGTCTTGCATGTTTTAGTTTTGCTTATTTTTAAATTTGGAGGTCCTCCATAATGTCAG
ATAATATTGACCTGCCATACGTTAGCACTCTTAGTTCCGCTACTGTCTTTAACAGGAGCAAAGAGCTGTGATAAA
CCATGCTTTTTTGAGCTTGTCTGACTCCTAATTAATAACATGTTTTTGGCAAGACAACAGATTGAGGTTAGAGGA
TCAGTAGGACATTTTTATTCCATCTGTCCTATGGGGAAATTTACAAATCCCGTGCTCTAAAATGTTCTCAAACAT
TTATATAGATTTCCCTTTCATCTTACTAAATTTTGCATTGTTCTTTTCAAGTATGTTTCGTATTTACTGTCTTTT
TTTCTGCCATTTCCCAAATAATAACTCCAGATTTCATAATTCCAGTTTTTACATTCCGTTATCTTTCTGGTACAA
CCATTCCCATTCAGCCTTAAATCTGAGTCCTTTTTAGCAGCAACTTTTTTCCTGGGATCCTCCTTCGTGGTCTTC
TAAGTCAGTGTTAGTTTTGAAATTTTTGGCCCTGCATAAGTTCTGCATAGCATCTAATGTCAAAATAGAACCAAC
TGGTAATCACAGTATTATTTAGTGTGGTTTCCATGACAACAAAAATACATACGAAGAAAACTTCTCAGGTTACTA
TGCTGAAATTCCAAAATGTCTGAGTTTTGAATAGTGATCACTTTGTTCTGGTATTGACGCAATTATATTAGGAAA
AAAGTTGGTTGACTGTTTTTGTTTAATTGACTTCTAAAATGTTCAAATTGTCTAGTTCTAAAAGTTTACTAAATG
CCTAGTGCAGTTAAACATACTCTTGTTTAAGTGTGTGTTGCTAAATTTTTTACTGTCATTACTAAATAATCTGTG
TGGCAAAATGTGTGTCAGCACTTTTCCCTCCTTTTTTATCTCCTATTTTCAGGAGTCAAATGTAGCCATAAACTG
TATCCTTGTCTGACACTTTAGCTAAAAATTTCCAGTTAGGGGAGTTTATTGCCAAATTAAATTTGGCTGTTCCCC
CCAACCCATATAGATATTAAGGAAGGTGTACTTAAAAAATGTTTGGACTGCTTTTAAAACCTGAGCAATGTCATT
AATCCATATGTGGACTAGTGATGAATAGATATTTTCATAAGAGTTTAAATGACTGATATTTGGTGGAAGTAGAGA
GTAACTCAATATTCTATCAATTCAAGTATTCTTACTATGGTTGCCTTTCCCTATTTGTTCAATAGACTGATAATA

FIGURE 531B

CTGGTATTTATAGAGTTTGAGCCATTACAACTTTTGTGAGGATGTGTTTCAAACATTTCTGGACAAATCTTATTT
TGTATTTCTGGAAGAATGTAGTAATCTTCTAGACCGCTTAAAACCAATGCTCCCAAGCTGAATATTCTTGAGCAA
ATTTGTTTTTTATTATGCCATTTGACATTTCAAATCAGTGCTCATATACAGTAAACTTGTGATAGAAATTGTATT
TTATTGCTTTTTGGATTATAATTCATATAAATATAATTACTTGAATATTGTTTGAGATCATTAACATGCCAGGGC
AGTTCCCACTGATTTAGATGGTCCAAGATAATCTCATTCAGGAGGCTTGAAACATTAATGGTTTAGTCTTGTGAA
TTTTAACAGTTCTCTGTCATCGTTTAACAAAACCAACAACTGACACAACTCCTTAAGCTGTGGTTTCAGTCTCTG
CTAGTTCATATTGCATGTTTATTTTGGACAGTCTTTTGTTAAGCATGGTGCTTGTACTGGTTTAAATAAAATGTT
AACATT

FIGURE 532

MSESLVVCDVAEDLVEKLRKFRFRKETNNAAIIMKIDKDKRLVVLDEELEGISPDELKDELPERQPRFIVYSYKY
QHDDGRVSYPLCFIFSSPVGCKPEQQMMYAGSKNKLVQTAELTKVFEIRNTEDLTEEWLREKLGFFH

FIGURE 533

AGGAAGCCGACTAGGCGAATTCACTTACTGACCGGCCTGGGCTGCTCTGAGAC**ATG**GAGGAAGCCAGTGAAGGTG
GAGGAAATGATCGTGTGCGGAACCTGCAAAGTGAGGTGGAGGGAGTTAAGAATATTATGACCCAGAATGTGGAGC
GGATCCTGGCCCGGGGGGAAAACTTGGAACATCTCCGCAACAAGACAGAGGATCTGGAAGCCACATCTGAGCACT
TCAAGACGACATCGCAGAAGGTGGCTCGGAAATTCTGGTGGAAGAACGTGAAGATGATTGTCCTTATCTGCGTGA
TTGTTTTTATCATCATCCTCTTCATTGTGCTCTTTGCCACTGGTGCCTTCTCT**TAA**GTAACAGGGAACCTCTCCC
ACCTGCCCTTCTTTTCAGGGACAACCCTCCATAAATGTGTGCCAAGAGGGTCTCCTTTCCTGTCTTCCTCTACAG
AGAATGCTGCTCGGTCCTCCTACCCCTCTTCCCGAGGCCCTGCTGCCACGTTGTATGCCCCAGAAGGTACCTTGG
TCCCCCGGAAGGAGAGAAAAAAGAGAGATGGACTGTGGCTGCATTTCTTGGGTCCTTAGAGTGGGCTGGAGAGAC
CTAGAGGGCCCAGCATGTGGCTGGGAAACTGTTGGTGGCCAGTGGGTAATAAAGACCTTTCAGTATCCCTAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 534

MEEASEGGGNDRVRNLQSEVEGVKNIMTQNVERILARGENLEHLRNKTEDLEATSEHFKTTSQKVARKFWWKNVK
MIVLICVIVFIIILFIVLFATGAFS

FIGURE 535A

GGCCCGGCTGCGAGGAGGAGGCGGCGGCGGCGCAGGAGG**ATG**TACTTGGTGGCGGGGGACAGGGGGTTGGCCGGC
TGCGGGCACCTCCTGGTCTCGCTGCTGGGGCTGCTGCTGCTGCTGGCGCGCTCCGGCACCCGGGCGCTGGTCTGC
CTGCCCTGTGACGAGTCCAAGTGCGAGGAGCCCAGGAACTGCCCGGGGAGCATCGTGCAGGGCGTCTGCGGCTGC
TGCTACACGTGCGCCAGCCAGAGGAACGAGAGCTGCGGCGGCACCTTCGGGATTTACGGAACCTGCGACCGGGGG
CTGCGTTGTGTCATCCGCCCCCCGCTCAATGGCGACTCCCTCACCGAGTACGAAGCGGGCGTTTGCGAAGATGAG
AACTGGACTGATGACCAACTGCTTGGTTTTAAACCATGCAATGAAAACCTTATTGCTGGCTGCAATATAATCAAT
GGGAAATGTGAATGTAACACCATTCGAACCTGCAGCAATCCCTTTGAGTTTCCAAGTCAGGATATGTGCCTTTCA
GCTTTAAAGAGAATTGAAGAAGAGAAGCCAGATTGCTCCAAGGCCCGCTGTGAAGTCCAGTTCTCTCCACGTTGT
CCTGAAGATTCTGTTCTGATCGAGGGTTATGCTCCTCCTGGGGAGTGCTGTCCCTTACCCAGCCGCTGCGTGTGC
AACCCCGCAGGCTGTCTGCGCAAAGTCTGCCAGCCGGGAAACCTGAACATACTAGTGTCAAAAGCCTCAGGGAAG
CCGGGAGAGTGCTGTGACCTCTATGAGTGCAAACCAGTTTTCGGCGTGGACTGCAGGACTGTGGAATGCCCTCCT
GTTCAGCAGACCGCGTGTCCCCCGGACAGCTATGAAACTCAAGTCAGACTAACTGCAGATGGTTGCTGTACTTTG
CCAACAAGATGCGAGTGTCTCTCTGGCTTATGTGGTTTCCCCGTGTGTGAGGTGGGATCCACTCCCCGCATAGTC
TCTCGTGGCGATGGGACACCTGGAAAGTGCTGTGATGTCTTTGAATGTGTTAATGATACAAAGCCAGCCTGCGTA
TTTAACAATGTGGAATATTATGATGGAGACATGTTTCGAATGGACAACTGTCGGTTCTGTCGATGCCAAGGGGGC
GTTGCCATCTGCTTCACTGCCCAGTGTGGTGAGATAAACTGCGAGAGGTACTACGTGCCCGAAGGAGAGTGCTGC
CCAGTGTGTGAAGATCCAGTGTATCCTTTTAATAATCCCGCTGGCTGCTATGCCAATGGCCTGATCCTTGCCCAC
GGAGACCGGTGGCGGGAAGACGACTGCACATTCTGCCAGTGCGTCAACGGTGAACGCCACTGCGTTGCGACCGTC
TGCGGACAGACCTGCACAAACCCTGTGAAAGTGCCTGGGGAGTGTTGCCCTGTGTGCGAAGAACCAACCATCATC
ACAGTTGATCCACCTGCATGTGGGGAGTTATCAAACTGCACTCTGACAGGGAAGGACTGCATTAATGGTTTCAAA
CGCGATCACAATGGTTGTCGGACCTGTCAGTGCATAAACACCGAGGAACTATGTTCAGAACGTAAACAAGGCTGC
ACCTTGAACTGTCCCTTCGGTTTCCTTACTGATGCCCAAAACTGTGAGATCTGTGAGTGCCGCCCAAGGCCCAAG
AAGTGCAGACCCATAATCTGTGACAAGTATTGTCCACTTGGATTGCTGAAGAATAAGCACGGCTGTGACATCTGT
CGCTGTAAGAAATGTCCAGAGCTCTCATGCAGTAAGATCTGCCCCTTGGGTTTCCAGCAGGACAGTCACGGCTGT
CTTATCTGCAAGTGCAGAGAGGCCTCTGCTTCAGCTGGGCCACCCATCCTGTCGGGCACTTGTCTCACCGTGGAT
GGTCATCATCATAAAAATGAGGAGAGCTGGCACGATGGGTGCCGGGAATGCTACTGTCTCAATGGACGGGAAATG
TGTGCCCTGATCACCTGCCCGGTGCCTGCCTGTGGCAACCCCACCATTCACCCTGGACAGTGCTGCCCATCATGT
GCAGATGACTTTGTGGTGCAGAAGCCAGAGCTCAGTACTCCCTCCATTTGCCACGCCCCTGGAGGAGAATACTTT
GTGGAAGGAGAAACGTGGAACATTGACTCCTGTACTCAGTGCACCTGCCACAGCGGACGGGTGCTGTGTGAGACA
GAGGTGTGCCCACCGCTGCTCTGCCAGAACCCCTCACGCACCCAGGATTCCTGCTGCCCACAGTGTACAGATCAA
CCTTTTCGGCCTTCCTTGTCCCGCAATAACAGCGTACCTAATTACTGCAAAAATGATGAAGGGGATATATTCCTG
GCAGCTGAGTCCTGGAAGCCTGACGTTTGTACCAGCTGCATCTGCATTGATAGCGTAATTAGCTGTTTCTCTGAG
TCCTGCCCTTCTGTATCCTGTGAAAGACCTGTCTTGAGAAAAGGCCAGTGTTGTCCCTACTGCATAGAAGACACA
ATTCCAAAGAAGGTGGTGTGCCACTTCAGTGGGAAGGCCTATGCCGACGAGGAGCGGTGGGACCTTGACAGCTGC
ACCCACTGCTACTGCCTGCAGGGCCAGACCCTCTGCTCGACCGTCAGCTGCCCCCCTCTGCCCTGTGTTGAGCCC
ATCAACGTGGAAGGAAGTTGCTGCCCAATGTGTCCAGAAATGTATGTCCCAGAACCAACCAATATACCCATTGAG
AAGACAAACCATCGAGGAGAGGTTGACCTGGAGGTTCCCCTGTGGCCCACGCCTAGTGAAAATGATATCGTCCAT
CTCCCTAGAGATATGGGTCACCTCCAGGTAGATTACAGAGATAACAGGCTGCACCCAAGTGAAGATTCTTCACTG
GACTCCATTGCCTCAGTTGTGGTTCCCATAATTATATGCCTCTCTATTATAATAGCATTCCTATTCATCAATCAG
AAGAAACAGTGGATACCACTGCTTTGCTGGTATCGAACACCAACTAAGCCTTCTTCCTTAAATAATCAGCTAGTA
TCTGTGGACTGCAAGAAAGGAACCAGAGTCCAGGTGGACAGTTCCCAGAGAATGCTAAGAATTGCAGAACCAGAT
GCAAGATTCAGTGGCTTCTACAGCATGCAAAAACAGAACCATCTACAGGCAGACAATTTCTACCAAACAGTG**TGA**

AGAAAGGCAACTAGGATGAGGTTTCAAAAGACGGAAGACGACTAAATCTGCTCTAAAAAGTAAACTAGAATTTGT
GCACTTGCTTAGTGGATTGTATTGGATTGTGACTTGATGTACAGCGCTAAGACCTTACTGGGATGGGCTCTGTCT
ACAGCAATGTGCAGAACAAGCATTCCCACTTTTCCTCAAGATAACTGACCAAGTGTTTTCTTAGAACCAAAGTTT
TTAAAGTTGCTAAGATATATTTGCCTGTAAGATAGCTGTAGAGATATTTGGGGTGGGGACAGTGAGTTTGGATGG
GGAAATGGGTGGGAGGGTGGTGTTGGGAAGAAAAATTGGTCAGCTTGGCTCGGGGAGAAACCTGGTAACATAAAA
GCAGTTCAGTGGCCCAGAGGTTATTTTTTTCCTATTGCTCTGAAGACTGCACTGGTTGCTGCAAAGCTCAGGCCT

FIGURE 535B

GAATGAGCAGGAAACAAAAAAGGCCTTGCGACCCAGCTGCCATAACCACCTTAGAACTACCAGACGAGCACATCA
GAACCCTTTGACAGCCATCCCAGGTCTAAAGCCACAAGTTTCTTTTCTATACAGTCACAACTGCAGTAGGCAGTG
AGGAAGCCAGAGAAATGCGATAGCGGCATTTCTCTAAAGCGGGTTATTAAGGATATATACAGTTACACTTTTTGC
TGCTTTTATTTTCTTCCAAGCCAATCAATCAGCCAGTTCCTAGCAGAGTCAGCACATGAACAAGATCTAAGTCAT
TTCTTGATGTGAGCACTGGAGCTTTTTTTTTTTTACAACGTGACAGGAAGAGGAGGGAGAGGGTGACGAACACCA
GGCATTTCCAGGGGCTATATTTCACTGTTTGTTGTTGCTTTGTTCTGTTATATTGTTGGTTGTTCATAGTTTTTG
TTGAAGCTCTAGCTTAAGAAGAAACTTTTTTTAAAAAGACTGTTTGGGGATTCTTTTTCCTTATTATATACTGAT
TCTACAAAATAGAAACTACTTCATTTTAATTGTATATTATTCAAGCACCTTTGTTGAAGCTCAAAAAAAATGATG
CCTCTTTAAACTTTAGCAATTATAGGAGTATTTATGTAACTATCTTATGCTTCAAAAAACAAAAGTATTTGTGTG
CATGTGTATATAATATATATATATACATATATATTTATACACATACAATTTATGTTTTCCTGTTGAATGTATTTT
TATGAGATTTTAACCAGAACAAAGGCAGATAAACAGGCATTCCATAGCAGTGCTTTTGATCACTTACAAATTTTT
TGAATAACACAAAATCTCATTCTACCTGCAGTTTAATTGGAAAGATGTGTGTGTGAGAGTATGTATGTGTGTGTG
TGTGTGTGTGTGTGTGCGCGCGCACGCACGCCTTGAGCAGTCAGCATTGCACCTGCTATGGAGAAGGGTATTCCT
TTATTAAAATCTTCCTCATTTGGATTTGCTTTCAGTTGGTTTTCAATTTGCTCACTGGCCAGAGACATTGATGGC
AGTTCTTATCTGCATCACTAATCAGCTCCTGGATTTTTTTTTTTTTTTTTCAAACAATGGTTTGAAACAACTAC
TGGAATATTGTCCACAATAAGCTGGAAGTTTGTTGTAGTATGCCTCAAATATAACTGACTGTATACTATAGTGGT
AACTTTTCAAACAGCCCTTAGCACTTTTATACTAATTAACCCATTTGTGCATTGAGTTTTCTTTTAAAAATGCTT
GTTGTGAAAGACACAGATACCCAGTATGCTTAACGTGAAAAGAAAATGTGTTCTGTTTTGTAAAGGAACTTTCAA
GTATTGTTGTAAATACTTGGACAGAGGTTGCTGAACTTTAAAAAAAATTAATTTATTATTATAATGACCTAATTT
ATTAATCTGAAGATTAACCATTTTTTTGTCTTAGAATATCAAAAAGAAAAAGAAAAAGGTGTTCTAGCTGTTTGC
ATCAAAGGAAAAAAAGATTTATTATCAAGGGGCAATATTTTTATCTTTTCCAAAATAAATTTGTTAATGATACAT
TACAAAAATAGATTGACATCAGCCTGATTAGTATAAATTTTGTTGGTAATTAATCCATTCCTGGCATAAAAAGTC
TTTATCAAAAAAAATTGTAGATGCTTGCTTTTTGTTTTTTCAATCATGGCCATATTATGAAAATACTAACAGGAT
ATAGGACAAGGTGTAAATTTTTTTATTATTATTTTAAAGATATGATTTATCCTGAGTGCTGTATCTATTACTCTT
TTACTTTGGTTCCTGTTGTGCTCTTGTAAAAGAAAAATATAATTTCCTGAAGAATAAAATAGATATATGGCACTT
GGAGTGCATCATAGTTCTACAGTTTGTTTTTGTTTTCTTCAAAAAAGCTGTAAGAGAATTATCTGCAACTTGATT
CTTGGCAGGAAATAAACATTTTGAGTTGAAATCAAAAAAAAAAAAAAAAAA

FIGURE 536

MYLVAGDRGLAGCGHLLVSLLGLLLLLARSGTRALVCLPCDESKCEEPRNCPGSIVQGVCGCCYTCASQRNESCG
GTFGIYGTCDRGLRCVIRPPLNGDSLTEYEAGVCEDENWTDDQLLGFKPCNENLIAGCNIINGKCECNTIRTCSN
PFEFPSQDMCLSALKRIEEEKPDCSKARCEVQFSPRCPEDSVLIEGYAPPGECCPLPSRCVCNPAGCLRKVCQPG
NLNILVSKASGKPGECCDLYECKPVFGVDCRTVECPPVQQTACPPDSYETQVRLTADGCCTLPTRCECLSGLCGF
PVCEVGSTPRIVSRGDGTPGKCCDVFECVNDTKPACVFNNVEYYDGDMFRMDNCRFCRCQGGVAICFTAQCGEIN
CERYYVPEGECCPVCEDPVYPFNNPAGCYANGLILAHGDRWREDDCTFCQCVNGERHCVATVCGQTCTNPVKVPG
ECCPVCEEPTIITVDPPACGELSNCTLTGKDCINGFKRDHNGCRTCQCINTEELCSERKQGCTLNCPFGFLTDAQ
NCEICECRPRPKKCRPIICDKYCPLGLLKNKHGCDICRCKKCPELSCSKICPLGFQQDSHGCLICKCREASASAG
PPILSGTCLTVDGHHHKNEESWHDGCRECYCLNGREMCALITCPVPACGNPTIHPGQCCPSCADDFVVQKPELST
PSICHAPGGEYFVEGETWNIDSCTQCTCHSGRVLCETEVCPPLLCQNPSRTQDSCCPQCTDQPFRPSLSRNNSVP
NYCKNDEGDIFLAAESWKPDVCTSCICIDSVISCFSESCPSVSCERPVLRKGQCCPYCIEDTIPKKVVCHFSGKA
YADEERWDLDSCTHCYCLQGQTLCSTVSCPPLPCVEPINVEGSCCPMCPEMYVPEPTNIPIEKTNHRGEVDLEVP
LWPTPSENDIVHLPRDMGHLQVDYRDNRLHPSEDSSLDSIASVVVPIIICLSIIIAFLFINQKKQWIPLLCWYRT
PTKPSSLNNQLVSVDCKKGTRVQVDSSQRMLRIAEPDARFSGFYSMQKQNHLQADNFYQTV

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FIGURE 537

CTCGGAAGCCCGTCACC**ATG**TCGTGCGAGTCGTCTATGGTTCTCGGGTACTGGGATATTCGTGGGCTGGCGCACG
CCATCCGCCTGCTCCTGGAGTTCACGGATACCTCTTATGAGGAGAAACGGTACACGTGCGGGGAAGCTCCTGACT
ATGATCGAAGCCAATGGCTGGATGTGAAATTCAAGCTAGACCTGGACTTTCCTAATCTGCCCTACCTCCTGGATG
GGAAGAACAAGATCACCCAGAGCAATGCCATCTTGCGCTACATCGCTCGCAAGCACAACATGTGTGGTGAGACTG
AAGAAGAAAAGATTCGAGTGGACATCATAGAGAACCAAGTAATGGATTTCCGCACACAACTGATAAGGCTCTGTT
ACAGCTCTGACCACGAAAAACTGAAGCCTCAGTACTTGGAAGAGCTACCTGGACAACTGAAACAATTCTCCATGT
TTCTGTGGAAATTCTCATGGTTTGCCGGGGAAAAGCTCACCTTTGTGGATTTTCTCACCTATGATATCTTGGATC
AGAACCGTATATTTGACCCCAAGTGCCTGGATGAGTTCCCAAACCTGAAGGCTTTCATGTGCCGTTTTGAGGCTT
TGGAGAAAATCGCTGCCTACTTACAGTCTGATCAGTTCTGCAAGATGCCCATCAACAACAAGATGGCCCAGTGGG
GCAACAAGCCTGTATGC**TGA**GCAGGAGGCAGACTTGCAGAGCTTGTTTTGTTTCATCCTGTCCGTAAGGGGTCAG
CGCTCTTGCTTTGCTCTTTTCAATGAATAGCACTTATGTTACTGGTGTCCAGCTGAGTTTCTCTTGGGTATAAAG
GCTAAAAGGGAAAAAGGATATGTGGAGAATCATCAAGATATGAATTGAATCGCTGCGATACTGTGGCATTTCCCT
ACTCCCCAACTGAGTTCAAGGGCTGTAGGTTCATGCCCAAGCCCTGAGAGTGGGTACTAGAAAAAACGAGATTGC
ACAGTTGGAGAGAGCAGGTGTGTTAAATGGACTGGAGTCCCTGTGAAGACTGGGTGAGGATAACACAAGTAAAAC
TGTGGTACTGATGGACTTAACCGGAGTTCGGAAACCGTCCTGTGTACACATGGGAGTTTAGTGTGATAAAGGCAG
TATTTCAGACTGGTGGGCTAGCCAATAGAGTTGGCAATTGCTTATTGAAACTCATTAAAAATAATAGAGCCCCAC
TTGACACTATTCACTAAAATTAATCTGGAATTTAAGGCCCAACATTAAACACAAAGCTGTATTGAT

FIGURE 538

MSCESSMVLGYWDIRGLAHAIRLLLEFTDTSYEEKRYTCGEAPDYDRSQWLDVKFKLDLDFPNLPYLLDGKNKIT
QSNAILRYIARKHNMCGETEEEKIRVDIIENQVMDFRTQLIRLCYSSDHEKLKPQYLEELPGQLKQFSMFLWKFS
WFAGEKLTFVDFLTYDILDQNRIFDPKCLDEFPNLKAFMCRFEALEKIAAYLQSDQFCKMPINNKMAQWGNKPVC

FIGURE 539

CGGCTGCTGCTGCCACTGCTGTGCTGGGGGCCCGGTCGCCAGGCAAAAAGCCCTCCACGTTTGAGGGGAGTC**ATG**

AGCCGTTTCCTGAATGTGTTAAGAAGTTGGCTGGTTATGGTGTCCATCATAGCCATGGGGAACACGCTGCAGAGC
TTCCGAGACCACACTTTTCTCTATGAAAAGCTCTACACTGGCAAGCCAAACCTTGTGAATGGCCTCCAAGCTCGG
ACCTTTGGGATCTGGACGCTGCTCTCATCAGTGATTCGCTGCCTCTGTGCCATTGACATTCACAACAAGACGCTC
TATCACATCACACTCTGGACCTTCCTCCTTGCCCTGGGGCATTTCCTCTCTGAGTTGTTTGTCTATGGAACTGCA
GCTCCCACGATTGGCGTCCTGGCACCCCTGATGGTGGCAAGTTTCTCCATCCTGGGTATGCTGGTCGGGCTCCGG
TATCTAGAAGTAGAACCAGTATCCAGACAGAAGAAGAGAAAC**TGA**GGCCAGCATTATCACCTCCAGGACTTTCTC
GTTTTCCACCTTGGCCATCTTCTTCCTTCGTCGTCTCTCCTCTTTAATTTCTTTTCTATTCCATCATCTGCCCTT
TTATTCACTTTTAGCCTCTTTTTTTAATTTTTAAAATTTAAAGATATGCATACTGAAAAGTATATAACATGTACG
TACAATTTAAAGAATAATTTTAAAGTGAATACTACGTAACTCCATCCAAGTCAAGAAATTGCCAGCTTCTCGGAA
GCCCACTGTGTCTCCTTCCCCTACCTGCAACCTCTTCCAGGCTCCCTTTTCCAGCCTTCCCCTTTTTCCCTTTTA
TTTTCATGCCTTGATTTGACTTGTGTGGTGGGAACATGTGAACTATGAAACTTAAACCTGCTGCCCACCCAGAGC
AGCTGTGACCAAGGGCTGCCTCAAGGGGTTGTCCACGCAGGTTGGGCTCCTCTCTGCTGCTGGACCCAAGACTCT
GAACCTTCCAAGGGACAGGCAGTTCTTCTAAGAAGGGCTCCCCTGTGTGTGAGCAAGACCACAGCTCTCCTTCTA
TCTACAGATGCATGAGGGTTGGAAGAGTCTGGGCTGTTTTTAGACCTTCTGGTCAGCTGTATTTGTGTAACAACT
TTTGTAATAAATAGAAAAACCCTCTGCTCTGATCAGTTCTTGTACTTTGACCTCTGCTAAGACAAGAGCATGGCT
GCCTCCTCTGAGCCCTAGGAGAATCACAGCTTTATGCCTGATTGAATACACCATAGTGAGTAGGACAGCTCATGA
CACAGGTCAGCCTGGCTGCCTCCGGCTCCTTACTGTCATTTGCTCATTCCTCTTGTATTCTTGAAGTCAAATCTT
CTTTTTTCTCACCTTCAAGAGTCTGCGTTCACAACTAAACACTAAGTGCCCTTTCTTATTTCCTCCTAAAGAAGA
AACAGATTCTTGAGAGAGCAGAGACAAAAAAATAGAACTAGGCAGCATAGATGAAACAACTGCATGACATGGGAA
GAAGACAACTAAACCCCGAGGAGAATGCACTGGAATGGACAGTTGCTCTTAAACCCTACCCAGAGGGCCTCCCCC
AGCTGGACCCTCATACACAGTGTGTGTATCCAAAAGGCCATTGCTATTTCAGCAAATATTTGTTGAGTACTTCTC
CATGCCGGACACTTGGGAAAGAGAAATGAACGACACAGGCAATGCCCCTGCCCTGTGGGCCTTATATTATAGTCA
AGGTAACAGAATCAACAAGCCAACACAAAAATAAAGAACTTCAAATAGGGATAAGAACTCTAACAAACACAAGGT
ATTTTGGTCAAGAAGGAATGTGGGGTGGGCAGTGGGGAACGTAACTTAAATTAGATCATCAGAAAGTCCTCCCTG
AGGAGATGGATTTTTTTTTGTTTTTTTAGAGACGGGGTTTCACTCTGTCACCCAGGCTGGGAATTGCAGTGGCAC
AATCCCTCACTGCTGCCTCAACTTCCTGGGCTCAAGTGACCCTCCTGCATCAGCTTCCCAAGTAGCTGGGACTGC
AAGTGTGTACCACCACATCCAGCTAACATTTTTGGGGGTGGGAAGAGATGGGGTCTTACTATGTTGTCCAGGCTA
AGAGGTGGGATTTGAGCTGAGACTTGAATGCCCAGGAGTTAAATGTCTTAAGATATGGAGCAGGCCGTTAGAAAG
GAGGGAGCAGCAACTGGAAGGTAGAATAGTCTTATTCAAGGAATAAGAACTATGTAATCACAGCATGGTGAAGAG
TTAGGAAGTGAAAAAAAAAAAAA

FIGURE 540

MSRFLNVLRSWLVMVSIIAMGNTLQSFRDHTFLYEKLYTGKPNLVNGLQARTFGIWTLLSSVIRCLCAIDIHNKT
LYHITLWTFLLALGHFLSELFVYGTAAPTIGVLAPLMVASFSILGMLVGLRYLEVEPVSRQKKRN

FIGURE 541

AGTACATCGACCCCGAGACCAAGAAGCACATCCCGTACCGCGAGCACAAGAGCCTGACGGGCACGGCGCGCTACA
TGAGCATCAACACGCACCTGGGCAAGGAGCAGAGCCGCCGCGACGACCTGGAGGCGCTGGGCCACATGTTCATGT
ACTTCCTGCGCGGCAGCCTCCCCTGGCAGGGGCTCAAGGCCGACACGCTCAAGGAGCGGTACCAGAAGATCGGGG
ACACCAAACGCGCCACGCCCATCGAGGTGCTCTGCGAGAACTTCCCAGAGGAGATGGCCACGTACCTGCGCTATG
TGCGGCGCCTGGACTTCTTCGAGAAGCCCGACTATGACTACCTGCGGAAGCTCTTCACCGACCTCTTCGACCGCA
GTGGCTTCGTGTTCGACTATGAGTACGACTGGGCCGGGAAGCCCCTGCCGACCCCCATCGGCACCGTCCACACCG
ACCTGCCCTCCCAGCCTCAGCTCCGGGACAAAACCCAGCCCCCTGAATCTTCTCCGTGCAGCCCCTTGGGGCGCG
ACCTTGTGCGAGGCCCTCGGGGCCCACCCACAGCGGCCCAGGGCCAGACCCTGGCTGGAAGCCAGAACGCAGACT
GCAGGGGCCGCGCCTGGCTCAGGCGGCCCCACCCCCGGGACGTGGGGTCACTTCCTTCATGTAAGACTTTGGCCG
AAATTTCTACACCTGTGTCTAGTCCTCCCCTCCAAGAGCATTAACTATTTAAAACAAGGAAAAGAGGAAAAAAAA
AACAGAGGCCCGCCCTACCCCACTCCTGCCCCTCCGTTTCTTTGCTGAAGTGAGTAGTGTGATCCTGGAGGCCCC
CCGGCCTGGCCCCGCCCCGCCAGCCGCCCCCGTTAGCGTCATAAAGTCCAGCTTGTCTCCCTCGATCCAAAGGCC
GTTTTCTCGAGGGGAGGGCAGGCCCGGCCTGGAGGGGTGCTGTGGAGCTGTCTTGCCCAGGCCCTCCTGGGAGGG
GGACAGGCATTGTTGCCAGGGGTGAGGCCGTGCCCCAGGCCTCCCCGAAACCAAAGGGGAAGGCAGGGGTGGGGC
CGTGGCTGAAGCCGGCTCCCCAACCAAAATGCTGCACCAAAGCTCGGGCGCCGCGGGCACGGCTGCTGCAGTCTC
TTCCCAGCCTGGCCCTGGCAAGGGGCGGGTGGGCGCTGCCAGGCGGGTGCTTCTCGACGCACTTGCTCCCGGAGG
CTGCGCCCCGGCGCCTGGAACCCGAGGTGGGAGGACCGGTTGGTGTCACCCTGCTCGGCCCTCAGCCCTGCCGCG
TGGGGCGCGTGGGCACGGAGCTTCCTGCCTCTCTGCTCCGACACCCGGCAAGCAGCCGGAGACAAAACGCCTTAA
AGCCCCCGGCCCAGCCCTGCAGGTATATTGCAGGGGCCTGGGGGCGGCCCTGGACTGGCGGGCGGTTCCCCAGTG
GGGTGCCCTGGAGGCTGCCGGGCAGAGTGGAGCAGCTTGGGGCCGTGCCCAGGGCGGTGGCTGTGAGTCTAGTTT
TTGCTTTACCAAGTGTACAGAAATGGCATTTACGTTTCTCTGATGCTCCCTTGAAGCCATAGAATTTAGGGGCTT
TTTTAAAAAAAATAAAAGAAAAATGAAACCAAAAAAAAAA

FIGURE 542

MSINTHLGKEQSRRDDLEALGHMFMYFLRGSLPWQGLKADTLKERYQKIGDTKRATPIEVLCENFPEEMATYLRY
VRRLDFFEKPDYDYLRKLFTDLFDRSGFVFDYEYDWAGKPLPTPIGTVHTDLPSQPQLRDKTQPPESSPCSPLGR
DLVRGPRGPPTAAQGQTLAGSQNADCRGRAWLRRPHPRDVGSLPSCKTLAEISTPVSSPPLQEH

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FIGURE 543

AGCTTTGGGGTTGTCCCTGGACTTGTCTTGGTTCCAGAACCTGACGACCCGGCGACGGCGACGTCTCTTTTGACT
AAAAGACAGTGTCCAGTGCTCCAGCCTAGGAGTCTACGGGGACCGCCTCCCGCGCCGCCACC**ATG**CCCAACTTCT
CTGGCAACTGGAAAATCATCCGATCGGAAAACTTCGAGGAATTGCTCAAAGTGCTGGGGGTGAATGTGATGCTGA
GGAAGATTGCTGTGGCTGCAGCGTCCAAGCCAGCAGTGGAGATCAAACAGGAGGGAGACACTTTCTACATCAAAA
CCTCCACCACCGTGCGCACCACAGAGATTAACTTCAAGGTTGGGGAGGAGTTTGAGGAGCAGACTGTGGATGGGA
GGCCCTGTAAGAGCCTGGTGAAATGGGAGAGTGAGAATAAAATGGTCTGTGAGCAGAAGCTCCTGAAGGGAGAGG
GCCCCAAGACCTCGTGGACCAGAGAACTGACCAACGATGGGGAACTGATCCTGACCATGACGGCGGATGACGTTG
TGTGCACCAGGGTCTACGTCCGAGAG**TGA**GTGGCCACAGGTAGAACCGCGGCCGAAGCCCACCACTGGCCATGCT
CACCGCCCTGCTTCACTGCCCCCTCCGTCCCACCCCCTCCTTCTAGGATAGCGCTCCCCTTACCCCAGTCACTTC
TGGGGGTCACTGGGATGCCTCTTGCAGGGTCTTGCTTTCTTTGACCTCTTCTCTCCTCCCCTACACCAACAAAGA
GGAATGGCTGCAAGAGCCCAGATCACCCATTCCGGGTTCACTCCCCGCCTCCCCAAGTCAGCAGTCCTAGCCCCA
AACCAGCCCAGAGCAGGGTCTCTCTAAAGGGGACTTGAGGGCCTGAGCAGGAAAGACTGGCCCTCTAGCTTCTAC
CCTTTGTCCCTGTAGCCTATACAGTTTAGAATATTTATTTGTTAATTTTATTAAAATGCTTTAAAAAAA

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FIGURE 544

MPNFSGNWKIIRSENFEELLKVLGVNVMLRKIAVAAASKPAVEIKQEGDTFYIKTSTTVRTTEINFKVGEEFEEQ
TVDGRPCKSLVKWESENKMVCEQKLLKGEGPKTSWTRELTNDGELILTMTADDVVCTRVYVRE

FIGURE 545

GCACGCACTGGCCCCGGCGCCCACCCGCACCCCTCCCCAGAGAGCACTGACACGGCTCCCGGGACCTCGGCAGGA
TGGAAGAGAAGCTGAAGAAAACCAAGATCATCTTTGTGGTGGGTGGGCCTGGCTCAGGGAAGGGCACCCAGTGTG
AGAAGATCGTGCAGAAGTATGGCTACACCCACCTCTCCACCGGGGACCTCCTGCGGTCCGAGGTCAGCTCAGGCT
CGGCCAGGGGCAAGAAGCTGTCGGAAATCATGGAGAAGGGGCAGCTGGTTCCACTGGAGACAGTGTTGGACATGC
TCCGGGATGCCATGGTGGCCAAAGTCAATACTTCCAAAGGCTTCCTGATTGATGGCTACCCGCGGGAGGTGCAGC
AAGGAGAAGAGTTTGAGCGACGGATTGGACAGCCCACACTGCTGCTGTATGTGGACGCAGGCCCTGAGACCATGA
CCCAGCGGCTCTTGAAACGTGGAGAGACCAGCGGGCGTGTGGACGACAATGAGGAGACCATCAAAAAGCGGCTGG
AGACCTATTACAAGGCCACAGAACCCGTCATCGCCTTCTATGAGAAACGTGGCATTGTGCGCAAGGTCAACGCTG
AGGGCTCCGTGGACAGTGTCTTCTCCCAGGTCTGCACCCACCTGGACGCCCTAAAGTAGCAACGCTGGAGCCGCT
TCCCCAGCTCAGAGCCCCGCCCCACCCCGTCCTGATTAGAGGTCCTCCTGGCCTGAGCGCAGCGCCTCCACCCTG
CCCTGCTGAGCACAGACGGAGGAAGCCGCTTATCCTGTTTTCATGGACAGCTGAGCACTAAAGGAATTTCTAAGG
ACATTTGGTTTTACTGCTTTTTCTCTGCTTCCAGTTGGAGTTGATTCATGTGCTTGTGCCTACCTGGCCGCAAGT
CCCCAGCCCCTCAACCCTCCGTTCCTCCTCAGCCTCCCTTTGCCAGCCACCCCTCCTCTAGCTCTGGTGGGAGGC
CCGGGGCCCTTCCTCGCACAGGGCATGCCTGGCCTGAGGACCCGGCGCTGAGTGGCGGGGCCCCTGCTCCGAGGG
GCTCATGTTCAGGCAGAACCGGTCCCAGCCTGGGCTCCTCTGCATCTTGCTCTGTGCCTTGGCCCTGACCCCCAT
CGCTCTGAGCATATGTTCCATGCCTGCCTTGCCGGGGCCTGGACTGCACAGGCAGCAAGGTCATGGTCTGAGTGG
GGCTTCCTGGGCAGTTGGGGCGGCCCACGCCAGCTGGCCCAGTGGGTAGTGAATTGGCTTCCTTGACGCGAGAGG
CTCTGAGGGTCTGAAAAGGGCATCTCAATGGCATGGGTGGGTGGGGAGTCAGTCATGTCACTGAAATTGAATGGG
GGAGGCCCAATGAGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAAGCTGAGGCAGGAGGATCACCTGAGGTC
AGGAGTTCGAGAGCAGCCTGGCCAACATGGCAAAACCCCTTATTTACTAAAAATACAAAAACTTAGCCGGGCATG
GTGGCATGTGCCTGTATTCCCAGCTACTCATGAGGCTGAGGCAGGAGAATGGCGTGAACCCGGGAGTGGAGCTTG
CAATGAGCCAAGATTGCGCCACTGCACTCCAGCCTGGGTGACAGAGCAAGACTCCGTCTCAAAAAAAAAAAAAAA
AAAAAAGAAATTAATTGGGGGAGTCATGGTCAGGGGTGAGACCTGAAGGACCTCCCCCTGTGTGGCCCTGGACAC
AGCCCACCCTCTGTGAGCCGTTTCCAATTCTAAAACAGACTCAATGTCCCCCTCACCCCCACCTCAAGGTCAGGA
TGCGAACACACTGAGTGAGGAGTGGACGCTGTCCATTGCCACGGCCATGAGGGCTGGAGACCAGAACAGCATGGC
CCGAAGCGTGCGGGGCCCCGGATGACTTGGGGACACCCCAGAATCCCCTGGGGAGAACCCTTCCTGCGCGCTTTC
ATTTTTTGACCTCATCACTGAGAAAGGCTCAATTTGGTGCTCACGTGTCCTTAACACCTGATCTGGCCCAAGCTG
CGTGCCCTTTAAGCCAAGAGAGCCTCTTGTGGACCCCGCCTGCCCGAATGAAATCCGAACAGTTGGGGCTGTTAT
GGCAAGTGGGGCTGGTTTTTCATTTCCATTGGTTATTTAAAGTTTCCTTTAAAATAAACGATTTTAAGTTATAAA
AGGTGAATCTATTGAAAGAAGAACATCAAAGAAATAAACAGGAGTTCAGCGGAGTAGCAGAAGACAAGGCATGTA
GGGGGAGCCATTCTGTCCCAG

FIGURE 546

MEEKLKKTKIIFVVGGPGSGKGTQCEKIVQKYGYTHLSTGDLLRSEVSSGSARGKKLSEIMEKGQLVPLETVLDM
LRDAMVAKVNTSKGFLIDGYPREVQQGEEFERRIGQPTLLLYVDAGPETMTQRLLKRGETSGRVDDNEETIKKRL
ETYYKATEPVIAFYEKRGIVRKVNAEGSVDSVFSQVCTHLDALK

FIGURE 547

CGGTTTCCTCCCCCATCCCCTTGACTCTCCCCTCCCAGCCCTCGCTCTCTCGCTCGCCCTCAGCGCGGCCCCCGC
CATGACGGAGGCGGGTGCCGGTGCCGTTGCCGCCGCTGCCGTCGCAGGGGGGGGAGTCGGGTTCCCAGAAAGTAGC
TTG**ATG**AGTGTCCAAAGTAGCAGTGGAAGTTTGGAGGGGCCGCCATCTTGGTCCCAGCTCTCCACGTCTCCAACC
CCGGGCTCGGCGGCGGCGGCCAGGTCCCTGCTGAATCACACGCCGCCATCCGGGAGGCCCAGGGAAGGTGCAATG
GATGAGCTTCATAGTCTGGATCCAAGAAGGCAAGAGTTATTGGAAGCTAGATTTACTGGAGTTGCAAGTGGGAGC
ACTGGAAGTACGGGCAGTTGCAGTGTTGGTGCTAAAGCCACAACAAATAACGAAAGCTCTAATCACAGTTTTGGA
AGCTTGGGATCTTTAAGTGACAAAGAATCAGAGACACCGGAGAAGAAACAATCGGAATCATCCAGGGGAAGAAAG
AGAAAAGCAGAAAACCAGAATGAAAGTAGTCAGGGAAAAAGTATTGGGGGACGTGGCCACAAAATTAGCGACTAT
TTTGAATACCAGGGTGGAAATGGCTCAAGTCCAGTAAGAGGCATACCTCCTGCAATCCGTTCTCCTCAAAATTCA
CATTCACATTCCACTCCTTCCTCATCTGTTCGACCGAATAGCCCTTCTCCTACTGCATTAGCATTTGGGGACCAC
CCTATTGTACAACCAAAGCAATTATCCTTTAAAATTATTCAGACTGATCTCACAATGCTGAAATTAGCAGCATTA
GAAAGTAATAAAATCCAGGACCTGGAAAAGAAGGAGGGACGTATAGATGATTTGCTCAGGGCTAACTGTGATCTC
AGACGGCAAATAGATGAACAACAAAAATTACTTGAAAAATACAAAGAACGATTAAATAAGTGCATATCAATGAGC
AAGAAACTTCTTATTGAAAAGAGTACACAAGAAAAGCTGTCAAGCAGAGAGAAGAGTATGCAAGATCGATTACGC
CTCGGGCACTTTACAACAGTTAGACATGGCGCTTCATTTACTGAACAATGGACAGATGGTTTTGCATTTCAGAAT
CTTGTGAAGCAACAAGAATGGGTGAATCAGCAAAGGGAAGATATTGAAAGGCAAAGGAAACTTCTAGCCAAACGC
AAACCTCCCACAGCTAATAATTCTCAGGCACCCTCTACCAATTCTGAACCAAAACAAAGGAAAAACAAAGCAGTC
AATGGAGCAGAGAATGATCCCTTTGTTAGACCAAATTTACCACAACTGTTGACTTTGGCAGAATATCATGAACAG
GAAGAAATTTTCAAACTTAGACTAGGACATCTCAAAAAGGAAGAGGCAGAAATCCAGGCAGAACTTGAACGTTTG
GAAAGAGTCAGAAATCTTCACATACGTGAGCTGAAAAGAATAAACAATGAAGATAATTCACAGTTCAAAGATCAC
CCAACATTAAATGAAAGATATTTATTACTTCATCTGCTTGGTAGAGGTGGCTTTAGTGAAGTGTATAAGGCTTTT
GACCTTTATGAACAAAGATATGCTGCTGTGAAGATACATCAGCTTAATAAAAGCTGGAGAGATGAGAAGAAAGAA
AACTACCACAAACATGCCTGCAGAGAGTATAGAATACACAAAGAACTGGATCACCCCAGAATAGTTAAACTCTAT
GATTATTTCTCCTTGGATACAGATACGTTTTGTACAGTGTTAGAATACTGTGAAGGCAATGACTTGGATTTCTAT
CTGAAGCAACACAAGTTAATGTCAGAGAAAGAAGCTCGGTCTATTGTAATGCAGATTGTAAATGCACTAAGATAT
CTCAATGAGATCAAACCCCCTATTATACATTATGATCTTAAGCCAGGAAACATCCTACTGGTAGATGGAACAGCA
TGTGGTGAAATCAAAATCACTGATTTTGGTCTGTCCAAGATTATGGATGATGATAGCTATGGTGTAGATGGAATG
GATCTAACTTCCCAGGGGGCAGGCACTTACTGGTATTTACCTCCTGAGTGTTTTGTAGTTGGAAAAGAGCCACCA
AAGATTTCCAACAAGGTTGATGTATGGTCGGTTGGAGTCATCTTCTTTCAGTGTCTTTATGGTAGAAAGCCATTT
GGTCACAATCAATCTCAACAAGACATTCTTCAAGAAAATACAATATTAAAAGCCACAGAAGTCCAGTTCCCTGTA
AAACCGGTTGTAAGCAGTGAAGCCAAGGCATTTATAAGACGCTGTTTGGCATATCGAAAAGAAGATCGATTTGAT
GTGCACCAGCTGGCAAATGACCCATACCTTCTCCCACACATGAGAAGATCAAATTCTTCAGGAAACCTACACATG
GCTGGGCTGACAGCATCCCCTACACCCCCTTCTTCAAGCATAATTACTTAC**TGA**CTTTCCTCCAAGATTGGCATG
ATATCTTTGAATTTGCTTCCAGATGCACACTTAAGTTTGAGAGCATTTGAGTGTTTGTTTTCTTTTTCTTTTTTT
TTTTTTTTTTTTTTTTACACAAGACGTGGTTAAAGAACTGTTTGTGACTGAAGTTCCTCATAGTGTCATTGGTAT
GAGAGAGGATCATGGACAATGAATAAATGCACACTTCTGACTATAATTTTGAGCAGTGAAGGAAGGATGACTGCC
TGTTACACAGAAACAGGAATACCATGTTAAGATAGAGGAAAAAAAAAAA

FIGURE 548

MSVQSSSGSLEGPPSWSQLSTSPTPGSAAAARSLLNHTPPSGRPREGAMDELHSLDPRRQELLEARFTGVASGST
GSTGSCSVGAKASTNNESSNHSFGSLESLSDKESETPEKKQSESSRGRKRKAENQNESSQGFPNLPVFQSLAYWE
MGRTAGGKSIGGRGHKISDYFEYQGGNGSSPVRGIPPAIRSPQNSHSHSTPSSSVRPNSPSPTALAFGDHPIVQP
KQLSFKIIQTDLTMLKLAALESNKILDLEKKEGRIDDLLRANCDLRRQIDEQQKLLDKYKERLNKCISMSKKLLI
EKSTQEKLSSREKSMQDRLRLGHFTTVRHGASFTEQWTDGFAFQNLVKQQEWVNQQREDIERQRKLLAKRKPPTA
NNSQAPSTNSEPKQRKNKAVNGAENDPFVRPNLPQLLTLAEYHEQEEIFKLRLGHLKKEEAGIQAELERLERVRN
LHIRELKRIHNEDNSQFKDHPTLNERYLLLHLLGRGGFSEVDKAFDLSEQRYAAVKIHQLNKSWRDEKKENYHKH
ACREYRIHKELDHPRIVKLYDYFSLDTDTFCTVLEYCEGNDLDFYLKQHKLMSEKEARSIVMQIVNALRYLNEIK
PPIIHYDLKPGNILLVDGTACGEIKITDFGLSKIMDDDSYGVDGMVLTSQGAGTYWYLPPECFVVGKEPPKISNK
VDVWSVGVIFYQCLYGRKPFGHNQSQQDILQENTILKATEVQFPVKPVVSSEAKAFIRRCLAYRKEDRFDVHQLA
CDPYLLPHMRRSNSSGNLHMAGLTASPTPPSSSIITY

FIGURE 549

TCGGCCGAGCCCAGAGACAGCCAGTTCCTCTCCCGCCGCGCCGGGCCGCGTGCCGCTCGCTCCCCGGCCGTGGCG
CCTCCGGGCCAGACGCGCTGCAGCCTCCAGCCCGCGGCAAGCGGGCGGGGCGGCCGCGCCACCCCCGGCCCCGCG
CCAGCAGCCCCTCGCCGCGCGTCCAGCGTTCCCGGCCAGCAGCCTCCCCATACGCAGTCCTGCTGGACCGCCCCG
TCGCGCCCCCCACTCTGAACTCAAGTCACCGTGGAGCTCCGCCGCCCCGAAACTTTCACGCGAGCGGGAAAT**ATG**

GGATGTATAAAATCAAAAGGGAAAGACAGCTTGAGTGACGATGGAGTAGATTTGAAGACTCAACCAGTACGTAAT
ACTGAAAGAACTATTTATGTGAGAGATCCAACGTCCAATAAACAGCAAAGGCCAGTTCCAGAATCTCAGCTTTTA
CCTGGACAGAGGTTTCAAACTAAAGATCCAGAGGAACAAGGAGACATTGTGGTAGCCTTGTACCCCTATGATGGC
ATCCACCCGGACGACTTGTCTTTCAAGAAAGGAGAGAAGATGAAAGTCCTGGAGGAGCATGGAGAATGGTGGAAA
GCAAAGTCCCTTTTAACAAAAAAAGAAGGCTTCATCCCCAGCAACTATGTGGCCAAACTCAACACCTTAGAAACA
GAAGAGTGGTTTTTCAAGGATATAACCAGGAAGGACGCAGAAAGGCAGCTTTTGGCACCAGGAAATAGCGCTGGA
GCTTTCCTTATTAGAGAAAGTGAAACATTAAAAGGAAGCTTCTCTCTGTCTGTCAGAGACTTTGACCCTGTGCAT
GGTGATGTTATTAAGCACTACAAAATTAGAAGTCTGGATAATGGGGGCTATTACATCTCTCCACGAATCACTTTT
CCCTGTATCAGCGACATGATTAAACATTACCAAAAGCAGGCAGATGGCTTGTGCAGAAGATTGGAGAAGGCTTGT
ATTAGTCCCAAGCCACAGAAGCCATGGGATAAAGATGCCTGGGAGATCCCCCGGGAGTCCATCAAGTTGGTGAAA
AGGCTTGGCGCTGGGCAGTTTGGGGAAGTCTGGATGGGTTACTATAACAACAGTACCAAGGTGGCTGTGAAAACC
CTGAAGCCAGGAACTATGTCTGTGCAAGCCTTCCTGGAAGAAGCCAACCTCATGAAGACCCTGCAGCATGACAAG
CTCGTGAGGCTCTACGCTGTGGTCACCAGGGAGGAGCCCATTTACATCATCACCGAGTACATGGCCAAGGGCAGT
TTGCTGGATTTCCTGAAGAGCGATGAAGGTGGCAAAGTGCTGCTTCCAAAGCTCATTGACTTTTCTGCTCAGATT
GCAGAGGGAATGGCATACATCGAGCGGAAGAACTACATTCACCGGGACCTGCGAGCAGCTAATGTTCTGGTCTCC
GAGTCACTAATGTGCAAAATTGCAGATTTTGGCCTTGCTAGAGTAATTGAAGATAATGAGTACACAGCAAGGGAA
GGTGCTAAGTTCCCTATTAAGTGGACGGCTCCAGAAGCAATCAACTTTGGATGTTTCACTATTAAGTCTGATGTG
TGGTCCTTTGGAATCCTCCTATACGAAATTGTCACCTATGGGAAAATTCCCTACCCAGGGAGAACTAATGCCGAC
GTGATGACCGCCCTGTCCCAGGGCTACAGGATGCCCCGTGTGGAGAACTGCCCAGATGAGCTCTATGACATTATG
AAAATGTGCTGGAAAGAAAAGGCAGAAGAGAGACCAACGTTTGACTACTTACAGAGCGTCCTGGATGATTTCTAC
ACAGCCACGGAAGGGCAATACCAGCAGCAGCCT**TAG**AGCACAGGGAGACCCGTCCATTTGGCAGGGGTGGCTGCC
TCATTTAGAGAGGAAAAGTAACCATCACTGGTTGCACTTATGATTTCATGTGCGGGGATCATCTGCCGTGCCTGG
ATCCTGAAATAGAGGCTAAATTACTCAGGAAGAACACCCTCTAAATGGGAAAGTATTCTGTACTCTTAGATGGAT
TCTCCACTCAGTTGCAACTTGGACTTGTCCTCAGCAGCTGGTAATCTTGCTCTGCTTGACAACATCTGAGTGCAG
CCGTTTGAGAAGAAAACATCTATTCTCTCCAAAAATGCACCCAACTAGCTCTATGTTTACAAATGGACATAGGAC
TCAAAGTTTCAGAGACCATTGCAATGAATCCCCAATAATTGCAGAACTAAACTCATTTATAAAGCTAAAATAACC
GGATATATACATAGCATGACATTTCTTTGTGCTTTGGCTTACTTGTTT

FIGURE 550

MGCIKSKGKDSLSDDGVDLKTQPVRNTERTIYVRDPTSNKQQRPVPESQLLPGQRFQTKDPEEQGDIVVALYPYD
GIHPDDLSFKKGEKMKVLEEHGEWWKAKSLLTKKEGFIPSNYVAKLNTLETEEWFFKDITRKDAERQLLAPGNSA
GAFLIRESETLKGSFSLSVRDFDPVHGDVIKHYKIRSLDNGGYYISPRITFPCISDMIKHYQKQADGLCRRLEKA
CISPKPQKPWDKDAWEIPRESIKLVKRLGAGQFGEVWMGYYNNSTKVAVKTLKPGTMSVQAFLEEANLMKTLQHD
KLVRLYAVVTREEPIYIITEYMAKGSLLDFLKSDEGGKVLLPKLIDFSAQIAEGMAYIERKNYIHRDLRAANVLV
SESLMCKIADFGLARVIEDNEYTAREGAKFPIKWTAPEAINFGCFTIKSDVWSFGILLYEIVTYGKIPYPGRTNA
DVMTALSQGYRMPRVENCPDELYDIMKMCWKEKAEERPTFDYLQSVLDDFYTATEGQYQQQP

FIGURE 551

GAATTCCTGCAGCTCAGCAGCCGCCGCCAGAGCAGGACGAACCGCCAATCGCAAGGCACCTCTGAGAACTTCAGG
ATGCAGATGTCTCCAGCCCTCACCTGCCTAGTCCTGGGCCTGGCCCTTGTCTTTGGTGAAGGGTCTGCTGTGCAC
CATCCCCCATCCTACGTGGCCCACCTGGCCTCAGACTTCGGGGTGAGGGTGTTTCAGCAGGTGGCGCAGGCCTCC
AAGGACCGCAACGTGGTTTTCTCACCCTATGGGGTGGCCTCGGTGTTGGCCATGCTCCAGCTGACAACAGGAGGA
GAAACCCAGCAGCAGATTCAAGCAGCTATGGGATTCAAGATTGATGACAAGGGCATGGCCCCCGCCCTCCGGCAT
CTGTACAAGGAGCTCATGGGGCCATGGAACAAGGATGAGATCAGCACCACAGACGCGATCTTCGTCCAGCGGGAT
CTGAAGCTGGTCCAGGGCTTCATGCCCCACTTCTTCAGGCTGTTCCGGAGCACGGTCAAGCAAGTGGACTTTTCA
GAGGTGGAGAGAGCCAGATTCATCATCAATGACTGGGTGAAGACACACACAAAAGGTATGATCAGCAACTTGCTT
GGGAAAGGAGCCGTGGACCAGCTGACACGGCTGGTGCTGGTGAATGCCCTCTACTTCAACGGCCAGTGGAAGACT
CCCTTCCCCGACTCCAGCACCCACCGCCGCCTCTTCCACAAATCAGACGGCAGCACTGTCTCTGTGCCCATGATG
GCTCAGACCAACAAGTTCAACTATACTGAGTTCACCACGCCCGATGGCCATTACTACGACATCCTGGAACTGCCC
TACCACGGGGACACCCTCAGCATGTTCATTGCTGCCCCTTATGAAAAAGAGGTGCCTCTCTCTGCCCTCACCAAC
ATTCTGAGTGCCCAGCTCATCAGCCACTGGAAAGGCAACATGACCAGGCTGCCCCGCCTCCTGGTTCTGCCCAAG
TTCTCCCTGGAGACTGAAGTCGACCTCAGGAAGCCCCTAGAGAACCTGGGAATGACCGACATGTTCAGACAGTTT
CAGGCTGACTTCACGAGTCTTTCAGACCAAGAGCCTCTCCACGTCGCGCAGGCGCTGCAGAAAGTGAAGATCGAG
GTGAACGAGAGTGGCACGGTGGCCTCCTCATCCACAGCTGTCATAGTCTCAGCCCGCATGGCCCCCGAGGAGATC
ATCATGGACAGACCCTTCCTCTTTGTGGTCCGGCACAACCCCACAGGAACAGTCCTTTTCATGGGCCAAGTGATG
GAACCCTGACCCTGGGGAAAGACGCCTTCATCTGGGACAAAACTGGAGATGCATCGGGAAAGAAGAAACTCCGAA
GAAAAGAATTTTAGTGTTAATGACTCTTTCTGAAGGAAGAGAAGACATTTGCCTTTTGTTAAAAGATGGTAAACC
AGATCTGTCTCCAAGACCTTGGCCTCTCCTTGGAGGACCTTTAGGTCAAACTCCCTAGTCTCCACCTGAGACCCT
GGGAGAGAAGTTTGAAGCACAACTCCCTTAAGGTCTCCAAACCAGACGGTGACGCCTGCGGGACCATCTGGGGCA
CCTGCTTCCACCCGTCTCTCTGCCCACTCGGGTCTGCAGACCTGGTTCCCACTGAGGCCCTTTGCAGGATGGAAC
TACGGGGCTTACAGGAGCTTTTGTGTGCCTGGTAGAAACTATTTCTGTTCCAGTCACATTGCCATCACTCTTGTA
CTGCCTGCCACCGCGGAGGAGGCTGGTGACAGGCCAAAGGCCAGTGGAAGAAACACCCTTTCATCTCAGAGTCCA
CTGTGGCACTGGCCACCCCTCCCCAGTACAGGGGTGCTGCAGGTGGCAGAGTGAATGTCCCCCATCATGTGGCCC
AACTCTCCTGGCCTGGCCATCTCCCTCCCCAGAAACAGTGTGCATGGGTTATTTTGGAGTGTAGGTGACTTGTTT
ACTCATTGAAGCAGATTTCTGCTTCCTTTTATTTTTATAGGAATAGAGGAAGAAATGTCAGATGCGTGCCCAGCT
CTTCACCCCCCAATCTCTTGGTGGGGAGGGGTGTACCTAAATATTTATCATATCCTTGCCCTTGAGTGCTTGTTA
GAGAGAAAGAGAACTACTAAGGAAAATAATATTATTTAAACTCGCTCCTAGTGTTTCTTTGTGGTCTGTGTCACC
GTATCTCAGGAAGTCCAGCCACTTGACTGGCACACACCCCTCCGGACATCCAGCGTGACGGAGCCCACACTGCCA
CCTTGTGGCCGCCTGAGACCCTCGCGCCCCCCGCGCCCCCCGCGCCCCTCTTTTTCCCCTTGATGGAAATTGACC
ATACAATTTCATCCTCCTTCAGGGGATCAAAAGGACGGAGTGGGGGGACAGAGACTCAGATGAGGACAGAGTGGT
TTCCAATGTGTTCAATAGATTTAGGAGCAGAAATGCAAGGGGCTGCATGACCTACCAGGACAGAACTTTCCCCAA
TTACAGGGTGACTCACAGCCGCATTGGTGACTCACTTCAATGTGTCATTTCCGGCTGCTGTGTGTGAGCAGTGGA
CACGTGAGGGGGGGGTGGGTGAGAGAGACAGGCAGCTCGGATTCAACTACCTTAGATAATATTTCTGAAAACCTA
CCAGCCAGAGGGTAGGGCACAAAGATGGATGTAATGCACTTTGGGAGGCCAAGGCGGGAGGATTGCTTGAGCCCA
GGAGTTCAAGACCAGCCTGGGCAACATACCAAGACCCCCGTCTCTTTAAAAATATATATATTTTAAATATACTTA
AATATATATTTCTAATATCTTTAAATATATATATATATTTTAAAGACCAATTTATGGGAGAATTGCACACAGATG
TGAAATGAATGTAATCTAATAGAAGC

FIGURE 552

MQMSPALTCLVLGLALVFGEGSAVHHPPSYVAHLASDFGVRVFQQVAQASKDRNVVFSPYGVASVLAMLQLTTGG
ETQQQIQAAMGFKIDDKGMAPALRHLYKELMGPWNKDEISTTDAIFVQRDLKLVQGFMPHFFRLFRSTVKQVDFS
EVERARFIINDWVKTHTKGMISNLLGKGAVDQLTRLVLVNALYFNGQWKTPFPDSSTHRRLFHKSDGSTVSVPMM
AQTNKFNYTEFTTPDGHYYDILELPYHGDTLSMFIAAPYEKEVPLSALTNILSAQLISHWKGNMTRLPRLLVLPK
FSLETEVDLRKPLENLGMTDMFRQFQADFTSLSDQEPLHVAQALQKVKIEVNESGTVASSSTAVIVSARMAPEEI
IMDRPFLFVVRHNPTGTVLFMGQVMEP

FIGURE 553

CTTCGGTCCTGCTGTAGTGCCTTCTGCGCCAGGCCCGGTTCAATCAGCGGCCACAACTGTCTAGGGCTCAGACAC
CACCAGCCAATGAGGGAGGGCACGTGGAGCCGCGTCTGGGCTCGCGGCTCCTGACCA**ATG**GGGAAGTGGCATGTG
GGAGGGCGCCGGGGGTTCCCCCCGCCAATGGGGAGCTACGGCGCGCGGCCGGGACTTGGAGGCGGTGCGGCGCGGC
GGGTGCGGTTCAGTCGGTCGGCGGCGGCAGCGGAGGAGGAGGAGGAGGAGGAGGATGAGGAGGATGAGGAGGATG
TGGGCCACGCAGGGGCTGGCGGTGCGCGTGGCTCTGAGCGTGCTGCCGGGCAGCCGGGCGCTGCGGCCGGGCGAC
TGCGAAGTTTGTATTTCTTATCTGGGAAGATTTTACCAGGACCTCAAAGACAGAGATGTCACATTCTCACCAGCC
ACTATTGAAAACGAACTTATAAAGTTCTGCCGGGAAGCAAGAGGCAAAGAGAATCGGTTGTGCTACTATATCGGG
GCCACAGATGATGCAGCCACCAAAATCATCAATGAGGTATCAAAGCCTCTGGCCCACCACATCCCTGTGGAGAAG
ATCTGTGAGAAGCTTAAGAAGAAGGACAGCCAGATATGTGAGCTTAAGTATGACAAGCAGATCGACCTGAGCACA
GTGGACCTGAAGAAGCTCCGAGTTAAAGAGCTGAAGAAGATTCTGGATGACTGGGGGGAGACATGCAAAGGCTGT
GCAGAAAAGTCTGACTACATCCGGAAGATAAATGAACTGATGCCTAAATATGCCCCCAAGGCAGCCAGTGCACCG
ACCGATTTG**TAG**TCTGCTCAATCTCTGTTGCACCTGAGGGGGAAAAAACAGTTCAACTGCTTACTCCCAAAACAG
CCTTTTTGTAATTTATTTTTTAAGTGGGCTCCTGACAATACTGTATCAGATGTGAAGCCTGGAGCTTTCCTGATG
ATGCTGGCCCTACAGTACCCCCATGAGGGGATTCCCTTCCTTCTGTTGCTGGTGTACTCTAGGACTTCAAAGTGT
GTCTGGGATTTTTTTATTAAAGAAAAAAAATTTCTAGCTGTCAAAAAAAAAAA

FIGURE 554

MGKWHVGGRRGSPRQWGATARGRDLEAVRRGGCGSVGRRRQRRRRRRRRMRRMRRMWATQGLAVRVALSVLPGSR
ALRPGDCEVCISYLGRFYQDLKDRDVTFSPATIENELIKFCREARGKENRLCYYIGATDDAATKIINEVSKPLAH
HIPVEKICEKLKKKDSQICELKYDKQIDLSTVDLKKLRVKELKKILDDWGETCKGCAEKSDYIRKINELMPKYAP
KAASAPTDL

FIGURE 555

AGCAGAGGACTTTTTAGCTGCTCACTGGCCCCGCTTGTCTGACCGACTCATCCGCCCGCGACCCCTAATCCCCTC
TGCCTGCCCCAAG**ATG**CTGAAGCCAGCCCTGGAGCCCCGAGGGGGCTTCTCCTTCGAGAACTGCCAAAGAAATGC
ATCATTGGAACGCGTCCTCCCGGGGCTCAAGGTCCCTCACGCACGCAAGACCGGGACCACCATCGCGGGCCTGGT
GTTCCAAGACGGGGTCATTCTGGGCGCCGATACGCGAGCCACTAACGATTCGGTCGTGGCGGACAAGAGCTGCGA
GAAGATCCACTTCATCGCCCCCAAAATCTACTGCTGTGGGGCTGGAGTAGCCGCGGACGCCGAGATGACCACACG
GATGGTGGCGTCCAAGATGGAGCTACACGCGTTATCTACGGGCCGCGAGCCCCGCGTGGCCACGGTCACTCGCAT
CCTGCGCCAGACGCTCTTCAGGTACCAGGGCCACGTGGGTGCATCGCTGATCGTGGGCGGCGTAGACCTGACTGG
ACCGCAGCTCTACGGCGTGCATCCCCATGGCTCCTACAGCCGTCTGCCCTTCACAGCCCTGGGCTCTGGTCAGGA
CGCGGCCCTGGCGGTGCTAGAAGACCGGTTCCAGCCGAACATGACGCTGGAGGCTGCTCAGGGGCTGCTGGTGGA
AGCCGTCACCGCCGGGATCTTGGGTGACCTGGGCTCCGGGGGCAATGTGGACGCATGTGTGATCACAAAGACTGG
CGCCAAGCTGCTGCGGACACTGAGCTCACCCACAGAGCCCGTGAAGAGGTCTGGCCGCTACCACTTTGTGCCTGG
AACCACAGCTGTCCTGACCCAGACAGTGAAGCCACTAACCCTGGAGCTAGTGGAGGAAACTGTGCAGGCTATGGA
GGTGGAG**TAA**GCTGAGGCTTAGAGCTTGGAACAAGGGGGAATAAACCCAGAAAATACAGTTAAAAAAAAAAAAAA
CAAAAAAAAAAAAAAAAAAAA

FIGURE 556

MLKPALEPRGGFSFENCQRNASLERVLPGLKVPHARKTGTTIAGLVFQDGVILGADTRATNDSVVADKSCEKIHF
IAPKIYCCGAGVAADAEMTTRMVASKMELHALSTGREPRVATVTRILRQTLFRYQGHVGASLIVGGVDLTGPQLY
GVHPHGSYSRLPFTALGSGQDAALAVLEDRFQPNMTLEAAQGLLVEAVTAGILGDLGSGGNVDACVITKTGAKLL
RTLSSPTEPVKRSGRYHFVPGTTAVLTQTVKPLTLELVEETVQAMEVE

FIGURE 557

CGGAGCCGCCCGCTGAGGTCAGAAGGAGGCGTCTGCGCTGATCGGGTCCGCCGCGCGCCAGAGCCAGAGTCGCAG
CCGAGGGGAGCCGGGGCCGGAGCCCGAGCCCGAGCCGAGCCGGAGCCCGAGCGAGCGGCGGAGACCGTGCCCCCG
CCTCGGCCCCGCGCCGCCGCGGCCAGGCCCGGC**ATG**GAGGAGGAGTGCCGGGTGCTCTCCATACAGAGCCACGTC
ATCCGCGGCTACGTGGGCAACCGGGCGGCCACGTTCCCGCTGCAGGTTTTGGGATTTGAGATTGACGCGGTGAAC
TCTGTCCAGTTTTCAAACCACACAGGCTATGCCCACTGGAAGGGCCAAGTGCTGAATTCAGATGAGCTCCAGGAG
TTGTACGAAGGCCTGAGGCTGAACAACATGAATAAATATGACTACGTGCTCACAGGTTATACGAGGGACAAGTCG
TTCCTGGCCATGGTGGTGGACATTGTGCAGGAGCTGAAGCAGCAGAACCCCAGGCTGGTGTACGTGTGTGATCCA
GTCTTGGGTGACAAGTGGGACGGCGAAGGCTCGATGTACGTCCCGGAGGACCTCCTTCCCGTCTACAAAGAAAAA
GTGGTGCCGCTTGCAGACATTATCACGCCCAACCAGTTTGAGGCCGAGTTACTGAGTGGCCGGAAGATCCACAGC
CAGGAGGAAGCCTTGCGGGTGATGGACATGCTGCACTCTATGGGCCCCGACACCGTGGTCATCACCAGCTCCGAC
CTGCCCTCCCCGCAGGGCAGCAACTACCTGATTGTGCTGGGGAGTCAGAGGAGGAGGAATCCCGCTGGCTCCGTG
GTGATGGAACGCATCCGGATGGACATTCGCAAAGTGGACGCCGTCTTTGTGGGCACTGGGGACCTGTTTGCTGCC
ATGCTCCTGGCGTGGACACACAAGCACCCCAATAACCTCAAGGTGGCCTGTGAGAAGACCGTGTCTACCTTGCAC
CACGTTCTGCAGAGGACCATCCAGTGTGCAAAAGCCCAGGCCGGGGAAGGAGTGAGGCCCAGCCCCATGCAGCTG
GAGCTGCGGATGGTGCAGAGCAAAAGGGACATCGAGGACCCAGAGATCGTCGTCCAGGCCACGGTGCTG**TGA**GGG
CCCCGCCGCTTGCCCGTGACACGCAGCGCGTTGGTGTCTCCGTGTTTGTCCCTGTGAAAACATGTAACGTCTGCC
TTAGAGCCATGACCGAAACTTGATATTTTTTTCTTTCATGAGTGTCCGGCATCTGCTGGTCTTCATTGTGAAACG
TGCCAGTCGTGCTTTGTGAAAAATAACAAAGTGGTCACAAAAAAAAAAAAAAAAAA

FIGURE 558

MEEECRVLSIQSHVIRGYVGNRAATFPLQVLGFEIDAVNSVQFSNHTGYAHWKGQVLNSDELQELYEGLRLNNMN
KYDYVLTGYTRDKSFLAMVVDIVQELKQQNPRLVYVCDPVLGDKWDGEGSMYVPEDLLPVYKEKVVPLADIITPN
QFEAELLSGRKIHSQEEALRVMDMLHSMGPDTVVITSSDLPSPQGSNYLIVLGSQRRRNPAGSVVMERIRMDIRK
VDAVFVGTGDLFAAMLLAWTHKHPNNLKVACEKTVSTLHHVLQRTIQCAKAQAGEGVRPSPMQLELRMVQSKRDI
EDPEIVVQATVL

FIGURE 559

GCAGCCAGGCGCGCACTGCACAGCTCTCTTCTCTCGCCGCCGCCCGAGCGCACCCTTCAGCCCGCGCGCCGGCCG
TGAGTCCTCGGTGCTCGCCCGCCGGCCAGACAAACAGCCCGCCCGACCCCGTCCCGACCCTGGCCGCCCCGAGCG
GAGCCTGGAGCAAA**ATG**ATGCTTCAACACCCAGGCCAGGTCTCTGCCTCGGAAGTGAGTGCTTCTGCCATCGTCC
CCTGCCTGTCCCCTCCTGGGTCACTGGTGTTTGAGGATTTTGCTAACCTGACGCCCTTTGTCAAGGAAGAGCTGA
GGTTTGCCATCCAGAACAAGCACCTCTGCCACCGGATGTCCTCTGCGCTGGAATCAGTCACTGTCAGCGACAGAC
CCCTCGGGGTGTCCATCACAAAAGCCGAGGTAGCCCCTGAAGAAGATGAAAGGAAAAAGAGGCGACGAGAAAGAA
ATAAGATTGCAGCTGCAAAGTGCCGAAACAAGAAGAAGGAGAAGACGGAGTGCCTGCAGCTTCAGTAT**TAG**CAGA
GCCACAGGCCGCCTCTGTGGCATCACCAGGGTTTCTCTGAAGAAGAGGGTCTGCATTTTCCTAAACCCAGTGCTG
CTCTCCCATCTCCCATCTTCCTCTCGCAGCTTGATGAGCCCCGGTGTGTCCCAGGAGTCGGAGAAGCTGGAAAGT
GTGAATGCTGAACTGAAGGCTCAGATTGAGGAGCTCAAGAACGAGAAGCAGCATTTGATATACATGCTCAACCTT
CATCGGCCCACGTGTATTGTCCGGGCTCAGAATGGGAGGACTCCAGAAGATGAGAGAAACCTCTTTATCCAACAG
ATAAAAGAAGGAACATTGCAGAGCTAAGCAGTCGTGGTATGGGGGCGACTGGGGAGTCCTCATTGAATCCTCATT
TTATACCCAAAACCCTGAAGCCATTGGAGAGCTGTCTTCCTGTGTACCTCTAGAATCCCAGCAGCAGAGAACCAT
CAAGGCGGGAGGGCCTGCAGTGATTCAGCAGGCCCTTCCCATTCTGCCCCAGAGTGGGTCTTGGACCAGGGCAAG
TGCATCTTTGCCTCAACTCCAGGATTTAGGCCTTAACACACTGGCCATTCTTATGTTCCAGATGGCCCCCAGCTG
GTGTCCTGCCCGCCTTTCATCTGGATTCTACAAAAAACCAGGATGCCCACCGTTAGATTCAGGCAGCAGTGTCTG
TACCTCGGGTGGGAGGGATGGGGCCATCTCCTTCACCGTGGCTACCATTGTCACTCGTAGGGGATGTGGAGTGAG
AACAGCATTTAGTGAAGTTGTGCAACGGCCAGGGTTGTGCTTTCTAGCAAATATGCTGTTATGTCCAGAAATTGT
GTGTGCAAGAAAACTAGGCAATGTACTCTTCCGATGTTTGTGTCACACAACACTGATGTGACTTTTATATGCTTT
TTCTCAGATCTGGTTTCTAAGAGTTTTGGGGGGCGGGGCTGTCACCACGTGCAGTATCTCAAGATATTCAGGTGG
CCAGAAGAGCTTGTCAGCAAGAGGAGGAACAGAATTCTCCCAGCGTTAACACAAAATCCATGGGCAGCATGATGG
CAGGTCCTCTGTTGCAAACTCAGTTCCAAAGTCACAGGAAGAAAGCAGAAAGTTCAACTTCCAAAGGGTTAGGAC
TCTCCACTCAATGTCTTAGGTCAGGAGTTGTGTCTAGGCTGGAAGAGCCAAAGAAATATTCCATTTTCCTTTCCT
TGTGGTTGAAACCACAGTCAGTGGAGAGATGTTTGGAACACAGTCAGTGGAGCTGGTGGTACCAGGTTTAGCATT
ATTGGATGTCAAAAGCATTTTTTTTGTCATGTAGCTGTTTTAAGAAATCTGGCCCAGGGTGTTTGCAGCTGTGAG
AAGTCACTCACACTGGCCACAAGGACGCTGGCTACTGTCTATTAAAATTCTGATGTTTCTGTGAAATTCTCAGAG
TGTTTAATTGTACTCAATGGTATCATTACAATTTTCTGTAAGAGAAAATATTACTTATTTATCCTAGTATTCCTA
ACCTGTCAGAATAATAAATATTGTGGTAAAA

FIGURE 560

MMLQHPGQVSASEVSASAIVPCLSPPGSLVFEDFANLTPFVKEELRFAIQNKHLCHRMSSALESVTVSDRPLGVS
ITKAEVAPEEDERKKRRRERNKIAAAKCRNKKKEKTECLQLQY

FIGURE 561

GGCCTCCCACTTGGTTGCTCGTACGCGGCTAGTGGGTCCTCAGTGGATGTAGGCTGGGCGCCGCGATGTTCGACG
GGACACCGGCGGAGAGCGACCTCGGGGTTAAGGGGTGGGGCTGGACGTCAGGAGCCAAG**ATG**GCGGCGGTGGTCG
CACTCTCCTTGAGGCGCCGGTTGCCGGCCACAACCCTTGGCGGAGCCTGCCTGCAGGCCTCCCGAGGAGCCCAGA
CAGCTGCAGCCACAGCTCCCCGTATCAAGAAATTTGCCATCTATCGATGGGACCCAGACAAGGCTGGAGACAAAC
CTCATATGCAGACTTATAAGGTTGACCTTAATAAATGTGGCCCCATGGTATTGGATGCTTTAATCAAGATTAAGA
ATGAAGTTGACTCTACTTTGACCTTCCGAAGATCATGCAGAGAAGGCATCTGTGGCTCTTGTGCAATGAACATCA
ATGGAGGCAACACTCTAGCTTGCACCCGAAGGATTGACACCAACCTCAATAAGGTCTCAAAAATCTACCCTCTTC
CACACATGTATGTGATAAAGGATCTTGTTCCCGATTTGAGCAACTTCTATGCACAGTACAAATCCATTGAGCCTT
ATTTGAAGAAGAAGGATGAATCTCAGGAAGGCAAGCAGCAGTATCTGCAGTCCATAGAAGAGCGTGAGAAACTGG
ACGGGCTCTACGAGTGCATTCTCTGTGCCTGCTGTAGCACCAGCTGCCCCAGCTACTGGTGGAACGGAGACAAAT
ATCTGGGGCCTGCAGTTCTTATGCAGGCCTATCGCTGGATGATTGACTCCAGAGATGACTTCACAGAGGAGCGCC
TGGCCAAGCTGCAGGACCCATTCTCTCTATACCGCTGCCACACCATCATGAACTGCACAAGGACCTGTCCTAAGG
GTCTGAATCCAGGGAAAGCTATTGCAGAGATCAAGAAAATGATGGCAACCTATAAGGAGAAGAAAGCTTCAGTT**T**
AACTGTTTCCATGCTAAACATGATTTATAACCAGCTCAGAGCTGAACATAATTTATATCTAATTTGAGTTCCTTT
AAAGATCTTGGTTTTCCATGAATACAGCATGTATAATAAAAATTTTAAGA

FIGURE 562

MAAVVALSLRRRLPATTLGGACLQASRGAQTAAATAPRIKKFAIYRWDPDKAGDKPHMQTYKVDLNKCGPMVLDA
LIKIKNEVDSTLTFRRSCREGICGSCAMNINGGNTLACTRRIDTNLNKVSKIYPLPHMYVIKDLVPDLSNFYAQY
KSIEPYLKKKDESQEGKQQYLQSIEEREKLDGLYECILCACCSTSCPSYWWNGDKYLGPAVLMQAYRWMIDSRDD
FTEERLAKLQDPFSLYRCHTIMNCTRTCPKGLNPGKAIAEIKKMMATYKEKKASV

FIGURE 563

CCAGAGCCGCAGCCGCAGCCGCCGCTACAGTCCGGGCCGGGCTCCACCGCGCATCCTGCTCCACTCTGGCGACCG
CCCCCGGGGTCCCCGCCGCGGGCGCGGCGCCCGCC**ATG**GGCGAGGAGGACTACTATCTGGAGCTGTGCGAGCGGC
CGGTGCAGTTCGAGAAGGCGAACCCTGTCAACTGCGTCTTCTTCGATGAGGCCAACAAGCAGGTTTTTGCTGTTC
GATCTGGTGGAGCTACTGGCGTGGTAGTTAAAGGCCCAGATGATAGGAATCCCATCTCATTTAGAATGGATGACA
AAGGAGAAGTGAAGTGCATTAAGTTTTCCTTAGAAAATAAGATATTGGCTGTTCAGAGGACCTCAAAGACTGTGG
ATTTTTGTAATTTTATCCCTGATAATTCCCAGCTGGAATACACACAGGAGTGCAAGACTAAGAATGCCAACATTC
TAGGATTCTGCTGGACTAGTTCAACTGAAATTGTCTTCATAACAGATCAAGGAATCGAATTTTACCAGGTATTAC
CAGAGAAACGGAGTCTGAAACTCTTGAAGAGCCACAATCTCAATGTGAATTGGTACATGTACTGCCCCGAGCGCG
CCGTGATCTTGCTGTCTACCACGGTCCTGGAGAATGTCCTGCAGCCTTTTCACTTTAGGGCTGGCACTATGTCGA
AGCTGCCCAAGTTTGAGATTGAATTACCAGCTGCGCCTAAGTCAACTAAACCCAGCCTTTCCGAAAGAGACATCG
CAATGGCTACCATATACGGGCAGCTGTATGTTCTCTTCTTGAGGCATCATTCTCGGACCTCCAACAGCACAGGAG
CGGAGGTGGTCCTCTATCATCTACCACGAGAAGGTGCCTGTAAAAAGATGCACATATTGAAGTTAAATAGGACGG
GAAAGTTTGCCCTGAACGTGGTGGACAACCTGGTAGTCGTGCATCATCAGGATACAGAGACATCGGTAATATTCG
ATATCAAGTTACGGGGAGAGTTTGACGGCTCCGTTACCTTCCACCACCCCGTGCTTCCTGCTCGATCGATCCAGC
CCTATCAGATCCCCATCACAGGTCCTGCTGCCGTGACCAGCCAGTCTCCTGTTCCATGTAAACTCTATTCTTCAT
CTTGGATTGTCTTTCAACCTGACATCATTATCAGCGCAAGCCAAGGTTACCTCTGGAACCTCCAAGTGAAACTTG
AGCCCATAGTAAATCTCTTACCAGACAAAGGAAGACTCATGGACTTTCTCCTCCAGAGAAAGGAATGCAAGATGG
TCATCCTGTCTGTCTGTTCACAGATGTTAAGTGAGTCAGACAGAGCATCGCTGCCCGTGATAGCCACTGTTTTTG
ATAAACTCAACCATGAGTATAAAAAGTACCTGGATGCCGAGCAGAGTTATGCGATGGCGGTGGAAGCAGGGCAGA
GCCGAAGCAGCCCGCTCCTCAAGAGGCCGGTGCGGACCCAGGCGGTGCTGGACCAGTCAGATGTGTACACCCATG
TCCTGTCAGCCTTCGTGGAAAAGAAGGAGATGCCTCATAAATTTGTGATAGCCGTGCTGATGGAATACATTCGTT
CTCTTAACCAGTTTCAGATTGCAGTACAGCATTACCTACATGAACTTGTTATCAAAACCCTTGTCCAGCACAACC
TCTTTTATATGCTGCATCAGTTCCTGCAGTACCACGTCCTCAGCGACTCCAAACCTTTGGCTTGTCTGCTGTTAT
CCCTAGAGAGTTTCTATCCTCCTGCTCATCAGCTATCTCTGGACATGCTGAAGCGACTTTCAACAGCAAATGATG
AAATAGTAGAAGTTCTCCTTTCCAAACACCAAGTGTTAGCTGCCTTAAGGTTTATCCGGGGCATTGGTGGCCATG
ACAACATTTCTGCACGAAAATTTTTAGATGCTGCAAAGCAGACTGAAGACAACATGCTTTTCTATACAATATTCC
GCTTTTTTGAACAGCGAAACCAGCGTTTGCGAGGGAGCCCCAATTTCACACCAGGGGAACACTGTGAAGAACATG
TTGCTTTTTTCAAACAGATTTTTGGAGACCAAGCTCTAATGAGGCCTACAACATTC**TGA**AATCACTTGCTGTTTT
TTTATATAAAAATGTGTACAAAGTTAATTTATTGCATTAATAAAGCTCTTTAAACTAT

FIGURE 564

MGEEDYYLELCERPVQFEKANPVNCVFFDEANKQVFAVRSGGATGVVVKGPDDRNPISFRMDDKGEVKCIKFSLE
NKILAVQRTSKTVDFCNFIPDNSQLEYTQECKTKNANILGFCWTSSTEIVFITDQGIEFYQVLPEKRSLKLLKSH
NLNVNWYMYCPERAVILLSTTVLENVLQPFHFRAGTMSKLPKFEIELPAAPKSTKPSLSERDIAMATIYGQLYVL
FLRHHSRTSNSTGAEVVLYHLPREGACKKMHILKLNRTGKFALNVVDNLVVVHHQDTETSVIFDIKLRGEFDGSV
TFHHPVLPARSIQPYQIPITGPAAVTSQSPVPCKLYSSSWIVFQPDIIISASQGYLWNLQVKLEPIVNLLPDKGR
LMDFLLQRKECKMVILSVCSQMLSESDRASLPVIATVFDKLNHEYKKYLDAEQSYAMAVEAGQSRSSPLLKRPVR
TQAVLDQSDVYTHVLSAFVEKKEMPHKFVIAVLMEYIRSLNQFQIAVQHYLHELVIKTLVQHNLFYMLHQFLQYH
VLSDSKPLACLLLSLESFYPPAHQLSLDMLKRLSTANDEIVEVLLSKHQVLAALRFIRGIGGHDNISARKFLDAA
KQTEDNMLFYTIFRFFEQRNQRLRGSPNFTPGEHCEEHVAFFKQIFGDQALMRPTTF

FIGURE 565

CCTCACTGACTATAAAAGAATAGAGAAGGAAGGGCTTCAGTGACCGGCTGCCTGGCTGACTTACAGCAGTCAGAC
TCTGACAGGATC**ATG**GCTATGATGGAGGTCCAGGGGGGACCCAGCCTGGGACAGACCTGCGTGCTGATCGTGATC
TTCACAGTGCTCCTGCAGTCTCTCTGTGTGGCTGTAACTTACGTGTACTTTACCAACGAGCTGAAGCAGATGCAG
GACAAGTACTCCAAAAGTGGCATTGCTTGTTTCTTAAAAGAAGATGACAGTTATTGGGACCCCAATGACGAAGAG
AGTATGAACAGCCCCTGCTGGCAAGTCAAGTGGCAACTCCGTCAGCTCGTTAGAAAGATGATTTTGAGAACCTCT
GAGGAAACCATTTCTACAGTTCAAGAAAAGCAACAAAATATTTCTCCCCTAGTGAGAGAAAGAGGTCCTCAGAGA
GTAGCAGCTCACATAACTGGGACCAGAGGAAGAAGCAACACATTGTCTTCTCCAAACTCCAAGAATGAAAAGGCT
CTGGGCCGCAAAATAAACTCCTGGGAATCATCAAGGAGTGGGCATTCATTCCTGAGCAACTTGCACTTGAGGAAT
GGTGAACTGGTCATCCATGAAAAAGGGTTTTACTACATCTATTCCCAAACATACTTTCGATTTCAGGAGGAAATA
AAAGAAAACACAAAGAACGACAAACAAATGGTCCAATATATTTACAAATACACAAGTTATCCTGACCCTATATTG
TTGATGAAAAGTGCTAGAAATAGTTGTTGGTCTAAAGATGCAGAATATGGACTCTATTCCATCTATCAAGGGGGA
ATATTTGAGCTTAAGGAAAATGACAGAATTTTTGTTTCTGTAACAAATGAGCACTTGATAGACATGGACCATGAA
GCCAGTTTTTTCGGGGCCTTTTTAGTTGGC**TAA**CTGACCTGGAAAGAAAAAGCAATAACCTCAAAGTGACTATTC
AGTTTTCAGGATGATACACTATGAAGATGTTTCAAAAAATCTGACCAAAACAAACAAACAGAAAACAGAAAACAA
AAAAACCTCTATGCAATCTGAGTAGAGCAGCCACAACCAAAAAATTCTACAACACACACTGTTCTGAAAGTGACT
CACTTATCCCAAGAAAATGAAATTGCTGAAAGATCTTTCAGGACTCTACCTCATATCAGTTTGCTAGCAGAAATC
TAGAAGACTGTCAGCTTCCAAACATTAATGCAATGGTTAACATCTTCTGTCTTTATAATCTACTCCTTGTAAAGA
CTGTAGAAGAAAGCGCAACAATCCATCTCTCAAGTAGTGTATCACAGTAGTAGCCTCCAGGTTTCCTTAAGGGAC
AACATCCTTAAGTCAAAAGAGAGAAGAGGCACCACTAAAAGATCGCAGTTTGCCTGGTGCAGTGGCTCACACCTG
TAATCCCAACATTTTGGGAACCCAAGGTGGGTAGATCACGAGATCAAGAGATCAAGACCATAGTGACCAACATAG
TGAAACCCCATCTCTACTGAAAGTGCAAAAATTAGCTGGGTGTGTTGGCACATGCCTGTAGTCCCAGCTACTTGA
GAGGCTGAGGCAGGAGAATCGTTTGAACCCGGGAGGCAGAGGTTGCAGTGTGGTGAGATCATGCCACTACACTCC
AGCCTGGCGACAGAGCGAGACTTGGTTTCAAAAAAAAAAAAAAAAAAAAACTTCAGTAAGTACGTGTTATTTTTT
TCAATAAAATTCTATTACAGTATGTCAAAAAAAAAAAAAAAAA

FIGURE 566

MAMMEVQGGPSLGQTCVLIVIFTVLLQSLCVAVTYVYFTNELKQMQDKYSKSGIACFLKEDDSYWDPNDEESMNS
PCWQVKWQLRQLVRKMILRTSEETISTVQEKQQNISPLVRERGPQRVAAHITGTRGRSNTLSSPNSKNEKALGRK
INSWESSRSGHSFLSNLHLRNGELVIHEKGFYYIYSQTYFRFQEEIKENTKNDKQMVQYIYKYTSYPDPILLMKS
ARNSCWSKDAEYGLYSIYQGGIFELKENDRIFVSVTNEHLIDMDHEASFFGAFLVG

FIGURE 567

GGGGAGAGCGGGTGTTTGAAGGCTCCGCGGACCGGCACTAGGAGCCGGGGGCGGGTCCGTGACCCTCCGGCTGCT
CGGAGTGAACAGGCGGCCAGGAAAGAAGCGGGCCTGAACACC**ATG**ATCCCTTTGGAGAAGCCAGGCAGCGGCGGC
TCCTCCCCAGGCGCCACCTCAGGCTCGGGCCGGGCAGGCCGGGGTCTGAGCGGGCCGTGCCGGCCGCCGCCGCCG
CCCCAGGCCCGCGGGCTGCTGACAGAGATACGCGCCGTGGTGCGCACCGAGCCCTTCCAGGACGGCTACAGCCTG
TGCCCGGGCCGGGAGCTGGGCAGGGGGAAATTTGCAGTGGTGAGAAAATGTATAAAGAAAGATTCTGGGAAAGAA
TTTGCTGCAAAGTTCATGAGAAAAAGAAGAAAAGGCCAAGATTGTCGGATGGAAATAATTCATGAGATTGCTGTA
CTTGAACTAGCACAAGACAATCCTTGGGTCATTAATTTACATGAAGTTTATGAGACTGCATCAGAAATGATCTTA
GTTCTGGAATATGCTGCTGGGGGTGAAATCTTTGACCAGTGTGTTGCAGACAGAGAAGAAGCCTTTAAAGAAAAA
GATGTTCAAAGACTTATGCGACAGATTTTAGAAGGTGTTCACTTTTTACACACTCGTGATGTAGTTCATCTTGAT
TTGAAGCCTCAGAATATTCTGTTGACAAGTGAATCTCCATTGGGTGACATTAAGATTGTTGATTTTGGCCTTTCA
AGAATATTGAAGAACAGTGAAGAGCTCCGAGAAATTATGGGTACCCCTGAATATGTGGCTCCTGAAATTCTTAGT
TATGATCCTATAAGCATGGCAACAGATATGTGGAGCATTGGAGTGTTAACATATGTCATGCTTACAGGAATATCA
CCTTTCTTAGGCAATGATAAACAAGAAACATTCTTAAACATCTCACAGATGAATTTAAGTTATTCTGAGGAAGAA
TTTGATGTTTTGTCTGAGTCGGCTGTTGATTTCATCAGGACACTTTTAGTTAAGAAACCTGAAGATCGAGCCACT
GCTGAAGAATGTCTAAAGCACCCCTGGTTGACACAGAGCAGTATTCAAGAGCCTTCTTTCAGGATGGAAAAGGCA
CTAGAAGAAGCAAATGCCCTCCAAGAAGGTCATTCTGTGCCTGAAATTAATTCGGATACCGACAAATCAGAAACC
GAGGAATCCATTGTAACCGAAGAGTTAATTGTAGTTACTTCATATACTCTAGGACAATGCAGACAGTCTGAAAAA
GAGAAAATGGAGCAAAAGGCCATTTCCAAACGATTTAAATTTGAGGAACCTTTGCTACAAGAAATTCCAGGAGAA
TTTATCTAC**TGA**GCAATATTTCCCTTTAGAACTTCAAGATTTCTACACTGAAAATGTTAATATTATTTATGGACC
TCTGGCCAAATGGTACATGTACTGGAAGTGGATAACCAGTATCACTTACACAAACAAAAATAACTTTGTCAAATT
TGTGGAGTTAGGTGGAAGCCAGATTTTAAAAGTTGCCAACCAGGATATTTAACAGGTACAGTTACCCGTTTCAAT
GTTATTTTTAAGAAGGGAGATGTTGGCACCTTTGAATTCTACATCCTGTTTCTCCAGAATGAGAATTTGTGTACA
AAGATATTTGTATTCACTTTCTTTAAAAAATCCAAGTAAAAGTGCCAAAACTACATTTCTGTAAATCTCTTGCAT
TATTCATATGTGTATCTATATCTGCATAATGTTTGTTAATGTCTACTAAAATTGCTACTTTTTCACTTTGGATTT
GTTTTTGGCAAAATTTTAGTCTAAACAGACATCTAAATTTTCGAGACTTAGAATAACATTCACTAAAGTTTGATA
ATGTCTTTTTTAAATATTTTCTTACTGCTTTATAGTGACTTGATTTGGTTTCTGTTGTGTTTTTGCCTAAATACT
AGTAACATATCAGTGAAAAACCCTAATTTTTTTTCTCTTCAATGTCACTAGTAAGAGAGGTGGTAATTTTTCACC
TCTGAAATTATTCTGGGTTTAGGTGTCAGCTTTTGAGCTGCTTCCCTCATCACACCACACTCACATGCATCTGTT
CTCTCTCACACTCTATACCCCTGCCACTTCCTGGCACCTCCCCCCATGCTTGTCATTTAATTTTGGCCACTTGTA
GGTATCAGTGTGATCTGATCAACACTCTGGTTACCTTGGTCAGTGAAAAGATGCTACTATATTGCTTTTGTCCCA
AAGTGAGTAAAATCCCCTAGAGCAGAGAGAGAGAGAGAGAGAGAGAGTGTCTTCATGCCAACCACAGCCTGTTTCTG
CTGAGTTTCTTATCAGCCCTCAAGCTATGCTAGGAAAAGTTATAAAATGCCAAAATATTTATAAACATTTACTTT
GTCCATAAAAAATTTACATTGGATACTCTGTAAGTAGGAGGTACTTTGTCCCAAAAAGATGTATAAGAATGTACT
AATAGTTTTATTTGATTAGGATTGAACAGTTCAGTTGTATCTATGCCCCACAGTGACCAGTAAAGTCCAATTAAA
ATATGGAAATGTAAAAGTGTATGCCGAATACCTTAAAGTAACTAATTATCCTTACACACAAAAGGCTCAGTGCAT
TAAATATTTGCCTATC

FIGURE 568

MIPLEKPGSGGSSPGATSGSGRAGRGLSGPCRPPPPPQARGLLTEIRAVVRTEPFQDGYSLCPGRELGRGKFAVV
RKCIKKDSGKEFAAKFMRKRRKGQDCRMEIIHEIAVLELAQDNPWVINLHEVYETASEMILVLEYAAGGEIFDQC
VADREEAFKEKDVQRLMRQILEGVHFLHTRDVVHLDLKPQNILLTSESPLGDIKIVDFGLSRILKNSEELREIMG
TPEYVAPEILSYDPISMATDMWSIGVLTYVMLTGISPFLGNDKQETFLNISQMNLSYSEEEFDVLSESAVDFIRT
LLVKKPEDRATAEECLKHPWLTQSSIQEPSFRMEKALEEANALQEGHSVPEINSDTDKSETEESIVTEELIVVTS
YTLGQCRQSEKEKMEQKAISKRFKFEEPLLQEIPGEFIY

FIGURE 569A

CACGCCCCGCGCTGCTGGGTCCCGCCAGACACGCCGCCGCCGCAGGAAAGTCTACAGTTTGGTACCCCAGGACTC
GCTGGTCAGGAAAGCCCTGCAGGACATGAGTGTTAGGCCCGACGCCTGGCCCTTGGCAGCTTGGGAGGTGGCTGG
GGCTGCTTTTGCCTTTGCCAGAGACAGCTCCAACTGAGGACCTCTCCAACGGGCCCATCCACAGTCCTTCCTTCC
CCTAGTGTCTGGGAAGACAGGCGCG**ATG**ATGGACTCCCCGTTCCTGGAGCTGTGGCAGTCCAAGGCAGTGTCCAT
CAGGGAGCAGCTGGGACTCGGGGACCGGCCCAACGACTCCTATTGCTACAACTCGGCCAAAAACAGCACCGTGCT
CCAGGGGGTCACCTTTGGTGGCATCCCCACTGTCCTGCTCATAGACGTCAGCTGCTTCCTGTTCTTAATCTTGGT
GTTTTCTATTATAAGAAGAAGATTCTGGGACTATGGCCGCATTGCCCTGGTGTCAGAAGCAGACAGCGAGTCCAG
ATTTCAGAGATTGTCATCGACTTCCTCCTCAGGTCAACAAGACTTTGAAAATGAGCTGGGATGCTGTCCCTGGCT
GACTGCCATCTTCCGTCTGCATGATGACCAGATCCTGGAATGGTGTGGGGAGGACGCCATCCACTACCTGTCCTT
CCAGAGGCACATCATCTTCCTGTTGGTGGTGGTCAGCTTTTTGTCCCTGTGTGTCATCCTGCCTGTCAACCTCTC
AGGGGATTTGCTGGACAAAGACCCGTATAGTTTTGGGAGGACAACAATAGCAAACCTACAGACTGACAATGACCT
CCTTTGGCTGCACACCATCTTTGCTGTCATTTACCTCTTCTTCACTGTGGGTTTCATGCGGCACCACACTCAGTC
CATTAAGTACAAAGAGGAGAACCTGGTGAGGCGGACCCTGTTCATCACAGGACTCCCCAGAGATGCCAGGAAGGA
GACTGTGGAGAGCCACTTCCGGGACGCGTATCCCACGTGTGAGGTGGTTGATGTGCAGCTGTGCTACAACGTGGC
CAAACTGATCTACCTGTGCAAGGAGAAAAAGAAGACTGAGAAGAGCCTGACCTATTACACAAACCTGCAGGTGAA
GACAGGCCAGCGGACCCTCATCAACCCCAAGCCCTGTGGCCAGTTTTGCTGCTGTGAAGTGCTGGGCTGTGAGTG
GGAAGACGCCATCTCTTACTACACACGGATGAAGGACAGGCTGCTGGAGAGGATCACAGAGGAAGAACGCCACGT
CCAGGACCAGCCCCTGGGAATGGCCTTCGTCACCTTCCAGGAGAAGTCCATGGCCACCTACATCCTGAAAGATTT
CAATGCCTGCAAGTGTCAGAGCCTTCAGTGCAAAGGTGAGCCCCAGCCGTCCTCCCATAGCAGGGAGCTCTATAC
CTCCAAGTGGACAGTCACCTTTGCTGCTGACCCTGAGGACATCTGCTGGAAGAACCTCTCTATCCAGGGCCTCCG
CTGGTGGCTACAGTGGCTGGGCATCAACTTCACCCTCTTCCTGGGGCTATTTTTCCTGACCACACCCTCCATCAT
CCTGTCCACCATGGACAAGTTTAATGTCACCAAACCCATCCATGCGCTGAATAACCCGATCATCAGCCAGTTCTT
CCCCACCCTCCTGCTCTGGTCCTTCTCGGCCCTGCTCCCCTCCATTGTCTACTACTCTACACTGCTGGAGTCTCA
CTGGACCAAGTCGGGGGAAAACCAGATCATGATGACCAAAGTCTACATATTCTTGATCTTCATGGTGCTGATCCT
GCCCTCCCTGGGTCTCACCAGTCTAGATTTTTTCTTCCGGTGGCTCTTTGACAAAACTTCCTCGGAGGCCTCCAT
CAGGTTGGAGTGCGTCTTCCTGCCTGACCAGGGTGCCTTCTTTGTGAACTATGTCATCGCCTCGGCCTTCATCGG
CAATGGCATGGAGCTGCTGCGGCTGCCAGGTCTCATCCTCTATACCTTCCGCATGATCATGGCCAAGACGGCTGC
TGACCGCAGGAATGTCAAGCAGAACCAGGCCTTCCAGTACGAGTTTGGAGCCATGTATGCATGGATGCTGTGTGT
CTTCACTGTCATCGTGGCCTACAGCATCACTTGTCCCATCATCGCGCCATTTGGCCTCATCTACATCCTGCTCAA
GCACATGGTGGACCGGCACAACCTCTACTTCGTCTACCTCCCAGCCAAGCTGGAGAAGGGGATCCACTTTGCCGC
TGTGAACCAGGCCTTGGCAGCCCCCATCCTGTGCCTCTTCTGGCTCTACTTCTTTTCCTTCCTGCGCCTGGGTAT
GAAGGCCCCCGCCACTCTGTTCACCTTCCTGGTGCTGCTGCTCACCATCCTGGTCTGCCTGGCTCACACCTGCTT
TGGATGCTTCAAGCACCTCAGCCCTCTGAACTACAAAACAGAAGAGCCTGCAAGTGACAAAGGAAGTGAGGCAGA
GGCCCACATGCCCCCACCGTTCACACCCTACGTGCCTCGGATTCTGAACGGCTTGGCCTCGGAGAGGACAGCACT
GTCTCCGCAGCAGCAGCAGCAGACCTATGGTGCCATCCACAACATCAGCGGGACTATCCCTGGACAGTGCTT
GGCGCAGAGCGCCACGGGCAGTGTGGCTGCTGCCCCCCAGGAGGCC**TGA**GGCTGGGTCTCACTGCTCTGAAAAGA
CACAACCAGAATGGCCTGGGGCTCAGGCCCTTGGCTGAGTGGGAATGCGTTGGGACTGCCCAGCTGAGCTATCAG
GTGCCCATCTTTTCTGGTCCCAGCAGTGGTGAGGAGAGCACAGGCAGGCCTCGCCCCTCCCTTGCTCACCCAGTT
TCCCCTCCGGCACAAGCTTCCAGCTCTGCAGCTGGGGTGACATCCCCAGTGGTTTGTCGCCAAGACCATGTGGTG
GACTTTTCGCCCCCCAAACTGATGAGTCCGGGAGAATATATGGAGAGAGAGATGTAACAAGGGGAAGGCCTCCTC
CCTTCTGAGCACACACACAACCGATAACCAAAGAGATGCTGCAGTCCAGGTCTGAGGTCCCGCTGGCATCCAGCT
CCCTGCTCCATGGCCAGTCCCTCCCCAGCCCAGCAGTCCCTCCAGGCTACATCCAGGAGTAAGCTATGGGGAACA
GGTTGGGAGGTGGCCAGTGCTCCTGCCAGCTGTGCACACATCTCTGTATCCCGCTAGAGTTCTGTGTTTTTGTAT
CATGTTGTCAGGGACGCTAGCTGGGTCAGGGTTACCCCATAGCAGGCAGGGACAAGGACCACTCATAATATGCCC
ATTGGACCACAGTTAAGATCCAGCCTCTCTCACCTCTTCAGGGCTGAGTGCATGAGTCTGCACCTCCAGGCAGGC
TCTGTGCAGTACTCACCCCCTCCGTCTGCTCCCTCCAAGGTGTGGGGGTGGGCAGTGCTCAGGGCCTCCTCGGAG
CCAAAGGACAGCATGGTCGGCACAGAGGAAGGGGTACCTGGGCTGGGTGCAGGGCCATCCCACTGCCCTTGAGCT
GTGGCTCTGGCAGGAAGGAGGGGCAGCCCATCCCTCTTCTCCCTCCTGGGGATTCTGGGGAATGGGATGCAACTT

FIGURE 569B

AAGACTTCTGCCTGAGAAGCCTCCTCCCTGCTGCCTCCAGGGGGCACCAAGGCACAAGCCTGTGCAGTAGGGGCG
GGATGGGGGTGTGGAAGAGCAGGTCCAGGCTCCTAGCACAACTGGCCTGGGGCCTTGGCACCTCTGTAGGCCCTG
CCTGTGCCTGTCCGCTGGCCTGGGGGGCCTGGGCTTATCTGGGCCTTCTCACTCAGGGACTCTCTTGACGCTGAC
TTGCCCCCGCAGCGGTGGCCAGTGCTGCCTCTGCTCCAAGCTGCCCCTGCGCTGGGAGGGGTGGGGGCGGTGCCA
TTGGTCTGGTGCAGCATAGCCCTGGCCAGTGGCCTCATCCCCAGCAGGCCTCCCGTGCCTCTGCCAGCAAGGAGG
GGCCGGCCAGCTCTGCTTGCACAGGGGGCCCCATGTGGGGTCAGCGCACGCTCATGTCACTGAGTTCCAGCCGCT
TTTAGAGTAAAGTCGTTTATCATC

FIGURE 570

MMDSPFLELWQSKAVSIREQLGLGDRPNDSYCYNSAKNSTVLQGVTFGGIPTVLLIDVSCFLFLILVFSIIRRRF
WDYGRIALVSEADSESRFQRLSSTSSSGQQDFENELGCCPWLTAIFRLHDDQILEWCGEDAIHYLSFQRHIIFLL
VVVSFLSLCVILPVNLSGDLLDKDPYSFGRTTIANLQTDNDLLWLHTIFAVIYLFFTVGFMRHHTQSIKYKEENL
VRRTLFITGLPRDARKETVESHFRDAYPTCEVVDVQLCYNVAKLIYLCKEKKKTEKSLTYYTNLQVKTGQRTLIN
PKPCGQFCCCEVLGCEWEDAISYYTRMKDRLLERITEEERHVQDQPLGMAFVTFQEKSMATYILKDFNACKCQSL
QCKGEPQPSSHSRELYTSKWTVTFAADPEDICWKNLSIQGLRWWLQWLGINFTLFLGLFFLTTPSIILSTMDKFN
VTKPIHALNNPIISQFFPTLLLWSFSALLPSIVYYSTLLESHWTKSGENQIMMTKVYIFLIFMVLILPSLGLTSL
DFFFRWLFDKTSSEASIRLECVFLPDQGAFFVNYVIASAFIGNGMELLRLPGLILYTFRMIMAKTAADRRNVKQN
QAFQYEFGAMYAWMLCVFTVIVAYSITCPIIAPFGLIYILLKHMVDRHNLYFVYLPAKLEKGIHFAAVNQALAAP
ILCLFWLYFFSFLRLGMKAPATLFTFLVLLLTILVCLAHTCFGCFKHLSPLNYKTEEPASDKGSEAEAHMPPPFT
PYVPRILNGLASERTALSPQQQQQQTYGAIHNISGTIPGQCLAQSATGSVAAAPQEA

FIGURE 571A

CGCCCCCGCCTCTGAGCTCCCTTCCC**ATG**GCGGCCCTAGTGTTGGAGGACGGGTCGGTCCTGCGGGGCCAGCCCT
TTGGGGCCGCCGTGTCGACTGCCGGGGAAGTGGTGTTTCAAACCGGCATGGTCGGCTACCCCGAGGCCCTCACTG
ATCCCTCCTACAAGGCACAGATCTTAGTGCTCACCTATCCTCTGATCGGCAACTATGGCATCCCCCCAGATGAAA
TGGATGAGTTCGGTCTCTGCAAGTGGTTTGAATCCTCGGGCATCCACGTAGCAGCACTGGTAGTGGGAGAGTGCT
GTCCTACTCCCAGCCACTGGAGTGCCACCCGCACCCTGCATGAGTGGCTGCAGCAGCATGGCATCCCTGGCTTGC
AAGGAGTAGACACTCGGGAGCTGACCAAGAAGTTGCGGGAACAGGGGTCTCTGCTGGGGAAGCTGGTCCAGAATG
GAACAGAACCTTCATCCCTGCCATTCTTGGACCCCAATGCCCGCCCCCTGGTACCAGAGGTCTCCATTAAGACTC
CACGGGTATTCAATACAGGGGGTGCCCCTCGGATCCTTGCTTTGGACTGTGGCCTCAAGTATAATCAGATCCGAT
GCCTCTGCCAGCGTGGGGCTGAGGTCACTGTGGTACCCTGGGACCATGCACTAGACAGCCAAGAGTATGAGGGTC
TCTTCTTAAGTAATGGGCCTGGTGACCCTGCCTCCTATCCCAGTGTCGTATCCACACTGAGCCGTGTTTTATCTG
AGCCTAATCCCCGACCTGTCTTTGGGATCTGCCTGGGACACCAGCTATTGGCCTTAGCCATTGGGGCCAAGACTT
ACAAGATGAGATATGGGAACCGAGGCCATAACCAGCCCTGCTTGTTGGTGGGCTCTGGGCGCTGCTTTCTGACAT
CCCAGAACCATGGGTTTGCTGTGGAGACAGACTCACTGCCAGCAGACTGGGCTCCTCTCTTCACCAACGCCAATG
ATGGTTCCAATGAAGGCATTGTGCACAACAGCTTGCCTTTCTTCAGTGTCCAGTTTCACCCAGAGCACCAAGCTG
GCCCTTCAGATATGGAACTGCTTTTCGATATCTTTCTGGAAACTGTGAAAGAGGCCACAGCTGGGAACCCTGGGG
GCCAGACAGTTAGAGAGCGGCTGACTGAGCGCCTCTGTCCCCCTGGGATTCCCACTCCCGGCTCTGGACTTCCAC
CACCACGAAAGGTTCTGATCCTGGGCTCAGGGGGCCTCTCCATTGGCCAAGCTGGAGAATTTGACTACTCGGGCT
CTCAGGCAATTAAGGCCCTGAAGGAGGAAAACATCCAGACGTTGCTGATCAACCCCAATATTGCCACAGTGCAGA
CCTCCCAGGGGCTGGCCGACAAGGTCTATTTTCTTCCCATAACACCTCATTATGTAACCCAGGTGATACGTAATG
AACGCCCCGATGGTGTGTTACTGACTTTTGGGGGCCAGACTGCTCTGAACTGTGGTGTGGAGCTGACCAAGGCCG
GGGTGCTGGCTCGGTATGGGGTCCGGGTCCTGGGCACACCAGTGGAGACCATTGAGCTGACCGAGGATCGACGGG
CCTTTGCTGCCAGAATGGCAGAGATCGGAGAGCATGTGGCCCCGAGCGAGGCAGCAAATTCTCTTGAACAGGCCC
AGGCAGCCGCTGAACGGCTGGGGTACCCTGTGCTAGTGCGTGCAGCCTTTGCCCTGGGTGGCCTGGGCTCTGGCT
TTGCCTCTAACAGGGAGGAGCTCTCTGCTCTCGTGGCCCCAGCTTTTGCCCATACCAGCCAAGTGCTAGTAGACA
AGTCTCTGAAGGGATGGAAGGAGATTGAGTACGAGGTGGTGAGAGACGCCTATGGCAACTGTGTCACGGTGTGTA
ACATGGAGAACTTGGACCCACTGGGCATCCACACTGGTGAGTCCATAGTGGTGGCCCCTAGCCAGACACTGAATG
ACAGGGAGTATCAGCTCCTGAGGCAGACAGCTATCAAGGTGACCCAGCACCTGGGAATTGTTGGGGAGTGCAATG
TGCAGTATGCCTTGAACCCTGAGTCTGAGCAGTATTACATCATTGAAGTGAATGCCAGGCTCTCTCGCAGCTCTG
CCCTGGCCAGTAAGGCCACAGGTTATCCACTGGCTTATGTGGCAGCCAAGCTAGCATTGGGCATCCCTTTGCCTG
AGCTCAGGAACTCTGTGACAGGGGGTACAGCAGCCTTTGAACCCAGCGTGGATTATTGTGTGGTGAAGATTCCTC
GATGGGACCTTAGCAAGTTCCTGCGAGTCAGCACAAAGATTGGGAGCTGCATGAAGAGCGTTGGTGAAGTCATGG
GCATTGGGCGTTCATTTGAGGAGGCCTTCCAGAAGGCCCTGCGCATGGTGGATGAGAACTGTGTGGGCTTTGATC
ACACAGTGAAACCAGTCAGCGATATGGAGTTGGAGACTCCAACAGATAAGCGGATTTTTGTGGTGGCAGCTGCTT
TGTGGGCTGGTTATTCAGTGGACCGCCTGTATGAGCTCACACGCATCGACCGCTGGTTCCTGCACCGAATGAAGC
GTATCATCGCACATGCCCAGCTGCTAGAACAACACCGTGGACAGCCTTTGCCGCCAGACCTGCTGCAACAGGCCA
AGTGTCTTGGCTTCTCAGACAAACAGATTGCCCTTGCAGTTCTGAGCACAGAGCTGGCTGTTCGCAAGCTGCGTC
AGGAACTGGGGATCTGTCCAGCAGTGAAACAGATTGACACAGTTGCAGCTGAGTGGCCAGCCCAGACAAATTACC
TATACCTAACGTATTGGGGCACCACCCATGACCTCACCTTTCGAACACCTCATGTCCTAGTCCTTGGCTCTGGCG
TCTACCGTATTGGCTCTAGCGTTGAATTTGACTGGTGTGCTGTAGGCTGCATCCAGCAGCTCCGAAAGATGGGAT
ATAAGACCATCATGGTGAACTATAACCCAGAGACAGTCAGCACCGACTATGACATGTGTGATCGACTCTACTTTG
ATGAGATCTCTTTTGAGGTGGTGATGGACATCTATGAGCTCGAGAACCCTGAAGGTGTGATCCTATCCATGGGTG
GACAGCTGCCCAACAACATGGCCATGGCGTTGCATCGGCAGCAGTGCCGGGTGCTGGGCACCTCCCCTGAAGCCA
TTGACTCGGCTGAGAACCGTTTCAAGTTTTCCCGGCTCCTTGACACCATTGGTATCAGCCAGCCTCAGTGGAGGG
AGCTCAGTGACCTCGAGTCTGCTCGCCAATTCTGCCAGACCGTGGGGTACCCCTGTGTGGTGCGCCCCTCCTATG
TGCTGAGCGGTGCTGCTATGAATGTGGCCTACACGGATGGAGACCTGGAGCGCTTCCTGAGCAGCGCAGCAGCCG
TCTCCAAAGAGCATCCCGTGGTCATCTCCAAGTTCATCCAGGAGGCTAAGGAGATTGACGTGGATGCCGTGGCCT
CTGATGGTGTGGTGGCAGCCATCGCCATCTCTGAGCATGTGGAGAATGCAGGTGTGCATTCAGGTGATGCGACGC
TGGTGACCCCCCCACAAGATATCACTGCCAAAACCCTGGAGCGGATCAAAGCCATTGTGCATGCTGTGGGCCAGG

FIGURE 571B

AGCTACAGGTCACAGGACCCTTCAATCTGCAGCTCATTGCCAAGGATGACCAGCTGAAAGTTATTGAATGCAACG
TACGTGTCTCTCGCTCCTTCCCCTTCGTTTCCAAGACACTGGGTGTGGACCTAGTAGCCTTGGCCACGCGGGTCA
TCATGGGGGGAAGAAGTGGAACCTGTGGGGCTAATGACTGGTTCTGGAGTCGTGGGAGTAAAGGTGCCTCAGTTCT
CCTTCTCCCGCTTGGCGGGTGCTGACGTGGTGTTGGGTGTGGAAATGACCAGTACTGGGGAGGTGGCCGGCTTTG
GGGAGAGCCGCTGTGAGGCATACCTCAAGGCCATGCTAAGCACTGGCTTTAAGATCCCCAAGAAGAATATCCTGC
TGACCATTGGCAGCTATAAGAACAAAAGCGAGCTGCTCCCAACTGTGCGGCTACTGGAGAGCCTGGGCTACAGCC
TCTATGCCAGTCTCGGCACAGCTGACTTCTACACTGAGCATGGCGTCAAGGTAACAGCTGTGGACTGGCACTTTG
AGGAGGCTGTGGATGGTGAGTGCCCACCACAGCGGAGCATCCTGGAGCAGCTAGCTGAGAAAAACTTTGAGCTGG
TGATTAACCTGTCAATGCGTGGAGCTGGGGGCCGGCGTCTCTCTTCCTTTGTCACCAAGGGCTACCGCACCCGAC
GCTTGGCCGCTGACTTCTCCGTGCCCCTAATCATCGATATCAAGTGCACCAAACTCTTTGTGGAGGCCCTAGGCC
AGATCGGGCCAGCCCCTCCTTTGAAGGTGCATGTTGACTGTATGACCTCCCAAAAGCTTGTGCGACTGCCGGGAT
TGATTGATGTCCATGTGCACCTGCGGGAACCAGGTGGGACACATAAGGAGGACTTTGCTTCAGGCACAGCCGCTG
CCCTGGCTGGGGGTATCACCATGGTGTGTGCCATGCCTAATACCCGGCCCCCCATCATTGACGCCCCTGCTCTGG
CCCTGGCCCAGAAGCTGGCAGAGGCTGGCGCCCGGTGCGACTTTGCGCTATTCCTTGGGGCCTCGTCTGAAAATG
CAGGAACCTTGGGCACCGTGGCCGGGTCTGCAGCCGGGCTGAAGCTTTACCTCAATGAGACCTTCTCTGAGCTGC
GGCTGGACAGCGTGGTCCAGTGGATGGAGCATTTCGAGACATGGCCCTCCCACCTCCCCATTGTGGCTCACGCAG
AGCAGCAAACCGTGGCTGCTGTCCTCATGGTGGCTCAGCTCACTCAGCGCTCAGTGCACATATGTCACGTGGCAC
GGAAGGAGGAGATCCTGCTAATTAAAGCTGCAAAGGCACGGGGCTTGCCAGTGACCTGCGAGGTGGCTCCCCACC
ACCTGTTCCTAAGCCATGATGACCTGGAGCGCCTGGGGCCTGGGAAGGGGGAGGTCCGGCCTGAGCTTGGCTCCC
GCCAGGATGTGGAAGCCCTGTGGGAGAACATGGCTGTCATCGACTGCTTTGCCTCAGACCATGCTCCCCATACCT
TGGAGGAGAAGTGTGGGTCCAGGCCCCCACCTGGGTTCCCAGGGTTAGAGACCATGCTGCCACTACTCCTGACGG
CTGTAAGCGAGGGCCGGCTCAGCCTGGACGACCTGCTGCAGCGATTGCACCACAATCCTCGGCGCATCTTTCACC
TGCCCCCGCAGGAGGACACCTATGTGGAGGTGGATCTGGAGCATGAGTGGACAATTCCCAGCCACATGCCCTTCT
CCAAGGCCCACTGGACACCTTTTGAAGGGCAGAAAGTGAAGGGCACCGTCCGCCGTGTGGTCCTGCGAGGGGAGG
TTGCCTATATCGATGGGCAGGTTCTGGTACCCCCGGGCTATGGACAGGATGTACGGAAGTGGCCACAGGGGGCTG
TTCCTCAGCTCCCACCCTCAGCCCCTGCCACTAGTGAGATGACCACGACACCTGAAAGACCCCGCCGTGGCATCC
CAGGGCTTCCTGATGGCCGCTTCCATCTGCCGCCCCGAATCCATCGAGCCTCCGACCCAGGTTTGCCAGCTGAGG
AGCCAAAGGAGAAGTCCTCTCGGAAGGTAGCCGAGCCAGAGCTGATGGGAACCCCTGATGGCACCTGCTACCCTC
CACCACCAGTACCGAGACAGGCATCTCCCCAGAACCTGGGGACCCCTGGCTTGCTGCACCCCCAGACCTCACCCC
TGCTGCACTCATTAGTGGGCCAACATATCCTGTCCGTCCAGCAGTTCACCAAGGATCAGATGTCTCACCTGTTCA
ATGTGGCACACACACTGCGTATGATGGTGCAGAAGGAGCGGAGCCTCGACATCCTGAAGGGGAAGGTCATGGCCT
CCATGTTCTATGAAGTGAGCACACGGACCAGCAGCTCCTTTGCAGCAGCCATGGCCCGGCTGGGAGGTGCTGTGC
TCAGCTTCTCGGAAGCCACATCGTCCGTCCAGAAGGGCGAATCCCTGGCTGACTCCGTGCAGACCATGAGCTGCT
ATGCCGACGTCGTCGTGCTCCGGCACCCCCAGCCTGGAGCAGTGGAGCTGGCCGCCAAGCACTGCCGGAGGCCAG
TGATCAATGCTGGGGATGGGGTCGGAGAGCACCCCACCCAGGCCCTGCTGGACATCTTCACCATCCGTGAGGAGC
TGGGAACTGTCAATGGCATGACGATCACGATGGTGGGTGACCTGAAGCACGGACGCACAGTACATTCCCTGGCCT
GCCTGCTCACCCAGTATCGTGTCAGCCTGCGCTACGTGGCACCTCCCAGCCTGCGCATGCCACCCACTGTGCGGG
CCTTCGTGGCCTCCCGCGGCACCAAGCAGGAGGAATTCGAGAGCATTGAGGAGGCGCTGCCTGACACTGATGTGC
TCTACATGACTCGAATCCAGAAGGAACGATTTGGCTCTACCCAGGAGTACGAAGCTTGCTTTGGTCAGTTCATCC
TCACTCCCCACATCATGACCCGGGCCAAGAAGAAGATGGTGGTGATGCACCCGATGCCCCGTGTCAACGAGATAA
GCGTGGAAGTGGACTCGGATCCCCGCGCAGCCTACTTCCGCCAGGCTGAGAACGGCATGTACATCCGCATGGCTC
TGTTAGCCACCGTGCTGGGCCGTTTCTAGGGGCCTGGCTTCCTCAGCCTCTTCTCTTTAGGCCCAGCTGCTGGGC
AAGGAATTCCAGTGCCTCCTACGGGGGCAGCACACTTAGATATTCCTGGACATCCAGATTGCTCACATGTGCTGA
CCACACTTCAGGCTCTGGACTGGAGCTCTCTGGCATGGGGGTGGGGCCTCAGATGCTGGGGCCCAGTCTGCCCCA
TCTTCATTCCTGCACCTTAAACCTGTACAGTCATTTTTCTACTGACTTAATAAACAGCCGAGCTGTCCCTTG

FIGURE 572

MAALVLEDGSVLRGQPFGAAVSTAGEVVFQTGMVGYPEALTDPSYKAQILVLTYPLIGNYGIPPDEMDEFGLCKW
FESSGIHVAALVVGECCPTPSHWSATRTLHEWLQQHGIPGLQGVDTRELTKKLREQGSLLGKLVQNGTEPSSLPF
LDPNARPLVPEVSIKTPRVFNTGGAPRILALDCGLKYNQIRCLCQRGAEVTVVPWDHALDSQEYEGLFLSNGPGD
PASYPSVVSTLSRVLSEPNPRPVFGICLGHQLLALAIGAKTYKMRYGNRGHNQPCLLVGSGRCFLTSQNHGFAVE
TDSLPADWAPLFTNANDGSNEGIVHNSLPFFSVQFHPEHQAGPSDMELLFDIFLETVKEATAGNPGGQTVRERLT
ERLCPPGIPTPGSGLPPPRKVLILGSGGLSIGQAGEFDYSGSQAIKALKEENIQTLLINPNIATVQTSQGLADKV
YFLPITPHYVTQVIRNERPDGVLLTFGGQTALNCGVELTKAGVLARYGVRVLGTPVETIELTEDRRAFAARMAEI
GEHVAPSEAANSLEQAQAAAERLGYPVLVRAAFALGGLGSGFASNREELSALVAPAFAHTSQVLVDKSLKGWKEI
EYEVVRDAYGNCVTVCNMENLDPLGIHTGESIVVAPSQTLNDREYQLLRQTAIKVTQHLGIVGECNVQYALNPES
EQYYIIEVNARLSRSSALASKATGYPLAYVAAKLALGIPLPELRNSVTGGTAAFEPSVDYCVVKIPRWDLSKFLR
VSTKIGSCMKSVGEVMGIGRSFEEAFQKALRMVDENCVGFDHTVKPVSDMELETPTDKRIFVVAAALWAGYSVDR
LYELTRIDRWFLHRMKRIIAHAQLLEQHRGQPLPPDLLQQAKCLGFSDKQIALAVLSTELAVRKLRQELGICPAV
KQIDTVAAEWPAQTNYLYLTYWGTTHDLTFRTPHVLVLGSGVYRIGSSVEFDWCAVGCIQQLRKMGYKTIMVNYN
PETVSTDYDMCDRLYFDEISFEVVMDIYELENPEGVILSMGGQLPNNMAMALHRQQCRVLGTSPEAIDSAENRFK
FSRLLDTIGISQPQWRELSDLESARQFCQTVGYPCVVRPSYVLSGAAMNVAYTDGDLERFLSSAAAVSKEHPVVI
SKFIQEAKEIDVDAVASDGVVAAIAISEHVENAGVHSGDATLVTPPQDITAKTLERIKAIVHAVGQELQVTGPFN
LQLIAKDDQLKVIECNVRVSRSFPFVSKTLGVDLVALATRVIMGEEVEPVGLMTGSGVVGVKVPQFSFSRLAGAD
VVLGVEMTSTGEVAGFGESRCEAYLKAMLSTGFKIPKKNILLTIGSYKNKSELLPTVRLLESLGYSLYASLGTAD
FYTEHGVKVTAVDWHFEEAVDGECPPQRSILEQLAEKNFELVINLSMRGAGGRRLSSFVTKGYRTRRLAADFSVP
LIIDIKCTKLFVEALGQIGPAPPLKVHVDCMTSQKLVRLPGLIDVHVHLREPGGTHKEDFASGTAAALAGGITMV
CAMPNTRPPIIDAPALALAQKLAEAGARCDFALFLGASSENAGTLGTVAGSAAGLKLYLNETFSELRLDSVVQWM
EHFETWPSHLPIVAHAEQQTVAAVLMVAQLTQRSVHICHVARKEEILLIKAAKARGLPVTCEVAPHHLFLSHDDL
ERLGPGKGEVRPELGSRQDVEALWENMAVIDCFASDHAPHTLEEKCGSRPPPGFPGLETMLPLLLTAVSEGRLSL
DDLLQRLHHNPRRIFHLPPQEDTYVEVDLEHEWTIPSHMPFSKAHWTPFEGQKVKGTVRRVVLRGEVAYIDGQVL
VPPGYGQDVRKWPQGAVPQLPPSAPATSEMTTTPERPRRGIPGLPDGRFHLPPRIHRASDPGLPAEEPKEKSSRK
VAEPELMGTPDGTCYPPPPVPRQASPQNLGTPGLLHPQTSPLLHSLVGQHILSVQQFTKDQMSHLFNVAHTLRMM
VQKERSLDILKGKVMASMFYEVSTRTSSSFAAAMARLGGAVLSFSEATSS

FIGURE 573

AGGGAGTCGTGTCGGCGCCACCCCGGCCCCCGAGCCCGCAGATTGCCCACCGAAGCTCGTGTGTGCACCCCCGAT
CCCGCCAGCCACTCGCCCCTGGCCTCGCGGGCCGTGTCTCCGGCATC**ATG**TGTGGTATATTTGCTTACTTAAACT
ACCATGTTCCTCGAACGAGACGAGAAATCCTGGAGACCCTAATCAAAGGCCTTCAGAGACTGGAGTACAGAGGAT
ATGATTCTGCTGGTGTGGGATTTGATGGAGGCAATGATAAAGATTGGGAAGCCAATGCCTGCAAAACCCAGCTTA
TTAAGAAGAAAGGAAAAGTTAAGGCACTGGATGAAGAAGTTCACAAGCAACAAGATATGGATTTGGATATAGAAT
TTGATGTACACCTTGGAATAGCTCATACCCGTTGGGCAACACATGGAGAACCCAGTCCTGTCAATAGCCACCCCC
AGCGCTCTGATAAAAATAATGAATTTATCGTTATTCACAATGGAATCATCACCAACTACAAAGACTTGAAAAAGT
TTTTGGAAAGCAAAGGCTATGACTTCGAATCTGAAACAGACACAGAGACAATTGCCAAGCTCGTTAAGTATATGT
ATGACAATCGGGAAAGTCAAGATACCAGCTTTACTACCTTGGTGGAGAGAGTTATCCAACAATTGGAAGGTGCTT
TTGCACTTGTGTTTAAAAGTGTTCATTTTCCCGGGCAAGCAGTTGGCACAAGGCGAGGTAGCCCTCTGTTGATTG
GTGTACGGAGTGAACATAAACTTTCTACTGATCACATTCCTATACTCTACAGAACAGGCAAAGACAAGAAAGGAA
GCTGCAATCTCTCTCGTGTGGACAGCACAACCTGCCTTTTCCCGGTGGAAGAAAAAGCAGTGGAGTATTACTTTG
CTTCTGATGCAAGTGCTGTCATAGAACACACCAATCGCGTCATCTTTCTGGAAGATGATGATGTTGCAGCAGTAG
TGGATGGACGTCTTTCTATCCATCGAATTAAACGAACTGCAGGAGATCACCCCGGACGAGCTGTGCAAACACTCC
AGATGGAACTCCAGCAGATCATGAAGGGCAACTTCAGTTCATTTATGCAGAAGGAAATATTTGAGCAGCCAGAGT
CTGTCGTGAACACAATGAGAGGAAGAGTCAACTTTGATGACTATACTGTGAATTTGGGTGGTTTGAAGGATCACA
TAAAGGAGATCCAGAGATGCCGGCGTTTGATTCTTATTGCTTGTGGAACAAGTTACCATGCTGGTGTAGCAACAC
GTCAAGTTCTTGAGGAGCTGACTGAGTTGCCTGTGATGGTGGAACTAGCAAGTGACTTCCTGGACAGAAACACAC
CAGTCTTTCGAGATGATGTTTGCTTTTTCCTTAGTCAATCAGGTGAGACAGCAGATACTTTGATGGGTCTTCGTT
ACTGTAAGGAGAGAGGAGCTTTAACTGTGGGGATCACAAACACAGTTGGCAGTTCCATATCACGGGAGACAGATT
GTGGAGTTCATATTAATGCTGGTCCTGAGATTGGTGTGGCCAGTACAAAGGCTTATACCAGCCAGTTTGTATCCC
TTGTGATGTTTGCCCTTATGATGTGTGATGATCGGATCTCCATGCAAGAAAGACGCAAAGAGATCATGCTTGGAT
TGAAACGGCTGCCTGATTTGATTAAGGAAGTACTGAGCATGGATGACGAAATTCAGAAACTAGCAACAGAACTTT
ATCATCAGAAGTCAGTTCTGATAATGGGACGAGGCTATCATTATGCTACTTGTCTTGAAGGGGCACTGAAAATCA
AAGAAATTACTTATATGCACTCTGAAGGCATCCTTGCTGGTGAATTGAAACATGGCCCTCTGGCTTTGGTGGATA
AATTGATGCCTGTGATCATGATCATCATGAGAGATCACACTTATGCCAAGTGTCAGAATGCTCTTCAGCAAGTGG
TTGCTCGGCAGGGGCGGCCTGTGGTAATTTGTGATAAGGAGGATACTGAGACCATTAAGAACACAAAAAGAACGA
TCAAGGTGCCCCACTCAGTGGACTGCTTGCAGGGCATTCTCAGCGTGATCCCTTTACAGTTGCTGGCTTTCCACC
TTGCTGTGCTGAGAGGCTATGATGTTGATTTCCCACGGAATCTTGCCAAATCTGTGACTGTAGAG**TGA**GGAATAT
CTATACAAAATGTACGAAACTGTATGATTAAGCAACACAAGACACCTTTTGTATTTAAAACCTTGATTTAAAATA
TCACCCCTTGAAGCCTTTTTTTAGTAAATCCTTATTTATATATCAGTTATAATTATTCCACTCAATATGTGATTT
TTGTGAAGTTACCTCTTACATTTTCCCAGTAATTTGTGGAGGACTTTGAATAATGGAATCTATATTGGAATCTGT
ATCAGAAAGATTCTAGCTATTATTTTCTTTAAAGAATGCTGGGTGTTGCATTTCTGGACCCTCCACTTCAATCTG
AGAAGACAATATGTTTCTAAAAATTGGTACTTGTTTCACCATACTTCATTCAGACCAGTGAAAGAGTAGTGCATT
TAATTGGAGTATCTAAAGCCAGTGGCAGTGTATGCTCATACTTGGACAGTTAGGGAAGGGTTTGCCAAGTTTTAA
GAGAAGATGTGATTTATTTTGAAATTTGTTTCTGTTTTGTTTTTAAATCAAACTGTAAAACTTAAAACTGAAAAA
TTTTATTGGTAGGATTTATATCTAAGTTTGGTTAGCCTTAGTTTCTCAGACTTGTTGTCTATTATCTGTAGGTGG
AAGAAATTTAGGAAGCGAAATATTACAGTAGTGCATTGGTGGGTCTCAATCCTTAACATATTTGCACAATTTTAT
AGCACAAACTTTAAATTCAAGCTGCTTTGGACAACTGACAATATGATTTTAAATTTGAAGATGGGATGTGTACAT
GTTGGGTATCCTACTACTTTGTGTTTTCATCTCCTAAAAGTGTTTTTTATTTCCTTGTATCTGTAGTCTTTTATT
TTTTAAATGACTGCTGAATGACATATTTTATCTTGTTCTTTAAAATCACAACACAGAGCTGCTATTAAATTAATA
TTGATAT

FIGURE 574

MCGIFAYLNYHVPRTRREILETLIKGLQRLEYRGYDSAGVGFDGGNDKDWEANACKTQLIKKKGKVKALDEEVHK
QQDMDLDIEFDVHLGIAHTRWATHGEPSPVNSHPQRSDKNNEFIVIHNGIITNYKDLKKFLESKGYDFESETDTE
TIAKLVKYMYDNRESQDTSFTTLVERVIQQLEGAFALVFKSVHFPGQAVGTRRGSPLLIGVRSEHKLSTDHIPIL
YRTGKDKKGSCNLSRVDSTTCLFPVEEKAVEYYFASDASAVIEHTNRVIFLEDDDVAAVVDGRLSIHRIKRTAGD
HPGRAVQTLQMELQQIMKGNFSSFMQKEIFEQPESVVNTMRGRVNFDDYTVNLGGLKDHIKEIQRCRRLILIACG
TSYHAGVATRQVLEELTELPVMVELASDFLDRNTPVFRDDVCFFLSQSGETADTLMGLRYCKERGALTVGITNTV
GSSISRETDCGVHINAGPEIGVASTKAYTSQFVSLVMFALMMCDDRISMQERRKEIMLGLKRLPDLIKEVLSMDD
EIQKLATELYHQKSVLIMGRGYHYATCLEGALKIKEITYMHSEGILAGELKHGPLALVDKLMPVIMIIMRDHTYA
KCQNALQQVVARQGRPVVICDKEDTETIKNTKRTIKVPHSVDCLQGILSVIPLQLLAFHLAVLRGYDVDFPRNLA
KSVTVE

FIGURE 575

GGGGAAGGAACACTGTAGGGGATAGCTGTCCACGGACGCTGTCTACAAGACCCTGGAGTGAGATAACGTGCCTGG
TACTGTGCCCTGCATGTGTAAGATGCCCAGTTGACCTTCGCAGCAGGAGCCTGGATCAGGCACTTCCTGCCTCAG
GTATTGCTGGACAGCCCAGACACTTCCCTCTGTGACC**ATG**AAACTCTGGGTGTCTGCATTGCTGATGGCCTGGTT
TGGTGTCCTGAGCTGTGTGCAGGCCGAATTCTTCACCTCTATTGGGCACATGACTGACCTGATTTATGCAGAGAA
AGAGCTGGTGCAGTCTCTGAAAGAGTACATCCTTGTGGAGGAAGCCAAGCTTTCCAAGATTAAGAGCTGGGCCAA
CAAAATGGAAGCCTTGACTAGCAAGTCAGCTGCTGATGCTGAGGGCTACCTGGCTCACCCTGTGAATGCCTACAA
ACTGGTGAAGCGGCTAAACACAGACTGGCCTGCGCTGGAGGACCTTGTCCTGCAGGACTCAGCTGCAGGTTTTAT
CGCCAACCTCTCTGTGCAGCGGCAGTTCTTCCCCACTGATGAGGACGAGATAGGAGCTGCCAAAGCCCTGATGAG
ACTTCAGGACACATACAGGCTGGACCCAGGCACAATTTCCAGAGGGGAACTTCCAGGAACCAAGTACCAGGCAAT
GCTGAGTGTGGATGACTGCTTTGGGATGGGCCGCTCGGCCTACAATGAAGGGGACTATTATCATACGGTGTTGTG
GATGGAGCAGGTGCTAAAGCAGCTTGATGCCGGGGAGGAGGCCACCACAACCAAGTCACAGGTGCTGGACTACCT
CAGCTATGCTGTCTTCCAGTTGGGTGATCTGCACCGTGCCCTGGAGCTCACCCGCCGCCTGCTCTCCCTTGACCC
AAGCCACGAACGAGCTGGAGGGAATCTGCGGTACTTTGAGCAGTTATTGGAGGAAGAGAGAGAAAAAACGTTAAC
AAATCAGACAGAAGCTGAGCTAGCAACCCCAGAAGGCATCTATGAGAGGCCTGTGGACTACCTGCCTGAGAGGGA
TGTTTACGAGAGCCTCTGTCGTGGGGAGGGTGTCAAACTGACACCCCGTAGACAGAAGAGGCTTTTCTGTAGGTA
CCACCATGGCAACAGGGCCCCACAGCTGCTCATTGCCCCCTTCAAAGAGGAGGACGAGTGGGACAGCCCGCACAT
CGTCAGGTACTACGATGTCATGTCTGATGAGGAAATCGAGAGGATCAAGGAGATCGCAAAACCTAAACTTGCACG
AGCCACCGTTCGTGATCCCAAGACAGGAGTCCTCACTGTCGCCAGCTACCGGGTTTCCAAAAGCTCCTGGCTAGA
GGAAGATGATGACCCTGTTGTGGCCCGAGTAAATCGTCGGATGCAGCATATCACAGGGTTAACAGTAAAGACTGC
AGAATTGTTACAGGTTGCAAATTATGGAGTGGGAGGACAGTATGAACCGCACTTCGACTTCTCTAGGAATGATGA
GCGAGATACTTTCAAGCATTTAGGGACGGGGAATCGTGTGGCTACTTTCTTAAACTACATGAGTGATGTAGAAGC
TGGTGGTGCCACCGTCTTCCCTGATCTGGGGGCTGCAATTTGGCCTAAGAAGGGTACAGCTGTGTTCTGGTACAA
CCTCTTGCGGAGCGGGGAAGGTGACTACCGAACAAGACATGCTGCCTGCCCTGTGCTTGTGGGCTGCAAGTGGGT
CTCCAATAAGTGGTTCCATGAACGAGGACAGGAGTTCTTGAGACCTTGTGGATCAACAGAAGTTGAC**TGA**CATCC
TTTTCTGTCCTTCCCCTTCCTGGTCCTTCAGCCCATGTCAACGTGACAGACACCTTTGTATGTTCCTTGTATGTT
CCTATCAGGCTGATTTTTGGAGAAATGAATGTTTGTCTGGAGCAGAGGGAGACCATACTAGGGCGACTCCTGTGT
GACTGAAGTCCCAGCCCTTCCATTCAGCCTGTGCCATCCCTGGCCCCAAGGCTAGGATCAAAGTGGCTGCAGCAG
AGTTAGCTGTCTAGCGCCTAGCAAGGTGCCTTTGTACCTCAGGTGTTTTAGGTGTGAGATGTTTCAGTGAACCAA
AGTTCTGATACCTTGTTTACATGTTTGTTTTTATGGCATTTCTATCTATTGTGGCTTTACCAAAAAATAAAATGT
CCCTACCAGAAGCCTTAAA

FIGURE 576

MKLWVSALLMAWFGVLSCVQAEFFTSIGHMTDLIYAEKELVQSLKEYILVEEAKLSKIKSWANKMEALTSKSAAD
AEGYLAHPVNAYKLVKRLNTDWPALEDLVLQDSAAGFIANLSVQRQFFPTDEDEIGAAKALMRLQDTYRLDPGTI
SRGELPGTKYQAMLSVDDCFGMGRSAYNEGDYYHTVLWMEQVLKQLDAGEEATTTKSQVLDYLSYAVFQLGDLHR
ALELTRRLLSLDPSHERAGGNLRYFEQLLEEEREKTLTNQTEAELATPEGIYERPVDYLPERDVYESLCRGEGVK
LTPRRQKRLFCRYHHGNRAPQLLIAPFKEEDEWDSPHIVRYYDVMSDEEIERIKEIAKPKLARATVRDPKTGVLT
VASYRVSKSSWLEEDDDPVVARVNRRMQHITGLTVKTAELLQVANYGVGGQYEPHFDFSRNDERDTFKHLGTGNR
VATFLNYMSDVEAGGATVFPDLGAAIWPKKGTAVFWYNLLRSGEGDYRTRHAACPVLVGCKWVSNKWFHERGQEF
LRPCGSTEVD

FIGURE 577

CGGAGCCAGCGTGGGAGGCCGCTGCCGTCGCGCGCCTTGGTTTTTCTGTTCCTTTTTTTTTTTTTTTTAACTT
CCTGCCTATCACACGCAGCCATCAGCCCACAAAGAC**ATG**ACTACCAACGCGGGCCCCTTGCACCCATACTGGCCT
CAGCACCTAAGACTGGACAACTTTGTACCTAATGACCGCCCCACCTGGCATATACTGGCTGGCCTCTTCTCTGTC
ACAGGGGTCTTAGTCGTGACCACATGGCTGTTGTCAGGTCGTGCTGCGGTTGTCCCATTGGGGACTTGGCGGCGA
CTGTCCCTGTGCTGGTTTGCAGTGTGTGGGTTCATTCACCTGGTGATCGAGGGCTGGTTCGTTCTCTACTACGAA
GACCTGCTTGGAGACCAAGCCTTCTTATCTCAACTCTGGAAAGAGTATGCCAAGGGAGACAGCCGATACATCCTG
GGTGACAACTTCACAGTGTGCATGGAAACCATCACAGCTTGCCTGTGGGGACCACTCAGCCTGTGGGTGGTGATC
GCCTTTCTCCGCCAGCATCCCCTCCGCTTCATTCTACAGCTTGTGGTCTCTGTGGGCCAGATCTATGGGGATGTG
CTCTACTTCCTGACAGAGCACCGCGACGGATTCCAGCACGGAGAGCTGGGCCACCCTCTCTACTTCTGGTTTTAC
TTTGTCTTCATGAATGCCCTGTGGCTGGTGCTGCCTGGAGTCCTTGTGCTTGATGCTGTGAAGCACCTCACTCAT
GCCCAGAGCACGCTGGATGCCAAGGCCACAAAAGCCAAGAGCAAGAAGAAC**TGA**GGAGTGGTGGACCAGGCTCGA
ACACTGGCCGAGGAGGAGCTCTCTGCCTGCCAGAAGAGTCTAGTCCTGCTCCCACAGTTTGGAGGGACAAAGCTA
ATTGATCTGTCACACTCAGGCTCATGGGCAGGCACAAGAAGGGGAATAAAGGGGCTGTGTGAAGGCACTGCTGGG
AGCCATTAGAACACAGATACAAGAGAAGCCAGGAGGTCTATGATGGTGACGATTTTTAAAATCAGGAAATAAAAG
ATCTTGACTCTAAAAAAAAAAAA

FIGURE 578

MTTNAGPLHPYWPQHLRLDNFVPNDRPTWHILAGLFSVTGVLVVTTWLLSGRAAVVPLGTWRRLSLCWFAVCGFI
HLVIEGWFVLYYEDLLGDQAFLSQLWKEYAKGDSRYILGDNFTVCMETITACLWGPLSLWVVIAFLRQHPLRFIL
QLVVSVGQIYGDVLYFLTEHRDGFQHGELGHPLYFWFYFVFMNALWLVLPGVLVLDAVKHLTHAQSTLDAKATKA
KSKKN

FIGURE 579A

GCACTGCTGCTGCCACCGCCGTCGCCGCCGCGCCGCCGCGCCGCTGCTGCTGCCGGTGCTAAGGAGTTCGCTGGA
GCCCTTTCCTCAGACCCGGCCCGGTCTTCGCGCCCGGACTCCTGGCGCCAGCGCTAGGCGCACTCACCGCTCTGA
CGGGTGCAGACGCGGGAGTTGTCCCAGACTGTGGAGTGGCGGGCACGGCCCCAGCCCCCCTTCCCTTCCCTGACC
CCTTCTTGCCATCGCCCCAGACATGGGGAACGCGGCGACCGCCAAGAAAGGCAGCGAGGTGGAGAGCGTGAAAGA
GTTTCTAGCCAAAGCCAAAGAAGACTTTTTGAAAAAATGGGAGAATCCAACTCAGAATAATGCCGGACTTGAAGA
TTTTGAAAGGAAAAAAACCCTTGGAACAGGTTCATTTGGAAGAGTCATGTTGGTAAAACACAAAGCCACTGAACA
GTATTATGCCATGAAGATCTTAGATAAGCAGAAGGTTGTTAAACTGAAGCAAATAGAGCATACTTTGAATGAGAA
AAGAATATTACAGGCAGTGAATTTTCCTTTCCTTGTTCGACTGGAGTATGCTTTTAAGGATAATTCTAATTTATA
CATGGTTATGGAATATGTCCCTGGGGGTGAAATGTTTTCACATCTAAGAAGAATTGGAAGGTTCAGTGAGCCCCA
TGCACGGTTCTATGCAGCTCAGATAGTGCTAACATTCGAGTACCTCCATTCACTAGACCTCATCTACAGAGATCT
AAAACCTGAAAATCTCTTAATTGACCATCAAGGCTATATCCAGGTCACAGACTTTGGGTTTGCCAAAAGAGTTAA
AGGCAGAACTTGGACATTATGTGGAACTCCAGAGTATTTGGCTCCAGAAATAATTCTCAGCAAGGGCTACAATAA
GGCAGTGGATTGGTGGGCATTAGGAGTGCTAATCTATGAAATGGCAGCTGGCTATCCCCCATTCTTTGCAGACCA
ACCAATTCAGATTTATGAAAAGATTGTTTCTGGAAAGGTCCGATTCCCATCCCACTTCAGTTCAGATCTCAAGGA
CCTTCTACGGAACCTGCTGCAGGTGGATTTGACCAAGAGATTTGGAAATCTAAAGAATGGTGTCAGTGATATAAA
AACTCACAAGTGGTTTGCCACGACAGATTGGATTGCTATTTACCAGAGGAAGGTTGAAGCTCCATTCATACCAAA
GTTTAGAGGCTCTGGAGATACCAGCAACTTTGATGACTATGAAGAAGAAGATATCCGTGTCTCTATAACAGAAAA
ATGTGCAAAAGAATTTGGTGAATTT**TAA**AGAGGAACAAGATGACATCTGAGCTCACACTCAGTGTTTGCACTCTG
TTGAGAGATAAGGTAGAGCTGAGACCGTCCTTGTTGAAGCAGTTACCTAGTTCCTTCATTCCAACGACTGAGTGA
GGTCTTTATTGCCATCATCCCGTGTGCGCACTCTGCATCCACCTATGTAACAAGGCACCGCTAAGCAAGCATTGT
CTGTGCCATAACACAGTACTAGACCACTTTCTTACTTCTCTTTGGGTTGTCTTTCTCCTCTCCTACATCCATTTC
TTCCTTTTCCAATTTCATTGGTTTTCTCTAAACAGTGCTCCATTTTATTTTGTTGGTGTTTCAGATGGGCAGTGT
TATGGCTACGTGATATTTGAAGGGAAGGATAAGTGTTGCTTTCAGTAGTTATTGCCAATATTGTTGTTGGTCAAT
GGCTTGAAGATAAACTTTCTAATAATTATTATTTCTTTGAGTAGCTCAGACTTGGTTTTGCCAAAACTCTTGGTA
ATTTTTGAAGATAGACTGTCTTATCACCAAGGAAATTTATACAAATTAAGACTAACTTTCTTGGAATTCACTATT
CTGGCAATAAATTTTGGTAGACTAATACAGTACAGCTAGACCCAGAAATTTGGAAGGCTGTAGATCAGAGGTTCT
AGTTCCCTTTCCCTCCTTTTATATCCTCCTCTCCTTGAGTAATGAAGTGACCAGCCTGTGTAGTGTGACAAACGT
GTCTCATTCAGCAGGAAAAACTAATGATATGGATCATCACCCAGATTCTCTCACTTGGTACCAGCATTTCTGTAG
GTATTAGAGAAGAGTTCTAAGTTTTCTAAACCTTAACTGTTCCTTAAGGATTTTAGCCAGTATTTTAATAGAACA
TGATTAATGAAAGTGACAAATTTTAAATTTTCTCTAATAGTCCTCATCATAAACTTTTTAAAGGAAAATAAGCAA
ACTAAAAAGAACATTGGTTTAGATAAATACTTATACTTTGCAAAGTCAAAAATGGCTTGATTTTTGGAAACAATA
TAGAGGTATTCATATTTAAATGAGGGTTTACATTTGTTTTGTTTTGTAACCGTTAAAAAGAAGTTGTTTCCAGCT
AATTATTGTGGTGTACTATATTTGTGAGCCTAGGGTAGGGGCACTGCTGCAACTTCTGCTTTCATCCCATGCCTC
ATCAATGAGGAAAGGGAACAAAGTGTATAAAACTGCCACAATTGTATTTTAATTTTGAGGTATGATATTTTCAGA
TATTTCATAATTTCTAACCTCTGTTCTCTCAGTAAACAGAATGTCTGATCGATCATGCAGATACAATGTTGGTAT
TTGAGAGGTTAGTTTTTTTCCTACACTTTTTTTTGCCAACTGACTTAACAACATTGCTGTCAGGTGGAAATTTCA
AGCACTTTTGCACATTTAGTTCAGTGTTTGTTGAGAATCCATGGCTTAACCCACTTGTTTTGCTATTTTTTTCTT
TGCTTTTAATTTTCCCCATCTGATTTTATCTCTGCGTTTCAGTGACCTACCTTAAAACAACACACGAGAAGAGTT
AAACTGGGTTCATTTTAATGATCAATTTACCTGCATATAAAATTTATTTTTAATCAAGCTGATCTTAATGTATAT
AATCATTCTATTTGCTTTATTATCGGTGCAGGTAGGTCATTAACACCACTTCTTTTCATCTGTACCACACCCTGG
TGAAACCTTTGAAGACATAAAAAAAACCTGTCTGAGATGTTCTTTCTACCAATCTATATGTCTTTCGGTTATCAA
GTGTTTCTGCATGGTAATGTCATGTAAATGCTGATATTGATTTCACTGGTCCATCTATATTTAAAACGTGCAAGA
AAAAAATAAAATACTCTGCTCTAGCAAGTTTTGTGTAACAAAGGCATATCGTCATGTTAATAAATTTAAAACATC
ATTCGTATAAAATATTTTAATTTTCTTGTATTTCATTTAGACCCAAGAACATGCTGACCAATGTGTTCTATATGT
AAACTACAAATTCTATGGTAGCTTTGTTGTATATTATTGTAAAATTATTTTAATAAGTCATGGGGATGACAATTT
GATTATTACAATTTAGTTTTCAGTAATCAAAAAGATTTCTATGAATTCTAAAAAATATTTTTTTCTATGAAATTA
CTAGTGCCCAGCTGTAGAATCTACCTTAGGTAGATGATCCCTAGACATACGTTGGTTTTGAGGGCTATTCAGCCA
TTCCATTTTACTCTCTATTTAAAGGCCGTGAGCAAGCTTGTCATGAGCAAATATGTCAAGGGAGTCAATTTCTGA

FIGURE 579B

CCAATCAAGTACACTAAATTAGAATATTTTTAAAGTATGTAACATTCCCAGTTTCAGCCACAATTTAGCCAAGAA
TAAGATAAAAACTTGAATAAGAAGTAAGTAGCATAAATCAGTATTTAACCTAAAATTACATATTTGAAACAGAAG
ATATTATGTTATGCTCAGTAAATAATTAAGAGATGGCATTGTGTAAGAAGGAGCCCTAGACTGAAAGTCAAGACA
TCTGAATTTCAGGCTGGAAAACTATCAGTATGATCTCAGCCTCAGTTCTCTTGTCTGTAAAATGGAAGAACTGGA
TTAGGCAGTTTGTAAGATTCCTCCTAACTTTCACAGTCGATGACAAGATTGTCTTTTTATCTGATATTTTGAAGG
GTATATTGCTTTGAAGTAAGTCTCAATAAGGCAATATATTTTAGGGCATCTTTCTTCTTATCTCTGACAGTGTTC
TTAAAATTATTTGAATATCATAAGAGCCTTGGTGTCTGTCCTAATTCCTTTCTCACTCACCGATGCTGAATACCC
AGTTGAATCAAACTGTCAACCTACCAAAAACGATATTGTGGCTTATGGGTATTGCTGTCTCATTCTTGGTATATT
CTTGTGTTAACTGCCCATTGGCCTGAAAATACTCATTGTAAGCCTGAAAAAAAAAAATCTTTCCCACTGTTTTTTC
TGCTTGTTGTAAGAATCAAATGAAATAATGTATGTGAAAGCACCTTGTAAACTGTAACCTATCAATGTAAAATGT
TAAGGTGTGTTGTTATTTCATTAATTACTTCTTTGTTTAGAATGGAATTTCCTATGCACTACTGTAGCTAGGAAA
TGCTGAAAACAACTGTGTTTTTTAATTAATCAATAACTGCAAAATTAAAGTACCTTCAATGGATAAGCCAAAAAA
ATCTATGTCGGGTGCGGAGAAAGAGGTAATGAAATGGCAGGAATTCGATATCAGCTTATCATACC

FIGURE 580

HCCCHRRRRRAAAPLLLPVLRSSLEPFPQTRPGLRARTPGASARRTHRSDGCRRGSCPRLWSGGHGPSPPSLPXP
LLAIAPDMGNAATAKKGSEVESVKEFLAKAKEDFLKKWENPTQNNAGLEDFERKKTLGTGSFGRVMLVKHKATEQ
YYAMKILDKQKVVKLKQIEHTLNEKRILQAVNFPFLVRLEYAFKDNSNLYMVMEYVPGGEMFSHLRRIGRFSEPH
ARFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDHQGYIQVTDFGFAKRVKGRTWTLCGTPEYLAPEIILSKGYNK
AVDWWALGVLIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSHFSSDLKDLLRNLLQVDLTKRFGNLKNGVSDIK
THKWFATTDWIAIYQRKVEAPFIPKFRGSGDTSNFDDYEEEDIRVSITEKCAKEFGEF

FIGURE 581

CCAGCCCCCCTTCCCTTCCCTGACCCCTTCTTGCCATCGCCCCAGAC**ATG**GGGAACGCGGCGACCGCCAAGAAAG
GCAGCGAGGTGGAGAGCGTGAAAGAGTTTCTAGCCAAAGCCAAAGAAGACTTTTTGAAAAAATGGGAGAATCCAA
CTCAGAATAATGCCGGACTTGAAGATTTTGAAAGGAAAAAAACCCTTGGAACAGGTTCATTTGGAAGAGTCATGT
TGGTAAAACACAAAGCCACTGAACAGTATTATGCCATGAAGATCTTAGATAAGCAGAAGGTTGTTAAACTGAAGC
AAATAGAGCATACTTTGAATGAGAAAAGAATATTACAGGCAGTGAATTTTCCTTTCCTTGTTCGACTGGAGTATG
CTTTTAAGGATAATTCTAATTTATACATGGTTATGGAATATGTCCCTGGGGGTGAAATGTTTTCACATCTAAGAA
GAATTGGAAGGTTCAGTGAGCCCCATGCACGGTTCTATGCAGCTCAGATAGTGCTAACATTCGAGTACCTCCATT
CACTAGACCTCATCTACAGAGATCTAAAACCTGAAAATCTCTTAATTGACCATCAAGGCTATATCCAGGTCACAG
ACTTTGGGTTTGCCAAAAGAGTTAAAGGCAGAACTTGGACATTATGTGGAACTCCAGAGTATTTGGCTCCAGAAA
TAATTCTCAGCAAGGGCTACAATAAGGCAGTGGATTGGTGGGCATTAGGAGTGCTAATCTATGAAATGGCAGCTG
GCTATCCCCCATTCTTTGCAGACCAACCAATTCAGATTTATGAAAAGATTGTTTCTGGAAAGGTCCGATTCCCAT
CCCACTTCAGTTCAGATCTCAAGGACCTTCTACGGAACCTGCTGCAGGTGGATTTGACCAAGAGATTTGGAAATC
TAAAGAATGGTGTCAGTGATATAAAAACTCACAAGTGGTTTGCCACGACAGATTGGATTGCTATTTACCAGAGGA
AGGTTGAAGCTCCATTCATACCAAAGTTTAGAGGCTCTGGAGATACCAGCAACTTTGATGACTATGAAGAAGAAG
ATATCCGTGTCTCTATAACAGAAAAATGTGCAAAAGAATTTGGTGAATTT**TAA**AGAGGAACAAGATGACATCTGA
GCTCACACTCAGTGTTTGCACTCTGTTGAGAGATAAGGTAGAGCTGAGACCGTCCTTGTTGAAGCAGTTACCTAG
TTCCTTCATTCCAACGACTGAGTGAGGTCTTTATTGCCATCATCCGTGTGCGCACTCTGCATCCACCTATGTAAC
AAGGCACCGCTAAGCAAGCATTGTCTGTGCCATAACACAGTACTAGACCACTTTCTTACTTCTCTTTGGGTTGTC
TTTCTCCTCTCCTACATCCATTTCTTCCTTTTCAATTTCATTGGTTTTCTCTAAACAGTGCTCCATTTTATTTTG
TTGGTGTTTCAGATGGGCAGTGTTATGGCTACGTGATATTTGAAGGGAAGGATAAGTGTTGCTTTCAGTAGTTAT
TGCCAATATTGTTGTTGGTCAATGGCTTGAAGATAAACTTTCTAATAATTATTATTTCTTTGAGTAGCTCAGACT
TGGTTTTGCCAAAACTCTTGGTAATTTTTGAAGATAGACTGTCTTATCACCAAGGAAATTTATACAAATTAAGAC
TAACTTTCTTGGAATTCACTATTCTGGCAATAAATTTTGGTAGACTAATACAGTACAGCTAGACCCAGAAATTTG
GAAGGCTGTAGATCAGAGGTTCTAGTTCCCTTTCCCTCCTTTTATATCCTCCTCTCCTTGAGTAATGAAGTGACC
AGCCTGTGTAGTGTGACAAACGTGTCTCATTCAGCAGGAAAAACTAATGATATGGATCATCACCCAGATTCTCTC
ACTTGGTACCAGCATTTCTGTAGGTATTAGAGAAGAGTTCTAAGTTTTCTAAACCTTAACTGTTCCTTAAGGATT
TTAGCCAGTATTTTAATAGAACATGATTAATGAAAGTGACAAATTTTAAATTTTCTCTAATAGTCCTCATCATAA
ACTTTTTAAAGGAAAATAAGCAAACTAAAAAGAACATTGGTTTAGATAAATACTTATACTTTGCAAAGTCAAAAA
TGGCTTGATTTTTGGAAACAATATAGAGGTATTCATATTTAAATGAGGGTTTACATTTGTTTTGTTTTGTAACCG
TTAAAAAGAAGTTGTTTCCAGCTAATTATTGTGGTGTACTATATTTGTGAGCCTAGGGTAGGGGCACTGCTGCAA
CTTCTGCTTTCATCCCATGCCTCATCAATGAGGAAAGGGAACAAAGTGTATAAAACCTGCCACAATTGTATTTTA
ATTTTGAGGTATGATATTTTCAGATATTTCATAATTTCTAACCTCTGTTCTCTCAGTAAACAGAATGTCTGATCG
ATCATGCAGATACAATGTTGGTATTTGAGAGGTTAGTTTTTTTCCTACACTTTTTTTTGCCAACTGACTTAACAA
CATTGCTGTCAGGTGGAAATTTCAAGCACTTTTGCACATTTAGTTCAGTGTTTGTTGAGAATCCATGGCTTAACC
CACTTGTTTTGCTATTTTTTTCTTTGCTTTTAATTTTCCCCATCTGATTTTATCTCTGCGTTTCAGTGACCTACC
TTAAAACAACACACGAGAAGAGTTAAACTGGGTTCATTTTAATGATCAATTTACCTGCATATAAAATTTATTTTT
AATCAAGCTGATCTTAATGTATATAATCATTCTATTTGCTTTATTATCGGTGCAGGTAGGTCATTAACACCACTT
CTTTTCATCTGTACCACACCCTGGTGAAACCTTTGAAGACATAAAAAAAACCTGTCTGAGATGTTCTTTCTACCA
ATCTATATGTCTTTCGGTTATCAAGTGTTTCTGCATGGTAATGTCATGTAAATGCTGATATTGATTTCACTGGTC
CATCTATATTTAAAACGTGC

FIGURE 582

MGNAATAKKGSEVESVKEFLAKAKEDFLKKWENPTQNNAGLEDFERKKTLGTGSFGRVMLVKHKATEQYYAMKIL
DKQKVVKLKQIEHTLNEKRILQAVNFPFLVRLEYAFKDNSNLYMVMEYVPGGEMFSHLRRIGRFSEPHARFYAAQ
IVLTFEYLHSLDLIYRDLKPENLLIDHQGYIQVTDFGFAKRVKGRTWTLCGTPEYLAPEIILSKGYNKAVDWWAL
GVLIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSHFSSDLKDLLRNLLQVDLTKRFGNLKNGVSDIKTHKWFAT
TDWIAIYQRKVEAPFIPKFRGSGDTSNFDDYEEEDIRVSITEKCAKEFGEF

FIGURE 583A

TCCCGAAACCAGAGGGATGGGGCCGGCTGTGCAGTAGAACGGGGATCGAAAAGAGGAAAACAAGGGCACGAAGAC
CAGCGAGAAAGAAGAGGACACCTGGGAAAGGCGGAAGCAGAAGACGGGGAAGGGAAAAGAAACCCATAGCAGGTG
GAAACCAGATCTAGAGCAACACCGTCAGGTTCACAGTTTGTTTTTCTAGAAGAGAAGAAAGTACCTGAGGATTGC
TCTTTTTTCCTACCGTTAATGAAAACTACTTTTGTCTTCATCATAAAAGAAAAAACTAAGGGGAGGTAAAGGCAG
TCTCCTGTTTTATTAGGGGGAGAGGTGAAGGGAAATCCAGGCTCACTTTCTGAATAAGCCACTGCCTGGTGCACA
GAGCAGAACCATCCTGGTTTCTGAAGACACATCCCTTTCAGCAGAATTCCAGCCGGAGTCGCTGGCACAGTTCTA
TTTTTATATTTAAATGTATGTCTCCCCTGGCCTTTTTTTTTTTTTTTTTTTTTTTAGCAACACTTTTCTTGTT
TGTAAACGCGAGTGACCAGAAAGTGTGAATGCGGAGTAGGAATATTTTTCGTGTTCTCTTTTATCTGCTTGCCTT
TTTTAGAGAGTAGCAGTGGTTCCTATTTCGGAAAAGGACGTTCTAATTCAAAGCTCTCTCCCAATATATTTACAC
GAATACGCATTTAGAAAGGGAGGCAGCTTTTGAGGTTGCAATCCTACTGAGAAGG**ATG**GAAGAAGGAGCCAGGCA
CCGAAACAACACCGAAAAGAAACACCCAGGTGGGGGCGAGTCGGACGCCAGCCCCGAGGCTGGTTCCGGAGGGGG
CGGAGTAGCCCTGAAGAAAGAGATCGGATTGGTCAGTGCCTGTGGTATCATCGTAGGGAACATCATCGGCTCTGG
AATCTTTGTCTCGCCAAAGGGAGTGCTGGAGAATGCTGGTTCTGTGGGCCTTGCTCTCATCGTCTGGATTGTGAC
GGGCTTCATCACAGTTGTGGGAGCCCTCTGCTATGCTGAACTCGGGGTCACCATCCCCAAATCTGGAGGTGACTA
CTCCTATGTCAAGGACATCTTCGGAGGACTGGCTGGGTTCCTGAGGCTGTGGATTGCTGTGCTGGTGATCTACCC
CACCAACCAGGCTGTCATCGCCCTCACCTTCTCCAACTACGTGCTGCAGCCGCTCTTCCCCACCTGCTTCCCCCC
AGAGTCTGGCCTTCGGCTCCTGGCTGCCATCTGCTTATTGCTCCTCACATGGGTCAACTGTTCCAGTGTGCGGTG
GGCCACCCGGGTTCAAGACATCTTCACAGCTGGGAAGCTCCTGGCCTTGGCCCTGATTATCATCATGGGGATTGT
ACAGATATGCAAAGGAGAGTACTTCTGGCTGGAGCCAAAGAATGCATTTGAGGATTTCCAGGAACCTGACATCGG
CCTCGTCGCACTGGCTTTCCTTCAGGGCTCCTTTGCCTATGGAGGCTGGAACTTTCTGAATTACGTGACTGAGGA
GCTTGTTGATCCCTACAAGAACCTTCCCAGAGCCATCTTCATCTCCATCCCACTGGTCACATTTGTGTATGTCTT
TGCCAATGTCGCTTATGTCACTGCAATGTCCCCCCAGGAGCTGCTGGCATCCAACGCCGTCGCTGTGACTTTTGG
AGAGAAGCTCCTAGGAGTCATGGCCTGGATCATGCCCATTTCTGTTGCCCTGTCCACATTTGGAGGAGTTAATGG
GTCTCTCTTCACCTCCTCTCGGCTGTTCTTCGCTGGAGCCCGAGAGGGCCACCTTCCCAGTGTGTTGGCCATGAT
CCACGTGAAGCGCTGCACCCCAATCCCAGCCCTGCTCTTCACATGCATCTCCACCCTGCTGATGCTGGTCACCAG
CGACATGTACACACTCATCAACTACGTGGGCTTCATCAACTACCTCTTCTATGGGGGCACGGTTGCTGGACAGAT
AGTCCTTCGCTGGAAGAAGCCTGATATCCCCCGCCCCATCAAGATCAACCTGCTGTTCCCCATCATCTACTTGCT
GTTCTGGGCCTTCCTGCTGGTCTTCAGCCTGTGGTCAGAGCCGGTGGTGTGTGGCATTGGCCTGGCCATCATGCT
GACAGGAGTGCCTGTCTATTTCCTGGGTGTTTACTGGCAACACAAGCCCAAGTGTTTCAGTGACTTCATTGAGCT
GCTAACCCTGGTGAGCCAGAAGATGTGTGTGGTCGTGTACCCCGAGGTGGAGCGGGGCTCAGGGACAGAGGAGGC
TAATGAGGACATGGAGGAGCAGCAGCAGCCCATGTACCAACCCACTCCCACGAAGGACAAGGACGTGGCGGGGCA
GCCCCAGCCC**TGA**GGACCACCATTCCCTGGCTACTCTCTCCTTCCTCCCCCTTTTATCCTACCTCCCTGCCTTGG
TCCCGCCAACACATGCGAGTACACACACACCCCTCTCTCTGCTTTTGTCAGGCAGTGGTAGGACTTTGGTGTGGG
TGGTGAGAAATTGTAAACAAAAACTGACATTCATACCCAAAGAACCAGCCTCTCACCCCAGGGTCCATGTCCCAG
GCCCCACTCCAGTGCTGCCCACACTCCCAGCTGCTGGAGGAGAGGGGAGATGCCAAGGTGCCCTGCAGGACCTCC
CTCCGGGCCACACCCTCAGCTGCCTCTTCAGGAACCGGAGCTCATTACTGCCTTCCCTCCCAGGGAGGCCCCTTC
AGAGAGGAGAGGCCAGGAGCTGCATTGTGGGGGGACAGGCTCAAGCAATTCTGTCCCCATCAAGGGGTCAGCTGG
AGAGACCCAAGACCCTATCTGTTCACCAGGGACCCAAAATCCAAGGGGATGCTTCCCTCTGCCCTCTTTCCTGCC
CCTCCCCATCATACCTGCACCCACCCCAGCCAGGGCTCCCTGTCCAGAATTCGGTTCTCCTCAGGACGCCAACTC
CCAGAGCTAAGGACCAAGGAGAAGAACAGCCTCTCCACCCCCAAGCCAGGCGGTTGAGGAACATATTGAGAAAGG
TTCAGATTGCAGAAACCCAGCCCTGCCCCTGCCTCCTGCATCCAGCCCCCAACATGGTGCCAAAGCTTCCAGAAG
CCAAAAAGCTTCTGATTTTTAAGGTAGTGGGCATCTCTCTCCTAATGACGAAGCTGCTCAGCAACTCCACCTGCC
CGCCGCAGGAAGGAGCAGTCCCCTGCTATCCCTGCAGCCACTCCCAGCACACCCGCACACAGCCAGCACCACCGC
CCCACCGTGCACTTCTCCTCTCTGGGCCTTGGCTTGGGACCAGGTACGAAGGATCCCCAAGCCCTTCAGGCCTGA
GATCAGAGCCAGATCAGCCTTAAGTCACCTCCCATCCAAGAACTTGGCCTAAAAATACTCCCCTATTTCTAACCC
TCAGGACGGATCTGATATTAAATGCCTTCCCTGGGAGGAAGGGTGCTTTCCCCCTCCCTAGAGGTGCCCATTCCA
TACCCTGGGAGACTGAGGAGAGCATTGGCTGAAGCCCAGTTCCTTTCCCATCCATCCCCAACTCCAATAATCCCC
CACTCCTCGCAGGTCTCAGTGTCATGCTGTCTTGGGGCAGGGTGAAAGGGTAGTGGCAGCAGGGCGCCCACTCTG

FIGURE 583B

GAGATCCTCAAAAAAGGCCCTCCTCTGTGGCTGGCAGCCTCTGACCTTTCCCTGGGCTTCAAAGGAAGGCTATGG
AGTTTGCTGTGGGCCCTGCAACCTTCCCAGCCACTCCTGCTGCACTAAGGACTTAGGATCCTTTTATCACAAATC
GGGATTCTCTCCCCCACCCCGAATTCTGTCTGCTTAAACTGGAATACACAGGAGCCCTTCCTGGCCTGGATGGTG
TCTCCCAGCTTCCCCGCCCAGCTTGCCCACCCCATAGTTGGTGAGATGCCAAGTTTGGTCTGAGTTGTGACCCCT
TCAGAGTAGATGCCCGGCAGGCTGGGGTTGGCCCCTGGAGGGTCAGGGGACCATCTTCTTATTCCCTCTTTTCTC
ATTCCTCCAACTTCCTCCCCTCCTTCAATTATTTTTTTGTAAAGTTGATGCCTTACTTTTTGGATAAATATTTTT
GAAGCTGGTATTTCTATTTCTTTTGGATTTTTTTTAATGTAAGGTTGTTTTGGGGGATGGAGTTAGAACCTTAAT
GATAATTTCTTTCGTTTGGTGTAGGTTTTAGAGATTTGTTTTGTGGAGAGGTTTTTTTCTTTTGATGTAATAAAA
TTTAAAATGGAAATGAAAAAAAAAAAAAAAAAAAAA

FIGURE 584

MEEGARHRNNTEKKHPGGGESDASPEAGSGGGGVALKKEIGLVSACGIIVGNIIGSGIFVSPKGVLENAGSVGLA
LIVWIVTGFITVVGALCYAELGVTIPKSGGDYSYVKDIFGGLAGFLRLWIAVLVIYPTNQAVIALTFSNYVLQPL
FPTCFPPESGLRLLAAICLLLLTWVNCSSVRWATRVQDIFTAGKLLALALIIIMGIVQICKGEYFWLEPKNAFED
FQEPDIGLVALAFLQGSFAYGGWNFLNYVTEELVDPYKNLPRAIFISIPLVTFVYVFANVAYVTAMSPQELLASN
AVAVTFGEKLLGVMAWIMPISVALSTFGGVNGSLFTSSRLFFAGAREGHLPSVLAMIHVKRCTPIPALLFTCIST
LLMLVTSDMYTLINYVGFINYLFYGGTVAGQIVLRWKKPDIPRPIKINLLFPIIYLLFWAFLLVFSLWSEPVVCG
IGLAIMLTGVPVYFLGVYWQHKPKCFSDFIELLTLVSQKMCVVVYPEVERGSGTEEANEDMEEQQQPMYQPTPTK
DKDVAGQPQP

FIGURE 585A

CCCGGGCGAGCCCGCCGTGCGCACAGCTCTGCCCGCCGCCCCTGGAGCGGATCCCCAGCCGTCCCTGGGCGTTCT
CCCGGGTTCTAGCAAAGCCCCCCGGGGTGCCCATCAGTTTCCTTGGGTGACTACAGCGTGTGTTTTTTCTTTCCT
CTTTCCCCTGCCTGTGTGCCCTTCTCCAGG**ATG**GCAGAGGCGGAATTGCACAAGGAAAGGCTGCAAGCCATAGCA
GAAAAAAGAAAGAGGCAGACTGAAATAGAAGGCAAGCGACAACAGCTTGACGAGCAGATACTTCTGCTGCAGCAT
TCCAAGTCCAAAGTGCTTCGGGAGAAATGGCTGCTGCAGGGCATACCCGCTGGAACTGCCGAAGAGGAGGAAGCC
AGGAGGCGGCAGTCTGAAGAGGATGAGTTCAGAGTCAAGCAACTTGAAGATAACATTCAGAGGCTGGAGCAAGAA
ATACAAACGCTAGAAAGTGAAGAGTCCCAGATATCTGCCAAAGAGCAAATCATCCTAGAGAAACTGAAGGAAACA
GAAAAATCCTTCAAGGACTTTCAGAAGGGTTTCTCCAGTACGGATGGAGATGCAGTAAATTACATTTCCTCCCAG
CTTCCCGACCTGCCAATCCTCTGTTCACGAACAGCAGAACCATCACCTGGGCAGGACGGGACCAGCAGAGCGGCT
GGAGTCGGGTGGGAGAATGTGCTGCTAAAGGAAGGTGAGTCAGCCTCGAACGCCACAGAAACATCCGGCCCAGAC
ATGACTATCAAGAAGCCTCCCCAGCTTTCTGAGGATGATATCTGGCTAAAAAGCGAGGGAGACAACTATAGTGCC
ACCCTCCTGGAGCCTGCTGCCAGCTCTCTTTCCCCAGATCACAAAAACATGGAAATTGAGGTGTCTGTTGCAGAA
TGTAAAAGTGTTCCTGGAATCACCTCTACCCCACATCCCATGGACCATCCCTCCGCTTTCTATTCACCCCCGCAT
AATGGCCTCCTTACTGATCACCACGAATCCCTGGATAATGATGTTGCCAGAGAGATCCGCTATCTAGATGAGGTG
CTAGAGGCCAACTGCTGTGATTCTGCTGTGGATGGAACGTACAATGGAACATCCTCCCCAGAGCCTGGTGCAGTG
GTTCTGGTGGGCGGCCTAAGCCCCCCTGTCCACGAGGCGACCCAGCCAGAACCCACTGAAAGAACAGCTAGCCGG
CAGGCACCTCCTCACATCGAGCTCAGTAATAGCAGCCCTGACCCCATGGCAGAGGCAGAAAGAACAAATGGCCAT
TCCCCCAGCCAGCCTAGAGATGCGCTGGGGGGACAGCCTGCAGGTGCCTGTCAGCCCCAGCTCCACAACCAGCTCA
CGGTGTTCTTCCCGAGATGGAGAGTTCACTCTCACCACACTGAAAAAGGAGGCCAAGTTTGAGCTGCGTGCCTTC
CATGAGGACAAGAAGCCCTCCAAGCTCTTTGAGGATGACGAGCATGAGAAAGAACAATACTGCATTAGAAAAGTG
AGGCCTTCAGAGGAGATGCTGGAGCTGGAAAAGGAGAGGAGAGAGCTCATCCGCAGCCAGGCCGTCAAGAAGAAT
CCTGGCATTGCAGCAAAATGGTGGAATCCCCCGCAGGAAAAAACCATCGAGGAGCAGCTGGACGAGGAACATCTG
GAGTCGCACAAAAAGTACAAGGAGCGCAAAGAGAGAAGGGCACAGCAGGAACAGTTGCTGCTGCAGAAGCAGTTA
CAGCAGCAGCAGCAGCAGCCCCCATCGCAGCTCTGCACAGCCCCTGCCTCTTCTCATGAACGCGCAAGCATGATT
GACAAAGCAAAGGAGGACATTGTCACAGAGCAGATAGATTTCTCTGCTGCTCGCAAACAATTTCAGCTGATGGAG
AATTCCAGGCAAGCGGTGGCCAAGGGCCAGAGTACACCCAGGCTGTTCTCCATCAAGCCTTTCTACAGGCCTCTG
GGGTCAGTCAACTCAGACAAGCCACTGACTAATCCGAGACCACCTTCTGTCGGGGGACCTCCAGAAGACAGTGGT
GCCTCAGCCGCCAAGGGACAGAAATCCCCCGGTGCCCTGGAGACCCCATCGGCAGCAGGAAGCCAGGGCAACACA
GCCTCTCAGGGGAAGGAAGGGCCCTACAGCGAGCCTTCTAAACGTGGGCCCTTATCTAAACTGTGGGCTGAGGAT
GGAGAATTTACGAGCGCCCGGGCTGTCCTCACTGTGGTCAAGGATGATGACCATGGGATTTTGGATCAGTTCTCA
AGATCTGTCAATGTCTCCTTGACCCAAGAGGAGCTTGACTCTGGTCTGGACGAATTGTCGGTGAGGTCTCAGGAT
ACCACAGTCCTGGAGACCCTATCCAATGATTTCAGCATGGACAACATCAGTGACAGCGGGGCATCCAATGAGACA
ACCAATGCCCTCCAGGAAAATTCACTGGCTGATTTTTCTCTGCCCCAGACACCACAAACTGACAACCCCTCAGAG
GGCCGAGGAGAAGGCGTCTCCAAGTCATTTAGTGATCATGGTTTCTATTCCCCTTCCTCCACGCTGGGGGACTCT
CCGTTGGTTGATGACCCCTTGGAGTATCAGGCTGGCCTCCTGGTGCAGAATGCCATTCAACAAGCCATAGCCGAG
CAGGTGGATAAAGCTGTGTCCAAAACCAGCAGGGATGGAGCAGAGCAACAGGGACCTGAAGCGACTGTAGAGGAA
GCTGAAGCTGCGGCTTTCGGCTCAGAAAAGCCTCAGAGCATGTTTGAGCCACCTCAGGTGTCTTCTCCTGTTCAA
GAGAAAAGGGATGTATTACCAAAGATTCTGCCTGCTGAAGACAGGGCGCTCAGGGAAAGGGGGCCCCCCCAGCCA
CTGCCAGCTGTGCAGCCCAGTGGCCCGATTAACATGGAGGAGACCAGGCCCGAAGGAAGCTATTTCAGCAAGTAC
TCGGAGGCAGCTGAGCTGAGAAGCACAGCCTCCCTCCTGGCCACTCAAGAATCTGACGTGATGGTTGGGCCTTTC
AAGCTGAGGTCCAGGAAACAGCGGACTTTGTCCATGATTGAGGAAGAGATCCGAGCAGCTCAGGAAAGGGAAGAG
GAGCTGAAGAGGCAGAGACAAGTCTTGCAGAGTACGCAGAGCCCCAGGACAAAGAATGCCCCATCACTGCCCTCC
AGAACATGCTACAAAACTGCTCCAGGGAAAATAGAGAAAGTCAAACCTCCTCCATCCCCCACCACTGAAGGCCCC
AGCCTGCAGCCTGACTTAGCCCCTGAAGAGGCTGCCGGAACCCAGCGGCCCAAGAATCTGATGCAGACCCTCATG
GAAGACTATGAGACACACAAATCTAAAAGGCGCGAGAGAATGGATGATAGTAGTTACACTTCTAAGTTACTGTCT
TGCAAGGTGACTTCCGAGGTCCTCGAGGCCACACGGGTTAATCGAAGAAAGAGCGCACTGGCTTTGCGCTGGGAA
GCAGGGATCTATGCCAACCAGGAGGAAGAAGACAACGAA**TAA**ACTTCCTTCAACCCAGGAAGCGTCTTTGGTGCT
TGGGAGACCAAGAAACCAAGAAATTAACAACTGAAAGCATTTTAATGGACTATTTATTAAAGTGCAAACAAACTC

FIGURE 585B

AGCAATCCTTATGTAGACCAGAAGCTGCAATATACAATGATGAAAATGAAACGAAAAGGAAGTCCCCCCATCAGA
CTCTGGACACCCAGGAATCAAAAGAGAAAGGACTTTTTTGGTGACTCAATCCCAGTGTCTGGTTTGGGGCCAATC
TACAATGGATCCAAAAGGACAAAACATGTTACAAGCAAATCAACATAGTTGCTGCAGGCGGAACTGAGACCAGCC
TCTCTGGGCGATGAAGGACAATGGTGGTAGGGCCACTTAGAGAGCAGTAGGGCCCAGGCTGGTGCAGCCTACATG
GCACAGGATATTTCCCTGCACCAGTTTCCCACCTGTCACTTGCAGCATCAGAGGGTGTTGCATTAACTCCATTTT
CTCCAGCAGCCATAAAATGAATGGCGTTTCTCTCCATATTTGCCCAGAAGAGGCAGTTATGATTCCACTTCTCCT
ACATTTAATTATTTTTAATTGAGAACAACTCATGATCACAATTCATAAAATCCATATTTTAAGACAATAGTTCTT
CATGTCACAAACACAATCTATTCTACATGAGGAGGCTGAGAAAGGGGAAGAGAAAAACAAACCAAATGGATGATG
TTAGCTTTAGGATCGTGTCTGCTTATAATATTCACTGATCTGCAGTTTATGAGAACACATTTTCACAGTTATGTT
TCTTCATAGGAAAACTATATTTAGTGGGCAACAACTATTTTTATGATGGGATGGGGGAGTATATACACGTATAGA
ATCTGTACGCGTTGAACAACTTGGTTCAAGATGGTGGGGGCATTTTTAGAGCGGCAATAATTGAAAAAAAAGGCG
AACTCTGCCTTGGAGAGGTAGATGATAAGAAATAAAAAGGTGTTTATAACTATTTTGTATTATAAAGTGGGCCTT
AGAGATAGGAAGAAGAATGATGGATTCCTTTTGGATCAATCAGAAAGGAAACACGAAAGAAAAGTCAGGAAGGTA
GAGAGAGAAAAAGGGAGGGAAGGAGAAAGAATGGGAATAAAATAAGGAGGTAAGAGATACTATTTTTGCTGAGCA
ACCAGTGTGTTTCAGGATGATACAAAGAAAAATATAGAATAGAAATAAGTGCAGGCTTGGAATCAGCTACAAATC
CTAAAGATGGGGTGTGTGTGGATGTGTGTGTGTGTGTGTGTACACCATTGTGTGTTTGTAAAATGTGTATGTTCA
TGAGTAAGGGTGTGTGTGTGTGTGTATTAAAATTCCAGAGTGACCGTGGCACTTGGGTGTACAGGTAATTCCTCC
AGAGCTGTTTGCTGGCTTCAGGAGTGGAGTGAGAATTTCTTTTTTATGAAAAGGGATATAAAGGCACCGAGCTGA
TGCAGTATTTGTAATATTAAGTTGACCTAACAAGGTATTTGCATGAGTCACAATTACAAAGTTTTGAGCGGTTTT
GTAATTTGACATTTAGGAAAGTCTCCTATTTATTCTCATACTTTACATTCATGCTTAGTATACTATAGAGGATGC
CAGCTTTAATCTTTCTGTCATTTAAAGCCATATGATAAGGGTATTCAATAATTGGGTGCCCTAAATTTCTGGATG
AGAAAATTTTCAATTCTGGCCATGAGAAAGAAAAAAAAATAAACAGCCTTCTTTTTTTTTCCTTTGTTTTAAAAC
TGTGGTTTTTTAAAAAAGCAATAATTAACTCAGACCTCACTAAAAATCATTTTTGTTTTTATATTGTTATGTCAT
AAGCTCTATTATGTTATTCTAACAAGTAGCAATTTCACAAAATTTGTATGTAGATGTTAACGCACATTTCCTTTG
CTTCTTTTATTAGACTAGTGTTGACTTTGGGGGGGGACATTTATTCACAAATGAGAAGTAGGCACAAAGTAAAAA
ATGGAACCATCTACTAACAAGGATCCTTTAAAACTGCCAAGGGAGCTCTAACTTGAAGCCACATCCTACAGATGG
CAGCCCAAATAGCACATGGGCAATTGGCACCATCTTTATATGGTTGAGTCTCCTGAATATTTTGAATGAATTCTC
AACAAAATGTGCTAGCCACTGGGGACGCAAAACAAGTAAGATCCCTGTTGCAAGAAATTCATTTTATAGTGAGGG
AGGTTGGCATGGAGACTAAAATTCTCAGGAAAATGAGATCCGTGTTAGATTAGAAGTCCTGATGTGAAATGGGAG
GACTCAGGAAGGAGGATCGTCTTTACCTGAGGATTTCTAGCCAGAGGTCCCAGATGCCTGGGCTGAGAACCCAGC
GATAAGGGGGCGTTCCCAAAGCAGACACAGGGATAAGAACAGAGGAGGCAGCAGCATTGCACAGCCCCAGGCACA
GTGGCAGTTAGGATGGCTGGAGAGTAGGATAGTTCTATGGGTTGCCCAAAAAATGTGATGCGCTTCATGTTTTCT
CTGACTCATGGATCTGGTAGAGACCATAGACATGATATAGACTAACTTCCCCATTTTTCACAATGAAGGTAAACC
ATCCTTATGACTTACCTTAAAGTTTTTTGTTCTGTTTTGAAGGAAACCATGTGCTTCATGAAACCTACAGTTGAC
AAGAGAATGTACAGCTAAGAGAAAAGCTTAAGAGGCCACACTATTCGCGGAATGGCTTTAGAGGCAGATGAAGTG
GTCTTTGACCACAGTTGATTGAACCAGAGCACTTATTGCTTAAAGAATAACAGAGTTCTAGAGCTGGGGGTTCTT
GGGCCATGCTCCGTGTGTGGATAAGGAAAGAAATACTGTTTCTGGGACTCTCCCACAGTCACAAAGCTGTTTTCA
CTGTGGCCCCTACATCTCTTAACTTTTGCTATTACTCCTATGCTGCCTTCCGGATTACTGCTGTCTATCTTCTTG
CTCCACTCACTGAAGATCCTATTATAATCCCATGAAAATGTAAATTACAGTTTACTTGGGAGAGCCAGATTTTCT
CTGTGCTCTTGAGTTTTTTATTCATTCAAGAAACCTTGGGCCACCGCTTTGTACATAGCACCGTGCTAGGCTCTG
GGATCCCAAATGGACCCTTTTAACTTTCTGAAGATGGGACCGTCCCCTGGAGGAAAGTCATTCCTGCCTAATCCA
TCGAGAGAAAGAGGCTTACGAAAAACTTTGCCTCTGATGCTCAGCCCCACCCCCAAATAGCACACAAGCTTGTTA
ACCCCACCTCTTACAAAATGTTTAGATTCTGTAGGTGTTAAAAGCCTTTCTGGAAGTATTGCATTCTGCCGTGTT
TATAGGTGTTCACTTTCCTCCAGAGCTGATTAACTACTGACATGACTTGGCTTTCTCATCCAGAAATTATGGAAA
CAGGGTCTGTCAGTGGCAGGAGGCCGTGCTGTGTTTTACTTGGATGACACAATGCAGTTTACTTGCCTCTTCATA
CCCATGCATGCTGCTCACCCTAGACAATGACATATAAGCCGTATATAGATCAATGTCCACATATATATACACACA
CACATATATATATATAAAGTGTAACAAGGAACACTAAAACAGTGTTGATTCTTGTCTCTGAAGACAAATAATTAA
ACCTTTTTTTTCCCAACTAAAGAATGGATTTAATTAAACTATGTATTGAAAAAAAAGTAGCCTAAGTGTTAGAGA

FIGURE 585C

TGGTGAATATATTCCATTTTAGTTAAAGAACAAATTTCCTGAATTTTAAGCATTCAGTGAGCTGCCAATTTTGAT
TTTGTGTTGCTCTTTACCCAAATTATTTTTTCTTTGTTTTTCTTTTTTTGGGGGGAGGAGGGGAAAAAAGCAGCAA
TACTGTGTTTGGAAATTATACTCTGTATCTGGTTTTCCTGTGTATGTTAACCACTTAAATGTTATTATCCTGCTT
TGGTTTTAGAGTGATTGTGAGGCATTCAATGCAAGTATACAGTTATTTTCTCATTAAAATCCAATGTGTGTTGAG
TTTTTATAAAAAAAAAAAAAAAAAA

FIGURE 586

MAEAELHKERLQAIAEKRKRQTEIEGKRQQLDEQILLLQHSKSKVLREKWLLQGIPAGTAEEEEARRRQSEEDEF
RVKQLEDNIQRLEQEIQTLESEESQISAKEQIILEKLKETEKSFKDFQKGFSSTDGDAVNYISSQLPDLPILCSR
TAEPSPGQDGTSRAAGVGWENVLLKEGESASNATETSGPDMTIKKPPQLSEDDIWLKSEGDNYSATLLEPAASSL
SPDHKNMEIEVSVAECKSVPGITSTPHPMDHPSAFYSPPHNGLLTDHHESLDNDVAREIRYLDEVLEANCCDSAV
DGTYNGTSSPEPGAVVLVGGLSPPVHEATQPEPTERTASRQAPPHIELSNSSPDPMAEAERTNGHSPSQPRDALG
DSLQVPVSPSSTTSSRCSSRDGEFTLTTLKKEAKFELRAFHEDKKPSKLFEDDEHEKEQYCIRKVRPSEEMLELE
KERRELIRSQAVKKNPGIAAKWWNPPQEKTIEEQLDEEHLESHKKYKERKERRAQQEQLLLQKQLQQQQQQPPSQ
LCTAPASSHERASMIDKAKEDIVTEQIDFSAARKQFQLMENSRQAVAKGQSTPRLFSIKPFYRPLGSVNSDKPLT
NPRPPSVGGPPEDSGASAAKGQKSPGALETPSAAGSQGNTASQGKEGPYSEPSKRGPLSKLWAEDGEFTSARAVL
TVVKDDDHGILDQFSRSVNVSLTQEELDSGLDELSVRSQDTTVLETLSNDFSMDNISDSGASNETTNALQENSLA
DFSLPQTPQTDNPSEGRGEGVSKSFSDHGFYSPSSTLGDSPLVDDPLEYQAGLLVQNAIQQAIAEQVDKAVSKTS
RDGAEQQGPEATVEEAEAAAFGSEKPQSMFEPPQVSSPVQEKRDVLPKILPAEDRALRERGPPQPLPAVQPSGPI
NMEETRPEGSYFSKYSEAAELRSTASLLATQESDVMVGPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQRQVLQ
STQSPRTKNAPSLPSRTCYKTAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAGTQRPKNLMQTLMEDYETHKSKR
RERMDDSSYTSKLLSCKVTSEVLEATRVNRRKSALALRWEAGIYANQEEEDNE

FIGURE 587A

CCCGGGCGAGCCCGCCGTGCGCACAGCTCTGCCCGCCGCCCCTGGAGCGGATCCCCAGCCGTCCCTGGGCGTTCT
CCCGGGTTCTAGCAAAGCCCCCCGGGGTGCCCATCAGTTTCCTTGGGTGACTACAGCGTGTGTTTTTTCTTTCCT
CTTTCCCCTGCCTGTGTGCCCTTCTCCAGG**ATG**GCAGAGGCGGAATTGCACAAGGAAAGGCTGCAAGCCATAGCA
GAAAAAAGAAAGAGGCAGACTGAAATAGAAGGCAAGCGACAACAGCTTGACGAGCAGATACTTCTGCTGCAGCAT
TCCAAGTCCAAAGTGCTTCGGGAGAAATGGCTGCTGCAGGGCATACCCGCTGGAACTGCCGAAGAGGAGGAAGCC
AGGAGGCGGCAGTCTGAAGAGGATGAGTTCAGAGTCAAGCAACTTGAAGATAACATTCAGAGGCTGGAGCAAGAA
ATACAAACGCTAGAAAGTGAAGAGTCCCAGATATCTGCCAAAGAGCAAATCATCCTAGAGAAACTGAAGGAAACA
GAAAAATCCTTCAAGGACTTTCAGAAGGGTTTCTCCAGTACGGATGGAGATGCAGTAAATTACATTTCCTCCCAG
CTTCCCGACCTGCCAATCCTCTGTTCACGAACAGCAGAACCATCACCTGGGCAGGACGGGACCAGCAGAGCGGCT
GGAGTCGGGTGGGAGAATGTGCTGCTAAAGGAAGGTGAGTCAGCCTCGAACGCCACAGAAACATCCGGCCCAGAC
ATGACTATCAAGAAGCCTCCCCAGCTTTCTGAGGATGATATCTGGCTAAAAAGCGAGGGAGACAACTATAGTGCC
ACCCTCCTGGAGCCTGCTGCCAGCTCTCTTTCCCCAGATCACAAAAACATGGAAATTGAGGTGTCTGTTGCAGAA
TGTAAAAGTGTTCCTGGAATCACCTCTACCCCACATCCCATGGACCATCCCTCCGCTTTCTATTCACCCCCGCAT
AATGGCCTCCTTACTGATCACCACGAATCCCTGGATAATGATGTTGCCAGAGAGATCCGCTATCTAGATGAGGTG
CTAGAGGCCAACTGCTGTGATTCTGCTGTGGATGGAACGTACAATGGAACATCCTCCCCAGAGCCTGGTGCAGTG
GTTCTGGTGGGCGGCCTAAGCCCCCCTGTCCACGAGGCGACCCAGCCAGAACCCACTGAAAGAACAGCTAGCCGG
CAGGCACCTCCTCACATCGAGCTCAGTAATAGCAGCCCTGACCCCATGGCAGAGGCAGAAAGAACAAATGGCCAT
TCCCCCAGCCAGCCTAGAGATGCGCTGGGGGACAGCCTGCAGGTGCCTGTCAGCCCCAGCTCCACAACCAGCTCA
CGGTGTTCTTCCCGAGATGGAGAGTTCACTCTCACCACACTGAAAAAGGAGGCCAAGTTTGAGCTGCGTGCCTTC
CATGAGGACAAGAAGCCCTCCAAGCTCTTTGAGGATGACGAGCATGAGAAAGAACAATACTGCATTAGAAAAGTG
AGGCCTTCAGAGGAGATGCTGGAGCTGGAAAAGGAGAGGAGAGAGCTCATCCGCAGCCAGGCCGTCAAGAAGAAT
CCTGGCATTGCAGCAAAATGGTGGAATCCCCCGCAGGAAAAAACCATCGAGGAGCAGCTGGACGAGGAACATCTG
GAGTCGCACAAAAAGTACAAGGAGCGCAAAGAGAGAAGGGCACAGCAGGAACAGTTGCTGCTGCAGAAGCAGTTA
CAGCAGCAGCAGCAGCAGCCCCCATCGCAGCTCTGCACAGCCCCTGCCTCTTCTCATGAACGCGCAAGCATGATT
GACAAAGCAAAGGAGGACATTGTCACAGAGCAGATAGATTTCTCTGCTGCTCGCAAACAATTTCAGCTGATGGAG
AATTCCAGGCAAGCGGTGGCCAAGGGCCAGAGTACACCCAGGCTGTTCTCCATCAAGCCTTTCTACAGGCCTCTG
GGGTCAGTCAACTCAGACAAGCCACTGACTAATCCGAGACCACCTTCTGTCGGGGGACCTCCAGAAGACAGTGGT
GCCTCAGCCGCCAAGGGACAGAAATCCCCCGGTGCCCTGGAGACCCCATCGGCAGCAGGAAGCCAGGGCAACACA
GCCTCTCAGGGGAAGGAAGGGCCCTACAGCGAGCCTTCTAAACGTGGGCCCTTATCTAAACTGTGGGCTGAGGAT
GGAGAATTTACGAGCGCCCGGGCTGTCCTCACTGTGGTCAAGGATGATGACCATGGGATTTTGGATCAGTTCTCA
AGATCTGTCAATGTCTCCTTGACCCAAGAGGAGCTTGACTCTGGTCTGGACGAATTGTCGGTGAGGTCTCAGGAT
ACCACAGTCCTGGAGACCCTATCCAATGATTTCAGCATGGACAACATCAGTGACAGCGGGGCATCCAATGAGACA
ACCAATGCCCTCCAGGAAAATTCACTGGCTGATTTTTCTCTGCCCCAGACACCACAAACTGACAACCCCTCAGAG
GGCCGAGGAGAAGGCGTCTCCAAGTCATTTAGTGATCATGGTTTCTATTCCCCTTCCTCCACGCTGGGGGACTCT
CCGTTGGTTGATGACCCCTTGGAGTATCAGGCTGGCCTCCTGGTGCAGAATGCCATTCAACAAGCCATAGCCGAG
CAGGTGGATAAAGCTGTGTCCAAAACCAGCAGGGATGGAGCAGAGCAACAGGGACCTGAAGCGACTGTAGAGGAA
GCTGAAGCTGCGGCTTTCGGCTCAGAAAAGCCTCAGAGCATGTTTGAGCCACCTCAGGTGTCTTCTCCTGTTCAA
GAGAAAAGGGATGTATTACCAAAGATTCTGCCTGCTGAAGACAGGGCGCTCAGGGAAAGGGGGCCCCCCCCAGCCA
CTGCCAGCTGTGCAGCCCAGTGGCCCGATTAACATGGAGGAGACCAGGCCCGAAGGAAGCTATTTCAGCAAGTAC
TCGGAGGCAGCTGAGCTGAGAAGCACAGCCTCCCTCCTGGCCACTCAAGAATCTGACGTGATGGTTGGGCCTTTC
AAGCTGAGGTCCAGGAAACAGCGGACTTTGTCCATGATTGAGGAAGAGATCCGAGCAGCTCAGGAAAGGGAAGAG
GAGCTGAAGAGGCAGAGACAAGTCTTGCAGAGTACGCAGAGCCCCAGGACAAAGAATGCCCCATCACTGCCCTCC
AGAACATGCTACAAAACTGCTCCAGGGAAAATAGAGAAAGTCAAACCTCCTCCATCCCCCACCACTGAAGGCCCC
AGCCTGCAGCCTGACTTAGCCCCTGAAGAGGCTGCCGGAACCCAGCGGCCCAAGAATCTGATGCAGACCCTCATG
GAAGACTATGAGACACACAAATCTAAAAGGCGCGAGAGAATGGATGATAGTAGTTACACTTCTAAGTTACTGTCT
TGCAAGGTGACTTCCGAGGTCCTCGAGGCCACACGGGTTAATCGAAGAAAGAGCGCACTGGCTTTGCGCTGGGAA
GCAGGGATCTATGCCAACCAGGAGGAAGAAGACAACGAA**TAA**ACTTCCTTCAACCCAGGAAGCGTCTTTGGTGCT
TGGGAGACCAAGAAACCAAGAAATTAACAACTGAAAGCATTTTAATGGACTATTTATTAAAGTGCAAACAAACTC

FIGURE 587B

AGCAATCCTTATGTAGACCAGAAGCTGCAATATACAATGATGAAAATGAAACGAAAAGGAAGTCCCCCCATCAGA
CTCTGGACACCCAGGAATCAAAAGAGAAAGGACTTTTTTGGTGACTCAATCCCAGTGTCTGGTTTGGGGCCAATC
TACAATGGATCCAAAAGGACAAAACATGTTACAAGCAAATCAACATAGTTGCTGCAGGCGGAACTGAGACCAGCC
TCTCTGGGCGATGAAGGACAATGGTGGTAGGGCCACTTAGAGAGCAGTAGGGCCCAGGCTGGTGCAGCCTACATG
GCACAGGATATTTCCCTGCACCAGTTTCCCACCTGTCACTTGCAGCATCAGAGGGTGTTGCATTAACTCCATTTT
CTCCAGCAGCCATAAAATGAATGGCGTTTCTCTCCATATTTGCCCAGAAGAGGCAGTTATGATTCCACTTCTCCT
ACATTTAATTATTTTTAATTGAGAACAACTCATGATCACAATTCATAAAATCCATATTTTAAGACAATAGTTCTT
CATGTCACAAACACAATCTATTCTACATGAGGAGGCTGAGAAAGGGGAAGAGAAAAACAAACCAAATGGATGATG
TTAGCTTTAGGATCGTGTCTGCTTATAATATTCACTGATCTGCAGTTTATGAGAACACATTTTCACAGTTATGTT
TCTTCATAGGAAAACTATATTTAGTGGGCAACAACTATTTTTATGATGGGATGGGGGAGTATATACACGTATAGA
ATCTGTACGCGTTGAACAACTTGGTTCAAGATGGTGGGGGCATTTTTAGAGCGGCAATAATTGAAAAAAAAGGCG
AACTCTGCCTTGGAGAGGTAGATGATAAGAAATAAAAAGGTGTTTATAACTATTTTGTATTATAAAGTGGGCCTT
AGAGATAGGAAGAAGAATGATGGATTCCTTTTGGATCAATCAGAAAGGAAACACGAAAGAAAAGTCAGGAAGGTA
GAGAGAGAAAAAGGGAGGGAAGGAGAAAGAATGGGAATAAAATAAGGAGGTAAGAGATACTATTTTTGCTGAGCA
ACCAGTGTGTTTCAGGATGATACAAAGAAAAATATAGAATAGAAATAAGTGCAGGCTTGGAATCAGCTACAAATC
CTAAAGATGGGGTGTGTGTGGATGTGTGTGTGTGTGTGTGTACACCATTGTGTGTTTGTAAAATGTGTATGTTCA
TGAGTAAGGGTGTGTGTGTGTGTGTATTAAAATTCCAGAGTGACCGTGGCACTTGGGTGTACAGGTAATTCCTCC
AGAGCTGTTTGCTGGCTTCAGGAGTGGAGTGAGAATTTCTTTTTTATGAAAAGGGATATAAAGGCACCGAGCTGA
TGCAGTATTTGTAATATTAAGTTGACCTAACAAGGTATTTGCATGAGTCACAATTACAAAGTTTTGAGCGGTTTT
GTAATTTGACATTTAGGAAAGTCTCCTATTTATTCTCATACTTTACATTCATGCTTAGTATACTATAGAGGATGC
CAGCTTTAATCTTTCTGTCATTTAAAGCCATATGATAAGGGTATTCAATAATTGGGTGCCCTAAATTTCTGGATG
AGAAAATTTTCAATTCTGGCCATGAGAAAGAAAAAAAAATAAACAGCCTTCTTTTTTTTTCCTTTGTTTTAAAAC
TGTGGTTTTTTAAAAAAGCAATAATTAACTCAGACCTCACTAAAAATCATTTTTGTTTTTATATTGTTATGTCAT
AAGCTCTATTATGTTATTCTAACAAGTAGCAATTTCACAAAATTTGTATGTAGATGTTAACGCACATTTCCTTTG
CTTCTTTTATTAGACTAGTGTTGACTTTGGGGGGGGACATTTATTCACAAATGAGAAGTAGGCACAAAGTAAAAA
ATGGAACCATCTACTAACAAGGATCCTTTAAAACTGCCAAGGGAGCTCTAACTTGAAGCCACATCCTACAGATGG
CAGCCCAAATAGCACATGGGCAATTGGCACCATCTTTATATGGTTGAGTCTCCTGAATATTTTGAATGAATTCTC
AACAAAATGTGCTAGCCACTGGGGACGCAAAACAAGTAAGATCCCTGTTGCAAGAAATTCATTTTATAGTGAGGG
AGGTTGGCATGGAGACTAAAATTCTCAGGAAAATGAGATCCGTGTTAGATTAGAAGTCCTGATGTGAAATGGGAG
GACTCAGGAAGGAGGATCGTCTTTACCTGAGGATTTCTAGCCAGAGGTCCCAGATGCCTGGGCTGAGAACCCAGC
GATAAGGGGGCGTTCCCAAAGCAGACACAGGGATAAGAACAGAGGAGGCAGCAGCATTGCACAGCCCCAGGCACA
GTGGCAGTTAGGATGGCTGGAGAGTAGGATAGTTCTATGGGTTGCCCAAAAAATGTGATGCGCTTCATGTTTTCT
CTGACTCATGGATCTGGTAGAGACCATAGACATGATATAGACTAACTTCCCCATTTTTCACAATGAAGGTAAACC
ATCCTTATGACTTACCTTAAAGTTTTTTGTTCTGTTTTGAAGGAAACCATGTGCTTCATGAAACCTACAGTTGAC
AAGAGAATGTACAGCTAAGAGAAAAGCTTAAGAGGCCACACTATTCGCGGAATGGCTTTAGAGGCAGATGAAGTG
GTCTTTGACCACAGTTGATTGAACCAGAGCACTTATTGCTTAAAGAATAACAGAGTTCTAGAGCTGGGGGTTCTT
GGGCCATGCTCCGTGTGTGGATAAGGAAAGAAATACTGTTTCTGGGACTCTCCCACAGTCACAAAGCTGTTTTCA
CTGTGGCCCCTACATCTCTTAACTTTTGCTATTACTCCTATGCTGCCTTCCGGATTACTGCTGTCTATCTTCTTG
CTCCACTCACTGAAGATCCTATTATAATCCCATGAAAATGTAAATTACAGTTTACTTGGGAGAGCCAGATTTTCT
CTGTGCTCTTGAGTTTTTTATTCATTCAAGAAACCTTGGGCCACCGCTTTGTACATAGCACCGTGCTAGGCTCTG
GGATCCCAAATGGACCCTTTTAACTTTCTGAAGATGGGACCGTCCCCTGGAGGAAAGTCATTCCTGCCTAATCCA
TCGAGAGAAAGAGGCTTACGAAAAACTTTGCCTCTGATGCTCAGCCCCACCCCCAAATAGCACACAAGCTTGTTA
ACCCCACCTCTTACAAAATGTTTAGATTCTGTAGGTGTTAAAAGCCTTTCTGGAAGTATTGCATTCTGCCGTGTT
TATAGGTGTTCACTTTCCTCCAGAGCTGATTAACTACTGACATGACTTGGCTTTCTCATCCAGAAATTATGGAAA
CAGGGTCTGTCAGTGGCAGGAGGCCGTGCTGTGTTTTACTTGGATGACACAATGCAGTTTACTTGCCTCTTCATA
CCCATGCATGCTGCTCACCCTAGACAATGACATATAAGCCGTATATAGATCAATGTCCACATATATATACACACA
CACATATATATATATAAAGTGTAACAAGGAACACTAAAACAGTGTTGATTCTTGTCTCTGAAGACAAATAATTAA
ACCTTTTTTTTCCCAACTAAAGAATGGATTTAATTAAACTATGTATTGAAAAAAAAGTAGCCTAAGTGTTAGAGA

FIGURE 587C

TGGTGAATATATTCCATTTTAGTTAAAGAACAAATTTCCTGAATTTTAAGCATTCAGTGAGCTGCCAATTTTGAT
TTTGTGTTGCTCTTTACCCAAATTATTTTTTCTTTGTTTTTCTTTTTTTGGGGGGAGGAGGGGAAAAAAGCAGCAA
TACTGTGTTTGGAAATTATACTCTGTATCTGGTTTTCCTGTGTATGTTAACCACTTAAATGTTATTATCCTGCTT
TGGTTTTAGAGTGATTGTGAGGCATTCAATGCAAGTATACAGTTATTTTCTCATTAAAATCCAATGTGTGTTGAG
TTTTTATAAAAAAAAAAAAAAAAAA

FIGURE 588

MAEAELHKERLQAIAEKRKRQTEIEGKRQQLDEQILLLQHSKSKVLREKWLLQGIPAGTAEEEEARRRQSEEDEF
RVKQLEDNIQRLEQEIQTLESEESQISAKEQIILEKLKETEKSFKDFQKGFSSTDGDAVNYISSQLPDLPILCSR
TAEPSPGQDGTSRAAGVGWENVLLKEGESASNATETSGPDMTIKKPPQLSEDDIWLKSEGDNYSATLLEPAASSL
SPDHKNMEIEVSVAECKSVPGITSTPHPMDHPSAFYSPPHNGLLTDHHESLDNDVAREIRYLDEVLEANCCDSAV
DGTYNGTSSPEPGAVVLVGGLSPPVHEATQPEPTERTASRQAPPHIELSNSSPDPMAEAERTNGHSPSQPRDALG
DSLQVPVSPSSTTSSRCSSRDGEFTLTTLKKEAKFELRAFHEDKKPSKLFEDDEHEKEQYCIRKVRPSEEMLELE
KERRELIRSQAVKKNPGIAAKWWNPPQEKTIEEQLDEEHLESHKKYKERKERRAQQEQLLLQKQLQQQQQQPPSQ
LCTAPASSHERASMIDKAKEDIVTEQIDFSAARKQFQLMENSRQAVAKGQSTPRLFSIKPFYRPLGSVNSDKPLT
NPRPPSVGGPPEDSGASAAKGQKSPGALETPSAAGSQGNTASQGKEGPYSEPSKRGPLSKLWAEDGEFTSARAVL
TVVKDDDHGILDQFSRSVNVSLTQEELDSGLDELSVRSQDTTVLETLSNDFSMDNISDSGASNETTNALQENSLA
DFSLPQTPQTDNPSEGRGEGVSKSFSDHGFYSPSSTLGDSPLVDDPLEYQAGLLVQNAIQQAIAEQVDKAVSKTS
RDGAEQQGPEATVEEAEAAAFGSEKPQSMFEPPQVSSPVQEKRDVLPKILPAEDRALRERGPPQPLPAVQPSGPI
NMEETRPEGSYFSKYSEAAELRSTASLLATQESDVMVGPFKLRSRKQRTLSMIEEEIRAAQEREEELKRQRQVLQ
STQSPRTKNAPSLPSRTCYKTAPGKIEKVKPPPSPTTEGPSLQPDLAPEEAAGTQRPKNLMQTLMEDYETHKSKR
RERMDDSSYTSKLLSCKVTSEVLEATRVNRRKSALALRWEAGIYANQEEEDNE

FIGURE 589

TTGCTGCATAGATTACAACGGTG**ATG**GCGGGCAAGCGGTCCGGCTGGAGCCGGGCGGCTCTCCTCCAGCTCCTTC
TCGGCGTGAACCTGGTGGTGATGCCGCCCACCCGGGCCCGGAGTCTGCGCTTCGTTACCTTGCTGTACCGCCATG
GAGACCGTTCACCAGTGAAGACATATCCCAAGGACCCCTATCAGGAAGAAGAATGGCCCCAGGGGTTTGGTCAGT
TAACCAAGGAGGGGATGCTACAGCACTGGGAACTGGGCCAGGCCCTGCGGCAGCGCTATCACGGCTTCCTAAACA
CCTCTTATCACCGGCAAGAGGTTTATGTGCGAAGCACAGACTTTGACCGGACTCTCATGAGTGCTGAGGCCAACC
TGGCTGGACTCTTCCCTCCCAACGGGATGCAGCGCTTCAACCCGAACATCTCGTGGCAGCCTATTCCTGTGCACA
CTGTGCCCATCACTGAGGACAGGCTGCTGAAGTTCCCGTTGGGCCCATGTCCCCGTTATGAGCAGCTGCAGAACG
AGACCCGGCAGACACCAGAGTATCAGAATGAGAGTTCTCGGAATGCACAATTTCTGGACATGGTGGCCAACGAGA
CAGGGCTTACAGACCTGACACTGGAGACCGTCTGGAATGTCTATGACACACTCTTCTGTGAGCAAACGCACGGGC
TGCGCCTGCCGCCCTGGGCCTCACCCCAAACCATGCAGCGTCTCAGCCGGCTAAAGGACTTCAGCTTCCGCTTCC
TCTTCGGAATCTACCAGCAGGCGGAGAAGGCCCGGCTTCAGGGGGGAGTCCTGCTGGCTCAGATAAGGAAGAACC
TGACCCTAATGGCGACCACCTCCCAGCTCCCCAAGCTGCTGGTTTACTCTGCGCACGACACTACCCTGGTTGCCC
TGCAAATGGCACTGGATGTCTACAATGGTGAACAAGCCCCCTACGCCTCCTGCCACATATTTGAACTGTACCAGG
AAGATTCTGGGAATTTCTCAGTGGAGATGTACTTTCGGAACGAGAGTGACAAGGCCCCCTGGCCGCTCAGCCTGC
CTGGCTGCCCTCACCGCTGCCCACTGCAGGACTTCCTTCGCCTCACAGAGCCCGTCGTGCCCAAGGATTGGCAGC
AGGAGTGCCAGCTGGCAAGCGGTCCTGCAGACACAGAGGTGATTGTGGCCTTGGCTGTATGTGGCTCCATCCTCT
TCCTCCTCATAGTGCTGCTCCTCACCGTCCTCTTCCGGATGCAGGCCCAGCCTCCTGGCTACCGCCACGTCGCAG
ATGGGGAGGACCACGCC**TGA**CAACCACTCAGCCCCCTTCCCTCCACCTCCTAGGGGAGGTGGGCTGGGCCCTCGC
TCCTGACTGTTGCTGCTCCCCAGCCCATGGACAGGAGATCCTGGGTTGGGCCTCCCTCTGATGACCCCAGCCAGA
TGAGCGAGTGGGGCTCAGCGTGGCCCATGGTGCCTGTCACTCAGCATTCCCATGCCTGATGTTTACCAAGTGCTG
TGTTGGACACTGGCTTTCTCCAAACAGGATTTGCCTCCTCCACGCTCCCTACACACCTGAGATGTAAACTGGCAG
TCAGTGTTCACTCAGGACCTAGGATTAGAAAATGGCAGAGTTGGTGCTGGATCCACCTTGCACTTCTATCAAGCC
CTGTTCTTTTTCCTCCAGCCTGAAGTCTTCGGCAAATAGCTCAGAGGGACACGGTCTTGCCTCTCAGTGCTTATT
TTAGTGGGAAAAACAGCTAATACCAGGGGTACAAACATTGGCTCCCAAGGAACTGGATCACCCAACAGCCAGCCA
GCCACATTTCCCTGTGTCTGGCTAGAGCCACCATTAGACTCAGACAGAATGCTTCAGGAATCGTTGTCACCCCTT
CAACTGGAGCAGGACGGAAGGTTGTCTGTACTTGGGAGGGAGTGGGGAGTGGTGGGAAGGGAGTTGCTTGTCACA
CGAATCAGGAAACTGCTCTCCCTCAGCTGGGCTGGGGTCTCCAGGGACCTGAGCTACATGCAGGTTGTGAGCTGG
AAAAGAAAGTTCTAGACTGTGGCCCAGAATAGGGCTGGGGCAGCTCCCAGAGAATGAATAGTGCTGTTTCCTATT
GGACTGATA

FIGURE 590

MAGKRSGWSRAALLQLLLGVNLVVMPPTRARSLRFVTLLYRHGDRSPVKTYPKDPYQEEEWPQGFGQLTKEGMLQ
HWELGQALRQRYHGFLNTSYHRQEVYVRSTDFDRTLMSAEANLAGLFPPNGMQRFNPNISWQPIPVHTVPITEDR
LLKFPLGPCPRYEQLQNETRQTPEYQNESSRNAQFLDMVANETGLTDLTLETVWNVYDTLFCEQTHGLRLPPWAS
PQTMQRLSRLKDFSFRFLFGIYQQAEKARLQGGVLLAQIRKNLTLMATTSQLPKLLVYSAHDTTLVALQMALDVY
NGEQAPYASCHIFELYQEDSGNFSVEMYFRNESDKAPWPLSLPGCPHRCPLQDFLRLTEPVVPKDWQQECQLASG
PADTEVIVALAVCGSILFLLIVLLLTVLFRMQAQPPGYRHVADGEDHA

FIGURE 591A

CATTCATAAGACTCAGAGCTACGGCCACGGCAGGGACACGCGGAACCAAGACTTGGAAACTTGATTGTTGTGGTT
CTTCTTGGGGGTTATGAAATTTCATTAATCTTTTTTTTTTCCGGGGAGAAAGTTTTTGGAAAGATTCTTCCAGAT
ATTTCTTCATTTTCTTTTGGAGGACCGACTTACTTTTTTTGGTCTTCTTTATTACTCCCCTCCCCCCGTGGGACC
CGCCGGACGCGTGGAGGAGACCGTAGCTGAAGCTGATTCTGTACAGCGGGACAGCGCTTTCTGCCCCTGGGGGAG
CAACCCCTCCCTCGCCCCTGGGTCCTACGGAGCCTGCACTTTCAAGAGGTACAGCGGCATCCTGTGGGGGCCTGG
GCACCGCAGGAAGACTGCACAGAAACTTTGCCATTGTTGGAACGGGACGTTGCTCCTTCCCCGAGCTTCCCCGGA
CAGCGTACTTTGAGGACTCGCTCAGCTCACCGGGGACTCCCACGGCTCACCCCGGACTTGCACCTTACTTCCCCA
ACCCGGCCATAGCCTTGGCTTCCCGGCGACCTCAGCGTGGTCACAGGGGCCCCCCTGTGCCCAGGGAA**ATG**TTTC
AGGCTTTCCCCGGAGACTACGACTCCGGCTCCCGGTGCAGCTCCTCACCCTCTGCCGAGTCTCAATATCTGTCTT
CGGTGGACTCCTTCGGCAGTCCACCCACCGCCGCGGCCTCCCAGGAGTGCGCCGGTCTCGGGGAAATGCCCGGTT
CCTTCGTGCCCACGGTCACCGCGATCACAACCAGCCAGGACCTCCAGTGGCTTGTGCAACCCACCCTCATCTCTT
CCATGGCCCAGTCCCAGGGGCAGCCACTGGCCTCCCAGCCCCCGGTCGTCGACCCCTACGACATGCCGGGAACCA
GCTACTCCACACCAGGCATGAGTGGCTACAGCAGTGGCGGAGCGAGTGGCAGTGGTGGGCCTTCCACCAGCGGAA
CTACCAGTGGGCCTGGGCCTGCCCGCCCAGCCCGAGCCCGGCCTAGGAGACCCCGAGAGGAGACGCTCACCCCAG
AGGAAGAGGAGAAGCGAAGGGTGCGCCGGGAACGAAATAAACTAGCAGCAGCTAAATGCAGGAACCGGCGGAGGG
AGCTGACCGACCGACTCCAGGCGGAGACAGATCAGTTGGAGGAAGAAAAAGCAGAGCTGGAGTCGGAGATCGCCG
AGCTCCAAAAGGAGAAGGAACGTCTGGAGTTTGTGCTGGTGGCCCACAAACCGGGCTGCAAGATCCCCTACGAAG
AGGGGCCCGGGCCGGGCCCGCTGGCGGAGGTGAGAGATTTGCCGGGCTCAGCACCGGCTAAGGAAGATGGCTTCA
GCTGGCTGCTGCCGCCCCCGCCACCACCGCCCCTGCCCTTCCAGACCAGCCAAGACGCACCCCCCAACCTGACGG
CTTCTCTCTTTACACACAGTGAAGTTCAAGTCCTCGGCGACCCCTTCCCCGTTGTTAACCCTTCGTACACTTCTT
CGTTTGTCCTCACCTGCCCGGAGGTCTCCGCGTTCGCCGGCGCCCAACGCACCAGCGGCAGTGACCAGCCTTCCG
ATCCCCTGAACTCGCCCTCCCTCCTCGCTCGG**TGA**ACTCTTTAGACACACAAAACAAACAAACACATGGGGGAGA
GAGACTTGGAAGAGGAGGAGGAGGAGGAGAAGGAGGAGAGAGAGGGGAAGAGACAAAGTGGGTGTGTGGCCTCCC
TGGCTCCTCCGTCTGACCCTCTGCGGCCACTGCGCCACTGCCATCGGACAGGAGGATTCCTTGTGTTTTGTCCTG
CCTCTTGTTTCTGTGCCCCGGCGAGGCCGGAGAGCTGGTGACTTTGGGGACAGGGGGTGGGAAGGGGATGGACAC
CCCCAGCTGACTGTTGGCTCTCTGACGTCAACCCAAGCTCTGGGGATGGGTGGGGAGGGGGGCGGGTGACGCCCA
CCTTCGGGCAGTCCTGTGTGAGGATGAAGGGACGGGGGTGGGAGGTAGGCTGTGGGGTGGGCTGGAGTCCTCTCC
AGAGAGGCTCAACAAGGAAAAATGCCACTCCCTACCCAATGTCTCCCACACCCACCCTTTTTTTGGGGTGCCCAG
GTTGGTTTCCCCTGCACTCCCGACCTTAGCTTATTGATCCCACATTTCCATGGTGTGAGATCCTCTTTACTCTGG
GCAGAAGTGAGCCCCCCCTTAAAGGGAATTCGATGCCCCCCTAGAATAATCTCATCCCCCCACCCGACTTCTTTT
GAAATGTGAACGTCCTTCCTTGACTGTCTAGCCACTCCCTCCCAGAAAAACTGGCTCTGATTGGAATTTCTGGCC
TCCTAAGGCTCCCCACCCCGAAATCAGCCCCCAGCCTTGTTTCTGATGACAGTGTTATCCCAAGACCCTGCCCCC
TGCCAGCCGACCCTCCTGGCCTTCCTCGTTGGGCCGCTCTGATTTCAGGCAGCAGGGGCTGCTGTGATGCCGTCC
TGCTGGAGTGATTTATACTGTGAAATGAGTTGGCCAGATTGTGGGGTGCAGCTGGGTGGGGCAGCACACCTCTGG
GGGGATAATGTCCCCACTCCCGAAAGCCTTTCCTCGGTCTCCCTTCCGTCCATCCCCCTTCTTCCTCCCCTCAAC
AGTGAGTTAGACTCAAGGGGGTGACAGAACCGAGAAGGGGGGTGACAGTCCTCCATCCACGTGGCCTCTCTCTCTC
TCCTCAGGACCCTCAGCCCTGGCCTTTTTCTTTAAGGTCCCCCGACCAATCCCCAGCCTAGGACGCCAACTTCTC
CCACCCCTTGGCCCCTCACATCCTCTCCAGGAAGGCAGTGAGGGGCTGTGACATTTTTCCGGAGAAGATTTCAGA
GCTGAGGCTTTGGTACCCCCAAACCCCCAATATTTTTGGACTGGCAGACTCAAGGGGCTGGAATCTCATGATTCC
ATGCCCGAGTCCGCCCATCCCTGACCATGGTTTTGGCTCTCCCACCCCGCCGTTCCCTGCGCTTCATCTCATGAG
GATTTCTTTATGAGGCAAATTTATATTTTTTAATATCGGGGGGTGGACCACGCCGCCCTCCATCCGTGCTGCATG
AAAAACATTCCACGTGCCCCTTGTCGCGCGTCTCCCATCCTGATCCCAGACCCATTCCTTAGCTATTTATCCCTT
TCCTGGTTTCCGAAAGGCAATTATATCTATTATGTATAAGTAAATATATTATATATGGATGTGTGTGTGTGCGTG
CGCGTGAGTGTGTGAGCGCTTCTGCAGCCTCGGCCTAGGTCACGTTGGCCCTCAAAGCGAGCCGTTGAATTGGAA
ACTGCTTCTAGAAACTCTGGCTCAGCCTGTCTCGGGCTGACCCTTTTCTGATCGTCTCGGCCCCTCTGATTGTTC
CCGATGGTCTCTCTCCCTCTGTCTTTTCTCCTCCGCCTGTGTCCATCTGACCGTTTTCACTTGTCTCCTTTCTGA
CTGTCCCTGCCAATGCTCCAGCTGTCGTCTGACTCTGGGTTCGTTGGGGACATGAGATTTTATTTTTTGTGAGTG
AGACTGAGGGATCGTAGATTTTTACAATCTGTATCTTTGACAATTCTGGGTGCGAGTGTGAGAGTGTGAGCAGGG

FIGURE 591B

CTTGCTCCTGCCAACCACAATTCAATGAATCCCCGACCCCCCTACCCCATGCTGTACTTGTGGTTCTCTTTTTGT
ATTTTGCATCTGACCCCGGGGGGGCTGGGACAGATTGGCAATGGGCCGTCCCCTCTCCCCTTGGTTCTGCACTGTT
GCCAATAAAAAGCTCTTAAAAACGC

FIGURE 592

MFQAFPGDYDSGSRCSSSPSAESQYLSSVDSFGSPPTAAASQECAGLGEMPGSFVPTVTAITTSQDLQWLVQPTL
ISSMAQSQGQPLASQPPVVDPYDMPGTSYSTPGMSGYSSGGASGSGGPSTSGTTSGPGPARPARARPRRPREETL
TPEEEEKRRVRRERNKLAAAKCRNRRRELTDRLQAETDQLEEEKAELESEIAELQKEKERLEFVLVAHKPGCKIP
YEEGPGPGPLAEVRDLPGSAPAKEDGFSWLLPPPPPPPLPFQTSQDAPPNLTASLFTHSEVQVLGDPFPVVNPSY
TSSFVLTCPEVSAFAGAQRTSGSDQPSDPLNSPSLLAR

FIGURE 593A

CGTGCGGCGGTGGGCTGGTCTTCCGCGGCCGGCGTTGCGCCGCGGCGGAGGGTGGGCGCGCGGGGAGCGGGATGG
AGCTGGGGCGACCCTTGCTGGAGGTACTGGCCTCAGCCCTTTCTCCCGCTTCCCCACCCCTCTTACCCCCAGATT
ACATTCTCTGTGTGGTGTCTTTACTGCAGATGAAGGATTTGGGGGCAGAGCACTTGGCAGGTCATGAAGGGGTCC
AACTTCTCGGGTTGTTGAACGTCTACCTGGAACAAGAAGAGAGATTCCAACCTCGAGAAAAAGGGCTGAGTTTGA
TTGAGGCTACCCCGGAGAATGATAACACTTTGTGTCCAGGATTGAGAAATGCCAAAGTTGAAGATTTAAGGAGTT
TAGCCAACTTTTTTGGATCTTGCACTGAAACTTTTGTCCTGGCTGTCAATATTTTGGACAGGTTCTTGGCTCTTA
TGAAGGTGAAACCTAAACATTTGTCTTGCATTGGAGTCTGTTCTTTTTTGCTGGCTGCTAGAATAGTTGAAGAAG
ACTGCAATATTCCATCCACTCATGATGTGATCCGGATTAGTCAGTGTAAATGTACTGCTTCTGACATAAAACGGA
TGGAAAAAATAATTTCAGAAAAATTGCACTATGAATTGGAAGCTACTACTGCCTTAAACTTTTTGCACTTATACC
ATACTATTATACTTTGTCATACTTCAGAAAGGAAAGAAATACTGAGCCTTGATAAACTAGAAGCTCAGCTGAAAG
CTTGCAACTGCCGACTCATCTTTTCAAAAGCAAAACCATCTGTATTAGCCTTGTGCCTTCTCAATTTGGAAGTGG
AAACTTTGAAATCTGTTGAATTACTGGAAATTCTCTTGCTAGTTAAAAAACATTCCAAGATTAATGACACTGAGT
TCTTCTACTGGAGAGAGTTGGTTTCTAAATGCCTAGCCGAGTATTCTTCTCCTGAATGTTGCAAACCAGATCTTA
AGAAGTTGGTTTGGATCGTTTCAAGGCGCACAGCCCAGAACCTCCACAACAGCTACTATAGTGTTCCTGAGCTGC
CAACGATACCTGAGGGGGGTTGTTTTGATGAAAGTGAAAGTGAGGACTCTTGTGAAGATATGAGTTGTGGAGAGG
AGAGTCTCAGCAGCTCTCCTCCCAGTGATCAAGAGTGCACCTTCTTTTTCAACTTCAAAGTGGCACAAACACTGT
GCTTTCCATCT**TAG**AAATCTGATTGTTCTGTCAGAATTTATATTTACAGGTTTCAAAGCAATAAATGGGGGAATA
GGTAGTTTCCTGGTTTAGCCCCCATCTAGTCAGGAATTAATATACTGGAATACCTACCTTCTATTTGTTATTCAG
ATCAGATCTGGCCTATTTTCATATTTATCCTAAGCCATCAAATGGGGTAGTGCCTCTTAAACCATTAACAGTACT
TTAGACATTGGCACTTTATTTTTCTCGTAGATCTTTAGCTACTTTGGGGAGGAGGGAAGGTGCTGATACCTTCAA
TTTGTTACTTTTCAAGATTTTTAAAAATAACTAGTGTAGCTTATCTTAAACATTTTATAAAACCTTCAGATGTCT
TTAAGCAGATTGGAAGTATGCAAGTGCTTCCTTAGCAGGGACAGTGGATAATCCTTAATGGTTTATCATAGATTT
CACCCTCCCCCCTTCTCAGAAGAGTGAGTATGCTCTTAAATGTCAAACACATTTTTGTTGTTTTGTTTTTTAAAT
GATCAGTGTCTATTTGATGTGATGCAGATCTTATAAATTTGGGAATTATAATATTGACATTTCTGTGATTTTTAT
ATATGTAATGTCTTAATTGAGATTTCTGTTAAGGCAGAAATAATTAGGCTAGGGCTCTTAGTTTTCATTCCTATT
GCCCAAGTATTGTCAAACTATGGTATTATTTTAATGTTACTTTAAAAATCCATAATCTGCTAGTTTTGCATGTAC
TTATATGAAAACAGTGCAGTAAGTTGAAAACTCAGTATCTATGGAATTGATAAATGTTGATCTGGTGTAGTATAT
TTTATCGCATTTTCTTATATTAAAAAATGTCTGCATGATTACATTTTATTTCCTTTGTAATTTACATTTCAGAAT
AGTGTATTGCTATATGGGTGCCAAGATTGAATATGAAGAACCCGAGTGTTTGTAGTATTATAGTTTTAAGCAAAT
CTGTGTGGTGATACAGCCATAAGAATGGGGCTTATATAAACTCTGTACATGTAAGATTTTGTACAGAGAATTTTT
AACTTTATAAATTGTATATGAACATGTAAATCTTTTAAAATGTACATAAAATACTGTATTTTTTTACCTTGTGTG
TGATAGTCTAGTCATTGCATGTAAATATAATTTATTATGTATTCTGTAGTATAAATCATACATTGATGACTTACA
TTTTTACTGGTAAGTCAACATCCGTTGGATGTTTTCTGAAGTGGCTCTTTTTGAAGTGATAATAGATTGTAATTC
AAAATAAAATTATTAATGAATTCTCCTTGTTTGGGATCACATCTTAATTTTTAATCTGTTAAAAGTTCTTGATGT
ATTTTAATGAGAAGACTTTAGGTGAGGCTACAGTGATTCCAGAGTGAGCCTTCTAACTGGCTAGCAGAAGTTCTC
TAGGTTTGGCATCTGTGCCTTGGAGATACTGAAAGAGAATCTGTCATTTGACAATTGACCTCTTTGTGGGATGGA
CTCATTAAGTATGCTCTCAGAGACTGGTATATTACCAGAATGCCTATTAATTTTCAGTGAGAGGCAACAGGTATT
AAGTAGAACAGAATGCTCAGGTTGGCAGATTAGAACGATCTTTCAGGAGACAAAGCAAGTTTTAATCAGTTGTTT
GGTTAATAAGTATGGGGTGTTCGCTGTGATAGGGCCCCGCCAGCTTCTGGCTCTTGTGGACCTCAAAAGTATCAG
GTGGTTTTGCAAGTGGTGGTCCTTTCCCCTGCCCCACCCCAATAGGTTCCCCATCTGTCTAGTTTGATTTTTGTA
GACCTTTGTTTTCTCTAGTTAGAAAATCAGGTACACTGAATATGGTTTTCATGTAACACCTCTTCTCTGGAGATA
GGGGTATGTTTTCCTACCCTTCTAGTGGAGAATCCTACTTGAGGATGACCTTTCCTCTCTTACTAAATAATATTA
GTAAATAGTGGGCAATATATTCTGCTTTCAGATTTTGATTTGTTGAGATGTAAAAGTTGTTTGGGGCTTACCAAA
TCTCAAGACTCTCTTTAGCTCCTGCAGGATTGTATTGCTTTTCTTACTGGATATTTTTCCTGGGTAAGCATCTTT
GTGGCTTCATCTCTTCCCCCTGTGGTTTTCAGTGTATTTAGTCGAGACCTCTCTGCTGAGCTTGCAACCTGTTTA
TTCACATGGCCTGCCATGCCACTTGGAGGTTTCTGATTACTCCCAAACCTGCTGGTTCTTTATGTCTTTCTCAGC
GAATAATTCCATCTGTTCATGTTGGAAACTTAGGTGATATGCTCATCTCCTTTTGCCTGTTTATGGAGGTCACCA
GCCTCTATCATTTGTATGATTTCGTTTACACTGTTTATATCTCTCTGTCCCCCCTTTTTCTGCCATTGGCATGGT

FIGURE 593B

TTAGACCTGTACTCTTTATCAGCAGAGGTACTGTAATATATTTGTGATCCCTCAGCTTCCAGGCTTACTCCTGGT
CTCTGCCTTCCTATCTACATATCCTTTTAAAATAAAATTTTAACTATCTCCTGAAAAATTGTTGAGTAGGTCACG
CACAATCAGGAGAAAAATCTATTCATGACATACAAGTCTCTGTCTAATCTGAACACTGCACCTGTCTCTGGCCTT
TTTTTCTTGTCATTTCCTAGACCTTAAAAAATGTGTATTGAGAAAGAACTCTGTTAGCTATACAGAAGATGAACT
GGGCAATATAGAGTAGCAGCATGGAGACCAGTCTGACTGAACTAAGGCAGTGGAAGTGTGGATGAGGAAGAGAGG
TGAAAATTGAGAAGCGCTATCCTTTCTCTTTGGGCATTATTAGGAGGCTCACAGACAAGTCCAGGAGTCTGGTTA
TACCCTCCTGTGCCATTCAACCAGGTGGCTTTCCCATGACTGTGATGAATAAAATTGAGAAGCCCCTGCCCTTTT
CAGAGCAGAGGGTGAGGAGAAAGCTACCATTTTGTCCTCATCCTTACCCCCGTTGACTTGGCGAGAGATTTGACC
TTTCAGGTTTTGATCCTGTCATTTTCTAGGATGTGGTGCACGCACTTTGCTGTTGCGCATGGTGAAGTATTGTGC
CTAGGTCCTGGGTCTTCATCTGTTTGGCTCTGCTACTGTTTCCTCCTCCCAGGAAGTGTGGTTAGACAAATAATG
TGTTTTAATTACCTGTCACACTCAGGATTAATACATACTCAGGTTAACTGTAGAGAGGCATTGGCTTCAGAACAC
TCCTCGTGACAATTTTAACCATTTTCTTTGTCTAGAGTCTGCCTTTTTCTTTTTTACAATTTCTTTTATTTCAAC
ACTAGGTTTCAATATGGTGTTCCTGCTACCTCCCACCTCCCTCCTCCCTCATCACACATGCAAATTGTCAGCTTA
TTGAGACAACCCACTTAGATTCATATATGGACAAGGACAAGGTATTTTGCATTTGTTACTGGAATTCAGTTTTCC
TAACTATTTACTACCAGAAATGGTCAATAACTTACTTTGTGGTTAGCAAATCAAATTGTGTGATAGATAGTTTCC
CAGTATGATGGCCAGTCAGTCTTTCCATCCCTGTGCCTACATGCTGCTCTTCCCGTCCACAAGTGGAGTCTGTTT
CTCTTGAGTTTTGGCTGGCCTTATGAATGGCTTTGCTTACTGAAGTGCAGCAGAAGAAATTTAGTATATGTCCAA
GCCTAGGCTTTAAGAGACTGGCAGCTTTCCTTTTATCCTTTTTGGAAGCTAGCCACCATGCTGCAAAGAAGCTCA
GCTGGATTACTGAAAGATGAGAGGCCATGTGGAGAGAGACTCTTGAGGATGAGAGATTATCTTGGATGTTCCAGC
CTTAAGCTCCCAGCTGAATGTGGGTGTATCCTCAGCTACACCACAGAAAACAGAGGAACTACTCAGTCGATCCCA
ATCAACCCACAGACTCACTAGAAATAACAAATTATTGTTTTAAGCCACGAGGTTTTGGGGGAGGGTTGTTAAACA
GTAATAGATAAGTGAGACAGATTGCTTGTTATTTATGGTCAAATGGTGATTATCTCTGGTGAGATTACAGGTGAT
GTTTTTTTTAAGTTATGCCTATCTGTAGTTTCCTTTTTTTCCTAAAATTGATTTGAATTATTAGTGTATTAACAG
AATAAAGAATGAACTTTAAAACACACACGCTGGTTATATGCTTCCTCTAATTAAAATTCATGGCTCTCACCAC

FIGURE 594

CGGGLVFRGRRCAAAEGGRAGSGMELGRPLLEVLASALSPASPPLLPPDYILCVVSLLQMKDLGAEHLAGHEGVQ
LLGLLNVYLEQEERFQPREKGLSLIEATPENDNTLCPGLRNAKVEDLRSLANFFGSCTETFVLAVNILDRFLALM
KVKPKHLSCIGVCSFLLAARIVEEDCNIPSTHDVIRISQCKCTASDIKRMEKIISEKLHYELEATTALNFLHLYH
TIILCHTSERKEILSLDKLEAQLKACNCRLIFSKAKPSVLALCLLNLEVETLKSVELLEILLLVKKHSKINDTEF
FYWRELVSKCLAEYSSPECCKPDLKKLVWIVSRRTAQNLHNSYYSVPELPTIPEGGCFDESESEDSCEDMSCGEE
SLSSSPPSDQECTFFFNFKVAQTLCFPS

FIGURE 595

CCGGTCGGATGCCGGACCGGGGGCACCGCTGAGGCGGTGGGTCCCCGACCTGCGAGACAGGTTTGGAAGCCCCCG
CTGCGCCCAGTCCGTGCGGACCGCGAGGCCGCGGGCGGGTGGAGGCGCGTCTCCGGCACG**ATG**AAGGATTTGGGG
GCAGAGCACTTGGCAGGTCATGAAGGGGTCCAACTTCTCGGGTTGTTGAACGTCTACCTGGAACAAGAAGAGAGA
TTCCAACCTCGAGAAAAAGGGCTGAGTTTGATTGAGGCTACCCCGGAGAATGATAACACTTTGTGTCCAGGATTG
AGAAATGCCAAAGTTGAAGATTTAAGGAGTTTAGCCAACTTTTTTGGATCTTGCACTGAAACTTTTGTCCTGGCT
GTCAATATTTTGGACAGGTTCTTGGCTCTTATGAAGGTGAAACCTAAACATTTGTCTTGCATTGGAGTCTGTTCT
TTTTTGCTGGCTGCTAGAATAGTTGAAGAAGACTGCAATATTCCATCCACTCATGATGTGATCCGGATTAGTCAG
TGTAAATGTACTGCTTCTGACATAAAACGGATGGAAAAAATAATTTCAGAAAAATTGCACTATGAATTGGAAGCT
ACTACTGCCTTAAACTTTTTGCACTTATACCATACTATTATACTTTGTCATACTTCAGAAAGGAAAGAAATACTG
AGCCTTGATAAACTAGAAGCTCAGCTGAAAGCTTGCAACTGCCGACTCATCTTTTCAAAAGCAAAACCATCTGTA
TTAGCCTTGTGCCTTCTCAATTTGGAAGTGGAAACTTTGAAATCTGTTGAATTACTGGAAATTCTCTTGCTAGTT
AAAAAACATTCCAAGATTAATGACACTGAGTTCTTCTACTGGAGAGAGTTGGTTTCTAAATGCCTAGCCGAGTAT
TCTTCTCCTGAATGTTGCAAACCAGATCTTAAGAAGTTGGTTTGGATCGTTTCAAGGCGCACAGCCCAGAACCTC
CACAACAGCTACTATAGTGTTCCTGAGCTGCCAACGATACCTGAGGGGGGTTGTTTTGATGAAAGTGAAAGTGAG
GACTCTTGTGAAGATATGAGTTGTGGAGAGGAGAGTCTCAGCAGCTCTCCTCCCAGTGATCAAGAGTGCACCTTC
TTTTTCAACTTCAAAGTGGCACAAACACTGTGCTTTCCATCT**TAG**AAATCTGATTGTTCTGTCAGAATTTATATT
TACAGGGTTTCAAAGCAATAAATGGGGGAATAGGTAGTTTCCTGGTTTAGCCCCCATCTAGTCAGGAATTAATAT
ACTGGAATACCTACCTTCTATTTGTTATTCAGATCAGATCTGGCCTATTTTCATATTTATCCTAAGCCATCAAAT
GGGGTAGTGCCTCTTAAACCATTAACAGTACTTTAGACATTGGCACTTTATTTTTCTCGTAGATCTTTAGCTACT
TTGGGGAGGAGGGAAGGTGCTGATACCTTCAATTTGTTACTTTTCAAGATTTTTAAAAATAACTAGTGTAGCTTA
TCTTAAACATTTTATAAAACCTTCAGATGTCTTTAAGCAGATTGGAAGTATGCAAGTGCTTCCTTAGCAGGGACA
GTGGATAATCCTTAATGGTTTATCATAGATTTCACCCTCCCCCCTTCTCAGAAGAGTGAGTATGCTCTTAAATGT
CAAACACATTTTTGTTGTTTTGTTTTTTAAATGATCAGTGTCTATTTGATGTGATGCAGATCTTATAAATTTGGG
AATTATAATATTGACATTTCTGTGATTTTTATATATGTAATGTCTTAATTGAGATTTGTGTTAAGGCAGAAATAA
TTAGGCTAGGGCTCTTAGTTTTCATTCCTATTGCCCCAAGTATTGTCAAACTATGGTATTATTTTAATGTTACTT
TAAAAATCCATAATCTGCTAGTTTTGCATGTACTTATATGAAAACAGTGCAGTAAGTTGAAAACTCAGTATCTAT
GGAATTGATAAATGTTGATCTGGTGTAGTATATTTTATCCGCATTTTCTTATATTAAAAAATGTTCTGCATGATT
ACATTTTATTTGCCTTTGT

FIGURE 596

MKDLGAEHLAGHEGVQLLGLLNVYLEQEERFQPREKGLSLIEATPENDNTLCPGLRNAKVEDLRSLANFFGSCTE
TFVLAVNILDRFLALMKVKPKHLSCIGVCSFLLAARIVEEDCNIPSTHDVIRISQCKCTASDIKRMEKIISEKLH
YELEATTALNFLHLYHTIILCHTSERKEILSLDKLEAQLKACNCRLIFSKAKPSVLALCLLNLEVETLKSVELLE
ILLLVKKHSKINDTEFFYWRELVSKCLAEYSSPECCKPDLKKLVWIVSRRTAQNLHNSYYSVPELPTIPEGGCFD
ESESEDSCEDMSCGEESLSSSPPSDQECTFFFNFKVAQTLCFPS

FIGURE 597A

GCGGATTGTTGCTCCGTTGTACCTGCTGGGGAATTCACCTCGTTACTGCTTGATATCTTCCACCCCTTACAAAAT
CAGAAAAGTTGTGTTTTCTAATACCAAAGAGGAGGTTTGGCTTTCTGTGGGTGATTCCCAGACACTGAAGTGCAA
AGAAGAGACCCTCCTAGAAAAGTAAAATATGACTAAAAGCAATGGAGAAGAGCCCAAGATGGGGGGCAGGATGGA
GAGATTCCAGCAGGGAGTCCGTAAACGCACACTTTTGGCCAAGAAGAAAGTGCAGAACATTACAAAGGAGGATGT
TAAAAGTTACCTGTTTCGGAATGCTTTTGTGCTGCTCACAGTCACCGCTGTCATTGTGGGTACAATCCTTGGATT
TACCCTCCGACCATACAGAATGAGCTACCGGGAAGTCAAGTACTTCTCCTTTCCTGGGGAACTTCTGATGAGGAT
GTTACAGATGCTGGTCTTACCACTTATCATCTCCAGTCTTGTCACAGGAATGGCGGCGCTAGATAGTAAGGCATC
AGGGAAGATGGGAATGCGAGCTGTAGTCTATTATATGACTACCACCATCATTGCTGTGGTGATTGGCATAATCAT
TGTCATCATCATCCATCCTGGGAAGGGCACAAAGGAAAACATGCACAGAGAAGGCAAAATTGTACGAGTGACAGC
TGCAGATGCCTTCCTGGACTTGATCAGGAACATGTTCCCTCCAAATCTGGTAGAAGCCTGCTTTAAACAGTTTAA
AACCAACTATGAGAAGAGAAGCTTTAAAGTGCCCATCCAGGCCAACGAAACGCTTGTGGGTGCTGTGATAAACAA
TGTGTCTGAGGCCATGGAGACTCTTACCCGAATCACAGAGGAGCTGGTCCCAGTTCCAGGATCTGTGAATGGAGT
CAATGCCCTGGGTCTAGTTGTCTTCTCCATGTGCTTCGGTTTTGTGATTGGAAACATGAAGGAACAGGGGCAGGC
CCTGAGAGAGTTCTTTGATTCTCTTAACGAAGCCATCATGAGACTGGTAGCAGTAATAATGTGGTATGCCCCCGT
GGGTATTCTCTTCCTGATTGCTGGGAAGATTGTGGAGATGGAAGACATGGGTGTGATTGGGGGGCAGCTTGCCAT
GTACACCGTGACTGTCATTGTTGGCTTACTCATTCACGCAGTCATCGTCTTGCCACTCCTCTACTTCTTGGTAAC
ACGGAAAAACCCTTGGGTTTTTATTGGAGGGTTGCTGCAAGCACTCATCACCGCTCTGGGGACCTCTTCAAGTTC
TGCCACCCTACCCATCACCTTCAAGTGCCTGGAAGAGAACAATGGCGTGGACAAGCGCGTCACCAGATTCGTGCT
CCCCGTAGGAGCCACCATTAACATGGATGGGACTGCCCTCTATGAGGCTTTGGCTGCCATTTTCATTGCTCAAGT
TAACAACTTTGAACTGAACTTCGGACAAATTATTACAATCAGCATCACAGCCACAGCTGCCAGTATTGGGGCAGC
TGGAATTCCTCAGGCGGGCCTGGTCACTATGGTCATTGTGCTGACATCTGTCGGCCTGCCCACTGACGACATCAC
GCTCATCATCGCGGTGGACTGGTTCCTGGATCGCCTCCGGACCACCACCAACGTACTGGGAGACTCCCTGGGAGC
TGGGATTGTGGAGCACTTGTCACGACATGAACTGAAGAACAGAGATGTTGAAATGGGTAACTCAGTGATTGAAGA
GAATGAAATGAAGAAACCATATCAACTGATTGCACAGGACAATGAAACTGAGAAACCCATCGACAGTGAAACCAA
GATGTAGACTAACATAAAGAAACACTTTCTTGAGCACCAGGTGTTAAAAACCATTATAAAATCTTTCCATCTCAT
TACAGCTCATTCGCTCCAGCAAGCCCGTCATCTTCCCTTTCCTCCCTTCTGATAAGACTGGAAAATAGTCCTCCA
AAACACAAGGGAGGATTTTGGGTGGCCAAAGTGTACAATTTTCATCCCACAATTGAAATTTTTAAATCATTTCAT
GTTAGTCTTACCGAATAAGGTACCAAGATCACAAATAGTGTTGATCAGATCTTACAAGTTTATGTGGCACACAAT
TCCTATAAATGTGATTTTTTTATATAAGTTAAAGAGACAAATAGTAGGCTAAAAACATTTTAAAATCAACTTTTG
AAATTTAAAAATCTTTCAGAATACAATTCAGTTTTAGTTTCAAAATGTTAACAACTTGAATTACAACCGGTTATC
AGTTGGACAGTAAGATTTTATCCCTTTCTCTTCTGACTGGTATACCTATTTCATTAGTAGCTAGGTGCACATATA
CATCTAGCACAGCTGTGAGGACAGACAGAAGGCAAAGTTTCCATGTGGCCTTGAGCAAGTCCCATCTCACCTCTA
GGCCTCAGTGTCCTCATCTATAAAATGAGGGACTTCCCTAGAAGTCTTCATGGTCTCTTCCAGCCCAGACATCCT
GTGATGTCATGAAAGCACCTGCCCTCTGTTTCCCCTCAGAACACCCTGTACCATCCATGGAGCACGAGGCCTTCA
GAAAAGACACTTCAATGGGAGTGAACATTTCTAACTAAGGACAGGATGGCTGTGTGTGGTGGTCACCAGGTCCTG
TGAGCAAAGTGCAGGTTATGCAAGTCGCCAGGCAGGAGGCCATTCCAGGAGTGGGATTATTCATCAAACTCTTTG
CCCAGTTCATCCCAATGGGGGAAGTATTCCCTTCTTTCCTACTCTGGGAAGAATGTCTCCTGCCACTCCTCAACT
GATGATAGACTTCGAAAACAGATGAGAAGACTAGCAGCTAGCAAGGGTGCTTGTAGTCACACTGTGGAACACTAA
AGAGCTAGGAAAGAGTTGAGCACAGGCAACATTACAAACAAAGGATTTGAAAACACCAAGAGTACAGGTCTTCTT
TAAGGAAGAATAAAAAAGAAGAGGTTCATTTTTCTGGCTTTTTTTTTCACCTGAAACACTTTTTCTCGAGTCCAA
AATCATTCCCCCCGTGAAGTCTGCTTACCAAAACATAAGACGACTTATATATTTGAAAGAAGTCAAATGAATGAG
CTCTCTAATAGAAGTCCATGAGTTGAGTGGGTATTTCTTATTTGAAAGTGTTTTTCTTTAATCAAAAGTCCTTAG
AATGAGGGAAACAAAATATTTATTTGTTTTGGAATCCCACTTATCAAATCATTCAAAACTTTCAGCTGGAGTGGG
GTTTGCTTTTGTTTTGTTTGTGTCCATAAGAGAAATGGTAGAAGATGAATCAGTATGAAGACACTGTCAATGAGG
TTATGAGAAAAAAACAGCAGGGGCATTAGTTTCAGGCAAGGCAGCTCCCAGGTTTAGAGATTAATTTTTACCCCC
TAAGGAATATCCAGTCAAAGACGCTGAGTGGGAGCTGTCAGGCAGTAGCAGCTGTGTTTGAGTTTCTGGCTGAAA
ATGGTGAAGAATGGACTTAATTATGCTAACAAACTGAAAAATCTAGACATAGATCCTCTGATATACAATTAGAGA
TATTTTTATATAGACCCCAAGCATTCTGTGCATAAAAGTTAACATTAGGCTGTGGTGCAGTAACCATTTAATGTC

FIGURE 597B

GAGGCTCTATTTCGGAAATACACTACAAATGTTAAAGTACGTGGCTGTCCTCTTAAGACACTAGTAGAGCAAAGA
CTTAATCATATCAACTTAATTCTGTTACACAATATGTGTTTTTTAATATACTAACCATTTCTTATGGAAAGGTCC
TGTGGGGAGCCCATCCTCTCGCCAAGCCATCACAGGCTCTGCATACACATGCACTCAGTGTGGACTGGGAAGCAT
TACTTTGTAGATGTATTTTCAATAAAGAAAAAAATAGTTTTACATT

FIGURE 598

MTKSNGEEPKMGGRMERFQQGVRKRTLLAKKKVQNITKEDVKSYLFRNAFVLLTVTAVIVGTILGFTLRPYRMSY
REVKYFSFPGELLMRMLQMLVLPLIISSLVTGMAALDSKASGKMGMRAVVYYMTTTIIAVVIGIIIVIIIHPGKG
TKENMHREGKIVRVTAADAFLDLIRNMFPPNLVEACFKQFKTNYEKRSFKVPIQANETLVGAVINNVSEAMETLT
RITEELVPVPGSVNGVNALGLVVFSMCFGFVIGNMKEQGQALREFFDSLNEAIMRLVAVIMWYAPVGILFLIAGK
IVEMEDMGVIGGQLAMYTVTVIVGLLIHAVIVLPLLYFLVTRKNPWVFIGGLLQALITALGTSSSSATLPITFKC
LEENNGVDKRVTRFVLPVGATINMDGTALYEALAAIFIAQVNNFELNFGQIITISITATAASIGAAGIPQAGLVT
MVIVLTSVGLPTDDITLIIAVDWFLDRLRTTTNVLGDSLGAGIVEHLSRHELKNRDVEMGNSVIEENEMKKPYQL
IAQDNETEKPIDSETKM

FIGURE 599A

CCAGGCGGCGTTGCGGCCCCGGCCCCGGCTCCCTGCGCCGCCGCCGCCGCCGCCGCCGCCGCCGCCGCCGCC
GCCAGCGCTAGCGCCAGCAGCCGGGCCCGATCACCCGCCGCCCGGTGCCCGCCGCCGCCCGCGCCAGCAACCGGG
CCCGATCACCCGCCGCCCGGTGCCCGCCGCCGCCCGCGCCACCGGC**ATG**GCGCTCCGGGGCTTCTGCAGCGCCGA
TGGCTCCGACCCGCTCTGGGACTGGAATGTCACGTGGAATACCAGCAACCCCGACTTCACCAAGTGCTTTCAGAA
CACGGTCCTCGTGTGGGTGCCTTGTTTTTACCTCTGGGCCTGTTTCCCCTTCTACTTCCTCTATCTCTCCCGACA
TGACCGAGGCTACATTCAGATGACACCTCTCAACAAAACCAAAACTGCCTTGGGATTTTTGCTGTGGATCGTCTG
CTGGGCAGACCTCTTCTACTCTTTCTGGGAAAGAAGTCGGGGCATATTCCTGGCCCCAGTGTTTCTGGTCAGCCC
AACTCTCTTGGGCATCACCACGCTGCTTGCTACCTTTTTAATTCAGCTGGAGAGGAGGAAGGGAGTTCAGTCTTC
AGGGATCATGCTCACTTTCTGGCTGGTAGCCCTAGTGTGTGCCCTAGCCATCCTGAGATCCAAAATTATGACAGC
CTTAAAAGAGGATGCCCAGGTGGACCTGTTTCGTGACATCACTTTCTACGTCTACTTTTCCCTCTTACTCATTCA
GCTCGTCTTGTCCTGTTTCTCAGATCGCTCACCCCTGTTCTCGGAAACCATCCACGACCCTAATCCCTGCCCAGA
GTCCAGCGCTTCCTTCCTGTCGAGGATCACCTTCTGGTGGATCACAGGGTTGATTGTCCGGGGCTACCGCCAGCC
CCTGGAGGGCAGTGACCTCTGGTCCTTAAACAAGGAGGACACGTCGGAACAAGTCGTGCCTGTTTTGGTAAAGAA
CTGGAAGAAGGAATGCGCCAAGACTAGGAAGCAGCCGGTGAAGGTTGTGTACTCCTCCAAGGATCCTGCCCAGCC
GAAAGAGAGTTCCAAGGTGGATGCGAATGAGGAGGTGGAGGCTTTGATCGTCAAGTCCCCACAGAAGGAGTGGAA
CCCCTCTCTGTTTAAGGTGTTATACAAGACCTTTGGGCCCTACTTCCTCATGAGCTTCTTCTTCAAGGCCATCCA
CGACCTGATGATGTTTTCCGGGCCGCAGATCTTAAAGTTGCTCATCAAGTTCGTGAATGACACGAAGGCCCCAGA
CTGGCAGGGCTACTTCTACACCGTGCTGCTGTTTGTCACTGCCTGCCTGCAGACCCTCGTGCTGCACCAGTACTT
CCACATCTGCTTCGTCAGTGGCATGAGGATCAAGACCGCTGTCATTGGGGCTGTCTATCGGAAGGCCCTGGTGAT
CACCAATTCAGCCAGAAAATCCTCCACGGTCGGGGAGATTGTCAACCTCATGTCTGTGGACGCTCAGAGGTTCAT
GGACTTGGCCACGTACATTAACATGATCTGGTCAGCCCCCCTGCAAGTCATCCTTGCTCTCTACCTCCTGTGGCT
GAATCTGGGCCCTTCCGTCCTGGCTGGAGTGGCGGTGATGGTCCTCATGGTGCCCGTCAATGCTGTGATGGCGAT
GAAGACCAAGACGTATCAGGTGGCCCACATGAAGAGCAAAGACAATCGGATCAAGCTGATGAACGAAATTCTCAA
TGGGATCAAAGTGCTAAAGCTTTATGCCTGGGAGCTGGCATTCAAGGACAAGGTGCTGGCCATCAGGCAGGAGGA
GCTGAAGGTGCTGAAGAAGTCTGCCTACCTGTCAGCCGTGGGCACCTTCACCTGGGTCTGCACGCCCTTTCTGGC
GAGTGTCTCCCTCAAACGCCTGAGGATCTTTCTCTCCCATGAGGAGCTGGAACCTGACAGCATCGAGCGACGGCC
TGTCAAAGACGGCGGGGGCACGAACAGCATCACCGTGAGGAATGCCACATTCACCTGGGCCAGGAGCGACCCTCC
CACACTGAATGGCATCACCTTCTCCATCCCCGAAGGTGCTTTGGTGGCCGTGGTGGGCCAGGTGGGCTGCGGAAA
GTCGTCCCTGCTCTCAGCCCTCTTGGCTGAGATGGACAAAGTGGAGGGGCACGTGGCTATCAAGGGCTCCGTGGC
CTATGTGCCACAGCAGGCCTGGATTCAGAATGATTCTCTCCGAGAAAACATCCTTTTTGGATGTCAGCTGGAGGA
ACCATATTACAGGTCCGTGATACAGGCCTGTGCCCTCCTCCCAGACCTGGAAATCCTGCCCAGTGGGGATCGGAC
AGAGATTGGCGAGAAGGGCGTGAACCTGTCTGGGGGCCAGAAGCAGCGCGTGAGCCTGGCCCGGGCCGTGTACTC
CAACGCTGACATTTACCTCTTCGATGATCCCCTCTCAGCAGTGGATGCCCATGTGGGAAAACACATCTTTGAAAA
TGTGATTGGCCCCAAGGGGATGCTGAAGAACAAGACGCGGATCTTGGTCACGCACAGCATGAGCTACTTGCCGCA
GGTGGACGTCATCATCGTCATGAGTGGCGGCAAGATCTCTGAGATGGGCTCCTACCAGGAGCTGCTGGCTCGAGA
CGGCGCCTTCGCTGAGTTCCTGCGTACCTATGCCAGCACAGAGCAGGAGCAGGATGCAGAGGAGAACGGGGTCAC
GGGCGTCAGCGGTCCAGGGAAGGAAGCAAAGCAAATGGAGAATGGCATGCTGGTGACGGACAGTGCAGGGAAGCA
ACTGCAGAGACAGCTCAGCAGCTCCTCCTCCTATAGTGGGGACATCAGCAGGCACCACAACAGCACCGCAGAACT
GCAGAAAGCTGAGGCCAAGAAGGAGGAGACCTGGAAGCTGATGGAGGCTGACAAGGCGCAGACAGGGCAGGTCAA
GCTTTCCGTGTACTGGGACTACATGAAGGCCATCGGACTCTTCATCTCCTTCCTCAGCATCTTCCTTTTCATGTG
TAACCATGTGTCCGCGCTGGCTTCCAACTATTGGCTCAGCCTCTGGACTGATGACCCCATCGTCAACGGGACTCA
GGAGCACACGAAAGTCCGGCTGAGCGTCTATGGAGCCCTGGGCATTTCACAAGGGATCGCCGTGTTTGGCTACTC
CATGGCCGTGTCCATCGGGGGGATCTTGGCTTCCCGCTGTCTGCACGTGGACCTGCTGCACAGCATCCTGCGGTC
ACCCATGAGCTTCTTTGAGCGGACCCCCAGTGGGAACCTGGTGAACCGCTTCTCCAAGGAGCTGGACACAGTGGA
CTCCATGATCCCGGAGGTCATCAAGATGTTCATGGGCTCCCTGTTCAACGTCATTGGTGCCTGCATCGTTATCCT
GCTGGCCACGCCCATCGCCGCCATCATCATCCCGCCCCTTGGCCTCATCTACTTCTTCGTCCAGAGGTTCTACGT
GGCTTCCTCCCGGCAGCTGAAGCGCCTCGAGTCGGTCAGCCGCTCCCCGGTCTATTCCCATTTCAACGAGACCTT
GCTGGGGGTCAGCGTCATTCGAGCCTTCGAGGAGCAGGAGCGCTTCATCCACCAGAGTGACCTGAAGGTGGACGA

FIGURE 599B

GAACCAGAAGGCCTATTACCCCAGCATCGTGGCCAACAGGTGGCTGGCCGTGCGGCTGGAGTGTGTGGGCAACTG
CATCGTTCTGTTTGCTGCCCTGTTTGCGGTGATCTCCAGGCACAGCCTCAGTGCTGGCTTGGTGGGCCTCTCAGT
GTCTTACTCATTGCAGGTCACCACGTACTTGAACTGGCTGGTTCGGATGTCATCTGAAATGGAAACCAACATCGT
GGCCGTGGAGAGGCTCAAGGAGTATTCAGAGACTGAGAAGGAGGCGCCCTGGCAAATCCAGGAGACAGCTCCGCC
CAGCAGCTGGCCCCAGGTGGGCCGAGTGGAATTCCGGAACTACTGCCTGCGCTACCGAGAGGACCTGGACTTCGT
TCTCAGGCACATCAATGTCACGATCAATGGGGGAGAAAAGGTCGGCATCGTGGGGCGGACGGGAGCTGGGAAGTC
GTCCCTGACCCTGGGCTTATTTCGGATCAACGAGTCTGCCGAAGGAGAGATCATCATCGATGGCATCAACATCGC
CAAGATCGGCCTGCACGACCTCCGCTTCAAGATCACCATCATCCCCCAGGACCCTGTTTTGTTTTCGGGTTCCCT
CCGAATGAACCTGGACCCATTCAGCCAGTACTCGGATGAAGAAGTCTGGACGTCCCTGGAGCTGGCCCACCTGAA
GGACTTCGTGTCAGCCCTTCCTGACAAGCTAGACCATGAATGTGCAGAAGGCGGGGAGAACCTCAGTGTCGGGCA
GCGCCAGCTTGTGTGCCTAGCCCGGGCCCTGCTGAGGAAGACGAAGATCCTTGTGTTGGATGAGGCCACGGCAGC
CGTGGACCTGGAAACGGACGACCTCATCCAGTCCACCATCCGGACACAGTTCGAGGACTGCACCGTCCTCACCAT
CGCCCACCGGCTCAACACCATCATGGACTACACAAGGGTGATCGTCTTGGACAAAGGAGAAATCCAGGAGTACGG
CGCCCCATCGGACCTCCTGCAGCAGAGAGGTCTTTTCTACAGCATGGCCAAAGACGCCGGCTTGGTG**TGA**GCCCC
AGAGCTGGCATATCTGGTCAGAACTGCAGGGCCTATATGCCAGCGCCCAGGGAGGAGTCAGTACCCCTGGTAAAC
CAAGCCTCCCACACTGAAACCAAAACATAAAAACCAAACCCAGACAACCAAAACATATTCAAAGCAGCAGCCACC
GCCATCCGGTCCCCTGCCTGGAACTGGCTGTGAAGACCCAGGAGAGACAGAGATGCGAACCACCCAAAACACGCA
CACCCTGCCCCTGGTGCCCTGAGACAGACACACAGCCTCACGCCCCCAGGAATGCAAGTGGTTTCCTGGTGCTTC
CCACGGAGGAGTTTTGGCAGCCAGACTTCTGGAGGAATTGGTTGTATAGAAGATCCTAGTGACCAAATTCAGCCT
ACTGCCTCGGATCTCTCCAGCCGAAGTCTGTGGACTGCAAGTCTTTGAGATGCTTCTGGCTCCCATCACCTCTAA
CATCCTTGTCTGGGTCTACCAGGAACGCTTCATTTCCTTGGGGCTGCAGTTTTGTGGTTGAGGGGCCTGGAGAAA
ATCATTTTCTCCCCTTGGCAGTGTCCCAGGGCCCTGGATGGTCCTCTTACCAACATCTGGTCTTCCAGGCACTCA
AAAGCTGGGAACCAGCATCTCAGCGCCAGCTCTACCAGTTCTCGTTTTGGGCCAGAGGCAGCCTCTGCACTCCCA
CGCCTGTCCTCCTGGAAGGGACCTGGTTGGACTAACGGCTAACCTGGACCTGGAACTGTAGGGCCAGGGGATTGT
CTCAGGGCCGACGTTCCACCTGGGGCTTCCCTCCCCACCCACCCCGACTCCAGGCTTTCCCTTTTTTCTTTTGTT
CAACATTGTAAGAACAATCAATGCTGTTATTACTGATCCCACCATGATTGATGTGGGGTAAATATTAAGGAGATG
GCCTCATGGGAATTTGACCTTGACTAGAAATAGAGACTGAGAGTGAGCAACCAGCTGGAAGGTACTATGCCAGTC
CTAGCAGAAAAATGTGTTAGGGGCCTGGCCCAAAGCAGTGTTGGTTGCTTACAGTGTTGATTGATTTTGTTCTTT
TTTCTTACCACCTCTTTTCTTTCCCTCTCATGGTACCTGCTCATGGTTATGAAGCTTTCAAAGTAAAGAACACGA
AATAC

FIGURE 600

MALRGFCSADGSDPLWDWNVTWNTSNPDFTKCFQNTVLVWVPCFYLWACFPFYFLYLSRHDRGYIQMTPLNKTKT
ALGFLLWIVCWADLFYSFWERSRGIFLAPVFLVSPTLLGITTLLATFLIQLERRKGVQSSGIMLTFWLVALVCAL
AILRSKIMTALKEDAQVDLFRDITFYVYFSLLLIQLVLSCFSDRSPLFSETIHDPNPCPESSASFLSRITFWWIT
GLIVRGYRQPLEGSDLWSLNKEDTSEQVVPVLVKNWKKECAKTRKQPVKVVYSSKDPAQPKESSKVDANEEVEAL
IVKSPQKEWNPSLFKVLYKTFGPYFLMSFFFKAIHDLMMFSGPQILKLLIKFVNDTKAPDWQGYFYTVLLFVTAC
LQTLVLHQYFHICFVSGMRIKTAVIGAVYRKALVITNSARKSSTVGEIVNLMSVDAQRFMDLATYINMIWSAPLQ
VILALYLLWLNLGPSVLAGVAVMVLMVPVNAVMAMKTKTYQVAHMKSKDNRIKLMNEILNGIKVLKLYAWELAFK
DKVLAIRQEELKVLKKSAYLSAVGTFTWVCTPFLASVSLKRLRIFLSHEELEPDSIERRPVKDGGGTNSITVRNA
TFTWARSDPPTLNGITFSIPEGALVAVVGQVGCGKSSLLSALLAEMDKVEGHVAIKGSVAYVPQQAWIQNDSLRE
NILFGCQLEEPYYRSVIQACALLPDLEILPSGDRTEIGEKGVNLSGGQKQRVSLARAVYSNADIYLFDDPLSAVD
AHVGKHIFENVIGPKGMLKNKTRILVTHSMSYLPQVDVIIVMSGGKISEMGSYQELLARDGAFAEFLRTYASTEQ
EQDAEENGVTGVSGPGKEAKQMENGMLVTDSAGKQLQRQLSSSSSYSGDISRHHNSTAELQKAEAKKEETWKLME
ADKAQTGQVKLSVYWDYMKAIGLFISFLSIFLFMCNHVSALASNYWLSLWTDDPIVNGTQEHTKVRLSVYGALGI
SQGIAVFGYSMAVSIGGILASRCLHVDLLHSILRSPMSFFERTPSGNLVNRFSKELDTVDSMIPEVIKMFMGSLF
NVIGACIVILLATPIAAIIIPPLGLIYFFVQRFYVASSRQLKRLESVSRSPVYSHFNETLLGVSVIRAFEEQERF
IHQSDLKVDENQKAYYPSIVANRWLAVRLECVGNCIVLFAALFAVISRHSLSAGLVGLSVSYSLQVTTYLNWLVR
MSSEMETNIVAVERLKEYSETEKEAPWQIQETAPPSSWPQVGRVEFRNYCLRYREDLDFVLRHINVTINGGEKVG
IVGRTGAGKSSLTLGLFRINESAEGEIIIDGINIAKIGLHDLRFKITIIPQDPVLFSGSLRMNLDPFSQYSDEEV
WTSLELAHLKDFVSALPDKLDHECAEGGENLSVGQRQLVCLARALLRKTKILVLDEATAAVDLETDDLIQSTIRT
QFEDCTVLTIAHRLNTIMDYTRVIVLDKGEIQEYGAPSDLLQQRGLFYSMAKDAGLV

FIGURE 601

CGGGGACCCGGCTGCGGTGGCTGCGGGACTGACGAGAAACTACTAAAGTTCCTGGGGAAGCAAAGTAGAATTTCA
TAAGAACAAA**ATG**GATGGAGAGGAGAAAACCTATGGTGGCTGTGAAGGACCTGATGCCATGTATGTCAAATTGAT
ATCATCTGATGGCCATGAATTTATTGTAAAAAGAGAACATGCATTAACATCAGGCACGATAAAAGCCATGTTGAG
TGGCCCAGGTCAGTTTGCTGAGAACGAAACCAATGAGGTCAATTTTAGAGAGATACCTTCACATGTGCTATCGAA
AGTATGCATGTATTTTACGTACAAGGTTCGCTACACTAACAGCTCCACCGAGATTCCTGAATTCCCAATTGCACC
TGAAATTGCACTGGAACTGCTGATGGCTGCGAACTTCTTAGATTGT**TAA**ATAAAATAAATTATAATAAACTGTTA
ACTCTTTTCAGTATTTAATACCTGTAGTTCAGTTAGTAACTTTTTCATATATAGCATGTTGCCTGTATGCAGTTG
AACTATATAAAGTTCATTGCAAAGCAGATTATCTTGTTTTTTTGCATAGCAATCAAAGTTGAAATTTGTTTGCTA
CATCAACAAATTAAGGACATTTTCACAAACTGAGAAATAAACAAATATGCCAATTAAAAAAAAAAAAA

FIGURE 602

MDGEEKTYGGCEGPDAMYVKLISSDGHEFIVKREHALTSGTIKAMLSGPGQFAENETNEVNFREIPSHVLSKVCM
YFTYKVRYTNSSTEIPEFPIAPEIALELLMAANFLDC

FIGURE 603

CAGACCCCAGTTCGCCGACTAAGCAGAAGAAAGATCAAAAACCGGAAAAGAGGAGAAGAGCAAACAGGCACTTTG
AGGAACAATCCCCTTTAACTCCAAGCCGACAGCGGTCTAGGAATTCAAGTTCAGTGCCTACCGAAGACAAAGGCG
CCCCGAGGGAGTGGCGGTGCGACCCCAGGGCGTGGGCCCGGCCGCGGAGCCCACACTGCCCGGCTGACCCGGTGG
TCTCGGACC**ATG**TCTCCCGCCCCAAGACCCCCCCGTTGTCTCCTGCTCCCCCTGCTCACGCTCGGCACCGCGCTC
GCCTCCCTCGGCTCGGCCCAAAGCAGCAGCTTCAGCCCCGAAGCCTGGCTACAGCAATATGGCTACCTGCCTCCC
GGGGACCTACGTACCCACACACAGCGCTCACCCCAGTCACTCTCAGCGGCCATCGCTGCCATGCAGAAGTTTTAC
GGCTTGCAAGTAACAGGCAAAGCTGATGCAGACACCATGAAGGCCATGAGGCGCCCCCGATGTGGTGTTCCAGAC
AAGTTTGGGGCTGAGATCAAGGCCAATGTTCGAAGGAAGCGCTACGCCATCCAGGGTCTCAAATGGCAACATAAT
GAAATCACTTTCTGCATCCAGAATTACACCCCCAAGGTGGGCGAGTATGCCACATACGAGGCCATTCGCAAGGCG
TTCCGCGTGTGGGAGAGTGCCACACCACTGCGCTTCCGCGAGGTGCCCTATGCCTACATCCGTGAGGGCCATGAG
AAGCAGGCCGACATCATGATCTTCTTTGCCGAGGGCTTCCATGGCGACAGCACGCCCTTCGATGGTGAGGGCGGC
TTCCTGGCCCATGCCTACTTCCCAGGCCCCAACATTGGAGGAGACACCCACTTTGACTCTGCCGAGCCTTGGACT
GTCAGGAATGAGGATCTGAATGGAAATGACATCTTCCTGGTGGCTGTGCACGAGCTGGGCCATGCCCTGGGGCTC
GAGCATTCCAGTGACCCCTCGGCCATCATGGCACCCTTTTACCAGTGGATGGACACGGAGAATTTTGTGCTGCCC
GATGATGACCGCCGGGGCATCCAGCAACTTTATGGGGGTGAGTCAGGGTTCCCCACCAAGATGCCCCCTCAACCC
AGGACTACCTCCCGGCCTTCTGTTCCTGATAAACCCAAAAACCCCACCTATGGGCCCAACATCTGTGACGGGAAC
TTTGACACCGTGGCCATGCTCCGAGGGGAGATGTTTGTCTTCAAGGAGCGCTGGTTCTGGCGGGTGAGGAATAAC
CAAGTGATGGATGGATACCCAATGCCCATTGGCCAGTTCTGGCGGGGCCTGCCTGCGTCCATCAACACTGCCTAC
GAGAGGAAGGATGGCAAATTCGTCTTCTTCAAAGGAGACAAGCATTGGGTGTTTGATGAGGCGTCCCTGGAACCT
GGCTACCCCAAGCACATTAAGGAGCTGGGCCGAGGGCTGCCTACCGACAAGATTGATGCTGCTCTCTTCTGGATG
CCCAATGGAAAGACCTACTTCTTCCGTGGAAACAAGTACTACCGTTTCAACGAAGAGCTCAGGGCAGTGGATAGC
GAGTACCCCAAGAACATCAAAGTCTGGGAAGGGATCCCTGAGTCTCCCAGAGGGTCATTCATGGGCAGCGATGAA
GTCTTCACTTACTTCTACAAGGGGAACAAATACTGGAAATTCAACAACCAGAAGCTGAAGGTAGAACCGGGCTAC
CCCAAGTCAGCCCTGAGGGACTGGATGGGCTGCCCATCGGGAGGCCGGCCGGATGAGGGGACTGAGGAGGAGACG
GAGGTGATCATCATTGAGGTGGACGAGGAGGGCGGCGGGGCGGTGAGCGCGGCTGCCGTGGTGCTGCCCGTGCTG
CTGCTGCTCCTGGTGCTGGCGGTGGGCCTTGCAGTCTTCTTCTTCAGACGCCATGGGACCCCCAGGCGACTGCTC
TACTGCCAGCGTTCCCTGCTGGACAAGGTC**TGA**CGCCCACCGCCGGCCCGCCCACTCCTACCACAAGGACTTTGC
CTCTGAAGGCCAGTGGCAGCAGGTGGTGGTGGGTGGGCTGCTCCCATCGTCCCGAGCCCCCTCCCCGCAGCCTCC
TTGCTTCTCTCTGTCCCCTGGCTGGCCTCCTTCACCCTGACCGCCTCCCTCCCTCCTGCCCCGGCATTGCATCTT
CCCTAGATAGGTCCCCTGAGGGCTGAGTGGGAGGGCGGCCCTTTCCAGCCTCTGCCCCTCAGGGGAACCCTGTAG
CTTTGTGTCTGTCCAGCCCCATCTGAATGTGTTGGGGGCTCTGCACTTGAAGGCAGGACCCTCAGACCTCGCTGG
TAAAGGTCAAATGGGGTCATCTGCTCCTTTTCCATCCCCTGACATACCTTAACCTCTGAACTCTGACCTCAGGAG
GCTCTGGGCACTCCAGCCCTGAAAGCCCCAGGTGTACCCAATTGGCAGCCTCTCACTACTCTTTCTGGCTAAAAG
GAATCTAATCTTGTTGAGGGTAGAGACCCTGAGACAGTGTGAGGGGGTGGGGACTGCCAAGCCACCCTAAGACCT
TGGGAGGAAAACTCAGAGAGGGTCTTCGTTGCTCAGTCAGTCAAGTTCCTCGGAGATCTGCCTCTGCCTCACCTA
CCCCAGGGAACTTCCAAGGAAGGAGCCTGAGCCACTGGGGACTAAGTGGGCAGAAGAAACCCTTGGCAGCCCTGT
GCCTCTCGAATGTTAGCCTTGGATGGGGCTTTCACAGTTAGAAGAGCTGAAACCAGGGGTGCAGCTGTCAGGTAG
GGTGGGGCCGGTGGGAGAGGCCCGGGTCAGAGCCCTGGGGGTGAGCCTGAAGGCCACAGAGAAAGAACCTTGCCC
AAACTCAGGCAGCTGGGGCTGAGGCCCAAAGGCAGAACAGCCAGAGGGGGCAGGAGGGGACCAAAAAGGAAAATG
AGGACGTGCAGCAGCATTGGAAGGCTGGGGCCGGGCAGGCCAGGCCAAGCCAAGCAGGGGGCCACAGGGTGGGCT
GTGGAGCTCTCAGGAAGGGCCCTGAGGAAGGCACACTTGCTCCTGTTGGTCCCTGTCCTTGCTGCCCAGGCAGCG
TGGAGGGGAAGGGTAGGGCAGCCAGAGAAAGGAGCAGAGAAGGCACACAAACGAGGAATGAGGGGCTTCACGAGA
GGCCACAGGGCCTGGCTGGCCACGCTGTCCCGGCCTGCTCACCATCTCAGTGAGGGGCAGGAGCTGGGGCTCGCT
TAGGCTGGGTCCACGCTTCCCTGGTGCCAGCACCCCTCAAGCCTGTCTCACCAGTGGCCTGCCCTCTCGCTCCCC
CACCCAGCCCACCCATTGAAGTCTCCTTGGGCCACCAAAGGTGGTGGCCATGGTACCGGGGACTTGGGAGAGTGA
GACCCAGTGGAGGGAGCAAGAGGAGAGGGATGTCGGGGGGGTGGGGCACGGGGTAGGGGAAATGGGGTGAACGGT
GCTGGCAGTTCGGCTAGATTTCTGTCTTGTTTGTTTTTTTGTTTTGTTTAATGTATATTTTTATTATAATTATTA
TATATGAATTCCAAAAAAAAAAAAAAAAAAAA

FIGURE 604

MSPAPRPPRCLLLPLLTLGTALASLGSAQSSSFSPEAWLQQYGYLPPGDLRTHTQRSPQSLSAAIAAMQKFYGLQ
VTGKADADTMKAMRRPRCGVPDKFGAEIKANVRRKRYAIQGLKWQHNEITFCIQNYTPKVGEYATYEAIRKAFRV
WESATPLRFREVPYAYIREGHEKQADIMIFFAEGFHGDSTPFDGEGGFLAHAYFPGPNIGGDTHFDSAEPWTVRN
EDLNGNDIFLVAVHELGHALGLEHSSDPSAIMAPFYQWMDTENFVLPDDDRRGIQQLYGGESGFPTKMPPQPRTT
SRPSVPDKPKNPTYGPNICDGNFDTVAMLRGEMFVFKERWFWRVRNNQVMDGYPMPIGQFWRGLPASINTAYERK
DGKFVFFKGDKHWVFDEASLEPGYPKHIKELGRGLPTDKIDAALFWMPNGKTYFFRGNKYYRFNEELRAVDSEYP
KNIKVWEGIPESPRGSFMGSDEVFTYFYKGNKYWKFNNQKLKVEPGYPKSALRDWMGCPSGGRPDEGTEEETEVI
IIEVDEEGGGAVSAAAVVLPVLLLLLVLAVGLAVFFFRRHGTPRRLLYCQRSLLDKV

FIGURE 605

GAATTCCGGGCTCCGGGG**ATG**AGGTCGCGGCCGGCGGGTCCCGCGCTGTTGCTGCTGCTGCTCTTCCTCGGAGCG
GCCGAGTCGGTGCGTCGGGCCCAGCCTCCGCGCCGCTACACCCCAGACTGGCCGAGCCTGGATTCTCGGCCGCTG
CCGGCCTGGTTCGACGAAGCCAAGTTCGGGGTGTTCATCCACTGGGGCGTGTTCTCGGTGCCCGCCTGGGGCAGC
GAGTGGTTCTGGTGGCACTGGCAGGGCGAGGGGCGGCCGCAGTACCAGCGCTTCATGCGCGACAACTACCCGCCC
GGCTTCAGCTACGCCGACTTCGGACCGCAGTTCACTGCGCGCTTCTTCCACCCGGAGGAGTGGGCCGACCTCTTC
CAGGCCGCGGGCGCCAAGTATGTAGTTTTGACGACAAAGCATCACGAAGGCTTCACAAACTGGCCGAGTCCTGTG
TCTTGGAACTGGAACTCCAAAGACGTGGGGCCTCATCGGGATTTGGTTGGTGAATTGGGAACAGCTCTCCGGAAG
AGGAACATCCGCTATGGACTATACCACTCACTCTTAGAGTGGTTCCATCCACTCTATCTACTTGATAAGAAAAAT
GGCTTCAAAACACAGCATTTTGTCAGTGCAAAAACAATGCCAGAGCTGTACGACCTTGTTAACAGCTATAAACCT
GATCTGATCTGGTCTGATGGGGAGTGGGAATGTCCTGATACTTACTGGAACTCCACAAATTTTCTTTCATGGCTC
TACAATGACAGCCCTGTCAAGGATGAGGTGGTAGTAAATGACCGATGGGGTCAGAACTCTTCCTGTCACCATGGA
GGATACTATAACTGTGAAGATAAATTCAAGCCACAGAGCTTGCCAGATCACAAGTGGGAGATGTGCACCAGCATT
GACAAGTTTTCCTGGGGCTATCGTCGTGACATGGCATTGTCTGATGTTACAGAAGAATCTGAAATCATTTCGGAA
CTGGTTCAGACAGTAAGTTTGGGAGGCAACTATCTTCTGAACATTGGACCAACTAAAGATGGACTGATTGTTCCC
ATCTTCCAAGAAAGGCTTCTTGCTGTTGGGAAATGGCTGAGCATCAATGGGGAGGCTATCTATGCCTCCAAACCA
TGGCGGGTGCAATGGGAAAAGAACACAACATCTGTATGGTATACCTCAAAGGGATCGGCTGTTTATGCCATTTTT
CTGCACTGGCCAGAAAATGGAGTCTTAAACCTTGAATCCCCCATAACTACCTCAACTACAAAGATAACAATGCTG
GGAATTCAAGGAGATCTGAAGTGGTCCACAGATCCAGATAAAGGTCTCTTCATCTCTCTACCCCAGTTGCCACCC
TCTGCTGTCCCCGCAGAGTTTGCTTGGACTATAAAGCTGACAGGAGTGAAG**TAA**TCATTTGAGTGCAAGAAGAAA
GAGGCGCTGCTCACTGTTTTCCTGCTTCAGTTTTTCTCTTATAGTACCATCACTATAATCAACGAACTTCTCTTC
TCCACCCAGAGATGGCTTTTCCAACACATTTTAATTAAAGGAACTGAGTACATTACCCTGATGTCTAAATGGACC
AAAGATCTGAGATCCATTGTGATTATATCTGTATCAGGTCAGCAGAAGAAGGAACTGAGCAGTTGAACTCTGAGT
TCATCAATTCTAATATTTGGAAATTATCTACAATGGAATCTTCCCTCTGTTCTCTGATAACCTACTTGCTTACTC
AATGCCTTTAAGCCAAGTCACCCTGTTGCCTATGGGAGGAGGTGGAAGGATTTGGCAAGCTCAACCACATGCTAT
TTAGTTAGCATCAGTTGTCACCAACAGTCTTTCTGCAAAGGGCAGGAGAGCTTTGGGGGAAAGGAAAAGGCTTAC
CAGGCTGCTATGGTCAACTCTTCAGAAATTTTCAGAGCAATCTAAAAGCGCCAAAATTCGCTATGTTTACAGTGA
TACTATTAAGAAAATGAATGTGATTCTGCTCTGTCTTTTTAAGTATGATCAAATAAA

FIGURE 606

MRSRPAGPALLLLLLFLGAAESVRRAQPPRRYTPDWPSLDSRPLPAWFDEAKFGVFIHWGVFSVPAWGSEWFWWH
WQGEGRPQYQRFMRDNYPPGFSYADFGPQFTARFFHPEEWADLFQAAGAKYVVLTTKHHEGFTNWPSPVSWNWNS
KDVGPHRDLVGELGTALRKRNIRYGLYHSLLEWFHPLYLLDKKNGFKTQHFVSAKTMPELYDLVNSYKPDLIWSD
GEWECPDTYWNSTNFLSWLYNDSPVKDEVVVNDRWGQNSSCHHGGYYNCEDKFKPQSLPDHKWEMCTSIDKFSWG
YRRDMALSDVTEESEIISELVQTVSLGGNYLLNIGPTKDGLIVPIFQERLLAVGKWLSINGEAIYASKPWRVQWE
KNTTSVWYTSKGSAVYAIFLHWPENGVLNLESPITTSTTKITMLGIQGDLKWSTDPDKGLFISLPQLPPSAVPAE
FAWTIKLTGVK

FIGURE 607

CCCGCCTTCCATACCTCCCCGGCTCCGCTCGGTTCCTGGCCACCCCGCAGCCCCTGCCCAGGTGCC**ATG**GCCGCA
TTGTACCGCCCTGGCCTGCGGCTTAACTGGCATGGGCTGAGCCCCTTGGGCTGGCCATCATGCCGTAGCATCCAG
ACCCTGCGAGTGCTTAGTGGAGATCTGGGCCAGCTTCCCACTGGCATTCGAGATTTTGTAGAGCACAGTGCCCGC
CTGTGCCAACCAGAGGGCATCCACATCTGTGATGGAACTGAGGCTGAGAATACTGCCACACTGACCCTGCTGGAG
CAGCAGGGCCTCATCCGAAAGCTCCCCAAGTACAATAACTGCTGGCTGGCCCGCACAGACCCCAAGGATGTGGCA
CGAGTAGAGAGCAAGACGGTGATTGTAACTCCTTCTCAGCGGGACACGGTACCACTCCCGCCTGGTGGGGCCTGT
GGGCAGCTGGGCAACTGGATGTCCCCAGCTGATTTCCAGCGAGCTGTGGATGAGAGGTTTCCAGGCTGCATGCAG
GGCCGCACCATGTATGTGCTTCCATTCAGCATGGGTCCTGTGGGCTCCCCGCTGTCCCGCATCGGGGTGCAGCTC
ACTGACTCAGCCTATGTGGTGGCAAGCATGCGTATTATGACCCGACTGGGGACACCTGTGCTTCAGGCCCTGGGA
GATGGTGACTTTGTCAAGTGTCTGCACTCCGTGGGCCAGCCCCTGACAGGACAAGGGGAGCCAGTGAGCCAGTGG
CCGTGCAACCCAGAGAAAACCCTGATTGGCCACGTGCCCGACCAGCGGGAGATCATCTCCTTCGGCAGCGGCTAT
GGTGGCAACTCCCTGCTGGGCAAGAAGTGCTTTGCCCTACGCATCGCCTCTCGGCTGGCCCGGGATGAGGGCTGG
CTGGCAGAGCACATGCTGATCCTGGGCATCACCAGCCCTGCAGGGAAGAAGGCGCTATGTGCAGCCGCCTTCCCT
AGTGCCTGTGGCAAGACCAACCTGGCTATGATGCGGCCTGCACTGCCAGGCTGGAAAGTGGAGTGTGTGGGGGAT
GATATTGCTTGGATGAGGTTTGACAGTGAAGGTCGACTCCGGGCCATCAACCCTGAGAACGGCTTCTTTGGGGTT
GCCCCTGGTACCTCTGCCACCACCAATCCCAACGCCATGGCTACAATCCAGAGTAACACTATTTTTACCAATGTG
GCTGAGACCAGTGATGGTGGCGTGTACTGGGAGGGCATTGACCAGCCTCTTCCACCTGGTGTTACTGTGACCTCC
TGGCTGGGCAAACCCTGGAAACCTGGTGACAAGGAGCCCTGTGCACATCCCAACTCTCGATTTTGTGCCCCGGCT
CGCCAGTGCCCCATCATGGACCCAGCCTGGGAGGCCCCAGAGGGTGTCCCCATTGACGCCATCATCTTTGGTGGC
CGCAGACCCAAAGGGGTACCCCTGGTATACGAGGCCTTCAACTGGCGTCATGGGGTGTTTGTGGGCAGAGCCATG
CGCTCTGAGTCCACTGCTGCAGCAGAACACAAAGGGAAGATCATCATGCACGACCCATTTGCCATGCGGCCCTTT
TTTGGCTACAACTTCGGGCACTACCTGGAACACTGGCTGAGCATGGAAGGGCGCAAGGGGGCCCAGCTGCCCCGT
ATCTTCCATGTCAACTGGTTCCGGCGTGACGAGGCAGGGCACTTCCTGTGGCCAGGCTTTGGGGAGAATGCTCGG
GTGCTAGACTGGATCTGCCGGCGGTTAGAGGGGGAGGACAGTGCCCGAGAGACACCCATTGGGCTGGTGCCAAAG
GAAGGAGCCTTGGATCTCAGCGGCCTCAGAGCTATAGACACCACTCAGCTGTTCTCCCTCCCCAAGGACTTCTGG
GAACAGGAGGTTCGTGACATTCGGAGCTACCTGACAGAGCAGGTCAACCAGGATCTGCCCAAAGAGGTGTTGGCT
GAGCTTGAGGCCCTGGAGAGACGTGTGCACAAAATG**TGA**CCTGAGGCCTAGTCTAGCAAGAGGACATAGCACCCT
CATCTGGGAATAGGGAAGGCACCTTGCAGAAAATATGAGCAATTGATATTAACTAACATCTTCAATGTGCCATAG
ACCTTCCCACAAAGACTGTCCAATAATAAGAGATGCTTATCTATTTTAAAAAAAAAAAAAAAAAA

FIGURE 608

MAALYRPGLRLNWHGLSPLGWPSCRSIQTLRVLSGDLGQLPTGIRDFVEHSARLCQPEGIHICDGTEAENTATLT
LLEQQGLIRKLPKYNNCWLARTDPKDVARVESKTVIVTPSQRDTVPLPPGGACGQLGNWMSPADFQRAVDERFPG
CMQGRTMYVLPFSMGPVGSPLSRIGVQLTDSAYVVASMRIMTRLGTPVLQALGDGDFVKCLHSVGQPLTGQGEPV
SQWPCNPEKTLIGHVPDQREIISFGSGYGGNSLLGKKCFALRIASRLARDEGWLAEHMLILGITSPAGKKALCAA
AFPSACGKTNLAMMRPALPGWKVECVGDDIAWMRFDSEGRLRAINPENGFFGVAPGTSATTNPNAMATIQSNTIF
TNVAETSDGGVYWEGIDQPLPPGVTVTSWLGKPWKPGDKEPCAHPNSRFCAPARQCPIMDPAWEAPEGVPIDAII
FGGRRPKGVPLVYEAFNWRHGVFVGRAMRSESTAAAEHKGKIIMHDPFAMRPFFGYNFGHYLEHWLSMEGRKGAQ
LPRIFHVNWFRRDEAGHFLWPGFGENARVLDWICRRLEGEDSARETPIGLVPKEGALDLSGLRAIDTTQLFSLPK
DFWEQEVRDIRSYLTEQVNQDLPKEVLAELEALERRVHKM

FIGURE 609

GGCGAGAGGCGGGCTGAGGCGGCCCAGCGGCGGCAGGTGAGGCGGAACCAACCCTCCTGGCC**ATG**GGAGGGGCCG
TGGTGGACGAGGGCCCCACAGGCGTCAAGGCCCCTGACGGCGGCTGGGGCTGGGCCGTGCTCTTCGGCTGTTTCG
TCATCACTGGCTTCTCCTACGCCTTCCCCAAGGCCGTCAGTGTCTTCTTCAAGGAGCTCATACAGGAGTTTGGGA
TCGGCTACAGCGACACAGCCTGGATCTCCTCCATCCTGCTGGCCATGCTCTACGGGACAGGTCCGCTCTGCAGTG
TGTGCGTGAACCGCTTTGGCTGCCGGCCCGTCATGCTTGTGGGGGGTCTCTTTGCGTCGCTGGGCATGGTGGCTG
CGTCCTTTTGCCGGAGCATCATCCAGGTCTACCTCACCACTGGGGTCATCACGGGGTTGGGTTTGGCACTCAACT
TCCAGCCCTCGCTCATCATGCTGAACCGCTACTTCAGCAAGCGGCGCCCCATGGCCAACGGGCTGGCGGCAGCAG
GTAGCCCTGTCTTCCTGTGTGCCCTGAGCCCGCTGGGGCAGCTGCTGCAGGACCGCTACGGCTGGCGGGGCGGCT
TCCTCATCCTGGGCGGCCTGCTGCTCAACTGCTGCGTGTGTGCCGCACTCATGAGGCCCCTGGTGGTCACGGCCC
AGCCGGGCTCGGGGCCGCCGCGACCCTCCCGGCGCCTGCTAGACCTGAGCGTCTTCCGGGACCGCGGCTTTGTGC
TTTACGCCGTGGCCGCCTCGGTCATGGTGCTGGGGCTCTTCGTCCCGCCCGTGTTCGTGGTGAGCTACGCCAAGG
ACCTGGGCGTGCCCGACACCAAGGCCGCCTTCCTGCTCACCATCCTGGGCTTCATTGACATCTTCGCGCGGCCGG
CCGCGGGCTTCGTGGCGGGGCTTGGGAAGGTGCGGCCCTACTCCGTCTACCTCTTCAGCTTCTCCATGTTCTTCA
ACGGCCTCGCGGACCTGGCGGGCTCTACGGCGGGCGACTACGGCGGCCTCGTGGTCTTCTGCATCTTCTTTGGCA
TCTCCTACGGCATGGTGGGGGCCCTGCAGTTCGAGGTGCTCATGGCCATCGTGGGCACCCACAAGTTCTCCAGTG
CCATTGGCCTGGTGCTGCTGATGGAGGCGGTGGCCGTGCTCGTCGGGCCCCCTTCGGGAGGCAAACTCCTGGATG
CGACCCACGTCTACATGTACGTGTTCATCCTGGCGGGGGCCGAGGTGCTCACCTCCTCCCTGATTTTGCTGCTGG
GCAACTTCTTCTGCATTAGGAAGAAGCCCAAAGAGCCACAGCCTGAGGTGGCGGCCGCGGAGGAGGAGAAGCTCC
ACAAGCCTCCTGCAGACTCGGGGGTGGACTTGCGGGAGGTGGAGCATTTCCTGAAGGCTGAGCCTGAGAAAAACG
GGGAGGTGGTTCACACCCCGGAAACAAGTGTC**TGA**GTGGCTGGGCGGGGCCGGCAGGCACAGGGAGGAGGTACAG
AAGCCGGCAACGCTTGCTATTTATTTTACAAACTGGACTGGCTCAGGCAGGGCCACGGCTGGGCTCCAGCTGCCG
GCCCAGCGGATCGTCGCCCGATCAGTGTTTTGAGGGGGAAGGTGGCGGGGTGGGAACCGTGTCATTCCAGAGTGG
ATCTGCGGTGAAGCCAAGCCGCAAGGTTACAAGGCATCCTCACCAGGGGCCCCGCCTGCTGCTCCCAGGTGGCCT
GCGGCCACTGCTATGCTCAAGGACCTGGAAACCCATGCTTCGAGACAACGTGACTTTAATGGGAGGGTGGGTGGG
CCGCAGACAGGCTGGCAGGGCAGGTGCTGCGTGGGGCCCTCTCCAGCCCGTCCTACCCTGGGCTCACATGGGGCC
TGTGCCCACCCCTCTTGAGTGTCTTGGGGACAGCTCTTTCCACCCCTGGAAGATGGAAATAAACCTGCGTGTGGG
TGGAGTGTTCTCGTGCCGAATTCAAAAAGCTT

FIGURE 610

MGGAVVDEGPTGVKAPDGGWGWAVLFGCFVITGFSYAFPKAVSVFFKELIQEFGIGYSDTAWISSILLAMLYGTG
PLCSVCVNRFGCRPVMLVGGLFASLGMVAASFCRSIIQVYLTTGVITGLGLALNFQPSLIMLNRYFSKRRPMANG
LAAAGSPVFLCALSPLGQLLQDRYGWRGGFLILGGLLLNCCVCAALMRPLVVTAQPGSGPPRPSRRLLDLSVFRD
RGFVLYAVAASVMVLGLFVPPVFVVSYAKDLGVPDTKAAFLLTILGFIDIFARPAAGFVAGLGKVRPYSVYLFSF
SMFFNGLADLAGSTAGDYGGLVVFCIFFGISYGMVGALQFEVLMAIVGTHKFSSAIGLVLLMEAVAVLVGPPSGG
KLLDATHVYMYVFILAGAEVLTSSLILLLGNFFCIRKKPKEPQPEVAAAEEEKLHKPPADSGVDLREVEHFLKAE
PEKNGEVVHTPETSV

FIGURE 611

AGTCCTGCTCTCCGCACGCCACCTTAGGCCCGCAGCCGTGCCGGGTGCTCTTCAGC**ATG**TCCTTCATCCCGGTGG
CCGAGGATTCCGACTTCCCCATCCACAACCTGCCCTACGGCGTCTTCTCGACCAGAGGCGACCCAAGACCGAGGA
TAGGTGTGGCCATTGGCGACCAGATCCTGGACCTCAGCATCATCAAGCACCTCTTTACTGGTCCTGTCCTCTCCA
AACACCAGGATGTCTTCAATCAGCCTACACTCAACAGCTTCATGGGCCTGGGTCAGGCTGCCTGGAAGGAGGCGA
GAGTGTTCTTGCAGAACTTGCTGTCTGTGAGCCAAGCCAGGCTCAGAGATGACACCGAACTTCGGAAGTGTGCAT
TCATCTCCCAGGCTTCTGCCACGATGCACCTTCCAGCCACCATAGGAGACTACACAGACTTCTATTCCTCTCGGC
AGCATGCTACCAACGTCGGAATCATGTTCAGGGACAAGGAGAATGCGTTGATGCCAAATTGGCTGCACTTACCAG
TGGGCTACCATGGCCGTGCCTCCTCTGTCGTGGTGTCTGGCACCCCAATCCGAAGGCCCATGGGACAGATGAAAC
CTGATGACTCTAAGCCTCCCGTATATGGTGCCTGCAAGCTCTTGGACATGGAGCTGGAAATGGCTTTTTTTGTAG
GCCCTGGAAACAGATTGGGAGAGCCGATCCCCATTTCCAAGGCCCATGAGCACATTTTTGGAATGGTCCTTATGA
ACGACTGGAGTGCACGAGACATTCAGAAGTGGGAGTATGTCCCTCTCGGGCCATTCCTTGGGAAGAGTTTTGGGA
CCACTGTCTCTCCGTGGGTGGTGCCCATGGATGCTCTCATGCCCTTTGCTGTGCCCAACCCGAAGCAGGACCCCA
GGCCCCTGCCGTATCTGTGCCATGACGAGCCCTACACATTTGACATCAACCTCTCTGTTAACCTGAAAGGAGAAG
GAATGAGCCAGGCGGCTACCATATGCAAGTCCAATTTTAAGTACATGTACTGGACGATGCTGCAGCAGCTCACTC
ACCACTCTGTCAACGGCTGCAACCTGCGGCCGGGGGACCTCCTGGCTTCTGGGACCATCAGCGGGCCGGAGCCAG
AAAACTTCGGCTCCATGTTGGAACTGTCGTGGAAGGGAACGAAGCCCATAGACCTGGGGAATGGTCAGACCAGGA
AGTTTCTGCTGGACGGGGATGAAGTCATCATAACAGGGTACTGCCAGGGGGATGGTTACCGCATCGGCTTTGGCC
AGTGTGCTGGAAAAGTGCTGCCTGCTCTCCTGCCATCA**TGA**GATTTTCTCTGCTCTTCTGGAAACAAAGGGCTCA
AGCACCCCTTTCAACCCTGTGACTGGGGTCCTCCCTCGGGCTGTAGGCCTGGTCCGCCATTCAGTGACAAATAAA
GCCATTGTGCTCTGAGGCCTGC

FIGURE 612

MSFIPVAEDSDFPIHNLPYGVFSTRGDPRPRIGVAIGDQILDLSIIKHLFTGPVLSKHQDVFNQPTLNSFMGLGQ
AAWKEARVFLQNLLSVSQARLRDDTELRKCAFISQASATMHLPATIGDYTDFYSSRQHATNVGIMFRDKENALMP
NWLHLPVGYHGRASSVVVSGTPIRRPMGQMKPDDSKPPVYGACKLLDMELEMAFFVGPGNRLGEPIPISKAHEHI
FGMVLMNDWSARDIQKWEYVPLGPFLGKSFGTTVSPWVVPMDALMPFAVPNPKQDPRPLPYLCHDEPYTFDINLS
VNLKGEGMSQAATICKSNFKYMYWTMLQQLTHHSVNGCNLRPGDLLASGTISGPEPENFGSMLELSWKGTKPIDL
GNGQTRKFLLDGDEVIITGYCQGDGYRIGFGQCAGKVLPALLPS

FIGURE 613

CTGAGGCCCACGCAGGGCCTAGGGTGGGAAG**ATG**GCAGGTGGGGGCGGCGACCTGAGCACCAGGAGGCTGAATGA
ATGTATTTCACCAGTAGCAAATGAGATGAACCATCTTCCTGCACACAGCCACGATTTGCAAAGGATGTTCACGGA
AGACCAGGGTGTAGATGACAGGCTGCTCTATGACATTGTATTCAAGCACTTCAAAAGAAATAAGGTGGAGATTTC
AAATGCAATAAAAAAGACATTTCCATTCCTCGAGGGCCTCCGTGATCGTGATCTCATCACAAATAAAATGTTTGA
AGATTCTCAAGATTCTTGTAGAAACCTGGTCCCTGTACAGAGAGTGGTGTACAATGTTCTTAGTGAACTGGAGAA
GACATTTAACCTGCCAGTTCTGGAAGCACTGTTCAGCGATGTCAACATGCAGGAATACCCCGATTTAATTCACAT
TTATAAAGGCTTTGAAAATGTAATCCATGACAAATTGCCTCTCCAAGAAAGTGAAGAAGAAGAGAGGGAGGAGAG
GTCTGGCCTCCAACTAAGTCTTGAACAAGGAACTGGTGAAAACTCTTTTCGAAGCCTGACTTGGCCACCTTCGGG
TTCCCCATCTCATGCTGGTACAACCCCACCTGAAAATGGACTCTCAGAGCACCCCTGTGAAACAGAACAGATAAA
TGCAAAGAGAAAAGATACAACCAGTGACAAAGATGATTCGCTAGGAAGCCAACAAACAAATGAACAATGTGCTCA
AAAGGCTGAGCCAACAGAGTCCTGCGAACAAATTGCTGTCCAAGTGAATAATGGGGATGCTGGAAGGGAGATGCC
CTGCCCGTTGCCCTGTGATGAAGAAAGCCCAGAGGCAGAGCTACACAACCATGGAATCCAAATTAATTCCTGTTC
TGTGCGACTGGTGGATATAAAAAAGGAAAAGCCATTTTCTAATTCAAAAGTTGAGTGCCAAGCCCAAGCAAGAAC
TCATCATAACCAGGCATCTGACATAATAGTCATCAGCAGTGAGGACTCTGAAGGATCCACTGACGTTGATGAGCC
CTTAGAAGTCTTCATCTCAGCACCGAGAAGTGAGCCTGTGATCAATAATGACAACCCTTTAGAATCAAATGATGA
AAAGGAGGGCCAAGAAGCCACTTGCTCACGACCCCAGATTGTACCAGAGCCCATGGATTTCAGAAAATTATCTAC
ATTCAGAGAAAGTTTTAAGAAAAGAGTGATAGGACAAGACCACGACTTTTCAGAATCCAGTGAGGAGGAGGCGCC
CGCAGAAGCCTCAAGCGGGGCACTGAGAAGCAAGCATGGTGAGAAGGCTCCTATGACTTCTAGAAGTACATCTAC
TTGGAGAATACCCAGCAGGAAGAGACGTTTCAGCAGTAGTGACTTTTCAGACCTGAGTAATGGAGAAGAGCTTCA
GGAAACCTGCAGCTCATCCCTAAGAAGAGGGTCAGGATCACAGCCACAAGAACCTGAAAATAAGAAGTGCTCCTG
TGTCATGTGTTTTCCAAAAGGTGTGCCAAGAAGCCAAGAAGCAAGGACTGAAAGTAGTCAAGCATCTGACATGAT
GGATACCATGGATGTTGAAAACAATTCTACTTTGGAAAAACACAGTGGGAAAAGAAGAAAAAAGAGAAGGCATAG
ATCTAAAGTAAATGGTCTCCAAAGAGGGAGAAAGAAAGACAGACCTAGAAAACATTTAACTCTGAATAACAAAGT
CCAAAAGAAAAGATGGCAACAAAGAGGAAGAAAAGCCAACACTAGACCTTTGAAAAGAAGAAGAAAAAGAGGTCC
AAGAATTCCCAAAGATGAAAATATTAATTTTAAACAATCTGAACTTCCTGTGACCTGTGGTGAGGTGAAGGGCAC
TCTATATAAGGAGCGATTCAAACAAGGAACCTCAAAGAAGTGTATACAGAGTGAGGATAAAAAGTGGTTCACTCC
CAGGGAATTTGAAATTGAAGGAGACCGCGGAGCATCCAAGAACTGGAAGCTAAGTATACGCTGCGGTGGATATAC
CCTGAAAGTCCTGATGGAGAACAAATTTCTGCCAGAACCACCAAGCACAAGAAAAAAGAGAATACTGGAATCTCA
CAACAATACCTTAGTTGACCCTTGTGAGGAGCATAAGAAGAAGAACCCAGATGCTTCAGTCAAGTTCTCAGAGTT
TTTAAAGAAGTGCTCAGAGACATGGAAGACCATTTTTGCTAAAGAGAAAGGAAAATTTGAAGATATGGCAAAGGC
GGACAAGGCCCATTATGAAAGAGAAATGAAAACCTATATCCCTCCTAAAGGGGAGAAAAAAAAGAAGTTCAAGGA
TCCCAATGCACCCAAGAGGCCTCCTTTGGCCTTTTTCCTGTTCTGCTCTGAGTATCGCCCAAAAATCAAAGGAGA
ACATCCTGGCCTGTCCATTGATGATGTTGTGAAGAAACTGGCAGGGATGTGGAATAACACCGCTGCAGCTGACAA
GCAGTTTTATGAAAAGAAGGCTGCAAAGCTGAAGGAAAAATACAAAAAGGATATTGCTGCATATCGAGCTAAAGG
AAAGCCTAATTCAGCAAAAAAGAGAGTTGTCAAGGCTGAAAAAAGCAAGAAAAAGAAGGAAGAGGAAGAAGATGA
AGAGGATGAACAAGAGGAGGAAAATGAAGAAGATGATGATAAA**TAA**GTTGCTTCTAGTGCAGTTTTTTTCTTGTC
TATAAAGCATTTAAGCTGCCTGTACACAACTCACTCCTTTTAAAGAAAAAAACTTCAACGTAAGACTGTGTAAGA
TTTGTTTTTAAACCGTACACTGTGTTTTTTTGTATAGTTAACCACTACCGAATGTGTCTTCAGATAGCCCTGTCC
TGGTGGTATTTAGCCACTAACCTTTGCCTGGTACAGTATGGGGGTTGTAAATTGGCATGGAAATTTAAAGCAGGT
TCTTGTTAGTGCACAGCACAAATTAGTTGTATAGGAGGATGGTAGTTTTTTCACCTTCAGTTGTCTCTGATGTAG
CTTATACAAAACATTTGTTGTTCTGTTAACTGAATGCCACTCTGTAATTGCAAAAAAAAAAAACAGTTGCAGCTG
TTTTGTTGACATTCTGAATGCTTCTAAGTAAATACAATTTTTAAAAAACCGTATGAGGGAACTGTGTAGACAAGG
TACCAGGTCAGTCTTCTTCCATGTTCTATTAGCTCCACAAAGCCAATCTCAATCCCTCAAAACAATCTTGTCATA
CTTGAAAATATGACACTCTAGTCAAAGCCTTGGTAAAATAATCAGTGTTTCCAATCTGTCCTGTTACAAAAGAAA
CAGATTATTATTGAACTTATGCAAATAACCATTGTCATAAGAATGTTTATGAATAGTTTCCAAATTATGGCAAAT
TCATGTAGAGAGAGAAAAGTAACTGTTTTGGTTTTGCTCACAAAAGTCTACTTTACCTAAGGGCTGTCAGATATA
AGTAACTTAAAAGAAAGAGAAGTTTTCTTGACTTTTGAAAACAAAATATGAAAAGAATCGGCAATGTTTCAAACA
AAAAGTCATAAAAGTCACTTTATTCCTCCATCAAAAAAAAAAAAAAAAAAAAA

FIGURE 614

MAGGGGDLSTRRLNECISPVANEMNHLPAHSHDLQRMFTEDQGVDDRLLYDIVFKHFKRNKVEISNAIKKTFPFL
EGLRDRDLITNKMFEDSQDSCRNLVPVQRVVYNVLSELEKTFNLPVLEALFSDVNMQEYPDLIHIYKGFENVIHD
KLPLQESEEEEREERSGLQLSLEQGTGENSFRSLIWPPSGSPSHAGTTPPENGLSEHPCETEQINAKRKDTTSDK
DDSLGSQQTNEQCAQKAEPTESCEQIAVQVNNGDAGREMPCPLPCDEESPEAELHNHGIQINSCSVRLVDIKKEK
PFSNSKVECQAQARTHHNQASDIIVISSEDSEGSTDVDEPLEVFISAPRSEPVINNDNPLESNDEKEGQEATCSR
PQIVPEPMDFRKLSTFRESFKKRVIGQDHDFSESSEEEAPAEASSGALRSKHGEKAPMTSRSTSTWRIPSRKRRF
SSSDFSDLSNGEELQETCSSSLRRGSGSQPQEPENKKCSCVMCFPKGVPRSQEARTESSQASDMMDTMDVENNST
LEKHSGKRRKKRRHRSKVNGLQRGRKKDRPRKHLTLNNKVQKKRWQQRGRKANTRPLKRRRKRGPRIPKDENINF
KQSELPVTCGEVKGTLYKERFKQGTSKKCIQSEDKKWFTPREFEIEGDRGASKNWKLSIRCGGYTLKVLMENKFL
PEPPSTRKKRILESHNNTLVDPCEEHKKKNPDASVKFSEFLKKCSETWKTIFAKEKGKFEDMAKADKAHYEREMK
TYIPPKGEKKKKFKDPNAPKRPPLAFFLFCSEYRPKIKGEHPGLSIDDVVKKLAGMWNNTAAADKQFYEKKAAKL
KEKYKKDIAAYRAKGKPNSAKKRVVKAEKSKKKKEEEEDEEDEQEEENEEDDDK

FIGURE 615

GAGGCAGTTCTGTTGCCACTCTCTCTCCTGTCA**ATG**ATGGATCTCAGAAATACCCCAGCCAAATCTCTGGACAAG
TTCATTGAAGACTATCTCTTGCCAGACACGTGTTTCCGCATGCAAATCGACCATGCCATTGACATCATCTGTGGG
TTCCTGAAGGAAAGGTGCTTCCGAGGTAGCTCCTACCCTGTGTGTGTGTCCAAGGTGGTAAAGGGTGGCTCCTCA
GGCAAGGGCACCACCCTCAGAGGCCGATCTGACGCTGACCTGGTTGTCTTCCTCAGTCCTCTCACCACTTTTCAG
GATCAGTTAAATCGCCGGGGAGAGTTCATCCAGGAAATTAGGAGACAGCTGGAAGCCTGTCAAAGAGAGAGAGCA
CTTTCCGTGAAGTTTGAGGTCCAGGCTCCACGCTGGGGCAACCCCCGTGCGCTCAGCTTCGTACTGAGTTCGCTC
CAGCTCGGGGAGGGGGTGGAGTTCGATGTGCTGCCTGCCTTTGATGCCCTGGGTCAGTTGACTGGCAGCTATAAA
CCTAACCCCCAAATCTATGTCAAGCTCATCGAGGAGTGCACCGACCTGCAGAAAGAGGGCGAGTTCTCCACCTGC
TTCACAGAACTACAGAGAGACTTCCTGAAGCAGCGCCCCACCAAGCTCAAGAGCCTCATCCGCCTAGTCAAGCAC
TGGTACCAAAATTGTAAGAAGAAGCTTGGGAAGCTGCCACCTCAGTATGCCCTGGAGCTCCTGACGGTCTATGCT
TGGGAGCGAGGGAGCATGAAAACACATTTCAACACAGCCCAAGGATTTCGGACGGTCTTGGAATTAGTCATAAAC
TACCAGCAACTCTGCATCTACTGGACAAAGTATTATGACTTTAAAAACCCCATTATTGAAAAGTACCTGAGAAGG
CAGCTCACGAAACCCAGGCCTGTGATCCTGGACCCGGCGGACCCTACAGGAAACTTGGGTGGTGGAGACCCAAAG
GGTTGGAGGCAGCTGGCACAAGAGGCTGAGGCCTGGCTGAATTACCCATGCTTTAAGAATTGGGATGGGTCCCCA
GTGAGCTCCTGGATTCTGCTGGCTGAAAGCAACAGTACAGACGATGAGACCGACGATCCCAGGACGTATCAGAAA
TATGGTTACATTGGAACACATGAGTACCCTCATTTCTCTCATAGACCCAGCACGCTCCAGGCAGCATCCACCCCA
CAGGCAGAAGAGGACTGGACCTGCACCATCCTC**TGA**ATGCCAGTGCATCTTGGGGGAAAGGGCTCCAGTGTTATC
TGGACCAGTTCCTTCATTTTCAGGTGGGACTCTTGATCCAGAGAAGACAAAGCTCCTCAGTGAGCTGGTGTATAA
TCCAAGACAGAACCCAAGTCTCCTGACTCCTGGCCTTCTATGCCCTCTATCCTATCATAGATAACATTCTCCACA
GCCTCACTTCATTCCACCTATTCTCTGAAAATATTCCCTGAGAGAGAACAGAGAGATTTAGATAAGAGAATGAAA
TTCCAGCCTTGACTTTCTTCTGTGCACCTGATGGGAGGGTAATGTCTAATGTATTATCAATAACAATAAAAATAA
AGCAAATACCAAAAA

FIGURE 616

MMDLRNTPAKSLDKFIEDYLLPDTCFRMQIDHAIDIICGFLKERCFRGSSYPVCVSKVVKGGSSGKGTTLRGRSD
ADLVVFLSPLTTFQDQLNRRGEFIQEIRRQLEACQRERALSVKFEVQAPRWGNPRALSFVLSSLQLGEGVEFDVL
PAFDALGQLTGSYKPNPQIYVKLIEECTDLQKEGEFSTCFTELQRDFLKQRPTKLKSLIRLVKHWYQNCKKKLGK
LPPQYALELLTVYAWERGSMKTHFNTAQGFRTVLELVINYQQLCIYWTKYYDFKNPIIEKYLRRQLTKPRPVILD
PADPTGNLGGGDPKGWRQLAQEAEAWLNYPCFKNWDGSPVSSWILLAESNSTDDETDDPRTYQKYGYIGTHEYPH
FSHRPSTLQAASTPQAEEDWTCTIL

FIGURE 617

GGGGGGGTAGAGGAAGCCGTGAGGCCGGAGCTTAGGTCGGGAAGGGATGGATCGCTGAGCCGATAGCGTCCGCTA
GGCTGTCTGCCTCGGTACCTGTTACTGCTGCTACTTCCTCGTTTGACACCTTCCTGGAATCTCTCTTGATTTTTG
AGGAAATACCTAGTAACAAAC**ATG**ACTGAGTTCTGGCTTATATCTGCTCCTGGGGAGAAAACCTGTCAGCAAACA
TGGGAGAAATTGCATGCGGCAACTTCAAAGAACAATAATCTTGCTGTCACTTCCAAGTTCAATATTCCTGACTTA
AAGGTTGGCACGTTGGATGTCTTGGTTGGCTTGTCAGATGAACTGGCTAAACTGGATGCATTTGTAGAAGGAGTG
GTTAAGAAAGTAGCTCAATACATGGCTGATGTATTGGAAGATAGCAAAGACAAAGTTCAAGAGAATCTGTTGGCT
AATGGAGTGGACTTGGTTACTTATATAACAAGGTTCCAGTGGGACATGGCCAAATATCCAATCAAGCAGTCCCTG
AAAAATATTTCTGAAATAATTGCCAAGGGAGTAACTCAGATTGATAATGACCTGAAATCTCGAGCATCTGCATAC
AATAACCTGAAAGGAAATCTTCAGAATTTGGAACGAAAGAATGCAGGAAGTTTGCTAACTAGAAGTCTAGCAGAA
ATTGTGAAGAAGGATGACTTTGTTCTTGATTCAGAGTATCTCGTCACATTACTGGTAGTAGTTCCCAAGTTAAAC
CACAACGACTGGATTAAGCAGTATGAAACACTAGCCGAAATGGTAGTTCCAAGGTCTAGCAATGTTCTTTCAGAG
GACCAAGACAGTTACCTGTGTAATGTCACCTTGTTTAGGAAGGCAGTTGATGACTTCAGACACAAAGCCAGAGAA
AACAAATTCATTGTTCGTGACTTCCAGTATAATGAAGAGGAGATGAAAGCAGATAAAGAAGAAATGAACAGGCTT
TCTACTGATAAGAAAAAACAATTTGGACCACTTGTACGGTGGCTGAAAGTGAATTTTAGTGAAGCATTTATTGCA
TGGATTCACGTGAAAGCATTACGGGTTTTCGTTGAGTCTGTTTTAAGGTATGGCTTGCCAGTGAACTTCCAAGCA
ATGCTACTTCAGCCCAATAAGAAAACTTTGAAGAAACTGAGAGAAGTATTACATGAATTGTATAAACATCTAGAC
AGCAGTGCAGCAGCTATTATTGATGCTCCTATGGATATTCCAGGTTTAAACCTGAGTCAACAAGAATACTACCCC
TATGTGTACTACAAGATTGATTGCAACTTGCTGGAATTCAAG**TGA**AAATGGGCTCCTCCCCCGACAATCCTGTCC
TTGTGTTTGTGTGTGCTAACAGAAATAAGTTGCAGTATGGTCGTACTTTTAACTCTAGTATCCTTTGCTTGCTTC
TTACCCCCTTTCCTAGGTGAATTCTCCCACAGTGGTCTGTATCTCAACATTTTCTTTTTAAAGGAAAAAATATAT
ATATATAGTTTCTTTTTATTGATCAGGTCTGTAAATGTGTACTAAAAAAATCAGAGTTTATTTATAAACAAAATA
GTTTATTTAAAGAGAAGGTCTCTTCCTTATTGATATCATGGTATGCATTAATTCCATTTGTTACTATTGTGCACA
AAAGCCCTGTTCACAGGGGAATGGTGTAAACATTTATACTGTTTTGTTCACTGTATTTAGTAGACATAACTGTTG
AATAGTTACTGAATCATGATGTAAAGAATATGTGACCATCTTCAGGTATGGGATTTCTGAACGTTTCAAATTTCA
ATCAATGAGCACTGTCAACACCCACAGGAGAGAATAAAATTACCTGTGCAAAAAAAAAAAAAAAAAAAAAAAAA
AAA

FIGURE 618

MTEFWLISAPGEKTCQQTWEKLHAATSKNNNLAVTSKFNIPDLKVGTLDVLVGLSDELAKLDAFVEGVVKKVAQY
MADVLEDSKDKVQENLLANGVDLVTYITRFQWDMAKYPIKQSLKNISEIIAKGVTQIDNDLKSRASAYNNLKGNL
QNLERKNAGSLLTRSLAEIVKKDDFVLDSEYLVTLLVVVPKLNHNDWIKQYETLAEMVVPRSSNVLSEDQDSYLC
NVTLFRKAVDDFRHKARENKFIVRDFQYNEEEMKADKEEMNRLSTDKKKQFGPLVRWLKVNFSEAFIAWIHVKAL
RVFVESVLRYGLPVNFQAMLLQPNKKTLKKLREVLHELYKHLDSSAAAIIDAPMDIPGLNLSQQEYYPYVYYKID
CNLLEFK

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FIGURE 619

GTTCTGTGTTCGCTTGGGTAGAGGAAGCCGTGAGGCCGGAGCTTAGGTCGGGAAGGGATGGATCGCTGAGCCGAT
AGCGTCCGCTAGGCTGTCTGCCTCGGTACCTGTTACTGCTGCTACTTCCTCGTTTGACACCTTCCTGGAATCTCT
CTTGATTTTTGAGGAAATACCTAGTAACAAACATGACTGAGTTCTGGCTTATATCTGCTCCTGGGGAGAAAACCT
GTCAGCAAACATGGGAGAAATTGCATGCGGCAACTTCAAAGAACAATAATCTTGCTGTCACTTCCAAGTTCAATA
TTCCTGACTTAAAGGTTGGCACGTTGGATGTCTTGGTTGGCTTGTCAGATGAACTGGCTAAACTGGATGCATTTG
TAGAAGGAGTGGTTAAGAAAGTAGCTCAATACATGGCTGATGTATTGGAAGATAGCAAAGACAAAGTTCAAGAGA
ATCTGTTGGCTAATGGAGTGGACTTGGTTACTTATATAACAAGGTTCCAGTGGGACATGGCCAAATATCCAATCA
AGCAGTCCCTGAAAAATATTTCTGAAATAATTGCCAAGGGAGTAACTCAGATTGATAATGACCTGAAATCTCGAG
CATCTGCATACAATAACCTGAAAGGAAATCTTCAGAATTTGGAACGAAAGAATGCAGGAAGTTTGCTAACTAGAA
GTCTAGCAGAAATTGTGAAGAAGGATGACTTTGTTCTTGATTCAGAGTATCTCGTCACATTACTGGTAGTAGTTC
CCAAGTTAAACCACAACGACTGGATTAAGCAGTATGAAACACTAGCCGAAATGGTAGTTCCAAGGTCTAGCAATG
TTCTTTCAGAGGACCAAGACAGTTACCTGTGTAATGTCACCTTGTTTAGGAAGGCAGTTGATGACTTCAGACACA
AAGCCAGAGAAAACAAATTCATTGTTCGTGACTTCCAGTATAATGAAGAGGAGATGAAAGCAGATAAAGAAGAAA
TGAACAGGCTTTCTACTGATAAGAAAAAACAATTTGGACCACTTGTACGGTGGCTGAAAGTGAATTTTAGTGAAG
CATTTATTGCATGGATTCACGTGAAAGCATTACGGGTTTTCGTTGAGTCTGTTTTAAGGTATGGCTTGCCAGTGA
ACTTCCAAGCAATGCTACTTCAGCCCAATAAGAAAACTTTGAAGAAACTGAGAGAAGTATTACATGAATTGTATA
AACATCTAGACAGCAGTGCAGCAGCTATTATTGATGCTCCTATGGATATTCCAGGTTTAAACCTGAGTCAACAAG
AATACTACCCCTATGTGTACTACAAGATTGATTGCAACTTGCTGGAATTCAAGTGAAAATGGGCTCCTCCCCCGA
CAATCCTGTCCTTGTGTTTGTGTGTGCTAACAGAAATAAGTTGCAGTATGGTCGTACTTTTAACTCTAGTATCCT
TTGCTTGCTTCTTACCCCCTTTCCTAGGTGAATTCTCCCACAGTGGTCTGTATCTCAACATTTTCTTTTTAAAGG
AAAAAATATATATATATAGTTTCTTTTTATTGATCAGGTCTGTAAATGTGTACTAAAAAAATCAGAGTTTATTTA
TAAACAGAATAGTTTATTTAAAGAGAAGGTCTCTTCCTTATTGATATCATGGTATGCATTAATTCCATTTGTTAC
TATTGTGCACAAAAGCCCTGTTCACAGGGGAATGGTGTAAACATTTATACTGTTTTGTTCACTGTATTTAGTAGA
CATAACTGTTGAATAGTTACTGAATCATGATGTAAAGAATATGTGACCATCTTCAGGTATGGGATTTCTGAACGT
TTCAAATTTCAATCAATGAGCACTGTCAACACCCACAGGAGAGAATAAAATTACCTGTGCAAAGGTGTATTGTGG
TGTGTGTAACTTAAGATTACAGTTCTGTTTGAGAGTTAAATGATGTCATAGCTCACTTGCTATGCTGCTTCCAGG
ATTTTGTTATATGCTGAGGTGTAACCATTTGTGTTGTCTGACTTTCGTATGATTTAATTGAGCCAAATTTGGGTC
AGAACACAAATTTGAAGATGACTTTTCAGTATATGATGGGTATTTACATTTGAACACTAGAATTTTAGGTCTCTC
AAATAATTAAGAATAGAGCCAGTTTTGAATAAAGTCTAGCAGAACTATG

FIGURE 620

MTEFWLISAPGEKTCQQTWEKLHAATSKNNNLAVTSKFNIPDLKVGTLDVLVGLSDELAKLDAFVEGVVKKVAQY
MADVLEDSKDKVQENLLANGVDLVTYITRFQWDMAKYPIKQSLKNISEIIAKGVTQIDNDLKSRASAYNNLKGNL
QNLERKNAGSLLTRSLAEIVKKDDFVLDSEYLVTLLVVVPKLNHNDWIKQYETLAEMVVPRSSNVLSEDQDSYLC
NVTLFRKAVDDFRHKARENKFIVRDFQYNEEEMKADKEEMNRLSTDKKKQFGPLVRWLKVNFSEAFIAWIHVKAL
RVFVESVLRYGLPVNFQAMLLQPNKKTLKKLREVLHELYKHLDSSAAAIIDAPMDIPGLNLSQQEYYPYVYYKID
CNLLEFK

FIGURE 621A

AAAGCCCTCAGCCTTTGTGTCCTTCTCTGCGCCGGAGTGGCTGCAGCTCACCCCTCAGCTCCCCTTGGGGCCCAG
CTGGGAGCCGAGATAGAAGCTCCTGTCGCCGCTGGGCTTCTCGCCTCCCGCAGAGGGCCACACAGAGACCGGGATG
GCCACCTCCATGGGCCTGCTGCTGCTGCTGCTGCTGCTCCTGACCCAGCCCGGGGCGGGGACGGGAGCTGACAC
GGAGGCGGTGGTCTGCGTGGGGACCGCCTGCTACACGGCCCACTCGGGCAAGCTGAGCGCTGCCGAGGCCCAGAA
CCACTGCAACCAGAACGGGGGCAACCTGGCCACTGTGAAGAGCAAGGAGGAGGCCCAGCACGTCCAGCGAGTACT
GGCCCAGCTCCTGAGGCGGGAGGCAGCCCTGACGGCGAGGATGAGCAAGTTCTGGATTGGGCTCCAGCGAGAGAA
GGGCAAGTGCCTGGACCCTAGTCTGCCGCTGAAGGGCTTCAGCTGGGTGGGCGGGGGGGAGGACACGCCTTACTC
TAACTGGCACAAGGAGCTCCGGAACTCGTGCATCTCCAAGCGCTGTGTGTCTCTGCTGCTGGACCTGTCCCAGCC
GCTCCTTCCCAACCGCCTGCCCAAGTGGTCTGAGGGCCCCTGTGGGAGCCCAGGCTCCCCCGGAAGTAACATTGA
GGGCTTCGTGTGCAAGTTCAGCTTCAAAGGCATGTGCCGGCCTCTGGCCCTGGGGGGCCCAGGTCAGGTGACCTA
CACCACCCCCTTCCAGACCACCAGTTCCTCCTTGGAGGCTGTGCCCTTTGCCTCTGCGGCCAATGTAGCCTGTGG
GGAAGGTGACAAGGACGAGACTCAGAGTCATTATTTCCTGTGCAAGGAGAAGGCCCCCGATGTGTTCGACTGGGG
CAGCTCGGGCCCCCTCTGTGTCAGCCCCAAGTATGGCTGCAACTTCAACAATGGGGGCTGCCACCAGGACTGCTT
TGAAGGGGGGGATGGCTCCTTCCTCTGCGGCTGCCGACCAGGATTCCGGCTGCTGGATGACCTGGTGACCTGTGC
CTCTCGAAACCCTTGCAGCTCCAGCCCATGTCGTGGGGGGGCCACGTGCGTCCTGGGACCCCATGGGAAAAACTA
CACGTGCCGCTGCCCCCAAGGGTACCAGCTGGACTCGAGTCAGCTGGACTGTGTGGACGTGGATGAATGCCAGGA
CTCCCCCTGTGCCCAGGAGTGTGTCAACACCCCTGGGGGCTTCCGCTGCGAATGCTGGGTTGGCTATGAGCCGGG
CGGTCCTGGAGAGGGGGCCTGTCAGGATGTGGATGAGTGTGCTCTGGGTCGCTCGCCTTGCGCCCAGGGCTGCAC
CAACACAGATGGCTCATTTCACTGCTCCTGTGAGGAGGGCTACGTCCTGGCCGGGGAGGACGGGACTCAGTGCCA
GGACGTGGATGAGTGTGTGGGCCCGGGGGGCCCCCTCTGCGACAGCTTGTGCTTCAACACACAAGGGTCCTTCCA
CTGTGGCTGCCTGCCAGGCTGGGTGCTGGCCCCAAATGGGGTCTCTTGCACCATGGGGCCTGTGTCTCTGGGACC
ACCATCTGGGCCCCCCGATGAGGAGGACAAAGGAGAGAAAGAAGGGAGCACCGTGCCCCGCGCTGCAACAGCCAG
TCCCACAAGGGGCCCCGAGGGCACCCCCAAGGCTACACCCACCACAAGTAGACCTTCGCTGTCATCTGACGCCCC
CATCACATCTGCCCCACTCAAGATGCTGGCCCCCAGTGGGTCCTCAGGCGTCTGGAGGGAGCCCAGCATCCATCA
CGCCACAGCTGCCTCTGGCCCCCAGGAGCCTGCAGGTGGGGACTCCTCCGTGGCCACACAAAACAACGATGGCAC
TGACGGGCAAAAGCTGCTTTTATTCTACATCCTAGGCACCGTGGTGGCCATCCTACTCCTGCTGGCCCTGGCTCT
GGGGCTACTGGTCTATCGCAAGCGGAGAGCGAAGAGGGAGGAGAAGAAGGAGAAGAAGCCCCAGAATGCGGCAGA
CAGTTACTCCTGGGTTCCAGAGCGAGCTGAGAGCAGGGCCATGGAGAACCAGTACAGTCCGACACCTGGGACAGA
CTGCTGAAAGTGAGGTGGCCCTAGAGACACTAGAGTCACCAGCCACCATCCTCAGAGCTTTGAACTCCCCATTCC
AAAGGGGCACCCACATTTTTTTGAAAGACTGGACTGGAATCTTAGCAAACAATTGTAAGTCTCCTCCTTAAAGGC
CCCTTGGAACATGCAGGTATTTTCTACGGGTGTTTGATGTTCCTGAAGTGGAAGCTGTGTGTTGGCGTGCCACGG
TGGGGATTTCGTGACTCTATAATGATTGTTACTCCCCCTCCCTTTTCAAATTCCAATGTGACCAATTCCGGATCA
GGGTGTGAGGAGGCTGGGGCTAAGGGGCTCCCCTGAATATCTTCTCTGCTCACTTCCACCATCTAAGAGGAAAAG
GTGAGTTGCTCATGCTGATTAGGATTGAAATGATTTGTTTCTCTTCCTAGGATGAAAACTAAATCAATTAATTAT
TCAATTAGGTAAGAAGATCTGGTTTTTTGGTCAAAGGGAACATGTTCGGACTGGAAACATTTCTTTACATTTGCA
TTCCTCCATTTCGCCAGCACAAGTCTTGCTAAATGTGATACTGTTGACATCCTCCAGAATGGCCAGAAGTGCAAT
TAACCTCTTAGGTGGCAAGGAGGCAGGAAGTGCCTCTTTAGTTCTTACATTTCTAATAGCCTTGGGTTTATTTGC
AAAGGAAGCTTGAAAAATATGAGAAAAGTTGCTTGAAGTGCATTACAGGTGTTTGTGAAGTCACATAATCTACGG
GGCTAGGGCGAGAGAGGCCAGGGATTTGTTCACAGATACTTGAATTAATTCATCCAAATGTACTGAGGTTACCAC
ACACTTGACTACGGATGTGATCAACACTAACAAGGAAACAAATTCAAGGACAACCTGTCTTTGAGCCAGGGCAGG
CCTCAGACACCCTGCCTGTGGCCCCGCCTCCACTTCATCCTGCCCGGAATGCCAGTGCTCCGAGCTCAGACAGAG
GAAGCCCTGCAGAAAGTTCCATCAGGCTGTTTCCTAAAGGATGTGTGAACGGGAGATGATGCACTGTGTTTTGAA
AGTTGTCATTTTAAAGCATTTTAGCACAGTTCATAGTCCACAGTTGATGCAGCATCCTGAGATTTTAAATCCTGA
AGTGTGGGTGGCGCACACACCAAGTAGGGAGCTAGTCAGGCAGTTTGCTTAAGGAACTTTTGTTCTCTGTCTCTT
TTCCTTAAAATTGGGGGTAAGGAGGGAAGGAAGAGGGAAAGAGATGACTAACTAAAATCATTTTTACAGCAAAAA
CTGCTCAAAGCCATTTAAATTATATCCTCATTTTAAAAGTTACATTTGCAAATATTTCTCCCTATGATAATGCAG
TCGATAGTGTGCACTCTTTCTCTCTCTCTCTCTCTCTCACACACACACACACACACACACACACACACACAGAGA
CACGGCACCATTCTGCCTGGGGCACTGGAACACATTCCTGGGGGTCACCGATGGTCAGAGTCACTAGAAGTTACC

FIGURE 621B

TGAGTATCTCTGGGAGGCCTCATGTCTCCTGTGGGCTTTTTACCACCACTGTGCAGGAGAACAGACAGAGGAAAT
GTGTCTCCCTCCAAGGCCCCAAAGCCTCAGAGAAAGGGTGTTTCTGGTTTTGCCTTAGCAATGCATCGGTCTCTG
AGGTGACACTCTGGAGTGGTTGAAGGGCCACAAGGTGCAGGGTTAATACTCTTGCCAGTTTTGAAATATAGATGC
TATGGTTCAGATTGTTTTTAATAGAAAACTAAAGGGGCAGGGGAAGTGAAAGGAAAGATGGAGGTTTTGTGCGGC
TCGATGGGGCATTTGGAACTTCTTTTTAAAGTCATCTCATGGTCTCCAGTTTTCAGTTGGAACTCTGGTGTTTAA
CACTTAAGGGAGACAAAGGCTGTGTCCATTTGGCAAAACTTCCTTGGCCACGAGACTCTAGGTGATGTGTGAAGC
TGGGCAGTCTGTGGTGTGGAGAGCAGCCATCTGTCTGGCCATTCAGAGGATTCTAAAGACATGGCTGGATGCGCT
GCTGACCAACATCAGCACTTAAATAAATGCAAATGCAACATTTCTCCCTCTGGGCCTTGAAAATCCTTGCCCTTA
TCATTTGGGGTGAAGGAGACATTTCTGTCCTTGGCTTCCCACAGCCCCAACGCAGTCTGTGTATGATTCCTGGGA
TCCAACGAGCCCTCCTATTTTCACAGTGTTCTGATTGCTCTCACAGCCCAGGCCCATCGTCTGTTCTCTGAATGC
AGCCCTGTTCTCAACAACAGGGAGGTCATGGAACCCCTCTGTGGAACCCACAAGGGGAGAAATGGGTGATAAAGA
ATCCAGTTCCTCAAAACCTTCCCTGGCAGGCTGGGTCCCTCTCCTGCTGGGTGGTGCTTTCTCTTGCACACCACT
CCCACCACGGGGGGAGAGCCAGCAACCCAACCAGACAGCTCAGGTTGTGCATCTGATGGAAACCACTGGGCTCAA
ACACGTGCTTTATTCTCCTGTTTATTTTTGCTGTTACTTTGAAGCATGGAAATTCTTGTTTGGGGGATCTTGGGG
CTACAGTAGTGGGTAAACAAATGCCCACCGGCCAAGAGGCCATTAACAAATCGTCCTTGTCCTGAGGGGCCCCAG
CTTGCTCGGGCGTGGCACAGTGGGGAATCCAAGGGTCACAGTATGGGGAGAGGTGCACCCTGCCACCTGCTAACT
TCTCGCTAGACACAGTGTTTCTGCCCAGGTGACCTGTTCAGCAGCAGAACAAGCCAGGGCCATGGGGACGGGGGA
AGTTTTCACTTGGAGATGGACACCAAGACAATGAAGATTTGTTGTCCAAATAGGTCAATAATTCTGGGAGACTCT
TGGAAAAAACTGAATATATTCAGGACCAACTCTCTCCCTCCCCTCATCCCACATCTCAAAGCAGACAATGTAAAG
AGAGAACATCTCACACACCCAGCTCGCCATGCCTACTCATTCCTGAATTTCAGGTGCCATCACTGCTCTTTCTTT
CTTCTTTGTCATTTGAGAAAGGATGCAGGAGGACAATTCCCACAGATAATCTGAGGAATGCAGAAAAACCAGGGC
AGGACAGTTATCGACAATGCATTAGAACTTGGTGAGCATCCTCTGTAGAGGGACTCCACCCCTGCTCAACAGCTT
GGCTTCCAGGCAAGACCAACCACATCTGGTCTCTGCCTTCGGTGGCCCACACACCTAAGCGTCATCGTCATTGCC
ATAGCATCATGATGCAACACATCTACGTGTAGCACTACGACGTTATGTTTGGGTAATGTGGGGATGAACTGCATG
AGGCTCTGATTAAGGATGTGGGGAAGTGGGCTGCGGTCACTGTCGGCCTTGCAAGGCCACCTGGAGGCCTGTCTG
TTAGCCAGTGGTGGAGGAGCAAGGCTTCAGGAAGGGCCAGCCACATGCCATCTTCCCTGCGATCAGGCAAAAAAG
TGGAATTAAAAAGTCAAACCTTTATATGCATGTGTTATGTCCATTTTGCAGGATGAACTGAGTTTAAAAGAATTT
TTTTTTCTCTTCAAGTTGCTTTGTCTTTTCCATCCTCATCACAAGCCCTTGTTTGAGTGTCTTATCCCTGAGCAA
TCTTTCGATGGATGGAGATGATCATTAGGTACTTTTGTTTCAACCTTTATTCCTGTAAATATTTCTGTGAAAACT
AGGAGAACAGAGATGAGATTTGACAAAAAAAAATTGAATTAAAAATAACACAGTCTTTTTAAAACTAACATAGGA
AAGCCTTTCCTATTATTTCTCTTCTTAGCTTCTCCATTGTCTAAATCAGGAAAACAGGAAAACACAGCTTTCTAG
CAGCTGCAAAATGGTTTAATGCCCCCTACATATTTCCATCACCTTGAACAATAGCTTTAGCTTGGGAATCTGAGA
TATGATCCCAGAAAACATCTGTCTCTACTTCGGCTGCAAAACCCATGGTTTAAATCTATATGGTTTGTGCATTTT
CTCAACTAAAAATAGAGATGATAATCCGAATTCTCCATATATTCACTAATCAAAGACACTATTTTCATACTAGAT
TCCTGAGACAAATACTCACTGAAGGGCTTGTTTAAAAATAAATTGTGTTTTGGTCTGTTCTTGTAGATAATGCCC
TTCTATTTTAGGTAGAAGCTCTGGAATCCCTTTATTGTGCTGTTGCTCTTATCTGCAAGGTGGCAAGCAGTTCTT
TTCAGCAGATTTTGCCCACTATTCCTCTGAGCTGAAGTTCTTTGCATAGATTTGGCTTAAGCTTGAATTAGATCC
CTGCAAAGGCTTGCTCTGTGATGTCAGATGTAATTGTAAATGTCAGTAATCACTTCATGAATGCTAAATGAGAAT
GTAAGTATTTTTAAATGTGTGTATTTCAAATTTGTTTGACTAATTCTGGAATTACAAGATTTCTATGCAGGATTT
ACCTTCATCCTGTGCATGTTTCCCAAACTGTGAGGAGGGAAGGCTCAGAGATCGAGCTTCTCCTCTGAGTTCTAA
CAAAATGGTGCTTTGAGGGTCAGCCTTTAGGAAGGTGCAGCTTTGTTGTCCTTTGAGCTTTCTGTTATGTGCCTA
TCCTAATAAACTCTTAAACACATT

FIGURE 622

MATSMGLLLLLLLLLTQPGAGTGADTEAVVCVGTACYTAHSGKLSAAEAQNHCNQNGGNLATVKSKEEAQHVQRV
LAQLLRREAALTARMSKFWIGLQREKGKCLDPSLPLKGFSWVGGGEDTPYSNWHKELRNSCISKRCVSLLLDLSQ
PLLPNRLPKWSEGPCGSPGSPGSNIEGFVCKFSFKGMCRPLALGGPGQVTYTTPFQTTSSSLEAVPFASAANVAC
GEGDKDETQSHYFLCKEKAPDVFDWGSSGPLCVSPKYGCNFNNGGCHQDCFEGGDGSFLCGCRPGFRLLDDLVTC
ASRNPCSSSPCRGGATCVLGPHGKNYTCRCPQGYQLDSSQLDCVDVDECQDSPCAQECVNTPGGFRCECWVGYEP
GGPGEGACQDVDECALGRSPCAQGCTNTDGSFHCSCEEGYVLAGEDGTQCQDVDECVGPGGPLCDSLCFNTQGSF
HCGCLPGWVLAPNGVSCTMGPVSLGPPSGPPDEEDKGEKEGSTVPRAATASPTRGPEGTPKATPTTSRPSLSSDA
PITSAPLKMLAPSGSSGVWREPSIHHATAASGPQEPAGGDSSVATQNNDGTDGQKLLLFYILGTVVAILLLLALA
LGLLVYRKRRAKREEKKEKKPQNAADSYSWVPERAESRAMENQYSPTPGTDC

FIGURE 623A

TGCCTCTGCTGAGGTGATCTGGCGCAGAGCGGAGGAGGTGCTTGGCGCTTCTCAGGCTCCTCCTCTCCCCTTGCG
GCCTTTCTAACGTTGGCCCTGCTCTTGTGGCCTCCCGCAGA**ATG**TGGATGACGCCCAAAAGAAGCAAGATGGAAG
TCGACGAGGCTCTAGTTTTCCGGCCCGAGTGGACCCAGCGTTATTTGGTGGTGGAGCCTCCGGAGGGCGATGGGG
CCCTGTGCCTGGTCTGTCGCCGCCTCATCGTAGCTACCCGCGAACGCGACGTCAGGCGCCACTACGAGGCTGAGC
ACGAATACTACGAGCGGTATGTGGCGGACGGCGAGCGCGCGGCCCTGGTGGAGCGTCTGCGTCAGGGCGACTTGC
CCGTGGCCTCCTTCACTCCTGAAGAGAGAGCTGCTCGTGCAGGCCTCGGGCTCTGCCGCCTCTTGGCCTTGAAGG
GTCGCGGCTGGGGTGAGGGGGACTTTGTATACCAGTGCATGGAGGTGTTGCTGAGAGAGGTACTGCCCGAGCATG
TAAGCGTCCTGCAAGGCGTTGACTTATCTCCAGATATCACAAGGCAGAGGATCCTGAGCATTGACAGGAATCTAC
GCAACCAGCTTTTTAACCGAGCCAGGGACTTTAAAGCCTATTCTCTTGCCTTGGACGACCAGGCTTTTGTGGCCT
ATGAGAACTACCTCCTGGTCTTTATCCGCGGTGTAGGCCCTGAGTTGGAGGTGCAAGAAGATCTTCTGACCATAA
TCAACCTGACTCATCATTTCAGTGTTGGTGCGCTCATGTCGGCAATCCTAGAGTCCCTGCAGACAGCAGGGCTTA
GCTTGCAGAGAATGGTTGGACTGACCACGACCCATACTTTGAGGATGATTGGTGAGAACTCAGGACTCGTCTCAT
ACATGAGAGAAAAGGCCGTAAGCCCCAACTGTTGGAATGTCATTCATTATTCAGGATTTCTTCACTTGGAACTGT
TGAGCTCCTATGATGTAGATGTTAATCAGATCATAAATACCATATCCGAATGGATAGTTTTGATTAAGACCAGAG
GCGTTAGGCGACCTGAATTTCAGACTTTACTAACGGAATCTGAATCAGAGCATGGTGAAAGGGTTAATGGACGAT
GTCTGAACAATTGGCTTAGGAGAGGGAAAACTTTAAAACTAATATTCTCTCTAAGAAAAGAAATGGAAGCGTTCT
TGGTTTCAGTAGGGGCAACAACAGTCCACTTCTCAGACAAACAATGGCTTTGTGACTTTGGCTTCTTGGTGGACA
TTATGGAACACCTTCGAGAACTCAGTGAAGAATTACGAGTTAGTAAAGTCTTTGCTGCTGCTGCCTTTGACCATA
TTTGTACTTTCGAAGTTAAGCTGAATTTATTTCAAAGACATATTGAGGAAAAAAATCTAACAGACTTTCCTGCCC
TCAGAGAAGTTGTTGATGAGCTAAAACAGCAAAATAAGGAAGATGAAAAAATATTTGATCCTGATAGGTATCAAA
TGGTGATCTGTCGTCTCCAAAAAGAATTTGAGAGACATTTTAAGGACCTCAGGTTCATTAAAAAGGACTTAGAAC
TTTTTTCAAATCCATTTAACTTTAAACCTGAATATGCACCTATTTCAGTGAGGGTGGAGCTAACAAAACTTCAGG
CAAACACTAATCTTTGGAATGAATACAGAATCAAAGACTTGGGGCAGTTTTATGCTGGATTGTCTGCTGAATCCT
ACCCAATTATCAAAGGGGTTGCCTGTAAGGTGGCATCCTTGTTTGATAGTAACCAAATCTGTGAAAAGGCTTTTT
CATATTTGACTCGAAACCAACACACTTTGAGTCAGCCATTAACAGATGAGCATCTCCAAGCCCTGTTTCGGGTTG
CCACAACTGAAATGGAGCCCGGTTGGGATGACCTTGTGAGAGAAAGAAATGAATCTAATCCA**TAA**GGCTTTGTAG
TACAAGATTGAAAAACTCAACAAGAATTTAATTCTAAAAGCAAAAATTGGTTTGAGTTTTCAAGTTTACTAATTT
GGATTGTGAGAAAGTACCAAGTACCAGCCGTCCAAACTGATCACAATTAAAATTCTGACAGTTGCCTTTTTTTTC
ATCTCAAATGGCAGCATGGGACTGAAACATGAGAATGCCACCTTTTTTAAAACTTAGTTTAGTGACAAAGTCATT
GTCTTTTATGATATAGTTAATTTTAAAGAGATTTAGTATTAATGTGAGTTGAATTTGCAGTCTGTTTTTTAGGTG
TTCTGAAGATAAATGCCAAAAATTTCAGCTCTTATTTTAATGGAGTGTTAAAATTCTGATTCATGTAGTCTTAAA
TTATCAACTCCTTAAATGTGCTTTTGAACCAATTTGCAGAAGCTCACATAGCAAGTTCATAAGGTTCCAAAAAGG
AAGCCCATACATAACAGTGGAGGTGTTTTGTCTAACCATCAAAATGTTTGAGACTTTTTTTTAAACATTTCTGAG
TTCGAAGGTAATACTGACAGATTTCTTCCCTCTTCCCTCCCCATCACCCACCTCAGTGATAACACATTACTGATA
GAGGAAGTCATTAGAATCATTTTTAAGTTTCAGATATAGGAGACTTCATGCAATTTGGAGATAAGACTAATTATT
GGGGGTTTTCCTTGGATTTTTTTTTTAATAACTGGGGGCTATTTTATCAGCTTGCCTATTAAAGGACTATGGTAA
GTATAGAATCTTAATGGTTGCCAGTTAGTAATTCTTTTTTTTTTTTTTTACTGTAGACACAAGTTTGGCCCTATC
AAAAACGATGAGGAAAAAAGATTGCACTCCAGGATTAGGAGGTGTGAGATATTTTAGCTTTTTTGTCTTATCTGC
GTGGGTATTGCTGCTTTATTTTAAAAAATCCTGCCTAAAGTAAACACTTTGTTTTAAAATGATACAGTATCAGAT
TTTGTTAGATGCTAGAAATGGATTTATTCTAAAATTTGGAACTGTCGTACACATTCTATATGTAAGATAGCACAC
AAGTAGAAATATTTAAAAGCAGTCTTATTCACAGATTGCAGTAATTCTGTATTTCTACTAAGATAATCTGCTTTG
TGCCAAAACAGTAATTTCCAAACTTCTGTTCACCATGAAAAGGCAATCTTAAAGTTCATTATGTAAAACTAATTA
TAAACAGGACCCAATTTATATTCATAGATCCTCTCAAGTATTATACAATTTAAAAACTCTTGTTCCAAAGTCCTG
TCTTAACTATTGAAACACCTTAATCTGTGGTTACTAATCCAGCAAATTCAAGGAACCAGGCTATGACTAAGAATT
TAGGTGGAATTGATGTCTGGGCAATTAAAATAAATGGCATAAGAGCTTAAAAACCAAAGTTGTGCCAGTGGCTTT
CAACTAGAGGCAGTAACCTGTCATTCCAGAGGATGCTGAGAAATGTGTAGGGGCACTTTTTTGGTTGTCATATTT
ACTAGGGGCTTCTGTTGGCATTTAAGCCTAAAGACACTCACCCCTGCAGTGCATGGGACAGCCTGGCACAATGAA
GAATTAGCCCTCCCAAAATGTAGATTATTTTATTTCAAGGGATAGGGCAGATTACCATTAGAAGCAAAATTAAAA

FIGURE 623B

GTACAAGCTGGGCAAACTGACAGAATACTAGATAGGAGAGACTAATTCCAACCTTCTAAATTTGGCTAGTAAAGT
GCAATAAAGGCATTGATAAGTTCTGTTAGCTCACCATAGCACTTGTAAATCAGGAATTAATAATTGAATCAGATT
TAAGGGCTCTGTCCTGTTATACATATTTAAGGCAGAAAAAAAGTTACATGTCGATTAGGTACTTATCAAGAATGG
TCAAGCTGAGATTTTGGTTAATAGAGTAAGCTTACATATCTAGAGAAACAACATAGTGGAAAACCGAAAAAAAAA
AACAGAAAAATCTACCGGTAATTTCCCAGTAGCTTTGAATATTCACAGCAGAGCTTTATTACTTGAGAGAAAGAC
TGGAAGACCTGAAAGCCACTTCTGCTTTCTAACCCCAGTTCCTTAAATATTGAAATCTTGTACATTTTGTGAAAT
TCCAGTATGTTTTGCTTAAGGTGTTAATAAAATTAGTTTGCATCATGTAGTCATTGAGTGAGGGGGAGATATAAG
CCAAGGATTTTAAATTGACCCTTAGCTATAGAGAATTTGCTATAAGCTAGTCTTGTTTGT

FIGURE 624

MWMTPKRSKMEVDEALVFRPEWTQRYLVVEPPEGDGALCLVCRRLIVATRERDVRRHYEAEHEYYERYVADGERA
ALVERLRQGDLPVASFTPEERAARAGLGLCRLLALKGRGWGEGDFVYQCMEVLLREVLPEHVSVLQGVDLSPDIT
RQRILSIDRNLRNQLFNRARDFKAYSLALDDQAFVAYENYLLVFIRGVGPELEVQEDLLTIINLTHHFSVGALMS
AILESLQTAGLSLQRMVGLTTTHTLRMIGENSGLVSYMREKAVSPNCWNVIHYSGFLHLELLSSYDVDVNQIINT
ISEWIVLIKTRGVRRPEFQTLLTESESEHGERVNGRCLNNWLRRGKTLKLIFSLRKEMEAFLVSVGATTVHFSDK
QWLCDFGFLVDIMEHLRELSEELRVSKVFAAAAFDHICTFEVKLNLFQRHIEEKNLTDFPALREVVDELKQQNKE
DEKIFDPDRYQMVICRLQKEFERHFKDLRFIKKDLELFSNPFNFKPEYAPISVRVELTKLQANTNLWNEYRIKDL
GQFYAGLSAESYPIIKGVACKVASLFDSNQICEKAFSYLTRNQHTLSQPLTDEHLQALFRVATTEMEPGWDDLVR
ERNESNP

FIGURE 625

ATGTCTCTTGTCAGCTGTCTTTCAGAAGACCTGGTGGGGCAAGTCCGTGGGCATC**ATG**TTGACCGAGCTGGAGAA
AGCCTTGAACTCTATCATCGACGTCTACCACAAGTACTCCCTGATAAAGGGGAATTTCCATGCCGTCTACAGGGA
TGACCTGAAGAAATTGCTAGAGACCGAGTGTCCTCAGTATATCAGGAAAAAGGGTGCAGACGTCTGGTTCAAAGA
GTTGGATATCAACACTGATGGTGCAGTTAACTTCCAGGAGTTCCTCATTCTGGTGATAAAGATGGGCGTGGCAGC
CCACAAAAAAAAGCCATGAAGAAAGCCACAAAGAG**TAG**CTGAGTTACTGGGCCCAGAGGCTGGGCCCCTGGACATG
TACCTGCAGAATAATAAAGTCATCAATACCTCAAAAAAAAAAAAAAAAAAAAA

FIGURE 626

MLTELEKALNSIIDVYHKYSLIKGNFHAVYRDDLKKLLETECPQYIRKKGADVWFKELDINTDGAVNFQEFLILV
IKMGVAAHKKSHEESHKE

FIGURE 627

GGCACGAGGCTGAGTGTCCGTCTCGCGCCCGGAAGCGGGCGACCGCCGTCAGCCCGGAGGAGGAGGAGGAGGAGG
AGGAGGAGGGGGCGGCC**ATG**GGGCTGCTGTCCCAGGGCTCGCCGCTGAGCTGGGAGGAAACCAAGCGCCATGCCG
ACCACGTGCGGCGGCACGGGATCCTCCAGTTCCTGCACATCTACCACGCCGTCAAGGACCGGCACAAGGACGTTC
TCAAGTGGGGCGATGAGGTGGAATACATGTTGGTATCTTTTGATCATGAAAATAAAAAAGTCCGGTTGGTCCTGT
CTGGGGAGAAAGTTCTTGAAACTCTGCAAGAGAAGGGGGAAAGGACAAACCCAAACCATCCTACCCTTTGGAGAC
CAGAGTATGGGAGTTACATGATTGAAGGGACACCAGGACAGCCCTACGGAGGAACAATGTCCGAGTTCAATACAG
TTGAGGCCAACATGCGAAAACGCCGGAAGGAGGCTACTTCTATATTAGAAGAAAATCAGGCTCTTTGCACAATAA
CTTCATTTCCCAGATTAGGCTGTCCTGGGTTCACACTGCCCGAGGTCAAACCCAACCCAGTGGAAGGAGGAGCTT
CCAAGTCCCTCTTCTTTCCAGATGAAGCAATAAACAAGCACCCTCGCTTCAGTACCTTAACAAGAAATATCCGAC
ATAGGAGAGGAGAAAAGGTTGTCATCAATGTACCAATATTTAAGGACAAGAATACACCATCTCCATTTATAGAAA
CATTTACTGAGGATGATGAAGCTTCAAGGGCTTCTAAGCCGGATCATATTTACATGGATGCCATGGGATTTGGAA
TGGGCAATTGCTGTCTCCAGGTGACATTCCAAGCCTGCAGTATATCTGAGGCCAGATACCTTTATGATCAGTTGG
CTACTATCTGTCCAATTGTTATGGCTTTGAGTGCTGCATCTCCCTTTTACCGAGGCTATGTGTCAGACATTGATT
GTCGCTGGGGAGTGATTTCTGCATCTGTAGATGATAGAACTCGGGAGGAGCGAGGACTGGAGCCATTGAAGAACA
ATAACTATAGGATCAGTAAATCCCGATATGACTCAATAGACAGCTATTTATCTAAGTGTGGTGAGAAATATAATG
ACATCGACTTGACGATAGATAAAGAGATCTACGAACAGCTGTTGCAGGAAGGCATTGATCATCTCCTGGCCCAGC
ATGTTGCTCATCTCTTTATTAGAGACCCACTGACACTGTTTGAAGAGAAAATACACCTGGATGATGCTAATGAGT
CTGACCATTTTGAGAATATTCAGTCCACAAATTGGCAGACAATGAGATTTAAGCCCCCTCCTCCAAACTCAGACA
TTGGATGGAGAGTAGAATTTCGACCCATGGAGGTGCAATTAACAGACTTTGAGAACTCTGCCTATGTGGTGTTTG
TGGTACTGCTCACCAGAGTGATCCTTTCCTACAAATTGGATTTTCTCATTCCACTGTCAAAGGTTGATGAGAACA
TGAAGGTAGCACAGAAAAGAGATGCTGTCTTGCAGGGAATGTTTTATTTCAGGAAAGATATTTGCAAAGGTGGCA
ATGCAGTGGTGGATGGTTGTGGCAAGGCCCAGAACAGCACGGAGCTCGCTGCAGAGGAGTACACCCTCATGAGCA
TAGACACCATCATCAATGGGAAGGAAGGTGTGTTTCCTGGACTGATCCCAATTCTGAACTCTTACCTTGAAAACA
TGGAAGTGGATGTGGACACCAGATGTAGTATTCTGAACTACCTAAAGCTAATTAAGAAGAGAGCATCTGGAGAAC
TAATGACAGTTGCCAGATGGATGAGGGAGTTTATCGCAAACCATCCTGACTACAAGCAAGACAGTGTCATAACTG
ATGAAATGAATTATAGCCTTATTTTGAAGTGTAACCAAATTGCAAATGAATTATGTGAATGCCCAGAGTTACTTG
GATCAGCATTTAGGAAAGTAAAATATAGTGGAAGTAAAACTGACTCATCCAAC**TAG**ACATTCTACAGAAAGAAAA
ATGCATTATTGACGAACTGGCTACAGTACCATGCCTCTCAGCCCGTGTGTATAATATGAAGACCAAATGATAGAA
CTGTACTGTTTTCTGGGCCAGTGAGCCAGAAATTGATTAAGGCTTTCTTTGGTAGGTAAATCTAGAGTTTATACA
GTGTACATGTACATAGTAAAGTATTTTTGATTAACAATGTATTTTAATAACATATCTAAAGTCATCATGAACTGG
CTTGTACATTTTTAAATTCTTACTCTGGAGCAACCTACTGTCTAAGCAGTTTTGTAAATGTACTGGTAATTGTAC
AATACTTGCATTCCAGAGTTAAAATGTTTACTGTAAATTTTTGTTCTTTTAAAGACTACCTGGGACCTGATTTAT
TGAAATTTTTCTCTTTAAAAACATTTTCTCTCGTTAATTTTCCTTTGTCATTTCCTTTGTTGTCTACATTAAATC
ACTTGAATCCATTGAAAGTGCTTCAAGGGTAATCTTGGGTTTCTAGCACCTTATCTATGATGTTTCTTTTGCAAT
TGGAATAATCACTTGGTCACCTTGCCCCAAGCTTTCCCCTCTGAATAAATACCCATTGAACTCTGAAAAAAAAAA
AAAAAAAAA

FIGURE 628

MGLLSQGSPLSWEETKRHADHVRRHGILQFLHIYHAVKDRHKDVLKWGDEVEYMLVSFDHENKKVRLVLSGEKVL
ETLQEKGERTNPNHPTLWRPEYGSYMIEGTPGQPYGGTMSEFNTVEANMRKRRKEATSILEENQALCTITSFPRL
GCPGFTLPEVKPNPVEGGASKSLFFPDEAINKHPRFSTLTRNIRHRRGEKVVINVPIFKDKNTPSPFIETFTEDD
EASRASKPDHIYMDAMGFGMGNCCLQVTFQACSISEARYLYDQLATICPIVMALSAASPFYRGYVSDIDCRWGVI
SASVDDRTREERGLEPLKNNNYRISKSRYDSIDSYLSKCGEKYNDIDLTIDKEIYEQLLQEGIDHLLAQHVAHLF
IRDPLTLFEEKIHLDDANESDHFENIQSTNWQTMRFKPPPPNSDIGWRVEFRPMEVQLTDFENSAYVVFVVLLTR
VILSYKLDFLIPLSKVDENMKVAQKRDAVLQGMFYFRKDICKGGNAVVDGCGKAQNSTELAAEEYTLMSIDTIIN
GKEGVFPGLIPILNSYLENMEVDVDTRCSILNYLKLIKKRASGELMTVARWMREFIANHPDYKQDSVITDEMNYS
LILKCNQIANELCECPELLGSAFRKVKYSGSKTDSSN

FIGURE 629

CTGTGACACTGCCAGCAGCGCGCAGAGGGAGGGATGGGGGCGGGTATCGGCGTAGGGGCCCTCGGAAAGAACGGA
TATTGCTGTGACACCGCGGGGACGCTCTGAAGGGACGAGTGTCGGTGTGGCACCGGTGCACGCTGAAGGAGCCGG
CGGAACCGGGTGGCC**ATG**GGGATGTGGGCATCGCTGGACGCTTTGTGGGAGATGCCGGCCGAGAAGCGTATCTTC
GGGGCCGTGCTGCTCTTTTCCTGGACAGTGTATCTTTGGGAGACCTTCCTAGCACAGCGGCAGAGAAGGATATAT
AAAACAACAACTCATGTACCACCGGAGTTAGGACAGATCATGGATTCTGAAACATTTGAGAAATCTCGACTCTAT
CAACTGGATAAAAGCACTTTCAGCTTCTGGTCAGGACTCTATTCAGAGACTGAAGGCACTCTTATTCTTCTCTTT
GGAGGAATACCTTATCTCTGGAGACTTTCTGGACGGTTCTGTGGTTATGCTGGCTTTGGACCAGAATATGAGATC
ACTCAGTCCCTGGTGTTTCTGCTGTTGGCTACACTTTTCAGTGCATTGACTGGTTTGCCATGGAGTCTTTATAAT
ACTTTTGTGATAGAAGAAAAACATGGCTTCAATCAACAGACTTTGGGGTTCTTCATGAAAGATGCAATCAAGAAA
TTTGTTGTGACTCAGTGTATTTTGTTGCCTGTGTCTTCACTTCTACTTTACATTATTAAAATTGGGGGTGACTAT
TTTTTTATTTATGCCTGGCTGTTCACATTAGTTGTGTCTCTGGTTCTTGTCACAATCTATGCTGATTATATTGCC
CCTTTATTTGACAAATTCACACCTCTGCCTGAGGGAAAGCTTAAAGAAGAAATTGAAGTAATGGCAAAGAGTATT
GACTTTCCTTTGACGAAGGTGTATGTTGTGGAAGGATCTAAACGCTCTTCCCACAGCAATGCTTATTTTTATGGC
TTCTTCAAGAACAAGCGAATAGTTTTGTTTGACACTCTACTAGAAGAGTACTCTGTACTAAACAAAGACATCCAG
GAGGATTCTGGCATGGAACCCCGCAATGAGGAAGAAGGGAACAGTGAAGAAATAAAAGCTAAAGTTAAAAATAAG
AAACAAGGATGTAAAAATGAGGAGGTACTCGCTGTACTAGGCCATGAACTGGGGCACTGGAAGTTGGGACATACA
GTCAAAAATATCATTATTAGCCAGATGAATTCTTTCCTGTGTTTTTTTTTATTTGCTGTATTAATTGGTCGAAAG
GAGCTTTTTGCTGCATTTGGTTTTTATGATAGCCAACCCACTCTTATTGGACTATTGATCATCTTCCAGTTTATT
TTTTCACCTTACAATGAGGTTCTTTCTTTTTGCCTAACAGTCCTAAGCCGCAGATTTGAGTTTCAAGCTGATGCA
TTTGCCAAGAAACTTGGGAAGGCTAAAGACTTATATTCTGCTTTAATCAAACTTAACAAAGATAACTTGGGATTC
CCTGTTTCTGACTGGTTGTTCTCAATGTGGCATTATTCTCATCCTCCACTGCTAGAGAGACTTCAAGCTTTGAAA
ACTATGAAGCAACAC**TGA**GATGTCCAGGATCTGTGACTGAAGACATTTCTGATTATTTCTGTCCTGGCAGCATGT
TCCAGCTCTTGATGTTTTTAAACTTTTTTTTAGAAGAAAAATTAAGTACAGAAAAGCCCAGATTTAAATACATTT
AATATGTCATTTTAAAAATGATTTTAATAATTCATTTCTTAAAACACTGAATGAATTTTGAAGCTTAATGTTTTT
AAAGGCATAGTTTTATCTTTGACATCTAATTTACCATCAAGTTGTAAAATTATTTGGAAAAATACAGAACTCGTT
TTATTTGTATACTTATATGGAATCTGCATGTGAGGTGTTTGAGGGCATATGTTTGAAAGAGGGAGCATCACCACA
GGAATCCTTTCTGTGAGGTGGAAACAGTGGTCCTGAATCATTGTGCTCACACCTAACTTGAAATCTGGTCTTACT
TTCATGCTGTTATGATTTCACCTGGTGAATCAGTGTTTTAAATAAGAAAGGTAATAGTTGGTAAGGCCAATGTTA
TTTAAATGAAAGTAGTTAGAAAAATGCTCTCCTATTCTACCAAATTTTTAATTTCTTTCTTCCCTTTCTTGCTAC
ACAGTGATCAAGAGTTTCTCATAGTGCTTTGAAGTTAGAAATTATGTATAGGATATTTTAAATCATTGAGTTTTG
TGGGGTTTTTTTGTTTGTTTGTTTCTTTTGTTTTTTGGAAAATCCGTGTCTTTATCTTTTTTTCCCACGTGGTAG
ATATGATCCCATTGGAGGTAAATTGTAGCTTCTTCTCATTCATGCAGTAAATAATACATCCTTTCACTCAGCAGA
GATGGCCATATTAAACACGTTTTGCTATGTTAAAAGTGGCAGAACAGGAAAGACGAATTAAAAATAACATTTTTT
AAGCGACATAAGGATGAAATACTGATGAATCTCTGTGACATTACAGGGAAAAAAATATAGTTTTCTATCTCTTTC
AAGGGCAGAAGAGTTTTCATTTTTATTTTTGTAATTTTATCTGTAAGTCATAAATATTACTTAATCAGGCCTGAT
TCTACTTTTGAAAATTACAGTTCTTGAAATGCAGATAATGTTTACTTTGAAAACAAATGTCATGAATGATTTCCA
GTTTTTAAAGCTATATGTTTCACTGCTTCATATCTCTGTCCACTTTCTGAATGAGAACTTATTTTGTGCCTAGAG
CTCTCACTCACTGATAATGCTTATTACCTTCTGGGCATTTATTCCAAAGTGGGATCAACTGTACGCCTTTGGTAT
CTGACCATAAAGTCTTTTGCTCCGCTGACATTTGGGTGATGTCTTCACATGGAAATATAATAAAAATAAAAATCT
AGTTTAATACTGCATTATTTATTTTCCTAAGGCTAAAGAGGAGCAGTCCTATGCTTTTATTCAGCATCCTTTATC
TGTGACTTCATGCTCTGATAACTGCCTTTCCTTCCTTCTGTGCCTTTGAATACAAATTTCAGTTCTGCAAAAGTG
AAACATTAAACATTGCCAACGCAAATGT

FIGURE 630

MGMWASLDALWEMPAEKRIFGAVLLFSWTVYLWETFLAQRQRRIYKTTTHVPPELGQIMDSETFEKSRLYQLDKS
TFSFWSGLYSETEGTLILLFGGIPYLWRLSGRFCGYAGFGPEYEITQSLVFLLLATLFSALTGLPWSLYNTFVIE
EKHGFNQQTLGFFMKDAIKKFVVTQCILLPVSSLLLYIIKIGGDYFFIYAWLFTLVVSLVLVTIYADYIAPLFDK
FTPLPEGKLKEEIEVMAKSIDFPLTKVYVVEGSKRSSHSNAYFYGFFKNKRIVLFDTLLEEYSVLNKDIQEDSGM
EPRNEEEGNSEEIKAKVKNKKQGCKNEEVLAVLGHELGHWKLGHTVKNIIISQMNSFLCFFLFAVLIGRKELFAA
FGFYDSQPTLIGLLIIFQFIFSPYNEVLSFCLTVLSRRFEFQADAFAKKLGKAKDLYSALIKLNKDNLGFPVSDW
LFSMWHYSHPPLLERLQALKTMKQH

FIGURE 631

CACCCTGTAAGTGGCTGCGGCGGGAAG**ATG**GCGGAGCTGCGCGTGCTCGTAGCTGTCAAGAGGGTCATCGACTAC
GCCGTGAAGATCCGAGTGAAGCCTGACAGGACCGGTGTGGTCACGGATGGTGTGAAGCACTCCATGAACCCCTTC
TGTGAGATCGCGGTGGAGGAGGCTGTGCGGCTCAAGGAGAAGAAGCTGGTGAAGGAGGTCATCGCCGTCAGCTGT
GGGCCTGCACAGTGCCAGGAGACGATTCGTACCGCCCTGGCCATGGGTGCAGACCGAGGTATCCACGTGGAGGTG
CCCCCAGCAGAAGCAGAACGCTTGGGTCCCCTGCAGGTGGCTCGGGTCCTGGCCAAGCTGGCAGAGAAGGAGAAG
GTGGACCTGGTGCTGCTGGGCAAACAGGCCATCGATGATGACTGTAACCAGACAGGGCAGATGACAGCTGGATTT
CTTGACTGGCCACAGGGCACATTCGCCTCCCAGGTGACGCTGGAGGGGGACAAGTTGAAAGTGGAGCGGGAGATC
GATGGGGGCCTGGAGACCCTGCGCCTGAAGCTGCCAGCTGTGGTGACAGCTGACCTGAGGCTCAACGAGCCCCGC
TACGCCACGCTGCCCAACATCATGAAAGCCAAGAAGAAGAAGATCGAGGTGATCAAGCCTGGGGACCTGGGTGTG
GACCTGACCTCCAAGCTCTCTGTGATCAGTGTGGAGGACCCGCCCCAGCGCACGGCCGGCGTCAAGGTGGAGACC
ACTGAGGACCTGGTGGCCAAGCTGAAGGAGATTGGGCGGATT**TGA**GCCCCTCCCAGAGATGGCAATAAAACTGAC
TCTCAACATCAAAAAAAAAAAAAAAAA

FIGURE 632

MAELRVLVAVKRVIDYAVKIRVKPDRTGVVTDGVKHSMNPFCEIAVEEAVRLKEKKLVKEVIAVSCGPAQCQETI
RTALAMGADRGIHVEVPPAEAERLGPLQVARVLAKLAEKEKVDLVLLGKQAIDDDCNQTGQMTAGFLDWPQGTFA
SQVTLEGDKLKVEREIDGGLETLRLKLPAVVTADLRLNEPRYATLPNIMKAKKKKIEVIKPGDLGVDLTSKLSVI
SVEDPPQRTAGVKVETTEDLVAKLKEIGRI

FIGURE 633

GATAGGATCACCACGGTGGTAACCTCTCACATTGTCTTCTCCACAGGAGGCGTCTGACACAGT**ATG**ATGATGAAG
ATCCCATGGGGCAGCATCCCAGTACTGATCTTGCTCCTGCTCCTGGGCCTAATCGATATCTCCCAGGCCCAGCTC
AGCTGCACCGGGCCCCCAGCCATCCCTGGCATCCCGGGTATCCCTGGGACACCTGGCCCCGATGGCCAACCTGGG
ACCCCAGGGATAAAAGGAGAGAAAGGGCTTCCAGGGCTGGCTGGAGACCATGGTGAGTTCGGAGAGAAGGGAGAC
CCAGGGATTCCTGGGAATCCAGGAAAAGTCGGCCCCAAGGGCCCCATGGGCCCTAAAGGTGGCCCAGGGGCCCCT
GGAGCCCCAGGCCCCAAAGGTGAATCGGGAGACTACAAGGCCACCCAGAAAATCGCCTTCTCTGCCACAAGAACC
ATCAACGTCCCCCTGCGCCGGGACCAGACCATCCGCTTCGACCACGTGATCACCAACATGAACAACAATTATGAG
CCCCGCAGTGGCAAGTTCACCTGCAAGGTGCCCGGTCTCTACTACTTCACCTACCACGCCAGCTCTCGAGGGAAC
CTGTGCGTGAACCTCATGCGTGGCCGGGAGCGTGCACAGAAGGTGGTCACCTTCTGTGACTATGCCTACAACACC
TTCCAGGTCACCACCGGTGGCATGGTCCTCAAGCTGGAGCAGGGGGAGAACGTCTTCCTGCAGGCCACCGACAAG
AACTCACTACTGGGCATGGAGGGTGCCAACAGCATCTTTTCCGGGTTCCTGCTCTTTCCAGATATGGAGGCC**TGA**

CCTGTGGGCTGCTTCACATCCACCCCGGCTCCCCCTGCCAGCAACGCTCACTCTACCCCCAACACCACCCCTTGC
CCAGCCAATGGACACAGTAGGGCTTGGTGAATGCTGCTGAGTGAATGAGTAAATAAACTCTTCAAGGCCAAGGAA
CAGTGGTCTAATTCAACTCTGTGTCCCAGCACTGGCACACCAGAAGTGCCATGCTCAGAAATGTTGGTTACATGA
ATGAATGAACCATGAATGAATG

FIGURE 634

MMMKIPWGSIPVLILLLLLGLIDISQAQLSCTGPPAIPGIPGIPGTPGPDGQPGTPGIKGEKGLPGLAGDHGEFG
EKGDPGIPGNPGKVGPKGPMGPKGGPGAPGAPGPKGESGDYKATQKIAFSATRTINVPLRRDQTIRFDHVITNMN
NNYEPRSGKFTCKVPGLYYFTYHASSRGNLCVNLMRGRERAQKVVTFCDYAYNTFQVTTGGMVLKLEQGENVFLQ
ATDKNSLLGMEGANSIFSGFLLFPDMEA

FIGURE 635A

GGACTGTGTGTGTCTGGCTGTAGCAGACGCGAGGCGGCGACGAGGCGCCGGGGACCCGCGCGAGGGGCGGCCGGG
AGGCGGCGGCGGCGGCCGCCAGAAGTAGCAGCAGGACCGGCGGCGGCGACGGCAGCCCTGAAATGCATTTTCCTC
TCCAGCGGCC**ATG**TTAACCAGGAAACCTTCGGCCGCCGCTCCCGCCGCCTACCCGACCGGCCGAGGTGGGGACAG
CGCCGTTCGTCAGCTTCAGGCTTCCCCGGGGCTCGGTGCAGGGCCCACCCGGAGCGGAGTGGGGACTGGCCCGCC
CTCCCCCATCGCCCTGCCGCCTCTCCGGGCCAGCAACGCTGCCGCCGCAGCCCACACGATTGGCGGCAGTAAGCA
CACAATGAATGATCACCTGCATGTCGGCAGCCACGCTCACGGACAGATCCAGGTTCAACAGTTGTTTGAGGATAA
CAGTAACAAGCGGACAGTGCTCACGACACAACCAAATGGGCTTACAACAGTGGGCAAAACGGGCTTGCCAGTGGT
GCCAGAGCGGCAGCTGGACAGCATTCATAGACGGCAGGGGAGCTCCACCTCTCTAAAGTCCATGGAAGGCATGGG
GAAGGTGAAAGCCACCCCCATGACACCTGAACAAGCAATGAAGCAATACATGCAAAAACTCACAGCCTTCGAACA
CCATGAGATTTTCAGCTACCCTGAAATATATTTCTTGGGTCTAAATGCTAAGAAGCGCCAGGGCATGACAGGTGG
GCCCAACAATGGTGGCTATGATGATGACCAGGGATCATATGTGCAGGTGCCCCACGATCACGTGGCTTACAGGTA
TGAGGTCCTCAAGGTCATTGGGAAGGGGAGCTTTGGGCAGGTGGTCAAGGCCTACGATCACAAAGTCCACCAGCA
CGTGGCCCTAAAGATGGTGCGGAATGAGAAGCGCTTCCACCGGCAAGCAGCGGAGGAGATCCGAATCCTGGAACA
CCTGCGGAAGCAGGACAAGGATAACACAATGAATGTCATCCATATGCTGGAGAATTTCACCTTCCGCAACCACAT
CTGCATGACGTTTGAGCTGCTGAGCATGAACCTCTATGAGCTCATCAAGAAGAATAAATTCCAGGGCTTCAGTCT
GCCTTTGGTTCGCAAGTTTGCCCACTCGATTCTGCAGTGCTTGGATGCTTTGCACAAAAACAGAATAATTCACTG
TGACCTTAAGCCCGAGAACATTTTGTTAAAGCAGCAGGGTAGAAGCGGTATTAAAGTAATTGATTTTGGCTCCAG
TTGTTACGAGCATCAGCGTGTCTACACGTACATCCAGTCGCGTTTTTACCGGGCTCCAGAAGTGATCCTTGGGGC
CAGGTATGGCATGCCCATTGATATGTGGAGCCTGGGCTGCATTTTAGCAGAGCTCCTGACGGGTTACCCCCTCTT
GCCTGGGGAAGATGAAGGGGACCAGCTGGCCTGTATGATTGAACTGTTGGGCATGCCCTCACAGAAACTGCTGGA
TGCATCCAAACGAGCCAAAAATTTTGTGAGCTCCAAGGGTTATCCCCGTTACTGCACTGTCACGACTCTCTCAGA
TGGCTCTGTGGTCCTAAACGGAGGCCGTTCCCGGAGGGGGAAACTGAGGGGCCCACCGGAGAGCAGAGAGTGGGG
GAACGCGCTGAAGGGGTGTGATGATCCCCTTTTCCTTGACTTCTTAAAACAGTGTTTAGAGTGGGATCCTGCAGT
GCGCATGACCCCAGGCCAGGCTTTGCGGCACCCCTGGCTGAGGAGGCGGTTGCCAAAGCCTCCCACCGGGGAGAA
AACGTCAGTGAAAAGGATAACTGAGAGCACCGGTGCTATCACATCTATATCCAAGTTACCTCCACCTTCTAGCTC
AGCTTCCAAACTGAGGACTAATTTGGCGCAGATGACAGATGCCAATGGGAATATTCAGCAGAGGACAGTGTTGCC
AAAACTTGTTAGC**TGA**GCTCACGTCCCCTGATGCTGGTAACCTGAAAGATACGACATTGCTGAGCCTTACTGGGT
TGAAAAGGAGTAGCTCAGACCTGTTTTTATTTGCTCAATAACTCTACTCATTTGTATCTTTTCAGCACTTAATTT
TAATGTAAGAAAGTTGTTCATTTTGTTTTTATAAAATACATGAGGACAATGCTTTAAGTTTTTATACTTTCAGAA
ACTTTTTGTGTTCTAAAAGTACAATGAGCCTTACTGTATTTAGTGTGGCAGAATAATAACATCAGTGGCAGGCCA
CTGATTACTTCATGACTGCCACGCATTTACAGATTGGTGTCAAAGACATTCACTATGTTTTTATGGTTCATGTTA
TATCCTCCCCAGGGTGACAGCCCCTTAAGGCCCTCCTTTTCCCTCCATGCTCCAGGTCCATGCACAGGTGTAGCA
TGTCCTGCTTCCGTTTTTCATAAATTAATCTGGGTGTTGGGGGTAGTGGGAGGAGAACGGTCAGAATCAAAGTGA
CATTCTAAGAAAAACTGTACCTTAGAGATTTTCCTCTAGTGCTCAAACAAATACAAAATAAGATCCCCAAGGTTT
AAACTGCCCAGTTAGCATTCTGACATTCTAAAAGCCGGCAAAGCAGCTTTTAGTGGATAAATGGGAATGGAAACG
TGTGTGTTCCTCCAAATTTTCTAGTATGATCGGTGAGCTGTTTTGTAAAGAAGCCTCATATTACAGAGTTGCTTT
TGCACCTAAATTTAGAATTGTATTCCATGAACTGTTCCTCCCTTTTCTCTGCTTTTCTCCTCTCTGTTCCTCTTT
TAATACCACACGTCTGTTGCTTGCATTTAGTTTGTCTTCTTCCTTCAGCTGTGTATCCCAGACTGTTAATACAGA
AAAGAGACATTTCAGCTGTGATTATGACCATTGTTTCATATTCCAATTAAAAAAAGAACAGCAGCCTAGCTACTT
AAGGTGGGGATTTCATAGTTCCAAAGAAGATTTAGCAGATTAGAGTGAGTTCACACTTTTCAGGTGCCACTGTAA
GGTTCTCTCAGCCTGGGAAACTATCAACTCTTTCTTTAAAAAGAAAGAGGGTTGAAAATCCTCTGGACGAACAGA
AGTCACTTTGGCTGTTCAGTAAGGCCAATGTTAACAACACGTTTAGAGGAGGAAAAGTTCAACCTCAAGTTAAAT
GGTTTGACTTATTCTTCGTATCATTAGAAGAACCCCAGAGATAGCATTCCTCTATTTTATTTTACTTTCTTTTGG
ATTGCACTGATTGTTTTTGTGGGAATGACACTTTATCTGGCAAAGTAACTGAGAGTTTGGTAAAAGAATATTTTC
TTCTCTGAATAATAATTATTTTCACAGTGAAAATTTCAGTATTTTATCACTAATGTATGAGCAATGATCTATATC
AATTTCAAGGCACGTGAAAAAAATTTTTTAGTATGTGCAATTTAATATAGAAAGATTTCTGCCTGTTTGGACAAT
AGGTTTTGGGTAGTACAGATTAGGATAAGTAAGCTTATATATGCACAGAGATTATTGTATTACCTGTAAATTGAT
TTACAAGTACTTAAAAGCGTGGTCCCCAGTGAGGCCAAGAAAGTTTCCGGTTAAGTTCTTTAATAATAATCCTAC

FIGURE 635B

AGTTTATCTTAAGAA

FIGURE 636

MLTRKPSAAAPAAYPTGRGGDSAVRQLQASPGLGAGPTRSGVGTGPPSPIALPPLRASNAAAAAHTIGGSKHTMN
DHLHVGSHAHGQIQVQQLFEDNSNKRTVLTTQPNGLTTVGKTGLPVVPERQLDSIHRRQGSSTSLKSMEGMGKVK
ATPMTPEQAMKQYMQKLTAFEHHEIFSYPEIYFLGLNAKKRQGMTGGPNNGGYDDDQGSYVQVPHDHVAYRYEVL
KVIGKGSFGQVVKAYDHKVHQHVALKMVRNEKRFHRQAAEEIRILEHLRKQDKDNTMNVIHMLENFTFRNHICMT
FELLSMNLYELIKKNKFQGFSLPLVRKFAHSILQCLDALHKNRIIHCDLKPENILLKQQGRSGIKVIDFGSSCYE
HQRVYTYIQSRFYRAPEVILGARYGMPIDMWSLGCILAELLTGYPLLPGEDEGDQLACMIELLGMPSQKLLDASK
RAKNFVSSKGYPRYCTVTTLSDGSVVLNGGRSRRGKLRGPPESREWGNALKGCDDPLFLDFLKQCLEWDPAVRMT
PGQALRHPWLRRRLPKPPTGEKTSVKRITESTGAITSISKLPPPSSSASKLRTNLAQMTDANGNIQQRTVLPKLV
S

FIGURE 637A

CTCGCAGCGCTTCCAGCTCCCCGCGCCCCTATGTGAGGGAGACGGGGAGGCCCGCGGCGCGCAGGGGAGGGCGAG
GCATGTGCACGGGCCGGAGGGTGCTGCAGCCGCCCGAGGAAGAGGAGGACGGCGGCGAGGAGGAGAGCGGGGGGC
TCGCGGCGGCGGGCCCCGGCCGAGGGGATGCAGTGGACTGTGTGTGTCTGGCTGTAGCAGACGCGAGGCGGCGAC
GAGGCGCCGGGGACCCGCGCGAGGGGCGGCCGNNNNNNNNNNNNNNNNNNNNCAGAAGTAGCAGCAGGACCGGC
GGCGGCGACGGCAGCCCTGAAATGCATTTTCCTCTCCAGCGGCC**ATG**TTAACCAGGAAACCTTCGGCCGCCGCTC
CCGCCGCCTACCCGACCGGCCGAGGTGGGGACAGCGCCGTTCGTCAGCTTCAGGCTTCCCCGGGGCTCGGTGCAG
GGGCCACCCGGAGCGGAGTGGGGACTGGCCCGCCCTCCCCCATCGCCCTGCCGCCTCTCCGGGCCAGCAACGCTG
CCGCCGCAGCCCACACGATTGGCGGCAGTAAGCACACAATGAATGATCACCTGCATGTCGGCAGCCACGCTCACG
GACAGATCCAGGTTCAACAGTTGTTTGAGGATAACAGTAACAAGCGGACAGTGCTCACGACACAACCAAATGGGC
TTACAACAGTGGGCAAAACGGGCTTGCCAGTGGTGCCAGAGCGGCAGCTGGACAGCATTCATAGACGGCAGGGGA
GCTCCACCTCTCTAAAGTCCATGGAAGGCATGGGGAAGGTGAAAGCCACCCCCATGACACCTGAACAAGCAATGA
AGCAATACATGCAAAAACTCACAGCCTTCGAACACCATGAGATTTTCAGCTACCCTGAAATATATTTCTTGGGTC
TAAATGCTAAGAAGCGCCAGGGCATGACAGGTGGGCCCAACAATGGTGGCTATGATGATGACCAGGGATCATATG
TGCAGGTGCCCCACGATCACGTGGCTTACAGGTATGAGGTCCTCAAGGTCATTGGGAAGGGGAGCTTTGGGCAGG
TGGTCAAGGCCTACGATCACAAAGTCCACCAGCACGTGGCCCTAAAGATGGTGCGGAATGAGAAGCGCTTCCACC
GGCAAGCAGCGGAGGAGATCCGAATCCTGGAACACCTGCGGAAGCAGGACAAGGATAACACAATGAATGTCATCC
ATATGCTGGAGAATTTCACCTTCCGCAACCACATCTGCATGACGTTTGAGCTGCTGAGCATGAACCTCTATGAGC
TCATCAAGAAGAATAAATTCCAGGGCTTCAGTCTGCCTTTGGTTCGCAAGTTTGCCCACTCGATTCTGCAGTGCT
TGGATGCTTTGCACAAAAACAGAATAATTCACTGTGACCTTAAGCCCGAGAACATTTTGTTAAAGCAGCAGGGTA
GAAGCGGTATTAAAGTAATTGATTTTGGCTCCAGTTGTTACGAGCATCAGCGTGTCTACACGTACATCCAGTCGC
GTTTTTACCGGGCTCCAGAAGTGATCCTTGGGGCCAGGTATGGCATGCCCATTGATATGTGGAGCCTGGGCTGCA
TTTTAGCAGAGCTCCTGACGGGTTACCCCCTCTTGCCTGGGGAAGATGAAGGGGACCAGCTGGCCTGTATGATTG
AACTGTTGGGCATGCCCTCACAGAAACTGCTGGATGCATCCAAACGAGCCAAAAATTTTGTGAGCTCCAAGGGTT
ATCCCCGTTACTGCACTGTCACGACTCTCTCAGATGGCTCTGTGGTCCTAAACGGAGGCCGTTCCCGGAGGGGGA
AACTGAGGGGCCCACCGGAGAGCAGAGAGTGGGGTAACGCGCTGAAGGGGTGTGATGATCCCCTTTTCCTTGACT
TCTTAAAACAGTGTTTAGAGTGGGATCCTGCAGTGCGCATGACCCCAGGCCAGGCTTTGCGGCACCCCTGGCTGA
GGAGGCGGTTGCCAAAGCCTCCCACCGGGGAGAAAACGTCAGTGAAAAGGATAACTGAGAGCACCGGTGCTATCA
CATCTATATCCAAGTTACCTCCACCTTCTAGCTCAGCTTCCAAACTGAGGACTAATTTGGCGCAGATGACAGATG
CCAATGGGAATATTCAGCAGAGGACAGTGTTGCCAAAACTTGTTAGC**TGA**GCTCACGTCCCCTGATGCTGGTAAC
CTGAAAGATACGACATTGCTGAGCCTTACTGGGTTGAAAAGGAGTAGCTCAGACCTGTTTTTATTTGCTCAATAA
CTCTACTCATTTGTATCTTTTCAGCACTTAATTTTAATGTAAGAAAGTTGTTCATTTTGTTTTTATAAAATACAT
GAGGACAATGCTTTAAGTTTTTATACTTTCAGAAACTTTTTGTGTTCTAAAAGTACAATGAGCCTTACTGTATTT
AGTGTGGCAGAATAATAACATCAGTGGCAGGCCACTGATTACTTCATGACTGCCACGCATTTACAGATTGGTGTC
AAAGACATTCACTATGTTTTTATGGTTCATGTTATATCCTCCCCAGGGTGACAGCCCCTTAAGGCCCTCCTTTTC
CCTCCATGCTCCAGGTCCATGCACAGGTGTAGCATGTCCTGCTTCCGTTTTTCATAAATTAATCTGGGTGTTGGG
GGTAGTGGGAGGAGAACGGTCAGAATCAAAGTGACATTCTAAGAAAAACTGTACCTTAGAGATTTTCCTCTAGTG
CTCAAACAAATACAAAATAAGATCCCCAAGGTTTAAACTGCCCAGTTAGCATTCTGACATTCTAAAAGCCGGCAA
AGCAGCTTTTAGTGGATAAATGGGAATGGAAACGTGTGTGTTCCTCCAAATTTTCTAGTATGATCGGTGAGCTGT
TTTGTAAAGAAGCCTCATATTACAGAGTTGCTTTTGCACCTAAATTTAGAATTGTATTCCATGAACTGTTCCTCC
CTTTTCTCTGCTTTTCTCCTCTCTGTTCCTCTTTTAATACCACACGTCTGTTGCTTGCATTTAGTTTGTCTTCTT
CCTTCAGCTGTGTATCCCAGACTGTTAATACAGAAAAGAGACATTTCAGCTGTGATTATGACCATTGTTTCATAT
TCCAATTAAAAAAAGAACAGCAGCCTAGCTACTTAAGGTGGGGATTTCCATAGTTCCAAAGAAGATTTAGCAGAT
TAGAGTGAGTTCACACTTTTCAGGTGCCACTGTAAGGTTCTCTCAGCCTGGGAAACTATCAACTCTTTCTTTAAA
AAGAAAGAGGGTTGAAAATCCTCTGGACGAACAGAAGTCACTTTGGCTGTTCAGTAAGGCCAATGTTAACAACAC
GTTTAGAGGAGGAAAAGTTCAACCTCAAGTTAAATGGTTTGACTTATTCTTCGTATCATTAGAAGAACCCCAGAG
ATAGCATTCCTCTATTTTATTTTACTTTCTTTTGGATTGCACTGATTGTTTTTGTGGGAATGACACTTTATCTGG
CAAAGTAACTGAGAGTTTGGTAAAAGAATATTTTCTTCTCTGAATAATAATTATTTTCACAGTGAAAATTTCAGT
ATTTTATCACTAATGTATGAGCAATGATCTATATCAATTTCAAGGCACGTGAAAAAAATTTTTTAGTATGTGCAA

FIGURE 637B

TTTAATATAGAAAGATTTCTGCCTGTTTGGACAATAGGTTTTGGGTAGTACAGATTAGGATAAGTAAGCTTATAT
ATGCACAGAGATTATTGTATTACCTGTAAATTGATTTACAAGTACTTAAAAGCGTGGTCCCCAGTGAGGCCAAGA
AAGTTTCCGGTTAAGTTCTTTAATAATAATCCTACAGTTTATCTTAAGAAAAAAAAAAAGGTTTGAAAAAAACAC
TTTAATTTAGGCTTCGTTGGTTGATGGTGGAAAAAAATGCTCAGGAAATATTTCAGATATTTGCCAAAAAACCAG
TAATAAGGTTACCTTATTAAAATAGTGATATTTGCTTTACTATTTAAGGTGTCACTGATAAATTAATTTGTACTT
CTGTGTTTAGAAATTATAGCTTCTTTTCCCTTAGTCAAATTTTTTAGCATATTATACACATTTCTGTGTAATCTG
TGGAAGTGCAATAATATGTTAGTAAGTTACATTTTAAATAATGCTCATGTGACAATACTCCCAATCAATGGCTTA
TAGAATTTAAAGATCTGTATATTAGATTTTGGCTTAAAGGCATGAGAAGTATAAGACTTGGTTTGGTGGCTTTGT
AAGACCACCAGCCTCTTAATGATGGTTAGCTTCTTTAGGTCATTAAATCAATAAAAACATATAATGCTGTTTTGC
TCTTCTAATGCTCCTCTTCCATTTCCAGTTATCTTCACATTTACATTTAAATATACAAACCTGAGCCCGCCATTA
TTAATTTCCCTATAAAATGACGATACATGTGAACATTTATAAATGGACTAATACTGCTTGTCTTTCCCCCACCGC
ACAAAACTGGTTCTTAAGATGCCAGCAATGAATTTGAGACTATCTTTATTTATAAATGGAAACCGGAAACTTTTA
TACCAAACTATAATAATGTGCAGCACTGTAGGGCTTTTTTTTTTTTCCCTCCAAATACAGTGAAATTTTTTTATT
CACAAGAGCTGCCACATCTCAGCATTTAGTAATAGAGCTGCTTTAATAAAATTCTAGTTTGATTGTCATGTCAAA
AAAAGAAAAATGTTGCATCTTTGTGATTTTAAAACATAAATTAATGAAGGCTCTGATAGGCTATTAGGAGTTGGC
TTGGAAACAGTTTTTGGTCTCACAGGTTACCATTGTTTGGGGATGTCTGAGCTGTTTTCAGATCTAGGAATAGCA
CAGTGTTGTCTTGTCTTTGGCAGTCTCATTTGGCTCTGTTTCTTGCACCACCAGCATGTTCATTACCACTTAAAT
ATATTGCTACAGCAGTGGAACAACAGAGTGGTGCAAGACACTGTAGATTAACGGTAGAGGAGAAATTGTGCCCTT
AGTGTTAACAATGTGCCTTTTGTTCTGAATGCCATGTTGTAGGGCATGCATTTTTTGGCCTCTTTAACTCTTCGA
ATTCTAGTCAGTAAGAATGGAACCCATCTCTGCAAAGATACATCTGTCTTAAATATCTAGTTACAGGCCTTAATA
GAAACCATAAGGCATGACTCATCTTCAGGCACTGAAAAAAGATAACCATCAGGTAGTGTTACACAAGGACTTCCT
ATATTTAAGGGGTTAAAGATGGTCTTTGTTGTATCTTAACATCAGACTGATTTTTACATTTTTTTTTTGTTATGC
TAACACTAGACAAAAATCAACTGTATTTGTAAAAATTTACCTCAAACCATTTAATTTTATAGTGTGATTAATCCC
AGGGCATTTGGTATGAACCAAAGTGCATTCCTTTTATATGTGCCTGGCTCTAGTAAGGATGGCCAGGGATTTTTA
CAATTTGGGTGCAAGGCACTTAAGCCACTTTTAAACTTAATGGGTGGTTTGGGGTCGTGTTAAATGACCCCATCA
GAATGTTAGAAAACACTTTAGGCATCAGTAGCATTGGGCCATATTGGAATCCTAAAGTGTGAATTATTTTAAGGA
GAGCATTCATTTTTGTAATTTTTTTCATCAAAAATATTTCTGGTAAGCAGAAGACTTTTTAAAAAAACTGATCTG
GTCTCGGTAAAGGTTTTAATATTGCCCAACATAATGCTGTAATAGCATTAAAAAAAGTATTTGTGAACTCTGTTT
CTTAGGGGCTTGTACATCTCTCTGCTATGGACATACATAAAATTAATTGTAATTATACTCAGCTCAACTGCTACA
GTTCTGTCTAGGCAGTGGCTTGGGTTTTTATCGAGCAACAACTTAGACACGTGACTGTAATATGCTGCAACTGTG
TGTACTGAAAATATGTGAAAATGGTTGAATGTGGACTGTGTATATATGTATGTAAAAATTTCTGTGAGATGCTGC
TGTCGCCACTTAACATTAAATATGTTCTAGTGGATTTTAATCCTAGTGGCCAGTTCTATGATACTGTATGTATTA
TACAGCTGATGACAGGAGTAAGACTGTTTAGTGAATATCTGTTAAATTTTATTGTTGTGGCCAGAGATAATTTCA
GAATAAAATTTTAATGTCCTACCTTACTTCTCTCCCCTTTCTAACTATAATTTAACTCCTGATCTATTTCTGGTA
TTATCCTTTGTCAATTAGCCTGGAGAGGGTTTAGAATGCAAAATGGATAGCTCTATATCAGGGTCTTGAGAAGTT
AAAATAATTCATTCTACTAGTTTGTTCATAGCAATACTTTATTAGTTCAATATAAGTATGCAGATTCCAAGTGGA
AAAACAAAGGTTTTAGTAAGTAGTTCTTGCTTTTCCCAGGATATTCTATTCCTTCACCTGTCAGATTTTTATGTT
AACTTTTTTATATATAGCCTCTGCTGTGTTCTTTATTATGCTAGAGCTTCATATCTTCTTTTATTTTAACCTTCA
CAATGATAGTTAAGCTGGGGGAGCAGAACCTGTCAATTATTCCCCACCAGTCTTCATTCTTTTCTCTGCACAAGT
TCTGGTAAATTATTCTAATGTGCTCTAACCAGTTCCACCCAATGTTTTTTAATGCTTATGAGTTTGCAGTTTTTG
TACTTGGTGGTCTCTGTGGTTCACATTTTTTTGTGTTGTAGTGTCTCCTGCCTCGGTTGGCTCAGAAAATAAGGC
CTAGGAACTGCAATTAGCTCATGATTTGTCAAGTTCAGTTAGTACCAAGCTAAGAGTTTACTTACAGATGACAGC
AAGCAGATGCTCTAGTAATTCGTCAGACATTGCAGGGATATTGTGTAGTCAGATATTACCCTCTTGTGGAAAGAA
CTACCTCACATCATTATTTATTTCCCTTCTGTTACCAACAGCCAAGGAATTACTTAGTGTGGCTCCCTGCATCAA
TACTGGGATATGCTTAAACAAGGGAATGCCATAAGAGTTCCCAATTGCCTCGTCATAGCCTGGGCCATAGATTTT
TGTTACTGCTAATCTTGCTTCTTAAAGTTCACACCCAGTGCAAAAAACCCAATCAGCAAACTAACCCCAAAATCC
AATATATTTAGAAATGTAAGTGTTAAGAGATGTGCATTATGTACAAAATTGAAAATTGGTGCTAAAGTGGCAATG
TCAATTTAAAATTTCTTGTCCAGATCTGACTGACTGACTCAGGAGATTATAGTTCCTACTCATTCTCTTTCCTTT

FIGURE 637C

TATCAGATCTTTCAAAAGCGCTTTTTAAAATTGATCAATGTGCAATTCTGTTTGAGTCTCTACAGTCCTATCCCT
TTTGGAATGAACAGCTACACAAATAAATATTCTTGGAACTTCGAAGTTGTCTTCAAACTAGCTCTAGAAAATGTC
CCTAGTTGACATTAGTGTTGGTCTGTTAGAAGGGGAAATTGATTTGACTGCTTCATGTTTTGAAAAGAGCATTAA
GAGGGATTTGAGGAAGGTATATGTGGCTTTCTTTTTTCTTAAGTTTGAATTACACTTGATTTCCTTTGGGTTATT
AGGCAGATAAACCCTTGTCATTAGTAATACTTAGCACTGTCCAAAATGAAAAATGACTGCCAGTGTGTTGCACAT
ACATAAGAAAATTACATCTTACTGCGAAGTCTTTGGTTTGTTTCCTTATTTGGTTTGACTTTGACTTACTATTTT
GCTATGGTCATATCCTTAATATCTGCGGTACATTTCATATGTATATATGGGGTGGGAGCATAATTGCCATTCCCA
TGTGTCTCAAGGAAGCTTAATGAGGAAACTAATGAGTTAATATTAACTCTTCTGAAGAAAGCTGACATTTTAGGA
GTATTAAGTCATCTGTCGTTAAGGAGCAGCAAGAATATATTATGATTGTATCACATGTTCCAGAAGAGCATTACC
CCTTACATAGAAAGCTCCTTGGAGATTTCATGATGTTGGATGAACATCAGTTTATCCTTATACATCCCTATGAGC
TATAATTATCCTCATTTGATACTTGAGGAAACTGAAGTGACTTGCTCCAAAGTGACTACAAAAACATTGCAGTTT
GAGGCTTAGGTTGTAATCAGGTAATTTTGGTCTTGGACAGTAAGGGAAAATCCATAATACATAAAACACAAAAGT
TTAGAAAGGGGGGGGAAGTTGAGCTAGCAATGGGCATTTCTATTATTTAAGTTACATATCAGTTTCCAGGAATATT
TTTCAAATGGGACAAACTAAAAAGTTGAGGACTAGAGCATCGTAGTGTCTAAGTGCACCTAATAACTTAATGCAT
GTGCACACACCCTCAGTTAATTTGTAAGAGAGTGACTTCTCATTGTTATTTGTGGAGAGGCTAATTATAGTAGCT
TCATTCTTTATTTTCTGTGTTCTTAAATTTTTTTTTACATTTGAAAGTATGAAAATACTATTTTTGACACTTTAC
TGATACTCAGGGATTAAAAGTTAAATTTTACTGACTGTAGCAGCAGGTAAATCTCTTAAATTTACTCAGGTTTCC
TATCCTTTGCCTCCATATTTAAGAAAATATAGAATGCCTGCCAGGGAAATATATAAAAATAAAAATTTCAAATAC
AATTTTAAAATACCAATTTGTAAATAAACCAATTTTACAAACTAAAATATTGTGTCTTTCCTTGCTTTTTATCCC
AATTTATCTCCCCTCCTAAGTTTGAGGAGTTTTATATATTAAGGCTATTTCTTCATTTGTAAAAATGAAGTATGC
TATTTGCAAAGCAAAAGCCCATGAAAAGCCCCAAATCATTTAAGTAAAGCTTACTGAATTGTTTTCAATTGTTTT
GGGAGAAATGTAACTAATTATAAGCAATTTATGTGGACCAGCAGCAAATAAATGTATGAGTACATTTGGGA

FIGURE 638

MLTRKPSAAAPAAYPTGRGGDSAVRQLQASPGLGAGATRSGVGTGPPSPIALPPLRASNAAAAAHTIGGSKHTMN
DHLHVGSHAHGQIQVQQLFEDNSNKRTVLTTQPNGLTTVGKTGLPVVPERQLDSIHRRQGSSTSLKSMEGMGKVK
ATPMTPEQAMKQYMQKLTAFEHHEIFSYPEIYFLGLNAKKRQGMTGGPNNGGYDDDQGSYVQVPHDHVAYRYEVL
KVIGKGSFGQVVKAYDHKVHQHVALKMVRNEKRFHRQAAEEIRILEHLRKQDKDNTMNVIHMLENFTFRNHICMT
FELLSMNLYELIKKNKFQGFSLPLVRKFAHSILQCLDALHKNRIIHCDLKPENILLKQQGRSGIKVIDFGSSCYE
HQRVYTYIQSRFYRAPEVILGARYGMPIDMWSLGCILAELLTGYPLLPGEDEGDQLACMIELLGMPSQKLLDASK
RAKNFVSSKGYPRYCTVTTLSDGSVVLNGGRSRRGKLRGPPESREWGNALKGCDDPLFLDFLKQCLEWDPAVRMT
PGQALRHPWLRRRLPKPPTGEKTSVKRITESTGAITSISKLPPPSSSASKLRTNLAQMTDANGNIQQRTVLPKLV
S

FIGURE 639

GGCACGAGGGTAGCTTTCCAACATAAAGTGGAGGTTTCAACACAGGAGACTTTAAGCAAGTTCCAGTGTGTCTAT
ATTTGGTCTGGCTGATCGGCTGGACTCTGGCCTTCCCCGCTCACGTTAGCAGACAGCTCTGCCCTAGTGGGCGCT
TAGCCTGCGACGGCAGCCCGAGAGG**ATG**TCTAACAAGCTTCTTTCTCCCCACCCCCATTCAGTTGTTCTCAGGTC
TGAATTCAAAATGGCCTCATCTCCTGCTGTCCTTCGAGCGTCCCGGCTGTACCAATGGAGCCTGAAGAGTTCGGC
GCAGTTCCTGGGGTCTCCACAGCTGAGGCAGGTTGGTCAGATCATTAGGGTTCCTGCTCGGATGGCGGCGACGCT
GATCCTGGAGCCTGCGGGCCGCTGCTGCTGGGACGAACCGGTGCGAATCGCCGTGCGCGGCCTAGCCCCGGAGCA
GCCGGTCACGCTGCGCGCGTCCCTGCGCGACGAGAAGGGCGCGCTTTTCCAGGCCCACGCGCGCTACCGCGCCGA
CACTCTTGGCGAGCTGGACCTGGAGCGCGCGCCCGCGCTGGGCGGCAGCTTCGCGGGGCTTGAGCCCATGGGGCT
GCTCTGGGCCTTGGAGCCCGAGAAACCTTTGGTGCGGCTGGTGAAGCGCGACGTGCGAACGCCCTTGGCCGTGGA
GCTGGAGGTGCTGGATGGCCACGACCCCGACCCCGGGCGGCTGCTGTGCCAGACGCGGCACGAGCGCTACTTCCT
CCCGCCCGGGGTGCGGCGCGAGCCGGTGCGCGTGGGCCGGGTGCGAGGCACGCTCTTCCTGCCGCCAGAACCTGG
GCCCTTTCCTGGGATTGTGGACATGTTCGGAACTGGAGGTGGCCTGCTGGAGTATCGGGCTAGTCTGCTGGCTGG
GAAGGGTTTTGCTGTGATGGCTCTGGCTTATTATAACTATGAAGACCTCCCCAAGACCATGGAGACGCTCCATCT
GGAGTACTTTGAAGAAGCCATGAACTACTTGCTCAGTCATCCCGAGGTAAAAGGTCCAGGAGTTGGGCTGCTTGG
AATTTCCAAAGGGGGTGAGCTCTGCCTTTCCATGGCCTCTTTCCTGAAGGGCATCACGGCTGCTGTCGTCATCAA
CGGCTCTGTGGCCAATGTTGGGGGAACCTTACGCTACAAGGGCGAGACCCTGCCCCCTGTGGGCGTCAACAGAAA
TCGCATCAAGGTGACCAAAGATGGCTATGCAGACATTGTGGATGTCCTGAACAGCCCTTTGGAAGGACCTGACCA
GAAGAGCTTCATTCCTGTGGAAAGGGCAGAGAGCACCTTCCTGTTCCTGGTAGGTCAGGATGACCACAACTGGAA
GAGTGAGTTCTATGCTAATGAGGCCTGTAAACGCTTGCAGGCCCATGGGAGGAGAAAGCCCCAGATCATCTGTTA
CCCAGAGACAGGGCACTATATTGAGCCTCCTTACTTCCCCCTGTGTCGGGCTTCCCTGCATGCCTTGGTGGGCAG
TCCTATTATCTGGGGAGGGGAGCCCAGGGCTCATGTCATGGCTCAGGTGGATGCTTGGAAACAACTCCAGACTTT
CTTCCACAAACACTTGGGTGGCCACGAGGGGACAATCCCATCAAAAGTG**TAA**ATTTTATTTGATCATGTGGCCTC
TCTGTTGCTAATCTCTCCTGGAAACATCTGCCACATTTAGTGTGTGTATGTGTATTCATTCTTTTGTTTTTAATA
ACTAAAGTTTTTTCCCCTCATTATTAAAATGAATTTACCAGTAAAAAAAAAAAAAAAAAA

FIGURE 640

MSNKLLSPHPHSVVLRSEFKMASSPAVLRASRLYQWSLKSSAQFLGSPQLRQVGQIIRVPARMAATLILEPAGRC
CWDEPVRIAVRGLAPEQPVTLRASLRDEKGALFQAHARYRADTLGELDLERAPALGGSFAGLEPMGLLWALEPEK
PLVRLVKRDVRTPLAVELEVLDGHDPDPGRLLCQTRHERYFLPPGVRREPVRVGRVRGTLFLPPEPGPFPGIVDM
FGTGGGLLEYRASLLAGKGFAVMALAYYNYEDLPKTMETLHLEYFEEAMNYLLSHPEVKGPGVGLLGISKGGELC
LSMASFLKGITAAVVINGSVANVGGTLRYKGETLPPVGVNRNRIKVTKDGYADIVDVLNSPLEGPDQKSFIPVER
AESTFLFLVGQDDHNWKSEFYANEACKRLQAHGRRKPQIICYPETGHYIEPPYFPLCRASLHALVGSPIIWGGEP
RAHVMAQVDAWKQLQTFFHKHLGGHEGTIPSKV

FIGURE 641

TCCTGGGGCCCAGCGCGGGTGGCTGCCGCGGCCCCTCGGGCTGCGTGGGGAGGGGGCTTCCGCCCCTGTTGTCAT
TGCTCCTGCAGCCTTTTCGCTGGGACTGCGCGACACCGCCCCCCGACCGGGTGCCCGCTGTGTGCCAGGCCGGGT
GCTGGGCACGGTCCCGCGAGTGCCCTATAAGGACTGCCAGGCAATA**ATG**AAGGTTCTTTTACTGAAGGATGCGAA
GGAAGATGACTGTGGCCAGGATCCGTATATCAGGGAATTAGGATTATATGGACTTGAAGCCACTTTGATCCCTGT
TTTATCGTTTGAGTTTTTGTCTCTTCCCAGTTTCTCTGAGAAGCTTTCTCATCCTGAAGATTACGGGGGACTCAT
TTTTACCAGCCCCAGAGCAGTGGAAGCAGCAGAGTTATGTTTGGAGCAAAACAATAAAACTGAAGTCTGGGAAAG
GTCTCTGAAAGAAAAATGGAATGCCAAGTCAGTGTATGTGGTTGGAAATGCTACTGCTTCTCTAGTGAGTAAAAT
TGGCCTGGATACAGAAGGAGAAACCTGTGGAAATGCAGAAAAGCTTGCAGAATATATTTGTTCCAGGGAGTCCTC
AGCACTGCCTCTTCTATTTCCCTGTGGAAACCTCAAAAGAGAAATCCTGCCAAAAGCGCTCAAGGACAAAGGGAT
TGCCATGGAAAGCATAACTGTGTATCAGACAGTTGCACACCCAGGAATCCAAGGGAACCTGAACAGCTACTATTC
CCAGCAGGGGGTTCCAGCCAGCATCACATTTTTTAGTCCCTCTGGCCTCACATACAGTCTCAAGCACATTCAGGA
GTTATCTGGTGACAATATCGATCAAATTAAGTTTGCAGCCATCGGCCCCACTACGGCTCGCGCGCTGGCCGCCCA
GGGCCTTCCTGTAAGCTGCACTGCAGAGAGCCCCACGCCACAAGCCCTGGCCACTGGCATCAGGAAGGCTCTCCA
GCCCCATGGCTGCTGC**TGA**GTCAGCCACCTAGCGCTGGCCCCATGCAGCCTCCCTGGGCTGGGCTGGCTCTGGAT
GGAGCCAGGCATCGGCAAGGGCTCTCGGGAGCTGCTGCCGTCAGACTCCTGCCTCAAGCCTGAGTGGAAGCACCT
GAGGACCGGGGATCGGGACCTGACCTGGGGCTGGCCTCAGGCCCACGTGCACGTGACTGCCCTCTGTGGAAGCCA
GCTTAAACCCTAGCCCTGTGAGAGCTTCCTGTGCCCAGCAGGAAGGAAGTCAAATAAACCACACTGACTACCTGT
GCTT

FIGURE 642

MKVLLLKDAKEDDCGQDPYIRELGLYGLEATLIPVLSFEFLSLPSFSEKLSHPEDYGGLIFTSPRAVEAAELCLE
QNNKTEVWERSLKEKWNAKSVYVVGNATASLVSKIGLDTEGETCGNAEKLAEYICSRESSALPLLFPCGNLKREI
LPKALKDKGIAMESITVYQTVAHPGIQGNLNSYYSQQGVPASITFFSPSGLTYSLKHIQELSGDNIDQIKFAAIG
PTTARALAAQGLPVSCTAESPTPQALATGIRKALQPHGCC

FIGURE 643

CCCAGAAATTCTACCCAAGCTCCCTCAGCACC**ATG**TACCGAGCACTTCGGCTCCTCGCGCGCTCGCGTCCCCTCG
TGCGGGCTCCAGCCGCAGCCTTAGCTTCGGCTCCCGGCTTGGGTGGCGCGGCCGTGCCCTCGTTTTGGCCTCCGA
ACGCGGCTCGAATGGCAAGCCAAAATTCCTTCCGGATAGAATATGATACCTTTGGTGAACTAAAGGTGCCAAATG
ATAAGTATTATGGCGCCCAGACCGTGAGATCTACGATGAACTTTAAGATTGGAGGTGTGACAGAACGCATGCCAA
CCCCAGTTATTAAAGCTTTTGGCATCTTGAAGCGAGCGGCCGCTGAAGTAAACCAGGATTATGGTCTTGATCCAA
AGATTGCTAATGCAATAATGAAGGCAGCAGATGAGGTAGCTGAAGGTAAATTAAATGATCATTTTCCTCTCGTGG
TATGGCAGACTGGATCAGGAACTCAGACAAATATGAATGTAAATGAAGTCATTAGCAATAGAGCAATTGAAATGT
TAGGAGGTGAACTTGGCAGCAAGATACCTGTGCATCCCAACGATCATGTTAATAAAAGCCAGAGCTCAAATGATA
CTTTTCCCACAGCAATGCACATTGCTGCTGCAATAGAAGTTCATGAAGTACTGTTACCAGGACTACAGAAGTTAC
ATGATGCTCTTGATGCAAAATCCAAAGAGTTTGCACAGATCATCAAGATTGGACGTACTCATACTCAGGATGCTG
TTCCACTTACTCTTGGGCAGGAATTTAGTGGTTATGTTCAACAAGTAAAATATGCAATGACAAGAATAAAAGCTG
CCATGCCAAGAATCTATGAGCTCGCAGCTGGAGGCACTGCTGTTGGTACAGGTTTAAATACTAGAATTGGCTTTG
CAGAAAAGGTTGCTGCAAAAGTGGCTGCACTTACAGGCTTGCCTTTTGTCACTGCTCCGAATAAATTTGAAGCTC
TGGCTGCTCATGACGCTCTGGTTGAGCTCAGTGGAGCCATGAACACTACTGCCTGCAGTCTGATGAAGATAGCAA
ATGATATTCGATTTTTGGGTTCTGGTCCTCGGTCAGGTCTGGGAGAATTGATCTTGCCTGAAAATGAACCAGGAA
GCAGTATCATGCCAGGCAAGGTGAACCCTACTCAGTGTGAAGCAATGACCATGGTTGCAGCCCAAGTCATGGGGA
ACCATGTTGCTGTCACTGTCGGAGGCAGCAATGGACATTTTGAGTTGAATGTTTTCAAGCCAATGATGATTAAAA
ATGTGTTACACTCAGCCAGGCTGCTGGGGGATGCTTCAGTTTCCTTTACAGAAAACTGCGTGGTGGGAATCCAGG
CCAATACAGAAAGGATCAACAAGCTGATGAATGAGTCTCTAATGTTGGTGACAGCTCTCAATCCTCATATAGGGT
ATGACAAGGCAGCAAAGATTGCTAAGACAGCACACAAAAATGGATCAACCTTAAAGGAAACTGCTATCGAACTTG
GCTATCTCACAGCAGAGCAGTTTGACGAATGGGTAAAACCTAAGGACATGCTGGGTCCAAAG**TGA**TTTACATAAA
TTTATAATGAAAATAAACATGTATAAAATTTAAAAAAACAGACTCCCATTTCTTAAAAACGGATAAGTTTGAAAG
GAAACTGCTATTGAACTTAAGCATCTCTAGCAGAGCAATTTGATCAGTATATAAAACCCTAGGATGTGCTAGGTC
TAAGATGGATTAAACAAGTATAAAATAAAATACATTTATAAAATAAAAAGGAAAACAGACTTAAAA

FIGURE 644

MYRALRLLARSRPLVRAPAAALASAPGLGGAAVPSFWPPNAARMASQNSFRIEYDTFGELKVPNDKYYGAQTVRS
TMNFKIGGVTERMPTPVIKAFGILKRAAAEVNQDYGLDPKIANAIMKAADEVAEGKLNDHFPLVVWQTGSGTQTN
MNVNEVISNRAIEMLGGELGSKIPVHPNDHVNKSQSSNDTFPTAMHIAAAIEVHEVLLPGLQKLHDALDAKSKEF
AQIIKIGRTHTQDAVPLTLGQEFSGYVQQVKYAMTRIKAAMPRIYELAAGGTAVGTGLNTRIGFAEKVAAKVAAL
TGLPFVTAPNKFEALAAHDALVELSGAMNTTACSLMKIANDIRFLGSGPRSGLGELILPENEPGSSIMPGKVNPT
QCEAMTMVAAQVMGNHVAVTVGGSNGHFELNVFKPMMIKNVLHSARLLGDASVSFTENCVVGIQANTERINKLMN
ESLMLVTALNPHIGYDKAAKIAKTAHKNGSTLKETAIELGYLTAEQFDEWVKPKDMLGPK

FIGURE 645A

CGTCCACCGTGGAGTCTCTCCTTGCTTTGGGTCCACTGAGCCCCACACATTGTTGAGTGTCTGATTGTCTCCTTG
CCCTTACAGGACAGGAAAGCGAAATCTCTGTTCCTTTGTAGGGACCTTTCTTTTGTAGGTGAAAGGGACAGAAAT
ATGATTCTGGCCTCCTTGATGGTGAATACAGGAACACTTTCAGATAAATTACAATAGAGAGGAGTCAGCTTATTT
AAACAAACTGAGGTTAAGCCAGAGATTGCAGTTAACAGTGAAAAAATTTAAAGCAAGTACCTGGATGGATGCAAA
GCAGTGCCCAGGAGACCCAACTTACGTGACAGAGATGATCATTGTCACTCATTCATTATGTTTTGAGCACCAGCC
ATGTGCCAGGTCCAGAACTAGAAGAAACTTGGGTGTAGGTGAGATCATAGGAACAGTCCCTGCCCCAGCTGAACA
TCAGGAAGCCAGACTGGGAGCACATGCCGTGGCTGACTAGGACTCCAGCAGGGACCTGGGGTTCCATCAGATCAG
TGTAAAGCGATGGTTTCCCAAATGAGACCTCTCCAGAGATGGTTCATTCCACCCCGCAATGGCCACCAGAAACAT
TGTGCTGACCAGAGGGCTTCACTGCCCCAAACCCCAAAATCACACTCCAGGATGAGAAACCTAAAAGTCTATCTT
GATGAGGCTTCATAGCTGGAAACCACCCCTCATGGATCCACAGGCTGCATTTGATGAAAGGAGACTCCAGGAAGT
CGAGCCATTCCAGGCAGACATGTAGCAAAAGCCCGAGCTGGGGTCCGCCCTCATGCAATAAATAACACCTGTGCA
CATAAGAGAGGTGACAGGCAGGGCATCCCTGGGGACCTGGGCCTGTGGCACGTGAAGAAACACCCAAGAGAGCAC
GAAGTCCCAATGCCATGACCAGATATTTCGGTGCCAGGCATGCTTCTGGGTCCCAGCAAAAGACACACAAATCCG
TGTCCTTGGGGACCCACAGTCTAGTGACCTAGGGCTGGCCGGGTCGCACGCTTCTTTTCAAGGGCTCGAAAGCCT
CTGCATGGATGCAACTTTGGGGGAAAAGTAACCCTAACCCTCTGCTTCTCTCATCCTCCCCTCTTCTGTGTATAT
GTCTGTCTCTTTCTCTCTGTGTGTGCCCTTCCCCACTCCCATCCCCATTCCTTTTTTTATTTATTATATTTTGGT
GGTGTGTGGCTCGGTTTCTGTTGGTCCCCTCGTGTGGCCCCTCCCCTGCTGCAGAACTCGTCCAGCTCGGCCTCC
TCCGAAGCCTCGGAAACCTGCCAGTCAGTGAGCGAGTGCAGCTCCCCCACCTCTGTCAGCTCGGGCTCCACCATG
GGTGCCTGGGTGTCCACAGAGAAGGTGACCGCCCGGGTGGCAGCCACAGCGGCCCCACTCTCCCTGGTCCCCCTG
CCTGCTGCTCAGACAGCCCTCACAGCCGCGGCAACCTGGAAGCTCAGAATCGACACCAAGAGTGGGGCTCCTCTT
GGGGACAGAGGGTGGGACAAGGCTGAGAGCATTTTCTAGAATGAGTGCCTGGCTGCTGGACAATGACCACATGGT
TGTCTCAAGGGAGAGGAAGGGGTATGGGGAATTTGGAGGTGTGAAGGCTTTCTCCCAGACCAGGTGTTGCGTGCC
TGTCCATCCTCCTCCCTCCCTTCCCGAGCCACCCACCAGACCGTTGGATGAGCCATGTCACTGTGTCAGAGGCTG
TGTGCTTTTCCGCTTTTTAGTTTGCACCCCCACCCCCCTGCCCTTGATTGAGAATGTGCTCCTGAGCAATGCGAC
GATTTTGGAAACCTAGAATGAACAGATTCATTTGAAGATGCTTTGGAATTTTTAAATTTGCATAATGAAATGAGC
AAATCACTATCACCATTAAATGAGGCTTCATTAGTTACATTATCAAAAACCATTGACAAGGCCACAAATTGAGGG
CACTGATCAATTTCCAAACTTCTAAAACGTAGGTCAAACATAGATGCTTATTTGCTGTCAAACTCATGTGCATTC
TTTGCACCCCGGCTCTTTTCTCTTGCATCACAGATCATCCGTGAGCAGCAGAGCCCCAATGTTTGTTTTATTTAT
AAATATTCAGGTTTCCCCTCCCTTGAATGTCAATGCCATTTTGTATCTCCGCACTCATCCTGTTATATTAATTTT
TTTTCCTTTCCCCCCCCTTTTTTTGTTTGTTTCCAGTTGTCTAACGGGTTTTCTCACTATAGTTTATCAAGTGAG
TCCCACGTGGGGCCCACGGGTGCAGGCCTTTTCCCTCATTGCCTGCCTGCCTCCCGCCTGCTCCCTCGGGTCACC
TCTGTCCACCTTCCAGACTACGCTCATTATTACACCATTGGGCCCGGC**ATG**TTCCCGTCATCTCAGATCCCTAGC
TGGAAGGACTGGGCTAAGCCTGGGCCCTATGACCAGCCTCTGGTGAACACCCTGCAGCGCCGCAAAGAGAAGCGA
GAACCGGACCCCAACGGGGGAGGACCCACTACCGCCAGCGGCCCACCTGCAGCAGCTGAGGAGGCTCAGAGACCA
CGGAGCATGACTGTATCGGCTGCCACCAGGCCTGGTGAGGAGATGGAGGCTTGTGAGGAGCTGGCCCTGGCCCTG
TCTCGGGGCCTGCAGCTGGACACCCAGAGGAGCAGCCGGGACTCGCTTCAGTGCTCCAGCGGCTACAGCACCCAG
ACAACCACCCCCTGCTGCTCTGAGGACACCATCCCTTCCCAAGTTTCAGATTATGATTATTTCTCTGTAAGTGGT
GACCAGGAGGCAGATCAGCAGGAGTTCGACAAGTCCTCCACCATTCCAAGAAACAGCGACATCAGCCAGTCCTAC
CGACGGATGTTCCAAGCCAAGCGTCCAGCCTCAACTGCTGGCCTCCCCACCACCCTGGGACCTGCTATGGTCACT
CCAGGGGTTGCAACTATCCGACGGACCCCTTCCACCAAGCCTTCTGTCCGCCGGGGAACCATTGGAGCTGGTCCC
ATCCCCATCAAGACACCCGTGATCCCTGTCAAGACCCCAACCGTCCCAGACCTCCCAGGGGTGTTGCCAGCCCCT
CCAGATGGGCCAGAAGAGCGGGGGGAGCACAGCCCTGAGTCGCCATCTGTGGGTGAGGGCCCCCAAGGTGTCACC
AGCATGCCCTCCTCAATGTGGAGCGGCCAAGCTTCCGTTAACCCTCCACTTCCAGGCCCGAAGCCCAGTATCCCT
GAGGAGCACAGACAGGCAATTCCAGAAAGTGAAGCTGAAGACCAGGAACGGGAACCCCCAAGTGCCACTGTCTCC
CCAGGCCAGATTCCAGAGAGTGACCCTGCAGACCTGAGCCCAAGGGATACTCCACAAGGAGAAGACATGCTGAAC
GCCATCCGAAGGGGCGTGAAACTGAAGAAGACCACGACAAACGATCGCTCAGCCCCTCGCTTTTCT**TAG**GTTCAC
AAGAAATGCGCCGGTGGGGAATGAACTGTTTCATTAATAAAACCTAATTTGTCTTGATCCATTCCACTCTATAAT
AAAACAAAAGATTTTGTAGGCAACTCGGAATATAGCTCTTTTGAAAGTACTCGACACCTTTAGATAAGAATTAAA

FIGURE 645B

ACCAACCTATGTAACTGACATAATCTTGATCTTTTAATTTGTAAATATTGACAATTTTCTTTCTGCACATTTTAA
TCTTAGTTTCCCTTTTGATTTTTCTGAAGGTGCCAAATTCCATTTAACTTTTTTACAAGTCTTTGTAAAATTTTA
AATGCATAAAGGGGGTTGGGGCAGGGGAACCACGAAGTAGTTAATTTTAGAAAAGGATTTACTATACTTCACTCT
TCTTTTTTTTTCCCCACAAGCTTTTGTAGATGCATTGTAGTAGTCTAGCTTAGAAGCAAATGCAAGTTATTTTAA
TGTACAAACTAAATGGGTAAGAGGTAAAATCTTCATTTAAATATACTATGTTCTGGATGAAAAGAGCAGGAGTAA
CAATTGATGAGCAATATTCAGAGTGAAGTAAATCTGGAAATGGTAGACTGTGTTGGGATTGGGGGGAGGGCCATG
GGAGGGGTACATCGTCAACATAGCCGATCCTGTTACATTTAAGAGTAGCCTCGTAGGTTGAATTTCTTCTGGTAG
CTTCATGGTAAATGCATCCGAATAAGCCATACTGGATTGCAGTGTTTGTTTCTGTAGGGTGTTTAAGGACTTGAC
TTCCTTTCTCCCATGATTCCTCTGGACTGCACACAGCACCCACAACCAGCCCCATGCATGCTGCTGCCTCTGGGC
AGTCGTAGAATCTCCCACTTCAGTTTCTCGTTGATTGTACTCACCTTTATGGAATCCAAATACATCCAAAAGGGT
AAGGCAGTTTTAAAAATGTGAAAACATTTAAAAATGATAATAGCAGGGAATTCTTAGATTATAGTAAATGCCTTT
TACTTAACTGTGCCCAGCAGGCTGGGTGCGTTAAAAAGCCCAAGTATTTTGAAAAAACTCGAACAGATTTGACAA
GGGTAGCCAGCTTGGAGTCTAGCAACTTGCCAATGTGTTTACCAATCTGGGGGCTTGTTTTTCTTTTCTTCTTTC
AAATAAATGGCAGTTAACTGGCTTTACAGTAAACATTGAAGAGAGGAGGATTTGTTTATTGTCACTGGGAATCTG
ACCACTATACTGTCCTTTTTTTGTATTCTGGGTAATGTTTTTTGGAAAAGATTTGTCTTTTCTAAGTGGAAGTTA
AATTTGTTATACTGCCCATCCCCTAAAGCCAACAGAGATTTGTAGATTTAAAGGGATCACATTTGAAGACAATAG
TGTTTAAGAAAGCAAGCAAGTCCCTTAGCAGTCAGGTCATAACAGGGCACATTTCTGACCGAACCCTCTCAAGGC
AGAGGAGGAGTTTGGTGGGTTTCATACACCCTGCAGATTCCTGTTGGCTCTAACCCTCAATTACCTAATCTTATG
CTTTAACACATAACTGCATTGGATGTGAGAGTAACGTACCGTATGGTCATTGTTCTATATATTAACATTGAACAC
TGCTGCGATTGCTCAAGGACATTTTATGTTACGGCTTTAAAGCAAAGGCATGATTATTAGAAACTATTTAAGCTT
TTTTCTTTGAAAAACAAGCTTCTTTTACAGAATATAAACAACAGTAGTGCCTGTGGTTTAGCCCACCAATCTTGA
TGACTAAAAGTAGCTGATGCATTGTGCATATGATGCTTGAGATGGTTTTTGCAAAAGCAGAAATCGCTGCAAGGT
AATCACAATAGATAAAAGTGGTATTTTAAACCTTTGAAATAAATGGATGTAACTGTACCTTGGTACAGCTTTTCA
CTTGTTTAGTTTTTAAACGTTAGTATAATCTGAATAAATAAAATGTTGCCAAATTCAATGTAGAAAGAATGTGAC
AACACACCTTGGGTAGTTCTGCTTGTGTTTTTGCATATTGTAAAAGCAGTGTCACAGCTAAAAAGAAAGAAATCG
TTTCTAACAGTAAATTATTGTGCTTTAGTTGCTAGTTTGTACTGAGAGTTGACCTCTCCCTGTGCAGTTTTTTGT
TCTAAACTTGTATAAATAACAATTGTGTAATGTGTCTCCCTCCTACATTGTAACAATTGCTTCAGCCTACGTTAT
AAATAAAGAACCACTAGATT

FIGURE 646

MFPSSQIPSWKDWAKPGPYDQPLVNTLQRRKEKREPDPNGGGPTTASGPPAAAEEAQRPRSMTVSAATRPGEEME
ACEELALALSRGLQLDTQRSSRDSLQCSSGYSTQTTTPCCSEDTIPSQVSDYDYFSVSGDQEADQQEFDKSSTIP
RNSDISQSYRRMFQAKRPASTAGLPTTLGPAMVTPGVATIRRTPSTKPSVRRGTIGAGPIPIKTPVIPVKTPTVP
DLPGVLPAPPDGPEERGEHSPESPSVGEGPQGVTSMPSSMWSGQASVNPPLPGPKPSIPEEHRQAIPESEAEDQE
REPPSATVSPGQIPESDPADLSPRDTPQGEDMLNAIRRGVKLKKTTTNDRSAPRFS

FIGURE 647

CCGATTCCTGGCTTTTGCAAGGCTGTGGTCGGTGGTCATCAGTGCTCTTGACCCAGGTCCAGCGAGCCTTTTCCC
TGGTGTTGCAGCTGTTGTTGTACCGCCGCCGTCGCCGCCGTCGCCGCCTGCTCTGCGGGGTC**ATG**GTGTGCTTCC
GCCTCTTCCCGGTTCCGGGCTCAGGGCTCGTTCTGGTCTGCCTAGTCCTGGGAGCTGTGCGGTCTTATGCATTGG
AACTTAATTTGACAGATTCAGAAAATGCCACTTGCCTTTATGCAAAATGGCAGATGAATTTCACAGTACGCTATG
AAACTACAAATAAAACTTATAAAACTGTAACCATTTCAGACCATGGCACTGTGACATATAATGGAAGCATTTGTG
GGGATGATCAGAATGGTCCCAAAATAGCAGTGCAGTTCGGACCTGGCTTTTCCTGGATTGCGAATTTTACCAAGG
CAGCATCTACTTATTCAATTGACAGCGTCTCATTTTCCTACAACACTGGTGATAACACAACATTTCCTGATGCTG
AAGATAAAGGAATTCTTACTGTTGATGAACTTTTGGCCATCAGAATTCCATTGAATGACCTTTTTAGATGCAATA
GTTTATCAACTTTGGAAAAGAATGATGTTGTCCAACACTACTGGGATGTTCTTGTACAAGCTTTTGTCCAAAATG
GCACAGTGAGCACAAATGAGTTCCTGTGTGATAAAGACAAAACTTCAACAGTGGCACCCACCATACACACCACTG
TGCCATCTCCTACTACAACACCTACTCCAAAGGAAAAACCAGAAGCTGGAACCTATTCAGTTAATAATGGCAATG
ATACTTGTCTGCTGGCTACCATGGGGCTGCAGCTGAACATCACTCAGGATAAGGTTGCTTCAGTTATTAACATCA
ACCCCAATACAACTCACTCCACAGGCAGCTGCCGTTCTCACACTGCTCTACTTAGACTCAATAGCAGCACCATTA
AGTATCTAGACTTTGTCTTTGCTGTGAAAAATGAAAACCGATTTTATCTGAAGGAAGTGAACATCAGCATGTATT
TGGTTAATGGCTCCGTTTTCAGCATTGCAAATAACAATCTCAGCTACTGGGATGCCCCCCTGGGAAGTTCTTATA
TGTGCAACAAAGAGCAGACTGTTTCAGTGTCTGGAGCATTTCAGATAAATACCTTTGATCTAAGGGTTCAGCCTT
TCAATGTGACACAAGGAAAGTATTCTACAGCTCAAGACTGCAGTGCAGATGACGACAACTTCCTTGTGCCCATAG
CGGTGGGAGCTGCCTTGGCAGGAGTACTTATTCTAGTGTTGCTGGCTTATTTTATTGGTCTCAAGCACCATCATG
CTGGATATGAGCAATTT**TAG**AATCTGCAACCTGATTGATTATATAAAAATACATGCAAATAACAAGATTTTCTTA
CCTCTCAGTTGTTGAAACACTTTGCTTCTTAAAATTGATATGTTGAAACTTTAATTCTTTTATCAATCCCAGCAT
TTTGAGATCAGTCTTTATTAATAAAACCTGTTCTCTTTAATCAGCTTAAAATCCAAAGTGTCATATTTACTGGTC
CTGGAGACAAACTTGTTCAAAAGAACATCAACGTGCAATGTTTTAAGGTCTATCTTAAGAAGCCCTGGCCAAATT
TTGATCCTAACCTTGAAGTATGCCTTGAACTTATTAACATGGCCATTATAAGAATAAAATATGTAGTTGTGTCTT
AATGGAATTAATAAATGTCATTTCACTACTGGTGTTCTGTTTTCAATGTATAAGGACTATAGTGATTTAAACTCA
TCAATGTGCCTTTGCATAAAGTTGATTAAATAAATATTGATGTGGTATAAATGCCCATCAGATATGCT

FIGURE 648

MVCFRLFPVPGSGLVLVCLVLGAVRSYALELNLTDSENATCLYAKWQMNFTVRYETTNKTYKTVTISDHGTVTYN
GSICGDDQNGPKIAVQFGPGFSWIANFTKAASTYSIDSVSFSYNTGDNTTFPDAEDKGILTVDELLAIRIPLNDL
FRCNSLSTLEKNDVVQHYWDVLVQAFVQNGTVSTNEFLCDKDKTSTVAPTIHTTVPSPTTTPTPKEKPEAGTYSV
NNGNDTCLLATMGLQLNITQDKVASVININPNTTHSTGSCRSHTALLRLNSSTIKYLDFVFAVKNENRFYLKEVN
ISMYLVNGSVFSIANNNLSYWDAPLGSSYMCNKEQTVSVSGAFQINTFDLRVQPFNVTQGKYSTAQECSLDDDTI
LIPIIVGAGLSGLIIVIVIAYVIGRRKSYAGYQTL

FIGURE 649A

CCGCCGTCCCTGCGTCCTTCGGTCTCTGCTCCCGGGACCCGGGCTCCGCCGCAGCCAGCCAGCATGTCGGGGATC
AAGAAGCAAAAGACGGAGAACCAGCAGAAATCCACCAATGTAGTCTATCAGGCCCACCATGTGAGCAGGAATAAG
AGAGGGCAAGTGGTTGGAACAAGGGGTGGGTTCCGAGGATGTACCGTGTGGCTAACAGGTCTCTCTGGTGCTGGA
AAAACAACGATAAGTTTTGCCCTGGAGGAGTACCTTGTCTCCCATGCCATCCCTTGTTACTCCCTGGATGGGGAC
AATGTCCGTCATGGCCTTAACAGAAATCTCGGATTCTCTCCTGGGGACAGAGAGGAAAATATCCGCCGGATTGCT
GAGGTGGCTAAGCTGTTTGCTGATGCTGGTCTGGTCTGCATTACCAGCTTTATTTCTCCATTCGCAAAGGATCGT
GAGAATGCCCGCAAAATACATGAATCAGCAGGGCTGCCATTCTTTGAAATATTTGTAGATGCACCTCTAAATATT
TGTGAAAGCAGAGACGTAAAAGGCCTCTATAAAAAGGCCAGAGCTGGGGAGATTAAAGGATTTACAGGTATTGAT
TCTGATTATGAGAAACCTGAAACTCCTGAGCGTGTGCTTAAAACCAATTTGTCCACAGTGAGTGACTGTGTCCAC
CAGGTAGTGGAACTTCTGCAAGAGCAGAACATTGTACCCTATACTATAATCAAAGATATCCACGAACTCTTTGTG
CCGGAAAACAAACTTGACCACGTCCGAGCTGAGGCTGAAACTCTCCCTTCATTATCAATTACTAAGCTGGATCTC
CAGTGGGTCCAGGTTTTGAGCGAAGGCTGGGCCACTCCCCTCAAAGGTTTCATGCGGGAGAAGGAGTACTTACAG
GTTATGCACTTTGACACCCTGCTAGATGATGGCGTGATCAACATGAGCATCCCCATTGTACTGCCCGTCTCTGCA
GAGGATAAGACACGGCTGGAAGGGTGCAGCAAGTTTGTCCTGGCACATGGTGGACGGAGGGTAGCTATCTTACGA
GACGCTGAATTCTATGAACACAGAAAAGAGGAACGCTGTTCCCGTGTTTGGGGGACAACATGTACAAAACACCCC
CATATCAAAATGGTGATGGAAAGTGGGGACTGGCTGGTTGGTGGAGACCTTCAGGTGCTGGAGAAAATAAGATGG
AATGATGGGCTGGACCAATACCGTCTGACACCTCTGGAGCTCAAACAGAAATGTAAAGAAATGAATGCTGATGCG
GTGTTTGCATTCCAGTTGCGCAATCCTGTCCACAATGGCCATGCCCTGTTGATGCAGGACACTCGCCGCAGGCTC
CTAGAGAGGGGCTACAAGCACCCGGTCCTCCTACTACACCCTCTGGGCGGCTGGACCAAGGATGACGATGTGCCT
CTAGACTGGCGGATGAAGCAGCACGCGGCTGTGCTCGAGGAAGGGGTCCTGGATCCCAAGTCAACCATTGTTGCC
ATCTTTCCGTCTCCCATGTTATATGCTGGCCCCACAGAGGTCCAGTGGCACTGCAGGTCCCGGATGATTGCGGGT
GCCAATTTCTACATTGTGGGGAGGGACCCTGCAGGAATGCCCCATCCTGAAACCAAGAAGGATCTGTATGAACCC
ACTCATGGGGGCAAGGTCTTGAGCATGGCCCCTGGCCTCACCTCTGTGGAAATCATTCCATTCCGAGTGGCTGCC
TACAACAAAGCCAAAAAAGCCATGGACTTCTATGATCTAGCAAGGCACAATGAGTTTGACTTCATCTCAGGAACT
CGAATGAGGAAGCTCGCCCGGGAAGGAGAGAATCCCCCAGATGGCTTCATGGCCCCCAAAGCATGGAAGGTCCTG
ACAGATTATTACAGGTCCCTGGAGAAGAACTAAGCCTTTGGCTCCAGAGTTTCTTTCTGAAGTGCTCTTTGATTA
CCTTTTCTATTTTTATGATTAGATGCTTTGTATTAAATTGCTTCCTCAATGATGCATTTTAACTTTTATAATGAA
GTAAAAGTTGTGTCTATAATTAAAAAAAAATATATATATATACACACACACATATACATACAAAGTCAAACTGAA
GACCAAATCTTAGCAGGTAAAAGCAATATTCTTATACATTTCATAATAAAATTAGCTCTATGTATTTTCTACTGC
ACCTGAGCAGGCAGGTCCCAGATTTCTTAAGGCTTTGTTTGACCATGTGTCTAGTTACTTGCTGAAAAGTGAATA
TATTTTCCAGCATGTCTTGACAACCTGTACTCTTCCAATGTCATTTATCAGTTGTAAAATATATCAGATTGTGTC
CTCTTCTGTACAATTGACAAAAAAAAATTTTTTTTTCTCACTCTAAAAGAGGTGTGGCTCACATCAAGATTCTTC
CTGATATTTTACCTCATGCTGTACAAGCCTTAATGTGTAATCATATCTTACGTGTTGAAGACCTGACTGGAGAAA
CAAAATGTGCAATAACGTGAATTTTATCTTAGAGATCTGTGCAGCCTAGATTTTACCTCATGCTGTACAAAGCCT
TAATGTTGTAATCATATCTTACGTGTTGAGACCTGACTGGAGAAACAAAATGTGCAATAACGTGAATTTTATCTT
AGAGATCTGTGCAGCCTATTTTCTGTCACAAAAGTTATATTGTCTAATAAGAGAAGTCTTAATGGCCTCTGTGAA
TAATGTAACTCAGTTACACGGTGACTTTTAATAGCATACAGTGATTTGATGAAAGGACGTCAAACAATGTGGCGA
TGTCGTGGAAAGTTATCTTTCCCGCTCTTTGCTGTGGTCATTGTGTCTTGCAGAAAGGATGGCCCTGATGCAGCA
GCAGCGCCAGCTGTAATAAAAAATAATTCACACTATCAGACTAGCAAGGCACTAGAACTGGAAAAGACCACAGAA
AACAAAGAATCCAACCCTTTCATCTTACAGGTGAACAAACTGTGATGATGCACATGTATGTGTTTTGTAAGCTGT
GAGCACCGTAACAAAATGTAAATTTGCCATTATTAGGAAAGTGCTGGTGGCAGTGAAGAAGCACCCAGGCCACTT
GACTCCCAGTCTGGTGCCCTGTCTACACCAGACAACACAGGAGCTGGGTCAGATTCCCCTCAGCTGCTTAACAAA
GTTCCTCGAACAGAAAGTGCTTACAAAGCTGCCTTCTCGGATACTGAAAGGTCGAGTTTTCTGAACTGCACTGAT
TTTATTGCAGTTGAAAAACCCAAAGCTATTCCAAAGATTTCAAGCTGTTCTGAGACATCTTCTGATGGCTTTACT
TCCTGAGAGGCAATGTTTTTACTTTATGCATAATTCATTGTTGCCAAGGAATAAAGTGAAGAAACAGCACCTTTT
TAATATATAGGTCTCTCTGGAAGAGACCTAAATTTAGAAAGAGAAAACTGTGACAATTTTCATATTCTCATTCTT
AAAAAACACTAATCTTAACTAACAAAAGTTCTTTTGAGAATAAGTTACACACAATGGCCACAGCAGTTTGTCTTT
AATAGTATAGTGCCTATACTCATGTAATCGGTTACTCACTACTGCCTTTAAAAAAAACCAGCATATTTATTGAAA

FIGURE 649B

ACATGAGACAGGATTATAGTGCCTTAACCGATATATTTTGTGACTTAAAAAATACATTTAAAACTGCTCTTCTGC
TCTAGTACCATGCTTAGTGCAAATGATTATTTCTATGTACAACTGATGCTTGTTCTTATTTTAATAAATTTATCA
GAGTGAAAAAAAAAAAAAAAAAA

FIGURE 650

MSGIKKQKTENQQKSTNVVYQAHHVSRNKRGQVVGTRGGFRGCTVWLTGLSGAGKTTISFALEEYLVSHAIPCYS
LDGDNVRHGLNRNLGFSPGDREENIRRIAEVAKLFADAGLVCITSFISPFAKDRENARKIHESAGLPFFEIFVDA
PLNICESRDVKGLYKKARAGEIKGFTGIDSDYEKPETPERVLKTNLSTVSDCVHQVVELLQEQNIVPYTIIKDIH
ELFVPENKLDHVRAEAETLPSLSITKLDLQWVQVLSEGWATPLKGFMREKEYLQVMHFDTLLDDGVINMSIPIVL
PVSAEDKTRLEGCSKFVLAHGGRRVAILRDAEFYEHRKEERCSRVWGTTCTKHPHIKMVMESGDWLVGGDLQVLE
KIRWNDGLDQYRLTPLELKQKCKEMNADAVFAFQLRNPVHNGHALLMQDTRRRLLERGYKHPVLLLHPLGGWTKD
DDVPLDWRMKQHAAVLEEGVLDPKSTIVAIFPSPMLYAGPTEVQWHCRSRMIAGANFYIVGRDPAGMPHPETKKD
LYEPTHGGKVLSMAPGLTSVEIIPFRVAAYNKAKKAMDFYDLARHNEFDFISGTRMRKLAREGENPPDGFMAPKA
WKVLTDYYRSLEKN

FIGURE 651

GGAGAGAGGACCTATTTCTACCTAAGGACATTCCCGGAAGGCAATGGGTTTCAAACAATATCCTGAAGAGACTCA
TCTCGGGGAACTAAGCAGGTGGTAATCAGAGAACACAGAGCCCCCGGAAGAATTTT**ATG**GCATTTCAGGCAAGCC
ACAGGCCAGCCTGGGGAAAAAGCAGGAAGAAAAACTGGCAATACGAGGGCCCAACCCAAAAGTTATTCCTGAAGA
GAAACAACGTGTCAGCACCAGATGGGCCTTCAGACCCCAGCATCTCCGCGAGCAGTGAGCAAAGCGGGGCACAGC
AGCCTCCCGGTTTACAGGTTGAAAGGATTGTTGACAAAAGGAAAAATAAAAAAGGGAAGACAGAGTATTTGGTTC
GGTGGAAAGGCTATGACAGCGAGGACGACACTTGGGAGCCGGAACAGCACCTCGTGAACTGTGAGGAATACATCC
ACGACTTCAACAGACGCCACACGGAGAAGCAGAAGGAGAGCACATTGACCAGAACAAACAGGACCTCTCCCAACA
ATGCTAGGAAACAAATCTCCAGATCCACCAACAGCAACTTTTCTAAGACCTCTCCTAAGGCACTCGTGATTGGGA
AAGACCACGAATCCAAAAACAGCCAGCTGTTTGCTGCCAGCCAGAAGTTCAGGAAGAACACAGCTCCATCTCTCT
CCAGCCGGAAGAACATGGACCTAGCGAAGTCAGGTATCAAGATCCTCGTGCCTAAAAGCCCCGTTAAGAGCAGGA
CCGCAGTGGACGGCTTTCAGAGCGAGAGCCCTGAGAAACTGGACCCCGTCGAGCAGGGTCAGGAGGACACAGTGG
CACCCGAAGTGGCAGCGGAAAAGCCGGTCGGAGCTTTATTGGGCCCCGGTGCCGAGAGGGCCAGGATGGGGAGCA
GGCCCAGGATACACCCACTAGTGCCTCAGGTGCCCGGCCCTGTGACTGCAGCCATGGCCACAGGCTTAGCTGTTA
ACGGGAAAGGTACATCTCCGTTCATGGATGCATTAACAGCCAATGGGACAACCAACATACAGACATCTGTTACAG
GAGTGACTGCCAGCAAAAGGAAATTTATTGACGACAGAAGAGACCAGCCTTTTGACAAGCGATTGCGTTTCAGCG
TGAGGCAAACAGAAAGTGCCTACAGATACAGAGATATTGTGGTCAGGAAGCAGGATGGCTTCACCCACATCTTGT
TATCCACAAAGTCCTCAGAGAATAACTCACTAAATCCAGAGGTAATGAGAGAAGTCCAGAGTGCTCTGAGCACGG
CCGCTGCCGATGACAGCAAGCTGGTACTGCTCAGCGCCGTTGGCAGCGTCTTCTGTTGTGGACTTGACTTTATTT
ATTTTATACGACGTCTGACAGATGACAGGAAAAGAGAAAGCACTAAAATGGCAGAAGCTATCAGAAACTTCGTGA
ATACTTTCATTCAATTTAAGAAGCCCATTATTGTAGCAGTCAATGGCCCAGCCATTGGTCTAGGAGCATCTATAT
TGCCTCTTTGCGATGTGGTTTGGGCTAATGAAAAGGCTTGGTTTCAAACACCCTATACCACCTTCGGACAGAGTC
CAGATGGCTGTTCTACCGTTATGTTTCCCAAGATAATGGGAGGAGCATCTGCAAACGAGATGCTGCTCAGTGGAC
GGAAGCTGACAGCGCAGGAGGCGTGTGGCAAGGGCCTGGTCTCCCAGGTGTTTTGGCCCGGGACGTTCACTCAGG
AAGTGATGGTTCGCATTAAGGAGCTTGCCTCGTGCAATCCAGTTGTGCTTGAGGAATCCAAAGCCCTCGTGCGCT
GCAACATGAAGATGGAGCTGGAGCAGGCCAACGAGAGGGAGTGTGAGGTGCTGAAGAAAATCTGGGGCTCGGCCC
AGGGGATGGACTCCATGTTAAAGTACTTGCAGAGGAAGATCGATGAGTTC**TGA**GTGTCGGGCTGCCCACTGGTGA
CACCGGGATCGGGCTGAGCAGGAGAACATCACCGGCTCCAGTTCCCCTGATCCATTCTCACAGCCTGAAACAAGC
TCACCCGTAGCTTACGCTTGGAAGCAGGACTGGGAACATCCACGCTATTTATTATCGAGGAGTTTTAAAGTACTG
TAACTTTAAAATAAATAACTACAAAGCTTCTTTGTCVAAACGTCATTATTTTATACTTATATACACGCAGGTGTA
AAAGTATAAAGGTGAGCACTAGACTGCTCTTAGAAGCTCTAATTTTTGTTTTCTTTGGCTAGTACTGTATAAAAA
ACAGAATTGTGTTTTATTGGTTTTGGATGACAGAAAAGTCTGGAATAATGTTTGTTTTCCTCATTTCTTCCTTCT
AGAACACAGAATCTAAGGGGGTGTTAGCCAGCCTCGCCTCCCTGCCCCACGTAGAGACACAGAGTGATGTGAGGC
GTTGGCTTTTTCTCCAAGAAGGTACAGATACCTCAGATTCGGGAAACTCAAAATCAAAAGACTTAGCTTCTAGGA
TAAATACTTCTGATGAAAAATCCGCTGAGGAGCATACCCCAAACCAGACATATGCTTAGGATTCATGCTGAGATA
TCAATTGGTTTCCCCTTCTTTTTAAAATACGTCCAGTTCTTACCCAGTTAACATGAAGAAACCACTGTCTCTAGA
AGAAAGCTTGTTTTGCAGTATTAGTGAATCACTGAATAGCTTAAGTATGACTATCTAAGTTATAAGTTAGTCTTT
AGTGGGTTTTAAATAGTTTTTCTGACCCTTCTGAAAAATAACTACATAAGTGCTTCTTGTTGCTGGGTGAGAAAT
ACTACTTTATAGACAGTTTTGGTTTTCTGTTTGCAGATATGATTGATGTATTTCACCAAAATAAAATATTTTTAT
GTTTATAAAGTGTAATTTTTAGGTTCACTTAGAATATATTTTATTTAATAAGTTAAAATTCTTTTGGCACACTAT
TAAATGCAAAAACTCCTTTCAAAAAAAAAA

FIGURE 652

MAFQASHRPAWGKSRKKNWQYEGPTQKLFLKRNNVSAPDGPSDPSISASSEQSGAQQPPGLQVERIVDKRKNKKG
KTEYLVRWKGYDSEDDTWEPEQHLVNCEEYIHDFNRRHTEKQKESTLTRTNRTSPNNARKQISRSTNSNFSKTSP
KALVIGKDHESKNSQLFAASQKFRKNTAPSLSSRKNMDLAKSGIKILVPKSPVKSRTAVDGFQSESPEKLDPVEQ
GQEDTVAPEVAAEKPVGALLGPGAERARMGSRPRIHPLVPQVPGPVTAAMATGLAVNGKGTSPFMDALTANGTTN
IQTSVTGVTASKRKFIDDRRDQPFDKRLRFSVRQTESAYRYRDIVVRKQDGFTHILLSTKSSENNSLNPEVMREV
QSALSTAAADDSKLVLLSAVGSVFCCGLDFIYFIRRLTDDRKRESTKMAEAIRNFVNTFIQFKKPIIVAVNGPAI
GLGASILPLCDVVWANEKAWFQTPYTTFGQSPDGCSTVMFPKIMGGASANEMLLSGRKLTAQEACGKGLVSQVFW
PGTFTQEVMVRIKELASCNPVVLEESKALVRCNMKMELEQANERECEVLKKIWGSAQGMDSMLKYLQRKIDEF

FIGURE 653

AGG**ATG**ATCAAGCTGTTCTCGCTGAAGCAGCAGAAGAAGGAGGAGGAGTCGGCGGGCGGCACCAAGGGCAGCAGC
AAGAAGGCGTCGGCGGCGCAGCTGCGGATCCAGAAGGACATAAACGAGCTGAACCTGCCCAAGACGTGTGATATC
AGCTTCTCAGATCCAGACGACCTCCTCAACTTCAAGCTGGTCATCTGTCCTGATGAGGGCTTCTACAAGAGTGGG
AAGTTTGTGTTCAGTTTTAAGGTGGGCCAGGGTTACCCGCATGATCCCCCCAAGGTGAAGTGTGAGACAATGGTC
TATCACCCCAACATTGACCTCGAGGGCAACGTCTGCCTCAACATCCTCAGAGAGGACTGGAAGCCAGTCCTTACG
ATAAACTCCATAATTTATGGCCTGCAGTATCTCTTCTTGGAGCCCAACCCCGAGGACCCACTGAACAAGGAGGCC
GCAGAGGTCCTGCAGAACAACCGGCGGCTGTTTGAGCAGAACGTGCAGCGCTCCATGCGGGGTGGCTACATCGGC
TCCACCTACTTTGAGCGCTGCCTGAAA**TAG**GGTTGGCGCATACCCACCCGCCGCCACGGCCACAAGCCCTGGCAT
CCCCTGCAAATATTTATTGGGGGCCATGGGTAGGGGTTTGGGGGGCGGCCGGTGGGGGAATCCCCTGCCTTGGCC
TTGCCTCCCCTTCCTGCCACGTGCCCCTAGTTATTTTTTTTTTAACACCAGGCTAACTAAAGGGGAATGTTACTG
C

FIGURE 654

MIKLFSLKQQKKEEESAGGTKGSSKKASAAQLRIQKDINELNLPKTCDISFSDPDDLLNFKLVICPDEGFYKSGK
FVFSFKVGQGYPHDPPKVKCETMVYHPNIDLEGNVCLNILREDWKPVLTINSIIYGLQYLFLEPNPEDPLNKEAA
EVLQNNRRLFEQNVQRSMRGGYIGSTYFERCLK

FIGURE 655A

GGAGCCCTGGGCGCGGGGGCGGCGTGTCAGGTGGTTGCGGAGCTGGTAAGAATCATATTCTAAGAACTCAGCCAC
TCAGGTATCCACC**ATG**GTGCTGGGTCCTGAACAGAAGATGTCAGATGACAGTGTTTCTGGAGATCATGGGGAGTC
TGCCAGTCTTGGTAACATCAACCCTGCCTATAGTAATCCCTCTCTTTCACAGTCCCCTGGGGACTCAGAGGAGTA
CTTCGCCACTTACTTTAATGAGAAGATCTCCATTCCTGAGGAGGAGTACTCTTGTTTTAGCTTTCGTAAACTCTG
GGCTTTCACCGGACCAGGTTTTCTTATGAGCATTGCCTACCTGGATCCAGGAAATATTGAATCCGATTTGCAGTC
TGGAGCAGTGGCTGGATTTAAGTTGCTCTGGATCCTTCTGTTGGCCACCCTTGTGGGGCTGCTGCTCCAGCGGCT
TGCAGCTAGACTGGGAGTGGTTACTGGGCTGCATCTTGCTGAAGTATGTCACCGTCAGTATCCCAAGGTCCCACG
AGTCATCCTGTGGCTGATGGTGGAGTTGGCTATCATCGGCTCAGACATGCAAGAAGTCATTGGCTCAGCCATTGC
TATCAATCTTCTGTCTGTAGGAAGAATTCCTCTGTGGGGTGGCGTTCTCATCACCATTGCAGATACTTTTGTATT
TCTCTTCTTGGACAAATATGGCTTGCGGAAGCTAGAAGCATTTTTTGGCTTTCTCATCACTATTATGGCCCTCAC
ATTTGGATATGAGTATGTTACAGTGAAACCCAGCCAGAGCCAGGTACTCAAGGGCATGTTCGTACCATCCTGTTC
AGGCTGTCGCACTCCACAGATTGAACAGGCTGTGGGCATCGTGGGAGCTGTCATCATGCCACACAACATGTACCT
GCATTCTGCCTTAGTCAAGTCTAGACAGGTAAACCGGAACAATAAGCAGGAAGTTCGAGAAGCCAATAAGTACTT
TTTCATTGAATCCTGCATTGCACTCTTTGTTTCCTTCATCATCAATGTCTTTGTTGTCTCAGTCTTTGCTGAAGC
ATTTTTTGGGAAAACCAACGAGCAGGTGGTTGAAGTCTGTACAAATACCAGCAGTCCTCATGCTGGCCTCTTTCC
TAAAGATAACTCGACACTGGCTGTGGACATCTACAAAGGGGGTGTTGTGCTGGGATGTTACTTTGGGCCTGCTGC
ACTCTACATTTGGGCAGTGGGGATCCTGGCTGCAGGACAGAGCTCCACCATGACAGGAACCTATTCTGGCCAGTT
TGTCATGGAGGGATTCCTGAACCTAAAGTGGTCACGCTTTGCCCGAGTGGTTCTGACTCGCTCTATTGCCATCAT
CCCCACTCTGCTTGTTGCTGTCTTCCAAGATGTAGAGCATCTAACAGGGATGAATGACTTTCTGAATGTTCTACA
GAGCTTACAGCTTCCCTTTGCTCTCATACCCATCCTCACATTTACGAGCTTGCGGCCAGTAATGAGTGACTTTGC
CAATGGACTAGGCTGGCGGATTGCAGGAGGAATCTTGGTCCTTATCATCTGTTCCATCAATATGTACTTTGTAGT
GGTTTATGTCCGGGACCTAGGGCATGTGGCATTATATGTGGTGGCTGCTGTGGTCAGCGTGGCTTATCTGGGCTT
TGTGTTCTACTTGGGTTGGCAATGTTTGATTGCACTGGGCATGTCCTTCCTGGACTGTGGGCATACGGTAAGCAT
CTCTAAAGGCCTGCTGACAGAAGAAGCCACCCGTGGCTACGTTAAA**TAA**CACTGGATTAGTCTGTCTTCTGCAGG
TAGCCATCAGAGCCAGTGTGTTTCTATGGTTTACTGTGTGAACATAGCCAAAAGTATGTGCCGTTGCACAGACTG
TGTTTATGACTCAACCGTTGGTTGGAAAAGACTTTGTTTCATGTGTATTTGAAAGATGGAATTATTTTTTCCTTC
CTGACCTAACCTTAGAACTGGATTAGGGTGGGATCTTTGAAAAGCTGACATTTGCTGCTATCATTCCAACACTAA
ATTCTTAAGTAGTTGCCCAAGGGCCAGCTCAGTTTATCCTTCGGAGAGACAAGGATATGCATGATTCTTAACCAG
GCTATATGTTAAAAAAAAATTGGAAAATGCAATACATTTTTTATTATACAAACTACAGAATGAGTATGCAAGTTT
TATTTATCAAAATGTAATGGATTTTTAAAGGCTGAGAAATTTTCCTTATACCTACCTTTTCAGTTATTTTAATTA
TACCAAATTATCAACTAGAATAGCTTCATCCATATGAAATATAAAATGAAGAGACACCTAGCTCTATCAGGCTTA
GGATTCTTTGAACTTATTTCCACTTTAATTTCTCAGTGGAAGTTAAGAGGGGTGAGAAAACAAAGAAGGGGAAAA
ACTGACAACTAACAAAACCAGCACCACATCGCTAGGTGGTGCTTACTAATTACCTTCTCAGGATTTTCCTCAGAT
TGAAAAGCTTATGAGGATTTCTTGGGAGTCTTAATAACCTGCCTGTTAGTACAGAGCTTTCCTGATGATATTTAC
TCTTGAGCACATGTGGTTGTAAAACCTTAACTTTCTTTCTCCAGGAGGGTGGTGATAGAAACAGATGGTAGTATT
TATGAACTGATGTTCTCGTGAAATGTTGAGGGTGGGGAGAAAAGACTTTAAGGGAGGAGAGCCATCTATTTTGTT
CCTAAAGCCACCTCTCAGCAGAATCGTCATGTTTTTCTGATGCACCGCTCTGCTTCATGCCCAAGATGACTTGCG
AGGCAATCTCAGGAGCTGTGGACTTAACCGTTGCAAAGCACACTGTCTTTCTCAGCGTTCTCTGCAAGTCAGTAG
GTGTTAGTATGGTTGCAAAGTTCACTGTCTCAGCAAAGTTGAACTGGGCTACCTCTCTACAGCTGTTTCCTCAGA
GGGAAAAATCTTGAGACCATGGTGGAGCTCTGGAGTCAGAGGAAATGGGTGTCTTCAGCACAAAGCTGCTGCTTT
TACTTCAGCCACTTCTGACATTTTTACATACCGAGCCTGAGATTGTGTGATTATCTCAAATCAAATCACTTTGAT
GGAGATAAATAATCAAAACTGTTTTATAGTCATTGATTTGGTGAGAACAGTAATGGAAAATGGTGTTGAAGGACT
TCTCATTTTTGGAGCTTTCCTTCCAGAGTCCTGGCTGATTGGTGTTCGCTGTTCATCTGAGCCCCCAAAAGCATT
ATTACTGATACTTGCACACAGTCAAAAGCGCAGACTGGATGGATGGTCTTTTATAAGGCATTTAAGGGTACACTA
CTGTGTTTCACTGACCATACATTTTTCTTAGCCCCTCAAGTAATATAGCACAGAGTTATGAATGACAATTCCCCT
AACCATTCCTCTTCATATCTGCCTCTTCCCCTTACCATCGTAATTCTCCAAACTGGTCATAAAGGCACTCTGTGA
AGATATTGGGGACTGACATCTTAAGCTCTCACCTGGCTGCAGTAGGAAAGGCCAAACTGACGACAAAAAAAAAAT
TCTTTATAAAGATGATATGGTAACATGTATCTTTGCCCTGGGTCTGGGTGGGTCCAGTCAGTCTCAGATTTACAA

FIGURE 655B

GCATTTAGGAGCCTAGGTAAAAGCTGCTAGTATTCTTTTAAAAGTTATATTTATGACTTGCAATGATAGAAAACT
CCTTCCAATTAAATGGCATTTTATAATATTATGTGTGTACTTCACAGTGTTAAAAATACCCTCATACGTTATTGC
ATTTGATCTTCACAGAAAGTGCATTTTAACCAGTACTCTGGGTGCAATAAATAATATGTAGAAATTTAAGTCCTC
CAATTCCAGCATATCCAGTGAGTTTTGACAGTGTGTTTATGTGGAATGTTTAAGGATATACAATTGTACTTTATA
TAAATTGGTTCTTGTTCTTCTTAAATGTGACATGAAATAATTGTGCTGCTACATTATACTGGAAATTAACAGGGG
AAAAGGGAAGAGCTCTTGGCTCCCTTGAGGTTCTGCTAGTGGTGTTAGGAGTGGTTACAACTGAGCTTTTAGTAA
CCATTTAACCGTATGTAAACTTGGTTTCTAATTAAAAAAAAATTTCTTTTTCC

FIGURE 656

MVLGPEQKMSDDSVSGDHGESASLGNINPAYSNPSLSQSPGDSEEYFATYFNEKISIPEEEYSCFSFRKLWAFTG
PGFLMSIAYLDPGNIESDLQSGAVAGFKLLWILLLATLVGLLLQRLAARLGVVTGLHLAEVCHRQYPKVPRVILW
LMVELAIIGSDMQEVIGSAIAINLLSVGRIPLWGGVLITIADTFVFLFLDKYGLRKLEAFFGFLITIMALTFGYE
YVTVKPSQSQVLKGMFVPSCSGCRTPQIEQAVGIVGAVIMPHNMYLHSALVKSRQVNRNNKQEVREANKYFFIES
CIALFVSFIINVFVVSVFAEAFFGKTNEQVVEVCTNTSSPHAGLFPKDNSTLAVDIYKGGVVLGCYFGPAALYIW
AVGILAAGQSSTMTGTYSGQFVMEGFLNLKWSRFARVVLTRSIAIIPTLLVAVFQDVEHLTGMNDFLNVLQSLQL
PFALIPILTFTSLRPVMSDFANGLGWRIAGGILVLIICSINMYFVVVYVRDLGHVALYVVAAVVSVAYLGFVFYL
GWQCLIALGMSFLDCGHTVSISKGLLTEEATRGYVK

FIGURE 657

GCGAGGGTAGCC**ATG**ACGGCCTCCGTGCTGCGAAGTATCTCGCCAGCCCTGCGCCCGACTAGCGGGCTTCTGGGA
ACTTGGCAGACGCAGCTTAGAGAGACTCACCAGCGAGCGTCATTGTTGTCTTTCTGGGAACTCATTCCCATGAGA
TCAGAACCTCTTCGAAAAAAGAAGAAGGTAGATCCTAAAAAAGACCAAGAAGCAAAGGAGCGCTTGAAAAGGAAG
ATCCGAAAACTGGAAAAGGCTACTCAAGAGCTAATTCCTATTGAAGATTTTATTACCCCTCTAAAGTTCTTGGAT
AAAGCAAGAGAGCGGCCTCAGGTGGAGCTCACCTTTGAGGAGACTGAGAGGAGAGCTCTGCTTCTGAAGAAGTGG
TCCTTGTACAAGCAGCAAGAGCATAAGATGGAGAGGGACACCATCAGGGCTATGCTAGAAGCCCAGCAGGAAGCT
CTGGAGGAACTGCAACTGGAATCCCCGAAGCTCCATGCTGAGGCCATCAAGCGGGATCCTAACCTGTTCCCCTTT
GAGAAGGAAGGGCCACATTACACACCACCGATCCCTAACTACCAACCCCCTGAAGGCAGGTACAATGACATCACC
AAGGTGTACACACAAGTGGAGTTTAAGAGA**TAG**ACTTGCAGGCTGCTATCCTTAACATGCTGCCCCTGAGAGTAG
GAATGACCAGGGTTCAAGTCTGCTTTCCACAGAATCAGGCATGCTGTTAATAAATACTGGTTTAATCAAAAAAAA
AAAAAAAAAA

FIGURE 658

MTASVLRSISPALRPTSGLLGTWQTQLRETHQRASLLSFWELIPMRSEPLRKKKKVDPKKDQEAKERLKRKIRKL
EKATQELIPIEDFITPLKFLDKARERPQVELTFEETERRALLLKKWSLYKQQEHKMERDTIRAMLEAQQEALEEL
QLESPKLHAEAIKRDPNLFPFEKEGPHYTPPIPNYQPPEGRYNDITKVYTQVEFKR

FIGURE 659A

GAATTCCGTTGCTGTCGGCGCGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCACCCGCATCC
GCTGCGGGAGTCCGAGCCGGAACCACACCCAAGTAGCTGCCCTTTCCTCTTCTGTCATCTCACCGCCCCACCACA
GACCGCGTTCCCCGAGGAAACCGGCCGCCCACGCCCGGAGCATCCTCCCCTGTTGAGCGGGCGCTGACGGACCCG
GCGGC**ATG**ATGCGGCTGCGAGGCTCGGGGATGCTGCGGGACCTGCTCCTGCGGTCGCCCGCCGGCGTGAGCGCGA
CTCTGCGGCGGGCACAGCCCTTGGTCACCCTGTGCCGGCGTCCCCGAGGCGGGGGACGGCCGGCCGCGGGCCCGG
CTGCCGCCGCGCGACTCCACCCGTGGTGGGGCGGGGGCGGCTGGCCGGCGGAGCCCCTCGCGCGGGGCCTGTCCA
GCTCTCCTTCGGAGATCTTGCAGGAGCTGGGCAAGGGGAGCACGCATCCGCAGCCCGGGGGTGTCGCCACCCGCTG
CCCCGGCGGCGCCCGGCCCCAAGGACGGCCCCGGGGAGACGGACGCGTTTGGCAACAGCGAGGGCAAAGAGCTGG
TGGCCTCAGGTGAAAATAAAATAAAACAGGGTCTGTTACCTAGCTTGGAAGATTTGCTGTTCTATACAATTGCTG
AAGGACAAGAGAAAATACCTGTTCATAAATTTATTACAGCACTCAAATCTACAGGATTGCGAACGTCTGATCCCA
GGTTGAAAGAGTGTATGGATATGTTAAGATTAACTCTTCAAACAACATCAGATGGTGTCATGCTAGACAAAGATC
TTTTTAAAAAATGTGTTCAGAGCAACATTGTTTTGTTGACACAAGCATTTAGAAGAAAGCTTGTGATTCCTGACT
TTATGTCTTTTACCTCACACATTGATGAGTTATATGAAAGTGCTAAAAAGCAGTCTGGAGGAAAGGTTGCAGATT
ATATTCCTCAACTGGCCAAATTCAGTCCCGATTTGTGGGGTGTGTCTGTTTGTACAGTAGATGGACAGAGGCATT
CTACTGGAGATACCAAAGTTCCCTTCTGTCTTCAGTCCTGTGTAAAACCTTTGAAATATGCCATTGCTGTTAATG
ATCTTGGAACTGAATATGTGCATCGATATGTTGGAAAAGAGCCGAGTGGACTAAGATTCAACAAACTATTTTTGA
ATGAAGATGATAAACCACATAATCCTATGGTAAATGCTGGAGCAATTGTTGTGACTTCACTAATAAAGCAAGGAG
TAAATAATGCTGAAAAATTTGACTATGTCATGCAGTTTTTGAATAAGATGGCTGGTAATGAATATGTTGGATTCA
GTAATGCAACGTTTCAGTCTGAAAGAGAAAGTGGAGATCGAAATTTTGCAATAGGATATTACTTAAAAGAAAAGA
AGTGCTTTCCAGAAGGCACAGACATGGTTGGTATATTAGACTTCTACTTCCAGCTGTGCTCCATTGAAGTGACTT
GTGAATCAGCCAGTGTGATGGCTGCGACACTGGCTAATGGTGGTTTCTGCCCAATTACTGGTGAAAGAGTACTGA
GCCCTGAAGCAGTTCGAAATACATTGAGTTTGATGCATTCCTGTGGCATGTATGACTTCTCAGGGCAGTTTGCTT
TCCATGTTGGTCTTCCTGCAAAATCTGGAGTTGCTGGGGGCATTCTTTTAGTTGTCCCCAATGTTATGGGTATGA
TGTGCTGGTCTCCTCCTCTGGATAAGATGGGCAACAGTGTTAAGGGAATTCACTTTTGTCACGATCTTGTTTCTC
TGTGTAATTTCCATAACTATGATAATTTGAGACACTTTGCAAAAAAACTTGATCCTCGAAGAGAAGGTGGTGATC
AAAGGGTAAAGTCAGTGATAAATCTTTTGTTTGCTGCATATACTGGAGATGTGTCTGCACTTCGAAGATTTGCTT
TGTCAGCTATGGACATGGAACAGCGGGACTATGATTCTAGAACAGCACTCCATGTAGCTGCTGCAGAGGGTCATG
TTGAAGTTGTTAAATTTTTGCTGGAAGCCTGCAAAGTAAACCCTTTCCCCAAGGACAGGTGGAATAACACTCCCA
TGGATGAAGCACTGCACTTTGGACACCATGATGTATTTAAAATTCTCCAAGAATACCAAGTCCAGTACACACCTC
AAGGAGATTCTGACAACGGGAAGGAAAATCAAACCGTCCATAAGAATCTTGATGGATTGTTG**TAA**TGGTCTCAAA
TCCCAAGATTTAAATCACTTACCTATTTAATTGTGGAAAATGATTATGAAGAACATGTGTATTTCTATCTGGTAG
TGATGTATATTTTACATTTGTCATTTCAGTGTTACTGGAGTTTTCTTCATTGTGCACACAGGACAAATCTGATCT
CTTTGGGAAAAAATAGAAATAAAACAATCTCCCTCCATAATGTGAGCAATATTACCTCGTGCATTGTATAATTTG
ATGTAAAAGAAATAGTTACCAATGCTAGCTTGTGTGGTCTTCCATGATTTATTTGTGTTTTGTGAATTTTCAATT
TATGGTGATGATCTGCTGATATGCATTTATAAAGTAAGCTCTGTTGTACAGTCTGTCCAAATGGGTCAAGGTTGC
CTTTAGAAGCAAATAGTGTGATTTTCAAGACTTCAAATACAAATTTAGTTTAAGTGTTTGAACAACTATATGCAC
TTACGGTTGTGTGTTTAAAATGTCTCTCTCTCACCCTAGCTTCATGATGTGACTCTTAAAAAACTATAATAGTTA
ACAACTGTTAGTAAGATAGACCAATTCTGATTAGACTTTATCAGGGAATCTGTTTAAGATATGTTTGGTGACCAA
AACGTATGTGTGAATGTAGTTATAATGCTTTTGAAAAATTTTCCTTTTTCTATATCCCCTTAGTCCAGCCTCTCT
TCTCAGACATTTAGCTATCTGCCTCTTTCCTTTAGCTGGGAAAGTGAGAGCTGGCATACTATGCAGTTTTTATGT
TTTCCATAGTAAGTCAGAAAATGCCTCCTATTTCTGGCATCAGAACTTTGCCATTTGTCTACAGAAGACGAACCA
GAGACAAAATTACTAAGTATAAATTAGTCAAGTTTATCAGTCTAAAAAGCGAAGGGATGTGCAACTGCAGCTCTT
TAAGAAGTTTTTTTTTTTAGCTTCTAGGGTAAAGATAAATTCAGAAATGCTCTAAGCTACCAAAGTTATTCTGAA
AGTATGGGAACTGCTACAACTAACAAACATTTGTTTCCAAGCCTGTCATTAAGAGTCTGCATCAAGAGATTTGTC
CTCCTTGGGGGACCACTGGATCATTCCAGATTTCTTGTGATTTTTCTATTGTGTAATTCTTGGTGGGCTCTGTAG
TTTAATAATAAGAAAAAGGCCATTTCATTTTAAATTGTGACCTATAATTCTTTGTCTTGGGTTGGTAATTCAGGA
TTCATTTGGAAAGTGGGTAAAAGGGGCTTCAAAAAACGGATAGAACAGGATTTTCTAGGAGTTACACATACATTT
TATCCTGTCATACCTCGAGATAAAGTGGCATGTTAGTGAGGAGTTCTGATATTAAGCACACACACACATGCACAC

FIGURE 659B

AAATGGACTTCTCTGAAGCTGTGTTTAGTGAAATGAGCTCAAGTACATGAATGTTAGTTGTTATCACATACAGCA
AATTCCTTTTTTTTTCTTTTTCTATGAGCACACTCTGCTGCTTCTAAACTTTACATGCCTGATGGCACCTTACTC
CAGCAGCCTCCAGGTGCTTTCATTTTCACTTCCAGTCTAAGCCAGTGGCTCCTGCCACTGCCCTCCCATTACCTA
GATGGCACCTCCTTTGGTGAAACCACGGCCAATGTTCCTTAGCTGCACCAGGCCCGAAGCTGTTCCCATGCTTGA
GCTTCCATGGGGAGGATGCTGAGTGAGCAGTTTCCTACGCCGTGGATCTAGCAAGCCATGGAGACAGGTAGCATT
TGTAAGATGCTGCACAGGAGCAGCATTATCCCCAAAGATATTACAGGGTAGACACGTTTTAACTGAAATCAATCA
AGATAACTTTATTCAAAGAGCAGCCCGCTTTGTGTGACTAAAATGAAACAAGACAGTTGAATTGTGTGACTTGAA
GATTACCAATGATTTTGAGGCTTTTCTATAATAAAAAGAGGTTCTAACCATTATTTGGGAACAAAGAGAGTTTTC
ATCTTTTTTCAGATCAAAACCATTCTGTAAAATCTTTGTTGTTTAATTAAATGTGCCGTTATTTACCCCTGATGT
TATTTATGACTATGTGCCGATTCCTGCTTGGGCTGTTTGCTGTTGGCTGGTAATAATATATTTGATTTAAATGCT
GTTGACTGTGCTATTAACTGCTGCCGTCAGTAAACTCCAAAGATCTTTTTGTTTTGGCTTTAGTATCATATGTGC
TTTTTCTGTATCCTGAGCGCTCTATATGATCATGTTAATTTAAAGCTTTATACACATTGTTGTTTTTGCTGGTCT
CATCTTTGGTAATATGCTATACCCCACTGCTGCCCGACACTGCCCTTTAGCTGCAGAGCTGGATTAGCTGTTGAC
CATTTGATGCTGTTGTCTGTCTGGCAGGGACTGAATGACCTGATGTCAGATTTAGATTCTTCCTGGGGATTACAC
AGCTATGAATGTATTTGCTTCTAAAACCTCCCAAAGTGAATCTAATCTTAAAACTACAAGTTGTAAGTATTCTGA
AATTGGGAAACATTTATTTTAAATGCAATCAGGTAGTGTTGCTTTTTACAGCATAATAAATATATGTTTCAAAA

FIGURE 660

MMRLRGSGMLRDLLLRSPAGVSATLRRAQPLVTLCRRPRGGGRPAAGPAAAARLHPWWGGGGWPAEPLARGLSSS
PSEILQELGKGSTHPQPGVSPPAAPAAPGPKDGPGETDAFGNSEGKELVASGENKIKQGLLPSLEDLLFYTIAEG
QEKIPVHKFITALKSTGLRTSDPRLKECMDMLRLTLQTTSDGVMLDKDLFKKCVQSNIVLLTQAFRRKLVIPDFM
SFTSHIDELYESAKKQSGGKVADYIPQLAKFSPDLWGVSVCTVDGQRHSTGDTKVPFCLQSCVKPLKYAIAVNDL
GTEYVHRYVGKEPSGLRFNKLFLNEDDKPHNPMVNAGAIVVTSLIKQGVNNAEKFDYVMQFLNKMAGNEYVGFSN
ATFQSERESGDRNFAIGYYLKEKKCFPEGTDMVGILDFYFQLCSIEVTCESASVMAATLANGGFCPITGERVLSP
EAVRNTLSLMHSCGMYDFSGQFAFHVGLPAKSGVAGGILLVVPNVMGMMCWSPPLDKMGNSVKGIHFCHDLVSLC
NFHNYDNLRHFAKKLDPRREGGDQRVKSVINLLFAAYTGDVSALRRFALSAMDMEQRDYDSRTALHVAAAEGHVE
VVKFLLEACKVNPFPKDRWNNTPMDEALHFGHHDVFKILQEYQVQYTPQGDSDNGKENQTVHKNLDGLL

FIGURE 661

CGCAGCAAACACATCCGTAGAAGGCAGCGCGGCCGCCGAGAGCCGCAGCGCCGCTCGCCCGCCGCCCCCCACCCC
GCCGCCCCGCCCGGCGAATTGCGCCCCGCGCCCCTCCCCTCGCGCCCCCGAGACAAAGAGGAGAGAAAGTTTGCG
CGGCCGAGCGGGGCAGGTGAGGAGGGTGAGCCGCGCGGGAGGGGCCCGCCTCGGCCCCGGCTCAGCCCCCGCCCG
CGCCCCCAGCCCGCCGCCGCGAGCAGCGCCCGGACCCCCCAGCGGCGGCCCCCGCCCGCCCAGCCCCCCGGCCCG
CC**ATG**GGCGCCGCGGCCCGCACCCTGCGGCTGGCGCTCGGCCTCCTGCTGCTGGCGACGCTGCTTCGCCCGGCCG
ACGCCTGCAGCTGCTCCCCGGTGCACCCGCAACAGGCGTTTTGCAATGCAGATGTAGTGATCAGGGCCAAAGCGG
TCAGTGAGAAGGAAGTGGACTCTGGAAACGACATTTATGGCAACCCTATCAAGAGGATCCAGTATGAGATCAAGC
AGATAAAGATGTTCAAAGGGCCTGAGAAGGATATAGAGTTTATCTACACGGCCCCCTCCTCGGCAGTGTGTGGGG
TCTCGCTGGACGTTGGAGGAAAGAAGGAATATCTCATTGCAGGAAAGGCCGAGGGGGACGGCAAGATGCACATCA
CCCTCTGTGACTTCATCGTGCCCTGGGACACCCTGAGCACCACCCAGAAGAAGAGCCTGAACCACAGGTACCAGA
TGGGCTGCGAGTGCAAGATCACGCGCTGCCCCATGATCCCGTGCTACATCTCCTCCCCGGACGAGTGCCTCTGGA
TGGACTGGGTCACAGAGAAGAACATCAACGGGCACCAGGCCAAGTTCTTCGCCTGCATCAAGAGAAGTGACGGCT
CCTGTGCGTGGTACCGCGGCGCGGCGCCCCCCAAGCAGGAGTTTCTCGACATCGAGGACCCA**TAA**GCAGGCCTCC
AACGCCCCTGTGGCCAACTGCAAAAAAAGCCTCCAAGGGTTTCGACTGGTCCAGCTCTGACATCCCTTCCTGGAA
ACAGCATGAATAAAACACTCATCCC

FIGURE 662

MGAAARTLRLALGLLLLATLLRPADACSCSPVHPQQAFCNADVVIRAKAVSEKEVDSGNDIYGNPIKRIQYEIKQ
IKMFKGPEKDIEFIYTAPSSAVCGVSLDVGGKKEYLIAGKAEGDGKMHITLCDFIVPWDTLSTTQKKSLNHRYQM
GCECKITRCPMIPCYISSPDECLWMDWVTEKNINGHQAKFFACIKRSDGSCAWYRGAAPPKQEFLDIEDP

FIGURE 663

GAATTCGGCACGAGCGACGCGGCCCAGAGGCCAGGAACATTCCGCGCGTGGACCAGCCGGGCCAGGGCG**ATG**CTG
CGGGTGCGGTGTCTGCGCGGCGGGAGCCGCGGCGCCGAGGCGGTGCACTACATCGGATCTCGGCTTGGACGAACC
TTGACAGGATGGGTGCAGCGAACTTTCCAGAGCACCCAGGCAGCTACGGCTTCCTCCCGGAACTCCTGTGCAGCT
GACGACAAAGCCACTGAGCCTCTGCCCAAGGACTGCCCTGTCTCTTCTTACAACGAATGGGACCCCTTAGAGGAA
GTGATAGTGGGCAGAGCAGAAAACGCCTGTGTTCCACCGTTCACCATCGAGGTGAAGGCCAACACATATGAAAAG
TACTGGCCATTTTACCAGAAGCAAGGAGGGCATTATTTTCCCAAAGATCATTTGAAAAAGGCTGTTGCTGAAATT
GAAGAAATGTGCAATATTTTAAAAACGGAAGGAGTGACAGTAAGGAGGCCTGACCCCATTGACTGGTCATTGAAG
TATAAAACTCCTGATTTTGAGTCTACGGGTTTATACAGTGCAATGCCTCGAGACATCCTGATAGTTGTGGGCAAT
GAGATTATCGAGGCTCCCATGGCATGGCGTTCACGCTTCTTTGAGTACCGAGCGTACAGGTCAATTATCAAAGAC
TACTTCCACCGTGGCGCCAAGTGGACAACAGCTCCTAAGCCCACAATGGCTGATGAGCTTTATAACCAGGATTAT
CCCATCCACTCTGTAGAAGACAGACACAAATTGGCTGCTCAGGGAAAATTTGTGACAACTGAGTTTGAGCCATGC
TTTGATGCTGCTGACTTCATTCGAGCTGGAAGAGATATTTTTGCACAGAGAAGCCAGGTTACAAACTACCTAGGC
ATTGAATGGATGCGTAGGCATCTTGCTCCAGACTACAGAGTGCATATCATCTCCTTTAAAGATCCCAATCCCATG
CATATTGATGCTACCTTCAACATCATTGGACCTGGTATTGTGCTTTCCAACCCTGACCGACCATGTCACCAGATT
GATCTTTTCAAGAAAGCAGGATGGACTATCATTACTCCTCCAACACCAATCATCCCAGACGATCATCCACTCTGG
ATGTCATCCAAATGGCTTTCCATGAATGTCTTAATGCTAGATGAAAAACGTGTTATGGTGGATGCCAATGAAGTT
CCAATTCAAAAGATGTTTGAAAAGCTGGGTATCACTACCATTAAAGTTAACATTCGTAATGCCAATTCCCTGGGA
GGAGGCTTCCATTGCTGGACCTGCGATGTCCGGCGCCGAGGCACCCTACAGTCCTACTTGGAC**TGA**ACAGGCCTG
ATGGAGCTTGTGGCTGGCCTCAGATACACCTAAGAAGCTTAGGGGCAAGGTTCATTCTCCTGCTTTAAAAAGTGC
ATGAACTGTAGTGCTTTAAACAATCATCTCCTTAACAGGGGTCGTAAGCCTGGTTTGCTTCTATTACTTTTCTTT
GACATAAAGAAAATAACTTCTGCTAGGTATTACTCTCTACTCCTAAAGTTATTTACTATTTGGCTTCAAGTATAA
AATTTTGGTGAATGTGTACCAAGAAAAAATTAGTCACCTGAGTAACTTGGCCACTAATAATTAACCATCTACCTC
TGTTTTTAATTTTCTTTCCAAAAGGCAGCTTGAAATGTTGGTCCTAATCTTAATTTTTTTTCCTCTTCTATAGAC
TTGAGAATGTTTTTCTCTAAATGAGAGAAAGACTTAGAATGTACACAGATCCAAAATAGAATCAGATTATCTCTT
TTTTTCTAAAGGAGAGAAAGACTTAGAACATACACAGATCCTAAGTAGAACCAGGTAATTGTCTCTTTTTCTAAT
AAGGAATTTGGGTAATTTTTAATTTTTTGTTTTTTAAAAAATAACCTAGACTATGCAAAACATCAAAGTGAATTT
TCCATGAATGTTTTTAATATTCTCATCTCAACATTGTGATATATGCTACTAAAAACCTTTTCATATACATCTTAC
CTCATTTCAAGTGAATTATTTTAATCTTTTTCTCTCTTTCCAAAAATTTACAGGAATGTTTAGTGTAATTGGATT
TCGCTATCAGTTCCCATCCTTAAGTTTTGATATTCAATATCTGATAGATACACTGCATCTTTGGTCATCTAAGAT
TTGTTTACAAATGTGCAAATTATTTAGAGCATAGACTTTATAAGCATTAAAAAAAACTAATGGAGGTAAAACCTA
AATGCGATGTGAAATAATTTTAGTGTTGATACTGTATGTGTATTTTTATTCTAATAAACTTTTGTGTTCCAGATT
GAAAA

FIGURE 664

MLRVRCLRGGSRGAEAVHYIGSRLGRTLTGWVQRTFQSTQAATASSRNSCAADDKATEPLPKDCPVSSYNEWDPL
EEVIVGRAENACVPPFTIEVKANTYEKYWPFYQKQGGHYFPKDHLKKAVAEIEEMCNILKTEGVTVRRPDPIDWS
LKYKTPDFESTGLYSAMPRDILIVVGNEIIEAPMAWRSRFFEYRAYRSIIKDYFHRGAKWTTAPKPTMADELYNQ
DYPIHSVEDRHKLAAQGKFVTTEFEPCFDAADFIRAGRDIFAQRSQVTNYLGIEWMRRHLAPDYRVHIISFKDPN
PMHIDATFNIIGPGIVLSNPDRPCHQIDLFKKAGWTIITPPTPIIPDDHPLWMSSKWLSMNVLMLDEKRVMVDAN
EVPIQKMFEKLGITTIKVNIRNANSLGGGFHCWTCDVRRRGTLQSYLD

FIGURE 665A

ATGGGGAGAAGACGGAGGCTGTGTCTCCAGCTCTACTTCCTGTGGCTGGGCTGTGTGGTGCTCTGGGCGCAGGGC
ACGGCCGGCCAGCCTCAGCCTCCTCCGCCCAAGCCGCCCCGGCCCCAGCCGCCGCCGCAACAGGTTCGGTCCGCT
ACAGCAGGCTCTGAAGGCGGGTTTCTAGCGCCCGAGTATCGCGAGGAGGGTGCCGCAGTGGCCAGCCGCGTCCGC
CGGCGAGGACAGCAGGACGTGCTCCGAGGGCCCAACGTGTGCGGCTCCAGATTCCACTCCTACTGCTGCCCTGGA
TGGAAGACGCTCCCTGGAGGAAACCAGTGCATTGTCCCGATTTGTAGAAATAGTTGTGGAGATGGATTTTGTTCC
CGTCCTAACATGTGTACTTGTTCCAGTGGGCAAATATCATCAACCTGTGGATCAAAATCAATTCAGCAGTGCAGT
GTGAGATGCATGAATGGTGGGACCTGTGCAGATGACCACTGCCAGTGCCAGAAAGGATATATTGGAACTTATTGT
GGACAACCTGTCTGTGAAAATGGATGTCAGAATGGTGGACGTTGCATCGCCCAACCGTGTGCTTGTGTTTATGGG
TTCACTGGTCCACAGTGTGAAAGAGATTACAGGACAGGCCCGTGTTTCACTCAGGTCAACAACCAGATGTGCCAA
GGGCAGCTGACAGGCATTGTCTGCACGAAGACTCTGTGCTGTGCCACCACTGGACGGGCGTGGGGCCATCCCTGT
GAGATGTGTCCAGCCCAGCCTCAGCCCTGCCGACGGGGTTTCATCCCCAACATCCGCACTGGAGCTTGCCAAGAT
GTTGATGAATGCCAGGCTATCCCAGGGATATGCCAAGGAGGAAACTGTATCAATACAGTGGGCTCTTTTGAATGC
AGATGCCCTGCTGGTCACAAACAGAGTGAAACTACTCAGAAATGTGAAGACATTGATGAGTGCAGCATCATTCCT
GGGATATGTGAAACTGGTGAATGTTCCAACACCGTGGGAAGCTATTTTTGTGTTTGTCCACGTGGATATGTAACC
TCAACAGATGGCTCTCGATGCATCGATCAGAGAACAGGCATGTGTTTCTCGGGCCTGGTGAATGGCCGCTGTGCA
CAAGAGCTCCCGGGGAGAATGACGAAAATGCAGTGCTGCTGTGAGCCTGGCCGCTGCTGGGGCATCGGAACCATT
CCTGAAGCCTGTCCTGTCAGAGGTTCTGAGGAATATCGCAGACTTTGCATGGATGGACTTCCAATGGGAGGAATT
CCAGGGAGTGCTGGTTCCAGACCTGGAGGCACTGGGGGAAATGGCTTTGCCCCAAGTGGCAATGGCAATGGCTAT
GGCCCAGGAGGGACAGGCTTCATCCCCATCCCTGGAGGCAATGGCTTTTCTCCTGGCGTTGGGGGAGCCGGTGTG
GGGGCCGGGGGACAGGGACCTATCATCACTGGACTAACAATTCTGAACCAGACAATAGATATCTGTAAGCATCAT
GCTAACCTTTGTTTAAATGGACGCTGTATACCAACTGTCTCAAGCTACCGATGTGAATGCAACATGGGTTATAAG
CAGGATGCAAATGGAGATTGTATAGATGTTGATGAATGCACATCAAATCCCTGCACTAATGGAGATTGTGTTAAC
ACACCTGGTTCCTATTATTGTAAATGTCATGCTGGATTCCAGAGGACTCCTACCAAGCAAGCATGCATTGATATT
GATGAGTGCATCCAGAATGGGGTTCTTTGTAAAAACGGTCGATGCGTGAACTCAGATGGAAGTTTCCAGTGCATT
TGCAATGCCGGCTTTGAATTAACTACAGATGGAAAAAACTGTGTTGATCATGATGAATGTACAACTACCAACATG
TGTTTGAATGGAATGTGCATCAATGAAGATGGCAGCTTCAAGTGCATCTGCAAACCAGGATTTGTCTTGGCTCCA
AATGGGCGTTACTGTACTGATGTTGATGAATGCCAGACCCCAGGAATCTGCATGAATGGGCACTGCATCAACAGT
GAAGGGTCCTTCCGCTGTGACTGTCCCCCAGGCCTGGCTGTGGGCATGGATGGACGTGTGTGTGTTGATACTCAC
ATGCGCAGTACCTGCTATGGAGGAATCAAGAAAGGAGTGTGTGTGCGTCCTTTCCCCGGTGCAGTGACCAAGTCC
GAATGCTGCTGTGCCAATCCAGACTATGGTTTTGGAGAACCCTGCCAGCCATGCCCTGCAAAAAATTCAGCTGAA
TTCCACGGCCTTTGTAGTAGTGGAGTAGGTATCACTGTGGATGGAAGAGATATCAATGAATGTGCTTTGGATCCT
GATATATGTGCCAATGGGATTTGTGAAAACTTACGTGGTAGTTACCGTTGTAATTGCAACAGTGGCTATGAACCA
GATGCCTCTGGAAGAAACTGTATTGACATTGATGAATGTTTAGTAAACAGACTGCTTTGTGATAACGGATTGTGC
CGAAACACGCCAGGAAGTTACAGCTGTACGTGCCCACCAGGGTATGTGTTCAGGACTGAGACAGAGACCTGTGAA
GATATAAATGAATGTGAAAGCAACCCATGTGTCAATGGGGCCTGCAGAAACAACCTTGGATCTTTCAATTGTGAA
TGTTCGCCCGGCAGCAAACTCAGCTCCACAGGATTGATCTGTATTGACAGCCTGAAGGGGACCTGTTGGCTCAAC
ATCCAGGACAGCCGCTGTGAGGTGAATATTAATGGAGCCACTCTGAAATCTGAATGCTGTGCCACCCTCGGAGCC
GCCTGGGGGAGCCCCTGTGAGCGGTGTGAACTAGATACAGCTTGCCCAAGAGGGCTTGCCAGGATTAAAGGTGTT
ACGTGTGAAGATGTTAATGAGTGTGAGGTGTTCCCTGGCGTTTGTCCAAATGGACGCTGTGTCAACAGTAAGGGA
TCTTTTCATTGCGAGTGCCCTGAAGGCCTTACGTTGGATGGGACTGGCCGTGTATGTTTGGATATTCGCATGGAG
CAGTGTTACTTGAAGTGGGATGAAGATGAATGCATCCACCCCGTTCCTGGAAAGTTCCGCATGGATGCCTGCTGC
TGTGCTGTCGGGGCGGCTTGGGGCACCGAGTGTGAGGAGTGCCCCAAACCTGGCACCAAGGAATACGAGACACTG
TGCCCCCGCGGGGCTGGCTTTGCTAACCGAGGGGATGTTCTTACTGGGCGGCCATTTTACAAAGACATCAATGAA
TGCAAAGCATTTCCTGGGATGTGCACTTATGGGAAGTGCAGAAATACAATCGGAAGCTTCAAATGCCGTTGCAAT
AGTGGCTTTGCTCTAGACATGGAGGAAAGAAACTGCACGGACATCGACGAGTGCAGGATTTCTCCTGACCTCTGT
GGCAGTGGAATCTGCGTCAATACACCGGGCAGCTTTGAGTGCGAGTGCTTCGAAGGCTATGAAAGTGGCTTCATG
ATGATGAAGAACTGCATGGACATTGACGGATGTGAACGTAACCCTCTCCTTTGTAGGGGTGGCACCTGTGTGAAC
ACTGAGGGCAGCTTTCAGTGTGACTGCCCACTGGGACACGAGCTGTCACCATCCCGTGAGGACTGTGTGGATATT

FIGURE 665B

AATGAATGCTCCCTGAGTGACAATCTCTGCAGAAATGGAAAATGTGTGAACATGATTGGAACCTATCAGTGCTCT
TGCAATCCTGGATATCAGGCTACGCCAGACCGCCAGGGCTGTACAGATATTGATGAATGTATGATAATGAACGGA
GGCTGTGACACCCAGTGCACAAATTCAGAGGGAAGCTACGAATGCAGCTGCAGTGAGGGTTATGCCCTGATGCCA
GATGGGAGATCGTGTGCAGACATTGATGAATGTGAAAACAATCCTGATATCTGTGATGGCGGCCAGTGTACCAAC
ATTCCTGGAGAGTATCGCTGCCTCTGCTATGATGGCTTCATGGCTTCCATGGACATGAAAACATGCATTGATGTC
AATGAATGTGACCTAAATTCAAATATCTGCATGTTTGGGGAATGTGAGAACACAAAGGGATCCTTCATTTGCCAC
TGTCAGCTGGGTTACTCAGTGAAGAAGGGGACCACAGGATGTACAGATGTGGATGAGTGTGAAATTGGTGCTCAT
AACTGCGACATGCATGCCTCATGTCTGAATATCCCAGGAAGCTTCAAGTGTAGCTGCAGAGAAGGCTGGATTGGA
AACGGCATCAAGTGTATTGATCTGGACGAATGTTCTAATGGAACCCACCAGTGTAGCATCAATGCTCAGTGTGTA
AATACCCCGGGCTCATACCGCTGTGCCTGCTCCGAAGGTTTCACTGGTGATGGCTTTACCTGCTCAGATGTTGAT
GAGTGTGCAGAAAACATAAACCTCTGTGAGAACGGACAGTGCCTTAATGTCCCGGGTGCATATCGCTGCGAGTGT
GAGATGGGCTTCACTCCAGCCTCAGACAGCAGATCCTGCCAAGATATTGATGAATGCTCCTTCCAAAACATTTGT
GTCTCTGGAACATGTAATAACCTGCCTGGAATGTTTCATTGCATCTGCGATGATGGTTATGAATTGGACAGAACA
GGAGGGAACTGTACAGATATTGATGAGTGTGCAGATCCTATAAACTGTGTCAATGGCCTATGTGTCAACACGCCT
GGTCGCTATGAGTGTAACTGCCCACCCGATTTTCAGTTGAACCCAACTGGTGTGGGTTGTGTTGACAACCGTGTG
GGCAACTGCTACCTGAAGTTTGGACCTCGAGGAGATGGGAGTCTGTCTTGCAACACCGAGATCGGGGTGGGCGTC
AGTCGCTCTTCATGCTGCTGCTCTCTGGGAAAGGCCTGGGGAAACCCCTGTGAGACATGCCCCCCTGTCAATAGC
ACTGAATATTACACCCTGTGTCCCGGAGGTGAAGGCTTCAGACCTAACCCCATCACAATCATTTTAGAAGACATT
GACGAATGCCAGGAGTTACCAGGTCTCTGCCAGGGTGGAAACTGCATCAACACTTTTGGGAGCTTCCAGTGTGAG
TGCCCACAAGGCTACTACCTCAGCGAGGATACCCGCATCTGTGAGGATATTGATGAGTGTTTTGCACATCCTGGT
GTGTGTGGGCCTGGGACCTGCTATAACACCCTGGGAAATTACACCTGCATTTGCCCACCTGAGTACATGCAGGTC
AATGGAGGCCACAACTGCATGGACATGAGAAAAAGCTTTTGCTACCGAAGCTATAATGGAACCACTTGTGAGAAT
GAGTTGCCTTTCAATGTGACAAAAAGGATGTGCTGCTGCACATATAATGTGGGCAAAGCTGGGAACAAACCTTGT
GAACCATGCCCAACTCCAGGAACAGCTGACTTTAAAACCATATGTGGAAATATTCCTGGATTCACCTTTGACATT
CACACAGGAAAAGCTGTTGACATTGATGAATGTAAAGAGATTCCAGGCATTTGTGCAAATGGTGTGTGCATTAAC
CAGATTGGCAGTTTCCGCTGTGAATGCCCTACAGGATTCAGTTACAATGACCTGCTGTTGGTTTGTGAAGATATA
GATGAGTGCAGCAATGGTGATAATCTCTGCCAGCGGAATGCAGACTGCATCAATAGTCCTGGTAGTTACCGCTGT
GAATGTGCCGCGGGTTTCAAACTTTCACCCAATGGGGCCTGTGTAGATCGCAATGAATGTTTAGAAATTCCTAAC
GTTTGCAGTCATGGCTTGTGTGTTGATCTGCAAGGAAGTTACCAGTGCATCTGCCACAATGGCTTTAAGGCTTCT
CAGGACCAGACCATGTGCATGGATGTTGATGAGTGCGAGCGGCACCCATGTGGAAATGGAACTTGTAAAAACACC
GTTGGATCCTATAACTGTCTGTGCTACCCAGGGTTTGAACTCACTCATAATAATGATTGCCTGGACATAGATGAG
TGCAGTTCCTTTTTTGGTCAGGTGTGCAGAAATGGACGTTGTTTTAATGAAATTGGTTCTTTCAAGTGTCTATGT
AACGAAGGTTATGAACTTACCCCAGATGGCAAAAACTGTATAGACACTAATGAGTGTGTCGCCCTTCCCGGCTCT
TGCTCTCCTGGTACCTGTCAGAATTTGGAGGGATCCTTCAGATGCATCTGTCCCCCAGGGTATGAAGTAAAAAGC
GAGAACTGCATTGATATAAATGAATGTGATGAAGATCCCAACATTTGTCTTTTTGGTTCCTGTACTAATACTCCA
GGGGGCTTCCAGTGCCTCTGCCCCCCTGGCTTTGTACTATCTGATAATGGACGGAGATGCTTTGATACTCGCCAG
AGCTTCTGCTTCACAAATTTTGAAAATGGAAAGTGTTCTGTACCCAAAGCTTTCAACACCACAAAAGCAAAATGC
TGCTGTAGTAAGATGCCAGGAGAGGGCTGGGGGGACCCCTGTGAGCTGTGCCCCAAAGACGATGAAGTTGCATTT
CAGGATTTGTGTCCATATGGCCATGGAACTGTCCCTAGTCTTCATGATACACGTGAAGATGTCAATGAGTGTCTT
GAGAGCCCAGGCATTTGTTCAAATGGTCAATGTATCAACACCGACGGATCTTTTCGCTGTGAATGTCCAATGGGC
TACAACCTTGACTACACTGGAGTACGCTGTGTGGATACTGATGAGTGTTCAATCGGCAATCCGTGTGGAAATGGT
ACATGCACCAATGTTATTGGGAGTTTTGAATGCAATTGCAATGAAGGCTTTGAGCCAGGGCCCATGATGAATTGT
GAAGATATCAACGAATGTGCCCAGAACCCACTGCTGTGTGCTTTACGCTGCATGAACACTTTTGGGTCCTATGAA
TGCACGTGCCCGATTGGCTATGCCCTCAGGGAAGATCAAAAGATGTGCAAAGATCTGGATGAATGTGCTGAAGGG
TTACACGACTGTGAATCTAGGGGCATGATGTGTAAGAATCTAATCGGCACCTTCATGTGCATCTGCCCTCCTGGA
ATGGCCCGAAGGCCCGATGGAGAAGGCTGTGTAGATGAAAATGAATGCAGGACCAAGCCAGGAATCTGTGAAAAT
GGACGTTGTGTTAACATTATTGGAAGCTATAGATGTGAGTGTAATGAAGGATTCCAGTCAAGTTCTTCAGGCACT
GAATGCCTTGACAATCGACAGGGTCTCTGCTTTGCAGAGGTACTGCAGACAATATGTCAAATGGCATCCAGTAGT

FIGURE 665C

CGCAATCTCGTCACTAAGTCAGAATGCTGCTGTGATGGTGGGCGAGGCTGGGGCCACCAGTGCGAGCTTTGCCCA
CTTCCTGGAACTGCCCAGTACAAAAAGATATGTCCTCATGGCCCAGGATATACAACTGATGGAAGAGATATTGAT
GAATGTAAGGTAATGCCAAACCTCTGCACCAATGGTCAGTGCATCAATACCATGGGCTCATTCCGATGCTTCTGC
AAGGTTGGCTACACCACAGACATCAGTGGAACCTCTTGTATAGACCTTGATGAATGCTCCCAGTCCCCGAAACCA
TGCAACTACATCTGCAAGAACACTGAGGGGAGTTATCAGTGTTCATGTCCGAGGGGGTATGTCCTGCAAGAGGAT
GGAAAGACATGCAAAGACCTTGATGAATGTCAAACAAAGCAGCATAACTGCCAGTTCCTCTGTGTCAACACCCTG
GGGGGGTTTACCTGTAAATGTCCACCTGGTTTCACACAGCATCACACTGCTTGTATCGACAACAACGAATGTGGG
TCTCAACCTTTGCTTTGTGGAGGAAAGGGAATCTGTCAAAACACTCCAGGCAGTTTCAGCTGTGAATGCCAAAGA
GGGTTCTCTCTTGATGCCACCGGACTGAACTGTGAAGATGTTGATGAATGTGATGGGAACCACAGGTGCCAACAC
GGCTGCCAGAACATCCTGGGTGGCTACAGATGTGGCTGCCCCCAAGGCTACATCCAGCACTACCAGTGGAATCAG
TGTGTCGATGAGAATGAATGCTCCAATCCCAATGCCTGTGGCTCTGCTTCCTGCTACAACACCCTGGGGAGTTAC
AAGTGCGCCTGCCCCTCGGGGTTCTCCTTCGACCAGTTCTCCAGTGCCTGCCACGACGTGAATGAGTGCTCGTCC
TCCAAGAACCCCTGCAATTACGGCTGCTCTAACACGGAGGGGGGCTACCTCTGTGGCTGCCCCCCTGGGTATTAC
AGAGTGGGACAAGGCCACTGTGTCTCAGGAATGGGATTTAACAAGGGGCAGTACCTGTCACTGGATACAGAGGTC
GATGAGGAAAATGCTCTGTCCCCAGAAGCATGCTACGAGTGCAAAATCAACGGCTATCCTAAGAAAGACAGCAGG
CAGAAGAGAAGTATTCATGAACCTGATCCCACTGCTGTTGAACAGATCAGCCTAGAGAGTGTCGACATGGACAGC
CCCGTCAACATGAAGTTCAACCTCTCCCACCTCGGCTCTAAGGAGCACATCCTGGAACTAAGGCCCGCCATCCAG
CCCCTCAACAACCACATCCGTTATGTCATCTCTCAAGGGAACGATGACAGCGTCTTCCGCATCCACCAAAGGAAT
GGGCTCAGCTACTTGCACACGGCCAAGAAGAAGCTCATGCCCGGCACATACACACTGGAAATCACTAGCATCCCT
CTCTACAAGAAGAAGGAGCTTAAGAAACTGGAAGAGAGCAATGAGGATGACTACCTCCTAGGGGAGCTTGGGGAG
GCTCTCAGAATGAGGCTGCAGATTCAGCTCTATTAACCGTTCACAGACTTGGGCCCAGGCTCAAATCCTAGCACA
GCCAGTCTGCAGAAGCATTTGAAAAGTCAAGGACTAATTTTAAAGAGGAAAAATAATAATAACTCTTGTTTCTTT
CCTCCCTGTCTTAGACTTTGAATGTTGACCCTCACAGGGAGGGATAATTTAGACTCTGGTATGGCCAAAGATTTG
AGCTCAAAGGCAACCGTGGTTACTGTATTTTTTATATAACTTCATTTTAAAATATATTAAAAGAAACCTAAATGT
TCAAGATATCAGCATATGGCACTAAATGCACAAAAATAATGTGAGCTTTTTTTTTTTTTCCTGTTAGCAGTCTG
TAACACTTTGGGTATTTTGCTATAGTTGCTAATTAAAAAAATATAGATGTTTATTTATTTTTAATGCAGTAATAT
ATGGAGAAATGAACAAACTATGTAAACAAAAAGGGAAACTCACTTGTTTTTCTTTAGATTTATAAATTTGAGCTA
TTTTTTTTAGAGGTGCTTTTTAAAAATCCAATAGATACAAGAGATGTTTCCTTTGGTTTTCTGCCAGTCATCCAG
CTGATACACACCTGATCGATTTTAAAGAAAGCCACACAGAGCTGAATCGGGCAGTGCTAATCAATAATTTAAAAG
ACATGAATGTCATTAGATCCTTTATAACGTAGATCGAAGCCAAAGCAGCTCATTTGTGACAACATTTCATATCAC
CAGACACACCAGGCAACAGAAGTTGAAGCACAACCACTGTAGCAAAATACCTTGACTGCTTGTGAGACCATTAGC
ATTGCAGGCCAAACCGTACTGTATTTCCTTCTCATAACCTCAAGGAACCATATGTGCTACCCACAACACCTCATT
CTTACCCAGGGTGCGCTGCGTCCTCATGGTACTGTAGGCAGCTGAAGAACCGCCGTTCCCTTGAAAGGGAACACC
TGGCATTCTGTGGTGTTTCGTGCTGTCTTAAATAATGGTGCATTTATTATGTTCAAGTTATTTCAGGATTGCCAT
ATGTGCAAACAAATCATGCAATGCAGCCAAGGAATATATGTTGTTGTTGTTGTTTTAAACCCATTTTTTTTTTAG
AATTTTCATTAATACTGTAGTTATACACCATATGCCTCATTTTATCATAGCCTATTGTGTATGAAAGATGTTTGT
ACAATGAATTGATGTTTAGTTTGCTTTAGTCATTTAAAAAGATATTGTACCAGGATGTGCTATTAAGAGCACGTA
TCCATTATTCTTCTCAACCCAAGAACCTGTTTCCTGGACCAGTGACCAAACCTCATATGTGAAATGGCCAAAGCA
CATGCAGGCTCCTGGTTGTTCCTCTCAAACCTGTGCTGACCAAAGATTAGTAACCAGTTATACCCAGTATTTTGA
GGTTTTATTGTTTTTTTAATAACTAAAAAAAAACTCGTGCC

FIGURE 666

MGRRRRLCLQLYFLWLGCVVLWAQGTAGQPQPPPPKPPRPQPPPQQVRSATAGSEGGFLAPEYREEGAAVASRVR
RRGQQDVLRGPNVCGSRFHSYCCPGWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSSGQISSTCGSKSIQQCS
VRCMNGGTCADDHCQCQKGYIGTYCGQPVCENGCQNGGRCIAQPCACVYGFTGPQCERDYRTGPCFTQVNNQMCQ
GQLTGIVCTKTLCCATTGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDECQAIPGICQGGNCINTVGSFEC
RCPAGHKQSETTQKCEDIDECSIIPGICETGECSNTVGSYFCVCPRGYVTSTDGSRCIDQRTGMCFSGLVNGRCA
QELPGRMTKMQCCCEPGRCWGIGTIPEACPVRGSEEYRRLCMDGLPMGGIPGSAGSRPGGTGGNGFAPSGNGNGY
GPGGTGFIPIPGGNGFSPGVGGAGVGAGGQGPIITGLTILNQTIDICKHHANLCLNGRCIPTVSSYRCECNMGYK
QDANGDCIDVDECTSNPCTNGDCVNTPGSYYCKCHAGFQRTPTKQACIDIDECIQNGVLCKNGRCVNSDGSFQCI
CNAGFELTTDGKNCVDHDECTTTNMCLNGMCINEDGSFKCICKPGFVLAPNGRYCTDVDECQTPGICMNGHCINS
EGSFRCDCPPGLAVGMDGRVCVDTHMRSTCYGGIKKGVCVRPFPGAVTKSECCCANPDYGFGEPCQPCPAKNSAE
FHGLCSSGVGITVDGRDINECALDPDICANGICENLRGSYRCNCNSGYEPDASGRNCIDIDECLVNRLLCDNGLC
RNTPGSYSCTCPPGYVFRTETETCEDINECESNPCVNGACRNNLGSFNCECSPGSKLSSTGLICIDSLKGTCWLN
IQDSRCEVNINGATLKSECCATLGAAWGSPCERCELDTACPRGLARIKGVTCEDVNECEVFPGVCPNGRCVNSKG
SFHCECPEGLTLDGTGRVCLDIRMEQCYLKWDEDECIHPVPGKFRMDACCCAVGAAWGTECEECPKPGTKEYETL
CPRGAGFANRGDVLTGRPFYKDINECKAFPGMCTYGKCRNTIGSFKCRCNSGFALDMEERNCTDIDECRISPDLC
GSGICVNTPGSFECECFEGYESGFMMMKNCMDIDGCERNPLLCRGGTCVNTEGSFQCDCPLGHELSPSREDCVDI
NECSLSDNLCRNGKCVNMIGTYQCSCNPGYQATPDRQGCTDIDECMIMNGGCDTQCTNSEGSYECSCSEGYALMP
DGRSCADIDECENNPDICDGGQCTNIPGEYRCLCYDGFMASMDMKTCIDVNECDLNSNICMFGECENTKGSFICH
CQLGYSVKKGTTGCTDVDECEIGAHNCDMHASCLNIPGSFKCSCREGWIGNGIKCIDLDECSNGTHQCSINAQCV
NTPGSYRCACSEGFTGDGFTCSDVDECAENINLCENGQCLNVPGAYRCECEMGFTPASDSRSCQDIDECSFQNIC
VSGTCNNLPGMFHCICDDGYELDRTGGNCTDIDECADPINCVNGLCVNTPGRYECNCPPDFQLNPTGVGCVDNRV
GNCYLKFGPRGDGSLSCNTEIGVGVSRSSCCCSLGKAWGNPCETCPPVNSTEYYTLCPGGEGFRPNPITIILEDI
DECQELPGLCQGGNCINTFGSFQCECPQGYYLSEDTRICEDIDECFAHPGVCGPGTCYNTLGNYTCICPPEYMQV
NGGHNCMDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAGNKPCEPCPTPGTADFKTICGNIPGFTFDI
HTGKAVDIDECKEIPGICANGVCINQIGSFRCECPTGFSYNDLLLVCEDIDECSNGDNLCQRNADCINSPGSYRC
ECAAGFKLSPNGACVDRNECLEIPNVCSHGLCVDLQGSYQCICHNGFKASQDQTMCMDVDECERHPCGNGTCKNT
VGSYNCLCYPGFELTHNNDCLDIDECSSFFGQVCRNGRCFNEIGSFKCLC

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FIGURE 667A

GGGGAGGAAGAAAGGCGAAGGCAAGGCGAAGGGGTGGAGAGTGATATGAAGAGCGAGAGAAAAGAGAGGACAGCG
GACGAGCAGATCCGGTATCTGGAATCCCGGCGCCTAGAACGTGTTTTTCGGGAGAGCAAAGGCTGTGTCTACGGC
AGGCTGGGGATATAGCCTCTCCTTCCGATGAAAAGAGAAAGGAAGA**ATG**GACTACAGCCACCAAACGTCCCTAGT
CCCATGTGGACAAGATAAATACATTTCCAAAAATGAACTTCTCTTGCATCTGAAGACCTACAACTTGTACTATGA
AGGCCAGAATTTACAGCTCCGGCACCGGGAGGAAGAAGACGAGTTCATTGTGGAGGGGCTCCTGAACATCTCCTG
GGGCCTGCGCCGGCCCATTCGCCTGCAGATGCAGGATGACAACGAACGCATTCGACCCCCTCCATCCTCCTCCTC
CTGGCACTCTGGCTGTAACCTGGGGGCTCAGGGAACCACTCTGAAGCCCCTGACTGTGCCCAAAGTTCAGATCTC
AGAGGTGGATGCCCCGCCGGAGGGTGACCAGATGCCAAGCTCCACAGACTCCAGGGGCCTGAAGCCCCTGCAGGA
GGACACCCCACAGCTGATGCGCACACGCAGTGATGTTGGGGTGCGTCGCCGTGGCAATGTGAGGACGCCTAGTGA
CCAGCGGCGAATCAGACGCCACCGCTTCTCCATCAACGGCCATTTCTACAACCATAAGACATCCGTGTTCACACC
AGCCTATGGCTCTGTCACCAACGTCCGCATCAACAGCACCATGACCACCCCACAGGTCCTGAAGCTGCTGCTCAA
CAAATTTAAGATTGAGAATTCAGCAGAGGAGTTTGCCTTGTACGTGGTCCATACGAGTGGTGAGAAACAGAAGCT
GAAGGCCACCGATTACCCGCTGATTGCCCGAATCCTCCAGGGCCCATGTGAGCAGATCTCCAAAGTGTTCCTAAT
GGAGAAGGACCAGGTGGAGGAAGTCACCTACGACGTGGCCCAGTATATAAAGTTCGAGATGCCGGTACTTAAAAG
CTTCATTCAGAAGCTCCAGGAGGAAGAAGATCGGGAAGTAAAGAAGCTGATGCGCAAGTACACCGTGCTCCGGCT
AATGATTCGACAGAGGCTGGAGGAGATAGCCGAGACCCCAGCAACAATC**TGA**GCCATGAGAACGAGGGGATCTGG
GCACCCCAGGAACCGCCATTGCCCATAAGACCCCCAGGAAGCTAGGCACTTTCTTTCCATGGAAACATTTAGACA
CAAACCTCCCCAGCTCCGGCCAAGCCATCATTTGCTACCTGGAGCTGGATGTAGAAGTCAGCAGACAGCTCCCTA
TCCCTGGACCCCTGCCCTCCTTTTTTCTGCTCACAAGGACTTTTGATTTTAGTTATAAGGAGGACCCAAAATGTG
TGTGTGTACATGTGTGTGCACACATGGTACGTGTCCATGTGCCTACCTGATACTTTCACATGTAATTAAATTCCA
GGCAACCAGCACAAGAGCCGTGAGCTTGGCACATGTGCTGCTCGTGAGCAGGAAAATCAGAGGAGCCACTGATCT
GAGTGGTATTTAGGTTGAAGGAAAGATTTCTCCTCTCAAGTGCCAGGGAGCAGCCACACGTCTGTCTGTGTTTAG
AGAGGGAAGAGGGTTCTCCAGGTTCACCATTTGGGTTGTTTATATGTTGGTAGAAATTCTCCCTGTATGCCTAGA
AGGATCAGTGAATGTAAGAGCCTTGGAAATTAACAAAATAACAGCCACATAACCTTGCGGCAAGTCTGATGGAAA
GAAAAAGATAAACCATCCGTGGGGTAGATGCAATAAGCCCACGTATTTTTACACTGGAAACGTTGATTGTTTTAA
ATGACAAAGACATATGTGATGTTCTATGTGGAAACCTGTGAAGAGTGGATTCTGCCTCCATCTCTGCCTCCATGG
CTACCTTTAGGAGACAGAGAAGATCCTGTGTGTTTCTCTGTACCCAGCTGACAGCCTGTCTCTATGGCGCTTCCT
TGAGTGGAAGGAAATGTCTCAAGAAACAAAGATCTCGCTGGTGCGTACACAGTGCTGACCAGCTAGTGTGGCCAG
GGCCTGGTGGCCTGGTGGCCAGGAAGTTTCAGGTTGAAGGGAAATGTCGAGGCTACCTGCAGATATGACAGGTGC
CTTGAACGCAGCCCATCTTCATGTCATCAAAGGTCTTCCTGCACTTGAAGCTGGGGCGATGTTTGCAGTCAAGAC
CATTCTTTCCAACCTCTGGGTTCTTGCAAGTTGCCCTCACCTTGTGTGTGGAGATGCATTCCAAGAATGAAGCCT
CATCTTGCTACTGAGTGTGGGGTTCAGGGAAGCTCTTTAGGCCACCTGGTGAAGGTGCATGGGGAGGATGGAGCT
TCTCCTCAGCTCCTCTGAGCAGCCACCTATGTGATCTTTAAATCCAACCCCAATGGGAGAAAAGGGCAAGAACAG
TCTGTGCCCTGGGACTCCTATCAGGAAGCTTGACAGGCAGCTGGGCATCAGTGCAGCTGATATCGTTTGAGGAGG
GAGACAGATGCTTGGACCTGGGTGCCTGGCTATGGAGATTGACCAAGCAAGATCAGGAGCTCCTGATAGCAGGCG
TCTTTGAGCCTAGCTGGGGTAGAGGCACTGCCCATCTCTTCTCCACCTTCTCTCCACAGAATGTTTGCAGAGCTG
GGCAGTTGAGGAAAGGACAGCCCCTGGTTGGTGCCTCCAAAGGAAGGTGGACTTTTTTGGTGGAGACGTTTCTGC
CCTGGGCACCCTCCTGCCCCCGATTCATACCTATGGCTTCTTGAGAAGGCTCACAGCTGTGGTCTTAACGTAGAC
TGCAGAAAGATGGCATGCGGCCCCTGGCATTTCGCCAAGGGTTTTATAGCAAGTCTCCTTCCTCCATAGGGACAG
CAGCACCAGCCCTGTGGGGCATGGAGTGGAAGCCCAGAAGGGCTTCTGCAAGCTGCACAGAACTGGGGTAAGAAG
ACAAAGAGTAGCCACCGGGAGAGGCTTCCTTTGTTACAGCTGGGAAAGAACAGTTCTGTGAATGCAAACACCTCC
TGAGTTTTGCAATTGAGAAAATGATTTGGAGAACTTCTCTTCTGGTAATTTTTATTTTGAATGTTCAGGGCCTTA
GTTGGCCCCAGTAATTCTCCTTGGAGGACTTGGGAGAAGAATTTCCACAAAGCAAACTACTAACCACTAGCTCTT
ACTGGACAGCGATTTCTGGCTTATAAGAGTTCTCTTTGATTTGCACTAGCACTACGATAGTGTTAGATGGGGAAA
TACTGCAACATGTCCAGTTGGCCAGATCACTTTCCAAGGGAGCGATACTAAGGCAGACTCAGCTTTTTAAAGATG
GGAGGTCAGGAGGTGGAAGTGAGAGGAGATCCCATCTCACACAACACACTTCCACGTAATGCAGACCACACTTTT
CCATTTTGTCCTGCCCTCTTGAGAGGTCATTTCTCACGTCCTAAGAACCTGATCAGAAATTTTGGAAGGGTTCTT
TGAAATAGCAGCAGTTGAAACAGAGACACTTTGCCACAGTGTGGAGCAGATTTTCTCACTGGTATCACATGGTCT

FIGURE 667B

TGCAGTTTTGAACTCTTCGACCGATTTGTGGGAGTTTATGTAATTGCGTGCAATGAACCTGAAATTGTGTAAAGG
ACAAAAGACCAGTTTATAGGGTTGGGTTTTTTTTCCAACTTGTGAAAAGCAGTTTAGCTGCATCTGTCTCCCCAC
CACCCCCACCCCGGGAGGGGCTTATGTTACAAGGTGATCAAGTGAAGGAAAAACCTGAGCCTATCTGGCTGGGAT
GGTGGAATTAAGCACAAGGTCACATTCTCTGTGATCACATGAGAGGGAAGGTGATGACTTAAATGGCAGGGGGTG
GGGATTATCTTGGGGAGAGGCTGAAAAGCACAAAAGATAGTCTTCCCTGTACGTATTGGTGAAGAACGTGCACAA
GGCTGGATGGACTTCAACTTGGAGTTGAGTTGAGGCAAGAGGATTTCTGGATATTAGTCACCCATCTGCAAGAAA
AATGCTGAGGCCTCGGGTCAAGATTTTGATCTGAGACATGCTGATGCTTCAAGGAGAAATATTTTCACAATCCTC
TCTTCCCTCACCAGAAGAGAACAGTACTCTCTCCTAGAAACCTCTAGGTAAACACATTTTATCCTAATATCGGTA
GCATATAATGCCCCCCCCCAAAATATCTGTTTTCCATGCAAAAAAGTCTCAACAAGAAGTCTGTGGAGTTGAGTGG
TTACTTCAAAGTGTCAGGAGAGTGAAGAAATTGGCCACAGAAGAGCAAGAAGCTCTCTTAAGAAAAGGGAATTCT
CTTTAAAGAAACCACCACCAACAACAAAACAACCAAAAACCATGTTTTATGTCAAAGCTCTGTAGCACAGAGAAT
GTGGTGTCACAGATACATCGCCGAGAGAGGTTTCTTTCTTTCTTTTTTTTTTTTTTGAGACAGAGTCTGGTTCTG
TTTCCCAGGCTGGAGTGCAGTGGTGGGATCTCAGCTCACTGCAACATCCGCCTCTGGGGTTCAAGTGATTCTCCT
GTCTCAGCCTCCCAAGTAGCTGGAATTACAGGGACCCGCCACCACGCCCGGCTAATTTTTTTGTGTGGTTTTAGT
AGAGGTGGGGTTTCACCATCTTGGCCAGGCTGGTCTTGAACTCCTGACCTCGTGATCCACCCGCCTAGGCCTCCC
AAAGTGTTGGGATTACAGGCGTGAGCCACTGTGCCCAGCCAAAAGAGAAATTTCTACATGAACAAGGCAATTTCA
GTGTCTTACAGCGGCCAAACCATGACGTGAAGAATGAGATAGGAGACAGGAGATCACCATAAGCGTCCCTGATAT
AGCAGCACACATTTTCACGTTTCCACTTAAATCGTTTTGCACAAAGTCTTGCTTCGCTCAGATGAGATGAGATAT
GATTTCCTAGAGATGTAAAAATAAGAATGAATGTGGCGCCCCCTTCTTCCAGATGTAATAGAAAGCTCTGCCCTA
TCACAAGGGGGGTGTTGAAGCGCCCCTTGTGTTTTAACTGTATTTAACTGAGCACAAGATGCACAAGCTGTGGTG
GGAAACCCTCAGTTTACCTTTGGAGTCTTCCCTGCAGATCGCAGACCTGTTTCCAGGCTGATGTTTCTGGTGTGT
AATTGCTAGCGTTTCTGAAGGGTTTTCCCAATTGTTTTAGCCTTGTGAAGTATTCTTAATTATAACTTGCCTTTC
AGCGATGGTACATGACTTGATTCAACGTTTGGTTCTGAACTTACACACTGATGCGTTTACTCATCTAACATAATC
TGACAGGGCCTCAGCAAGGGAGCCATACATTTTTGTAACATTTTGATATGTTTTAATGCATCTGACTTAGATCTT
ACTGAAATAAAGCACTTTTCAAAGAG

FIGURE 668

MDYSHQTSLVPCGQDKYISKNELLLHLKTYNLYYEGQNLQLRHREEEDEFIVEGLLNISWGLRRPIRLQMQDDNE
RIRPPPSSSSWHSGCNLGAQGTTLKPLTVPKVQISEVDAPPEGDQMPSSTDSRGLKPLQEDTPQLMRTRSDVGVR
RRGNVRTPSDQRRIRRHRFSINGHFYNHKTSVFTPAYGSVTNVRINSTMTTPQVLKLLLNKFKIENSAEEFALYV
VHTSGEKQKLKATDYPLIARILQGPCEQISKVFLMEKDQVEEVTYDVAQYIKFEMPVLKSFIQKLQEEEDREVKK
LMRKYTVLRLMIRQRLEEIAETPATI

FIGURE 669

CCCGCTGGCCCAATGGCAGCGTCCTACAGTGTAGCCTCCGCCTCCCGATTGACTGGCCTGCTTGGCAAGGCAAGT
AGCGGCGGCGCTTCAAG**ATG**CGCTGCCTGACCACGCCTATGCTGCTGCGGGCCCTGGCCCAGGCTGCACGTGCAG
GACCTCCTGGTGGCCGGAGCCTCCACAGCAGTGCAGTGGCAGCCACCTACAAGTATGTGAACATGCAGGATCCCG
AGATGGACATGAAGTCAGTGACTGACCGGGCAGCCCGCACCCTGCTGTGGACTGAGCTCTTCCGAGGCCTGGGCA
TGACCCTGAGCTACCTGTTCCGGGAACCGGCCACCATCAACTACCCGTTCGAGAAGGGCCCGCTGAGCCCTCGCT
TCCGTGGGGAGCATGCGCTGCGCCGGTACCCATCCGGGGAGGAGCGTTGCATTGCCTGCAAGCTCTGCGAGGCCA
TCTGCCCCGCCCAGGCCATCACCATCGAGGCTGAGCCAAGAGCTGATGGCAGCCGCCGGACCACCCGCTATGACA
TCGACATGACCAAGTGCATCTACTGCGGCTTCTGCCAGGAGGCCTGTCCCGTGGATGCCATCGTCGAGGGCCCCA
ACTTTGAGTTCTCCACGGAGACCCATGAGGAGCTGCTGTACAACAAGGAGAAGTTGCTCAACAACGGGGACAAGT
GGGAGGCCGAGATCGCCGCCAACATCCAGGCTGACTACTTGTATCGG**TGA**CGCCCCACCGGCCTGCAGCCCCTGC
TGCCCAATAAAACCACTCCGACCCCACGG

FIGURE 670

MRCLTTPMLLRALAQAARAGPPGGRSLHSSAVAATYKYVNMQDPEMDMKSVTDRAARTLLWTELFRGLGMTLSYL
FREPATINYPFEKGPLSPRFRGEHALRRYPSGEERCIACKLCEAICPAQAITIEAEPRADGSRRTTRYDIDMTKC
IYCGFCQEACPVDAIVEGPNFEFSTETHEELLYNKEKLLNNGDKWEAEIAANIQADYLYR

FIGURE 671A

CTCCTTCCATAAGGGTCTGGTCCTTCATCCCTCCCGCTTCACCAGACCCCCTCACCCTGGGAGCCGCCACCTCCC
TTTCCCCAAGACCAGATGTCGCGCGGCCGGACACAGCCAGCACGGAGAGTCGATGCCGGCGTCTGAGCTGCGCAG
TGGGGTCTTCCCGCTGCCCAGCAGCCTACAGGCGCGGTGCACTCTGGGGGAACATGGCCGCTTCCGGTCTCCCTC
CCGGGCCGGCGCTGGCCTGACTGCGGCCCCGGTCCGTAGCACTCCGCCCTCCGCTTCTCCCGCCCTGTAGCCGCG
AAGACTGCTTCAGCCTTTCCCTGTGCTGCCCCTGCCGCGCG**ATG**GAGACGAGCTCGAGCTGCGAGAGTCTTGGCT
CCCAGCCGGCGGCGGCTCGGCCGCCCAGCGTGGACTCCTTGTCCAGTGCCTCCACTTCTCATTCAGAGAATTCAG
TGCATACAAAATCAGCTTCTGTTGTATCATCAGATTCCATTTCAACTTCTGCCGACAACTTTTCTCCTGATTTGA
GGGTCCTGAGGGAGTCTAACAAGTTAGCAGAAATGGAAGAACCACCCTTGCTTCCAGGAGAAAATATTAAAGACA
TGGCCAAAGATGTAACTTATATATGTCCATTCACTGGCGCTGTACGAGGAACTCTGACTGTCACGAATTATAGGT
TATATTTCAAAAGCATGGAACGGGATCCCCCATTTGTTTTAGATGCTTCCCTTGGTGTGATAAATAGAGTAGAAA
AAATTGGTGGTGCTTCTAGTCGAGGTGAAAATTCTTATGGACTAGAAACTGTGTGTAAGGATATTAGGAATTTAC
GATTTGCTCATAAACCTGAGGGGCGGACAAGAAGATCCATATTTGAGAATCTAATGAAATATGCATTTCCTGTCT
CTAATAACCTGCCTCTTTTTGCTTTTGAATACAAAGAAGTATTCCCTGAAAATGGGTGGAAGCTATATGACCCTC
TTTTAGAGTATAGAAGGCAGGGAATTCCAAATGAAAGCTGGAGAATAACAAAGATAAATGAACGATATGAACTTT
GTGATACATACCCTGCCCTCCTGGTTGTGCCAGCAAATATTCCTGATGAAGAATTAAAGAGAGTGGCATCCTTCA
GATCAAGAGGCCGTATCCCAGTTTTATCATGGATTCATCCTGAAAGTCAAGCCACAATCACTCGGTGTAGCCAGC
CCATGGTTGGAGTGAGTGGAAAGCGAAGCAAAGAAGATGAAAAATACCTTCAAGCTATCATGGATTCCAATGCCC
AGTCTCACAAAATCTTTATATTTGATGCCCGGCCAAGTGTTAATGCTGTTGCCAACAAGGCAAAGGGTGGAGGTT
ATGAAAGTGAAGATGCCTATCAAAATGCTGAACTAGTTTTCCTGGATATCCACAATATTCATGTTATGAGAGAAT
CATTACGAAAACTTAAGGAGATTGTGTACCCCAACATTGAGGAAACTCACTGGTTGTCTAACTTGGAATCTACTC
ATTGGCTAGAACATATTAAGCTTATTCTTGCAGGGGCTCTTAGGATTGCTGACAAGGTAGAGTCAGGGAAGACGT
CTGTGGTAGTGCATTGCAGTGATGGTTGGGATCGCACAGCTCAGCTCACTTCCCTTGCCATGCTCATGTTGGATG
GATACTATCGAACCATCCGAGGATTTGAAGTCCTTGTGGAGAAAGAATGGCTAAGTTTTGGACATCGATTTCAAC
TAAGAGTTGGCCATGGAGATAAGAACCATGCAGATGCAGACAGATCGCCTGTTTTTCTTCAATTTATTGACTGTG
TCTGGCAGATGACAAGACAGTTTCCTACCGCATTTGAATTCAATGAGTATTTTCTCATTACCATTTTGGACCACC
TATACAGCTGCTTATTCGGAACATTCCTCTGTAATAGTGAACAACAGAGAGGAAAAGAGAATCTTCCTAAAAGGA
CTGTGTCACTGTGGTCTTACATAAACAGCCAGCTGGAAGACTTCACTAATCCTCTCTATGGGAGCTATTCCAATC
ATGTCCTTTATCCAGTAGCCAGCATGCGCCACCTAGAGCTCTGGGTGGGATATTACATAAGGTGGAATCCACGGA
TGAAACCACAGGAACCTATTCACAACAGATACAAAGAACTTCTTGCTAAACGAGCAGAGCTTCAGAAAAAAGTAG
AGGAACTACAGAGAGAGATTTCTAACCGATCAACCTCATCCTCAGAGAGAGCCAGCTCTCCTGCACAGTGTGTCA
CTCCTGTCCAAACTGTTGTA**TAA**AGGACTGTAAGATCAGGGGCATCATTGCTATACACTCTTGATTACACTGGCA
GCTCTATGAGTAGAAAGTCTTCGGAATTTAGAACCCATCTATGAGAGAAAGTTCAGTCACTTTATTTATTTTAAA
TCTCTCTAGGATGAGTTTAGAACTGTAGCAGTGCAGGTGGCTTAAGTGAAGTAACTCCATATGTAATTACATGAT
TATGATACTAATCTTTTAAGTATCCAAAGAATATTAAAATACTTCAATCCTGGATTCACAGTGGGAACAAGTTTC
TATTAAAAGGCAAATGCTGTTACAAATTTTTGGCATCTGGTAATATTAAAACCATTTTAGAAATACACTCTGTGC
TCACTGTGCAGAGGAACATCAGTTTTCAAACCAACACTGAAATTCTGTGGCATCACATATATTGGGCCTTGATGT
CATGACAGATCAAAATCATTTGATATCCCTTTCTCCATTCTAGGTTTTTCTTTTTTTCAGTAACTGATTTACCTT
GATCACTTTTCAACTTCCATATTCTTCATATAGTAAAAGGCAAAGTATTGAAGATACTACGGTGTGGTAGTAGTT
GAAAATTATTGCCGTCATTATTTACATACTTAAGACATATTAGCAAGTTGATCCAAAATGGGAGGCCTTATAGAT
GTGCTTGGGGGAAAATGAAGGGGAGAAAGTAGCCATACAGGAGTTCAAAGAATTCCATGCCCTTCAGATTAGCCC
AATTACCAGAAACATCATGAAAGATATTTTAAAAACTAATTATTTACTACAGTGTATTTCACTTGTCTTGTGTGT
CTGAACACACAGAAGCTAATTAGCAAGTTTTTAAGAAGTATTTAAAAATCTTACTAGGATTGACATTTTTTCTGA
ATTCTGTATAAATAGCTTATAGTGAGAAGTACTGTGCTCAAATTTTACATTTTTTTCCTTTGCAAATTCTGTAAT
TTCACTCAACGATTAAGTCTACCAAAGAACACACTGCATGTAAAAGATGTATTACAATCTCAAAGCCAGTAAAAG
AAATCTTGCTTCACTGTTCACCTGCTACAAGTAAGAGTTTGGTGCTGGTAGAAACATTTGACTCTGATGTCTATT
TTATTCTACATAAGAGCCATATGTAATGTACTGTAACAAAGGAGCTTCTTGTCCCCTTGGTCTTTTAATTAAAAG
AAATTCCAACTGACTTTTAAACTTTGTTCTTGTCCAAAGTTGCCATTTCTTTTTTTTCCCCAGAAATATTTGGAA
ATTATTGGAGGAATATGCACCCCAGATGAAAATGTTCAGTTTGTACCCATTTTTCCTTAACCAACACCCAAATCA

FIGURE 671B

AACAATTAAAATATACAGTGTTTTTCCACTCACTAATTCACTATACAGAGAGTCTGAACCTTAGCCTCCCTCTTG
GTCTTGCAGTGAGGAAATTTCTATTAGTATATCCAATTTAGCAAAATTGGTACCAAAATGATTTCTTTGGTAATT
GTGTGAAATATAAGCTTTTTAACAGGGCATTTAAGTGGCTAGCAAATCAGTAATTAAAAATTAAGCTTTCTACTC
CAAGTATTTCACAAATGCATCTGCCATTTTCCTCATTTAAACCTTGGTTATCTTGGCCTGATACCACATAAAAGA
ATGTAGAATGGCTGAAGAGATCAAGAATTTAAAGCTTCTAGTCTTAACATACTTGCATCCACTTCAAATTCAAAT
CAAAAGCCAGGGAAATCTAAGTGCAACCCTACCACTTCTCTGCTGAGAACCTTCCAGTGGTTCCCCTCACCTTCT
GCAGAAGTCTCCAATATGGAGTACATGCACTTGGGCATTTAATATATACCACTGGTGTGTGTGGGAGGGAGGGAG
GAGGAATACTAGCCCTTTTTATATATTTACACAAGCAAAACTTTTAAATATTTGAATTGACAGTTACATGTTTCA
TAACTTCGTATGTCTATTGGTTGTGCAGGTGTAATTTTTTCCCTTTTTGATTAGGGTTACAAAATTTAGAGACCA
GTATGATTAAGTTGAAGCTCCTTAGCCTCCTTCGACCTAGTCTCTGCATACCTCAACTTTTACGTACCAATGCTA
CTCTGCTGTTCACAATTGCCTCATGTAATCTGCAGATTCCTGCCTCCCCACTTTGGTTCAGTCTGTCTTGTGCAC
CTGGAACAACTGTTCTCCCTTGTGACTAATTCCTATTTTCTAGAGTTTAGGCATCATCTCTTCCTTTGGGAAGTT
ATCTGATTCACGACTGCCTTCTCTGACATCCCCACCTTCCTCTGTGCCCCCATAGCACTGTGTATACCGCTACTA
CCACTGCAATTCACATTATATTGGAATGAACAATTCACATGTCTACCACAAGTCTGTAAACATAACCTTATTTGA
AATGAATTGCAATAAAGCTCTGTTACAACGT

FIGURE 672

METSSSCESLGSQPAAARPPSVDSLSSASTSHSENSVHTKSASVVSSDSISTSADNFSPDLRVLRESNKLAEMEE
PPLLPGENIKDMAKDVTYICPFTGAVRGTLTVTNYRLYFKSMERDPPFVLDASLGVINRVEKIGGASSRGENSYG
LETVCKDIRNLRFAHKPEGRTRRSIFENLMKYAFPVSNNLPLFAFEYKEVFPENGWKLYDPLLEYRRQGIPNESW
RITKINERYELCDTYPALLVVPANIPDEELKRVASFRSRGRIPVLSWIHPESQATITRCSQPMVGVSGKRSKEDE
KYLQAIMDSNAQSHKIFIFDARPSVNAVANKAKGGGYESEDAYQNAELVFLDIHNIHVMRESLRKLKEIVYPNIE
ETHWLSNLESTHWLEHIKLILAGALRIADKVESGKTSVVVHCSDGWDRTAQLTSLAMLMLDGYYRTIRGFEVLVE
KEWLSFGHRFQLRVGHGDKNHADADRSPVFLQFIDCVWQMTRQFPTAFEFNEYFLITILDHLYSCLFGTFLCNSE
QQRGKENLPKRTVSLWSYINSQLEDFTNPLYGSYSNHVLYPVASMRHLELWVGYYIRWNPRMKPQEPIHNRYKEL
LAKRAELQKKVEELQREISNRSTSSSERASSPAQCVTPVQTVV

FIGURE 673A

ACGCGGCGCGGAGGCTGGCCCGGGACGCGCCCGGAGCCCAGGGAAGGAGGGAGGAGGGGAGGGTCGCGGCCGGCC
GCC**ATG**GGGCCGGGGGCCCGTGGCCGCCGCCGCCGCCGTCGCCCGATGTCGCCGCCACCGCCACCGCCACCCGTG
CGGGCGCTGCCCCTGCTGCTGCTGCTAGCGGGGCCGGGGGCTGCAGCCCCCCCTTGCCTGGACGGAAGCCCGTGT
GCAAATGGAGGTCGTTGCACCCAGCTGCCCTCCCGGGAGGCTGCCTGCCTGTGCCCGCCTGGCTGGGTGGGTGAG
CGGTGTCAGCTGGAGGACCCCTGTCACTCAGGCCCCTGTGCTGGCCGTGGTGTCTGCCAGAGTTCAGTGGTGGCT
GGCACCGCCCGATTCTCATGCCGGTGCCCCCGTGGCTTCCGAGGCCCTGACTGCTCCCTGCCAGATCCCTGCCTC
AGCAGCCCTTGTGCCCACGGTGCCCGCTGCTCAGTGGGGCCCGATGGACGCTTCCTCTGCTCCTGCCCACCTGGC
TACCAGGGCCGCAGCTGCCGAAGCGACGTGGATGAGTGCCGGGTGGGTGAGCCCTGCCGCCATGGTGGCACCTGC
CTCAACACACCTGGCTCCTTCCGCTGCCAGTGTCCAGCTGGCTACACAGGGCCACTATGTGAGAACCCCGCGGTG
CCCTGTGCGCCCTCACCATGCCGTAACGGGGGCACCTGCAGGCAGAGTGGCGACCTCACTTACGACTGTGCCTGT
CTTCCTGGGTTTGAGGGTCAGAATTGTGAAGTGAACGTGGACGACTGTCCAGGACACCGATGTCTCAATGGGGGG
ACATGCGTGGATGGCGTCAACACCTATAACTGCCAGTGCCCTCCTGAGTGGACAGGCCAGTTCTGCACGGAGGAC
GTGGATGAGTGTCAGCTGCAGCCCAACGCCTGCCACAATGGGGGTACCTGCTTCAACACGCTGGGTGGCCACAGC
TGCGTGTGTGTCAATGGCTGGACAGGTGAGAGCTGCAGTCAGAATATCGATGACTGTGCCACAGCCGTGTGCTTC
CATGGGGCCACCTGCCATGACCGCGTGGCTTCTTTCTACTGTGCCTGCCCCATGGGCAAGACTGGCCTCCTGTGT
CACCTGGATGACGCCTGTGTCAGCAACCCCTGCCACGAGGATGCTATCTGTGACACAAATCCGGTGAACGGCCGG
GCCATTTGCACCTGTCCTCCCGGCTTCACGGGTGGGGCATGTGACCAGGATGTGGACGAGTGCTCTATCGGCGCC
AACCCCTGCGAGCACTTGGGCAGGTGCGTGAACACGCAGGGCTCCTTCCTGTGCCAGTGCGGTCGTGGCTACACT
GGACCTCGCTGTGAGACCGATGTCAACGAGTGTCTGTCGGGGCCCTGCCGAAACCAGGCCACGTGCCTCGACCGC
ATAGGCCAGTTCACCTGTATCTGTATGGCAGGCTTCACAGGAACCTATTGCGAGGTGGACATTGACGAGTGTCAG
AGTAGCCCCTGTGTCAACGGTGGGGTCTGCAAGGACCGAGTCAATGGCTTCAGCTGCACCTGCCCCTCGGGCTTC
AGCGGCTCCACGTGTCAGCTGGACGTGGACGAATGCGCCAGCACGCCCTGCAGGAATGGCGCCAAATGCGTGGAC
CAGCCCGATGGCTACGAGTGCCGCTGTGCCGAGGGCTTTGAGGGCACGCTGTGTGATCGCAACGTGGACGACTGC
TCCCCTGACCCATGCCACCATGGTCGCTGCGTGGATGGCATCGCCAGCTTCTCATGTGCCTGTGCTCCTGGCTAC
ACGGGCACACGCTGCGAGAGCCAGGTGGACGAATGCCGCAGCCAGCCCTGCCGCCATGGCGGCAAATGCCTAGAC
CTGGTGGACAAGTACCTCTGCCGCTGCCCTTCTGGGACCACAGGTGTGAACTGCGAAGTGAACATTGACGACTGT
GCCAGCAACCCCTGCACCTTTGGAGTCTGCCGTGATGGCATCAACCGCTACGACTGTGTCTGCCAACCTGGCTTC
ACAGGGCCCCTTTGTAACGTGGAGATCAATGAGTGTGCTTCCAGCCCATGCGGCGAGGGAGGTTCCTGTGTGGAT
GGGGAAAATGGCTTCCGCTGCCTCTGCCCGCCTGGCTCCTTGCCCCCACTCTGCCTCCCCCCGAGCCATCCCTGT
GCCCATGAGCCCTGCAGTCACGGCATCTGCTATGATGCACCTGGCGGGTTCCGCTGTGTGTGTGAGCCTGGCTGG
AGTGGCCCCCGCTGCAGCCAGAGCCTGGCCCGAGACGCCTGTGAGTCCCAGCCGTGCAGGGCCGGTGGGACATGC
AGCAGCGATGGAATGGGTTTCCACTGCACCTGCCCGCCTGGTGTCCAGGGACGTCAGTGTGAACTCCTCTCCCCC
TGCACCCCGAACCCCTGTGAGCATGGGGGCCGCTGCGAGTCTGCCCCTGGCCAGCTGCCTGTCTGCTCCTGCCCC
CAGGGCTGGCAAGGCCCACGATGCCAGCAGGATGTGGACGAGTGTGCTGGCCCCGCACCCTGTGGCCCTCATGGT
ATCTGCACCAACCTGGCAGGGAGTTTCAGCTGCACCTGCCATGGAGGGTACACTGGCCCTTCCTGTGATCAGGAC
ATCAATGACTGTGACCCCAACCCATGCCTGAACGGTGGCTCGTGCCAAGACGGCGTGGGCTCCTTTTCCTGCTCC
TGCCTCCCTGGTTTCGCCGGCCCACGATGCGCCCGCGATGTGGATGAGTGCCTGAGCAACCCCTGCGGCCCGGGC
ACCTGTACCGACCACGTGGCCTCCTTCACCTGCACCTGCCCGCCGGGCTACGGAGGCTTCCACTGCGAACAGGAC
CTGCCCGACTGCAGCCCCAGCTCCTGCTTCAATGGCGGGACCTGTGTGGACGGCGTGAACTCGTTCAGCTGCCTG
TGCCGTCCCGGCTACACAGGAGCCCACTGCCAACATGAGGCAGACCCCTGCCTCTCGCGGCCCTGCCTACACGGG
GGCGTCTGCAGCGCCGCCCACCCTGGCTTCCGCTGCACCTGCCTCGAGAGCTTCACGGGCCCGCAGTGCCAGACG
CTGGTGGATTGGTGCAGCCGCCAGCCTTGTCAAAACGGGGGTCGCTGCGTCCAGACTGGGGCCTATTGCCTTTGT
CCCCCTGGATGGAGCGGACGCCTCTGTGACATCCGAAGCTTGCCCTGCAGGGAGGCCGCAGCCCAGATCGGGGTG
CGGCTGGAGCAGCTGTGTCAGGCGGGTGGGCAGTGTGTGGATGAAGACAGCTCCCACTACTGCGTGTGCCCAGAG
GGCCGTACTGGTAGCCACTGTGAGCAGGAGGTGGACCCCTGCTTGGCCCAGCCCTGCCAGCATGGGGGGACCTGC
CGTGGCTATATGGGGGGCTACATGTGTGAGTGTCTTCCTGGCTACAATGGTGATAACTGTGAGGACGACGTGGAC
GAGTGTGCCTCCCAGCCCTGCCAGCACGGGGGTTCATGCATTGACCTCGTGGCCCGCTATCTCTGCTCCTGTCCC
CCAGGAACGCTGGGGGTGCTCTGCGAGATTAATGAGGATGACTGCGGCCCAGGCCCACCGCTGGACTCAGGGCCC

FIGURE 673B

CGGTGCCTACACAATGGCACCTGCGTGGACCTGGTGGGTGGTTTCCGCTGCACCTGTCCCCCAGGATACACTGGT
TTGCGCTGCGAGGCAGACATCAATGAGTGTCGCTCAGGTGCCTGCCACGCGGCACACACCCGGGACTGCCTGCAG
GACCCAGGCGGAGGTTTCCGTTGCCTTTGTCATGCTGGCTTCTCAGGTCCTCGCTGTCAGACTGTCCTGTCTCCC
TGCGAGTCCCAGCCATGCCAGCATGGAGGCCAGTGCCGTCCTAGCCCGGGTCCTGGGGGTGGGCTGACCTTCACC
TGTCACTGTGCCCAGCCGTTCTGGGGTCCGCGTTGCGAGCGGGTGGCGCGCTCCTGCCGGGAGCTGCAGTGCCCG
GTGGGCGTCCCATGCCAGCAGACGCCCCGCGGGCCGCGCTGCGCCTGCCCCCCAGGGTTGTCGGGACCCTCCTGC
CGCAGCTTCCCGGGGTCGCCGCCGGGGGCCAGCAACGCCAGCTGCGCGGCCGCCCCCTGTCTCCACGGGGGCTCC
TGCCGCCCCGCGCCGCTCGCGCCCTTCTTCCGCTGCGCTTGCGCGCAGGGCTGGACCGGGCCGCGCTGCGAGGCG
CCCGCCGCGGCACCCGAGGTCTCGGAGGAGCCGCGGTGCCCGCGCGCCGCCTGCCAGGCCAAGCGCGGGGACCAG
CGCTGCGACCGCGAGTGCAACAGCCCAGGCTGCGGCTGGGACGGCGGCGACTGCTCGCTGAGCGTGGGCGACCCC
TGGCGGCAATGCGAGGCGCTGCAGTGCTGGCGCCTCTTCAACAACAGCCGCTGCGACCCCGCCTGCAGCTCGCCC
GCCTGCCTCTACGACAACTTCGACTGCCACGCCGGTGGCCGCGAGCGCACTTGCAACCCGGTGTACGAGAAGTAC
TGCGCCGACCACTTTGCCGACGGCCGCTGCGACCAGGGCTGCAACACGGAGGAGTGCGGCTGGGATGGGCTGGAT
TGTGCCAGCGAGGTGCCGGCCCTGCTGGCCCGCGGCGTGCTGGTGCTCACAGTGCTGCTGCCGCCGGAGGAGCTA
CTGCGTTCCAGCGCCGACTTTCTGCAGCGGCTCAGCGCCATCCTGCGCACCTCGCTGCGCTTCCGCCTGGACGCG
CACGGCCAGGCCATGGTCTTCCCTTACCACCGGCCTAGTCCTGGCTCCGAACCCCGGGCCCGTCGGGAGCTGGCC
CCCGAGGTGATCGGCTCGGTAGTAATGCTGGAGATTGACAACCGGCTCTGCCTGCAGTCGCCTGAGAATGATCAC
TGCTTCCCCGATGCCCAGAGCGCCGCTGACTACCTGGGAGCGTTGTCAGCGGTGGAGCGCCTGGACTTCCCGTAC
CCACTGCGGGACGTGCGGGGGGAGCCGCTGGAGCCTCCAGAACCCAGCGTCCCGCTGCTGCCACTGCTAGTGGCG
GGCGCTGTCTTGCTGCTGGTCATTCTCGTCCTGGGTGTCATGGTGGCCCGGCGCAAGCGCGAGCACAGCACCCTC
TGGTTCCCTGAGGGCTTCTCACTGCACAAGGACGTGGCCTCTGGTCACAAGGGCCGGCGGGAACCCGTGGGCCAG
GACGCGCTGGGCATGAAGAACATGGCCAAGGGTGAGAGCCTGATGGGGGAGGTGGCCACAGACTGGATGGACACA
GAGTGCCCAGAGGCCAAGCGGCTAAAGGTAGAGGAGCCAGGCATGGGGGCTGAGGAGGCTGTGGATTGCCGTCAG
TGGACTCAACACCATCTGGTTGCTGCTGACATCCGCGTGGCACCAGCCATGGCACTGACACCACCACAGGGCGAC
GCAGATGCTGATGGCATGGATGTCAATGTGCGTGGCCCAGATGGCTTCACCCCGCTAATGCTGGCTTCCTTCTGT
GGGGGGGCTCTGGAGCCAATGCCAACTGAAGAGGATGAGGCAGATGACACATCAGCTAGCATCATCTCCGACCTG
ATCTGCCAGGGGGCTCAGCTTGGGGCACGGACTGACCGTACTGGCGAGACTGCTTTGCACCTGGCTGCCCGTTAT
GCCCGTGCTGATGCAGCCAAGCGGCTGCTGGATGCTGGGGCAGACACCAATGCCCAGGACCACTCAGGCCGCACT
CCCCTGCACACAGCTGTCACAGCCGATGCCCAGGGTGTCTTCCAGATTCTCATCCGAAACCGCTCTACAGACTTG
GATGCCCGCATGGCAGATGGCTCAACGGCACTGATCCTGGCGGCCCGCCTGGCAGTAGAGGGCATGGTGGAAGAG
CTCATCGCCAGCCATGCTGATGTCAATGCTGTGGATGAGCTTGGGAAATCAGCCTTACACTGGGCTGCGGCTGTG
AACAACGTGGAAGCCACTTTGGCCCTGCTCAAAAATGGAGCCAATAAGGACATGCAGGATAGCAAGGAGGAGACC
CCCCTATTCCTGGCCGCCCGCGAGGGCAGCTATGAGGCTGCCAAGCTGCTGTTGGACCACTTTGCCAACCGTGAG
ATCACCGACCACCTGGACAGGCTGCCGCGGGACGTAGCCCAGGAGAGACTGCACCAGGACATCGTGCGCTTGCTG
GATCAACCCAGTGGGCCCCGCAGCCCCCCCGGTCCCCACGGCCTGGGGCCTCTGCTCTGTCCTCCAGGGGCCTTC
CTCCCTGGCCTCAAAGCGGCACAGTCGGGGTCCAAGAAGAGCAGGAGGCCCCCCGGGAAGGCGGGGCTGGGGCCG
CAGGGGCCCCGGGGGCGGGGCAAGAAGCTGACGCTGGCCTGCCCGGGCCCCCTGGCTGACAGCTCGGTCACGCTG
TCGCCCGTGGACTCGCTGGACTCCCCGCGGCCTTTCGGTGGGCCCCCTGCTTCCCCTGGTGGCTTCCCCCTTGAG
GGGCCCTATGCAGCTGCCACTGCCACTGCAGTGTCTCTGGCACAGCTTGGTGGCCCAGGCCGGGCAGGTCTAGGG
CGCCAGCCCCCTGGAGGATGTGTACTCAGCCTGGGCCTGCTGAACCCTGTGGCTGTGCCCCTCGATTGGGCCCGG
CTGCCCCCACCTGCCCCTCCAGGCCCCTCGTTCCTGCTGCCACTGGCGCCGGGACCCCAGCTGCTCAACCCAGGG
ACCCCCGTCTCCCCGCAGGAGCGGCCCCCGCCTTACCTGGCAGTCCCAGGACATGGCGAGGAGTACCCGGTGGCT
GGGGCACACAGCAGCCCCCCAAAGGCCCGCTTCCTGCGGGTTCCCAGTGAGCACCCTTACCTGACCCCATCCCCC
GAATCCCCTGAGCACTGGGCCAGCCCCTCACCTCCCTCCCTCTCAGACTGGTCCGAATCCACGCCTAGCCCAGCC
ACTGCCACTGGGGCCATGGCCACCACCACTGGGGCACTGCCTGCCCAGCCACTTCCCTTGTCTGTTCCCAGCTCC
CTTGCTCAGGCCCAGACCCAGCTGGGGCCCCAGCCGGAAGTTACCCCCAAGAGGCAAGTGTTGGCCTGAGACGCT
CGTCAGTTCTTAGATCTTGGGGGCCTAAAGAGACCCCCGTCCTGCCTCCTTTCTTTCTCTGTCTCTTCCTTCCTT
TTAGTCTTTTTCATCCTCTTCTCTTTCCACCAACCCTCCTGCATCCTTGCCTTGCAGCGTGACCGAGATAGGTCA

FIGURE 673C

TCAGCCCAGGGCTTCAGTCTTCCTTTATTTATAATGGGTGGGGGCTACCACCCACCCTCTCAGTCTTGTGAAGAG
TCTGGGACCTCCTTCTTCCCCACTTCTCTCTTCCCTCATTCCTTTCTCTCTCCTTCTGGCCTCTCATTTCCTTAC
ACTCTGACATGAATGAATTATTATTATTTTTCTTTTTCTTTTTTTTTTTACATTTTGTATAGAAACAAATTCATT
TAAACAAACTTATTATTATTATTTTTTACAAAATATATATATGGAGATGCTCCCTCCCCCTGTGAACCCCCCAGT
GCCCCCGTGGGGCTGAGTCTGTGGGCCCATTCGGCCAAGCTGGATTCTGTGTACCTAGTACACAGGCATGACTGG
GATCCCGTGTACCGAGTACACGACCCAGGTATGTACCAAGTAGGCACCCTTGGGCGCACCCACTGGGGCCAGGGG
TCGGGGGAGTGTTGGGAGCCTCCTCCCCACCCCACCTCCCTCACTTCACTGCATTCCAGATTGGACATGTTCCAT
AGCCTTGCTGGGGAAGGGCCCACTGCCAACTCCCTCTGCCCCAGCCCCACCCTTGGCCATCTCCCTTTGGGAACT
AGGGGGCTGCTGGTGGGAAATGGGAGCCAGGGCAGATGTATGCATTCCTTTATGTCCCTGTAAATGTGGGACTAC
AAGAAGAGGAGCTGCCTGAGTGGTACTTTCTCTTCCTGGTAATCCTCTGGCCCAGCCTTATGGCAGAATAGAGGT
ATTTTTAGGCTATTTTTGTAATATGGCTTCTGGTCAAAATCCCTGTGTAGCTGAATTCCCAAGCCCTGCATTGTA
CAGCCCCCCACTCCCCTCACCACCTAATAAAGGAATAGTTAACACTCAAAAAAAAAAAAAAAAAAA

FIGURE 674

MGPGARGRRRRRRPMSPPPPPPPVRALPLLLLLAGPGAAAPPCLDGSPCANGGRCTQLPSREAACLCPPGWVGER
CQLEDPCHSGPCAGRGVCQSSVVAGTARFSCRCPRGFRGPDCSLPDPCLSSPCAHGARCSVGPDGRFLCSCPPGY
QGRSCRSDVDECRVGEPCRHGGTCLNTPGSFRCQCPAGYTGPLCENPAVPCAPSPCRNGGTCRQSGDLTYDCACL
PGFEGQNCEVNVDDCPGHRCLNGGTCVDGVNTYNCQCPPEWTGQFCTEDVDECQLQPNACHNGGTCFNTLGGHSC
VCVNGWTGESCSQNIDDCATAVCFHGATCHDRVASFYCACPMGKTGLLCHLDDACVSNPCHEDAICDTNPVNGRA
ICTCPPGFTGGACDQDVDECSIGANPCEHLGRCVNTQGSFLCQCGRGYTGPRCETDVNECLSGPCRNQATCLDRI
GQFTCICMAGFTGTYCEVDIDECQSSPCVNGGVCKDRVNGFSCTCPSGFSGSTCQLDVDECASTPCRNGAKCVDQ
PDGYECRCAEGFEGTLCDRNVDDCSPDPCHHGRCVDGIASFSCACAPGYTGTRCESQVDECRSQPCRHGGKCLDL
VDKYLCRCPSGTTGVNCEVNIDDCASNPCTFGVCRDGINRYDCVCQPGFTGPLCNVEINECASSPCGEGGSCVDG
ENGFRCLCPPGSLPPLCLPPSHPCAHEPCSHGICYDAPGGFRCVCEPGWSGPRCSQSLARDACESQPCRAGGTCS
SDGMGFHCTCPPGVQGRQCELLSPCTPNPCEHGGRCESAPGQLPVCSCPQGWQGPRCQQDVDECAGPAPCGPHGI
CTNLAGSFSCTCHGGYTGPSCDQDINDCDPNPCLNGGSCQDGVGSFSCSCLPGFAGPRCARDVDECLSNPCGPGT
CTDHVASFTCTCPPGYGGFHCEQDLPDCSPSSCFNGGTCVDGVNSFSCLCRPGYTGAHCQHEADPCLSRPCLHGG
VCSAAHPGFRCTCLESFTGPQCQTLVDWCSRQPCQNGGRCVQTGAYCLCPPGWSGRLCDIRSLPCREAAAQIGVR
LEQLCQAGGQCVDEDSSHYCVCPEGRTGSHCEQEVDPCLAQPCQHGGTCRGYMGGYMCECLPGYNGDNCEDDVDE
CASQPCQHGGSCIDLVARYLCSCPPGTLGVLCEINEDDCGPGPPLDSGPRCLHNGTCVDLVGGFRCTCPPGYTGL
RCEADINECRSGACHAAHTRDCLQDPGGGFRCLCHAGFSGPRCQTVLSPCESQPCQHGGQCRPSPGPGGGLTFTC
HCAQPFWGPRCERVARSCRELQCPVGVPCQQTPRGPRCACPPGLSGPSCRSFPGSPPGASNASCAAAPCLHGGSC
RPAPLAPFFRCACAQGWTGPRCEAPAAAPEVSEEPRCPRAACQAKRGDQRCDRECNSPGCGWDGGDCSLSVGDPW
RQCEALQCWRLFNNSRCDPACSSPACLYDNFDCHAGGRERTCNPVYEKYCADHFADGRCDQGCNTEECGWDGLDC
ASEVPALLARGVLVLTVLLPPEELLRSSADFLQRLSAILRTSLRFRLDAHGQAMVFPYHRPSPGSEPRARRELAP
EVIGSVVMLEIDNRLCLQSPENDHCFPDAQSAADYLGALSAVERLDFPYPLRDVRGEPLEPPEPSVPLLPLLVAG
AVLLLVILVLGVMVARRKREHSTLWFPEGFSLHKDVASGHKGRREPVGQDALGMKNMAKGESLMGEVATDWMDTE
CPEAKRLKVEEPGMGAEEAVDCRQWTQHHLVAADIRVAPAMALTPPQGDADADGMDVNVRGPDGFTPLMLASFCG
GALEPMPTEEDEADDTSASIISDLICQGAQLGARTDRTGETALHLAARYARADAAKRLLDAGADTNAQDHSGRTP
LHTAVTADAQGVFQILIRNRSTDLDARMADGSTALILAARLAVEGMVEELIASHADVNAVDELGKSALHWAAAVN
NVEATLALLKNGANKDMQDSKEETPLFLAAREGSYEAAKLLLDHFANREI

FIGURE 675

AGGAAATGGTTTCTGGAAAACGTTAGTAAGGTCAGTTTTTAAACACTGAATCCAAGGTTGTCTTCTGGAATATCC
AAATTGGTTATGACCAGAATGTGATTCATTATACTAAGCTAAAGGAATAGATTAAAGAATTAGCAACAGTGGCCG
GGTGCAGTGGCTCATGCCTGTAACCCCAGCACTTTGGGGGAGGCCCAGGTGGGTGGATCATTTGAGGTCAGGAGT
TTGAGACCAGCCTGGCCAACATGGTGAAACCTAAAAATACAAAAATTAGCCAGGTGTGGTGGCAGGTGCTTGTAA
TCCCAGCTGCTTGGGAGGCTGAAGCAGGAGAATTGCTTGAACCCGGAGGCAGGGGTTGCAGTGAGCCAAGATCAC
ACCATTGCACTCCAGCCTGGGTGGCAGAGTGAGACTCTGTCTCAAAAATTAAAAAGCAACAGTGTATATGCAATA
GTTGCAAGATGTAAGATCACCCAAAGAGTATGCAGAGGGAAATGAGGGACAGAACCCAGAAATATTAATACCCAG
GGAGTGAACAGGAGGAGGACCCCAAGAAGTTACTGAGTCAGATTTTTCCCACTCATCCAGGTGAAAGTTTAGGTC
AATAATGTGAAATACCAGAGGGATTAAATGTCTACAGAAATAAAACCATGTCTCACATTAAGACAAACAAGTAGG
TTGGAGGGATATTTTGAAAGGCAAGGTGATATTAAACTTTATTCTGAAAGTAGTTTGTTAGAGAAAGAGGCATGA
TAAGAGTTGCAGTTAACTGATTGGAAACTATGCAGCAGATGAAACTGGAATAAAGGAAACTCATCAGGAAATGAT
TATAGTAATAAGGGCCAGAAATAAGGGCTTGCTTGCCTGAACTAAAAACAAAGAGGATACAAAGGTTCTAGAAAT
ATTTCAAAGGAATTAGCTTTAATTCAGCAATACTCATTGAGAATCACCTATGCACCTGGCTCTGAAGATGAAGTG
CTGAGTAAACTTAGACATGGACCCTGCTATCATGGAGATGGCAGATTATTGGTCAGAATGCTCTTACCTGTCATT
GTAGCAATTTTGTTAGATCCTTAATACCTCTGAATTGCTAATAAACTTGTTTTGGCTGAAAAAATAGTCCTGTGA
ATTTTACCATGCAGTTAAATAAGAAACTAAAAGCAAACCTAAATACCACCAAAAAGGTTAGTAGTCTGTTATATG
CATTAGCCTTAATCTAAGGAAATATTTTATTATAGGTCTCCTTGAAGAAAATGATATTTTCAGGAATGCTCAAGC
AGGTGTTCTCATCAGCACTAATAGTCATCCAATCTTAAGGAAAAACAGAATATTTGATGGATTTGCCGCAGGTAT
TGAAATTACAAATCACGCAACTGCAACACTAGAAGGCAATCAGATTTTTAACAACCGGTTTGGAGGCTTATTTTT
AGCATCTGGTGTTAATGTGACA**ATG**AAAGATAACAAAATAATGAACAATCAAGATGCCATAGAAAAGGCTGTTAG
TAGAGGCCAATGTTTATATAAAATATCAAGTTATACCAGCTATCCCATGCATGATTTCTACAGATGTCATACTTG
TAACACCACAGATCGAAATGCCATATGTGTGAACTGCATTAAGAAGTGCCATCAGGGACATGATGTAGAGTTTAT
TAGACATGATAGGTATGTAGCACACTTGCTTGATATATTACCCAATTACTTTCCCCCTCACTTTTCTAATATTTG
GGTTTCATTTTGCTTTAGGTTTTTCTGTGACTGTGGTGCTGGAACACTGTCTAATCCTTGTACATTAGCTGGTGA
GCCTACACATGATACAGATACACTATATGACTCTGCTCCACCTATAGAATCTAATACATTGCAGCACAAC**TGA**AT
TCCTTCCCTAAAGAAAAAGTCCTGCCATTGTAACATCATAACTTAAAACACTTTTTTGGAAGAAGATTTAAAATA
TTTGCCCATGCTACAGGAAGAGACTGTATTAAAAATGGATACACAAGGTCAGTTGACACTATGAAGCTCAAGCTA
CCAAAAAGAAAGTGGCAATATATTGACTCAGGATCTCAAAGCTGGGTGTTTTAGCATTACTGTGTAAAGACTTGA
AGGGACAGAAGTGAAGAAAATAAGCTGCAATTTTGTACAGATACCAACTTCTGAAAAGCTGGTGTTTTTACAACT
AGCATTGAATGCAGTCCAATTTGCAGTAGTAATCTTCAATAGACAAGCAGCTTTGTTGCTGCCTTTATGGACATG
GGTACCAATTGCTTTTGTAATATGGTAAAAATGTGAGCTAGCACTTCTGCGTTCCTTTTGATTTTTTTTTTTTAA
CATGTATTCAGATTGAGAAATATGATTTTAATGCCTTAATCTCATGTAGTTTGTTTTTAATTTCAAGCAAAATCT
TACTGTACTTGAATGTGCCCTGTTTTGTTAGCACACCTAGACTTGCTGTAACTGTACTCATGTCCCAGTATGTAC
GTTCTTTCTATGAAAGAGAAAACACTAATCTTAAATTATATCCAGCAATGTTTCTGGTATCCTTTAAGAAAAGTT
AAGACTATTATTTCCTTCCCTTCCCTGTGCAGCATTCAAAAATCACCCCTAGAAAAAGTGAGTGTTTTAATGAGA
CTTCCTAGGAAGGGATGCACTGTAAAACAAAAGTATTCTTGTAACTCAGTTTTGTGAAAGGTAAAAAACTACTAT
GTTTTAAGTACACTTTAGAAAGTCTCTTCAAAACAAACAGTCCTGTATTTGAACTCTGTTCATAGTTTTTTTTTG
AACAGTTTAGACAAAACTGTTGGAAATTAAACCAATTTCCTGCATTAAGCTGAGACAAGTATATAAACAGCCCTA
TACAGTTTCATAGCTTTTCCTCCCCCATTTATGTGTATTGGTGACAGTGGGTATAAAACAGCCTGAAAGTGTATG
CATGTACCATAACATTTAGACTTAATATATTGTGGAGTATTCAATAACCATTATGTAGAAGGTAGATAAGAATTA
AAAGGGTTTAATTTCCTAGAAAGAAAATGGAAAAATGGTCATTTTTAAAAAATAAAGTTTATTAGATCATAATGT
TGTCTGAATTTACCACCTTTGTCAGAAGTCAACTCAAAGCTTCCAATGTAGTCAGTCTATAATTCCTTAATCAAA
GTCAGCAATTTATGGACAGCTTCAGCATTTACAGTTGACCTTTCACTAGCCAGGCAAACTTCCCTTAAAATTAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 676

MKDNKIMNNQDAIEKAVSRGQCLYKISSYTSYPMHDFYRCHTCNTTDRNAICVNCIKKCHQGHDVEFIRHDRYVA
HLLDILPNYFPPHFSNIWVSFCFRFFCDCGAGTLSNPCTLAGEPTHDTDTLYDSAPPIESNTLQHN

FIGURE 677

GAATTCGCCTCG**ATG**GCGTTTATCCGGAAGAAGCAGCAGGAGCAGCAGCTGCAGCTCTACTCCAAGGAGAGATTT
TCCTTGCTGCTGCTTAACTTGGAGGAGTACTACTTTGAACAGCATAGAGCCAATCACATTTTGCACAAGGGCAGT
CACCATGAAAGGAAAATCAGAGGCTCCTTAAAAATATGTTCAAAATCGGTGATTTTTGAACCAGATTCAATATCC
CAGCCCATCATCAAGATTCCTTTGAGAGACTGTATAAAAATAGGAAAGCATGGAGAAAATGGAGCCAATAGACAC
TTCACAAAGGCAAAATCTGGGGGTATTTCACTCATTTTCAGTCAGGTATATTTCATTAAAGAACATAATGTTGTT
GCACCATATAAAATAGAAAGGGGCAAAATGGAATATGTTTTTGAATTGGATGTTCCCGGGAAAGTGGAAGATGTT
GTGGAGACGTTGCTTCAGCTTCACAGAGCATCCTGCCTTGACAAATTGGGTGACCAAACCGCCATGATAACAGCT
ATTTTGCAGTCTCGTTTAGCTAGAACATCATTTGACAAAAACAGGTTCCAAAACATTTCTGAAAAGCTGCACATG
GAATGCAAAGCAGAAATGGTGACGCCTCTGGTGACTAATCCTGGACACGTGTGCATCACGGACACAAACCTGTAT
TTTCAGCCCCTCAACGGCTACCCGAAACCTGTGGTCCAGATAACACTCCAAGATGTCCGCCGCATCTACAAAAGG
AGGCACGGCCTCATGCCTCTGGGCTTGGAAGTATTTTGCACAGAAGATGATCTGTGTTCCGACATCTACCTAAAG
TTCTATGAACCTCAAGATAGAGATGATCTCTATTTTTACATTGCCACATACCTAGAGCACCATGTGGCGGAGCAC
ACTGCTGAGAGCTACATGCTGCAGTGGCAGCGTGGACACCTTTCCAACTATCAGTACCTCCTTCACCTCAACAAC
CTGGCCGACCGCAGCTGCAACGACCTCTCCCAGTACCCTGTGTTTCCATGGATAATACATGATTATTCCAGCTCA
GAACTAGATTTGTCAAATCCAGGAACCTTCCGGGATCTCAGTAAGCCAGTAGGGGCCCTAAATAAGGAACGGCTG
GAGAGACTACTGACACGCTACCAGGAAATGCCTGAACCAAAGTTCATGTATGGGAGTCACTACTCTTCCCCGGGT
TATGTACTTTTTTATCTTGTTAGGATTGCACCAGAGTATATGCTGTGCCTGCAGAATGGAAGATTTGATAATGCA
GATAGAATGTTCAACAGTATTGCAGAAACTTGGAAAAACTGTCTGGATGGTGCAACGGATTTTAAAGAGTTAATT
CCAGAATTCTATGGTGATGATGTGAGCTTTCTAGTCAATAGCCTGAAGTTGGATTTGGGAAAGAGACAAGGAGGA
CAGATGGTTGACGACGTGGAGCTTCCCCCTTGGGCTTCCAGTCCCGAGGACTTTCTCCAGAAGAGCAAAGATGCA
TTGGAAAGCAATTATGTGTCTGAACACCTTCACGAGTGGATTGATCTAATATTTGGCTACAAACAAAAAGGGAGT
GATGCAGTTGGGGCCCATAATGTATTTCATCCCCTGACCTATGAAGGAGGTGTAGACTTGAACAGCATCCAGGAT
CCTGATGAGAAGGTAGCCATGCTTACGCAAATCTTGGAATTTGGGCAGACACCAAAACAACTATTTGTGACACCA
CATCCTCGAAGGATCACCCCAAAGTTTAAAAGTTTGTCCCAGACCTCCAGTTATAATGCTTCTATGGCAGATTCC
CCAGGTGAAGAGTCTTTTGAAGACCTGACCGAAGAAAGCAAAACACTGGCCTGGAATAACATCACCAAACTGCAG
TTACACGAGCACTATAAAATCCACAAAGAAGCAGTTACTGGAATCACGGTCTCTCGCAATGGATCTTCAGTATTC
ACAACATCCCAAGATTCCACCTTGAAGATGTTTTCTAAAGAATCAAAAATGCTACAAAGAAGTATATCATTTTCA
AATATGGCTTTATCGTCTTGTTTACTTTTACCAGGAGATGCCACTGTCATAACTTCTTCATGGGATAATAATGTC
TATTTTTATTCCATAGCATTTGGAAGACGCCAGGACACGTTAATGGGACATGATGATGCTGTTAGTAAGATCTGT
TGGCATGACAACAGGCTATATTCTGCATCGTGGGACTCTACAGTGAAGGTGTGGTCTGGTGTTCCTGCAGAGATG
CCAGGCACCAAAAGACACCACTTTGACTTGCTGGCCGAGCTGGAACATGATGTCAGTGTAGATACAATCAGTTTA
AATGCTGCAAGCACACTGTTAGTTTCCGGCACCAAAGAAGGCACAGTGAATATTTGGGACCTCACAACGGCCACC
TTAATGCACCAGATTCCATGCCATTCAGGGATTGTATGTGACACTGCTTTTAGCCCAGATAGTCGCCATGTCCTC
AGCACAGGAACAGATGGCTGTCTTAATGTCATTGATGTGCAGACAGGAATGCTCATCTCCTCCATGACATCAGAT
GAGCCCCAGACGTGCTTTGTCTGGGATGGAAATTCCGTTTTATCTGGCAGTCAGTCTGGTGAACTGCTCGTTTGG
GACCTCCTTGGAGCAAAAATCAGTGAGAGAATACAGGGCCACACAGGTGCTGTGACATGTATATGGATGAATGAA
CAGTGTAGCAGTATCATCACAGGAGGGGAAGACAGACAAATTATATTCTGGAAATTGCAGTAT**TAA**GTGCCTTTT
CCTCTCCTGAATATTAAATTGAACTCTATTTAATGCATTTTTAAACCAAACTTTTAAACGGACTGGTGAATGTGC
AATGTTAGTAATTAGAAGTTTTACCACATGGAAAATTTGTGGTTTTAAACTTTCTAAATCATGGTGACTTCATTG
AAAGCCATTAGTTGCCATTCTCTTAGGGCAGATAAAATGCGGCTGTGTTAGGAAAAACATGTTACACTGTAAGGC
AGATGATCGTCCCCGTATGATGATTGTCAGAAGACAGGACTAAGTAGCAGAGAATAGCTAAGAGATAAATTGGGC
TGGGGAAACTTGTCAGAAAGCACTGAACAATTAAGAAATTTTCCAAGAAAATGTGCAGTATTCTCTGCTACTTCT
GAATCTGTTTTGTCTTCCTAATCTATCACAATTGCCACCCATCGGGTTTTGGGTGTGTGTTTTCATAGCGTGGTT
ACTTTCTATAATGCTGTACCCAGATTCTAAGAACCTGGAGAAGGATTAGCAGTTCTTAGTAAGTTTACTGTGTAT
AGGAACGGTTTGTATTTCATTACAGCTATTCATCTTTTCTACATTAAAAATATTTTTCTCTAAAAAAAAAAAAAA
AAAAA

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FIGURE 678

MAFIRKKQQEQQLQLYSKERFSLLLLNLEEYYFEQHRANHILHKGSHHERKIRGSLKICSKSVIFEPDSISQPII
KIPLRDCIKIGKHGENGANRHFTKAKSGGISLIFSQVYFIKEHNVVAPYKIERGKMEYVFELDVPGKVEDVVETL
LQLHRASCLDKLGDQTAMITAILQSRLARTSFDKNRFQNISEKLHMECKAEMVTPLVTNPGHVCITDTNLYFQPL
NGYPKPVVQITLQDVRRIYKRRHGLMPLGLEVFCTEDDLCSDIYLKFYEPQDRDDLYFYIATYLEHHVAEHTAES
YMLQWQRGHLSNYQYLLHLNNLADRSCNDLSQYPVFPWIIHDYSSSELDLSNPGTFRDLSKPVGALNKERLERLL
TRYQEMPEPKFMYGSHYSSPGYVLFYLVRIAPEYMLCLQNGRFDNADRMFNSIAETWKNCLDGATDFKELIPEFY
GDDVSFLVNSLKLDLGKRQGGQMVDDVELPPWASSPEDFLQKSKDALESNYVSEHLHEWIDLIFGYKQKGSDAVG
AHNVFHPLTYEGGVDLNSIQDPDEKVAMLTQILEFGQTPKQLFVTPHPRRITPKFKSLSQTSSYNASMADSPGEE
SFEDLTEESKTLAWNNITKLQLHEHYKIHKEAVTGITVSRNGSSVFTTSQDSTLKMFSKESKMLQRSISFSNMAL
SSCLLLPGDATVITSSWDNNVYFYSIAFGRRQDTLMGHDDAVSKICWHDNRLYSASWDSTVKVWSGVPAEMPGTK
RHHFDLLAELEHDVSVDTISLNAASTLLVSGTKEGTVNIWDLTTATLMHQIPCHSGIVCDTAFSPDSRHVLSTGT
DGCLNVIDVQTGMLISSMTSDEPQTCFVWDGNSVLSGSQSGELLVWDLLGAKISERIQGHTGAVTCIWMNEQCSS
IITGGEDRQIIFWKLQY

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FIGURE 679

ACTTCCCCCGGCTCCAGCCGGCGCAGGCAGCGGCGGCAGCAGCAGGCGAGCCTCGGCCCCGCAAGGCC**ATG**AAGG
TGAAGAAGGGCGGCGGTGGGGCCGGGACGGCGACGGAGTCCGCTCCGGGGCCCTCGGGCCAGAGCGTGGCCCCCA
TACCACAGCCGCCTGCGGAATCCGAATCTGGGTCCGAGTCGGAGCCGGACGCAGGCCCAGGGCCCAGGCCGGGGC
CGCTGCAGAGGAAGCAGCCGATCGGGCCGGAGGACGTGCTGGGGCTGCAGCGGATCACCGGTGACTACCTCTGCT
CCCCTGAGGAGAATATCTACAAGATCGACTTTGTCAGGTTTAAGATTCGGGACATGGACTCAGGCACTGTCCTCT
TTGAAATCAAGAAGCCCCCAGTCTCAGAACGGTTGCCCATCAACCGGCGGGACCTGGACCCCAATGCTGGGCGCT
TTGTCCGCTACCAGTTCACGCCTGCCTTCCTCCGCCTGAGGCAGGTGGGAGCCACGGTGGAGTTCACAGTGGGAG
ACAAGCCTGTCAACAACTTCCGCATGATCGAGAGGCACTACTTCCGCAACCAGCTACTCAAAAGCTTCGACTTCC
ACTTTGGCTTCTGCATCCCCAGCAGCAAGAACACCTGCGAGCACATTTACGACTTCCCCCCTCTCTCCGAGGAGC
TGATCAGCGAGATGATCCGCCACCCGTATGAGACCCAGTCTGACAGCTTCTACTTCGTGGATGACCGGCTGGTGA
TGCACAATAAAGCAGACTATTCCTACAGCGGGACACCC**TGA**CCCCACGGCTGCCCTGACCCCAGGAGGCTCCAGT
TCTGGGCTGGGAGCTGTGACCTCCCCAACGCTCACCCCTCAACCCCAAGTCCTCTGCTTGGGGAGTTCTCCAGGA
GCTCCGGACCCTGAGTCAATGTTGGGAGGAAGGGTACCTGGTGTCCCCAGTCAAGCCCATGAAGCCCATGCGGCC
TGCTACATGGGGTGGGGTCGTAGGGAGGCTGTTTGCCTCCACGTCTAGGAAGGCCTGTGAGAGGAGCAGTCAGGA
CTTCCGGACAACTTAGCTGGGCCCTACTTGGGCCCAAGTTTCAGAATAGTGTTCCCCTATCAAGGCTGTGACTAG
ATCAGGCAGGGATCCATTCCCTGTCCCCTGCCCACTACCTTCAGGCCATTTAGAGTTGTAAATTTACAAAGATCC
ACGGTGGGCTCCAGCTGCCAAGCCACCCAAGGGAGTCTGGGCCCTAGGCCTAGCCCCATCCCTCCCCATGAGGGG
CCAAGACACTGCCTAAGGTGTGGGAGGGACTGGCTGAGATTGCAGCCCATGGTAGGAGCTGGACCAACTGTATAT
AGTTTTCAATAAACTTTTTCCTTTTCTGTTCAAAAAAAAAAAAAA

FIGURE 680

MKVKKGGGGAGTATESAPGPSGQSVAPIPQPPAESESGSESEPDAGPGPRPGPLQRKQPIGPEDVLGLQRITGDY
LCSPEENIYKIDFVRFKIRDMDSGTVLFEIKKPPVSERLPINRRDLDPNAGRFVRYQFTPAFLRLRQVGATVEFT
VGDKPVNNFRMIERHYFRNQLLKSFDFHFGFCIPSSKNTCEHIYDFPPLSEELISEMIRHPYETQSDSFYFVDDR
LVMHNKADYSYSGTP

FIGURE 681

ATGGCGACTGCGACCCCCGTGCCGCCGCGGATGGGCAGCCGCGCTGGCGGCCCCACCACGCCGCTGAGCCCCACG
CGCCTGTCGCGGCTCCAGGAGAAGGAGGAGCTGCGCGAGCTCAATGACCGGCTGGCGGTGTACATCGACAAGGTG
CGCAGCCTGGAGACGGAGAACAGCGCGCTGCAGCTGCAGGTGACGGAGCGCGAGGAGGTGCGCGGCCGTGAGCTC
ACCGGCCTCAAGGCGCTCTACGAGACCGAGCTGGCCGACGCGCGACGCGCGCTCGACGACACGGCCCGCGAGCGC
GCCAAGCTGCAGATCGAGCTGGGCAAGTGCAAGGCGGAACACGACCAGCTGCTCCTCAACTATGCTAAGAAGGAA
TCTGATCTTAATGGCGCCCAGATCAAGCTTCGAGAATATGAAGCAGCACTGAATTCGAAAGATGCAGCTCTTGCT
ACTGCACTTGGTGACAAAAAAAGTTTAGAGGGAGATTTGGAGGATCTGAAGGATCAGATTGCCCAGTTGGAAGCC
TCCTTAGCTGCAGCCAAAAAACAGTTAGCAGATGAAACTTTACTTAAAGTAGATTTGGAGAATCGTTGTCAGAGC
CTTACTGAGGACTTGGAGTTTCGCAAAAGCATGTATGAAGAGGAGATTAACGAGACCAGAAGGAAGCATGAAACG
CGCTTGGTAGAGGTGGATTCTGGGCGTCAAATTGAGTATGAGTACAAGCTGGCGCAAGCCCTTCATGAGATGAGA
GAGCAACATGATGCCCAAGTGAGGCTGTATAAGGAGGAGCTGGAGCAGACTTACCATGCCAAACTTGAGAATGCC
AGACTGTCATCAGAGATGAATACTTCTACTGTCAACAGTGCCAGGGAAGAACTGATGGAAAGCCGCATGAGAATT
GAGAGCCTTTCATCCCAGCTTTCTAATCTACAGAAAGAGTCTAGAGCATGTTTGGAAAGGATTCAAGAATTAGAG
GACTTGCTTGCTAAAGAAAAAGACAACTCTCGTCGCATGCTGACAGACAAAGAGAGAGAGATGGCGGAAATAAGG
GATCAAATGCAGCAACAGCTGAATGACTATGAACAGCTTCTTGATGTAAAGTTAGCCCTGGACATGGAAATCAGT
GCTTACAGGAAACTCTTAGAAGGCGAAGAAGAGAGGTTGAAGCTGTCTCCAAGCCCTTCTTCCCGTGTGACAGTA
TCCCGAGCATCCTCAAGTCGTAGTGTACGTACAACTAGAGGAAAGCGGAAGAGGGTTGATGTGGAAGAATCAGAG
GCGAGTAGTAGTGTTAGCATCTCTCATTCCGCCTCAGCCACTGGAAATGTTTGCATCGAAGAAATTGATGTTGAT
GGGAAATTTATCCGCTTGAAGAACACTTCTGAACAGGATCAACCAATGGGAGGCTGGGAGATGATCAGAAAAATT
GGAGACACATCAGTCAGTTATAAATATACCTCAAGATATGTGCTGAAGGCAGGCCAGACTGTTACAATTTGGGCT
GCAAACGCTGGTGTCACAGCCAGCCCCCCAACTGACCTCATCTGGAAGAACCAGAACTCGTGGGGCACTGGCGAA
GATGTGAAGGTTATATTGAAAAATTCTCAGGGAGAGGAGGTTGCTCAAAGAAGTACAGTCTTTAAAACAACCATA
CCTGAAGAAGAGGAGGAGGAGGAAGAAGCAGCTGGAGTGGTTGTTGAGGAAGAACTTTTCCACCAGCAGGGAACC
CCAAGAGCATCCAATAGAAGCTGTGCAATTATG**TAA**AATTTTCAACTGTCTTCCTCAAAATAAAGAAGTATGGTA
ATCTTTACCTGTATACAGTGCAGAGCCTTCTCAGAAGCACAGAATATTTTTATATTTCCTTTATGTGAATTTTTA
AGCTGCAAATCTGATGGCCTTAATTTCCTTTTTGACACTGAAAGTTTTGTAAAAGAAATCATGTCCATACACTTT
GTTGCAAGATGTGAATTATTGACACTGAACTTAATAACTGTGTACTGTTCGGAAGGGGTTCCTCAAATTTTTTGA
CTTTTTTTGTATGTGTGTTTTTTCTTTTTTTTTAAGTTCTTATGAGGAGGGGAGGGTAAATAAACCACTGTGCGT
CTTGGTGTAATTTGAAGATTGCCCCATCTAGACTAGCAATCTCTTCATTATTCTCTGCTATATATAAAACGGTGC
TGTGAGGGAGGGGAAAAGCATTTTTCAATATATTGAACTTTTGTACTGAATTTTTTTGTAATAAGCAATCAAGGT
TATAATTTTTTTTAAAATAGAAATTTTGTAAGAAGGCAATATTAACCTAATCACCATGTAAGCACTCTGGATGAT
GGATTCCACAAAACTTGGTTTTATGGTTACTTCTTCTCTTAGATTCTTAATTCATGAGGAGGGTGGGGGAGGGAG
GTGGAGGGAGGGAAGGGTTTCTCTATTAAAATGCATTCGTTGTGTTTTTTAAGATAGTGTAACTTGCTTAAATTT
CTTATGTGACATTAACAAATAAAAAAGCTCTTTT

FIGURE 682

MATATPVPPRMGSRAGGPTTPLSPTRLSRLQEKEELRELNDRLAVYIDKVRSLETENSALQLQVTEREEVRGREL
TGLKALYETELADARRALDDTARERAKLQIELGKCKAEHDQLLLNYAKKESDLNGAQIKLREYEAALNSKDAALA
TALGDKKSLEGDLEDLKDQIAQLEASLAAAKKQLADETLLKVDLENRCQSLTEDLEFRKSMYEEEINETRRKHET
RLVEVDSGRQIEYEYKLAQALHEMREQHDAQVRLYKEELEQTYHAKLENARLSSEMNTSTVNSAREELMESRMRI
ESLSSQLSNLQKESRACLERIQELEDLLAKEKDNSRRMLTDKEREMAEIRDQMQQQLNDYEQLLDVKLALDMEIS
AYRKLLEGEEERLKLSPSPSSRVTVSRASSSRSVRTTRGKRKRVDVEESEASSSVSISHSASATGNVCIEEIDVD
GKFIRLKNTSEQDQPMGGWEMIRKIGDTSVSYKYTSRYVLKAGQTVTIWAANAGVTASPPTDLIWKNQNSWGTGE
DVKVILKNSQGEEVAQRSTVFKTTIPEEEEEEEEAAGVVVEEELFHQQGTPRASNRSCAIM

FIGURE 683A

GGTGAATGGGCTGGTGGTGCTCGCTGCTGCTGCTGAGAGGAGGAGGAGGATGAAGAGTTGGGCTTGTTTGTCTCC
TCCTCCTCCTGCTTCCCCTGCTCAGAGTTCCTGCCTCCAGCTGCCAGGGGGGACAGCCAGCCAGCAGCAGGAGGG
GGGCTAGAGAGCTGAAGGAGAGCCAGTTTCCCCAAAATTGGACTTCTCAGAACCTTTAATATGCTAATGTGCATT
GTGAATCTCCAAGAGGGGGATATGATATGCAGCATTCTTGAATACTTCTAATGACAGGGAGCCCACTACCTCATA
AGCTGCAGTGAGAAGAGGAGTTTGTTACTTTAAACAGAGGCTGAAGAAACTATAGAATTAGCAGAGAAAGTGGAG
AAGGTAGAGG**ATG**GAGTTGCAGACTCTACAGGAGGCTCTTAAAGTGGAAATTCAGGTTCACCAGAAACTGGTTGC
TCAAATGAAGCAGGATCCACAGAATGCTGACTTAAAGAAACAGCTTCATGAACTCCAAGCCAAAATCACAGCTTT
GAGTGAGAAACAGAAAAGAGTAGTTGAACAGCTACGGAAGAACCTGATAGTAAAGCAAGAACAACCGGACAAGTT
CCAAATACAGCCATTGCCACAATCTGAAAACAAACTACAAACAGCACAGCAGCAACCACTACAGCAACTACAACA
ACAGCAGCAGTACCACCACCACCACGCCCAGCAGTCAGCTGCAGCCTCTCCCAACCTGACTGCTTCACAGAAGAC
TGTAACTACAGCTTCTATGATTACCACAAAGACACTACCTCTCGTCTTGAAAGCAGCAACTGCGACCATGCCTGC
CTCTGTGGTGGGCCAGAGACCTACCATTGCTATGGTGACCGCCATCAACAGTCAGAAGGCTGTGCTCAGCACTGA
TGTGCAGAACACACCAGTCAACCTCCAGACGTCTAGTAAGGTCACTGGGCCTGGGGCAGAGGCTGTCCAAATTGT
GGCAAAAAACACAGTCACTCTGCAGGTTCAGGCAACACCTCCTCAGCCCATCAAAGTACCACAGTTTATCCCCCC
TCCTAGACTCACTCCACGTCCAAACTTTCTTCCACAGGTTCGACCCAAGCCTGTGGCCCAGAATAACATTCCTAT
TGCCCCAGCACCACCTCCCATGCTCGCAGCTCCTCAGCTTATCCAGAGGCCCGTCATGCTGACCAAGTTCACCCC
CACAACCCTTCCCACATCCCAGAATTCCATCCACCCCGTCCGTGTCGTCAATGGGCAGACTGCAACCATAGCCAA
AACGTTCCCCATGGCCCAGCTCACCAGCATTGTGATAGCTACTCCAGGGACCAGACTCGCTGGACCTCAAACTGT
ACAGCTTAGCAAGCCAAGTCTTGAAAAACAGACAGTTAAATCTCACACAGAAACAGATGAGAAACAAACAGAGAG
CCACACCATCACCCCACCTGCTGCACCCAAACCAAAACGGGAGGAGAACCCTCAGAAACTTGCCTTCATGGTGTC
TCTAGGGTTGGTAACACATGACCATCTAGAAGAAATCCAAAGCAAGAGGCAAGAGCGAAAAAGAAGAACAACAGC
AAATCCGGTCTACAGTGGAGCAGTCTTTGAGCCAGAGCGTAAGAAGAGTGCAGTGACATACCTAAACAGCACAAT
GCACCCTGGGACCCGGAAGAGAGCCAATGAGGAACACTGGCCAAAGGGTGATATTCATGAGGATTTTTGCAGCGT
TTGCAGAAAAAGTGGCCAGTTACTGATGTGCGACACGTGTTCCCGTGTATATCATTTGGACTGCTTAGACCCCCC
TCTGAAAACAATTCCCAAGGGCATGTGGATCTGTCCCAGATGTCAGGACCAGATGCTGAAGAAGGAAGAAGCAAT
TCCATGGCCTGGAACTTTAGCAATTGTTCATTCCTATATTGCCTACAAAGCAGCAAAAGAAGAAGAGAAACAGAA
GTTACTTAAATGGAGTTCAGATTTAAAACAAGAACGAGAACAACTAGAGCAAAAGGTGAAACAGCTCAGCAATTC
CATAAGTAAATGCATGGAAATGAAGAACACCATCCTGGCCCGGCAGAAGGAGATGCACAGCTCCCTGGAGAAGGT
AAAACAGCTGATTCGCCTCATCCACGGCATCGACCTCTCCAAACCTGTAGACTCTGAGGCCACTGTGGGGGCCAT
CTCCAATGGCCCGGACTGCACCCCCCCTGCCAATGCCGCCACCTCCACGCCGGCCCCTTCCCCCTCCTCCCAGAG
CTGCACAGCGAACTGTAACCAGGGGGAAGAGACTAAA**TAA**CAGAGCCCCTCTAGGAGAAGCCACGGGATCCCGGC
GGCAAGGAGAACAGAACACTGAAGACTCTAGAAAAGCAAAGCCGGATTTCTGGAAAGTGCAGAATTCTTTTGGTT
CTTTGGTTCCAGAGAGAGAGAAGATGCTTGTGCCAGGTGGCACCAGAGTTTGCCAATTGATCCTTCTTATTCTGT
GTGTACATGCAAAGATTGGACCATGTTACATGAAATAGTGCCAGCTGGAGGTTCTTTGCCAGCACCATGCCAAGT
GAAATAATATATTTACTCTCTCTATTATACACCAGTGTGTGCCTGCAGCAGCCTCCACAGCCACGATGGGTTTGT
TTCTGTTTTCTTGGGTGGGGAGCAGGGACGGGCGGAGGGAGGAGAGCAGGTTTCAGATCCTTACTTGCCGAGCCG
TTTGTTTAGGTAGAGAAGACAAGTCCAAAGAGTGTGTGGGCTTTCCTGTTTCTAAACTTTCGCTACTATAAAACC
AAAAAAAGGAATTGAGATTTCACCAACCCCAGTGCCCAGAAGAGGGAAGGGGAGTGGCTGGAGGGAGCAGGGGGT
GGGACAGTGTATCAAATAAGCAGTATTTAATCACCTCTGGCGGGGGCCTCGTGCAAGGGGAGACTGACACCAAGA
ACAGCCAGTAGGTTCTTCTCCCCTGCACTCTGCTCCCTGCGCGGTAACCCCACCACTCCTGAAGCCTGCCCAGTC
TCCTTCCTTCCCTGCTTGGTGAGTCGCGCATCTCCGTGGTTATCCCGCTGTCTCCTCTCCAAGAACAAGCAGAGC
CCGGGCCACTGGCCCTTGCCCAAGGCAGGGAAGAAGGATGTGTGTGTCCAGGAAGGAAAAAAAGGTGGATCAGTG
ATTTTACTTGAAAACAAGCTCCATCCCTTTTCTATATTTATAAGAAGAGAAGATCTTGAGTGAAGCAGCACGCGA
CCCAGGTGTGTGTGAATTGAATGGAGACGTTTCTTTTCTCTTTCTTTAATTTTTGTTTTTGTTCTTTTTTTCTTT
AAGGAAAGTTTTATTTTACTGTTCATTTTACTTTCTTGGTAACAAAAACTAAAATAAGGAATAGAAAAGCTGTTT
TTCAGGCTGACAGTCCAATTAAGGGTAGCCAAGACCTTGCATGGTAGAGTAGGAATCATAGTGTCAGTGAGGTCC
CGTGAGTCTTTGTGAGTCCTTGTGTCATCGTTCGGGCACTGTTTTTTTATGCAAGGGCAAAAATCTTTGTATCTG
GGGAAAAAAAACTTTTTTTTAAATTAAAAAGGAAAATAAAAGATATTGAGGTCTTCCTAGTGTTACTTAAATTAA

FIGURE 683B

GATCAAGGTAAGAAACATTGTAAAAAAAAATTACAAAAGTGCTATTTGTTTCCTAAAAACAGTGATTTCTATTAA
AAAGGTGTCAGAACTGG

FIGURE 684

MELQTLQEALKVEIQVHQKLVAQMKQDPQNADLKKQLHELQAKITALSEKQKRVVEQLRKNLIVKQEQPDKFQIQ
PLPQSENKLQTAQQQPLQQLQQQQQQYHHHHAQQSAAASPNLTASQKTVTTASMITTKTLPLVLKAATATMPASVV
GQRPTIAMVTAINSQKAVLSTDVQNTPVNLQTSSKVTGPGAEAVQIVAKNTVTLQVQATPPQPIKVPQFIPPPRL
TPRPNFLPQVRPKPVAQNNIPIAPAPPPMLAAPQLIQRPVMLTKFTPTTLPTSQNSIHPVRVVNGQTATIAKTFP
MAQLTSIVIATPGTRLAGPQTVQLSKPSLEKQTVKSHTETDEKQTESHTITPPAAPKPKREENPQKLAFMVSLGL
VTHDHLEEIQSKRQERKRRTTANPVYSGAVFEPERKKSAVTYLNSTMHPGTRKRANEEHWPKGDIHEDFCSVCRK
SGQLLMCDTCSRVYHLDCLDPPLKTIPKGMWICPRCQDQMLKKEEAIPWPGTLAIVHSYIAYKAAKEEEKQKLLK
WSSDLKQEREQLEQKVKQLSNSISKCMEMKNTILARQKEMHSSLEKVKQLIRLIHGIDLSKPVDSEATVGAISNG
PDCTPPANAATSTPAPSPSSQSCTANCNQGEETK

FIGURE 685

GTCCCAGCTAGAGCTCCAGCGCCCGCTCAGGCCCCACTCGACCCTCTCGGGCCTCGGCTACTTGGACTGCGGCGG
AAT**ATG**GCGGCTCCGATGACTCCCGCGGCTCGGCCCGAGGACTACGAGGCGGCGCTCAATGCCGCCCTGGCTGAC
GTGCCCGAACTGGCCAGACTCCTGGAGATCGACCCGTACTTGAAGCCCTACGCCGTGGACTTCCAGCGCAGGTAT
AAGCAGTTTAGCCAAATTTTGAAGAACATTGGAGAAAATGAAGGTGGTATTGATAAGTTTTCCAGAGGCTATGAA
TCATTTGGCGTCCACAGATGTGCTGATGGTGGTTTATACTCCAAAGAATGGGCCCCGGGAGCAGAAGGAGTTTTT
CTTACTGGAGATTTTAATGGTTGGAATCCATTTTCGTACCCATACAAAAAACTGGATTATGGAAAATGGGAGCTG
TATATCCCACCAAAGCAGAATAAATCTGTACTCGTGCCTCATGGATCCAAATTAAAGGTAGTTATTACTAGTAAA
AGCGGAGAGATCTTGTATCGTATTTCACCGTGGGCAAAGTATGTGGTTCGTGAAGGTGATAATGTGAATTATGAT
TGGATACACTGGGATCCAGAACACTCATATGAGTTTAAGCATTCCAGACCAAAGAAGCCACGGAGTCTAAGAATT
TATGAATCTCATGTGGGAATTTCTTCCCATGAAGGAAAAGTAGCTTCTTATAAACATTTTACATGCAATGTACTA
CCAAGAATCAAAGGCCTTGGATACAACTGCATTCAGTTGATGGCAATCATGGAGCATGCTTACTATGCCAGCTTT
GGTTACCAAATCACAAGCTTCTTTGCAGCTTCCAGCCGTTATGGAACACCTGAAGAGCTACAAGAACTGGTAGAC
ACAGCTCATTCCATGGGTATCATAGTCCTCTTAGATGTGGTACACAGCCATGCTTCAAAAAATTCAGCAGATGGA
TTGAATATGTTTGATGGGACAGATTCCTGTTATTTTCATTCTGGACCTAGAGGGACTCATGATCTTTGGGATAGC
AGATTGTTTGCCTACTCCAGCTGGGAAGTTTTAAGATTCCTTCTGTCAAACATAAGATGGTGGTTGGAAGAATAT
CGCTTTGATGGATTTCGTTTTGATGGTGTTACGTCCATGCTTTATCATCACCATGGAGTGGGTCAAGGTTTCTCA
GGTGATTACAGTGAATATTTCGGACTACAAGTAGATGAAGATGCCTTGACTTACCTCATGTTGGCAAATCATTTG
GTTCACACGCTGTGTCCCGATTCTATAACAATAGCTGAGGATGTATCAGGAATGCCAGCTCTGTGCTCTCCAATT
TCCCAGGGAGGGGGTGGTTTTGACTATCGACTAGCCATGGCAATTCCAGATAAGTGGATTCAGCTACTTAAAGAG
TTTAAAGATGAAGACTGGAACATGGGCGATATAGTATACACGCTCACAAACAGGCGCTACCTTGAAAAGTGCATT
GCTTATGCAGAGAGCCATGATCAGGCATTGGTTGGGGATAAGTCGCTGGCATTTTGGTTGATGGATGCCGAAATG
TATACAAACATGAGTGTCCTGACTCCTTTTACTCCAGTTATTGATCGTGGAATACAGCTTCATAAAATGATTCGA
CTCATTACGCATGGGCTTGGTGGAGAAGGCTATCTCAATTTCATGGGTAATGAATTTGGGCATCCTGAATGGTTA
GACTTCCCAAGAAAAGGAAATAATGAGAGTTACCATTATGCCAGGCGGCAGTTTCATTTAACTGACGACGACCTT
CTTCGCTACAAGTTCCTAAATAATTTTGACAGGGATATGAATAGATTGGAAGAAAGATATGGTTGGCTTGCAGCT
CCACAGGCCTACGTGAGTGAAAAACATGAAGGCAATAAGATCATTGCTTTTGAAAGAGCAGGTCTTCTTTTCATT
TTCAACTTCCATCCAAGCAAGAGCTACACTGACTACCGAGTTGGAACAGCATTGCCAGGGAAATTCAAAATTGTG
CTAGATTCAGATGCAGCGGAATATGGAGGGCATCAGAGACTGGACCACAGCACTGACTTTTTTTCTGAGGCTTTT
GAACATAATGGGCGTCCCTATTCTCTTTTGGTGTACATTCCAAGCAGAGTGGCCCTCATCCTTCAGAATGTGGAT
CTGCCGAAT**TGA**AGAGGCCTGATTTCAGCTCCACCAGATGCAGATTTGTGTTTTGTTTTCTTGTTATCACTGTCA
CACAGCTTATAACATGTATGCTTTTCAGAATACAGTTGTCTAGCCAAGCCATCAAGTGTCTGAAATTCAATATTG
GTTTATGCAAATACAGCAAACTTTTATTTAAGTAGATAGGAGAATATGTTTAAAATATTAGGAATCCTAGACCAT
ATTTTCAAGTCATCTTAGCAGCTAGGATTCTCAAATGGAAGTGTTATATATAATATGTTAAAAACATTTTGCTTT
CCTGGCTAATTATTTGATCCTTTTAAATCCAAATTTGAATCATTTGTCATGTATGATTATTTCTGTTAAATGTAC
ACAGTATTTAAGATGGATATTTGGTGGCTCTATTTGTTCTGATATCTTTTGGTCTAAATTATGAGGTACCAAGAT
TGTTTCTTTGTTTCTTTTTTTCAAATTGTGTTTAGAAATACTGTAATAAATATGCAGTAGTGATATAAAGAATTA
TATCCAAGGTAATATAAAAGCCATTACGTATGAACTCATCCGTGTCTCATTTTGTGTTTTATTTTGTGATCTCTT
GTCCACTAAGTATCTTGTTAAATGCCAGTATCTCAGTCTTTCTGAAGCCCTGAAATGGTAATTGTAGCATTTCAG
AAAATGTCTTTCATTTCAATCAATAAAAAGCTTTTGTAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 686

MAAPMTPAARPEDYEAALNAALADVPELARLLEIDPYLKPYAVDFQRRYKQFSQILKNIGENEGGIDKFSRGYES
FGVHRCADGGLYSKEWAPGAEGVFLTGDFNGWNPFSYPYKKLDYGKWELYIPPKQNKSVLVPHGSKLKVVITSKS
GEILYRISPWAKYVVREGDNVNYDWIHWDPEHSYEFKHSRPKKPRSLRIYESHVGISSHEGKVASYKHFTCNVLP
RIKGLGYNCIQLMAIMEHAYYASFGYQITSFFAASSRYGTPEELQELVDTAHSMGIIVLLDVVHSHASKNSADGL
NMFDGTDSCYFHSGPRGTHDLWDSRLFAYSSWEVLRFLLSNIRWWLEEYRFDGFRFDGVTSMLYHHHGVGQGFSG
DYSEYFGLQVDEDALTYLMLANHLVHTLCPDSITIAEDVSGMPALCSPISQGGGGFDYRLAMAIPDKWIQLLKEF
KDEDWNMGDIVYTLTNRRYLEKCIAYAESHDQALVGDKSLAFWLMDAEMYTNMSVLTPFTPVIDRGIQLHKMIRL
ITHGLGGEGYLNFMGNEFGHPEWLDFPRKGNNESYHYARRQFHLTDDDLLRYKFLNNFDRDMNRLEERYGWLAAP
QAYVSEKHEGNKIIAFERAGLLFIFNFHPSKSYTDYRVGTALPGKFKIVLDSDAAEYGGHQRLDHSTDFFSEAFE
HNGRPYSLLVYIPSRVALILQNVDLPN

FIGURE 687

CTCTCCTCAGC**ATG**GACAGGGGCTTCCCCTTCGCCGCCGCCGTCGCGGCGGCAAGTCCGCGCGCCCGGTCCTGCG
GCCTATTGCAGTTTATGTTGCTTTTTAGTCGTCAGGGAAAGCTTCGACTGCAAAAATGGTATGTCCCACTATCAG
ACAAAGAGAAGAAAAAGATCACAAGAGAACTTGTTCAGACCGTTTTAGCACGGAAACCTAAAATGTGCAGCTTCC
TTGAGTGGCGAGATCTGAAGATTGTTTACAAAAGATATGCTAGTCTGTATTTTTGCTGTGCTATTGAGGATCAGG
ACAATGAACTAATTACCCTGGAAATAATTCATCGTTATGTGGAATTACTTGACAAGTATTTCGGCAGTGTCTGTG
AACTAGATATCATCTTTAATTTTGAGAAGGCTTATTTTATTTTGGATGAGTTTCTTTTGGGAGGGGAAGTTCAGG
AAACATCCAAGAAAAATGTCCTTAAAGCAATTGAGCAGGCTGATCTACTGCAGGAGGAGGAAGCTGAAACCCCAC
GTAGTGTTCTTGAAGAAATTGGACTGACA**TAA**CTCTCCTCCCTTGTTGATGACTTCTTGTGGCATTTCACACACT
GTAGATGGTCACTCCCTTCATTGTCCATTGTTAGCTCATGGTGTAAGATGATGTCTTGTCAGTATTACTGTTTTG
CTAAGCCGCTTCATTCATGCCTACACAATTTTTTTTTAAAAGGGAACTTTAGTTAATTAAGTGATAAGGGACTTA
AATATGAATTAGAATGGTGCAGAAAGAGATACCTTTTCTGGATATTTTAAAGTTTAAAGGTCAGTTTCTCTTAAT
CTGATTATGTGCACATATGAAAATGGCACATCATATACATGTAAAATCAGGCAGTATACATTTATTAATTACTGT
ATTTGACAAAGGAAACTCTTAAATTATAATGTGAAACCTGGTTTTATGAAACCAAAGACTAGTGCAGCATTTCAG
CATATGTAAAAAAAAAAAAGGGAATTGACATGTCACATATCAAATGAATGGAAACTTTGTTGAAACTTTAAAAAG
CAAATTTACTCCAAAGACTTGTATTGGAAATTACATACCTTTTTTTTTTTTTTAAAGGACTACAGATTATTTTT
AATGACTAAATTGGAGTGATACTTCTTACACTAAAAATTATTTCTTAGGCATTCTGAATCTGGGATGAGAAACAG
GATTGTTTCACAATAGTAAGCACATAATTTTTAAGGCCAAGGCACATTTGACTCCTGAGATGAATTTTTTGTGGT
CATAATCAAATACTTAGTTGTTTTTGATGCCCCAAAATAAAGTGAGAATGGTAATTTGCCAGGAATTCTTCATAA
CAGTATCTTACAAAAAACGTGTTGCTCTCTTCACAGTATTATGTGTAAAGTCATTGTTTAAAGCACGAATGTTCC
CTCTGGGGTACTTGTTAAAGCTAAATTTATTTTGCTTCCCTCCACTTAGAAGTGCTGCACACTTTACAGCAGCTT
CCTTTCTTTCCATGGCACTGCCTAGTTAACAGAAGTCTTATAAAAATTTAAAAAGACACATTTCTTACAAAAAAG
AGTTGAATGAGGTAAAATGGCATTAGATGGCTCTATATTTTTTAAAGCTATGTAATTGTTCAGCGTCACTTTTCT
AAGTACTTATACATATCTAAACATGTCTTCAATGGTTTATATTTTCACTTATAATATGCTGGGCTGGATTAAGCT
TTGTTGTGAATTGTGACCCAACATTCAGGCCAACGTTGAGCACTGTCCTTATCACATCTCGCCACAATTAGTTGT
AATAAACCGTTCAACGTACAAACGTACAAACACTGGAGTGTGTTTTTATCTCTTTCCAAAAGTTTGTCAAACTAT
GCAGAGCTGCTGAAGGAAGAATTTCTCATTTTTTTTTCAGTAAAATGTTGAAAATTCCCCTCCATTTGAATATGG
TGGTTGTTATAAGCACACACAAGATACATGGTGGAAGATCTAAGGAGTCTTCATGTACTTCATTAAAAAATAACA
TGGATTCCATACTGAGAGCCTATCTACACATTTATTTTCAATCAATAAATGCTGCTTTTAAAACCTTGAAA

FIGURE 688

MDRGFPFAAAVAAASPRARSCGLLQFMLLFSRQGKLRLQKWYVPLSDKEKKKITRELVQTVLARKPKMCSFLEWR
DLKIVYKRYASLYFCCAIEDQDNELITLEIIHRYVELLDKYFGSVCELDIIFNFEKAYFILDEFLLGGEVQETSK
KNVLKAIEQADLLQEEEAETPRSVLEEIGLT

FIGURE 689

AGCGGTTACCCGCGCTGCCTCCGGTGCCGCTGGCGACCGCTGAGCCGCTTCCCGCGCGTCGCCTAGCCCGCCCCT
CAGCTCGCCGCAGCCCCGGCTCCTCCCTCGTCCGGCCCCCGGGGCGGGGTCTGTCAGCTTGCCCTCCCCTCTCCG
CCTAAGCCTGCCCT**ATG**CCAGCCGGGTGTCCTCCCCACAGCACCACGGCTTCTCTTCCTCAGCACGGCGACAGGG
GCTTCCCCTTCGCCGCCGCCGCCGCCGCCGGCCAAGCTCCGCCGCGCCCGCGGCCCGCGGCCGCCATGCAGTTTA
TGTTGCTTTTTAGTCGTCAGGGAAAGCTTCGACTGCAAAAATGGTATGTCCCACTATCAGACAAAGAGAAGAAAA
AGATCACAAGAGAACTTGTTCAGACCGTTTTAGCACGGAAACCTAAAATGTGCAGCTTCCTTGAGTGGCGAGATC
TGAAGATTGTTTACAAAAGATATGCTAGTCTGTATTTTTGCTGTGCTATTGAGGATCAGGACAATGAACTAATTA
CCCTGGAAATAATTCATCGTTATGTGGAATTACTTGACAAGTATTTCGGCAGTGTCTGTGAACTAGATATCATCT
TTAATTTTGAGAAGGCTTATTTTATTTTGGATGAGTTTCTTTTGGGAGGGGAAGTTCAGGAAACATCCAAGAAAA
ATGTCCTTAAAGCAATTGAGCAGGCTGATCTACTGCAGGAGGAAGCTGAAACCCCACGTAGTGTTCTTGAAGAAA
TTGGACTGACA**TAA**CTCTCCTCCCTTGTTGATGACTTCTTGTGGCATTTCACACACTGTAGATGGTCACTCCCTT
CATGTCCATGTTAGCTCATGGTGTAAGATGATGTCTTGTCAGTATTACTGTTTTGCTAAGCCGCTTCATTCATGC
CTACACAATTTTTTTTTAAAAGGGAACTTTAGTTAATTAAGTGATAAGGGACTTAAATATGAATTAGAATGGTGC
AGAAAGAGATACCTTTTCTGGATATTTTAAAGTTTAAAGGTCAGTTTCTCTTAATCTGATTATGTGCACATATGA
AAATGGCACATCATATACATGTAAAATCAGGCAGTATACATTTATTAATTACTGTATTTGACAAAGGAAACTCTT
AAATTATAATGTGAAACCTGGTTTTATGAAACCAAAGACTAGTGCAGCATTTCAGCATATGTAAAAAAAAAAAAA
AAGGGAATTGACATGTCACATATCAAATGAATGGAAACTTTGTTGAAACTTTAAAAAGCAAATTTACTCCAAAGA
CTTGTATTGGAAATTACATACCTTTTTTTTTTTTTTTAAAGGACTACAGATTATTTTTAATGACTAAATTGGAG
TGATACTTCTTACACTAAAAATTATTTCTTAGGCATTCTGAATCTGGGATGAGAAACAGGATTGTTTCACAATAG
TAAGCACATAATTTTTAAGGCCAAGGCACATTTGACTCCTGAGATGAATTTTTTGTGGTCATAATCAAATACTTA
GTTGTTTTTGATGCCCCAAAATAAAGTGAGAATGGTAATTTGCCAGGAATTCTTCATAACAGTATCTTACAAAAA
ACGTGTTGCTCTCTTCACAGTATTATGTGTAAAGTCATTGTTTAAAGCACGAATGTTCCCTCTGGGGTACTTGTT
AAAGCTAAATTTATTTTGCTTCCCTCCACTTAGAAGTGCTGCACACTTTACAGCAGCTTCCTTTCTTTCCATGGC
ACTGCCTAGTTAACAGAAGTCTTATAAAAATTTAAAAAGACACATTTCTTACAAAAAAGAGTTGAATGAGGTAAA
ATGGCATTAGATGGCTCTATATTTTTTAAAGCTATGTAATTGTTCAGCGTCACTTTTCTAAGTACTTATACATAT
CTAAACATGTCTTCATGGTTTATATTTTCACTTATATATGCTGGGCTGGATTAAGCTTTGTTGTGATTGTGACCA
ACATTCAGGCCACGTGAGCACTGTCTTATCACATCGCCAATTAGTTGTAATAAACGTTCAACGTACAAACACTGG
AGTGTGTTTTTATCTCTTTCCAAAAGTTTGTCAAACTATGCAGAGCTGCTGAAGGAAGAATTTCTCATTTTTTTT
TCAGTAAAATGTTGAAAATTCCCCTCCATTTGAATATGGTGGTTGTTATAAGCACACACAAGATACATGGTGGAA
GATCTAAGGAGTCTTCATGTACTTCATTAAAAAATAACATGGATTCCATACTGAGAGCCTATCTACACATTTATT
TTCAATCAATAAATGCTGCTTTTAAAACCTTGA

FIGURE 690

MDRGFPFAAAVAAASPRARSCGLLQFMLLFSRQGKLRLQKWYVPLSDKEKKKITRELVQTVLARKPKMCSFLEWR
DLKIVYKRYASLYFCCAIEDQDNELITLEIIHRYVELLDKYFGSVCELDIIFNFEKAYFILDEFLLGGEVQETSK
KNVLKAIEQADLLQEEEAETPRSVLEEIGLT

FIGURE 691

GGAGGCCAGTGCGCGGCCGCGGTGCTCTACCGGCGTGTCGCTCCGCCCCAGGGAGAGCCGGCGCTACC**ATG**GAGG
AGTACCATCGCCACTGCGACGAGGTTGGCTTCAATGCTGAGGAAGCCCACAATATTGTCAAAGAGTGTGTAGATG
GGGTTTTAGGTGGTGAAGATTATAATCACAACAACATCAACCAGTGGACTGCAAGCATAGTGGAACAATCCTTAA
CACACCTGGTTAAGTTGGGAAAAGCCTATAAATATATTGTGACCTGTGCAGTGGTCCAGAAGAGCGCATATGGCT
TTCACACAGCCAGCTCCTGTTTTTGGGATACCACATCTGATGGAACCTGTACCGTAAGATGGGAGAACCGGACCA
TGAACTGTATTGTCAACGTTTTTGCCATTGCTATTGTTCTT**TAA**CTGACTAAAAATGTTGGGCTAAAGCCATTAA
CTTAAGAATTTGTCAGTGTATCCTTTCCAAAAAGAGTAATAGTTGTTTACTAGTGTGCTAGATGAAAAGCGTGCA
ATATGCTTTAAAGCTATCAACAAAAACTGAATATTATAAGCAAGCAATATCATAGTAATTGGCAGATTAGCTCAT
ATTCTATACAGCATCGTTTAAATAGGAAAAATTTAATGCTAGCAAAAAATAAATTTAGAATATGGCATGACATGA
AAATACAATCTTATATTTACACCAGCTTTTCACTAATATTTTGTACCTAAGGTGATGGGGAACTCCATTCAGATA
ATAAAATTCTCTTTCAGCTAGAGAAGTTAACAGGAATAAATATATGAACAAAAAAGCTGCAAGGATAAATGTGGA
GAAAATGATGAGAATTAGCTAACATTTTTAAGTTTTTTTAAACTTTCTTCCCCTCAGTTGTACTTAATATTTAGT
GGAAAGTAATAATTTTTTTATTTTCTATCAACTAATAGTATAGTAACAACTATGATTAACTTGTTTACTTTTTCT
GAGGATTAGTAAATCAATTTTTTTTAATTTCAAATTTTGGATTTACACTTGAGGGTAAATTAAATCTGGTAAACT
GAATTTCCTAGTTAAATAAAATTAGTTGCAGTATATGATGAACAGTGTATGACTCAAACAGCTGCCTTACAATTC
ACTCATTCCATGTGGAACAAACATTTATCAGATGCCTATTATGGGCATATGTCTCTGCTAAGCACCATAGTTGTC
AATGTGCTGTGCAAATGCTAAGTTCCTTTTAGCAATTGTTCAGTTGGAAGACGTATTAATATTTGGGGAAGGAAA
AGAAAGTAGTTGTTTTACAAGGGAGGAAAAAAGTGAATCTGGTTACACATATGGAAGTAAGCAAAATGAAAAGCA
CTTATTGCTTTCTGACAGAATTATAGATGTAATTTTAAGAGTTGCTCCTAGCAAGTTAAAAGTGCATATAAAATA
TGCAACTCTTAGTTAAAGGCCTTATTATCAGTCTTACCTATACAAGTAGTAAATTTTGTCATTGCTTTAGTTACA
ACCATCTGTAAATAACTTAAAAGACTTATTATGTGGGGTTCAAATTGAGTGGAATAAAGTATAGATTAAAAGTAT
ACAATCCTTAGCACGTTATCTCAGGGCTTATGAAATGTAATTAAATTTATTAAGAAAATAGATGAAAAATTAGGG
TACACAGCTGGCCACCAAATGCGAAGTCAATCTGCTACTTAACCCTGAAAACAAAATCAGTTTTGCATATTACCA
CTAACACTAATACATATAGAGAGCGGAACCATAACTCATTGAATTTTGGAGAGGAATAAGCTTAGCGTTAATATT
GACAATATTAAGGCAATATTCTTGTAGGAATACTATGTGCATGTTTGATATTTTGCCAAATAACAATAATTAATA
ATTGTTCAATGTTTAAGAATAATATTAACAAAATAAAGGAGTTTAATGCAGTGATCTTTGTTTTTGGCACATCAA
AAATTCTCAGTCATTATTCATGTTTCTTTTATGCTGCTGGCTTTTGTGCCCTGGAAGATCATAATAGTGACCAAA
ATATACATGCAGACTTGTTTTTTATTATTGTTGTTTAAGCATAATTTAAGAAAAAAAATTTTTACCTGGTGAACT
TGCTATCTGCTCTGTTTCTAGTTAAAATATAATAAATATTATCTTCCTGTGCTGTA

FIGURE 692

MEEYHRHCDEVGFNAEEAHNIVKECVDGVLGGEDYNHNNINQWTASIVEQSLTHLVKLGKAYKYIVTCAVVQKSA
YGFHTASSCFWDTTSDGTCTVRWENRTMNCIVNVFAIAIVL

FIGURE 693A

CTTTCCCGAGTCCGTTTGAGGAAGTCCCCGAGGCGCACAGAGCAAGCCCACGCGAGGGCACCTCTGGAGGGGAGC
GCCTGCAGGACCTTGTAAAGTCAAAA**ATG**TCAGAAACTTCCAGGACCGCCTTTGGAGGCAGAAGAGCAGTTCCAC
CCAATAACTCTAATGCAGCGGAAGATGACCTGCCCACAGTGGAGCTTCAGGGCGTGGTGCCCCGGGGCGTCAACC
TGCAAGAGTTTCTTAATGTCACGAGCGTTCACCTGTTCAAGGAGAGATGGGACACTAACAAGGTGGACCACCACA
CTGACAAGTATGAAAACAACAAGCTGATTGTCCGCAGAGGGCAGTCTTTCTATGTGCAGATTGACCTCAGTCGTC
CATATGACCCCAGAAGGGATCTCTTCAGGGTGGAATACGTCATTGGTCGCTACCCACAGGAGAACAAGGGAACCT
ACATCCCAGTGCCTATAGTCTCAGAGTTACAAAGTGGAAAGTGGGGGGCCAAGATTGTCATGAGAGAGGACAGGT
CTGTGCGGCTGTCCATCCAGTCTTCCCCCAAATGTATTGTGGGGAAATTCCGCATGTATGTTGCTGTCTGGACTC
CCTATGGCGTACTTCGAACCAGTCGAAACCCAGAAACAGACACGTACATTCTCTTCAATCCTTGGTGTGAAGATG
ATGCTGTGTATCTGGACAATGAGAAAGAAAGAGAAGAGTATGTCCTGAATGACATCGGGGTAATTTTTTATGGAG
AGGTCAATGACATCAAGACCAGAAGCTGGAGCTATGGTCAGTTTGAAGATGGCATCCTGGACACTTGCCTGTATG
TGATGGACAGAGCACAAATGGACCTCTCTGGAAGAGGGAATCCCATCAAAGTCAGCCGTGTGGGGTCTGCAATGG
TGAATGCCAAAGATGACGAAGGTGTCCTCGTTGGATCCTGGGACAATATCTATGCCTATGGCGTCCCCCCATCGG
CCTGGACTGGAAGCGTTGACATTCTATTGGAATACCGGAGCTCTGAGAATCCAGTCCGGTATGGCCAATGCTGGG
TTTTTGCTGGTGTCTTTAACACATTTTTACGATGCCTTGGAATACCAGCAAGAATTGTTACCAATTATTTCTCTG
CCCATGATAATGATGCCAATTTGCAAATGGACATCTTCCTGGAAGAAGATGGGAACGTGAATTCCAAACTCACCA
AGGATTCAGTGTGGAACTACCACTGCTGGAATGAAGCATGGATGACAAGGCCTGACCTTCCTGTTGGATTTGGAG
GCTGGCAAGCTGTGGACAGCACCCCCCAGGAAAATAGCGATGGCATGTATCGGTGTGGCCCCGCCTCGGTTCAAG
CCATCAAGCACGGCCATGTCTGCTTCCAATTTGATGCACCTTTTGTTTTTGCAGAGGTCAACAGCGACCTCATTT
ACATTACAGCTAAGAAAGATGGCACTCATGTGGTGGAAAATGTGGATGCCACCCACATTGGGAAATTAATTGTGA
CCAAACAAATTGGAGGAGATGGCATGATGGATATTACTGATACTTACAAATTCCAAGAAGGTCAAGAAGAAGAGA
GATTGGCCCTAGAAACTGCCCTGATGTACGGAGCTAAAAAGCCCCTCAACACAGAAGGTGTCATGAAATCAAGGT
CCAACGTTGACATGGACTTTGAAGTGGAAAATGCTGTGCTGGGAAAAGACTTCAAGCTCTCCATCACCTTCCGGA
ACAACAGCCACAACCGTTACACCATCACAGCTTATCTCTCAGCCAACATCACCTTCTACACCGGGGTCCCGAAGG
CAGAGTTCAAGAAGGAGACGTTCGACGTGACGCTGGAGCCCTTGTCCTTCAAGAAAGAGGCGGTGCTGATCCAAG
CCGGCGAGTACATGGGTCAGCTGCTGGAACAAGCGTCCCTGCACTTCTTTGTCACAGCTCGCATCAATGAGACCA
GGGATGTTCTGGCCAAGCAAAAGTCCACCGTGCTAACCATCCCTGAGATCATCATCAAGGTCCGTGGCACTCAGG
TAGTTGGTTCTGACATGACTGTGACAGTTCAGTTTACCAATCCTTTAAAAGAAACCCTGCGAAATGTCTGGGTAC
ACCTGGATGGTCCTGGAGTAACAAGACCAATGAAGAAGATGTTCCGTGAAATCCGGCCCAACTCCACCGTGCAGT
GGGAAGAAGTGTGCCGGCCCTGGGTCTCTGGGCATCGGAAGCTGATAGCCAGCATGAGCAGTGACTCCCTGAGAC
ATGTGTATGGCGAGCTGGACGTGCAGATTCAAAGACGACCTTCCATG**TGA**ATGCACAGGAAGCTGAGATGAACCC
TGGCATTTGGCCTCTTGTAGTCTTGGCTAAGGAAATTCTAACGCAAAAATAGCTCTTGCTTTGACTTAGGTGTGA
AGACCCAGACAGGACTGCAGAGGGCCCCAGAGTGGAGATCCCACATATTTCAAAAACATACTTTTCCAAACCCAG
GCTATTCGGCAAGGAAGTTAGTTTTTAATCTCTCCACCTTCCAAAGAGTGCTAAGCATTAGCTTTAATTAAGCTC
TCATAGCTCATAAGAGTAACAGTCATCATTTATCATCACAAATGGCTACATCTCCAAATATCAGTGGGCTCTCTT
ACCAGGGAGATTTGCTCAATACCTGGCCTCATTTAAAACAAGACTTCAGATTCCCCACTCAGCCTTTTGGGAATA
ATAGCACATGATTTGGGCTCTAGAATTCCAGTCCCCTTTCTCGGGGTCAGGTTCTACCCTCCATGTGAGAATATT
TTTCCCAGGACTAGAGCACAACATAATTTTTATTTTTGGCAAAGCCAGAAAAAGATCTTTCATTTTGCACCTGCA
GCCAAGCAAATGCCTGCCAAATTTTAGATTTACCTTGTTAGAAGAGGTGGCCCCATATTAACAAATTGCATTTGT
GGGAAACTTAACCACCTACAAGGAGATAAGAAAGCAGGTGCAACACTCAAGTCTATTGAATAATGTAGTTTTGTG
ATGCATTTTATAGAATGTGTCACACTGTGGCCTGATCAGCAGGAGCCAATATCCCTTACTTTAACCCTTTCTGGG
ATGCAATACTAGGAAGTAAAGTGAAGAATTTATCTCTTTAGTTAGTGATTATATTTCACCCATCTCTCAGGAATC
ATCTCCTTTGCAGAATGATGCAGGTTCAGGTCCCCTTTCAGAGATATAATAAGCCCAACAAGTTGAAGAAGCTGG
CGGATCTAGTGACCAGATATATAGAAGGACTGCAGCCACTGATTCTCTCTTGTCCTTCACATCACCATTTTGAGA
CCTCAGCTTGGCACTCAGGTGCTGAAGGGTAATATGGACTCAGCCTTGCAAATAGCCAGTGCTAGTTCTGACCCA
ACCACAGAGGATGCTGACATCATTTGTATTATGTTCCAAGGCTACTACAGAGAAGGCTGCCTGCTATGTATTTGC
AAGGCTGATTTATGGTCAGAATTTCCCTCTGATATGTCTAGGGTGTGATTTAGGTCAGTAGACTGTGATTCTTAG
CAAAAAATGAACAGTGATAAGTATACTGGGGGCAAAATCAGAATGGAATGCTCTGGTCTATATAACCACATTTCT

FIGURE 693B

GAGCCTTTGAGACTGTTCCTGAGCCTTCAGCACTAACCTATGAGGGTGAGCTGGTCCCCTCTATATATACATCAT
ACTTAACTTTACTAAGTAATCTCACAGCATTTGCCAAGTCTCCCAATATCCAATTTTAAAATGAAATGCATTTTG
CTAGACAGTTAAACTGGCTTAACTTAGTATATTATTATTAATTACAATGTAATAGAAGCTTAAAATAAAGTTAAA
CTGATTAT

FIGURE 694

MSETSRTAFGGRRAVPPNNSNAAEDDLPTVELQGVVPRGVNLQEFLNVTSVHLFKERWDTNKVDHHTDKYENNKL
IVRRGQSFYVQIDLSRPYDPRRDLFRVEYVIGRYPQENKGTYIPVPIVSELQSGKWGAKIVMREDRSVRLSIQSS
PKCIVGKFRMYVAVWTPYGVLRTSRNPETDTYILFNPWCEDDAVYLDNEKEREEYVLNDIGVIFYGEVNDIKTRS
WSYGQFEDGILDTCLYVMDRAQMDLSGRGNPIKVSRVGSAMVNAKDDEGVLVGSWDNIYAYGVPPSAWTGSVDIL
LEYRSSENPVRYGQCWVFAGVFNTFLRCLGIPARIVTNYFSAHDNDANLQMDIFLEEDGNVNSKLTKDSVWNYHC
WNEAWMTRPDLPVGFGGWQAVDSTPQENSDGMYRCGPASVQAIKHGHVCFQFDAPFVFAEVNSDLIYITAKKDGT
HVVENVDATHIGKLIVTKQIGGDGMMDITDTYKFQEGQEEERLALETALMYGAKKPLNTEGVMKSRSNVDMDFEV
ENAVLGKDFKLSITFRNNSHNRYTITAYLSANITFYTGVPKAEFKKETFDVTLEPLSFKKEAVLIQAGEYMGQLL
EQASLHFFVTARINETRDVLAKQKSTVLTIPEIIIKVRGTQVVGSDMTVTVQFTNPLKETLRNVWVHLDGPGVTR
PMKKMFREIRPNSTVQWEEVCRPWVSGHRKLIASMSSDSLRHVYGELDVQIQRRPSM

FIGURE 695

GCCCGCTGCGGTAAATGGGGCAGAGGCCGGGAGGGGTGGGGGTTCCCCGCGCCGCAGCC**ATG**GAGCAGCTTCGCG
CCGCCGCCCGTCTGCAGATTGTTCTGGGCCACCTCGGCCGCCCCTCGGCCGGGGCTGTCGTAGCTCATCCCACTT
CAGGGACTATTTCCTCTGCCAGTTTCCATCCTCAACAATTCCAGTATACTCTGGATAATAATGTTCTAACCCTGG
AACAGAGAAAATTTTATGAAGAAAATGGGTTTCTAGTAATCAAAAATCTTGTACCTGATGCCGATATTCAACGCT
TTCGGAATGAGTTTGAAAAAATCTGCAGAAAGGAGGTGAAACCATTAGGATTAACAGTAATGAGAGATGTGACCA
TTTCGAAATCCGAATATGCTCCAAGTGAGAAGATGATCACGAAGGTCCAGGATTTCCAGGAAGATAAGGAGCTCT
TCAGATACTGCACTCTCCCCGAGATTCTGAAATATGTGGAGTGCTTCACTGGACCTAATATTATGGCCATGCACA
CAATGTTGATAAACAAACCTCCAGATTCTGGCAAGAAGACGTCCCGTCACCCCCTGCACCAGGACCTGCACTATT
TCCCCTTCAGGCCCAGCGATCTCATCGTTTGCGCCTGGACGGCGATGGAGCACATCAGCCGGAACAACGGCTGTC
TGGTTGTGCTCCCAGGCACACACAAGGGCTCCCTGAAGCCCCACGATTACCCCAAGTGGGAGGGGGGAGTTAACA
AAATGTTCCACGGGATCCAGGACTACGAGGAAAACAAGGCCCGGGTGCACCTGGTGATGGAGAAGGGCGACACTG
TTTTCTTCCATCCTTTGCTCATCCACGGATCTGGTCAGAATAAAACCCAGGGATTCCGGAAGGCAATTTCCTGCC
ATTTCGCCAGTGCCGATTGCCACTACATTGACGTGAAGGGCACCAGTCAAGAAAACATCGAGAAGGAAGTTGTAG
GAATAGCACATAAATTCTTTGGAGCTGAAAATAGCGTGAACTTGAAGGATATTTGGATGTTTCGAGCTCGACTTG
TGAAAGGAGAAAGAACCAATCTT**TGA**AATAGCCATCTGCTATAACTCTTTCAACAGAAAACCAAAACCAAACGAA
ATGTCTAAGGAAAATGTTTTCTTAATGAGATGATGTAACCTTTTCTATCACTTGTTAAAAGCAGAAAACATGTAT
CAGGTACTTAATTGCATAGAGTTAGTTTTGCAGCACAATGGTGTTGCTTTAATGGAAAAAAAAAACAGTAAAAGT
GAAATATTACTGTTTTAAGGAAAACTAATTTAGGGTGGCAGCCAATAAAGGTGGTTGGTGTCTAATTTAAGTGTT
AAATCAATTTCTTTCATTCAGTTAGCTCTTTACCCAAGAAGAAGTGAATGATTTGGAGCTTAGGGTATGTTTTGT
ATCCCCTTTCTGATAAACCCATTCCCTACCAATTTTATGTCATAAGAGATTTTTTTCCCCCAAATCTAGAACAAT
GTATAATACATTCACATCTAGTCAAGGGCATAGGAACGGTGTCATGGAGTCCAAATAAAGTGGATATTCCTGCTC
GG

FIGURE 696

MEQLRAAARLQIVLGHLGRPSAGAVVAHPTSGTISSASFHPQQFQYTLDNNVLTLEQRKFYEENGFLVIKNLVPD
ADIQRFRNEFEKICRKEVKPLGLTVMRDVTISKSEYAPSEKMITKVQDFQEDKELFRYCTLPEILKYVECFTGPN
IMAMHTMLINKPPDSGKKTSRHPLHQDLHYFPFRPSDLIVCAWTAMEHISRNNGCLVVLPGTHKGSLKPHDYPKW
EGGVNKMFHGIQDYEENKARVHLVMEKGDTVFFHPLLIHGSGQNKTQGFRKAISCHFASADCHYIDVKGTSQENI
EKEVVGIAHKFFGAENSVNLKDIWMFRARLVKGERTNL

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FIGURE 697

GCGGACGTGGGCAGGAGGGCTGGAAAAGCCGGCGCTGGAGCGGGAACGGGAGTAGCTGCCTGGGCGCCAAAGGCC
GCGGCACTCCCACGCGGACCCCGAAGTCCGCAACCCGGGGATGGGCCCGCGGCTGCGAGGGGATCTTCTCTGGAT
CAAGCAATGGTGGTGAAAA**ATG**TTTCGCAAGGGCAAAAAACGACACAGTAGTAGCAGTTCCCAAAGTAGCGAAAT
CAGTACTAAGAGCAAGTCTGTGGATTCTAGCCTTGGGGGGTCTTTCACGATCCAGCACTGTGGCCAGCCTCGACAC
AGATTCCACCAAAAGCTCAGGACAAAGCAACAATAATTCAGATACCTGTGCAGAATTTCGAATAAAATATGTTGG
TGCCATTGAGAAACTGAAACTCTCCGAGGGAAAAGGCCTTGAAGGGCCATTAGACCTGATAAATTATATAGACGT
TGCCCAGCAAGATGGAAAGTTGCCTTTTGTTCCTCCGGAGGAAGAATTTATTATGGGAGTTTCCAAGTATGGCAT
AAAAGTATCAACATCAGATCAATATGATGTTTTGCACAGGCATGCTCTCTACTTAATAATCCGGATGGTGTGTTA
CGATGACGGTCTGGGGGGCGGGAAAAAGCTTACTGGCTCTGAAGACCACAGATGCAAGCAATGAGGAATACAGCCT
GTGGGTTTATCAGTGCAACAGCCTGGAACAAGCACAAGCCATTTGCAAGGTTTTATCCACCGCTTTTGACTCTGT
ATTAACATCTGAGAAACCC**TGA**ATCCTGCAATCAAGTAGAAGTCAACTTCATCTGAAAGTTCAGCTGTTTTCAAA
CTGCAATGCTGAAATGTTATGCAAATAATGAAGTTATCCCTTGCTCTAGATTTTCTGAAGAAAATGGATTGTGTA
AAATGCTGATCATTTGTTTATTAAAATGTGTCCTATTACACAGTGAGTTAACTCTCAATGAAGTCATCTATTTTC
TGGGCTAAAAAACTTCATTTGTCTTTTTCAACTTCTAATAAGCTTAACCTAAGTGTCACGAAGACGAGATGTCAC
AGAGGTCCACTCAGTGACAAACACACACTGAAGGCCTGAGGGAAGACTGAGGACATGGGCTCAGTGGTGGCTTCC
CAGTCATGGTATCACTGGCATGGACCTCTGTCCGGCAGAGGTGTGGACTGGAGACCAGGATTCATGCTGGTCTGG
AACAATGACATTGCCAACTTAAGACACACAAAGCAGATTTTCAGAAGTGTCTGGTCAAGATAACATGCTGGCCAA
CCACAATTCCTAGAGTTAAGAGAACCTTAAAAGATTACCGCTCATGCTAAAAGTATGTAAAGATCCCATGTACAG
TATGATAGTGTACTTTTTTTAAAGGACTGTCAATATACAAAACTTTAAAGATTAAAAACATTAAAAATAAAAAAA

FIGURE 698

MFRKGKKRHSSSSSQSSEISTKSKSVDSSLGGLSRSSTVASLDTDSTKSSGQSNNNSDTCAEFRIKYVGAIEKLK
LSEGKGLEGPLDLINYIDVAQQDGKLPFVPPEEEFIMGVSKYGIKVSTSDQYDVLHRHALYLIIRMVCYDDGLGA
GKSLLALKTTDASNEEYSLWVYQCNSLEQAQAICKVLSTAFDSVLTSEKP

FIGURE 699A

GGCACGGGGACATCAGGATATCCTGAGTGTGTCTGCAGATGGTGGCATCGTG**ATG**GGCTATTCTAGTGGCGTCAC
CAATGGGCTGAATGATGCCAGCGACTCCATCTACACGAAAGGCACCCCGGAGATTGCTTTCTGGGGAAGCAATGC
TGGGGTGAAAACAACACGGCTAGAAGCTCATTCTGAAATGGGGAGCACTGAAATTTTGGAAAAGGAGACCCCAGA
AAATCTCAGTAATGGTACCAGCAGCAATGTGGAAGCAGCCAAAAGGTTGGCCAAACGCCTTTATCAGCTGGACAG
ATTCAAAAGATCAGATGTTGCAAAACACCTTGGCAAGAACAACGAATTTAGCAAACTAGTTGCAGAAGAATATCT
GAAGTTTTTTGATTTTACAGGAATGACGCTGGATCAGTCACTCAGGTATTTCTTTAAAGCATTCTCTCTTGTGGG
AGAAACTCAAGAACGAGAGAGAGTTTTAATACACTTCTCCAATAGATATTTTTATTGTAACCCAGATACCATTGC
TTCACAAGATGGAGTCCATTGCCTTACCTGTGCAATAATGCTTCTTAATACCGATCTACATGGCCACGTGAATAT
TGGAAAGAAGATGACCTGTCAGGAGTTCATTGCAAATCTGCAAGGGGTAAATGAGGGTGTTGATTTCTCCAAGGA
TCTGCTGAAAGCTCTGTACAACTCAATCAAGAATGAGAAGCTTGAATGGGCAGTAGATGATGAAGAGAAAAAAAA
GTCTCCCTCAGAAAGTACTGAGGAGAAAGCTAACGGAACACATCCAAAGACCATCAGTCGTATTGGAAGTACTAC
TAACCCATTTTTGGACATTCCTCATGATCCAAATGCTGCTGTGTACAAAAGTGGATTCTTGGCTCGGAAAATTCA
TGCAGATATGGATGGAAAGAAGACTCCAAGAGGAAAACGAGGATGGAAAACCTTTTATGCTGTACTGAAGGGAAC
AGTTCTTTACTTGCAAAAGGATGAATACAAGCCAGAAAAGGCCTTGTCTGAAGAGGACTTGAAAAACGCTGTGAG
TGTGCACCACGCATTGGCATCCAAGGCCACGGACTATGAGAAGAAACCAAACGTGTTTAAACTTAAAACTGCCGA
CTGGAGGGTCTTGCTTTTTCAAACTCAGAGCCCAGAGGAAATGCAAGGGTGGATAAACAAAATCAATTGTGTGGC
AGCTGTATTTTCTGCACCACCATTTCCAGCAGCAATCGGCTCTCAGAAGAAGTTTAGCCGCCCACTTCTGCCTGC
CACTACAACAAAACTGTCTCAGGAGGAGCAACTGAAGTCACATGAAAGTAAGCTGAAGCAGATCACCACCGAGCT
GGCCGAGCACCGCTCATATCCCCCCGACAAGAAGGTCAAAGCCAAGGACGTCGATGAGTACAAACTGAAAGACCA
CTATCTGGAGTTTGAGAAAACCCGCTATGAAATGTATGTCAGCATTCTCAAGGAAGGAGGCAAAGAGCTACTGAG
TAACGATGAAAGCGAGGCTGCAGGACTGAAGAAGTCGCACTCGAGTCCTTCGCTGAACCCGGATACTTCTCCAAT
CACTGCCAAAGTCAAGCGTAACGTGTCAGAGAGGAAGGATCACCGACCTGAAACACCAAGCATTAAGCAAAAAGT
TACT**TAG**AGTCCATCTGCGGCCAGGAAGTGCTGGTCATGGAGCAAAATAGGGTTTTTCAAGATCTTTCTGGTAAT
CCGTGAATATATTTAAAAAAAAAAAAGTCTGTGACAAAACGGTGCATTAGTAATTTTTTCTATTGTATATTTTTG
TTAGTTTCTGTACAGATTGTCTTTGCTCTTGATTTCTTTTGCTTTGATGATTTTTGCAACTTGATAGCTAATGCA
CCTTTTCTGTGAGGAGGAGGGGATCGTGATTTCAGAATGAATTATGTATCCCTTCTCTTTTGGTTTTCTCTTGTT
TGCAGTCTGCTCAGTTGTTTTATGTATTCTCATATCAACTGTTAAACTTTTTTTTAAGGTTAAAGAATTTAATCC
ATTGTGAAACACTTAACTGGACAAACTGTAGTTTTAGTAAATTCTAGCTGGAGTTAATATACGCCTTTATATGTG
AAATCTTGCCCAGTCACAGAGGTAGAATTGAGCACTCACAGATGCTCCAGTAAGAATCACAGTGCTGGGAATCTA
GTTGCTCCAATATGAGGCAGCTTCATGTGCAGCTTAGCACTTGTTGTTGAGATCGGACCCTGCTGGAAGCAGGGA
AAAGAAGCGTGAAGATCGTAGGATTGAGAACTTAGGGAAGCACATTAGCTTGCTTGAAGTGCTGATTCCATTTCA
GCCAAGCAAGGGAAAGAGGAAGTGGAGTCATTTTGCCTTTGAAGGCTGAGGAAAGATTGATACCCAGTTAATTTT
GTTTGCTAAAGGATGGGGGCAATAATCGGCCCTTGAGGAGCTGCAGCAGTAGGCATGTGCTCAGTCTGCAGGAAT
TGTTACCTCACTCCCACAGGGTCTAGACTAGAAATCCATCATCTCTATCGTTGATATCCTTCCATCCAGGAATAG
ATTTTTCTTACTCTACATATGTGTGTGTGCGTGCGTGTGTGTGCGTGTGTGGGCATGGGGTTGTGTCCTGGTTGT
GATATTGAGGTCTTCCTTCCTAACAAATTAATACTAAAATGAAACAGCTTTTCTTGTGTCCTTAAGACAAAATAA
GGAAGGAAAACGTAGCTGCAGTTGTCCACGATGGATATTGGTTCTTTAAAATATATCTGAAAGTAGTAGTCAGAA
TGAATTATGGTTGGAAAACTGAGGAATCTTCTGGTTGCAGGTGCAAAGTGACTTTGTTTATTCTTGTCTCAGTCT
CCTTGATAGCCACTTCACTCTGCTACTACTCAACTTTCTCCTAAAAATACTTCATCTATTTTCAGTCCTTTCTTT
CTGTCTACTCAAAATGGTTCTATTAACTTTGCAGTCATGAGCTTGTTCCAGTTACAGTCCCTTTGAAGTTCAGGG
TGATAAACAGAATATTCTTCTGTAGAGGAAGAGAAAGGAGTGAAAGTTTAGCCCACTGAGACCTAGAGCTTTGTG
ATTTCCTAACCTTGAAACTCTGTAATCCCTAAAGTTAAAATCTCCGCAAGTGGCACAACTTCAGAACTAATAGTA
TCACTTTGATTTTTCTTTTTCCTCCCTTAGAAAGTTTCTCTAGTTCTATAGTTTATTTGTTGAAGGTACTATGAC
CAAAGAATCAGCTGCTCTACAGGAATAGCATGGTTCCAGTGAATTAGAGAAAACCTGCTGTAAAGCCATGGTAGT
GTCTAAGTGGTATGTTATTATGATGTACTAGCATTTATTTACAGAATTATTTATTAACGTTTACTTCCTTCCCCT
CTGTAAATGTCCATGACTATTGCCCAGAGAAGGCTTACCCCTCTCTAGGGTTGCAGTTGCTTTCTTTGTAATAAG
TATTTTGCCACACCTGTAAAAAAAAAAAACCTCACTTTTAACTCTCTGCCTTGTTTGGGTAAAGGCAGTAACTAA
GTTTATGTTTCAGAACTGCAAAACAAACAGGATAGTTACCAATATGGCCCATGTGTCAGATTGATTTTTGTAGCC

FIGURE 699B

TCTCACTGAATCCAACATATCCACAAGCAAGTTATCTGTCTTTCTACCTGATAATCTAAATTATCAGGATATTTG
TTTTCTGCCTAAATGTTTATACTAAGCCGAGGGGAGAGAGGTACCTAGACCATGTCATCTACGAGCTTCAGTAAC
TAAAGAAAAAGGAACTTCCCTGAGTGGCTTGAATGTGTTTGCCCACAGTCTATATCTATGTATATAGAATGTCTG
TATGTATTTTACTTATTTAATATACATTGAATGGTACCTTGCTACAGTATTTCTGACATTTAGAGTAGTGTTGAA
ATACTCGGCTAGCATCAGCACCACTATAGCACTGTCCGTGTCATATGAGTCACTAATATTAACTCCAGGGACTTC
TGGATAGGCTAATAGATCATTGGATACGAAGGGCTCTTTTGAAGCTTCAGTATACCATGTTTGCATAGTTTATCT
TTAAAAACAACTTTAAAGGTTCTTTTGTGAGCCAGGATCTCAGACTGCCGTAGCATGATGCTGTCCATCTTTAGC
GCATGGGCTGAGAACACCTCTTCCCTGAGGCTTCTGAAGGTTGCTGTCTGTCATGAGTGCATGAAGGAGGCCAAG
AGTTTATGCTATGGGAGGAACCAGTCACTGATTTGCCTAGATTCTGAGAGTCTGGCCCATAGCCAACCACATTTT
CCTTTGGGATAATTTATTTCCTGTGGCATCTAGCCAGAAGAAATTGAGGATGTTTCCTTTCACAGCTGCTCCAAG
CCTGTTGCCCAATTCACGGTACAAGGGAGCACCCCTTCCCTTTCCTCTGAAGGTACGCCACCCACCTCCGTCGCC
CACCTCAGCGCCCAGGAGCCTTGGGACTTCCTTCCATATGATAAATCATTCTTCTTCACGTCAATACACTTCATA
TTAATTTCTAGTACAGAAAATCTTGACAGCTATCAGAATGCCTTGGTCATAGTGTTGTTGCAAAATTGACCATAC
AGGTGGCCCATGTATAAAATCTGAATTTTAGGGGTTTGTCCCCACCTCGCATGCTGGCTTTTACAGGGAGGTGTC
TGGGATTCCTCATTAGCAATCAAAACTTAATTACTGGGATGCAGAGTCCTTACTTTATCGCCAGCCCGTAGGCAT
TTCTGAAGTGCACTTTTTTTGAAACATCATTTTGCTAACTCTCAGCAGTGTCTAATTAAACTGAGCAATACTTTTG
TGAATTTTAATTAATCTCAGCAAAACCATGATGGGAGAGAGTCCTCTGATGGAAATGTAGTCCCTGGATTATGTG
TAACCTTTTTATTGCTCTTAGATGCAGAGGATAGAAAGCATTTTTTGGTGCAGTGGTCTTGTGGCAAACACAAGA
CCCTCTATGCGTCTCCAACTGTTATCCTAATCTAGAAAATGAGGACTGGCCCCTGGGCAAAAGTGACATGAGGAA
TTTACTCTGGAAGAGGAAAATCTGGGTGGCTTTCCAAGGCTAAGATAGGTTTGTATTTCACCCTGTGGCCAAGCT
ACAGAACTTCTGAGATTGTGGAAGAATTTTTGCAACCAGCAGGGAAAGAGGCCTCTTACTGCCTAAACACAAAGT
TACACTGAGCTTTTCTACTGTCCTTTGCCTATTGCTCCCTCTATCATGTAAAGATCTGGGAAGGATGAGAGGCAG
GGCCTGCTTGTCATGAGCTGCACTCTTTTCTTTTTAACTAATCATTGACAATTGGAAGAAAATTGACGTTAAAGA
AGTTTCTCCATTGTCTTACTAACAAAACCTTTTGGGTTTCATTAATTGTCCTTGAAATTGAGTTCCTTTGGCATT
TTTCCTTGCAGTCATCAGTTAAGCATGTTGCATCCTGAATTCACAGAAGTTTAGCTTTGCAGGTTTGAATCTCTG
TAATTTAACTCCCGTGGACTTGGTCGAGTTTTCAGCAGGTTGGGAGCCACCTCTCTTCATTTCAGCAGTGAGTCA
TCCCTTGACTTTTCAAATGACAGAATTTTTTCCAATTGTAAAATTAGCACTGTAAAACAAAGAACCAAAGTGGCA
TCCTAAGAGTTGTTAAACCTGAAGTCTAGTTTATGAGGAATTGTCCAAGTTGGAGTTTAAATAGTATCTGCTTTT
GTCTCAAAGCATCTAAGTTATTCTGACAGAAAATGGTAAGTCAGCTTTGCAGGCAGATGCGCCTCTGGGCCTCCT
ACCTTGCTCCACAGCTTTCTGGCCATCTTGTCTCCCAGGCCATGCCACTGCTCTGCCACATGTCAGCAAATTTCT
TTCCACCAGTCTTATAGCATCTTACATGATCAAATCATCACAGAATAACCCCGTGATAGATTATTGATAGCAATA
GAGAGGGGCGGCTTTGTCACTGATTTTTCTCTCAGATTCCTTTTCCATCTCTCATCCATAAAGGAAGGACTGAAA
TCCAAAGGCATTCTCCTTTTGTACCTACAGTATCCAGAACCCACGTGGGCAGCCTTCTGCTTATGACAATAATTG
GCCCATTGCATGCAGAGAGAATGTCTTCATAGAGAGAATGTCATTAAATACTTGAATCTGCATGACAGTTTGACT
TGAATGCAACAGCAGGAAAATTTTGCAAGTTACATAATTGTATATACAGTAGGTTTTCTTAAGTCTCTTCGGTTC
ATCCTTTGTAATTTGTGTGTGTATCTGTAGTATTGCAGGCTTTTGGAGACTATTCTTACAGGCAGTATGTCAGTC
ATCAAAGAAAATGCTGTCACCTGCCATTGTTGTATTTGTGGGTATTTATAGTTGTATGTATGTAAATGCATCAGT
GTGTAGATTGCATATCAGTGTATGGTACATGTACATCAAAATTATTTTTGTCCTTAATCAGTGTGATATGAAAAG
CAAGTACAACCTCATAGGACTGATTATATAATGAAGTTGTTGAGAGTATATATAGTGGTATTGTTTTATTAAACT
TAAACTCAAATAATATTTTGATTAAAATTTTTAATAAGACTTTATGCTAGAAAATTCTTTGAGCTTTGAATCACC
AGGGCAAAAATGACTTTCAACTAACCTTGTGAATCTTTTGCAGTGTACTGTGTGCAATACCAAGGGCATAGCTCC
CTGTAATTTGGGAAATACAGAAAGAAAAGAAAAAAAAAAAAAAAAA

FIGURE 700

MGYSSGVTNGLNDASDSIYTKGTPEIAFWGSNAGVKTTRLEAHSEMGSTEILEKETPENLSNGTSSNVEAAKRLA
KRLYQLDRFKRSDVAKHLGKNNEFSKLVAEEYLKFFDFTGMTLDQSLRYFFKAFSLVGETQERERVLIHFSNRYF
YCNPDTIASQDGVHCLTCAIMLLNTDLHGHVNIGKKMTCQEFIANLQGVNEGVDFSKDLLKALYNSIKNEKLEWA
VDDEEKKKSPSESTEEKANGTHPKTISRIGSTTNPFLDIPHDPNAAVYKSGFLARKIHADMDGKKTPRGKRGWKT
FYAVLKGTVLYLQKDEYKPEKALSEEDLKNAVSVHHALASKATDYEKKPNVFKLKTADWRVLLFQTQSPEEMQGW
INKINCVAAVFSAPPFPAAIGSQKKFSRPLLPATTTKLSQEEQLKSHESKLKQITTELAEHRSYPPDKKVKAKDV
DEYKLKDHYLEFEKTRYEMYVSILKEGGKELLSNDESEAAGLKKSHSSPSLNPDTSPITAKVKRNVSERKDHRPE
TPSIKQKVT

FIGURE 701

GTGGCCGCGCAGGAGGACGGAGCCCTAACCGCAACCCGCGCCGCGCCGCGCCGATTTGATTTGTATCCACTGTCA
CCAGCACTGCTCACTTAGGACTTTCTGGATCCAGACCCAGGCAGCGCACACTGGACTCTTGAGGAAGAAGGAGAC
TCTAATTTTGGATTCCTTGGTGGAGGAAAATAAAACACTCTGGTCTTGCCGCCAACGATGCAAGTGTGACTGCTG
GCGTCTTC**ATG**AGCTCCAGAGGTCACAGCACGCTACCAAGGACTCTCATGGCCCCTCGGATGATTTCCGAGGGAG
ACATAGGAGGCATTGCTCAAATCACCTCCTCTCTATTCCTGGGCAGAGGCAGTGTGGCCTCCAATCGGCACCTCC
TCCAGGCTCGTGGCATCACCTGCATTGTTAATGCTACCATTGAGATCCCTAATTTCAACTGGCCCCAATTTGAGT
ATGTTAAAGTGCCTCTGGCTGACATGCCGCATGCCCCCATTGGACTGTACTTTGACACCGTGGCTGACAAGATCC
ACAGTGTGAGCAGGAAGCACGGGGCCACCTTGGTGCACTGTGCTGCAGGGGTGAGCCGCTCAGCCACGCTGTGTA
TCGCGTACCTGATGAAATTCCACAACGTGTGCCTGCTGGAGGCATACAACTGGGTGAAAGCCCGGCGACCTGTCA
TCAGGCCCAACGTAGGCTTCTGGAGGCAACTGATAGACTACGAGCGCCAGCTCTTTGGGAAGTCGACAGTTAAAA
TGGTACAGACACCTTATGGCATAGTTCCCGACGTCTATGAGAAGGAGTCCCGACACCTGATGCCTTACTGGGGGA
TT**TAG**TGCCACTGAAGCCTGCGTCAGCAGCCCGAGCGGGGCCGGCATCTGCTCCCCGCCGTCTGCTCCCTCTCCA
CTCTCTTCTCAAATGGCTGACTTCTGGTTCTCCCTCAAGTGTTTTTTACACTGGGTGTTCAAATTTATTTTAAGA
GATAGGGAGGGAGGGGACATAAAGGGAATGCATACATTGCTAGTCACATTTTTAAAATTAACATTTTGGAATAGT
GTTTATGGAAATCTTTAGCTTTTAATCATTTTTACCAATTTGAACAGTTTAATAAACTGGTTCTGCTCTCTTCTG
AATCTCATGCCTTTGGCACCTTGGTAGGTGCAGGAGGAGCTCAGTGCAAAAATCACTTTGGGGCCTCATTAACCC
TTTAGAGACAAGCTTTGCCCCAGGCTGCGGACCAGACAGATGCTTAGGGAAGGTTGATACCAGCTTCAGTCTCTA
CTGGATTAGCCCTACTCTTTCCTTTCCCCTCCATTATTTAGTGACTCTGTAAGTAAGTTAAATACACCCTTATTA
TTTAGCTGTTAAGTAACTATAATGAAATCTGCTGCAAAATCTCTCTTGGAATCCATGTGCCCAGGATTATATTAG
CATTATTTTTAATAAATCTATATGCTTAAAAAAAAAAAAAAAAAA

FIGURE 702

MSSRGHSTLPRTLMAPRMISEGDIGGIAQITSSLFLGRGSVASNRHLLQARGITCIVNATIEIPNFNWPQFEYVK
VPLADMPHAPIGLYFDTVADKIHSVSRKHGATLVHCAAGVSRSATLCIAYLMKFHNVCLLEAYNWVKARRPVIRP
NVGFWRQLIDYERQLFGKSTVKMVQTPYGIVPDVYEKESRHLMPYWGI

FIGURE 703

CTGGTGACTCGCGGCGGCGGCGGCGGACGGCCCAGCCGGAGCGCGAGGGGCTCGGGGGGGCGCGGCGGTTCGGGT
CGCAGAGCCAGGGACCCCAGGACCCGGGAGGCGGCGCAGCCGGGGCCGCCGGAGGAGCGCGGGTGACCTGGCGGC
GGCGAG**ATG**CCGCTCGCCCAGCTCAAGGAGCCCTGGCCGCTCATGGAGCTAGTGCCGCTGGACCCGGAGAATGGA
CAGACCTCAGGGGAAGAAGCTGGACTTCAGCCGTCCAAGGATGAGGGCGTCCTCAAGGAGATCTCCATCACGCAC
CACGTCAAGGCTGGCTCTGAGAAGGCTGATCCATCCCATTTCGAGCTCCTCAAGGTTCTGGGCCAGGGATCCTTT
GGCAAAGTCTTCCTGGTGCGGAAAGTCACCCGGCCTGACAGTGGGCACCTGTATGCTATGAAGGTGCTGAAGAAG
GCAACGCTGAAAGTACGTGACCGCGTCCGGACCAAGATGGAGAGAGACATCCTGGCTGATGTAAATCACCCATTC
GTGGTGAAGCTGCACTATGCCTTCCAGACCGAGGGCAAGCTCTATCTCATTCTGGACTTCCTGCGTGGTGGGGAC
CTCTTCACCCGGCTCTCAAAAGAGGTGATGTTCACGGAGGAGGATGTGAAGTTTTACCTGGCCGAGCTGGCTCTG
GGCCTGGATCACCTGCACAGCCTGGGTATCATTTACAGAGACCTCAAGCCTGAGAACATCCTTCTGGATGAGGAG
GGCCACATCAAACTCACTGACTTTGGCCTGAGCAAAGAGGCCATTGACCACGAGAAGAAGGCCTATTCTTTCTGC
GGGACAGTGGAGTACATGGCCCCTGAGGTCGTCAACCGCCAGGGCCACTCCCATAGTGCGGACTGGTGGTCCTAT
GGGGTGTTGATGTTTGAGATGCTGACGGGCTCCCTGCCCTTCCAGGGGAAGGACCGGAAGGAGACCATGACACTG
ATTCTGAAGGCGAAGCTAGGCATGCCCCAGTTTCTGAGCACTGAAGCCCAGAGCCTCTTGCGGGCCCTGTTCAAG
CGGAATCCTGCCAACCGGCTCGGCTCCGGCCCTGATGGGGCAGAGGAAATCAAGCGGCATGTCTTCTACTCCACC
ATTGACTGGAATAAGCTATACCGTCGTGAGATCAAGCCACCCTTCAAGCCAGCAGTGGCTCAGCCTGATGACACC
TTCTACTTTGACACCGAGTTCACGTCCCGCACACCCAAGGATTCCCCAGGCATCCCCCCCAGCGCTGGGGCCCAT
CAGCTGTTCCGGGGCTTCAGCTTCGTGGCCACCGGCCTGATGGAAGACGACGGCAAGCCTCGTGCCCCGCAGGCA
CCCCTGCACTCGGTGGTACAGCAACTCCATGGGAAGAACCTGGTTTTTAGTGACGGCTACGTGGTAAAGGAGACA
ATTGGTGTGGGCTCCTACTCTGAGTGCAAGCGCTGTGTCCACAAGGCCACCAACATGGAGTATGCTGTCAAGGTC
ATTGATAAGAGCAAGCGGGATCCTTCAGAAGAGATTGAGATTCTTCTGCGGTATGGCCAGCACCCCAACATCATC
ACTCTGAAAGATGTGTATGATGATGGCAAACACGTGTACCTGGTGACAGAGCTGATGCGGGGTGGGGAGCTGCTG
GACAAGATCCTGCGGCAGAAGTTCTTCTCAGAGCGGGAGGCCAGCTTTGTCCTGCACACCATTGGCAAAACTGTG
GAGTATCTGCACTCACAGGGGGTTGTGCACAGGGACCTGAAGCCCAGCAACATCCTGTATGTGGACGAGTCCGGG
AATCCCGAGTGCCTGCGCATCTGTGACTTTGGTTTTGCCAAACAGCTGCGGGCTGAGAATGGGCTCCTCATGACA
CCTTGCTACACAGCCAACTTTGTGGCGCCTGAGGTGCTGAAGCGCCAGGGCTACGATGAAGGCTGCGACATCTGG
AGCCTGGGCATTCTGCTGTACACCATGCTGGCAGGATATACTCCATTTGCCAACGGTCCCAGTGACACACCAGAG
GAAATCCTAACCCGGATCGGCAGTGGGAAGTTTACCCTCAGTGGGGGAAATTGGAACACAGTTTCAGAGACAGCC
AAGGACCTGGTGTCCAAGATGCTACACGTGGATCCCCACCAGCGCCTCACAGCTAAGCAGGTTCTGCAGCATCCA
TGGGTCACCCAGAAAGACAAGCTTCCCCAAAGCCAGCTGTCCCACCAGGACCTACAGCTTGTGAAGGGAGCCATG
GCTGCCACGTACTCCGCACTCAACAGCTCCAAGCCCACCCCCCAGCTGAAGCCCATCGAGTCATCCATCCTGGCC
CAGCGGCGAGTGAGGAAGTTGCCATCCACCACCCTG**TGA**GGCACCAGGGCATTCGGGCCACAGGGCGGTGCTAGC
TTGACAGAGTCAGCATGCTTCCCAGAGGGAGCAGGCCGGAACCACAGGGCCAGAGGGAGCTGGAACCCGAGGGGC
CGGGGAAGCTGCCAGCCCAGAACACCCCTAATGAGGGTGTGAGAAGTGCCTTCTCCTTCCCCAGGATGGACTCTT
CTCGGCTCAGGCTCTGCTGGTGGAAAGCGATTCACTGTATAAACTTTTTTTTATGAAAAAAATGGCATCAACCAC
CATGGATTTTTACAAGATCCATTTGCCTTTCTGGGAGCAGAAACAGCCATTGCGGCCCCAGGAGGGGAACTGAGT
CACGCTGGGGCTCTCTGAGACTCTTTAGAGCAGCTTTGGGATCCCACCCTGGGGACCCCCATGATTGGCCACCTG
TAGCCATCTGCACACACCTCCGAGACAGTCCAGTGTCACCTCTCTCAGAGCATCTGGCTGTTTAGCAGAACTCAT
TCTATCCCCAATCAGCTCCTTTTCCGTTCTGTTCTGCTGGGAGTTCTAGAACCACTTCCTGCTACAGGAGGGGTC
TCATGTCCTGCTGGCTTCCAGCTTCAGGCACCAGCATCCACCTTGGCTCTGCCAGTGGATCCCCTGCGGTCAGGC
TGGGCAGCCCCAGAGAGAGGATGTGGAAAGCACTTTTTGGCTGACTTCATCTGGGGTTGGCAACAGGACAGAGTT
CACAGGAGGCCAGTGGGCGGGCCATGAGGGACAGGGTCTTTTTTCATTTCTTCCTCAGCTGGTTACTCAGGGTTC
ATCTGTCCATGGCCTTTCTAATAAACTGTTGAGTTGAAAAAAAAAAAAAAAAAAAA

FIGURE 704

MPLAQLKEPWPLMELVPLDPENGQTSGEEAGLQPSKDEGVLKEISITHHVKAGSEKADPSHFELLKVLGQGSFGK
VFLVRKVTRPDSGHLYAMKVLKKATLKVRDRVRTKMERDILADVNHPFVVKLHYAFQTEGKLYLILDFLRGGDLF
TRLSKEVMFTEEDVKFYLAELALGLDHLHSLGIIYRDLKPENILLDEEGHIKLTDFGLSKEAIDHEKKAYSFCGT
VEYMAPEVVNRQGHSHSADWWSYGVLMFEMLTGSLPFQGKDRKETMTLILKAKLGMPQFLSTEAQSLLRALFKRN
PANRLGSGPDGAEEIKRHVFYSTIDWNKLYRREIKPPFKPAVAQPDDTFYFDTEFTSRTPKDSPGIPPSAGAHQL
FRGFSFVATGLMEDDGKPRAPQAPLHSVVQQLHGKNLVFSDGYVVKETIGVGSYSECKRCVHKATNMEYAVKVID
KSKRDPSEEIEILLRYGQHPNIITLKDVYDDGKHVYLVTELMRGGELLDKILRQKFFSEREASFVLHTIGKTVEY
LHSQGVVHRDLKPSNILYVDESGNPECLRICDFGFAKQLRAENGLLMTPCYTANFVAPEVLKRQGYDEGCDIWSL
GILLYTMLAGYTPFANGPSDTPEEILTRIGSGKFTLSGGNWNTVSETAKDLVSKMLHVDPHQRLTAKQVLQHPWV
TQKDKLPQSQLSHQDLQLVKGAMAATYSALNSSKPTPQLKPIESSILAQRRVRKLPSTTL

FIGURE 705

GCGTGGAGGTCGACGACTCCGTCGCAGACTACGGACCTGTCTGGGTCTCAGCCGCCAAAGACCCCGTCCGGTAGG
TGAGTGGCTCACTTTGAGGGCAAGCCTTCTCGGATCGAGGCTTCTTCATGGCCGCTCAGATCGTGAGCGGCCGGG
GCTGCTCTCTTTGCGGAGGATGGCGTCTAATGAGCGCAGTTGATTCGAGGAAGTACTAGCCGGACATC**ATG**AGTG
GCTGTCGGGTATTCATCGGGAGACTAAATCCAGCGGCCAGGGAGAAGGACGTGGAAAGATTCTTCAAGGGATATG
GACGGATAAGAGATATTGATCTGAAAAGAGGCTTTGGTTTTGTGGAATTTGAGGATCCAAGGGATGCAGATGATG
CTGTGTATGAGCTTGATGGAAAAGAACTCTGTAGTGAAAGGGTTACTATTGAACATGCTAGGGCTCGGTCACGAG
GTGGAAGAGGTAGAGGACGATACTCTGACCGTTTTAGTAGTCGCAGACCTCGAAATGATAGACGGTATGTGAAGG
GTGGATGGCTGCAT**TGA**ACAATTATTGTAGGGGTAGCATTTAAGATTCAGGAGTCATTAGCAGTGATGATTTTGG
GACCTGCCGTATAATCTGTTCTTCTATTCCCACGTTAGCCAATTGTTCTTGATGAATCTATATGAGTCATAGAAC
ACAAATCTATTGACGGAAGTCATTAGAATGGCTTGTGATATCTGATGGCTTGAACTTGCCCACAGTTGAACACAA
GTGCTGTCATTGCATTTCTTCCATTGTGAATACGAATTTTCTTCCTCAGAAATGCTCCACCTGTAAGAACAGAAA
ATCGTCTTATAGTTGAGAATTTATCCTCAAGAGTCAGCTGGCAGGATCTCAAAGATTTCATGAGACAAGCTGGGG
AAGTAACGTTTGCGGATGCACACCGACCTAAATTAAATGAAGGGGTGGTTGAGTTTGCCTCTTATGGTGACTTAA
AGAATGCTATTGAAAAACTTTCTGGAAAGGAAATAAATGGGAGAAAAATAAAATTAATTGAAGGCAGCAAAAGGC
ACAGGTCAAGAAGCAGGTCTCGATCCCGGACCAGAAGTTCCTCTAGGTCTCGTAGCCGATCCCGTTCCCGTAGTC
GCAAATCTTACAGCCGGTCAAGAAGCAGGAGCAGGAGCCGGAGCCGGAGCAAGTCCCGTTCTGTTAGTAGGTCTC
CCGTGCCTGAGAAGAGCCAGAAACGTGGTTCTTCAAGTAGATCTAAGTCTCCAGCATCTGTGGATCGCCAGAGGT
CCCGGTCCCGATCAAGGTCCAGATCAGTTGACAGTGGCAATTAAACTGTAAATAACTTGCCCTGGGGGCCTTTTT
TTTTAAAAAACAAAAACCACAAAAATTCCCAAACCATACTTGCTAAAAATTCTGGTAAGTATGTGCTTTTCTGTG
GGGGTGGGATTTGGAAGGGGGGTTGGGTTGGGCTGGATATCTTTGTAGATGTGGACCACCAAGGGGTTGTTGAAA
ACTAATTGTATTAAATGTCTTTTGATAAGCCTTCTGCTCACATTTTTGTGAATGTCTGAAGTATATAGTTTGTGT
ATATTGACAGAGCTCTTTTATAACTAAAGCAAATTTAATTTTTTTGTACTAGAAAAAAATTTGAACATTTTAGTT
CTTGGTTATAAAAATGTTAATTCAGAATTAGTTTAATGCCTTAATTAAACTAATTAATAGCTTTGGACACTTAAA
AGAGCTCTAAATTTGCTTGTACATAAAGGCTTAATTTGTTTTCCTTGTTAGGGTCAAGGGTGTCCTCCACTCTTT
AACAGCTGCTGGACAGACACATTAGAGCAGCTGTTTGTTATTGATAATAAAATATTATAAAACTA

FIGURE 706

MSGCRVFIGRLNPAAREKDVERFFKGYGRIRDIDLKRGFGFVEFEDPRDADDAVYELDGKELCSERVTIEHARAR
SRGGRGRGRYSDRFSSRRPRNDRRYVKGGWLH

800/2825

FIGURE 707

CGCAGCGGAGGTGAAGGACGTCCTTCCCCAGGAGCCGACTGGCCAATCACAGGCAGGAAG**ATG**AAGGTTCTGTGG
GCTGCGTTGCTGGTCACATTCCTGGCAGGATGCCAGGCCAAGGTGGAGCAAGCGGTGGAGACAGAGCCGGAGCCC
GAGCTGCGCCAGCAGACCGAGTGGCAGAGCGGCCAGCGCTGGGAACTGGCACTGGGTCGCTTTTGGGATTACCTG
CGCTGGGTGCAGACACTGTCTGAGCAGGTGCAGGAGGAGCTGCTCAGCTCCCAGGTCACCCAGGAACTGAGGGCG
CTGATGGACGAGACCATGAAGGAGTTGAAGGCCTACAAATCGGAACTGGAGGAACAACTGACCCCGGTGGCGGAG
GAGACGCGGGCACGGCTGTCCAAGGAGCTGCAGGCGGCGCAGGCCCGGCTGGGCGCGGACATGGAGGACGTGTGC
GGCCGCCTGGTGCAGTACCGCGGCGAGGTGCAGGCCATGCTCGGCCAGAGCACCGAGGAGCTGCGGGTGCGCCTC
GCCTCCCACCTGCGCAAGCTGCGTAAGCGGCTCCTCCGCGATGCCGATGACCTGCAGAAGCGCCTGGCAGTGTAC
CAGGCCGGGGCCCGCGAGGGCGCCGAGCGCGGCCTCAGCGCCATCCGCGAGCGCCTGGGGCCCCTGGTGGAACAG
GGCCGCGTGCGGGCCGCCACTGTGGGCTCCCTGGCCGGCCAGCCGCTACAGGAGCGGGCCCAGGCCTGGGGCGAG
CGGCTGCGCGCGCGGATGGAGGAGATGGGCAGCCGGACCCGCGACCGCCTGGACGAGGTGAAGGAGCAGGTGGCG
GAGGTGCGCGCCAAGCTGGAGGAGCAGGCCCAGCAGATACGCCTGCAGGCCGAGGCCTTCCAGGCCCGCCTCAAG
AGCTGGTTCGAGCCCCTGGTGGAAGACATGCAGCGCCAGTGGGCCGGGCTGGTGGAGAAGGTGCAGGCTGCCGTG
GGCACCAGCGCCGCCCCTGTGCCCAGCGACAATCAC**TGA**ACGCCGAAGCCTGCAGCCATGCGACCCCACGCCACC
CCGTGCCTCCTGCCTCCGCGCAGCCTGCAGCGGGAGACCCTGTCCCCGCCCCAGCCGTCCTCCTGGGGTGGACCC
TAGTTTAATAAAGATTCACCAAGTTTCACGC

FIGURE 708

MKVLWAALLVTFLAGCQAKVEQAVETEPEPELRQQTEWQSGQRWELALGRFWDYLRWVQTLSEQVQEELLSSQVT
QELRALMDETMKELKAYKSELEEQLTPVAEETRARLSKELQAAQARLGADMEDVCGRLVQYRGEVQAMLGQSTEE
LRVRLASHLRKLRKRLLRDADDLQKRLAVYQAGAREGAERGLSAIRERLGPLVEQGRVRAATVGSLAGQPLQERA
QAWGERLRARMEEMGSRTRDRLDEVKEQVAEVRAKLEEQAQQIRLQAEAFQARLKSWFEPLVEDMQRQWAGLVEK
VQAAVGTSAAPVPSDNH

FIGURE 709A

ATGGCTCACCTAAAGCGACTAGTAAAATTACACATTAAAAGACATTACCATAAAAAGTTCTGGAAGCTTGGTGCA
GTAATTTTTTTCTTTATAATAGTTTTGGTTTTAATGCAAAGAGAAGTAAGTGTTCAATATTCCAAAGAGGAATCA
AGGATGGAAAGGAACATGAAAAACAAAAACAAGATGTTGGATTTAATGCTAGAAGCTGTAAACAATATTAAGGAT
GCCATGCCAAAAATGCAAATAGGAGCACCTGTCAGGCAAAACATTGATGCTGGTGAGAGACCTTGTTTGCAAGGA
TATTATACAGCAGCAGAATTGAAGCCTGTCCTTGACCGTCCACCTCAGGATTCAAATGCACCTGGTGCTTCTGGT
AAAGCATTCAAGACAACCAATTTAAGTGTTGAAGAGCAAAAGGAAAAGGAACGTGGGGAAGCTAAACACTGCTTT
AATGCTTTCGCAAGTGACAGGATTTCTTTGCACCGAGATCTTGGACCAGACACTCGACCTCCTGAATGTATTGAA
CAAAAATTTAAGCGCTGCCCTCCCCTGCCCACCACCAGTGTCATAATAGTTTTTCATAATGAAGCGTGGTCCACG
TTGCTTAGAACTGTCCACAGTGTGCTCTATTCTTCACCTGCAATACTGCTGAAGGAAATCATTTTGGTGGATGAT
GCTAGTGTAGATGAGTACTTACATGATAAACTAGATGAATATGTAAAACAATTTTCTATAGTAAAAATAGTCAGA
CAAAGAGAAAGAAAAGGTCTGATCACTGCTCGGTTGCTAGGAGCAACAGTCGCAACAGCTGAAACGCTCACATTT
TTAGATGCTCACTGTGAGTGTTTCTATGGTTGGCTAGAACCTCTGTTGGCCAGAATAGCTGAGAACTACACGGCT
GTCGTAAGTCCAGATATTGCATCCATAGATCTGAACACGTTTGAATTCAACAAACCTTCTCCTTATGGAAGTAAC
CATAACCGTGGAAATTTTGACTGGAGTCTTTCATTTGGCTGGGAGTCGCTTCCTGATCATGAGAAGCAAAGAAGG
AAAGATGAAACCTACCCAATTAAAACACCCACTTTTGCAGGAGGACTTTTTTCCATATCAAAAGAATATTTTGAG
TATATTGGAAGCTATGATGAAGAAATGGAAATCTGGGGAGGTGAAAATATAGAAATGTCTTTCAGAGTATGGCAA
TGTGGTGGGCAGTTGGAGATTATGCCTTGCTCTGTTGTTGGACATGTTTTTCGCAGCAAAAGCCCTCATAGCTTT
CCAAAAGGCACTCAGGTGATTGCTAGAAACCAAGTTCGCCTTGCAGAAGTCTGGATGGATGAATACAAGGAAATA
TTTTATAGGAGAAATACAGATGCAGCAAAAATTGTTAAACAAAAAGCATTTGGTGATCTTTCAAAAAGATTTGAA
ATAAAACACCGTCTTCGGTGTAAAAATTTTACATGGTATCTGAACAACATTTATCCAGAGGTGTATGTGCCAGAC
CTTAATCCTGTTATATCTGGATACATTAAAAGCGTTGGTCAGCCTCTATGTCTGGATGTTGGAGAAAACAATCAA
GGAGGCAAACCATTAATTATGTATACATGTCATGGACTTGGGGGAAACCAGTACTTTGAATACTCTGCTCAACAT
GAAATTCGGCACAACATCCAGAAGGAATTATGTCTTCATGCTGCTCAAGGTCTCGTTCAGCTGAAGGCATGTACC
TACAAAGGTCACAAGACAGTTGTCACTGGAGAGCAGATATGGGAGATCCAGAAGGATCAACTTCTATACAATCCA
TTCTTAAAAATGTGCCTTTCAGCAAATGGAGAGCATCCAAGTTTAGTGTCATGCAACCCATCAGATCCACTCCAA
AAATGGATACTTAGCCAAAATGAT**TAA**GTGTTCCTTAAAATTAAGTTGAAAAAGGAAATATTCTTTCTCATAAAA
CTGTGACTAGGCATACACTGTAGTTTTTGAAAATTATGCAAAAGCAGCTAAATGTAACTTATTCCAAGTGCATTT
TTCTTATTTATATCTTTATGTAGCACTACTACAGAAATTCTGCAAGTTTCTGTTTCAAAGCACAATAACTAGTAA
TACCAAAGACTATTTCAAAATGTCCAGATGTAGGGGAAGAGATGTTTACAGTATGATGAAAATAATTTTCCAAGT
AAAGTGATGTTTGTGTGTTTTGTACACTTAGGGATATATATATATAGCTACATTCACACACTCACAATTTAAAAT
ATTTCCCCTAGTTTTTTGGGGGGATAGGAAGAAAGATTTGTTACTGTATTTTTTTAACTACATAAAAATAGATCA
ATAAATGTCAGCATTGGCCTCTGTGTACAAACCAAGAGCTTTTACAGATCCAGAATTTATTAGTTTAAAATGCAG
GTGAACTTTTTTTTTGCGTTTGGTTTACTTGTCTGTCAAATGTTTCCTTAAACATGAAACTGAATAAGGAGAAGAG
TATTTTTAACACTTAAATTTCTTGGCAAATTTTAAAACATTTTTTAGTCTGTAATACACTCCACTTGAAGCACTT
AAGTCTTCCTTAAATGACTTTTCTTAAGTAATGATACTGTGTGTTTTCCCAAAGCACTTTTAAAAAAATTTTTAT
AAATTACTATCTGTTGAAAAGGTGTCCTTTTCCTTTCTTCTAGTATTTTTTTTCTTACCAAAATTCACTAATCTT
GAATGTTTGTGATATTAAATTTCAAATGCAGAATACTTGACTCATTTAAAGCTAAATTTTGTTACTGATTCAATT
ATAATTGTAATGGATTTTTGACTTTGTAATGGATTCTTTTCATCAAAAAGCCTTATTATTTTTTATCTATGTGGA
AAACACAATAAAAAATCCTCAACACTATTGTAATCATTTGGTTAAGTGCTTATTCCTCTTTTGGGTAAAATCTGT
AATTGATAATAGGTGGGGGAAAATGAATTTTGTATGCTGAATTTCTAAGCGCCTATTGTTTGTAAAACCATCAGA
TATTTCTTATGGCACAAAAAATGAGGAATAGCAAAATTCCTGTGTTCAATATTTAGAAAATTTTGTATTAATTTC
TGATAAAGTTCCTTAAGCATCTGATAGAATGATGTTTTAAAAAAATTTGACGCTTGCTTAGGAGATTTACCACTT
TTTTTTTTTGTTTTTCGTCATTTTATATTTAGATCTCCTGTATTCTTGTTCCCGAAGTAAAATACGATCGGTTTC
ATATTTTAAATCTGGCAGAGCCTCAGCTGTACGAAAAAGAGCATATACTGGTTATTGACCCTATCTTCTCATTGT
TTGTTTGTAAGTTTGAATTTGTATTAAAAAGCCTGCATTCTGAGCTGGACATGGTGGCTCAGCTTCTAATCCCAG
CACTTTGGTAGGCAAAGGTGGGAGGATCATTTGAGCTCAGGAGTTCCAGACCAGCCTGGGCAACATAGCAAAATC
TCATCTCTACAAAAAGTAAAAATTAAAAAATGAAATTAAAAATAAAATTACCTAGGTGTGGTGGCACGCATCTGT
AGTTCCAGCTATACAGGAAGGTGAGGCAGAAGCATTGCTTGAGCTTGGGAGATCGAGGCTACAGTGAGCTATGAT

FIGURE 709B

TACACCACTGCACTTCAGTCTGTGTGACTGAGCAAGACTCTTTCAAAAAAAAAAAAAAAGCCTACATTCTCCAGTT
GATTATTTCCAACTAATGTGTATTATGTGCCTAATTTTCTATCAGAAGTTGTATTAAGCCCGTTTTCACACTGCT
GTTAAAGACATACCTGAGACTGGGTAATTTATAAAGAAAAATAGGTTCAATGGACCCACAGGTCCGCGTGGCTGG
GGAAGCTTCACAATCATGGCGGAAGGTGAAAGCATGTCTTACGTGGAAG

FIGURE 710

MAHLKRLVKLHIKRHYHKKFWKLGAVIFFFIIVLVLMQREVSVQYSKEESRMERNMKNKNKMLDLMLEAVNNIKD
AMPKMQIGAPVRQNIDAGERPCLQGYYTAAELKPVLDRPPQDSNAPGASGKAFKTTNLSVEEQKEKERGEAKHCF
NAFASDRISLHRDLGPDTRPPECIEQKFKRCPPLPTTSVIIVFHNEAWSTLLRTVHSVLYSSPAILLKEIILVDD
ASVDEYLHDKLDEYVKQFSIVKIVRQRERKGLITARLLGATVATAETLTFLDAHCECFYGWLEPLLARIAENYTA
VVSPDIASIDLNTFEFNKPSPYGSNHNRGNFDWSLSFGWESLPDHEKQRRKDETYPIKTPTFAGGLFSISKEYFE
YIGSYDEEMEIWGGENIEMSFRVWQCGGQLEIMPCSVVGHVFRSKSPHSFPKGTQVIARNQVRLAEVWMDEYKEI
FYRRNTDAAKIVKQKAFGDLSKRFEIKHRLRCKNFTWYLNNIYPEVYVPDLNPVISGYIKSVGQPLCLDVGENNQ
GGKPLIMYTCHGLGGNQYFEYSAQHEIRHNIQKELCLHAAQGLVQLKACTYKGHKTVVTGEQIWEIQKDQLLYNP
FLKMCLSANGEHPSLVSCNPSDPLQKWILSQND

FIGURE 711

CTCGCGCAAGCGGCGTGCGGTCCCGCGGCGCTGCAGTTGTGTCCAGCCGGTCACGGGGCGGCT**ATG**GCGGCCACG
TTCTTCGGAGAGGTGGTGAAGGCGCCGTGCCGAGCTGGGACTGAGGACGAAGAGGAGGAGGAGGAGGGGCGGAGG
GAGACGCCCGAGGACAGGGAGGTGCGTCTGCAGCTGGCGCGGAAGAGGGAAGTGCGGCTCCTTCGAAGACAAACA
AAAACATCTTTGGAAGTTTCTTTGCTAGAAAAATATCCGTGCTCCAAGTTTATAATTGCTATAGGAAATAATGCA
GTAGCATTTCTGTCATCATTTGTTATGAATTCAGGAGTCTGGGAGGAAGTTGGTTGTGCCAAACTCTGGAATGAA
TGGTGTAGAACAACAGACACTACACATCTGTCCTCCACAGAGGCTTTTTGTGTGTTTTATCATCTAAAATCCAAT
CCCTCGGTTTTTCTCTGTCAGTGCAGTTGCTATGTTGCAGAAGATCAACAGTATCAGTGGCTGGAAAAGGTTTTT
GGCTCTTGTCCAAGGAAGAACATGCAGATAACTATTCTCACATGTCGACATGTTACCGATTATAAAACCTCAGAA
TCCACCGGCAGCCTTCCTTCTCCTTTCCTGAGAGCCCTAAAAACACAGAATTTCAAAGACTCGGCGTGTTGTCCA
TTGCTAGAACAACCGAATATAGTACACGACCTTCCTGCAGCAGTTCTAAGCTACTGTCAAGTATGGAAAATCCCA
GCAATTCTGTACTTGTGTTATACTGATGTGATGAAATTAGACCTAATCACAGTGGAAGCTTTTAAGCCTATACTT
TCTACCAGAAGCTTGAAGGGTTTGGTTAAGAATATTCCCCAAAGCACTGAGATACTAAAGAAATTGATGACAACA
AATGAGATTCAGAGTAACATTTATACA**TGA**TCTTAAACATTGTTTTGTAGTGTATATTACTTGTCCATTCCTTTA
AGGGGAGCAGCCTGCACTCTTTTGTAGATTACTTTTGGGGGGATATATTTTGAGAATGATGAAACGGAATAAAATT
GTAAAAAACTAAAAAAAAAAAAAAAAAAA

FIGURE 712

MAATFFGEVVKAPCRAGTEDEEEEEEGRRETPEDREVRLQLARKREVRLLRRQTKTSLEVSLLEKYPCSKFIIAI
GNNAVAFLSSFVMNSGVWEEVGCAKLWNEWCRTTDTTHLSSTEAFCVFYHLKSNPSVFLCQCSCYVAEDQQYQWL
EKVFGSCPRKNMQITILTCRHVTDYKTSESTGSLPSPFLRALKTQNFKDSACCPLLEQPNIVHDLPAAVLSYCQV
WKIPAILYLCYTDVMKLDLITVEAFKPILSTRSLKGLVKNIPQSTEILKKLMTTNEIQSNIYT

FIGURE 713

ACTCAGTGTTCGCGGGAGCCGCACCTACACCAGCCAACCCAGATCCCGAGGTCCGACAGCGCCCGGCCCAGATCC
CCACGCCTGCCAGGAGCAAGCCGAGAGCCAGCCGGCCGGCGCACTCCGACTCCGAGCAGTCTCTGTCCTTCGACC
CGAGCCCCGCGCCCTTTCCGGGACCCCTGCCCCGCGGGCAGCGCTGCCAACCTGCCGGCC**ATG**GAGACCCCGTCC
CAGCGGCGCGCCACCCGCAGCGGGGCGCAGGCCAGCTCCACTCCGCTGTCGCCCACCCGCATCACCCGGCTGCAG
GAGAAGGAGGACCTGCAGGAGCTCAATGATCGCTTGGCGGTCTACATCGACCGTGTGCGCTCGCTGGAAACGGAG
AACGCAGGGCTGCGCCTTCGCATCACCGAGTCTGAAGAGGTGGTCAGCCGCGAGGTGTCCGGCATCAAGGCCGCC
TACGAGGCCGAGCTCGGGGATGCCCGCAAGACCCTTGACTCAGTAGCCAAGGAGCGCGCCCGCCTGCAGCTGGAG
CTGAGCAAAGTGCGTGAGGAGTTTAAGGAGCTGAAAGCGCGCAATACCAAGAAGGAGGGTGACCTGATAGCTGCT
CAGGCTCGGCTGAAGGACCTGGAGGCTCTGCTGAACTCCAAGGAGGCCGCACTGAGCACTGCTCTCAGTGAGAAG
CGCACGCTGGAGGGCGAGCTGCATGATCTGCGGGGCCAGGTGGCCAAGCTTGAGGCAGCCCTAGGTGAGGCCAAG
AAGCAACTTCAGGATGAGATGCTGCGGCGGGTGGATGCTGAGAACAGGCTGCAGACCATGAAGGAGGAACTGGAC
TTCCAGAAGAACATCTACAGTGAGGAGCTGCGTGAGACCAAGCGCCGTCATGAGACCCGACTGGTGGAGATTGAC
AATGGGAAGCAGCGTGAGTTTGAGAGCCGGCTGGCGGATGCGCTGCAGGAACTGCGGGCCCAGCATGAGGACCAG
GTGGAGCAGTATAAGAAGGAGCTGGAGAAGACTTATTCTGCCAAGCTGGACAATGCCAGGCAGTCTGCTGAGAGG
AACAGCAACCTGGTGGGGGCTGCCCACGAGGAGCTGCAGCAGTCGCGCATCCGCATCGACAGCCTCTCTGCCCAG
CTCAGCCAGCTCCAGAAGCAGCTGGCAGCCAAGGAGGCGAAGCTTCGAGACCTGGAGGACTCACTGGCCCGTGAG
CGGGACACCAGCCGGCGGCTGCTGGCGGAAAAGGAGCGGGAGATGGCCGAGATGCGGGCAAGGATGCAGCAGCAG
CTGGACGAGTACCAGGAGCTTCTGGACATCAAGCTGGCCCTGGACATGGAGATCCACGCCTACCGCAAGCTCTTG
GAGGGCGAGGAGGAGAGGCTACGCCTGTCCCCCAGCCCTACCTCGCAGCGCAGCCGTGGCCGTGCTTCCTCTCAC
TCATCCCAGACACAGGGTGGGGGCAGCGTCACCAAAAAGCGCAAACTGGAGTCCACTGAGAGCCGCAGCAGCTTC
TCACAGCACGCACGCACTAGCGGGCGCGTGGCCGTGGAGGAGGTGGATGAGGAGGGCAAGTTTGTCCGGCTGCGC
AACAAGTCCAATGAGGACCAGTCCATGGGCAATTGGCAGATCAAGCGCCAGAATGGAGATGATCCCTTGCTGACT
TACCGGTTCCCACCAAAGTTCACCCTGAAGGCTGGGCAGGTGGTGACGATCTGGGCTGCAGGAGCTGGGGCCACC
CACAGCCCCCCTACCGACCTGGTGTGGAAGGCACAGAACACCTGGGGCTGCGGGAACAGCCTGCGTACGGCTCTC
ATCAACTCCACTGGGGAAGAAGTGGCCATGCGCAAGCTGGTGCGCTCAGTGACTGTGGTTGAGGACGACGAGGAT
GAGGATGGAGATGACCTGCTCCATCACCACCATGTGAGTGGTAGCCGCCGC**TGA**GGCCGAGCCTGCACTGGGGCC
ACCCAGCCAGGCCTGGGGGCAGCCTCTCCCCAGCCTCCCCGTGCCAAAAATCTTTTCATTAAAGAATGTTTGGAA
CTTT

FIGURE 714

METPSQRRATRSGAQASSTPLSPTRITRLQEKEDLQELNDRLAVYIDRVRSLETENAGLRLRITESEEVVSREVS
GIKAAYEAELGDARKTLDSVAKERARLQLELSKVREEFKELKARNTKKEGDLIAAQARLKDLEALLNSKEAALST
ALSEKRTLEGELHDLRGQVAKLEAALGEAKKQLQDEMLRRVDAENRLQTMKEELDFQKNIYSEELRETKRRHETR
LVEIDNGKQREFESRLADALQELRAQHEDQVEQYKKELEKTYSAKLDNARQSAERNSNLVGAAHEELQQSRIRID
SLSAQLSQLQKQLAAKEAKLRDLEDSLARERDTSRRLLAEKEREMAEMRARMQQQLDEYQELLDIKLALDMEIHA
YRKLLEGEEERLRLSPSPTSQRSRGRASSHSSQTQGGGSVTKKRKLESTESRSSFSQHARTSGRVAVEEVDEEGK
FVRLRNKSNEDQSMGNWQIKRQNGDDPLLTYRFPPKFTLKAGQVVTIWAAGAGATHSPPTDLVWKAQNTWGCGNS
LRTALINSTGEEVAMRKLVRSVTVVEDDEDEDGDDLLHHHHVSGSRR

FIGURE 715

CCAAGCCCATGAGGGCCGCGCGCCCGGCCGCCGGTGCTGACGAGACGGAGCTCCTGGCCCCCGAGGAGGAGCAGA
GGATCA**ATG**CGGTTCAAGAATCGATTCCAGCGGTTCATGAACCATCGAGCTCCAGCCAATGGCCGCTACAAGCCA
ACTTGCTATGAACATGCTGCTAACTGTTACACACACGCATTCCTCATTGTTCCGGCCATCGTGGGCAGTGCCCTC
CTCCATCGGCTGTCTGATGACTGCTGGGAAAAGATAACAGCATGGATTTATGGAATGGGACTCTGTGCCCTCTTC
ATCGCTTCTACAGTATTTCACATTGTATCATGGAAAAAGAGCCACTTAAGGACAGCGGAGCATTGTTTTCACATG
TGTGATAGAATGGTTATCTATTTCTTCATTGCTGCTTCTTATGCTCCATGGTTAAATCTTCGTGAACTTGGACCC
CTGGCATCTCATATGCGTTGGTTTATCTGGCTCATGGCAGCTGGAGGAACCATTTATGTATTTCTCTACCATGAA
AAATATAAGGTGGTTGAACTCTTTTTCTATCTCACAATGGGATTCTCTCCAGCCTTGGTGGTGACATCAATGAAC
AACACCGATGGACTTCAGGAACTTGCCTGTGGGGGCTTAATTTATTGCTTGGGAGTTGTGTTCTTCAAGAGTGAT
GGCATCATTCCATTTGCCCACGCCATCTGGCACCTGTTTGTGGCCACGGCAGCTGCAGTGCATTACTACGCCATT
TGGAAATACCTTTACCGAAGTCCTACGGACTTTATGCGGCATTTA**TGA**CCAATCTGTACTAATTCTCCAAACCAG
TATTATTTCAATTATGGCACTTGGGAGTGGGGTGAGAGCTAAACATTGCACAGGGCAAAGAAAAAAAATAACTGC
ACTGACTTTATATCTTTTGAATATAATTACTGTGAAAGTATAAAGGCTGTGTTCTGGAATTTTCTGCCTCACAGC
AAATAAATAAGGTAGTGAATTAATTATTCATTCCATTCCACTATCATGAAGGACTCTGAATAGACTTGGCCAACT
GATGTTTACAAACCAGACTTTTATATTTTAATTTTACAGATTTTACTACATGATTTTTCTAAATTACTATGTCAG
GTTGTAAAAGTCAGTGCAATAACAAACCTTCCTTTTTAAGAAGAAAATTGTTTCTATTACTTTCCCATTCACTAG
GTAAAGAATCATGGACAGAACTTACACTACTTTTTACCATGTTTCATCTTGGCATAACATGGTTCTTTTTTAAAT
AGAAACTTTAGTTTTTTGTAAATTTTTAAAAAAATATTTCATTGATATGCATCTCTGCAGGTCCTCATTCATGTT
GTAAATTTTTGGAGCAAGCAGTCAACATTCCACAAACGAACAAACATTATACCTCTTCTGATAGTTTTATTAAGC
ATGGAGAAATTGCCAATTTTTAAAAACTGCAGTTTTCCAAACTTTTCTGCCAACCTCTTACTCTGAATTCAGTGC
TGCTTTGGGACATATACTTGACCTAGCTTGGTTTACCAGTGATGGAAAAGTATTTTGATATCATTAACTTTTTCA
AAAGATCCAACTTTTTCTCTATGCCTTTGCCACATTCTCTTCAGGGTCTCTTTCCACAGCGGATAAATGTTTTTT
CTGTATTATGACAGTATTGTTGTGATGGCCATCTGCTGGAAACTCCTGAAGAGCATTATGTATTACAGTGAGCAG
TTGTATTGCCTGTTTGGTGCCCAATGGTTAAGTCATTGTCACTTAGCTTTATATTGTCAGTTTGATATTTATTTT
AAATTGTGGAACTAGATGCATAAATTCACATTTCTGCCTTTCCTTTGCATCTTCTCATATATTGTGTTTTTTTTT
TTTTTCCTAGAAAAAATATTTAAAGCATTGTTTGACAGGTAGAAACTCATGTATCTGTAGTCCATGAGTTATATC
CTGGCTCAGTGGAGTGATATTTATGTATTATTTTTACTTTTCTCTCAGTGTCTTATATTAAGATTAACATGTTGT
TAATAGTTGCTTTGTTGATTAATCTCTCTTGTTGGTGTTTTAATAAATGAAATAGGCTTGCCTTTAGATCGGGTG
CTGATATTGCCTGTTTCCTAGTAATGGGCTGATCAAATGATCAGTGGAATTCTTGGTTTGATGATAACCTTATTA
ATTGAAATTTTTTACTGATGTGGCTTTAAAAGAGGTTTATTTTGTATATGTTTAGAACTCTCTGATTTTGATGAA
TTATATGGGAGTGAGAAACAGAAGAAGTGGTATTTGCTGGCGAGTTAAATAGGCAAGGTACCCAGTGATAACACC
AACCAAACCACTCCTATCTGCATGATTCTGAACATCTGGATGCCTGTTGTTTTACTGTGTATATTTTATTTTTAA
TATATTAACTTTGTGGATTCATTTAAGGTCTACTCAAAAGTAACACTGTCCAAACCACTAATATGTATGTAAAAA
TTGTGCTGTATACTACAATAAAGTTGTTACTTGGATTTGTTCCAAAAAAAAAAAAAAA

FIGURE 716

MRFKNRFQRFMNHRAPANGRYKPTCYEHAANCYTHAFLIVPAIVGSALLHRLSDDCWEKITAWIYGMGLCALFIA
STVFHIVSWKKSHLRTAEHCFHMCDRMVIYFFIAASYAPWLNLRELGPLASHMRWFIWLMAAGGTIYVFLYHEKY
KVVELFFYLTMGFSPALVVTSMNNTDGLQELACGGLIYCLGVVFFKSDGIIPFAHAIWHLFVATAAAVHYYAIWK
YLYRSPTDFMRHL

FIGURE 717

CTGTCGCCCTGCACGGTGACCCGCGTGTGCGAGGCCTTCATGGCCAGGATCCGGGTGGAGAGGCGCTGCTGACAC
CGCCGCCACACCGCCGCCACACCGCCGCTGCCTCAGTC**ATG**CCGAAGCACGAGTTCTCTGTGGACATGACCTGTG
GAGGCTGTGCTGAAGCTGTCTCTCGGGTCCTCAATAAGCTTGGAGGAGTTAAGTATGACATTGACCTGCCCAACA
AGAAGGTCTGCATTGAATCTGAGCACAGCATGGACACTCTGCTTGCAACCCTGAAGAAAACAGGAAAGACTGTTT
CCTACCTTGGCCTTGAG**TAG**CAGGGGCCTGGTCCCCACAGCCCACAGGATGGACCAAAGGGGGCAGGATGCTGAT
CCTCCCGCTGGCTTCCAGACAGACCTGGGACTTGGCAGTCATGCCGGGTGATCGTGTTCCTGCGGAGACCCTCAG
TTGTCCTATTCCTTCCTAGCTTCCCTGCAATAAATCAAGCTGCTTTTGTTGG

FIGURE 718

MPKHEFSVDMTCGGCAEAVSRVLNKLGGVKYDIDLPNKKVCIESEHSMDTLLATLKKTGKTVSYLGLE

FIGURE 719

GTCTTGACGTGAGCTAGCTGGCATGGCGGCCTGCATTGCAGCGGGGCACTGGGCTGCA**ATG**GGCCTAGGCCGGAG
TTTCCAAGCCGCCAGGACTCTGCTCCCCCCGCCGGCCTCTATCGCCTGCAGGGTCCACGCGGGGCCTGTCCGGCA
GCAGAGCACTGGGCCTTCCGAGCCCGGTGCGTTCCAACCGCCGCCGAAACCGGTCATCGTGGACAAGCACCGCCC
CGTGGAACCGGAACGCAGGTTCTTGAGTCCTGAATTCATTCCTCGAAGGGGAAGAACAGATCCTCTGAAATTTCA
AATAGAAAGAAAAGATATGTTAGAAAGGAGAAAAGTACTCCACATTCCAGAGTTCTATGTTGGAAGTATTCTTCG
TGTTACTACAGCTGACCCATATGCCAGTGGAAAAATCAGCCAGTTTCTGGGGATTTGCATTCAGAGATCAGGAAG
AGGACTTGGAGCTACTTTCATCCTTAGGAATGTTATCGAAGGACAAGGTGTCGAGATTTGCTTTGAACTTTATAA
TCCTCGGGTCCAGGAGATTCAGGTGGTCAAATTAGAGAAACGGCTGGATGATAGCTTGCTATACTTACGAGATGC
CCTTCCTGAATATAGCACTTTTGATGTGAATATGAAGCCAGTAGTACAAGAGCCTAACCAAAAAGTTCCTGTTAA
TGAGCTGAAAGTAAAAATGAAGCCTAAGCCCTGGTCTAAACGCTGGGAACGTCCAAATTTTAATATTAAAGGAAT
CAGATTTGATCTTTGTTTAACTGAACAGCAAATGAAAGAAGCTCAGAAGTGGAATCAGCCATGGCTTGAATTTGA
TATGATGAGGGAATATGATACTTCAAAAATTGAAGCTGCAATATGGAAGGAAATTGAAGCGTCGAAAAGGTCT**TG**
ATTCTGAGAATGAATTTGGTTAGTTGCAGAAGATACATTGGCTCTAAGAGGATATATTTTGAGACCAATTTAATT
TCATTTATAAGAACATAGTAATTAAGTGAACTAAGCATTCATTGTTTTATTAATACTTTTTTTCTAAAATAAAAC
TTGTACACCAGTTTATTACTCTAAAAAGAGAATTACACATGCCAAATGGACCAATGTCCATTTGCTTATTGGAGG
CAAAGCTACAATAGAAGTCAGAGCATCACCAGAATGGTCTTTAATGAGCATGGAACCTGAGCAAAGGGAATAGGT
GGGATGAATTTTTTTTTTAATTGTGAAACAATTCATAAGCACAATATGATTTACAGAATAATAAACATTCATGTA
CCCACTATCAGGTTAAGAAATAGAACATTTATTAATATGTAGGAATGTTAAGAAATAAAACATTTAATAAGA

FIGURE 720

MGLGRSFQAARTLLPPPASIACRVHAGPVRQQSTGPSEPGAFQPPPKPVIVDKHRPVEPERRFLSPEFIPRRGRT
DPLKFQIERKDMLERRKVLHIPEFYVGSILRVTTADPYASGKISQFLGICIQRSGRGLGATFILRNVIEGQGVEI
CFELYNPRVQEIQVVKLEKRLDDSLLYLRDALPEYSTFDVNMKPVVQEPNQKVPVNELKVKMKPKPWSKRWERPN
FNIKGIRFDLCLTEQQMKEAQKWNQPWLEFDMMREYDTSKIEAAIWKEIEASKRS

FIGURE 721

GTGGGAGGGAGGCTCGGCGCTCAGGAAGC**ATG**GCACTCTGGCGGGCATACCAGCGGGCCCTGGCCGCTCACCCGT
GGAAAGTACAGGTCCTGACAGCTGGGTCCCTGATGGGCCTGGGTGACATTATCTCACAGCAGCTGGTGGAGAGGC
GGGGTCTGCAGGAACACCAGAGAGGCCGGACTCTGACCATGGTGTCCCTGGGCTGTGGCTTTGTGGGCCCTGTGG
TAGGAGGCTGGTACAAGGTTTTGGATCGGTTCATCCCTGGCACCACCAAAGTGGATGCACTGAAGAAGATGTTGT
TGGATCAGGGGGGCTTTGCCCCGTGTTTTCTAGGCTGCTTTCTCCCACTGGTAGGGGCACTTAATGGACTGTCAG
CCCAGGACAACTGGGCCAAACTACAGCGGGATTATCCTGATGCCCTTATCACCAACTACTATCTATGGCCTGCTG
TGCAGTTAGCCAACTTCTACCTGGTCCCCCTTCATTACAGGTTGGCCGTTGTCCAATGTGTTGCTGTTATCTGGA
ACTCCTACCTGTCCTGGAAGGCACATCGGCTC**TAA**GCCTGCCTCACTCCATCGTTTCCACCTTGCAGTGATGCAG
CTTGACCCTGGAACGGTCAGACAACCTCCTCAAAGTGGGCATACCAGTTTCCACGGGGTTGGGTTGCCGGTCAGA
GCTTAAGAGGACTAGCACCTGCAATGCCCTCTTCACTCTAAATGTACACTGACTGCTTTAGAGCCCTTGATAATA
GTCTTATTCCCACCACATACTAGGCACTCCATAAATATCTGTTGAACCTTCATGACCTTATCAACTTTACACCCA
TATCCAGCAAATGCCACTCATCCCCACTCTTCATAGACACATTTGTTACTCTAACCCTGCCTAGGCTTCTTGTAG
CTCCAGCTCTTTAGAGACTCCGGGAACCCTTTATATGGTGCCTCAGTAAATATGTTATTAAATATGTAATCCGG

FIGURE 722

MALWRAYQRALAAHPWKVQVLTAGSLMGLGDIISQQLVERRGLQEHQRGRTLTMVSLGCGFVGPVVGGWYKVLDR
FIPGTTKVDALKKMLLDQGGFAPCFLGCFLPLVGALNGLSAQDNWAKLQRDYPDALITNYYLWPAVQLANFYLVP
LHYRLAVVQCVAVIWNSYLSWKAHRL

FIGURE 723A

AAGTGACCCAGGGAGACAAACACTTGGAGATACTTGGGGCTGAGTTTGAGCAAGACTCCCTAACCTGTGTCTGGA
CAAGTCTGATGTCCTGTGTGGCCCAAGAAGAACTGACCCCGTGTCTGGAGCTCCCACCGTTATTGCATCCCTGCT
GTGGCTCACCTGCTGCTGTCTCCAGGAGCCCCTGAGAAGATTTGCCTCCTCTCCCCTGCTAAGCTCCAGGTCCTG
AGATTGAATTAGGGGCTGGAGCTCACTGCACTCCAGCAGTC**ATG**GGACCCAGGATAGGGCCAGCGGGTGAGGTAC
CCCAGGTACCAGACAAGGAAACCAAAGCCACAATGGGCACAGAAAACACACCTGGAGGCAAAGCCAGCCCAGACC
CTCAGGACGTGCGGCCAAGTGTGTTCCATAACATCAAGCTGTTCGTTCTGTGCCACAGCCTGCTGCAGCTGGCGC
AGCTCATGATCTCCGGCTACCTAAAGAGCTCCATCTCCACAGTGGAGAAGCGCTTCGGCCTCTCCAGCCAGACGT
CGGGGCTGCTGGCCTCCTTCAACGAGGTGGGGAACACAGCCTTGATTGTGTTTGTGAGCTATTTTGGCAGCCGGG
TGCACCGACCCCGAATGATTGGCTATGGGGCTATCCTTGTGGCCCTGGCGGGCCTGCTCATGACTCTCCCGCACT
TCATCTCGGAGCCATACCGCTACGACAACACCAGCCCTGAGGATATGCCACAGGACTTCAAGGCTTCCCTGTGCC
TGCCCACAACCTCGGCCCCAGCCTCGGCCCCCTCCAATGGCAACTGCTCAAGCTACACAGAAACCCAGCATCTGA
GTGTGGTGGGGATCATGTTCGTGGCACAGACCCTGCTGGGCGTGGGCGGGGTGCCCATTCAGCCCTTTGGCATCT
CCTACATCGATGACTTTGCCCACAACAGCAACTCGCCCCTCTACCTCGGGATCCTGTTTGCAGTGACCATGATGG
GGCCAGGCCTGGCCTTTGGGCTGGGCAGCCTCATGCTGCGCCTTTATGTGGACATTAACCAGATGCCAGAAGGTG
GTATCAGCCTGACCATAAAGGACCCCCGATGGGTGGGTGCCTGGTGGCTGGGTTTCCTCATCGCTGCCGGTGCAG
TGGCCCTGGCTGCCATCCCCTACTTCTTCTTCCCCAAGGAAATGCCCAAGGAAAAACGTGAGCTTCAGTTTCGGC
GAAAGGTCTTAGCAGTCACAGACTCACCTGCCAGGAAGGGCAAGGACTCTCCCTCTAAGCAGAGCCCTGGGGAGT
CCACGAAGAAGCAGGATGGCCTAGTCCAGATTGCACCAAACCTGACTGTGATCCAGTTCATTAAAGTCTTCCCCA
GGGTGCTGCTGCAGACCCTACGCCACCCCATCTTCCTGCTGGTGGTCCTGTCCCAGGTATGCTTGTCATCCATGG
CTGCGGGCATGGCCACCTTCCTGCCCAAGTTCCTGGAGCGCCAGTTTTCCATCACAGCCTCCTACGCCAACCTGC
TCATCGGCTGCCTCTCCTTCCCTTCGGTCATCGTGGGCATCGTGGTGGGTGGCGTCCTGGTCAAGCGGCTCCACC
TGGGCCCTGTGGGATGCGGTGCCCTTTGCCTGCTGGGGATGCTGCTGTGCCTCTTCTTCAGCCTGCCGCTCTTCT
TTATCGGCTGCTCCAGCCACCAGATTGCGGGCATCACACACCAGACCAGTGCCCACCCTGGGCTGGAGCTGTCTC
CAAGCTGCATGGAGGCCTGCTCCTGCCCATTGGACGGCTTTAACCCTGTCTGCGACCCCAGCACTCGTGTGGAAT
ACATCACACCCTGCCACGCAGGCTGCTCAAGCTGGGTGGTCCAGGATGCTCTGGACAACAGCCAGGTTTTCTACA
CCAACTGCAGCTGCGTGGTGGAGGGCAACCCCGTGCTGGCAGGATCCTGCGACTCAACGTGCAGCCATCTGGTGG
TGCCCTTCCTGCTCCTGGTCAGCCTGGGCTCGGCCCTGGCCTGTCTCACCCACACACCCTCCTTCATGCTCATCC
TAAGAGGAGTGAAGAAAGAAGACAAGACTTTGGCTGTGGGCATCCAGTTCATGTTCCTGAGGATTTTGGCCTGGA
TGCCCAGCCCCGTGATCCACGGCAGCGCCATCGACACCACCTGTGTGCACTGGGCCCTGAGCTGTGGGCGTCGAG
CTGTCTGTCGCTACTACAATAATGACCTGCTCCGAAACCGGTTCATCGGCCTCCAGTTCTTCTTCAAAACAGGTT
CTGTGATCTGCTTCGCCTTAGTTTTGGCTGTCCTGAGGCAGCAGGACAAAGAGGCAAGGACCAAAGAGAGCAGAT
CCAGCCCTGCCGTAGAGCAGCAATTGCTAGTGTCGGGGCCAGGGAAGAAGCCAGAGGATTCCCGAGTG**TGA**GCTG
TCTTGGGGCCCCACCTGGCCAAGAGTAGCAGCCACAGCAGTACCTCCTCTGAGTCCTTTGCCCAAGATTGGGTGT
CAAGAGCCCTGTGTTCCATTCTGGCTCCTCCACTAAATTGCTGTGTGACTTCAGGCAAGACATTGATCCTCTCTC
AGCCTTTGCTTGCTAGTCTGAACCAAAGAGTTGTTTGGGCATTTGCTGTGTTGGCCATTTCTGGAGCAAGAGGGT
CTTCTTCCTCCTTCCCCCAGCCAGCCAGCTGTCCTGGGGCCAGGCTTTCCTGGGTGGAAAGAAGTATACCTTTCC
CTGGGGCCCTAGGATAGCAAAGTGAGCCATAGTGGGCCAGGCTGCCCTCCATGCTGGGCCCCAGCCCAGGTCTGC
ACTCGCCTGGATCACCTTCTTTGAGCCTTAGCCATCTCCTGTCAGGTAGGAATGAACTTGCCAGCCTTCAGGCTC
GTTCAGCTATGACCATCTGTGCGGTCAGGGTACACTCAGCTCTCCTCCCCAACTCCAGCAGCCTTTAAGAAGTGT
CCCTTTGGCGCCCCCTGGAGGCAGAGCACTGAGCTGGACCCTGGGTAGACTCCCACAGGGAGGACGGAGCTGGCC
TCAGGAGTGGGACACCCAGACTTGGCAGGGCCTTCAAGAGGCCTGTGTGGGGGCCCCAGGAATCCTTAGCTGAAG
CGGGGAGACTCACTCTCCATCTCAGGAAATTCTAGCCCTTGCCCTCAGGGAGCCACGGTTGAGGGTGAGGCCCAA
CACCTGCCTTAGGGCCCTGGGTGGGCAAGTCTGGGCCCTGGGGTAGGGAGGGAGACTCAGGCCCACACTTGGGTA
TTTTCTAATTTCAGACAAACACACACTCAGCGCGCACTCACTGATTCCTACACATTGCCAAGATTTCACACATGT
GACCAGGGGCCACCAAAGTCCCTGTGACCTTTGTGACTAGGATCCTAATTTCTCTATTTTCTCCTGGGTGCCTGG
GTCTGTGTCACCTGGGGCAGTGTGGATAATGTTTAGTTCTGTGACACTGTTTTTTGGGGGTGGCACCTGGTTCTC
CGATGCCTGGGCTGGTGTCAGGCCCAGGACTGTAGTGCTGGGAGCAGTAAAGCTCAGCTCTGTGTAATGAGTGAT
GCTATGGCTTGCTCGTGTCTTATGATCCAATCCTTTTCTACATCAGCCCTTGTTTTGTTTTATGGCTAGTCTTAT

FIGURE 723B

CTGGCCTGGTTATTTCCTTGCGGGGAGGAGAGGGTTTGCTAATCTGCTCCCAGCCCAACCTATTACCACCCCACC
TCGCTGGGACCTACTGCTCGGGAGGCAGCAGACAGGGAGCCACCAGCAGTGGCTTCCTGGCCCTGTGCTGGGGGT
GGGGGGAAGCTGGGGGCACATGTGGCCCTTGCCTTCTGAGCAGCTCCCAGTGCCAGGGCTTTGAGACTTTCCCAC
ATGATAAAAGAAAAGGGAGGTACAGAAGTTCCAATTCCCTTTTTATTTTGCTGGTTGGTATCTGTAAATGTTTAA
TAAATATCTGAGCATGTATCTATCAACGCCAAGAATTTCAAAGTCTCCTTCAACAATATGAGGCTTTTAGGATGT
TTATATTCCTTCATCCCTCTTGTTTCCCAGGTTTTGCAGGGAAAAAAAGTCTGGAATTATAGATACAGCTTATTA
TTAAATTTGTTCTTGCAT

FIGURE 724

MGPRIGPAGEVPQVPDKETKATMGTENTPGGKASPDPQDVRPSVFHNIKLFVLCHSLLQLAQLMISGYLKSSIST
VEKRFGLSSQTSGLLASFNEVGNTALIVFVSYFGSRVHRPRMIGYGAILVALAGLLMTLPHFISEPYRYDNTSPE
DMPQDFKASLCLPTTSAPASAPSNGNCSSYTETQHLSVVGIMFVAQTLLGVGGVPIQPFGISYIDDFAHNSNSPL
YLGILFAVTMMGPGLAFGLGSLMLRLYVDINQMPEGGISLTIKDPRWVGAWWLGFLIAAGAVALAAIPYFFFPKE
MPKEKRELQFRRKVLAVTDSPARKGKDSPSKQSPGESTKKQDGLVQIAPNLTVIQFIKVFPRVLLQTLRHPIFLL
VVLSQVCLSSMAAGMATFLPKFLERQFSITASYANLLIGCLSFPSVIVGIVVGGVLVKRLHLGPVGCGALCLLGM
LLCLFFSLPLFFIGCSSHQIAGITHQTSAHPGLELSPSCMEACSCPLDGFNPVCDPSTRVEYITPCHAGCSSWVV
QDALDNSQVFYTNCSCVVEGNPVLAGSCDSTCSHLVVPFLLLVSLGSALACLTHTPSFMLILRGVKKEDKTLAVG
IQFMFLRILAWMPSPVIHGSAIDTTCVHWALSCGRRAVCRYYNNDLLRNRFIGLQFFFKTGSVICFALVLAVLRQ
QDKEARTKESRSSPAVEQQLLVSGPGKKPEDSRV

FIGURE 725A

GTAATTGCGAGCGAGAGTGAGTGGGGCCGGGACCCGCAGAGCCGAGCCGACCCTTCTCTCCCGGGCTGCGGCAGG
GCAGGGCGGGGAGCTCCGCGCACCAACAGAGCCGGTTCTCAGGGCGCTTTGCTCCTTGTTTTTTCCCCGGTTCTG
TTTTCTCCCCTTCTCCGGAAGGCTTGTCAAGGGGTAGGAGAAAGAGACGCAAACACAAAAGTGGAAAACAGTTAA
TGACCAGCCACGGCGTCCCTGCTGTGAGCTCTGGCCGCTGCCTTCCAGGGCTCCCGAGCCACACGCTGGGGGTGC
TGGCTGAGGGAACATGGCTTGTTGGCCTCAGCTGAGGTTGCTGCTGTGGAAGAACCTCACTTTCAGAAGAAGACA
AACATGTCAGCTGCTGCTGGAAGTGGCCTGGCCTCTATTTATCTTCCTGATCCTGATCTCTGTTCGGCTGAGCTA
CCCACCCTATGAACAACATGAATGCCATTTTCCAAATAAAGCC**ATG**CCCTCTGCAGGAACACTTCCTTGGGTTCA
GGGGATTATCTGTAATGCCAACAACCCCTGTTTCCGTTACCCGACTCCTGGGGAGGCTCCCGGAGTTGTTGGAAA
CTTTAACAAATCCATTGTGGCTCGCCTGTTCTCAGATGCTCGGAGGCTTCTTTTATACAGCCAGAAAGACACCAG
CATGAAGGACATGCGCAAAGTTCTGAGAACATTACAGCAGATCAAGAAATCCAGCTCAAACTTGAAGCTTCAAGA
TTTCCTGGTGGACAATGAAACCTTCTCTGGGTTCCTGTATCACAACCTCTCTCTCCCAAAGTCTACTGTGGACAA
GATGCTGAGGGCTGATGTCATTCTCCACAAGGTATTTTTGCAAGGCTACCAGTTACATTTGACAAGTCTGTGCAA
TGGATCAAAATCAGAAGAGATGATTCAACTTGGTGACCAAGAAGTTTCTGAGCTTTGTGGCCTACCAAGGGAGAA
ACTGGCTGCAGCAGAGCGAGTACTTCGTTCCAACATGGACATCCTGAAGCCAATCCTGAGAACACTAAACTCTAC
ATCTCCCTTCCCGAGCAAGGAGCTGGCTGAAGCCACAAAAACATTGCTGCATAGTCTTGGGACTCTGGCCCAGGA
GCTGTTCAGCATGAGAAGCTGGAGTGACATGCGACAGGAGGTGATGTTTCTGACCAATGTGAACAGCTCCAGCTC
CTCCACCCAAATCTACCAGGCTGTGTCTCGTATTGTCTGCGGGCATCCCGAGGGAGGGGGGCTGAAGATCAAGTC
TCTCAACTGGTATGAGGACAACAACTACAAAGCCCTCTTTGGAGGCAATGGCACTGAGGAAGATGCTGAAACCTT
CTATGACAACTCTACAACTCCTTACTGCAATGATTTGATGAAGAATTTGGAGTCTAGTCCTCTTTCCCGCATTAT
CTGGAAAGCTCTGAAGCCGCTGCTCGTTGGGAAGATCCTGTATACACCTGACACTCCAGCCACAAGGCAGGTCAT
GGCTGAGGTGAACAAGACCTTCCAGGAACTGGCTGTGTTCCATGATCTGGAAGGCATGTGGGAGGAACTCAGCCC
CAAGATCTGGACCTTCATGGAGAACAGCCAAGAAATGGACCTTGTCCGGATGCTGTTGGACAGCAGGGACAATGA
CCACTTTTGGGAACAGCAGTTGGATGGCTTAGATTGGACAGCCCAAGACATCGTGGCGTTTTTGGCCAAGCACCC
AGAGGATGTCCAGTCCAGTAATGGTTCTGTGTACACCTGGAGAGAAGCTTTCAACGAGACTAACCAGGCAATCCG
GACCATATCTCGCTTCATGGAGTGTGTCAACCTGAACAAGCTAGAACCCATAGCAACAGAAGTCTGGCTCATCAA
CAAGTCCATGGAGCTGCTGGATGAGAGGAAGTTCTGGGCTGGTATTGTGTTCACTGGAATTACTCCAGGCAGCAT
TGAGCTGCCCCATCATGTCAAGTACAAGATCCGAATGGACATTGACAATGTGGAGAGGACAAATAAAATCAAGGA
TGGGTACTGGGACCCTGGTCCTCGAGCTGACCCCTTTGAGGACATGCGGTACGTCTGGGGGGGCTTCGCCTACTT
GCAGGATGTGGTGGAGCAGGCAATCATCAGGGTGCTGACGGGCACCGAGAAGAAAACTGGTGTCTATATGCAACA
GATGCCCTATCCCTGTTACGTTGATGACATCTTTCTGCGGGTGATGAGCCGGTCAATGCCCCTCTTCATGACGCT
GGCCTGGATTTACTCAGTGGCTGTGATCATCAAGGGCATCGTGTATGAGAAGGAGGCACGGCTGAAAGAGACCAT
GCGGATCATGGGCCTGGACAACAGCATCCTCTGGTTTAGCTGGTTCATTAGTAGCCTCATTCCTCTTCTTGTGAG
CGCTGGCCTGCTAGTGGTCATCCTGAAGTTAGGAAACCTGCTGCCCTACAGTGATCCCAGCGTGGTGTTTGTCTT
CCTGTCCGTGTTTGCTGTGGTGACAATCCTGCAGTGCTTCCTGATTAGCACACTCTTCTCCAGAGCCAACCTGGC
AGCAGCCTGTGGGGGCATCATCTACTTCACGCTGTACCTGCCCTACGTCCTGTGTGTGGCATGGCAGGACTACGT
GGGCTTCACACTCAAGATCTTCGCTAGCCTGCTGTCTCCTGTGGCTTTTGGGTTTGGCTGTGAGTACTTTGCCCT
TTTTGAGGAGCAGGGCATTGGAGTGCAGTGGGACAACCTGTTTGAGAGTCCTGTGGAGGAAGATGGCTTCAATCT
CACCACTTCGGTCTCCATGATGCTGTTTGACACCTTCCTCTATGGGGTGATGACCTGGTACATTGAGGCTGTCTT
TCCAGGCCAGTACGGAATTCCCAGGCCCTGGTATTTTCCTTGCACCAAGTCCTACTGGTTTGGCGAGGAAAGTGA
TGAGAAGAGCCACCCTGGTTCCAACCAGAAGAGAATATCAGAAATCTGCATGGAGGAGGAACCCACCCACTTGAA
GCTGGGCGTGTCCATTCAGAACCTGGTAAAAGTCTACCGAGATGGGATGAAGGTGGCTGTCGATGGCCTGGCACT
GAATTTTTATGAGGGCCAGATCACCTCCTTCCTGGGCCACAATGGAGCGGGGAAGACGACCACCATGTCAATCCT
GACCGGGTTGTTCCCCCCGACCTCGGGCACCGCCTACATCCTGGGAAAAGACATTCGCTCTGAGATGAGCACCAT
CCGGCAGAACCTGGGGGTCTGTCCCCAGCATAACGTGCTGTTTGACATGCTGACTGTCGAAGAACACATCTGGTT
CTATGCCCGCTTGAAAGGGCTCTCTGAGAAGCACGTGAAGGCGGAGATGGAGCAGATGGCCCTGGATGTTGGTTT
GCCATCAAGCAAGCTGAAAAGCAAAACAAGCCAGCTGTCAGGTGGAATGCAGAGAAAGCTATCTGTGGCCTTGGC
CTTTGTCGGGGGATCTAAGGTTGTCATTCTGGATGAACCCACAGCTGGTGTGGACCCTTACTCCCGCAGGGGAAT
ATGGGAGCTGCTGCTGAAATACCGACAAGGCCGCACCATTATTCTCTCTACACACCACATGGATGAAGCGGACGT

FIGURE 725B

CCTGGGGGACAGGATTGCCATCATCTCCCATGGGAAGCTGTGCTGTGTGGGCTCCTCCCTGTTTCTGAAGAACCA
GCTGGGAACAGGCTACTACCTGACCTTGGTCAAGAAAGATGTGGAATCCTCCCTCAGTTCCTGCAGAAACAGTAG
TAGCACTGTGTCATACCTGAAAAAGGAGGACAGTGTTTCTCAGAGCAGTTCTGATGCTGGCCTGGGCAGCGACCA
TGAGAGTGACACGCTGACCATCGATGTCTCTGCTATCTCCAACCTCATCAGGAAGCATGTGTCTGAAGCCCGGCT
GGTGGAAGACATAGGGCATGAGCTGACCTATGTGCTGCCATATGAAGCTGCTAAGGAGGGAGCCTTTGTGGAACT
CTTTCATGAGATTGATGACCGGCTCTCAGACCTGGGCATTTCTAGTTATGGCATCTCAGAGACGACCCTGGAAGA
AATATTCCTCAAGGTGGCCGAAGAGAGTGGGGTGGATGCTGAGACCTCAGATGGTACCTTGCCAGCAAGACGAAA
CAGGCGGGCCTTCGGGGACAAGCAGAGCTGTCTTCGCCCGTTCACTGAAGATGATGCTGCTGATCCAAATGATTC
TGACATAGACCCAGAATCCAGAGAGACAGACTTGCTCAGTGGGATGGATGGCAAAGGGTCCTACCAGGTGAAAGG
CTGGAAACTTACACAGCAACAGTTTGTGGCCCTTTTGTGGAAGAGACTGCTAATTGCCAGACGGAGTCGGAAAGG
ATTTTTTGCTCAGATTGTCTTGCCAGCTGTGTTTGTCTGCATTGCCCTTGTGTTCAGCCTGATCGTGCCACCCTT
TGGCAAGTACCCCAGCCTGGAACTTCAGCCCTGGATGTACAACGAACAGTACACATTTGTCAGCAATGATGCTCC
TGAGGACACGGGAACCCTGGAACTCTTAAACGCCCTCACCAAAGACCCTGGCTTCGGGACCCGCTGTATGGAAGG
AAACCCAATCCCAGACACGCCCTGCCAGGCAGGGGAGGAAGAGTGGACCACTGCCCCAGTTCCCCAGACCATCAT
GGACCTCTTCCAGAATGGGAACTGGACAATGCAGAACCCTTCACCTGCATGCCAGTGTAGCAGCGACAAAATCAA
GAAGATGCTGCCTGTGTGTCCCCCAGGGGCAGGGGGGCTGCCTCCTCCACAAAGAAAACAAAACACTGCAGATAT
CCTTCAGGACCTGACAGGAAGAAACATTTCGGATTATCTGGTGAAGACGTATGTGCAGATCATAGCCAAAAGCTT
AAAGAACAAGATCTGGGTGAATGAGTTTAGGTATGGCGGCTTTTCCCTGGGTGTCAGTAATACTCAAGCACTTCC
TCCGAGTCAAGAAGTTAATGATGCCATCAAACAAATGAAGAAACACCTAAAGCTGGCCAAGGACAGTTCTGCAGA
TCGATTTCTCAACAGCTTGGGAAGATTTATGACAGGACTGGACACCAAAAATAATGTCAAGGTGTGGTTCAATAA
CAAGGGCTGGCATGCAATCAGCTCTTTCCTGAATGTCATCAACAATGCCATTCTCCGGGCCAACCTGCAAAAGGG
AGAGAACCCTAGCCATTATGGAATTACTGCTTTCAATCATCCCCTGAATCTCACCAAGCAGCAGCTCTCAGAGGT
GGCTCTGATGACCACATCAGTGGATGTCCTTGTGTCCATCTGTGTCATCTTTGCAATGTCCTTCGTCCCAGCCAG
CTTTGTCGTATTCCTGATCCAGGAGCGGGTCAGCAAAGCAAAACACCTGCAGTTCATCAGTGGAGTGAAGCCTGT
CATCTACTGGCTCTCTAATTTTGTCTGGGATATGTGCAATTACGTTGTCCCTGCCACACTGGTCATTATCATCTT
CATCTGCTTCCAGCAGAAGTCCTATGTGTCCTCCACCAATCTGCCTGTGCTAGCCCTTCTACTTTTGCTGTATGG
GTGGTCAATCACACCTCTCATGTACCCAGCCTCCTTTGTGTTCAAGATCCCCAGCACAGCCTATGTGGTGCTCAC
CAGCGTGAACCTCTTCATTGGCATTAATGGCAGCGTGGCCACCTTTGTGCTGGAGCTGTTCACCGACAATAAGCT
GAATAATATCAATGATATCCTGAAGTCCGTGTTCTTGATCTTCCCACATTTTTGCCTGGGACGAGGGCTCATCGA
CATGGTGAAAAACCAGGCAATGGCTGATGCCCTGGAAAGGTTTGGGGAGAATCGCTTTGTGTCACCATTATCTTG
GGACTTGGTGGGACGAAACCTCTTCGCCATGGCCGTGGAAGGGGTGGTGTTCTTCCTCATTACTGTTCTGATCCA
GTACAGATTCTTCATCAGGCCCAGACCTGTAAATGCAAAGCTATCTCCTCTGAATGATGAAGATGAAGATGTGAG
GCGGGAAAGACAGAGAATTCTTGATGGTGGAGGCCAGAATGACATCTTAGAAATCAAGGAGTTGACGAAGATATA
TAGAAGGAAGCGGAAGCCTGCTGTTGACAGGATTTGCGTGGGCATTCCTCCTGGTGAGTGCTTTGGGCTCCTGGG
AGTTAATGGGGCTGGAAAATCATCAACTTTCAAGATGTTAACAGGAGATACCACTGTTACCAGAGGAGATGCTTT
CCTTAACAAAAATAGTATCTTATCAAACATCCATGAAGTACATCAGAACATGGGCTACTGCCCTCAGTTTGATGC
CATCACAGAGCTGTTGACTGGGAGAGAACACGTGGAGTTCTTTGCCCTTTTGAGAGGAGTCCCAGAGAAAGAAGT
TGGCAAGGTTGGTGAGTGGGCGATTCGGAAACTGGGCCTCGTGAAGTATGGAGAAAAATATGCTGGTAACTATAG
TGGAGGCAACAAACGCAAGCTCTCTACAGCCATGGCTTTGATCGGCGGGCCTCCTGTGGTGTTTCTGGATGAACC
CACCACAGGCATGGATCCCAAAGCCCGGCGGTTCTTGTGGAATTGTGCCCTAAGTGTTGTCAAGGAGGGGAGATC
AGTAGTGCTTACATCTCATAGTATGGAAGAATGTGAAGCTCTTTGCACTAGGATGGCAATCATGGTCAATGGAAG
GTTCAGGTGCCTTGGCAGTGTCCAGCATCTAAAAAATAGGTTTGGAGATGGTTATACAATAGTTGTACGAATAGC
AGGGTCCAACCCGGACCTGAAGCCTGTCCAGGATTTCTTTGGACTTGCATTTCCTGGAAGTGTTCTAAAAGAGAA
ACACCGGAACATGCTACAATACCAGCTTCCATCTTCATTATCTTCTCTGGCCAGGATATTCAGCATCCTCTCCCA
GAGCAAAAAGCGACTCCACATAGAAGACTACTCTGTTTCTCAGACAACACTTGACCAAGTATTTGTGAACTTTGC
CAAGGACCAAAGTGATGATGACCACTTAAAAGACCTCTCATTACACAAAAACCAGACAGTAGTGGACGTTGCAGT
TCTCACATCTTTTCTACAGGATGAGAAAGTGAAAGAAAGCTATGTATGAAGAATCCTGTTCATACGGGGTGGCTG
AAAGTAAAGAGGAACTAGACTTTCCTTTGCACCATGTGAAGTGTTGTGGAGAAAAGAGCCAGAAGTTGATGTGGG

FIGURE 725C

AAGAAGTAAACTGGATACTGTACTGATACTATTCAATGCAATGCAATTCAATGCAATGAAAACAAAATTCCATTA
CAGGGGCAGTGCCTTTGTAGCCTATGTCTTGTATGGCTCTCAAGTGAAAGACTTGAATTTAGTTTTTTACCTATA
CCTATGTGAAACTCTATTATGGAACCCAATGGACATATGGGTTTGAACTCACACTTTTTTTTTTTTTTTGTTCC
TGTGTATTCTCATTGGGGTTGCAACAATAATTCATCAAGTAATCATGGCCAGCGATTATTGATCAAAATCAAAAG
GTAATGCACATCCTCATTCACTAAGCCATGCCATGCCCAGGAGACTGGTTTCCCGGTGACACATCCATTGCTGGC
AATGAGTGTGCCAGAGTTATTAGTGCCAAGTTTTTCAGAAAGTTTGAAGCACCATGGTGTGTCATGCTCACTTTT
GTGAAAGCTGCTCTGCTCAGAGTCTATCAACATTGAATATCAGTTGACAGAATGGTGCCATGCGTGGCTAACATC
CTGCTTTGATTCCCTCTGATAAGCTGTTCTGGTGGCAGTAACATGCAACAAAAATGTGGGTGTCTCCAGGCACGG
GAAACTTGGTTCCATTGTTATATTGTCCTATGCTTCGAGCCATGGGTCTACAGGGTCATCCTTATGAGACTCTTA
AATATACTTAGATCCTGGTAAGAGGCAAAGAATCAACAGCCAAACTGCTGGGGCTGCAAGCTGCTGAAGCCAGGG
CATGGGATTAAAGAGATTGTGCGTTCAAACCTAGGGAAGCCTGTGCCCATTTGTCCTGACTGTCTGCTAACATGG
TACACTGCATCTCAAGATGTTTATCTGACACAAGTGTATTATTTCTGGCTTTTTGAATTAATCTAGAAAATGAAA
AGATGGAGTTGTATTTTGACAAAAATGTTTGTACTTTTTAATGTTATTTGGAATTTTAAGTTCTATCAGTGACTT
CTGAATCCTTAGAATGGCCTCTTTGTAGAACCCTGTGGTATAGAGGAGTATGGCCACTGCCCCACTATTTTTATT
TTCTTATGTAAGTTTGCATATCAGTCATGACTAGTGCCTAGAAAGCAATGTGATGGTCAGGATCTCATGACATTA
TATTTGAGTTTCTTTCAGATCATTTAGGATACTCTTAATCTCACTTCATCAATCAAATATTTTTTGAGTGTATGC
TGTAGCTGAAAGAGTATGTACGTACGTATAAGACTAGAGAGATATTAAGTCTCAGTACACTTCCTGTGCCATGTT
ATTCAGCTCACTGGTTTACAAATATAGGTTGTCTTGTGGTTGTAGGAGCCCACTGTAACAATACTGGGCAGCCTT
TTTTTTTTTTTTTTTAATTGCAACAATGCAAAAGCCAAGAAAGTATAAGGGTCACAAGTCTAAACAATGAATTCT
TCAACAGGGAAAACAGCTAGCTTGAAAACTTGCTGAAAAACACAACTTGTGTTTATGGCATTTAGTACCTTCAAA
TAATTGGCTTTGCAGATATTGGATACCCCATTAAATCTGACAGTCTCAAATTTTTCATCTCTTCAATCACTAGTC
AAGAAAAATATAAAAACAACAAATACTTCCATATGGAGCATTTTTCAGAGTTTTCTAACCCAGTCTTATTTTTCT
AGTCAGTAAACATTTGTAAAAATACTGTTTCACTAATACTTACTGTTAACTGTCTTGAGAGAAAAGAAAAATATG
AGAGAACTATTGTTTGGGGAAGTTCAAGTGATCTTTCAATATCATTACTAACTTCTTCCACTTTTTCCAGAATTT
GAATATTAACGCTAAAGGTGTAAGACTTCAGATTTCAAATTAATCTTTCTATATTTTTTAAATTTACAGAATATT
ATATAACCCACTGCTGAAAAAGAAAAAAATGATTGTTTTAGAAGTTAAAGTCAATATTGATTTTAAATATAAGTA
ATGAAGGCATATTTCCAATAACTAGTGATATGGCATCGTTGCATTTTACAGTATCTTCAAAAATACAGAATTTAT
AGAATAATTTCTCCTCATTTAATATTTTTCAAAATCAAAGTTATGGTTTCCTCATTTTACTAAAATCGTATTCTA
ATTCTTCATTATAGTAAATCTATGAGCAACTCCTTACTTCGGTTCCTCTGATTTCAAGGCCATATTTTAAAAAAT
CAAAAGGCACTGTGAACTATTTTGAAGAAAACACAACATTTTAATACAGATTGAAAGGACCTCTTCTGAAGCTAG
AAACAATCTATAGTTATACATCTTCATTAATACTGTGTTACCTTTTAAAATAGTAATTTTTTACATTTTCCTGTG
TAAACCTAATTGTGGTAGAAATTTTTACCAACTCTATACTCAATCAAGCAAAATTTCTGTATATTCCCTGTGGAA
TGTACCTATGTGAGTTTCAGAAATTCTCAAAATACGTGTTCAAAAATTTCTGCTTTTGCATCTTTGGGACACCTC
AGAAAACTTATTAACAACTGTGAATATGAGAAATACAGAAGAAAATAATAAGCCCTCTATACATAAATGCCCAGC
ACAATTCATTGTTAAAAAACAACCAAACCTCACACTACTGTATTTCATTATCTGTACTGAAAGCAAATGCTTTGT
GACTATTAAATGTTGCACATCATTCATTCACTGTATAGTAATCATTGACTAAAGCCATTTGTCTGTGTTTTCTTC
TTGTGGTTGTATATATCAGGTAAAATATTTTCCAAAGAGCCATGTGTCATGTAATACTGAACCACTTTGATATTG
AGACATTAATTTGTACCCTTGTTATTATCTACTAGTAATAATGTAATACTGTAGAAATATTGCTCTAATTCTTTT
CAAAATTGTTGCATCCCCCTTAGAATGTTTCTATTTCCATAAGGATTTAGGTATGCTATTATCCCTTCTTATACC
CTAAGATGAAGCTGTTTTTGTGCTCTTTGTTCATCATTGGCCCTCATTCCAAGCACTTTACGCTGTCTGTAATGG
GATCTATTTTTGCACTGGAATATCTGAGAATTGCAAAACTAGACAAAAGTTTCACAACAGATTTCTAAGTTAAAT
CATTTTCATTAAAAGGAAAAAAGAAAAAAAATTTTGTATGTCAATAACTTTATATGAAGTATTAAAATGCATATT
TCTATGTTGTAATATAATGAGTCACAAAATAAAGCTGTGACAGTTCTGTTGGTCTACAGAAA

FIGURE 726

MPSAGTLPWVQGIICNANNPCFRYPTPGEAPGVVGNFNKSIVARLFSDARRLLLYSQKDTSMKDMRKVLRTLQQI
KKSSSNLKLQDFLVDNETFSGFLYHNLSLPKSTVDKMLRADVILHKVFLQGYQLHLTSLCNGSKSEEMIQLGDQE
VSELCGLPREKLAAAERVLRSNMDILKPILRTLNSTSPFPSKELAEATKTLLHSLGTLAQELFSMRSWSDMRQEV
MFLTNVNSSSSSTQIYQAVSRIVCGHPEGGGLKIKSLNWYEDNNYKALFGGNGTEEDAETFYDNSTTPYCNDLMK
NLESSPLSRIIWKALKPLLVGKILYTPDTPATRQVMAEVNKTFQELAVFHDLEGMWEELSPKIWTFMENSQEMDL
VRMLLDSRDNDHFWEQQLDGLDWTAQDIVAFLAKHPEDVQSSNGSVYTWREAFNETNQAIRTISRFMECVNLNKL
EPIATEVWLINKSMELLDERKFWAGIVFTGITPGSIELPHHVKYKIRMDIDNVERTNKIKDGYWDPGPRADPFED
MRYVWGGFAYLQDVVEQAIIRVLTGTEKKTGVYMQQMPYPCYVDDIFLRVMSRSMPLFMTLAWIYSVAVIIKGIV
YEKEARLKETMRIMGLDNSILWFSWFISSLIPLLVSAGLLVVILKLGNLLPYSDPSVVFVFLSVFAVVTILQCFL
ISTLFSRANLAAACGGIIYFTLYLPYVLCVAWQDYVGFTLKIFASLLSPVAFGFGCEYFALFEEQGIGVQWDNLF
ESPVEEDGFNLTTSVSMMLFDTFLYGVMTWYIEAVFPGQYGIPRPWYFPCTKSYWFGEESDEKSHPGSNQKRISE
ICMEEEPTHLKLGVSIQNLVKVYRDGMKVAVDGLALNFYEGQITSFLGHNGAGKTTTMSILTGLFPPTSGTAYIL
GKDIRSEMSTIRQNLGVCPQHNVLFDMLTVEEHIWFYARLKGLSEKHVKAEMEQMALDVGLPSSKLKSKTSQLSG
GMQRKLSVALAFVGGSKVVILDEPTAGVDPYSRRGIWELLLKYRQGRTIILSTHHMDEADVLGDRIAIISHGKLC
CVGSSLFLKNQLGTGYYLTLVKKDVESSLSSCRNSSSTVSYLKKEDSVSQSSSDAGLGSDHESDTLTIDVSAISN
LIRKHVSEARLVEDIGHELTYVLPYEAAKEGAFVELFHEIDDRLSDLGISSYGISETTLEEIFLKVAEESGVDAE
TSDGTLPARRNRRAFGDKQSCLRPFTEDDAADPNDSDIDPESRETDLLSGMDGKGSYQVKGWKLTQQQFVALLWK
RLLIARRSRKGFFAQIVLPAVFVCIALVFSLIVPPFGKYPSLELQPWMYNEQYTFVSNDAPEDTGTLELLNALTK
DPGFGTRCMEGNPIPDTPCQAGEEEWTTAPVPQTIMDLFQNGNWTMQNPSPACQCSSDKIKKMLPVCPPGAGGLP
PPQRKQNTADILQDLTGRNISDYLVKTYVQIIAKSLKNKIWVNEFRYGGFSLGVSNTQALPPSQEVNDATKQMKK
HLKLAKDSSADRFLNSLGRFMTGLDTRNNVKVWFNNKGWHAISSFLNVINNAILRANLQKGENPSHYGITAFNHP
LNLTKQQLSEVAPMTTSVDVLVSICVIFAMSFVPASFVVFLIQERVSKAKHLQFISGVKPVIYWLSNFVWDMCNY
VVPATLVIIIFICFQQKSYVSSTNLPVLALLLLLYGWSITPLMYPASFVFKIPSTAYVVLTSVNLFIGINGSVAT
FVLELFTDNKLNNINDILKSVFLIFPHFCLGRGLIDMVKNQAMADALERFGENRFVSPLSWDLVGRNLFAMAVEG
VVFFLITVLIQYRFFIRPRPVNAKLSPLNDEDEDVRRERQRILDGGGQNDILEIKELTKIYRRKRKPAVDRICVG
IPPGECFGLLGVNGAGKSSTFKMLTGDTTVTRGDAFLNRNSILSNIHEVHQNMGYCPQFDAITELLTGREHVEFF
ALLRGVPEKEVGKVGEWAIRKLGLVKYGEKYAGNYSGGNKRKLSTAMALI

FIGURE 727A

GGCCGGGACCCGCAGAGCCGAGCCGACCCTTCTCTCCCGGGCTGCGGCAGGGCAGGGCGGGGAGCTCCGCGCACC
AACAGAGCCGGTTCTCAGGGCGCTTTGCTCCTTGTTTTTTCCCCGGTTCTGTTTTCTCCCCTTCTCCGGAAGGCT
TGTCAAGGGGTAGGAGAAAGAGACGCAAACACAAAAGTGGAAAACAGTTAATGACCAGCCACGGGCGTCCCTGCT
GTGAGCTCTGGCCGCTGCCTTCCAGGGCTCCCGAGCCACACGCTGGGCGTGCTGGCTGAGGGAAC**ATG**GCTTGTT
GGCCTCAGCTGAGGTTGCTGCTGTGGAAGAACCTCACTTTCAGAAGAAGACAAACATGTCAGCTGTTACTGGAAG
TGGCCTGGCCTCTATTTATCTTCCTGATCCTGATCTCTGTTCGGCTGAGCTACCCACCCTATGAACAACATGAAT
GCCATTTTCCAAATAAAGCCATGCCCTCTGCAGGAACACTTCCTTGGGTTCAGGGGATTATCTGTAATGCCAACA
ACCCCTGTTTCCGTTACCCGACTCCTGGGGAGGCTCCCGGAGTTGTTGGAAACTTTAACAAATCCATTGTGGCTC
GCCTGTTCTCAGATGCTCGGAGGCTTCTTTTATACAGCCAGAAAGACACCAGCATGAAGGACATGCGCAAAGTTC
TGAGAACATTACAGCAGATCAAGAAATCCAGCTCAAACTTGAAGCTTCAAGATTTCCTGGTGGACAATGAAACCT
TCTCTGGGTTCCTATATCACAACCTCTCTCTCCCAAAGTCTACTGTGGACAAGATGCTGAGGGCTGATGTCATTC
TCCACAAGGTATTTTTGCAAGGCTACCAGTTACATTTGACAAGTCTGTGCAATGGATCAAAATCAGAAGAGATGA
TTCAACTTGGTGACCAAGAAGTTTCTGAGCTTTGTGGCCTACCAAAGGAGAAACTGGCTGCAGCAGAGCGAGTAC
TTCGTTCCAACATGGACATCCTGAAGCCAATCCTGAGAACACTAAACTCTACATCTCCCTTCCCGAGCAAGGAGC
TGGCTGAAGCCACAAAAACATTGCTGCATAGTCTTGGGACTCTGGCCCAGGAGCTGTTCAGCATGAGAAGCTGGA
GTGACATGCGACAGGAGGTGATGTTTCTGACCAATGTGAACAGCTCCAGCTCCTCCACCCAAATCTACCAGGCTG
TGTCTCGTATTGTCTGCGGGCATCCCGAGGGAGGGGGGCTGAAGATCAAGTCTCTCAACTGGTATGAGGACAACA
ACTACAAAGCCCTCTTTGGAGGCAATGGCACTGAGGAAGATGCTGAAACCTTCTATGACAACTCTACAACTCCTT
ACTGCAATGATTTGATGAAGAATTTGGAGTCTAGTCCTCTTTCCCGCATTATCTGGAAAGCTCTGAAGCCGCTGC
TCGTTGGGAAGATCCTGTATACACCTGACACTCCAGCCACAAGGCAGGTCATGGCTGAGGTGAACAAGACCTTCC
AGGAACTGGCTGTGTTCCATGATCTGGAAGGCATGTGGGAGGAACTCAGCCCCAAGATCTGGACCTTCATGGAGA
ACAGCCAAGAAATGGACCTTGTCCGGATGCTGTTGGACAGCAGGGACAATGACCACTTTTGGGAACAGCAGTTGG
ATGGCTTAGATTGGACAGCCCAAGACATCGTGGCGTTTTTGGCCAAGCACCCAGAGGATGTCCAGTCCAGTAATG
GTTCTGTGTACACCTGGAGAGAAGCTTTCAACGAGACTAACCAGGCAATCCGGACCATATCTCGCTTCATGGAGT
GTGTCAACCTGAACAAGCTAGAACCCATAGCAACAGAAGTCTGGCTCATCAACAAGTCCATGGAGCTGCTGGATG
AGAGGAAGTTCTGGGCTGGTATTGTGTTCACTGGAATTACTCCAGGCAGCATTGAGCTGCCCCATCATGTCAAGT
ACAAGATCCGAATGGACATTGACAATGTGGAGAGGACAAATAAAATCAAGGATGGGTACTGGGACCCTGGTCCTC
GAGCTGACCCCTTTGAGGACATGCGGTACGTCTGGGGGGGCTTCGCCTACTTGCAGGATGTGGTGGAGCAGGCAA
TCATCAGGGTGCTGACGGGCACCGAGAAGAAAACTGGTGTCTATATGCAACAGATGCCCTATCCCTGTTACGTTG
ATGACATCTTTCTGCGGGTGATGAGCCGGTCAATGCCCCTCTTCATGACGCTGGCCTGGATTTACTCAGTGGCTG
TGATCATCAAGGGCATCGTGTATGAGAAGGAGGCACGGCTGAAAGAGACCATGCGGATCATGGGCCTGGACAACA
GCATACTCTGGTTTAGCTGGTTCATTAGTAGCCTCATTCCTCTTCTTGTGAGCGCTGGCCTGCTAGTGGTCATCC
TGAAGTTAGGAAACCTGCTGCCCTACAGTGATCCCAGCGTGGTGTTTGTCTTCCTGTCCGTGTTTGCTGTGGTGA
CAATCCTGCAGTGCTTCCTGATTAGCACACTCTTCTCCAGAGCCAACCTGGCAGCAGCCTGTGGGGGCATCATCT
ACTTCACGCTGTACCTGCCCTACGTCCTGTGTGTGGCATGGCAGGACTACGTGGGCTTCACACTCAAGATCTTCG
CTAGCCTGCTGTCTCCTGTGGCTTTTGGGTTTGGCTGTGAGTACTTTGCCCTTTTTGAGGAGCAGGGCATTGGAG
TGCAGTGGGACAACCTGTTTGAGAGTCCTGTGGAGGAAGATGGCTTCAATCTCACCACTTCGATCTCCATGATGC
TGTTTGACACCTTCCTCTATGGGGTGATGACCTGGTACATTGAGGCTGTCTTTCCAGGCCAGTACGGAATTCCCA
GGCCCTGGTATTTTCCTTGCACCAAGTCCTACTGGTTTGGCGAGGAAAGTGATGAGAAGAGCCACCCTGGTTCCA
ACCAGAAGAGAATGTCAGAAATCTGCATGGAGGAGGAACCCACCCACTTGAAGCTGGGCGTGTCCATTCAGAACC
TGGTAAAAGTCTACCGAGATGGGATGAAGGTGGCTGTCGATGGCCTGGCACTGAATTTTTATGAGGGCCAGATCA
CCTCCTTCCTGGGCCACAATGGAGCGGGGAAGACGACCACCATGTCAATCCTGACCGGGTTGTTCCCCCCGACCT
CGGGCACCGCCTACATCCTGGGAAAAGACATTCGCTCTGAGATGAGCACCATCCGGCAGAACCTGGGGGTCTGTC
CCCAGCATAACGTGCTGTTTGACATGCTGACTGTCGAAGAACACATCTGGTTCTATGCCCGCTTGAAAGGGCTCT
CTGAGAAGCACGTGAAGGCGGAGATGGAGCAGATGGCCCTGGATGTTGGTTTGCCATCAAGCAAGCTGAAAAGCA
AAACAAGCCAGCTGTCAGGTGGAATGCAGAGAAAGCTATCTGTGGCCTTGGCCTTTGTCGGGGGATCTAAGGTTG
TCATTCTGGATGAACCCACAGCTGGTGTGGACCCTTACTCCCGCAGGGGAATATGGGAGCTGCTGCTGAAATACC
GACAAGGCCGCACCATTATTCTCTCTACACACCACATGGATGAAGCGGACGTCCTGGGGGACAGGATTGCCATCA

FIGURE 727B

TCTCCCATGGGAAGCTGTGCTGTGTGGGCTCCTCCCTGTTTCTGAAGAACCAGCTGGGAACAGGCTACTACCTGA
CCTTGGTCAAGAAAGATGTGGAATCCTCCCTCAGTTCCTGCAGAAACAGTAGTAGCACTGTGTCATACCTGAAAA
AGGAGGACAGTGTTTCTCAGAGCAGTTCTGATGCTGGCCTGGGCAGCGACCATGAGAGTGACACGCTGACCATCG
ATGTCTCTGCTATCTCCAACCTCATCAGGAAGCATGTGTCTGAAGCCCGGCTGGTGGAAGACATAGGGCATGAGC
TGACCTATGTGCTGCCATATGAAGCTGCTAAGGAGGGAGCCTTTGTGGAACTCTTTCATGAGATTGATGACCGGC
TCTCAGACCTGGGCATTTCTAGTTATGGCATCTCAGAGACGACCCTGGAAGAAATATTCCTCAAGGTGGCCGAAG
AGAGTGGGGTGGATGCTGAGACCTCAGATGGTACCTTGCCAGCAAGACGAAACAGGCGGGCCTTCGGGGACAAGC
AGAGCTGTCTTCGCCCGTTCACTGAAGATGATGCTGCTGATCCAAATGATTCTGACATAGACCCAGAATCCAGAG
AGACAGACTTGCTCAGTGGGATGGATGGCAAAGGGTCCTACCAGGTGAAAGGCTGGAAACTTACACAGCAACAGT
TTGTGGCCCTTTTGTGGAAGAGACTGCTAATTGCCAGACGGAGTCGGAAAGGATTTTTTGCTCAGATTGTCTTGC
CAGCTGTGTTTGTCTGCATTGCCCTTGTGTTCAGCCTGATCGTGCCACCCTTTGGCAAGTACCCCAGCCTGGAAC
TTCAGCCCTGGATGTACAACGAACAGTACACATTTGTCAGCAATGATGCTCCTGAGGACACGGGAACCCTGGAAC
TCTTAAACGCCCTCACCAAAGACCCTGGCTTCGGGACCCGCTGTATGGAAGGAAACCCAATCCCAGACACGCCCT
GCCAGGCAGGGGAGGAAGAGTGGACCACTGCCCCAGTTCCCCAGACCATCATGGACCTCTTCCAGAATGGGAACT
GGACAATGCAGAACCCTTCACCTGCATGCCAGTGTAGCAGCGACAAAATCAAGAAGATGCTGCCTGTGTGTCCCC
CAGGGGCAGGGGGGCTGCCTCCTCCACAAAGAAAACAAAACACTGCAGATATCCTTCAGGACCTGACAGGAAGAA
ACATTTCGGATTATCTGGTGAAGACGTATGTGCAGATCATAGCCAAAAGCTTAAAGAACAAGATCTGGGTGAATG
AGTTTAGGTATGGCGGCTTTTCCCTGGGTGTCAGTAATACTCAAGCACTTCCTCCGAGTCAAGAAGTTAATGATG
CCATCAAACAAATGAAGAAACACCTAAAGCTGGCCAAGGACAGTTCTGCAGATCGATTTCTCAACAGCTTGGGAA
GATTTATGACAGGACTGGACACCAGAAATAATGTCAAGGTGTGGTTCAATAACAAGGGCTGGCATGCAATCAGCT
CTTTCCTGAATGTCATCAACAATGCCATTCTCCGGGCCAACCTGCAAAAGGGAGAGAACCCTAGCCATTATGGAA
TTACTGCTTTCAATCATCCCCTGAATCTCACCAAGCAGCAGCTCTCAGAGGTGGCTCTGATGACCACATCAGTGG
ATGTCCTTGTGTCCATCTGTGTCATCTTTGCAATGTCCTTCGTCCCAGCCAGCTTTGTCGTATTCCTGATCCAGG
AGCGGGTCAGCAAAGCAAAACACCTGCAGTTCATCAGTGGAGTGAAGCCTGTCATCTACTGGCTCTCTAATTTTG
TCTGGGATATGTGCAATTACGTTGTCCCTGCCACACTGGTCATTATCATCTTCATCTGCTTCCAGCAGAAGTCCT
ATGTGTCCTCCACCAATCTGCCTGTGCTAGCCCTTCTACTTTTGCTGTATGGGTGGTCAATCACACCTCTCATGT
ACCCAGCCTCCTTTGTGTTCAAGATCCCCAGCACAGCCTATGTGGTGCTCACCAGCGTGAACCTCTTCATTGGCA
TTAATGGCAGCGTGGCCACCTTTGTGCTGGAGCTGTTCACCGACAATAAGCTGAATAATATCAATGATATCCTGA
AGTCCGTGTTCTTGATCTTCCCACATTTTTGCCTGGGACGAGGGCTCATCGACATGGTGAAAAACCAGGCAATGG
CTGATGCCCTGGAAAGGTTTGGGGAGAATCGCTTTGTGTCACCATTATCTTGGGACTTGGTGGGACGAAACCTCT
TCGCCATGGCCGTGGAAGGGGTGGTGTTCTTCCTCATTACTGTTCTGATCCAGTACAGATTCTTCATCAGGCCCA
GACCTGTAAATGCAAAGCTATCTCCTCTGAATGATGAAGATGAAGATGTGAGGCGGGAAAGACAGAGAATTCTTG
ATGGTGGAGGCCAGAATGACATCTTAGAAATCAAGGAGTTGACGAAGATATATAGAAGGAAGCGGAAGCCTGCTG
TTGACAGGATTTGCGTGGGCATTCCTCCTGGTGAGTGCTTTGGGCTCCTGGGAGTTAATGGGGCTGGAAAATCAT
CAACTTTCAAGATGTTAACAGGAGATACCACTGTTACCAGAGGAGATGCTTTCCTTAACAAAAATAGTATCTTAT
CAAACATCCATGAAGTACATCAGAACATGGGCTACTGCCCTCAGTTTGATGCCATCACAGAGCTGTTGACTGGGA
GAGAACACGTGGAGTTCTTTGCCCTTTTGAGAGGAGTCCCAGAGAAAGAAGTTGGCAAGGTTGGTGAGTGGGCGA
TTCGGAAACTGGGCCTCGTGAAGTATGGAGAAAAATATGCTGGTAACTATAGTGGAGGCAACAAACGCAAGCTCT
CTACAGCCATGGCTTTGATCGGCGGGCCTCCTGTGGTGTTTCTGGATGAACCCACCACAGGCATGGATCCCAAAG
CCCGGCGGTTCTTGTGGAATTGTGCCCTAAGTGTTGTCAAGGAGGGGAGATCAGTAGTGCTTACATCTCATAGTA
TGGAAGAATGTGAAGCTCTTTGCACTAGGATGGCAATCATGGTCAATGGAAGGTTCAGGTGCCTTGGCAGTGTCC
AGCATCTAAAAAATAGGTTTGGAGATGGTTATACAATAGTTGTACGAATAGCAGGGTCCAACCCGGACCTGAAGC
CTGTCCAGGATTTCTTTGGACTTGCATTTCCTGGAAGTGTTCTAAAAGAGAAACACCGGAACATGCTACAATACC
AGCTTCCATCTTCATTATCTTCTCTGGCCAGGATATTCAGCATCCTCTCCCAGAGCAAAAAGCGACTCCACATAG
AAGACTACTCTGTTTCTCAGACAACACTTGACCAAGTATTTGTGAACTTTGCCAAGGACCAAAGTGATGATGACC
ACTTAAAAGACCTCTCATTACACAAAAACCAGACAGTAGTGGACGTTGCAGTTCTCACATCTTTTCTACAGGATG
AGAAAGTGAAAGAAAGCTATGTA**TGA**AGAATCCTGTTCATACGGGGTGGCTGAAAGTAAAGAGGAACTAGACTTT
CCTTTGCACCATGTGAAGTGTTGTGGAGAAAAGAGCCAGAAGTTGATGTGGGAAGAAGTAAACTGGATACTGTAC

FIGURE 727C

TGATACTATTCAATGCAATGCAATTCAATGCAATGAAAACAAAATTCCATTACAGGGGCAGTGCCTTTGTAGCCT
ATGTCTTGTATGGCTCTCAAGTGAAAGACTTGAATTTAGTTTTTTACCTATACCTATGTGAAACTCTATTATGGA
ACCCAATGGACATATGGGTTTGAACTCACACTTTTTTTTTTTTTTTGTTCCTGTGTATTCTCATTGGGGTTGCAA
CAATAATTCATCAAGTAATCATGGCCAGCGATTATTGATCAAAATCAAAAGGTAATGCACATCCTCATTCACTAA
GCCATGCCATGCCCAGGAGACTGGTTTCCCGGTGACACATCCATTGCTGGCAATGAGTGTGCCAGAGTTATTAGT
GCCAAGTTTTTCAGAAAGTTTGAAGCACCATGGTGTGTCATGCTCACTTTTGTGAAAGCTGCTCTGCTCAGAGTC
TATCAACATTGAATATCAGTTGACAGAATGGTGCCATGCGTGGCTAACATCCTGCTTTGATTCCCTCTGATAAGC
TGTTCTGGTGGCAGTAACATGCAACAAAAATGTGGGTGTCTCTAGGCACGGGAAACTTGGTTCCATTGTTATATT
GTCCTATGCTTCGAGCCATGGGTCTACAGGGTCATCCTTATGAGACTCTTAAATATACTTAGATCCTGGTAAGAG
GCAAAGAATCAACAGCCAAACTGCTGGGGCTGCAAGCTGCTGAAGCCAGGGCATGGGATTAAAGAGATTGTGCGT
TCAAACCTAGGGAAGCCTGTGCCCATTTGTCCTGACTGTCTGCTAACATGGTACACTGCATCTCAAGATGTTTAT
CTGACACAAGTGTATTATTTCTGGCTTTTTGAATTAATCTAGAAAATGAAAAGATGGAGTTGTATTTTGACAAAA
ATGTTTGTACTTTTTAATGTTATTTGGAATTTTAAGTTCTATCAGTGACTTCTGAATCCTTAGAATGGCCTCTTT
GTAGAACCCTGTGGTATAGAGGAGTATGGCCACTGCCCCACTATTTTTATTTTCTTATGTAAGTTTGCATATCAG
TCATGACTAGTGCCTAGAAAGCAATGTGATGGTCAGGATCTCATGACATTATATTTGAGTTTCTTTCAGATCATT
TAGGATACTCTTAATCTCACTTCATCAATCAAATATTTTTTGAGTGTATGCTGTAGCTGAAAGAGTATGTACGTA
CGTATAAGACTAGAGAGATATTAAGTCTCAGTACACTTCCTGTGCCATGTTATTCAGCTCACTGGTTTACAAATA
TAGGTTGTCTTGTGGTTGTAGGAGCCCACTGTAACAATATTGGGCAGCCTTTTTTTTTTTTTTTTAATTGCAACA
ATGCAAAAGCCAAGAAAGTATAAGGGTCACAAGTTTAAACAATGAATTCTTCAACAGGGAAAACAGCTAGCTTGA
AAACTTGCTGAAAAACACAACTTGTGTTTATGGCATTTAGTACCTTCAAATAATTGGCTTTGCAGATATTGGATA
CCCCATTAAATCTGACAGTCTCAAATTTTTCATCTCTTCAATCACTAGTCAAGAAAAATATAAAAACAACAAATA
CTTCCATATGGAGCATTTTTCAGAGTTTTCTAACCCAGTCTTATTTTTCTAGTCAGTAAACATTTGTAAAAATAC
TGTTTCACTAATACTTACTGTTAACTGTCTTGAGAGAAAAGAAAAATATGAGAGAACTATTGTTTGGGGAAGTTC
AAGTGATCTTTCAATATCATTACTAACTTCTTCCACTTTTTCCAAAATTTGAATATTAACGCTAAAGGTGTAAGA
CTTCAGATTTCAAATTAATCTTTCTATATTTTTTAAATTTACAGAATATTATATAACCCACTGCTGAAAAAGAAA
AAAATGATTGTTTTAGAAGTTAAAGTCAATATTGATTTTAAATATAAGTAATGAAGGCATATTTCCAATAACTAG
TGATATGGCATCGTTGCAATTTACAGTATCTTCAAAAATACAGAATTTATAGAATAATTTCTCCTCATTTAATAT
TTTTCAAAATCAAAGTTATGGTTTCCTCATTTTACTAAAATCGTATTCTAATTCTTCATTATAGTAAATCTATGA
GCAACTCCTTACTTCGGTTCCTCTGATTTCAAGGCCATATTTTAAAAAATCAAAAGGCACTGTGAACTATTTTGA
AGAAAACACGACATTTTAATACAGATTGAAAGGACCTCTTCTGAAGCTAGAAACAATCTATAGTTATACATCTTC
ATTAATACTGTGTTACCTTTTAAAATAGTAATTTTTTACATTTTCCTGTGTAAACCTAATTGTGGTAGAAATTTT
TACCAACTCTATACTCAATCAAGCAAAATTTCTGTATATTCCCTGTGGAATGTACCTATGTGAGTTTCAGAAATT
CTCAAAATACGTGTTCAAAAATTTCTGCTTTTGCATCTTTGGGACACCTCAGAAAACTTATTAACAACTGTGAAT
ATGAGAAATACAGAAGAAAATAATAAGCCCTCTATACATAAATGCCCAGCACAATTCATTGTTAAAAAACAACCA
AACCTCACACTACTGTATTTCATTATCTGTACTGAAAGCAAATGCTTTGTGACTATTAAATGTTGCACATCATTC
ATTCACTGTATAGTAATCATTGACTAAAGCCATTTGCTGTGTTTTCTTCTTGTGGXTGXATATATCAGGTAAAAT
ATTTTCCAAAGAGCCATGTGTCATGTAATACTGAACCCTTTGATATTGAGACATTAATTTGGACCCTTGGTATTA
TCTACTAGAATAATGTAATACTGXAGAAATATTGCTCTAATTCTTTCAAAATGGTGCATCCCCCTTAAAAXGTTC
TATTTCCATAAGGATTTAGCTTGCTTATCCCTTCTTATACCCTAAGATGAAGCTGTTTTTGTGCTCTTTGTTCAT
CATTGGCCCTCATTCCAAGCACTTTACGCTGTCTGTAATGGGATCTATTTTTGCACTGGAATATCTGAGAATTGC
AAAACTAGACAAAAGTTTCACAACAGATTTCTAAGTTAAATCATTTTCATTAAAAGGAAAAAAGAAAAAAAATTT
TGTATGTCAATAACTTTATATGAAGTATTAAAATGCATATTTCTATGTTGTAATATAATGAGTCACAAAATAAAG
CTGTGACAGTTCTGTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAA

FIGURE 728

MACWPQLRLLLWKNLTFRRRQTCQLLLEVAWPLFIFLILISVRLSYPPYEQHECHFPNKAMPSAGTLPWVQGIIC
NANNPCFRYPTPGEAPGVVGNFNKSIVARLFSDARRLLLYSQKDTSMKDMRKVLRTLQQIKKSSSNLKLQDFLVD
NETFSGFLYHNLSLPKSTVDKMLRADVILHKVFLQGYQLHLTSLCNGSKSEEMIQLGDQEVSELCGLPKEKLAAA
ERVLRSNMDILKPILRTLNSTSPFPSKELAEATKTLLHSLGTLAQELFSMRSWSDMRQEVMFLTNVNSSSSSTQI
YQAVSRIVCGHPEGGGLKIKSLNWYEDNNYKALFGGNGTEEDAETFYDNSTTPYCNDLMKNLESSPLSRIIWKAL
KPLLVGKILYTPDTPATRQVMAEVNKTFQELAVFHDLEGMWEELSPKIWTFMENSQEMDLVRMLLDSRDNDHFWE
QQLDGLDWTAQDIVAFLAKHPEDVQSSNGSVYTWREAFNETNQAIRTISRFMECVNLNKLEPIATEVWLINKSME
LLDERKFWAGIVFTGITPGSIELPHHVKYKIRMDIDNVERTNKIKDGYWDPGPRADPFEDMRYVWGGFAYLQDVV
EQAIIRVLTGTEKKTGVYMQQMPYPCYVDDIFLRVMSRSMPLFMTLAWIYSVAVIIKGIVYEKEARLKETMRIMG
LDNSILWFSWFISSLIPLLVSAGLLVVILKLGNLLPYSDPSVVFVFLSVFAVVTILQCFLISTLFSRANLAAACG
GIIYFTLYLPYVLCVAWQDYVGFTLKIFASLLSPVAFGFGCEYFALFEEQGIGVQWDNLFESPVEEDGFNLTTSI
SMMLFDTFLYGVMTWYIEAVFPGQYGIPRPWYFPCTKSYWFGEESDEKSHPGSNQKRMSEICMEEEPTHLKLGVS
IQNLVKVYRDGMKVAVDGLALNFYEGQITSFLGHNGAGKTTTMSILTGLFPPTSGTAYILGKDIRSEMSTIRQNL
GVCPQHNVLFDMLTVEEHIWFYARLKGLSEKHVKAEMEQMALDVGLPSSKLKSKTSQLSGGMQRKLSVALAFVGG
SKVVILDEPTAGVDPYSRRGIWELLLKYRQGRTIILSTHHMDEADVLGDRIAIISHGKLCCVGSSLFLKNQLGTG
YYLTLVKKDVESSLSSCRNSSSTVSYLKKEDSVSQSSSDAGLGSDHESDTLTIDVSAISNLIRKHVSEARLVEDI
GHELTYVLPYEAAKEGAFVELFHEIDDRLSDLGISSYGISETTLEEIFLKVAEESGVDAETSDGTLPARRNRRAF
GDKQSCLRPFTEDDAADPNDSDIDPESRETDLLSGMDGKGSYQVKGWKLTQQQFVALLWKRLLIARRSRKGFFAQ
IVLPAVFVCIALVFSLIVPPFGKYPSLELQPWMYNEQYTFVSNDAPEDTGTLELLNALTKDPGFGTRCMEGNPIP
DTPCQAGEEEWTTAPVPQTIMDLFQNGNWTMQNPSPACQCSSDKIKKMLPVCPPGAGGLPPPQRKQNTADILQDL
TGRNISDYLVKTYVQIIAKSLKNKIWVNEFRYGGFSLGVSNTQALPPSQEVNDAIKQMKKHLKLAKDSSADRFLN
SLGRFMTGLDTRNNVKVWFNNKGWHAISSFLNVINNAILRANLQKGENPSHYGITAFNHPLNLTKQQLSEVALMT
TSVDVLVSICVIFAMSFVPASFVVFLIQERVSKAKHLQFISGVKPVIYWLSNFVWDMCNYVVPATLVIIIFICFQ
QKSYVSSTNLPVLALLLLLYGWSITPLMYPASFVFKIPSTAYVVLTSVNLFIGINGSVATFVLELFTDNKLNNIN
DILKSVFLIFPHFCLGRGLIDMVKNQAMADALERFGENRFVSPLSWDLVGRNLFAMAVEGVVFFLITVLIQYRFF
IRPRPVNAKLSPLNDEDEDVRRERQRILDGGGQNDILEIKELTKIYRRKRKPAVDRICVGIPPGECFGLLGVNGA
GKSSTFKMLTGDTTVTRGDAFLNKNSILSNIHEVHQNMGYCPQFDAITELLTGREHVEFFALLRGVPEKEVGKVG
EWAIRKLGLVKYGEKYAGNYSGGNKRKLSTAMALIGGPPVVFLDEPTTGMDPKARRFLWNCALSVVKEGRSVVLT
SHSMEECEALCTRMAIMVNGRFRCLGSVQHLKNRFGDGYTIVVRIAGSNPDLKPVQDFFGLAFPGSVLKEKHRNM
LQYQLPSSLSSLARIFSILSQSKKRLHIEDYSVSQTTLDQVFVNFAKDQSDDDHLKDLSLHKNQTVVDVAVLTSF
LQDEKVKESYV

FIGURE 729A

GCGAGCGCAGCGGAGCCTGGAGAGAAGGCGCTGGGCTGCGAGGGCGCGAGGGCGCGAGGGCAGGGGGCAACCGGA
CCCCGCCCGCACCC**ATG**GCGCCCGTCGCCGTCTGGGCCGCGCTGGCCGTCGGACTGGAGCTCTGGGCTGCGGCGC
ACGCCTTGCCCGCCCAGGTGGCATTTACACCCTACGCCCCGGAGCCCGGGAGCACATGCCGGCTCAGAGAATACT
ATGACCAGACAGCTCAGATGTGCTGCAGCAAATGCTCGCCGGGCCAACATGCAAAAGTCTTCTGTACCAAGACCT
CGGACACCGTGTGTGACTCCTGTGAGGACAGCACATACACCCAGCTCTGGAACTGGGTTCCCGAGTGCTTGAGCT
GTGGCTCCCGCTGTAGCTCTGACCAGGTGGAAACTCAAGCCTGCACTCGGGAACAGAACCGCATCTGCACCTGCA
GGCCCGGCTGGTACTGCGCGCTGAGCAAGCAGGAGGGGTGCCGGCTGTGCGCGCCGCTGCGCAAGTGCCGCCCGG
GCTTCGGCGTGGCCAGACCAGGAACTGAAACATCAGACGTGGTGTGCAAGCCCTGTGCCCCGGGGACGTTCTCCA
ACACGACTTCATCCACGGATATTTGCAGGCCCCACCAGATCTGTAACGTGGTGGCCATCCCTGGGAATGCAAGCA
TGGATGCAGTCTGCACGTCCACGTCCCCCACCCGGAGTATGGCCCCAGGGGCAGTACACTTACCCCAGCCAGTGT
CCACACGATCCCAACACACGCAGCCAACTCCAGAACCCAGCACTGCTCCAAGCACCTCCTTCCTGCTCCCAATGG
GCCCCAGCCCCCCAGCTGAAGGGAGCACTGGCGACTTCGCTCTTCCAGTTGGACTGATTGTGGGTGTGACAGCCT
TGGGTCTACTAATAATAGGAGTGGTGAACTGTGTCATCATGACCCAGGTGAAAAAGAAGCCCTTGTGCCTGCAGA
GAGAAGCCAAGGTGCCTCACTTGCCTGCCGATAAGGCCCGGGGTACACAGGGCCCCGAGCAGCAGCACCTGCTGA
TCACAGCGCCGAGCTCCAGCAGCAGCTCCCTGGAGAGCTCGGCCAGTGCGTTGGACAGAAGGGCGCCCACTCGGA
ACCAGCCACAGGCACCAGGCGTGGAGGCCAGTGGGGCCGGGGAGGCCCGGGCCAGCACCGGGAGCTCAGATTCTT
CCCCTGGTGGCCATGGGACCCAGGTCAATGTCACCTGCATCGTGAACGTCTGTAGCAGCTCTGACCACAGCTCAC
AGTGCTCCTCCCAAGCCAGCTCCACAATGGGAGACACAGATTCCAGCCCCTCGGAGTCCCCGAAGGACGAGCAGG
TCCCCTTCTCCAAGGAGGAATGTGCCTTTCGGTCACAGCTGGAGACGCCAGAGACCCTGCTGGGGAGCACCGAAG
AGAAGCCCCTGCCCCTTGGAGTGCCTGATGCTGGGATGAAGCCCAGT**TAA**CCAGGCCGGTGTGGGCTGTGTCGTA
GCCAAGGTGGGCTGAGCCCTGGCAGGATGACCCTGCGAAGGGGCCCTGGTCCTTCCAGGCCCCCACCACTAGGAC
TCTGAGGCTCTTTCTGGGCCAAGTTCCTCTAGTGCCCTCCACAGCCGCAGCCTCCCTCTGACCTGCAGGCCAAGA
GCAGAGGCAGCGAGTTGGGGAAAGCCTCTGCTGCCATGGTGTGTCCCTCTCGGAAGGCTGGCTGGGCATGGACGT
TCGGGGCATGCTGGGGCAAGTCCCTGACTCTCTGTGACCTGCCCCGCCCAGCTGCACCTGCCAGCCTGGCTTCTG
GAGCCCTTGGGTTTTTTGTTTGTTTGTTTGTTTGTTTGTTTGTTTCTCCCCCTGGGCTCTGCCCAGCTCTGGCTT
CCAGAAAACCCCAGCATCCTTTTCTGCAGAGGGGCTTTCTGGAGAGGAGGGATGCTGCCTGAGTCACCCATGAAG
ACAGGACAGTGCTTCAGCCTGAGGCTGAGACTGCGGGATGGTCCTGGGGCTCTGTGTAGGGAGGAGGTGGCAGCC
CTGTAGGGAACGGGGTCCTTCAAGTTAGCTCAGGAGGCTTGGAAAGCATCACCTCAGGCCAGGTGCAGTGGCTCA
CGCCTATGATCCCAGCACTTTGGGAGGCTGAGGCGGGTGGATCACCTGAGGTTAGGAGTTCGAGACCAGCCTGGC
CAACATGGTAAAACCCCATCTCTACTAAAAATACAGAAATTAGCCGGGCGTGGTGGCGGGCACCTATAGTCCCAG
CTACTCAGAAGCCTGAGGCTGGGAAATCGTTTGAACCCGGGAAGCGGAGGTTGCAGGGAGCCGAGATCACGCCAC
TGCACTCCAGCCTGGGCGACAGAGCGAGAGTCTGTCTCAAAAGAAAAAAAAAAAAGCACCGCCTCCAAATGCTAA
CTTGTCCTTTTGTACCATGGTGTGAAAGTCAGATGCCCAGAGGGCCCAGGCAGGCCACCATATTCAGTGCTGTGG
CCTGGGCAAGATAACGCACTTCTAACTAGAAATCTGCCAATTTTTTAAAAAAGTAAGTACCACTCAGGCCAACAA
GCCAACGACAAAGCCAAACTCTGCCAGCCACATCCAACCCCCCACCTGCCATTTGCACCCTCCGCCTTCACTCCG
GTGTGCCTGCAGCCCCGCGCCTCCTTCCTTGCTGTCCTAGGCCACACCATCTCCTTTCAGGGAATTTCAGGAACT
AGAGATGACTGAGTCCTCGTAGCCATCTCTCTACTCCTACCTCAGCCTAGACCCTCCTCCTCCCCCAGAGGGGTG
GGTTCCTCTTCCCCACTCCCCACCTTCAATTCCTGGGCCCCAAACGGGCTGCCCTGCCACTTTGGTACATGGCCA
GTGTGATCCCAAGTGCCAGTCTTGTGTCTGCGTCTGTGTTGCGTGTCGTGGGTGTGTGTAGCCAAGGTCGGTAAG
TTGAATGGCCTGCCTTGAAGCCACTGAAGCTGGGATTCCTCCCCATTAGAGTCAGCCTTCCCCCTCCCAGGGCCA
GGGCCCTGCAGAGGGGAAACCAGTGTAGCCTTGCCCGGATTCTGGGAGGAAGCAGGTTGAGGGGCTCCTGGAAAG
GCTCAGTCTCAGGAGCATGGGGATAAAGGAGAAGGCATGAAATTGTCTAGCAGAGCAGGGGCAGGGTGATAAATT
GTTGATAAATTCCACTGGACTTGAGCTTGGCAGCTGAACTATTGGAGGGTGGGAGAGCCCAGCCATTACCATGGA
GACAAGAAGGGTTTTCCACCCTGGAATCAAGATGTCAGACTGGCTGGCTGCAGTGACGTGCACCTGTACTCAGGA
GGCTGAGGGGAGGATCACTGGAGCCCAGGAGTTTGAGGCTGCAGCGAGCTATGATCGCGCCACTACACTCCAGCC
TGAGCAACAGAGTGAGACCCTGTCTCTTAAAGAAAAAAAAAGTCAGACTGCTGGGACTGGCCAGGTTTCTGCCCA
CATTGGACCCACATGAGGACATGATGGAGCGCACCTGCCCCCTGGTGGACAGTCCTGGGAGAACCTCAGGCTTCC
TTGGCATCACAGGGCAGAGCCGGGAAGCGATGAATTTGGAGACTCTGTGGGGCCTTGGTTCCCTTGTGTGTGTGT

FIGURE 729B

GTTGATCCCAAGACAATGAAAGTTTGCACTGTATGCTGGACGGCATTCCTGCTTATCAATAAACCTGTTTGTTTT
AAAAAAAA

FIGURE 730

MAPVAVWAALAVGLELWAAAHALPAQVAFTPYAPEPGSTCRLREYYDQTAQMCCSKCSPGQHAKVFCTKTSDTVC
DSCEDSTYTQLWNWVPECLSCGSRCSSDQVETQACTREQNRICTCRPGWYCALSKQEGCRLCAPLRKCRPGFGVA
RPGTETSDVVCKPCAPGTFSNTTSSTDICRPHQICNVVAIPGNASMDAVCTSTSPTRSMAPGAVHLPQPVSTRSQ
HTQPTPEPSTAPSTSFLLPMGPSPPAEGSTGDFALPVGLIVGVTALGLLIIGVVNCVIMTQVKKKPLCLQREAKV
PHLPADKARGTQGPEQQHLLITAPSSSSSSLESSASALDRRAPTRNQPQAPGVEASGAGEARASTGSSDSSPGGH
GTQVNVTCIVNVCSSSDHSSQCSSQASSTMGDTDSSPSESPKDEQVPFSKEECAFRSQLETPETLLGSTEEKPLP
LGVPDAGMKPS

FIGURE 731A

GGCGCGGGCGGCCTGGAGCCCCGGGAGCGGCGCGCGGTCCCGGCCCAGCCGGCTCTCCTGGCCTCGCGCTGCA
CATTCTCTCCTGGCGGCGGCGCCACCTGCAGTAGCGTTCGCCCGAAC**ATG**GCGACACGGAGCAGCAGGAGGGAGT
CGCGACTCCCGTTCCTATTCACCCTGGTCGCACTGCTGCCGCCCGGAGCTCTCTGCGAAGTCTGGACGCAGAGGC
TGCACGGCGGCAGCGCGCCCTTGCCCCAGGACCGGGGCTTCCTCGTGGTGCAGGGCGACCCGCGCGAGCTGCGGC
TGTGGGCGCGCGGGGATGCCAGGGGGGCGAGCCGCGCGGACGAGAAGCCGCTCCGGAGGAAACGGAGCGCTGCCC
TGCAGCCCGAGCCCATCAAGGTGTACGGACAGGTTAGTCTGAATGATTCCCACAATCAGATGGTGGTGCACTGGG
CTGGAGAGAAAAGCAACGTGATCGTGGCCTTGGCCCGAGATAGCCTGGCATTGGCGAGGCCCAAGAGCAGTGATG
TGTACGTGTCTTACGACTATGGAAAATCATTCAAGAAAATTTCAGACAAGTTAAACTTTGGCTTGGGAAATAGGA
GTGAAGCTGTTATCGCCCAGTTCTACCACAGCCCTGCGGACAACAAGCGGTACATCTTTGCAGACGCTTATGCCC
AGTACCTCTGGATCACGTTTGACTTCTGCAACACTCTTCAAGGCTTTTCCATCCCATTTCGGGCAGCTGATCTCC
TCCTACACAGTAAGGCCTCCAACCTTCTCTTGGGCTTTGACAGGTCCCACCCCAACAAGCAGCTGTGGAAGTCAG
ATGACTTTGGCCAGACCTGGATCATGATTCAGGAACATGTCAAGTCCTTTTCTTGGGGAATTGATCCCTATGACA
AACCAAATACCATCTACATTGAACGACACGAACCCTCTGGCTACTCCACTGTCTTCCGAAGTACAGATTTCTTCC
AGTCCCGGGAAAACCAGGAAGTGATCCTTGAGGAAGTGAGAGATTTTCAGCTTCGGGACAAGTACATGTTTGCTA
CAAAGGTGGTGCATCTCTTGGGCAGTGAACAGCAGTCTTCTGTCCAGCTCTGGGTCTCCTTTGGCCGGAAGCCCA
TGAGAGCAGCCCAGTTTGTCACAAGACATCCTATTAATGAATATTACATCGCAGATGCCTCCGAGGACCAGGTGT
TTGTGTGTGTCAGCCACAGTAACAACCGCACCAATTTATACATCTCAGAGGCAGAGGGGCTGAAGTTCTCCCTGT
CCTTGGAGAACGTGCTCTATTACAGCCCAGGAGGGGCCGGCAGTGACACCTTGGTGAGGTATTTTGCAAATGAAC
CATTTGCTGACTTCCACCGAGTGGAAGGATTGCAAGGAGTCTACATTGCTACTCTGATTAATGGTTCTATGAATG
AGGAGAACATGAGATCGGTCATCACCTTTGACAAAGGGGGAACCTGGGAGTTTCTTCAGGCTCCAGCCTTCACGG
GATATGGAGAGAAAATCAATTGTGAGCTTTCCCAGGGCTGTTCCCTTCATCTGGCTCAGCGCCTCAGTCAGCTCC
TCAACCTCCAGCTCCGGAGAATGCCCATCCTGTCCAAGGAGTCGGCTCCAGGCCTCATCATCGCCACTGGCTCAG
TGGGAAAGAACTTGGCTAGCAAGACAAACGTGTACATCTCTAGCAGTGCTGGAGCCAGGTGGCGAGAGGCACTTC
CTGGACCTCACTACTACACATGGGGAGACCACGGCGGAATCATCACGGCCATTGCCCAGGGCATGGAAACCAACG
AGCTAAAATACAGTACCAATGAAGGGGAGACCTGGAAAACATTCATCTTCTCTGAGAAGCCAGTGTTTGTGTATG
GCCTCCTCACAGAACCTGGGGAGAAGAGCACTGTCTTCACCATCTTTGGCTCGAACAAAGAGAATGTCCACAGCT
GGCTGATCCTCCAGGTCAATGCCACGGATGCCTTGGGAGTTCCCTGCACAGAGAATGACTACAAGCTGTGGTCAC
CATCTGATGAGCGGGGGAATGAGTGTTTGCTGGGACACAAGACTGTTTTCAAACGGCGGACCCCCCATGCCACAT
GCTTCAATGGAGAGGACTTTGACAGGCCGGTGGTCGTGTCCAACTGCTCCTGCACCCGGGAGGACTATGAGTGTG
ACTTCGGTTTCAAGATGAGTGAAGATTTGTCATTAGAGGTTTGTGTTCCAGATCCGGAATTTTCTGGAAAGTCAT
ACTCCCCTCCTGTGCCTTGCCCTGTGGGTTCTACTTACAGGAGAACGAGAGGCTACCGGAAGATTTCTGGGGACA
CTTGTAGCGGAGGAGATGTTGAAGCGCGACTGGAAGGAGAGCTGGTCCCCTGTCCCCTGGCAGAAGAGAACGAGT
TCATTCTGTATGCTGTGAGGAAATCCATCTACCGCTATGACCTGGCCTCGGGAGCCACCGAGCAGTTGCCTCTCA
CCGGGCTACGGGCAGCAGTGGCCCTGGACTTTGACTATGAGCACAACTGTTTGTATTGGTCCGACCTGGCCTTGG
ACGTCATCCAGCGCCTCTGTTTGAATGGAAGCACAGGGCAAGAGGTGATCATCAATTCTGGCCTGGAGACAGTAG
AAGCTTTGGCTTTTGAACCCCTCAGCCAGCTGCTTTACTGGGTAGATGCAGGCTTCAAAAAGATTGAGGTAGCTA
ATCCAGATGGCGACTTCCGACTCACAATCGTCAATTCCTCTGTGCTTGATCGTCCCAGGGCTCTGGTCCTCGTGC
CCCAAGAGGGGGTGATGTTCTGGACAGACTGGGGAGACCTGAAGCCTGGGATTTATCGGAGCAATATGGATGGTT
CTGCTGCCTATCACCTGGTGTCTGAGGATGTGAAGTGGCCCAATGGCATCTCTGTGGACGACCAGTGGATTTACT
GGACGGATGCCTACCTGGAGTGCATAGAGCGGATCACGTTCAGTGGCCAGCAGCGCTCTGTCATTCTGGACAACC
TCCCGCACCCCTATGCCATTGCTGTCTTTAAGAATGAAATCTACTGGGATGACTGGTCACAGCTCAGCATATTCC
GAGCTTCCAAATACAGTGGGTCCCAGATGGAGATTCTGGCAAACCAGCTCACGGGGCTCATGGACATGAAGATTT
TCTACAAGGGGAAGAACACTGGAAGCAATGCCTGTGTGCCCAGGCCATGCAGCCTGCTGTGCCTGCCCAAGGCCA
ACAACAGTAGAAGCTGCAGGTGTCCAGAGGATGTGTCCAGCAGTGTGCTTCCATCAGGGGACCTGATGTGTGACT
GCCCTCAGGGCTATCAGCTCAAGAACAATACCTGTGTCAAAGAAGAGAACACCTGTCTTCGCAACCAGTATCGCT
GCAGCAACGGGAACTGTATCAACAGCATTTGGTGGTGTGACTTTGACAACGACTGTGGAGACATGAGCGATGAGA
GAAACTGCCCTACCACCATCTGTGACCTGGACACCCAGTTTCGTTGCCAGGAGTCTGGGACTTGTATCCCACTGT
CCTATAAATGTGACCTTGAGGATGACTGTGGAGACAACAGTGATGAAAGTCATTGTGAAATGCACCAGTGCCGGA

FIGURE 731B

GTGACGAGTACAACTGCAGTTCCGGCATGTGCATCCGCTCCTCCTGGGTATGTGACGGGGACAACGACTGCAGGG
ACTGGTCTGATGAAGCCAACTGTACCGCCATCTATCACACCTGTGAGGCCTCCAACTTCCAGTGCCGAAACGGGC
ACTGCATCCCCCAGCGGTGGGCGTGTGACGGGGATACGGACTGCCAGGATGGTTCCGATGAGGATCCAGTCAACT
GTGAGAAGAAGTGCAATGGATTCCGCTGCCCAAACGGCACTTGCATCCCATCCAGCAAACATTGTGATGGTCTGC
GTGATTGCTCTGATGGCTCCGATGAACAGCACTGCGAGCCCCTCTGTACGCACTTCATGGACTTTGTGTGTAAGA
ACCGCCAGCAGTGCCTGTTCCACTCCATGGTCTGTGACGGAATCATCCAGTGCCGCGACGGGTCCGATGAGGATG
CGGCGTTTGCAGGATGCTCCCAAGATCCTGAGTTCCACAAGGTATGTGATGAGTTCGGTTTCCAGTGTCAGAATG
GAGTGTGCATCAGTTTGATTTGGAAGTGCGACGGGATGGATGATTGCGGCGATTATTCTGATGAAGCCAACTGCG
AAAACCCCACAGAAGCCCCAAACTGCTCCCGCTACTTCCAGTTTCGGTGTGAGAATGGCCACTGCATCCCCAACA
GATGGAAATGTGACAGGGAGAACGACTGTGGGGACTGGTCTGATGAGAAGGATTGTGGAGATTCACATATTCTTC
CCTTCTCGACTCCTGGGCCCTCCACGTGTCTGCCCAATTACTACCGCTGCAGCAGTGGGACCTGCGTGATGGACA
CCTGGGTGTGCGACGGGTACCGAGATTGTGCAGATGGCTCTGACGAGGAAGCCTGCCCCTTGCTTGCAAACGTCA
CTGCTGCCTCCACTCCCACCCAACTTGGGCGATGTGACCGATTTGAGTTCGAATGCCACCAACCGAAGACGTGTA
TTCCCAACTGGAAGCGCTGTGACGGCCACCAAGATTGCCAGGATGGCCGGGACGAGGCCAATTGCCCCACACACA
GCACCTTGACTTGCATGAGCAGGGAGTTCCAGTGCGAGGACGGGGAGGCCTGCATTGTGCTCTCGGAGCGCTGCG
ACGGCTTCCTGGACTGCTCGGACGAGAGCGATGAAAAGGCCTGCAGTGATGAGTTGACTGTGTACAAAGTACAGA
ATCTTCAGTGGACAGCTGACTTCTCTGGGGATGTGACTTTGACCTGGATGAGGCCCAAAAAAATGCCCTCTGCTT
CTTGTGTATATAATGTCTACTACAGGGTGGTTGGAGAGAGCATATGGAAGACTCTGGAGACCCACAGCAATAAGA
CAAACACTGTATTAAAAGTCTTGAAACCAGATACCACGTATCAGGTTAAAGTACAGGTTCAGTGTCTCAGCAAGG
CACACAACACCAATGACTTTGTGACCCTGAGGACCCCAGAGGGATTGCCAGATGCCCCTCGAAATCTCCAGCTGT
CACTCCCCAGGGAAGCAGAAGGTGTGATTGTAGGCCACTGGGCTCCTCCCATCCACACCCATGGCCTCATCCGTG
AGTACATTGTAGAATACAGCAGGAGTGGTTCCAAGATGTGGGCCTCCCAGAGGGCTGCTAGTAACTTTACAGAAA
TCAAGAACTTATTGGTCAACACTCTATACACCGTCAGAGTGGCTGCGGTGACTAGTCGTGGAATAGGAAACTGGA
GCGATTCTAAATCCATTACCACCATAAAAGGAAAAGTGATCCCACCACCAGATATCCACATTGACAGCTATGGTG
AAAATTATCTAAGCTTCACCCTGACCATGGAGAGTGATATCAAGGTGAATGGCTATGTGGTGAACCTTTTCTGGG
CATTTGACACCCACAAGCAAGAGAGGAGAACTTTGAACTTCCGAGGAAGCATATTGTCACACAAAGTTGGCAATC
TGACAGCTCATACATCCTATGAGATTTCTGCCTGGGCCAAGACTGACTTGGGGGATAGCCCTCTGGCATTTGAGC
ATGTTATGACCAGAGGGGTTCGCCCACCTGCACCTAGCCTCAAGGCCAAAGCCATCAACCAGACTGCAGTGGAAT
GTACCTGGACCGGCCCCCGGAATGTGGTTTATGGTATTTTCTATGCCACGTCCTTTCTTGACCTCTATCGCAACC
CGAAGAGCTTGACTACTTCACTCCACAACAAGACGGTCATTGTCAGTAAGGATGAGCAGTATTTGTTTCTGGTCC
GTGTAGTGGTACCCTACCAGGGGCCATCCTCTGACTACGTTGTAGTGAAGATGATCCCGGACAGCAGGCTTCCAC
CCCGTCACCTGCATGTGGTTCATACGGGCAAAACCTCCGTGGTCATCAAGTGGGAATCACCGTATGACTCTCCTG
ACCAGGACTTGTTGTATGCAATTGCAGTCAAAGATCTCATAAGAAAGACTGACAGGAGCTACAAAGTAAAATCCC
GTAACAGCACTGTGGAATACACCCTTAACAAGTTGGAGCCTGGCGGGAAATACCACATCATTGTCCAACTGGGGA
ACATGAGCAAAGATTCCAGCATAAAAATTACCACAGTTTCATTATCAGCACCTGATGCCTTAAAAATCATAACAG
AAAATGATCATGTTCTTCTGTTTTGGAAAAGCCTGGCTTTAAAGGAAAAGCATTTTAATGAAAGCAGGGGCTATG
AGATACACATGTTTGATAGTGCCATGAATATCACAGCTTACCTTGGGAATACTACTGACAATTTCTTTAAAATTT
CCAACCTGAAGATGGGTCATAATTACACGTTCACCGTCCAAGCAAGATGCCTTTTTGGCAACCAGATCTGTGGGG
AGCCTGCCATCCTGCTGTACGATGAGCTGGGGTCTGGTGCAGATGCATCTGCAACGCAGGCTGCCAGATCTACGG
ATGTTGCTGCTGTGGTGGTGCCCATCTTATTCCTGATACTGCTGAGCCTGGGGGTGGGGTTTGCCATCCTGTACA
CGAAGCACCGGAGGCTGCAGAGCAGCTTCACCGCCTTCGCCAACAGCCACTACAGCTCCAGGCTGGGGTCCGCAA
TCTTCTCCTCTGGGGATGACCTGGGGGAAGATGATGAAGATGCCCCTATGATAACTGGATTTTCAGATGACGTCC
CCATGGTGATAGCCTGAAAGAGCTTTCCTCACTAGAAACCAAATGGTGTAAATATTTTATTTGATAAAGATAGTT
GATGGTTTATTTTAAAAGATGCACTTTGAGTTGCAATATGTTATTTTTATATGGGCCAAAAACAAAAAACAAAAA
AAAAAA

FIGURE 732

MATRSSRRESRLPFLFTLVALLPPGALCEVWTQRLHGGSAPLPQDRGFLVVQGDPRELRLWARGDARGASRADEK
PLRRKRSAALQPEPIKVYGQVSLNDSHNQMVVHWAGEKSNVIVALARDSLALARPKSSDVYVSYDYGKSFKKISD
KLNFGLGNRSEAVIAQFYHSPADNKRYIFADAYAQYLWITFDFCNTLQGFSIPFRAADLLLHSKASNLLLGFDRS
HPNKQLWKSDDFGQTWIMIQEHVKSFSWGIDPYDKPNTIYIERHEPSGYSTVFRSTDFFQSRENQEVILEEVRDF
QLRDKYMFATKVVHLLGSEQQSSVQLWVSFGRKPMRAAQFVTRHPINEYYIADASEDQVFVCVSHSNNRTNLYIS
EAEGLKFSLSLENVLYYSPGGAGSDTLVRYFANEPFADFHRVEGLQGVYIATLINGSMNEENMRSVITFDKGGTW
EFLQAPAFTGYGEKINCELSQGCSLHLAQRLSQLLNLQLRRMPILSKESAPGLIIATGSVGKNLASKTNVYISSS
AGARWREALPGPHYYTWGDHGGIITAIAQGMETNELKYSTNEGETWKTFIFSEKPVFVYGLLTEPGEKSTVFTIF
GSNKENVHSWLILQVNATDALGVPCTENDYKLWSPSDERGNECLLGHKTVFKRRTPHATCFNGEDFDRPVVVSNC
SCTREDYECDFGFKMSEDLSLEVCVPDPEFSGKSYSPPVPCPVGSTYRRTRGYRKISGDTCSGGDVEARLEGELV
PCPLAEENEFILYAVRKSIYRYDLASGATEQLPLTGLRAAVALDFDYEHNCLYWSDLALDVIQRLCLNGSTGQEV
IINSGLETVEALAFEPLSQLLYWVDAGFKKIEVANPDGDFRLTIVNSSVLDRPRALVLVPQEGVMFWTDWGDLKP
GIYRSNMDGSAAYHLVSEDVKWPNGISVDDQWIYWTDAYLECIERITFSGQQRSVILDNLPHPYAIAVFKNEIYW
DDWSQLSIFRASKYSGSQMEILANQLTGLMDMKIFYKGKNTGSNACVPRPCSLLCLPKANNSRSCRCPEDVSSSV
LPSGDLMCDCPQGYQLKNNTCVKEENTCLRNQYRCSNGNCINSIWWCDFDNDCGDMSDERNCPTTICDLDTQFRC
QESGTCIPLSYKCDLEDDCGDNSDESHCEMHQCRSDEYNCSSGMCIRSSWVCDGDNDCRDWSDEANCTAIYHTCE
ASNFQCRNGHCIPQRWACDGDTDCQDGSDEDPVNCEKKCNGFRCPNGTCIPSSKHCDGLRDCSDGSDEQHCEPLC
THFMDFVCKNRQQCLFHSMVCDGIIQCRDGSDEDAAFAGCSQDPEFHKVCDEFGFQCQNGVCISLIWKCDGMDDC
GDYSDEANCENPTEAPNCSRYFQFRCENGHCIPNRWKCDRENDCGDWSDEKDCGDSHILPFSTPGPSTCLPNYYR
CSSGTCVMDTWVCDGYRDCADGSDEEACPLLANVTAASTPTQLGRCDRFEFECHQPKTCIPNWKRCDGHQDCQDG
RDEANCPTHSTLTCMSREFQCEDGEACIVLSERCDGFLDCSDESDEKACSDELTVYKVQNLQWTADFSGDVTLTW
MRPKKMPSASCVYNVYYRVVGESIWKTLETHSNKTNTVLKVLKPDTTYQVKVQVQCLSKAHNTNDFVTLRTPEGL
PDAPRNLQLSLPREAEGVIVGHWAPPIHTHGLIREYIVEYSRSGSKMWASQRAASNFTEIKNLLVNTLYTVRVAA
VTSRGIGNWSDSKSITTIKGKVIPPPDIHIDSYGENYLSFTLTMESDIKVNGYVVNLFWAFDTHKQERRTLNFRG
SILSHKVGNLTAHTSYEISAWAKTDLGDSPLAFEHVMTRGVRPPAPSLKAKAINQTAVECTWTGPRNVVYGIFYA
TSFLDLYRNPKSLTTSLHNKTVIVSKDEQYLFLVRVVVPYQGPSSDYVVVKMIPDSRLPPRHLHVVHTGKTSVVI
KWESPYDSPDQDLLYAIAVKDLIRKTDRSYKVKSRNSTVEYTLNKLEPGG

FIGURE 733

GGCACGAGGCTGCGCCGGAAGTCCCTAGCCAGGCCTGGCGGTAACCTTGGGGGCCTCACTGCAGCCGCCGCTGCT
GTTGGAGTGGGCTTTGCGAGTCTGAACGTTGGCGGGGCTAGGCTCGTTAACTGCCGAGAGCCTCCGGGTTTGCGG
TGGAGGACGCTGAGGCCCGTGGGGGGCAGGCACCCGGGCGCCGGGCCTCCCAGCCGAC**ATG**TCTCTAGTGGCGGA
AGCCTTCGTCTCCCAGATTGCAGCTGCAGAACCTTGGCCTGAAAATGCTACATTATATCAGCAATTGAAAGGGGA
GCAAATTTTACTTTCTGACAATGCAGCTTCTCTTGCAGTGCAGGCCTTTTTGCAAATGTGTAACTTGCCTATCAA
AGTAGTTTGTAGGGCAAATGCAGAATATATGTCTCCATCTGGTAAAGTACCTTTTATTCATGTGGGAAATCAAGT
AGTATCAGAACTTGGTCCAATAGTCCAATTTGTTAAAGCCAAGGGCCATTCTCTTAGTGATGGGCTGGAGGAAGT
CCAAAAAGCAGAAATGAAAGCTTACATGGAATTAGTCAACAATATGCTGTTGACTGCAGAGCTGTATCTTCAGTG
GTGTGATGAAGCTACAGTAGGGGAGATCACTCATGCTAGGTATGGATCTCCTTACCCTTGGCCTCTGAATCATAT
TTTGGCCTATCAAAAACAGTGGGAAGTCAAACGTAAGATGAAAGCTATTGGATGGGGAAAGAAGACTCTGGACCA
GGTCTTAGAGGATGTAGACCAGTGCTGTCAAGCTCTCTCTCAAAGACTGGGAACACAACCGTATTTCTTCAATAA
GCAGCCTACTGAACTTGACGCACTGGTATTTGGCCATCTATACACCATTCTTACCACACAATTGACAAATGATGA
ACTTTCTGAGAAGGTGAAAAACTATAGCAACCTCCTTGCTTTCTGTAGGAGAATTGAACAGCACTATTTTGAAGA
TCGTGGTAAAGGCAGGCTGTCA**TAG**AGTTATGTGTTAGTCTCAGGAGTCTTAACTTTTGAAATATGTTTTACTTG
AATGTTACATTAGATATTGGTGTCAGAATTTTAAAACCAAATTACTGCTTTTTGAAACCTCAAATTATATAATGT
ATCTTATGTATGTGCTTTATATTGTTATTTGTGTATACATTAAAATAATTCTGAATTATTTAATCTGATATGTTG
TATTCTGTATCTTGAAATTTTTGTTTCCTTGAAACATGCATGCATTTAAAAATAAAGCTTAAACAACTGT

FIGURE 734

MSLVAEAFVSQIAAAEPWPENATLYQQLKGEQILLSDNAASLAVQAFLQMCNLPIKVVCRANAEYMSPSGKVPFI
HVGNQVVSELGPIVQFVKAKGHSLSDGLEEVQKAEMKAYMELVNNMLLTAELYLQWCDEATVGEITHARYGSPYP
WPLNHILAYQKQWEVKRKMKAIGWGKKTLDQVLEDVDQCCQALSQRLGTQPYFFNKQPTELDALVFGHLYTILTT
QLTNDELSEKVKNYSNLLAFCRRIEQHYFEDRGKGRLS

FIGURE 735A

GCGGCCGCGTCGACGCGGCGGCGGCAGCGGCGTCGGCTCGGGGTTCTCCGGGAGAGGGGGAGTGCGCGGCGGCCG
CAGCTGCCACAAACCAGGTGAAGCTTTGTTCTAAGAATATTTGTTTCATCTAGTTTATGAGTCCAAATGATATAG
ACTGTAAATGTCACAGCAGTGGTGAAAGACTGCTCGGTC**ATG**AGCACCGACAGTAACTCACTGGCACGTGAATTT
CTGACCGATGTCAACCGGCTTTGCAATGCAGTGGTCCAGAGGGTGGAGGCCAGGGAGGAAGAAGAGGAGGAGACG
CACATGGCAACCCTTGGACAGTACCTTGTCCATGGTCGAGGATTTCTATTACTTACCAAGCTAAATTCTATAATT
GATCAGGCATTGACATGTAGAGAAGAACTCCTGACTCTTCTTCTGTCTCTCCTTCCACTGGTATGGAAGATACCT
GTCCAAGAAGAAAAGGCAACAGATTTTAACCTACCGCTCTCAGCAGATATAATCCTGACCAAAGAAAAGAACTCA
AGTTCACAAAGATCCACTCAGGAAAAATTACATTTAGAAGGAAGTGCCCTGTCTAGTCAGGTTTCTGCAAAAGTA
AATGTTTTTCGAAAAAGCAGACGACAGCGTAAAATTACCCATCGCTATTCTGTAAGAGATGCAAGAAAGACACAG
CTCTCCACCTCAGATTCAGAAGCCAATTCAGATGAAAAAGGCATAGCAATGAATAAGCATAGAAGGCCCCATCTG
CTGCATCATTTTTTAACATCGTTTCCTAAACAAGACCACCCCAAAGCTAAACTTGACCGCTTAGCAACCAAAGAA
CAGACTCCTCCAGATGCTATGGCTTTGGAAAATTCCAGAGAGATTATTCCAAGACAGGGGTCAAACACTGACATT
TTAAGTGAGCCAGCTGCCTTGTCTGTTATCAGTAACATGAACAATTCTCCATTTGACTTATGTCATGTTTTGTTA
TCTTTATTAGAAAAAGTTTGTAAGTTTGACGTTACCTTGAATCATAATTCTCCTTTAGCAGCCAGTGTAGTGCCC
ACACTAACTGAATTCCTAGCAGGCTTTGGGGACTGCTGCAGTCTGAGCGACAACTTGGAGAGTCGAGTAGTTTCT
GCAGGTTGGACCGAAGAACCGGTGGCTTTGATTCAAAGGATGCTCTTTCGAACAGTGTTGCATCTTCTGTCAGTA
GATGTTAGTACTGCAGAGATGATGCCAGAAAATCTTAGGAAAAATTTAACTGAATTGCTTAGAGCAGCTTTAAAA
ATTAGAATATGCCTAGAAAAGCAGCCTGACCCTTTTGCACCAAGACAAAAGAAAACACTGCAGGAGGTTCAGGAA
GATTTTGTGTTTTCAAAGTATCGTCATAGAGCCCTTCTTTTACCTGAGCTTTTGGAAGGAGTTCTTCAGATTCTG
ATCTGTTGTCTTCAAAGTGCAGCTTCAAATCCCTTCTACTTCAGTCAAGCCATGGATTTGGTTCAAGAATTCATT
CAGCATCATGGATTTAATTTATTTGAAACAGCAGTTCTTCAAATGGAATGGCTGGTTTTAAGAGATGGAGTTCCT
CCCGAGGCCTCAGAGCATTTGAAAGCCCTAATAAATAGTGTGATGAAAATAATGAGCACTGTCAAAAAAGTGAAA
TCAGAGCAACTTCATCATTCGATGTGTACAAGAAAAAGGCACAGACGATGTGAATATTCTCATTTTATGCATCAT
CACCGAGATCTCTCAGGTCTTCTGGTTTCGGCTTTTAAAAACCAGGTTTCCAAAAACCCATTTGAAGAGACTGCA
GATGGAGATGTTTATTATCCTGAGCGGTGCTGTTGCATTGCAGTGTGTGCCCATCAGTGCTTGCGCTTACTACAG
CAGGCTTCCTTGAGCAGCACTTGTGTCCAGATCCTATCGGGTGTTCATAACATTGGAATATGCTGTTGTATGGAT
CCCAAATCTGTAATCATTCCTTTGCTCCATGCTTTTAAATTGCCAGCACTGAAAAATTTTCAGCAGCATATATTG
AATATCCTTAACAAACTTATTTTGGATCAGTTAGGAGGAGCAGAGATATCACCAAAAATTAAAAAAGCAGCTTGT
AATATTTGTACTGTTGACTCTGACCAACTAGCCCAATTAGAAGAGACACTGCAGGGAAACTTATGTGATGCTGAA
CTCTCCTCAAGTTTATCCAGTCCTTCTTACAGATTTCAAGGGATCCTGCCCAGCAGTGGATCTGAAGATTTGTTG
TGGAAATGGGATGCTTTAAAGGCTTATCAGAACTTTGTTTTTGAAGAAGACAGATTACATAGTATACAGATTGCA
AATCACATTTGCAATTTAATCCAGAAAGGCAATATAGTTGTTCAGTGGAAATTATATAATTACATATTTAATCCT
GTGCTCCAAAGAGGAGTTGAATTAGCACATCATTGTCAACACCTAAGCGTTACTTCAGCTCAAAGTCATGTATGT
AGCCATCATAACCAGTGCTTGCCTCAGGACGTGCTTCAGATTTATGTAAAAACTCTGCCTATCCTGCTTAAATCC
AGGGTAATAAGAGATTTGTTTTTGAGTTGTAATGGAGTAAGTCAAATAATCGAATTAAATTGCTTAAATGGTATT
CGAAGTCATTCTCTAAAAGCATTTGAAACTCTGATAATCAGCCTAGGGGAGCAACAGAAAGATGCCTCAGTTCCA
GATATTGATGGGATAGACATTGAACAGAAGGAGTTGTCCTCTGTACATGTGGGTACTTCTTTTCATCATCAGCAA
GCTTATTCAGATTCTCCTCAGAGTCTCAGCAAATTTTATGCTGGCCTCAAAGAAGCTTATCCAAAGAGACGGAAG
ACTGTTAACCAAGATGTTCATATCAACACAATAAACCTATTCCTCTGTGTGGCTTTTTTATGCGTAAGTAAAGAA
GCAGAGTCTGACAGGGAGTCGGCCAATGACTCAGAAGATACTTCTGGCTATGACAGCACAGCCAGCGAGCCTTTA
AGTCATATGCTGCCATGTATATCTCTCGAGAGCCTTGTCTTGCCTTCTCCTGAACATATGCACCAAGCAGCAGAC
ATTTGGTCTATGTGTCGTTGGATCTACATGTTGAGTTCAGTGTTCCAGAAACAGTTTTATAGGCTTGGTGGTTTC
CGAGTATGCCATAAGTTAATATTTATGATAATACAGAAACTGTTCAGAAGTCACAAAGAGGAGCAAGGAAAAAAG
GAGGGAGATACAAGTGTAAATGAAAACCAGGATTTAAACAGAATTTCTCAACCTAAGAGAACTATGAAGGAAGAT
TTATTATCTTTGGCTATAAAAAGTGACCCCATACCATCAGAACTAGGTAGTCTAAAAAAGAGTGCTGACAGTTTA
GGTAAATTAGAGTTACAGCATATTTCTTCCATAAATGTGGAAGAAGTTTCAGCTACTGAAGCCGCTCCCGAGGAA
GCAAAGCTATTTACAAGTCAAGAAAGTGAGACCTCACTTCAAAGTATACGACTTTTGGAAGCCCTTCTGGCCATT
TGTCTTCATGGTGCCAGAACTAGTCAACAGAAGATGGAATTGGAGTTACCTAATCAGAACTTGTCTGTGGAAAGT

FIGURE 735B

ATATTATTTGAAATGAGGGACCATCTTTCCCAGTCAAAGGTGATTGAAACACAACTAGCAAAGCCGTTATTTGAT
GCCCTGCTTCGAGTTGCCCTCGGGAATTATTCAGCAGATTTTGAACATAATGATGCTATGACTGAGAAGAGTCAT
CAATCTGCAGAAGAATTGTCATCCCAGCCTGGTGATTTTTCAGAAGAAGCTGAGGATTCTCAGTGTTGTAGTTTT
AAACTTTTAGTTGAAGAAGAAGGTTACGAAGCAGATAGTGAAAGCAATCCTGAAGATGGCGAAACCCAGGATGAT
GGGGTAGACTTAAAGTCTGAAACAGAAGGTTTCAGTGCATCAAGCAGTCCAAATGACTTACTCGAAAACCTCACT
CAAGGGGAAATAATTTATCCTGAGATTTGTATGCTGGAATTAAATTTGCTTTCTGCTAGTAAAGCCAAACTTGAT
GTGCTTGCCCATGTATTTGAGAGTTTTTTGAAAATTATTAGGCAGAAAGAAAAGAATGTTTTTCTGCTCATGCAA
CAGGGAACTGTGAAAAATCTTTTAGGAGGGTTCTTGAGTATTTTAACACAGGATGATTCTGATTTTCAAGCATGC
CAGAGAGTATTGGTGGATCTTTTGGTATCTTTGATGAGTTCAAGAACATGTTCAGAAGAGCTAACCCTTCTTTTG
AGAATATTTCTGGAGAAATCTCCTTGTACAAAAATTCTTCTTCTGGGTATTCTGAAAATTATTGAAAGTGATACT
ACTATGAGCCCTTCACAGTATCTAACCTTCCCTTTACTGCACGCTCCAAATTTAAGCAACGGTGTTTCATCACAA
AAGTATCCTGGGATTTTAAACAGTAAGGCCATGGGTTTATTGAGAAGAGCACGAGTTTCACGGAGCAAGAAAGAG
GCTGATAGAGAGAGTTTTCCCCATCGGCTGCTTTCATCTTGGCACATAGCCCCAGTCCACCTGCCGTTGCTGGGG
CAAAACTGCTGGCCACACCTATCAGAAGGTTTCAGTGTTTCCCTGTGGTTTAATGTGGAGTGTATCCATGAAGCT
GAGAGTACTACAGAAAAAGGAAAGAAGATAAAGAAAAGAAACAAATCATTAATTTTACCAGATAGCAGTTTTGAT
GGTACAGAGAGCGACAGACCAGAAGGTGCAGAGTACATAAATCCTGGTGAAAGACTCATAGAAGAAGGATGTATT
CATATAATTTCACTGGGATCCAAAGCGTTGATGATCCAAGTGTGGGCTGATCCCCACAATGCCACTCTTATCTTT
CGTGTGTGCATGGATTCAAATGATGACATGAAAGCTGTTTTACTAGCACAGGTTGAATCACAGGAGAATATTTTC
CTCCCAAGCAAATGGCAACATTTAGTACTCACCTACTTACAGCAGCCCCAAGGGAAAAGGAGGATTCATGGGAAA
ATCTCCATATGGGTCTCTGGACAGAGGAAGCCTGATGTTACTTTGGATTTTATGCTTCCAAGAAAAACAAGTTTG
TCATCTGATAGCAATAAAACATTTTGCATGATTGGCCATTGTTTATCATCCCAAGAAGAGTTTTTGCAGTTGGCT
GGAAAATGGGACCTGGGAAATTTGCTTCTCTTCAACGGAGCTAAGGTTGGTTCACAAGAGGCCTTTTATCTGTAT
GCTTGTGGACCCAACCATACATCTGTAATGCCATGTAAGTATGGCAAGCCAGTCAATGACTACTCCAAATATATT
AATAAAGAAATTTTGCGATGTGAACAAATCAGAGAACTTTTTATGACCAAGAAAGATGTGGATATTGGTCTCTTA
ATTGAAAGTCTTTCAGTTGTTTATACAACTTACTGTCCTGCTCAGTATACCATCTATGAACCAGTGATTAGACTT
AAAGGTCAAATGAAAACCCAACTCTCTCAAAGACCCTTCAGCTCAAAAGAAGTTCAGAGCATCTTATTAGAACCT
CATCATCTAAAGAATCTCCAACCTACTGAATATAAAACTATTCAAGGCATTCTGCACGAAATTGGTGGAACTGGC
ATATTTGTTTTTCTCTTTGCCAGGGTTGTTGAACTCAGTAGCTGTGAAGAAACTCAAGCATTAGCACTGCGAGTT
ATACTCTCATTAATTAAATACAACCAACAAAGAGTACATGAATTAGAAAATTGTAATGGACTTTCTATGATTCAT
CAGGTGTTGATCAAACAAAAATGCATTGTTGGGTTTTACATTTTGAAGACCCTTCTTGAAGGATGCTGTGGTGAA
GATATTATTTATATGAATGAGAATGGAGAGTTTAAGTTGGATGTAGACTCTAATGCTATAATCCAAGATGTTAAG
CTGTTAGAGGAACTATTGCTTGACTGGAAGATATGGAGTAAAGCAGAGCAAGGTGTTTGGGAAACTTTGCTAGCA
GCTCTAGAAGTCCTCATCAGAGCAGATCACCACCAGCAGATGTTTAATATTAAGCAGTTATTGAAAGCTCAAGTG
GTTCATCACTTTCTACTGACTTGTCAGGTTTTGCAGGAATACAAAGAGGGGCAACTCACACCCATGCCCCGAGAG
GTTTGTAGATCATTTGTGAAAATTATAGCAGAAGTCCTTGGATCTCCTCCAGATTTGGAATTATTGACAATTATC
TTCAATTTCCTTTTAGCAGTTCACCCTCCTACTAATACTTACGTTTGTCACAATCCCACGAACTTCTACTTTTCT
TTGCACATAGATGGCAAGATCTTTCAGGAGAAAGTGCGGTCAATCATGTACCTGAGGCATTCCAGCAGTGGAGGA
AGGTCCCTTATGAGCCCTGGATTTATGGTAATAAGCCCATCTGGTTTTACTGCTTCACCATATGAAGGAGAGAAT
TCCTCTAATATTATTCCACAACAGATGGCCGCCCATATGCTGCGTTCTAGAAGCCTACCAGCATTCCCTACTTCT
TCACTACTAACGCAATCACAAAAACTGACTGGAAGTTTGGGTTGTAGTATCGACAGGTTACAAAATATTGCAGAT
ACTTATGTTGCCACCCAATCAAAGAAACAAAATTCTTTGGGGAGTTCCGACACACTGAAAAAAGGCAAAGAGGAC
GCATTCATCAGTAGCTGTGAGTCTGCAAAAACTGTTTGTGAAATGGAAGCTGTCCTCTCAGCCCAGGTCTCTGTC
AGTGATGTCCCAAAGGGAGTGCTGGGATTTCCAGTGGTCAAAGCAGATCATAAACAGTTGGGAGCAGAACCCAGG
TCAGAAGATGACAGTCCTGGGGATGAGTCCTGCCCACGCCGACCTGATTACCTAAAGGGATTGGCCTCCTTCCAG
CGAAGCCACAGCACTATTGCAAGCCTTGGGCTAGCTTTTCCTTCACAGAACGGATCTGCAGCTGTTGGCCGTTGG
CCAAGTCTTGTTGATAGAAACACTGATGATTGGGAAAACTTTGCCTATTCTCTTGGTTATGAGCCAAATTACAAC
CGAACTGCAAGTGCTCACAGTGTAACTGAAGACTGTTTGGTACCTATATGCTGTGGATTATATGAACTCCTAAGT
GGGGTTCTTCTTATCCTGCCTGATGTTTTGCTTGAAGATGTGATGGACAAGCTTATTCAAGCAGATACACTTTTG

FIGURE 735C

GTCCTCGTTAACCACCCATCACCAGCTATACAACAAGGTGTTATTAAACTATTAGATGCATATTTTGCTAGAGCA
TCTAAGGAACAAAAAGATAAATTTCTGAAGAATCGTGGATTTTCCTTGCTAGCCAACCAGTTGTATCTTCATCGA
GGAACTCAAGAATTGTTAGAATGCTTCATCGAAATGTTCTTTGGTCGACATATTGGCCTTGATGAAGAATTTGAT
CTGGAAGATGTGAGAAACATGGGATTGTTTCAGAAGTGGTCTGTCATTCCTATTCTGGGACTAATAGAGACCTCT
CTATATGACAACATACTCTTGCATAATGCTCTTTTACTTCTTCTCCAAATTTTAAATTCTTGTTCTAAGGTAGCA
GATATGTTGCTGGATAATGGTCTACTCTATGTGTTATGTAATACAGTAGCAGCCCTGAATGGATTAGAAAAGAAC
ATTCCCATGAGTGAATATAAATTGCTTGCTTGTGATATACAGCAACTTTTCATAGCAGTTACAATTCATGCTTGC
AGTTCCTCAGGCTCACAATATTTTAGGGTTATTGAAGACCTTATTGTAATGCTTGGATATCTTCAAAATAGCAAA
AACAAGAGGACACAAAATATGGCTGTTGCACTACAGCTTAGAGTTCTCCAGGCTGCTATGGAATTTATAAGGACC
ACCGCAAATCATGACTCTGAAAACCTCACAGATTCACTCCAGTCACCTTCTGCTCCCCATCATGCAGTAGTTCAA
AAGCGGAAAAGCATTGCTGGTCCTCGAAAATTTCCCCTTGCTCAAACTGAATCGCTTCTGATGAAAATGCGTTCA
GTGGCAAATGATGAGCTTCATGTGATGATGCAACGGAGAATGAGCCAAGAGAACCCTAGCCAAGCAACTGAAACG
GAACTTGCGCAGAGACTACAGAGGCTCACTGTTTTAGCAGTCAACAGGATTATTTATCAAGAATTTAATTCAGAC
ATTATTGACATTTTGAGAACTCCAGAAAATGTAACTCAAAGCAAGACCTCAGTTTTCCAGACCGAAATTTCTGAG
GAAAATATTCATCATGAACAGTCTTCTGTTTTCAATCCATTTCAGAAAGAAATTTTTACATATCTGGTAGAAGGA
TTCAAAGTATCTATTGGTTCAAGTAAAGCCAGTGGTTCCAAGCAGCAATGGACTAAAATTCTGTGGTCTTGTAAG
GAGACCTTCCGAATGCAGCTTGGGAGACTACTAGTGCATATTTTGTCGCCAGCCCACGCTGCACAAGAGAGAAAG
CAAATTTTTGAAATAGTTCATGAACCAAATCATCAGGAAATACTACGAGACTGTCTCAGCCCATCCCTACAACAT
GGAGCCAAGTTAGTTTTGTATTTGTCAGAGTTGATACATAATCACCAAGGTGAATTGACTGAAGAAGAGCTAGGC
ACAGCAGAACTGCTTATGAATGCTTTGAAGTTATGTGGTCACAAGTGCATCCCTCCCAGTGCATCAACAAAAGCA
GACCTTATTAAAATGATCAAAGAGGAACAAAAGAAATATGAAACTGAAGAAGGAGTGAATAAAGCTGCTTGGCAG
AAAACAGTTAACAATAATCAACAAAGTCTCTTTCAGCGTCTGGATTCAAAATCAAAGGATATATCTAAAATAGCT
GCAGATATCACCCAGGCAGTGTCTCTCTCCCAAGGAAATGAGAGAAAAAAGGTGATCCAGCATATTAGAGGAATG
TATAAAGTAGATTTGAGTGCCAGCAGACATTGGCAGGAACTTATTCAGCAGCTGACACATGATAGAGCAGTATGG
TATGACCCCATCTACTATCCAACCTCATGGCAGTTGGATCCAACAGAAGGGCCAAATCGAGAGAGGAGACGTTTA
CAGAGATGTTATTTAACTATTCCAAATAAGTATCTCCTTAGGGATAGACAGAAATCAGAAGATGTTGTCAAACCA
CCACTCTCTTACCTGTTTGAAGACAAAACTCATTCTTCTTTCTCTTCTACTGTCAAAGACAAAGCTGCAAGTGAA
TCTATAAGAGTGAATCGAAGATGCATCAGTGTTGCACCATCTAGAGAGACAGCTGGTGAATTGTTACTAGGTAAA
TGTGGAATGTATTTTGTGGAAGATAATGCTTCTGATACAGTTGAAAGTTCGAGCCTTCAGGGAGAGTTGGAACCA
GCATCATTTTCCTGGACATATGAAGAAATTAAAGAAGTTCACAAGCGTTGGTGGCAATTGAGAGATAATGCTGTA
GAAATCTTTCTAACAAATGGCAGAACACTCCTGTTGGCATTTGATAACACCAAGGTTCGTGATGATGTATACCAC
AATATACTCACAAATAACCTCCCTAATCTTCTGGAATATGGTAACATCACCGCTCTGACAAATTTATGGTATACT
GGGCAAATTACTAATTTTGAATATTTGACTCACTTAAACAAACATGCTGGCCGATCCTTCAATGATCTCATGCAG
TATCCTGTGTTCCCATTTATACTTGCTGACTACGTTAGTGAGACACTTGACCTCAATGATCTGTTGATATACAGA
AATCTCTCTAAACCTATAGCTGTTCAGTATAAAGAAAAAGAAGATCGTTATGTGGACACATACAAGTACTTGGAG
GAAGAGTACCGCAAAGGAGCCAGAGAAGATGACCCCATGCCTCCCGTGCAGCCCTATCACTATGGCTCCCACTAT
TCCAATAGCGGCACTGTGCTTCACTTCCTGGTCAGGATGCCTCCTTTCACTAAAATGTTTTTAGCCTATCAAGAT
CAAAGTTTTGACATTCCAGACAGAACTTTTCATTCTACAAATACAACTTGGCGACTCTCATCTTTTGAATCTATG
ACTGATGTGAAAGAACTTATCCCAGAGTTTTTCTATCTTCCAGAGTTCCTAGTTAACCGTGAAGGTTTTGATTTT
GGTGTGCGTCAGAATGGTGAACGGGTTAATCACGTCAACCTTCCCCCTTGGGCGCGTAATGATCCTCGTCTTTTT
ATCCTCATCCATCGGCAGGCTCTAGAGTCTGACTACGTGTCGCAGAACATCTGTCAGTGGATTGACTTGGTGTTT
GGGTATAAGCAAAAGGGGAAGGCTTCTGTTCAAGCGATCAATGTTTTTCATCCTGCTACATATTTTGGAATGGAT
GTCTCTGCAGTTGAAGATCCAGTTCAGAGACGAGCGCTAGAAACCATGATAAAAACCTACGGGCAGACTCCCCGT
CAGCTGTTCCACATGGCCCATGTGAGCAGACCTGGAGCCAAGCTCAATATTGAAGGAGAGCTTCCAGCTGCTGTG
GGGTTGCTAGTGCAGTTTGCTTTCAGGGAGACCCGAGAACAGGTCAAAGAAATCACCTATCCGAGTCCTTTGTCA
TGGATAAAAGGCTTGAAATGGGGGGAATACGTGGGTTCCCCCAGTGCTCCAGTACCTGTGGTCTGCTTCAGCCAG
CCCCACGGAGAAAGATTTGGCTCTCTCCAGGCTCTGCCCACCAGAGCAATCTGTGGTTTGTCACGGAATTTCTGT
CTTGTGATGACATATAGCAAGGAACAAGGTGTGAGAAGCATGAACAGTACGGACATTCAGTGGTCAGCCATCCTG

FIGURE 735D

AGCTGGGGATATGCTGATAATATTTTAAGGTTGAAGAGTAAACAAAGTGAGCCTCCAGTAAACTTTATTCAAAGT
TCACAACAGTACCAGGTGACTAGTTGTGCTTGGGTGCCTGACAGTTGCCAGCTGTTTACTGGAAGCAAATGCGGT
GTCATCACAGCCTACACAAACAGATTTACAAGCAGCACGCCATCAGAAATAGAAATGGAGACTCAAATACATCTC
TATGGTCACACAGAAGAGATAACCAGCTTATTTGTTTGCAAACCATACAGTATACTGATAAGTGTGAGCAGAGAC
GGAACCTGCATCATATGGGATTTAAACAGGTTATGCTATGTACAAAGTCTGGCGGGACACAAAAGCCCTGTCACA
GCTGTCTCTGCCAGTGAAACCTCAGGTGATATTGCTACTGTGTGTGATTCAGCTGGCGGAGGCAGTGACCTCAGA
CTCTGGACGGTGAACGGGGATCTCGTTGGACATGTCCACTGCAGGGAGATCATCTGTTCCGTGGCTTTCTCCAAC
CAGCCTGAGGGAGTATCTATCAATGTAATCGCTGGGGGATTAGAAAATGGAATTGTAAGGTTATGGAGCACATGG
GACTTAAAGCCTGTGAGAGAAATTACATTTCCCAAATCAAATAAGCCCATCATCAGCCTTACATTTTCTTGTGAT
GGCCACCATTTGTACACAGCAAACAGTGATGGGACCGTGATTGCCTGGTGTCGGAAGGACCAGCAGCGCTTGAAA
CAGCCAATGTTCTATTCCTTCCTTAGCAGCTATGCAGCCGGGTGAATGCGAATGAACTTCACGTTCTCCAAAGCA
CTTTAACTCCAAACTAGATTTGTTGACTTCACCAGTTTTAGGAGGTTGAACCTAAAGAAATGGATGACTGGACAA
ACCATCCAAATAATGATAAAGTCTATTCATCTGCACAAAATTCTGAAGAGTCACATGATCCTAAGAGGAAAGTTC
TGTTCTATTTTAGTGATAATCTGGAAGATTGTGTCAATATGCACTAGCCAACAAGTTTTAAGCCTCGCATGGTAC
ATTAAAATGATATTCTTAAAATTTTTTCCCACCAAGGTATTCCAAAGAAAATATTAAGGTCTCCCCTTTTTCTAT
GATTCCAAAAGGACCAGTAGAATTTAAATTGGTTGGTTGATXGTTTATATAAAACACACTAAAATTATATTTTAA
AAGTTTAXTGCCXTGAAATACTCCTCCCACCACACACACATGCTCCAAAAGAGGAAAGAAAAAAAGATAATTTTT
AGGACTTGATAATTGCTTTCTTTGAGAAGCAAATTATTCAGTAGGTGCCTCTGTACCAAATATTTTATGGAATAT
CTAAATACTAAAATAAACTATGAATGAATCTCAAAATTAGGCAGTTTTTGCCAGTTGCTTTCTTAGCTCAAAGGA
GAACCAGAATTTTTTTGACAGCCACAAACAAGAATACAGGTATCTTGGATTTCAGACACATTCTGTTTCTTCATA
AAAATTTTACTTAAAATCTGTAACGCTAGATATTGACTATCCTTAGTTGAGTCACTGAGGTTTAAACACAATGGT
AAGTCTTAAAGTCTGCTATTTACAGAGCATTGAATCTGTACCAATTTGCAATAGAAAGCCTTCAGTATGCAAGAA
GTTTGCATGGGTATTAAGAACACAGCCTAAATAAGGCATTTGATCTAATCTGCAGGAAGAATTTTCTTCCCCAAA
ACAGAATTATAAAAGCTTACTTTAAACAGGAGGCAGAATAATTCTTTTAGGAAACCATTTCATTCTGTTTCTACT
AACCTATACCATCTGAGAATTCCTAAACATCTTGGAGCCGTCTGTCTCTCCCATATGATGGCTGTCTGTATATTT
TTACTTGGGGTGCTGCTTTATTGGCTTTGAAAACACTGTCAGATAAGCTCAGTAATATGTTACCATGGGATAAAA
ATATGTATCCCTGCCTAAGAATAACTTGTGCATTTGTTATGGAAATTTAATTCATATGGTGTTTACAGTACTACT
TTTGTAACTTCCAGACTTTCTAAAACATTCTGCTTAAAAACCATATAAAATATAATTCCAAAGTCTCTGCTGTCA
AGATAGATTCGAGAGAAAGCACGTGGCCATGTATGCTTTAACCTTAAACTGCATACACATGTAGTGATACCTAGG
CTGCATTTAGATCACCGTGTGCTCAGGCCAGGTGTGAATCCTGAGGTCCATGGAGGTGCAGAGATGAGATTACTC
CTATTCACGTTGAAGTGATTTGCTTTGTTAACAAAAAATTGCAGCTATTGTCTAGCTTTCATTTTTTTACTGAGA
ACTTTAAATTAGTCCCCTATTAGAATAGGGTTGCTACTCATCTTTTTTTAAAAACCGAATTTCATCATTTATCTA
AAGAGAAAATATGCAGAATAACTGGTCTTGTTAAGAGTGCAATATTATATTTTTATGTAAAAATAAAAATTAATT
TGGGGGGATTATTTATTCAGCATGAAACCTAATATGTATATGTTTGAAATACTTCATAATGTGCATGTTGTAGCA
AACATTTCTGTAAATTATCACAAGCTCTGTTACCTTTATATACGCTGCCTCTTCAATTTGGAAATAAATTTCATA
AAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 736

MSTDSNSLAREFLTDVNRLCNAVVQRVEAREEEEEETHMATLGQYLVHGRGFLLLTKLNSIIDQALTCREELLTL
LLSLLPLVWKIPVQEEKATDFNLPLSADIILTKEKNSSSQRSTQEKLHLEGSALSSQVSAKVNVFRKSRRQRKIT
HRYSVRDARKTQLSTSDSEANSDEKGIAMNKHRRPHLLHHFLTSFPKQDHPKAKLDRLATKEQTPPDAMALENSR
EIIPRQGSNTDILSEPAALSVISNMNNSPFDLCHVLLSLLEKVCKFDVTLNHNSPLAASVVPTLTEFLAGFGDCC
SLSDNLESRVVSAGWTEEPVALIQRMLFRTVLHLLSVDVSTAEMMPENLRKNLTELLRAALKIRICLEKQPDPFA
PRQKKTLQEVQEDFVFSKYRHRALLLPELLEGVLQILICCLQSAASNPFYFSQAMDLVQEFIQHHGFNLFETAVL
QMEWLVLRDGVPPEASEHLKALINSVMKIMSTVKKVKSEQLHHSMCTRKRHRRCEYSHFMHHHRDLSGLLVSAFK
NQVSKNPFEETADGDVYYPERCCCIAVCAHQCLRLLQQASLSSTCVQILSGVHNIGICCCMDPKSVIIPLLHAFK
LPALKNFQQHILNILNKLILDQLGGAEISPKIKKAACNICTVDSDQLAQLEETLQGNLCDAELSSSLSSPSYRFQ
GILPSSGSEDLLWKWDALKAYQNFVFEEDRLHSIQIANHICNLIQKGNIVVQWKLYNYIFNPVLQRGVELAHHCQ
HLSVTSAQSHVCSHHNQCLPQDVLQIYVKTLPILLKSRVIRDLFLSCNGVSQIIELNCLNGIRSHSLKAFETLII
SLGEQQKDASVPDIDGIDIEQKELSSVHVGTSFHHQQAYSDSPQSLSKFYAGLKEAYPKRRKTVNQDVHINTINL
FLCVAFLCVSKEAESDRESANDSEDTSGYDSTASEPLSHMLPCISLESLVLPSPEHMHQAADIWSMCRWIYMLSS
VFQKQFYRLGGFRVCHKLIFMIIQKLFRSHKEEQGKKEGDTSVNENQDLNRISQPKRTMKEDLLSLAIKSDPIPS
ELGSLKKSADSLGKLELQHISSINVEEVSATEAAPEEAKLFTSQESETSLQSIRLLEALLAICLHGARTSQQKME
LELPNQNLSVESILFEMRDHLSQSKVIETQLAKPLFDALLRVALGNYSADFEHNDAMTEKSHQSAEELSSQPGDF
SEEAEDSQCCSFKLLVEEEGYEADSESNPEDGETQDDGVDLKSETEGFSASSSPNDLLENLTQGEIIYPEICMLE
LNLLSASKAKLDVLAHVFESFLKIIRQKEKNVFLLMQQGTVKNLLGGFLSILTQDDSDFQACQRVLVDLLVSLMS
SRTCSEELTLLLRIFLEKSPCTKILLLGILKIIESDTTMSPSQYLTFPLLHAPNLSNGVSSQKYPGILNSKAMGL
LRRARVSRSKKEADRESFPHRLLSSWHIAPVHLPLLGQNCWPHLSEGFSVSLWFNVECIHEAESTTEKGKKIKKR
NKSLILPDSSFDGTESDRPEGAEYINPGERLIEEGCIHIISLGSKALMIQVWADPHNATLIFRVCMDSNDDMKAV
LLAQVESQENIFLPSKWQHLVLTYLQQPQGKRRIHGKISIWVSGQRKPDVTLDFMLPRKTSLSSDSNKTFCMIGH
CLSSQEEFLQLAGKWDLGNLLLFNGAKVGSQEAFYLYACGPNHTSVMPCKYGKPVNDYSKYINKEILRCEQIREL
FMTKKDVDIGLLIESLSVVYTTYCPAQYTIYEPVIRLKGQMKTQLSQRPFSSKEVQSILLEPHHLKNLQPTEYKT
IQGILHEIGGTGIFVFLFARVVELSSCEETQALALRVILSLIKYNQQRVHELENCNGLSMIHQVLIKQKCIVGFY
ILKTLLEGCCGEDIIYMNENGEFKLDVDSNAIIQDVKLLEELLLDWKIWSKAEQGVWETLLAALEVLIRADHHQQ
MFNIKQLLKAQVVHHFLLTCQVLQEYKEGQLTPMPREVCRSFVKIIAEVL

FIGURE 737A

CTGAGCCGCATCTGCAATAGCACACTTGCCCGGCCACCTGCTGCCGTGAGCCTTTGCTGCTGAAGCCCCTGGGGT
CGCCTCTACCTG**ATG**AGGATGTGCACCCCCATTAGGGGGCTGCTCATGGCCCTTGCAGTGATGTTTGGGACAGCG
ATGGCATTTGCACCCATACCCCGGATCACCTGGGAGCACAGAGAGGTGCACCTGGTGCAGTTTCATGAGCCAGAC
ATCTACAACTACTCAGCCTTGCTGCTGAGCGAGGACAAGGACACCTTGTACATAGGTGCCCGGGAGGCGGTCTTC
GCTGTGAACGCACTCAACATCTCCGAGAAGCAGCATGAGGTGTATTGGAAGGTCTCAGAAGACAAAAAAGCAAAA
TGTGCAGAAAAGGGGAAATCAAAACAGACAGAGTGCCTCAACTACATCCGGGTGCTGCAGCCACTCAGCGCCACT
TCCCTTTACGTGTGTGGGACCAACGCATTCCAGCCGGCCTGTGACCACCTGAACTTAACATCCTTTAAGTTTCTG
GGGAAAAATGAAGATGGCAAAGGAAGATGTCCCTTTGACCCAGCACACAGCTACACATCCGTCATGGTTGATGGA
GAACTTTATTCGGGGACGTCGTATAATTTTTTGGGAAGTGAACCCATCATCTCCCGAAATTCTTCCCACAGTCCT
CTGAGGACAGAATATGCAATCCCTTGGCTGAACGAGCCTAGTTTCGTGTTTGCTGACGTGATCCGAAAAAGCCCA
GACAGCCCCGACGGCGAGGATGACAGGGTCTACTTCTTCTTCACGGAGGTGTCTGTGGAGTATGAGTTTGTGTTC
AGGGTGCTGATCCCACGGATAGCAAGAGTGTGCAAGGGGGACCAGGGCGGCCTGAGGACCTTGCAGAAGAAATGG
ACCTCCTTCCTGAAAGCCCGACTCATCTGCTCCCGGCCAGACAGCGGCTTGGTCTTCAATGTGCTGCGGGATGTC
TTCGTGCTCAGGTCCCCGGGCCTGAAGGTGCCTGTGTTCTATGCACTCTTCACCCCACAGCTGAACAACGTGGGG
CTGTCGGCAGTGTGCGCCTACAACCTGTCCACAGCCGAGGAGGTCTTCTCCCACGGGAAGTACATGCAGAGCACC
ACAGTGGAGCAGTCCCACACCAAGTGGGTGCGCTATAATGGCCCGGTACCCAAGCCGCGGCCTGGAGCGTGCATC
GACAGCGAGGCACGGGCCGCCAACTACACCAGCTCCTTGAATTTGCCAGACAAGACGCTGCAGTTCGTTAAAGAC
CACCCTTTGATGGATGACTCGGTAACCCCAATAGACAACAGGCCCAGGTTAATCAAGAAAGATGTGAACTACACC
CAGATCGTGGTGGACCGGACCCAGGCCCTGGATGGGACTGTCTATGATGTCATGTTTGTCAGCACAGACCGGGGA
GCTCTGCACAAAGCCATCAGCCTCGAGCACGCTGTTCACATCATCGAGGAGACCCAGCTCTTCCAGGACTTTGAG
CCAGTCCAGACCCTGCTGCTGTCTTCAAAGAAGGGCAACAGGTTTGTCTATGCTGGCTCTAACTCGGGCGTGGTC
CAGGCCCCGCTGGCCTTCTGTGGGAAGCACGGCACCTGCGAGGACTGTGTGCTGGCGCGGGACCCCTACTGCGCC
TGGAGCCCGCCCACAGCGACCTGCGTGGCTCTGCACCAGACCGAGAGCCCCAGCAGGGGTTTGATTCAGGAGATG
AGCGGCGATGCTTCTGTGTGCCCGGATAAAAGTAAAGGAAGTTACCGGCAGCATTTTTTCAAGCACGGTGGCACA
GCGGAACTGAAATGCTCCCAAAAATCCAACCTGGCCCGGGTCTTTTGGAAGTTCCAGAATGGCGTGTTGAAGGCC
GAGAGCCCCAAGTACGGTCTTATGGGCAGAAAAAACTTGCTCATCTTCAACTTGTCAGAAGGAGACAGTGGGGTG
TACCAGTGCCTGTCAGAGGAGAGGGTTAAGAACAAAACGGTCTTCCAAGTGGTCGCCAAGCACGTCCTGGAAGTG
AAGGTGGTTCCAAAGCCCGTAGTGGCCCCCACCTTGTCAGTTGTTCAGACAGAAGGTAGTAGGATTGCCACCAAA
GTGTTGGTGGCATCCACCCAAGGGTCTTCTCCCCCAACCCCAGCCGTGCAGGCCACCTCCTCCGGGGCCATCACC
CTTCCTCCCAAGCCTGCGCCCACCGGCACATCCTGCGAACCAAAGATCGTCATCAACACGGTCCCCCAGCTCCAC
TCGGAGAAAACCATGTATCTTAAGTCCAGCGACAACCGCCTCCTCATGTCCCTCTTCCTCTTCTTCTTTGTTCTC
TTCCTCTGCCTCTTTTTCTACAACTGCTATAAGGGATACCTGCCCAGACAGTGCTTGAAATTCCGCTCGGCCCTA
CTAATTGGGAAGAAGAAGCCCAAGTCAGATTTCTGTGACCGTGAGCAGAGCCTGAAGGAGACGTTAGTAGAGCCA
GGGAGCTTCTCCCAGCAGAATGGGGAGCACCCCAAGCCAGCCCTGGACACCGGCTATGAGACCGAGCAAGACACC
ATCACCAGCAAAGTCCCCACGGATAGGGAGGACTCACAGAGGATCGACGACCTTTCTGCCAGGGACAAGCCCTTT
GACGTCAAGTGTGAGCTGAAGTTCGCTGACTCAGACGCAGATGGAGAC**TGA**GGCCGGCTGTGCATCCCCGCTGGT
GCCTCGGCTGCGACGTGTCCAGGCGTGGAGAGTTTTGTGTTTCTCCTGTTCAGTATCCGAGTCTCGTGCAGTGCT
GCGTAGGTTAGCCCGCATCGTGCAGACAACCTCAGTCCTCTTGTCTATTTTCTCTTGGGTTGAGCCTGTGACTTG
GTTTCTCTTTGTCCTTTTGGAAAAATGACAAGCATTGCATCCCAGTCTTGTGTTCCGAAGTCAGTCGGAGTACTT
GAAGAAGGCCCACGGGCGGCACGGAGTTCCTGAGCCCTTTCTGTAGTGGGGGAAAGGTGGCTGGACCTCTGTTGG
CTGAGAAGAGCATCCCTTCAGCTTCCCCTCCCCGTAGCAGCCACTAAAAGATTATTTAATTCCAGATTGGAAATG
ACATTTTAGTTTATCAGATTGGTAACTTATCGCCTGTTGTCCAGATTGGCACGAACCTTTTCTTCCACTTAATTA
TTTTTTTAGGATTTTGCTTTGATTGTGTTTATGTCATGGGTCATTTTTTTTTTAGTTACAGAAGCAGTTGTGTTAA
TATTTAGAAGAAGATGTATATCTTCCAGATTTTGTTATATATTTGGCATAAAATACGGCTTACGTTGCTTAAGAT
TCTCAGGGATAAACTTCCTTTTGCTAAATGCATTCTTTCTGCTTTTAGAAATGTAGACATAAACACTCCCCGGAG
CCCACTCACCTTTTTTCTTTTTCTTTTTTTTTTTTTAACTTTATTCCTTGAGGGAAGCATTGTTTTTGGAGAGAT
TTTCTTTCTGTACTTCGTTTTACTTTTCTTTTTTTTTAACTTTTACTCTCTCGAAGAAGAGGACCTTCCCACATC
CACGAGGTGGGTTTTGAGCAAGGGAAGGTAGCCTGGATGAGCTGAGTGGAGCCAGGCTGGCCCAGAGCTGAGATG

FIGURE 737B

GGAGTGCGGTACAATCTGGAGCCCACAGCTGTCGGTCAGAACCTCCTGTGAGACAGATGGAACCTTCACAAGGGC
GCCTTTGGTTCTCTGAACATCTCCTTTCTCTTCTTGCTTCAATTGCTTACCCACTGCCTGCCCAGACTTTCTATC
CAGCCTCACTGAGCTGCCCACTACTGGAAGGGAACTGGGCCTCGGTGGCCGGGGCCGCGAGCTGTGACCACAGCA
CCCTCAAGCATACGGCGCTGTTCCTGCCACTGTCCTGAAGATGTGAATGGGTGGTACGATTTCAACACTGGTTAA
TTTCACACTCCATCTCCCCGCTTTGTAAATACCCATCGGGAAGAGACTTTTTTTCCATGGTGAAGAGCAATAAAC
TCTGGATGTTTGTGCGCGTGTGTGGACAGTCTTATCTTCCAGCATGATAGGATTTGACCATTTTGGTGTAAACAT
TTGTGTTTTATAAGATTTACCTTGTTTTTATTTTTCTACTTTGAATTGTATACATTTGGAAAGTACCCAAATAAA
TGAGAAGCTTCTATCCTTAAAAAAAAAAAAAA

FIGURE 738

MRMCTPIRGLLMALAVMFGTAMAFAPIPRITWEHREVHLVQFHEPDIYNYSALLLSEDKDTLYIGAREAVFAVNA
LNISEKQHEVYWKVSEDKKAKCAEKGKSKQTECLNYIRVLQPLSATSLYVCGTNAFQPACDHLNLTSFKFLGKNE
DGKGRCPFDPAHSYTSVMVDGELYSGTSYNFLGSEPIISRNSSHSPLRTEYAIPWLNEPSFVFADVIRKSPDSPD
GEDDRVYFFFTEVSVEYEFVFRVLIPRIARVCKGDQGGLRTLQKKWTSFLKARLICSRPDSGLVFNVLRDVFVLR
SPGLKVPVFYALFTPQLNNVGLSAVCAYNLSTAEEVFSHGKYMQSTTVEQSHTKWVRYNGPVPKPRPGACIDSEA
RAANYTSSLNLPDKTLQFVKDHPLMDDSVTPIDNRPRLIKKDVNYTQIVVDRTQALDGTVYDVMFVSTDRGALHK
AISLEHAVHIIEETQLFQDFEPVQTLLLSSKKGNRFVYAGSNSGVVQAPLAFCGKHGTCEDCVLARDPYCAWSPP
TATCVALHQTESPSRGLIQEMSGDASVCPDKSKGSYRQHFFKHGGTAELKCSQKSNLARVFWKFQNGVLKAESPK
YGLMGRKNLLIFNLSEGDSGVYQCLSEERVKNKTVFQVVAKHVLEVKVVPKPVVAPTLSVVQTEGSRIATKVLVA
STQGSSPPTPAVQATSSGAITLPPKPAPTGTSCEPKIVINTVPQLHSEKTMYLKSSDNRLLMSLFLFFFVLFLCL
FFYNCYKGYLPRQCLKFRSALLIGKKKPKSDFCDREQSLKETLVEPGSFSQQNGEHPKPALDTGYETEQDTITSK
VPTDREDSQRIDDLSARDKPFDVKCELKFADSDADGD

FIGURE 739

AAACACTCTGTGTGGCTCCTCGGCTTTGGGACAGAGTGCAAGACG**ATG**ACTTGCAAAATGTCGCAGCTGGAACGC
AACATAGAGACCATCATCAACACCTTCCACCAATACTCTGTGAAGCTGGGGCACCCAGACACCCTGAACCAGGGG
GAATTCAAAGAGCTGGTGCGAAAAGATCTGCAAAATTTTCTCAAGAAGGAGAATAAGAATGAAAAGGTCATAGAA
CACATCATGGAGGACCTGGACACAAATGCAGACAAGCAGCTGAGCTTCGAGGAGTTCATCATGCTGATGGCGAGG
CTAACCTGGGCCTCCCACGAGAAGATGCACGAGGGTGACGAGGGCCCTGGCCACCACCATAAGCCAGGCCTCGGG
GAGGGCACCCCC**TAA**GACCACAGTGGCCAAGATCACAGTGGCCACGGCCATGGCCACAGTCATGGTGGCCACGGC
CACAGGCCACTAATCAGGAGGCCAGGCCACCCTGCCTCTACCCAACCAGGGCCCCGGGGCCTGTTATGTCAAACT
GTCTTGGCTGTGGGGCTAGGGGCTGGGGCCAAATAAAGTCTCTTCCTCCAA

FIGURE 740

MTCKMSQLERNIETIINTFHQYSVKLGHPDTLNQGEFKELVRKDLQNFLKKENKNEKVIEHIMEDLDTNADKQLS
FEEFIMLMARLTWASHEKMHEGDEGPGHHHKPGLGEGTP

FIGURE 741A

CACGTTGGGTGACATAATGGGGTTTTTTTAATTATAGATTCACACTGCATTTATTCATCACCCCTGTCCTCTCAT
CCATAACTCAAATTTACTACCAGCAACACAAAATACAAAGATGTGTCCAGTTTCACTACAGCTCTTCGCGTTTAC
AAGTGTCGAGCGCTTGCTTTCGGAACGCCCTTGTGATTGGCCGAGCCAATGCCAGTGACATCAACCAACTTACTT
TTGATTGGAAGGCTGGTTGCTGGGACTGTAGCGTTTGCAGGAAGTCACTTAACTGTTTGGGAGCTGGAAAACCGA
AGCTGAAGTTCTCTTTTGCCATAGGAACGAGCGCAACTGACTAGGAAAGATGTGTCCCAAAGCTCCGCAAGCTGG
AACGTGAGCCAGGAGGCCCGGACCGGCCACGGGACCGCGAGGCACTCCGAAAGTGTGCGGCTGCCCCTTCCCTGC
CTCCCAGCTGTTACCCTTTTAAATGTCAGTGTTCGAGGCTGTAGGGGTAGCACGAGGCAGCGAAACGGAACAGTC
GGATTGGCCGCACGCCTCAGTTCTAGACGCACCTCTCCACCGAAGCCGTTCTGACTGGCAGGGGGAGAAAGTAAA
CAGAGTTGAATCACCCTCCCCACTGGCCAATTGGAGGGGGTTTGGTTTGTGACGTGATGGGATTCTGCGAAATTG
TTACTGAGCAAGAGAATGCCGGAACGTGCGGACCGGCCGGAGCAGGGGTTCAGAAGCCGTCAGTGGACTCGGGAA
AAAGTGTCTCTTAGACCTGGCGCTCGGCGGGGCCCTCGCCACCCGCGTCGGGGGTGATCGGGTGAATGTCCTGGGG
CTTTGGCTCGACGGCGAGGCGGCCGAGGGCGTGCACCTCTCTTGCAGTTTCCTCTCCCAGCGCCTCGGGGGCGTT
TTCAGTCGAATAAACTTGCGACCGCCACGTGTGGCATCTTTCCAAGGGAGCCGGCTCAGAGGGGCCGGCGCGCCC
GTCGGGGGATCGCGGCCGGCGCGGGGCAGGGGCGGCGGCTAGAGGCGGCGGCGCGGCGGAGCCCGGGGCCGTGGA
TGCTGCGTGCGGAGGCGCTGCCGGTTACGTAAAGATGAGGGGCTGAGGTCGCCTCGGCGCTCCTGCGAGTCGGAA
GCGCCCCGCGCCCCCGCCCCCTTGGCCGCCGCGCCGTGCCGGGCGGGCGGGTCGTCGTCCGAGGCCAGGGAGGGC
GAGCCGAACCTCCGCAGCCACCGCCAAGTTTGTCCGCGCCGCCTGGGCTGCCGTCGCCCGCACC**ATG**TCCGCGGC
CGCCTACATGGACTTCGTGGCTGCCCAGTGTCTGGTTTCCATTTCGAACCGCGCTGCGGTGCCGGAGCATGGGGT
CGCTCCGGACGCCGAGCGGCTGCGACTACCTGAGCGCGAGGTGACCAAGGAGCACGGTGACCCGGGGGACACCTG
GAAGGATTACTGCACACTGGTCACCATCGCCAAGAGCTTGTTGGACCTGAACAAGTACCGACCCATCCAGACCCC
CTCCGTGTGCAGCGACAGTCTGGAAAGTCCAGATGAGGATATGGGATCCGACAGCGACGTGACCACCGAATCTGG
GTCGAGTCCTTCCCACAGCCCGGAGGAGAGACAGGATCCTGGCAGCGCGCCCAGCCCGCTCTCCCTCCTCCATCC
TGGAGTGGCTGCGAAGGGGAAACACGCCTCCGAAAAGAGGCACAAGTGCCCCTACAGTGGCTGTGGGAAAGTCTA
TGGAAAATCCTCCCATCTCAAAGCCCATTACAGAGTGCATACAGGTGAACGGCCCTTCCCCTGCACGTGGCCAGA
CTGCCTTAAAAAGTTCTCCCGCTCAGACGAGCTGACCCGCCACTACCGGACCCACACTGGGGAAAAGCAGTTCCG
CTGTCCGCTGTGTGAGAAGCGCTTCATGAGGAGTGACCACCTCACAAAGCACGCCCGGCGGCACACCGAGTTCCA
CCCCAGCATGATCAAGCGATCGAAAAAGGCGCTGGCCAACGCTTTG**TGA**GGTGCTGCCCGTGGAAGCCAGGGAGG
GATGGACCCCGAAAGGACAAAAGTACTCCCAGGAAACAGACGCGTGAAAACTGAGCCCCAGAAGAGGCACACTTG
ACGGCACAGGAAGTCACTGCTCTTTGGTCAATATTCTGATTTTCCTCTCCCTGCATTGTTTTTAAAAAGCACATT
GTAGCCTAAGATCAAAGTCAACAACACTCGGTCCCCTTGAAGAGGCAACTCTCTGAACCCGTCTCTGACTGTTGG
AGGGAAGGCAAATGCTTTTGGGTTTTTTGGTTTTTGTTTTTGTTTTTTTTTCTCCTTTTATTTTTTTGCGGGGGA
GGGTAGGGAGTGGGTGGGGGGGAGGGGGTAAGGCCAAGACTGGGTAGATTTTAAAGATTCAACACTGGTGTACAT
ATGTCCGCTGGGTGAGTTGACCTGTGGCCTCGCACAGTGATTCTAGGCCCTTTATGCTTGCTGTCTCTCAGAATT
GTTTTCTTACCTTTTAATGTAATGACGAGTGTGCTTCAGTTTGTTTAGCAAAACCACTCTCTTGAATCACGTTAA
CTTTTGAGATTAAAAAAAAAAACGCCATAGCACAGCTGTCTTTATGCAAGCAAGAGCACATCTACTCCAGCATGA
TCTGTCATCTAAAGACTTGAAAACAAAAAACAGTTACTTATAGTCAATGGGTAAGCAGAGTCTGAATTTATACTA
ATCAAGACAAACCTTTGAAAGGTTACACTAAGTACAGAACTTTTAAACCTTGCTTTGTATGAGTTGTACTTTTTG
AACATAAGCTGCACTTTTATTTTCTAATGCAGAGGATGAATAAGTTAAATACATGCTTTGAGGATAGAAGCAGAT
GTTCTGTTTGGCACCACGTTATAATCTGCTTATTTTACAATATACACGTTTCCCTAAGAAATCATGCGCAGAGAT
GTGAGGGCAGAATATACACAACAGATGCTGAAGGAGAAGGAGGGTAGTGTTTTGCAAAAGAAAAAGAAAAGAACC
AACAGAATTTTAACTCTATTAACTTTTCCAAATTTTCCTATGCTTTTAGTTAACATCATTATTGTATCCTAATGC
CACTAGGGGAGAGAGCTTTTGACTCTGTTGGGTTTTATTTGAATGTGTGCATAACAGTAATGAGATCTGGAAACA
CCTATTTTTTGGGGAAAAAGGTTTGTTGGTCTCCTTCCTGTGTTCCTACAAAACTCCCACTCTCAGGTGCAAGAG
TTATGTAGAAGGAAAGGGAGCTGAAATAGGAACAGAAAAATCAACCCCTATAACTAGTGAACACCAAGGGAAAAT
ACCACAATGATTTCAGAGGAGACTCTGCAAAATCGTCCCTTGTGGAGAATGCAGGCAACATGGAATACTACGAAT
GAAATCACATCACTGTATCTTTTACATCAATAGCCTCACCACTAATATATCTTGTATCTAGGTGTCTATAATGGC
TGAAACCACTACATCCATCTATGCCATTTACCTGAAAACTTAACTGTGGCCTTTATGAGGCCAGAAAAGTGAACT
GAGTTTTGTAGTTAAGACCTCAAATGAGGGGAGTCAGCAGTGATCATGGGGGAAATGTTTACATTTTTTTTTTCT

FIGURE 741B

TCAGAAGTAACGCTTTCTGATGATTTTATCTGATATTTAAAACAGGGAGCTATGGTGCACTCTAGTTTATACTTG
CGCTCTGAAATGTGTAAACATAGGGTGCCTACCTATTTCACCTGACCCATACTCGTTTCTGATTCAGAATCAGTG
TGGGCTCCTGCAGTGGGCGCGGGTCACGGCTGACTCCAACTTCCAATACAACAGCCATCACTAGCACAGTGTTTT
TTTGTTTAACCAACGTAGTGTTATTAGTAGTTCTATAAAGAGAACTGCTTTTAACATTAGGGACTGGGAGCAGTC
CATGGGATAAAAAGGAAAGTGTTTTCTCACGAGAAAACATGTCAGGAAAAATAAAGAACACTTTCTACCTCTGTT
TCAGATTTTTGAAACACTTATTTTAAACCAAATTTTAATTTCTGTGTCCAAAATAAGTTTTAAGGACATCTGTTC
TTCCATACGAAATAGGTTAGGCTGCCTATTTCTCACTGAGCTCATGGAATGGTTCTGCTTATGATACTCTGCACG
CTGCCTTTTAGTGAGTGAGGAGTTTGGGGTTGCCTAGCACTTGCTAACTTGTAAAAAGTCATCTTTCCCTCACAG
AAAGAAACGAAAGAAAGCAAAGCAAAGTCAGTGAAAGACAATCTTTATAGTTTCAGGAGTAAATCTAAATGTGGC
TTTTGTCAAGCACTTAGATGGATATAAATGCAGCAACTTGTTTTAAAAAAATGCACATTTACTTCCCAAAAAAGT
TGTTACTTGCCTTTTCAAGTGTGACAAACTCACATTTGATATTCTCTTATATGTTATAGTAATGTAACGTATAAA
CTCAAGCCTTTTTATTCTTTGTGATTAAATCCTGTTTTAAAATGTCACAAAACAGGAACCAGCATTCTAATTAGA
TTTACTATATCAAGATATGGTTCAAATAGGACTACTAGAGTTCATTGAACACTAAAACTATGAAACAATTACTTT
TTATATTAAAAAGACCATGGATTTAACTTATGAAAATCCAAATGCAGGATAGTAATTTTTGTTTACTTTTTTAAC
CAAACTGAATTTTTGAAAGACTATTGCAGGTGTTTAAAAAGAAAGAAAAGTTGTTTTATCTAATACTGTAAGTAG
TTGTCATATTCTGGAAAATTTAATAGTTTTAGAGTTAAGATATCTCCTCTCTTTGGTTAGGGAAGAAGAAAGCCC
TTCACCATTGTGGAATGATGCCCTGGCTTTAAGGTTTAGCTCCACATCATGCTTCTCTT

FIGURE 742

MSAAAYMDFVAAQCLVSISNRAAVPEHGVAPDAERLRLPEREVTKEHGDPGDTWKDYCTLVTIAKSLLDLNKYRP
IQTPSVCSDSLESPDEDMGSDSDVTTESGSSPSHSPEERQDPGSAPSPLSLLHPGVAAKGKHASEKRHKCPYSGC
GKVYGKSSHLKAHYRVHTGERPFPCTWPDCLKKFSRSDELTRHYRTHTGEKQFRCPLCEKRFMRSDHLTKHARRH
TEFHPSMIKRSKKALANAL

FIGURE 743

GGCACGAGGGATCCCGGATGTGGATCAAGTTGGTGGGAAGCGTGCGGTGCCGCAGCA**ATG**GCGGCGCTCACAATT
GCCACGGGTACTGGCAATTGGTTTTCGGCTTTGGCGCTCGGGGTGACTCTTCTCAAATGCCTTCTCATCCCCACA
TACCATTCCACAGATTTTGAAGTACACCGAAACTGGCTTGCTATCACTCACAGTTTGCCAATATCACAGTGGTAT
TATGAGGCAACTTCAGAGTGGACGTTGGATTACCCCCCTTTCTTTGCATGGTTTGAGTATATCCTGTCACATGTT
GCCAAATATTTTGATCAAGAAATGCTGAATGTCCATAATTTGAATTACTCCAGCTCAAGGACCTTACTTTTCCAG
AGATTTTCCGTCATCTTTATGGATGTACTCTTTGTGTATGCTGTCCGTGAGTGCTGTAAATGCATTGATGGAAAA
AAAGTGGGTAAAGAACTTACAGAAAAGCCAAAATTTATTCTGTCGGTATTACTTCTGTGGAACTTCGGGTTATTA
ATTGTGGACCATATTCATTTTCAGTACAATGGCTTTTTATTTGGATTAATGCTACTCTCCATTGCACGATTATTT
CAGAAAAGGCATATGGAAGGAGCATTTCTCTTTGCTGTTCTCCTACATTTCAAGCATATCTACCTCTATGTAGCA
CCAGCTTATGGTGTATATCTGCTGCGATCCTACTGTTTCACTGCAAATAAACCAGATGGGTCTATTCGATGGAAG
AGTTTCAGCTTTGTTCGTGTTATTTCCCTGGGACTGGTTGTTTTCTTAGTTTCTGCTCTTTCATTGGGTCCTTTC
CTGGCCTTGAATCAGCTGCCTCAAGTCTTTTCCCGACTCTTTCCTTTCAAGAGGGGCCTCTGTCATGCATATTGG
GCTCCAAACTTCTGGGCTTTGTACAATGCTTTGGACAAAGTGCTGTCTGTCATCGGTTTGAAATTGAAATTTCTT
GATCCCAACAATATTCCCAAGGCCTCAATGACAAGTGGTTTGGTTCAGCAGTTCCAACACACAGTCCTTCCCTCA
GTGACTCCCTTGGCAACCCTCATCTGCACACTGATTGCCATATTGCCCTCTATTTTCTGTCTTTGGTTTAAACCC
CAAGGGCCCAGAGGCTTTCTCCGATGTCTAACTCTTTGTGCCTTGAGCTCCTTTATGTTTGGGTGGCATGTTCAT
GAAAAAGCCATACTTCTAGCAATTCTCCCAATGAGCCTTTTGTCTGTGGGAAAAGCAGGAGACGCTTCGATTTTT
CTGATTCTGACCACAACAGGACATTATTCCCTCTTTCCTCTGCTCTTCACTGCACCAGAACTTCCCATTAAAATC
TTACTCATGTTACTATTCACCATATATAGTATTTCGTCACTGAAGACTTTATTCAGAAAAGAAAAACCTCTTTTT
AATTGGATGGAAACTTTCTACCTGCTTGGCCTGGGGCCTCTGGAAGTCTGCTGTGAATTTGTATTCCCTTTCACC
TCCTGGAAGGTGAAGTACCCCTTCATCCCTTTGTTACTAACCTCAGTGTATTGTGCAGTAGGCGTCACATATGCT
TGGTTCAAACTGTATGTTTCAGTATTGATTGACTCTGCTATTGGCAAGACAAAGAAACAA**TGA**ATAAAGGAACTG
CTTAGAAAAAAAAAAAAAAAAAAAA

FIGURE 744

MAALTIATGTGNWFSALALGVTLLKCLLIPTYHSTDFEVHRNWLAITHSLPISQWYYEATSEWTLDYPPFFAWFE
YILSHVAKYFDQEMLNVHNLNYSSSRTLLFQRFSVIFMDVLFVYAVRECCKCIDGKKVGKELTEKPKFILSVLLL
WNFGLLIVDHIHFQYNGFLFGLMLLSIARLFQKRHMEGAFLFAVLLHFKHIYLYVAPAYGVYLLRSYCFTANKPD
GSIRWKSFSFVRVISLGLVVFLVSALSLGPFLALNQLPQVFSRLFPFKRGLCHAYWAPNFWALYNALDKVLSVIG
LKLKFLDPNNIPKASMTSGLVQQFQHTVLPSVTPLATLICTLIAILPSIFCLWFKPQGPRGFLRCLTLCALSSFM
FGWHVHEKAILLAILPMSLLSVGKAGDASIFLILTTTGHYSLFPLLFTAPELPIKILLMLLFTIYSISSLKTLFR
KEKPLFNWMETFYLLGLGPLEVCCEFVFPFTSWKVKYPFIPLLLTSVYCAVGVTYAWFKLYVSVLIDSAIGKTKK
Q

FIGURE 745

CCCCTCTTCCTCCTCCTCAAGGGAAAGCTGCCCACTTCTAGCTGCCCTGCCATCCCCTTTAAAGGGCGACTTGCT
CAGCGCCAAACCGCGGCTCCAGCCCTCTCCAGCCTCCGGCTCAGCCGGCTCATCAGTCGGTCCGCGCCTTGCAGC
TCCTCCAGAGGGACGCGCCCCGAG**ATG**GAGAGCAAAGCCCTGCTCGTGCTGACTCTGGCCGTGTGGCTCCAGAGT
CTGACCGCCTCCCGCGGAGGGGTGGCCGCCGCCGACCAAAGAAGAGATTTTATCGACATCGAAAGTAAATTTGCC
CTAAGGACCCCTGAAGACACAGCTGAGGACACTTGCCACCTCATTCCCGGAGTAGCAGAGTCCGTGGCTACCTGT
CATTTCAATCACAGCAGCAAAACCTTCATGGTGATCCATGGCTGGACGGTAACAGGAATGTATGAGAGTTGGGTG
CCAAAACTTGTGGCCGCCCTGTACAAGAGAGAACCAGACTCCAATGTCATTGTGGTGGACTGGCTGTCACGGGCT
CAGGAGCATTACCCAGTGTCCGCGGGCTACACCAAACTGGTGGGACAGGATGTGGCCCGGTTTATCAACTGGATG
GAGGAGGAGTTTAACTACCCTCTGGACAATGTCCATCTCTTGGGATACAGCCTTGGAGCCCATGCTGCTGGCATT
GCAGGAAGTCTGACCAATAAGAAAGTCAACAGAATTACTGGCCTCGATCCAGCTGGACCTAACTTTGAGTATGCA
GAAGCCCCGAGTCGTCTTTCTCCTGATGATGCAGATTTTGTAGACGTCTTACACACATTCACCAGAGGGTCCCCT
GGTCGAAGCATTGGAATCCAGAAACCAGTTGGGCATGTTGACATTTACCCGAATGGAGGTACTTTTCAGCCAGGA
TGTAACATTGGAGAAGCTATCCGCGTGATTGCAGAGAGAGGACTTGGAGATGTGGACCAGCTAGTGAAGTGCTCC
CACGAGCGCTCCATTCATCTCTTCATCGACTCTCTGTTGAATGAAGAAAATCCAAGTAAGGCCTACAGGTGCAGT
TCCAAGGAAGCCTTTGAGAAAGGGCTCTGCTTGAGTTGTAGAAAGAACCGCTGCAACAATCTGGGCTATGAGATC
AATAAAGTCAGAGCCAAAAGAAGCAGCAAAATGTACCTGAAGACTCGTTCTCAGATGCCCTACAAAGTCTTCCAT
TACCAAGTAAAGATTCATTTTTCTGGGACTGAGAGTGAAACCCATACCAATCAGGCCTTTGAGATTTCTCTGTAT
GGCACCGTGGCCGAGAGTGAGAACATCCCATTCACTCTGCCTGAAGTTTCCACAAATAAGACCTACTCCTTCCTA
ATTTACACAGAGGTAGATATTGGAGAACTACTCATGTTGAAGCTCAAATGGAAGAGTGATTCATACTTTAGCTGG
TCAGACTGGTGGAGCAGTCCCGGCTTCGCCATTCAGAAGATCAGAGTAAAAGCAGGAGAGACTCAGAAAAAGGTG
ATCTTCTGTTCTAGGGAGAAAGTGTCTCATTTGCAGAAAGGAAAGGCACCTGCGGTATTTGTGAAATGCCATGAC
AAGTCTCTGAATAAGAAGTCAGGC**TGA**AACTGGGCGAATCTACAGAACAAAGAACGGCATGTGAATTCTGTGAAG
AATGAAGTGGAGGAAGTAACTTTTACAAAACATACCCAGTGTTTGGGGTGTTTCAAAAGTGGATTTTCCTGAATA
TTAATCCCAGCCCTACCCTTGTTAGTTATTTTAGGAGACAGTCTCAAGCACTAAAAAGTGGCTAATTCAATTTAT
GGGGTATAGTGGCCAAATAGCACATCCTCCAACGTTAAAAGACAGTGGATCATGAAAAGTGCTGTTTTGTCCTTT
GAGAAAGAAATAATTGTTTGAGCGCAGAGTAAAATAAGGCTCCTTCATGTGGCGTATTGGGCCATAGCCTATAAT
TGGTTAGAACCTCCTATTTTAATTGGAATTCTGGATCTTTCGGACTGAGGCCTTCTCAAACTTTACTCTAAGTCT
CCAAGAATACAGAAAATGCTTTTCCGCGGCACGAATCAGACTCATCTACACAGCAGTATGAATGATGTTTTAGAA
TGATTCCCTCTTGCTATTGGAATGTGGTCCAGACGTCAACCAGGAACATGTAACTTGGAGAGGGACGAAGAAAGG
GTCTGATAAACACAGAGGTTTTAAACAGTCCCTACCATTGGCCTGCATCATGACAAAGTTACAAATTCAAGGAGA
TATAAAATCTAGATCAATTAATTCTTAATAGGCTTTATCGTTTATTGCTTAATCCCTCTCTCCCCCTTCTTTTTT
GTCTCAAGATTATATTATAATAATGTTCTCTGGGTAGGTGTTGAAAATGAGCCTGTAATCCTCAGCTGACACATA
ATTTGAATGGTGCAGAAAAAAAAAAAGATACCGTAATTTTATTATTAGATTCTCCAAATGATTTTCATCAATTTAA
AATCATTCAATATCTGACAGTTACTCTTCAGTTTTAGGCTTACCTTGGTCATGCTTCAGTTGTACTTCCAGTGCG
TCTCTTTTGTTCCTGGCTTTGACATGAAAAGATAGGTTTGAGTTCAAATTTTGCATTGTGTGAGCTTCTACAGAT
TTTAGACAAGGACCGTTTTTACTAAGTAAAAGGGTGGAGAGGTTCCTGGGGTGGATTCCTAAGCAGTGCTTGTAA
ACCATCGCGTGCAATGAGCCAGATGGAGTACCATGAGGGTTGTTATTTGTTGTTTTTAACAACTAATCAAGAGTG
AGTGAACAACTATTTATAAACTAGATCTCCTATTTTTCAGAATGCTCTTCTACGTATAAATATGAAATGATAAAG
ATGTCAAATATCTCAGAGGCTATAGCTGGGAACCCGACTGTGAAAGTATGTGATATCTGAACACATACTAGAAAG
CTCTGCATGTGTGTTGTCCTTCAGCATAATTCGGAAGGGAAAACAGTCGATCAAGGGATGTATTGGAACATGTCG
GAGTAGAAATTGTTCCTGATGTGCCAGAACTTCGACCCTTTCTCTGAGAGAGATGATCGTGCCTATAAATAGTAG
GACCAATGTTGTGATTAACATCATCAGGCTTGGAATGAATTCTCTCTAAAAATAAAATGATGTATGATTTGTTGT
TGGCATCCCCTTTATTAATTCATTAAATTTCTGGATTTGGGTTGTGACCCAGGGTGCATTAACTTAAAAGATTCA
CTAAAGCAGCACATAGCACTGGGAACTCTGGCTCCGAAAAACTTTGTTATATATATCAAGGATGTTCTGGCTTTA
CATTTTATTTATTAGCTGTAAATACATGTGTGGATGTGTAAATGGAGCTTGTACATATTGGAAAGGTCATTGTGG
CTATCTGCATTTATAAATGTGTGGTGCTAACTGTATGTGTCTTTATCAGTGATGGTCTCACAGAGCCAACTCACT
CTTATGAAATGGGCTTTAACAAAACAAGAAAGAAACGTACTTAACTGTGTGAAGAAATGGAATCAGCTTTTAATA
AAATTGACAACATTTTATTACCAC

FIGURE 746

MESKALLVLTLAVWLQSLTASRGGVAAADQRRDFIDIESKFALRTPEDTAEDTCHLIPGVAESVATCHFNHSSKT
FMVIHGWTVTGMYESWVPKLVAALYKREPDSNVIVVDWLSRAQEHYPVSAGYTKLVGQDVARFINWMEEEFNYPL
DNVHLLGYSLGAHAAGIAGSLTNKKVNRITGLDPAGPNFEYAEAPSRLSPDDADFVDVLHTFTRGSPGRSIGIQK
PVGHVDIYPNGGTFQPGCNIGEAIRVIAERGLGDVDQLVKCSHERSIHLFIDSLLNEENPSKAYRCSSKEAFEKG
LCLSCRKNRCNNLGYEINKVRAKRSSKMYLKTRSQMPYKVFHYQVKIHFSGTESETHTNQAFEISLYGTVAESEN
IPFTLPEVSTNKTYSFLIYTEVDIGELLMLKLKWKSDSYFSWSDWWSSPGFAIQKIRVKAGETQKKVIFCSREKV
SHLQKGKAPAVFVKCHDKSLNKKSG

FIGURE 747

GGCGCCGACCCATGCTGGCTGGGAACGTGTCTCCCGGTGACGCAGCCCCGGGTGGGGAACGTGGTGCGGCGGCGG
CGGCGGCGGCGACTGTACGCGCCTCCGCCGCCCCCGAGAGGACGCGCCGTGCAGCGGCTGAGTGGCGGCGGCGGC
GACGGCAAACCCGGAGCTGCCGGCCGGCGCGCGGGAGGAGGACGCGGGTGCGGTCTAGGAAACGGAGCTGCGGGC
GGAGGCTCCATGTTGGGAAGCGGCGCCGTTCGTGCTTGTTAGCGGGAATCCGGGAGCCGCGGGGTGAGCTGGCGG
GGGCCGGGCCCTAAGTGAAG**ATG**GAGGCCCCGCTGCGGCCTGCCGCGGACATCCTGAGGCGGAACCCGCAGCAGG
ACTACGAACTCGTCCAGAGGGTCGGCAGCGGCACCTACGGGGACGTCTATAAGGCCAGAAATGTACACACAGGAG
AGCTGGCTGCAGTAAAAATCATTAAATTGGAGCCTGGAGATGATTTTTCTTTGATTCAACAAGAAATATTTATGG
TTAAAGAATGTAAACATTGTAACATCGTTGCCTACTTTGGGAGTTATCTTAGTCGGGAAAAACTATGGATTTGTA
TGGAATACTGTGGTGGCGGATCACTTCAAGATATTTACCATGTTACTGGACCATTATCAGAATTGCAAATAGCCT
ATGTATGCAGAGAAACCTTACAGGGTCTTGCCTATTTGCATACTAAAGGCAAAATGCATAGAGATATCAAAGGTG
CTAATATTTTATTGACAGACCATGGCGATGTAAAATTAGCTGACTTTGGTGTGGCTGCAAAAATAACAGCTACCA
TTGCAAAACGAAAATCTTTCATTGGCACCCCTTACTGGATGGCCCCAGAAGTTGCAGCAGTAGAGAAGAATGGTG
GCTACAACCAACTCTGTGATATCTGGGCAGTAGGAATAACAGCAATTGAACTTGGAGAACTTCAGCCACCTATGT
TTGATCTCCACCCAATGAGGGCTCTCTTCTTAATGTCAAAAAGTAATTTTCAGCCTCCAAAACTAAAGGACAAAA
CAAAATGGTCATCAACATTCCATAATTTTGTCAAAATAGCACTAACCAAAAACCCAAAAAAAAAGACCAACTGCTG
AAAGACTTCTGACTCACACTTTTGTTGCACAGCCAGGTCTCTCTAGAGCCCTAGCAGTTGAACTGTTAGACAAAG
TGAACAATCCAGATAACCACGCACATTACACTGAAGCAGATGACGATGACTTTGAGCCCCATGCAATCATTCGTC
ATACCATTAGATCTACAAACAGGAATGCCAGAGCTGAACGGACAGCTTCAGAAATAAATTTTGACAAATTACAAT
TTGAACCTCCTCTGAGAAAAGAAACAGAAGCACGAGATGAAATGGGATTGTCATCAGACCCAAATTTCATGTTAC
AGTGGAATCCTTTTGTTGATGGTGCAAATACTGGCAAATCAACCTCAAAACGTGCAATACCACCTCCCCTACCTC
CTAAGCCAAGGATAAGCAGTTACCCTGAAGACAACTTTCCGGATGAAGAAAAAGCATCAACCATAAAACATTGTC
CTGATTCAGAAAGCAGAGCTCCCCAAATTCTCAGAAGACAGAGTAGCCCAAGTTGTGGGCCTGTGGCAGAGACTT
CTTCTATTGGAAATGGTGATGGTATTTCAAAACTGATGAGTGAAAATACAGAAGGATCAGCACAAGCACCACAGT
TACCACGAAAAAAGGACAAACGAGACTTCCCTAAACCAGCCATCAATGGCCTTCCACCCACCCCAAAAGTTCTGA
TGGGAGCATGCTTTTCAAAAGTTTTTGATGGCTGTCCTTTGAAAATTAATTGTGCAACATCCTGGATACATCCTG
ATACAAAAGATCAGTACATTATTTTTGGAACTGAAGATGGTATTTACACACTGAATCTCAATGAGCTACATGAGG
CAACGATGGAACAGTTATTTCCACGGAAGTGTACTTGGCTGTATGTTATCAATAATACTTTAATGTCATTATCAG
AAGGAAAAACCTTTCAGCTCTACTCTCACAATCTTATAGCTTTGTTTGAACATGCCAAAAAACCAGGATTAGCTG
CCCATATTCAAACTCACAGGTTTCCAGACCGAATACTACCAAGAAAATTCGCTTTAACAACAAAGATTCCTGATA
CAAAAGGCTGCCACAAATGTTGCATAGTCAGAAACCCTTACACGGGACATAAATACCTCTGTGGAGCTTTACAGT
CTGGAATTGTTTTACTTCAGTGGTATGAGCCAATGCAGAAATTCATGTTGATAAAGCACTTTGATTTTCCTTTGC
CAAGTCCTTTGAATGTTTTTGAAATGCTGGTGATACCTGAACAGGAATACCCTATGGTCTGTGTAGCTATTAGCA
AAGGCACTGAATCGAATCAGGTAGTTCAGTTTGAGACAATCAATTTGAACTCTGCATCTTCATGGTTTACAGAAA
TTGGTGCAGGCAGCCAGCAGTTAGATTCCATTCATGTAACACAGTTGGAGAGAGATACCGTTTTAGTGTGTTTAG
ACAAATTTGTGAAAATTGTAAATCTACAAGGAAAATTAAAATCAAGTAAGAAACTGGCCTCTGAGTTAAGTTTTG
ATTTTCGCATTGAATCTGTAGTATGCCTTCAAGACAGTGTGTTGGCTTTCTGGAAACATGGGATGCAGGGTAAAA
GCTTCAAGTCAGATGAGGTTACCCAGGAGATTTCAGATGAAACAAGAGTTTTCCGCTTATTAGGATCAGACAGGG
TTGTCGTTTTGGAAAGTAGGCCAACAGAAAATCCTACTGCACACAGCAATCTCTACATCTTGGCTGGACATGAAA
ATAGTTAC**TAA**GCAACAGAAACTGATCTCAAATGACAGGAAAATGAATATACTCCATTGAAAGGAAAAATAAGGA
AATTCAATACAAACTGCACTATGATTTGCTTTAACTATTATGGGTTATATTGCAAATGATCTGTACTTTAGGGTA

FIGURE 748

MEAPLRPAADILRRNPQQDYELVQRVGSGTYGDVYKARNVHTGELAAVKIIKLEPGDDFSLIQQEIFMVKECKHC
NIVAYFGSYLSREKLWICMEYCGGGSLQDIYHVTGPLSELQIAYVCRETLQGLAYLHTKGKMHRDIKGANILLTD
HGDVKLADFGVAAKITATIAKRKSFIGTPYWMAPEVAAVEKNGGYNQLCDIWAVGITAIELGELQPPMFDLHPMR
ALFLMSKSNFQPPKLKDKTKWSSTFHNFVKIALTKNPKKRPTAERLLTHTFVAQPGLSRALAVELLDKVNNPDNH
AHYTEADDDDFEPHAIIRHTIRSTNRNARAERTASEINFDKLQFEPPLRKETEARDEMGLSSDPNFMLQWNPFVD
GANTGKSTSKRAIPPPLPPKPRISSYPEDNFPDEEKASTIKHCPDSESRAPQILRRQSSPSCGPVAETSSIGNGD
GISKLMSENTEGSAQAPQLPRKKDKRDFPKPAINGLPPTPKVLMGACFSKVFDGCPLKINCATSWIHPDTKDQYI
IFGTEDGIYTLNLNELHEATMEQLFPRKCTWLYVINNTLMSLSEGKTFQLYSHNLIALFEHAKKPGLAAHIQTHR
FPDRILPRKFALTTKIPDTKGCHKCCIVRNPYTGHKYLCGALQSGIVLLQWYEPMQKFMLIKHFDFPLPSPLNVF
EMLVIPEQEYPMVCVAISKGTESNQVVQFETINLNSASSWFTEIGAGSQQLDSIHVTQLERDTVLVCLDKFVKIV
NLQGKLKSSKKLASELSFDFRIESVVCLQDSVLAFWKHGMQGKSFKSDEVTQEISDETRVFRLLGSDRVVVLESR
PTENPTAHSNLYILAGHENSY

FIGURE 749

CACCTGCTGCCGCCCGCGCC**ATG**GCTGGCAAAGCACACAGGCTGAGCGCTGAGGAGAGGGACCAGCTGCTGCCAA
ACCTGAGGGCTGTGGGGTGGAATGAGCTGGAAGGCCGTGATGCCATCTTCAAGCAGTTTCATTTCAAAGACTTCA
ACAGGGCCTTTGGGTTCATGACAAGAGTGGCCCTGCAGGCTGAGAAACTGGACCACCATCCTGAATGGTTTAACG
TGTACAACAAGGTCCACATCACGCTGAGCACCCATGAGTGTGCCGGCCTTTCAGAACGGGACATAAACCTGGCCA
GCTTCATCGAACAAGTAGCAGTGTCCATGACA**TAG**ACCCTGCCCTTCCTCTTTGAATTCTTCCGGGGGGAAGGGGT
GACTGAACTGGGAGTCCAGGGAGGGAGCTGAGGAGCCCTTACCCTCCCACCACTCCCCTCCCAAGACCCAGCCGC
CGCCGTTGAGGGCTGAGTCCTTGCTGTGGGATGTGCCAGTGTCCCCACCAACACCAGGAATTTAGACCTTTTCCC
TGCACCACTCTCTTCATCCTGGGGGGCTCTGTTACACTAATTTGAATAAACTCTCCCCTTTCTTTGCAACTTCCCA
GCAACAATAATGATTTTCTTGCCA

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FIGURE 750

MAGKAHRLSAEERDQLLPNLRAVGWNELEGRDAIFKQFHFKDFNRAFGFMTRVALQAEKLDHHPEWFNVYNKVHI
TLSTHECAGLSERDINLASFIEQVAVSMT

FIGURE 751

TGCCGCAGCCCCCGCCCGCCCGCAGAGCTTTTGAAAGGCGGCGGGAGGCGGCGAGCGCC**ATG**GCCAGTCCGGGCT
GCCTGCTGTGCGTGCTGGGCCTGCTACTCTGCGGGGCGGCGAGCCTCGAGCTGTCTAGACCCCACGGCGACACCG
CCAAGAAGCCCATCATCGGAATATTAATGCAAAAATGCCGTAATAAAGTCATGAAAAACTATGGAAGATACTATA
TTGCTGCGTCCTATGTAAAGTACTTGGAGTCTGCAGGTGCGAGAGTTGTACCAGTAAGGCTGGATCTTACAGAGA
AAGACTATGAAATACTTTTCAAATCTATTAATGGAATCCTTTTCCCTGGAGGAAGTGTTGACCTCAGACGCTCAG
ATTATGCTAAAGTGGCCAAAATATTTTATAACTTGTCCATACAGAGTTTTGATGATGGAGACTATTTTCCTGTGT
GGGGCACATGCCTTGGATTTGAAGAGCTTTCACTGCTGATTAGTGGAGAGTGCTTATTAACTGCCACAGATACTG
TTGACGTGGCAATGCCGCTGAACTTCACTGGAGGTCAATTGCACAGCAGAATGTTCCAGAATTTTCCTACTGAGT
TGTTGCTGTCATTAGCAGTAGAACCTCTGACTGCCAATTTCCATAAGTGGAGCCTCTCCGTGAAGAATTTTACAA
TGAATGAAAAGTTAAAGAAGTTTTTCAATGTCTTAACTACAAATACAGATGGCAAGATTGAGTTTATTTCAACAA
TGGAAGGATATAAGTATCCAGTATATGGTGTCCAGTGGCATCCAGAGAAAGCACCTTATGAGTGGAAGAATTTGG
ATGGCATTTCCCATGCACCTAATGCTGTGAAAACCGCATTTTATTTAGCAGAGTTTTTTGTTAATGAAGCTCGGA
AAAACAACCATCATTTTAAATCTGAATCTGAAGAGGAGAAAGCATTGATTTATCAGTTCAGTCCAATTTATACTG
GAAATATTTCTTCATTTCAGCAATGTTACATATTTGAT**TGA**AAGTCTTCAATTTGTTAACAGAGCAAATTTGAAT
AATTCCATGATTAAACTGTTAGAATAACTTGCTACTCATGGCAAGATTAGGAAGTCACAGATTCTTTTCTATAAT
GTGCCTGGCTCTGATTCTTCATTATGTATGTGACTATTTATATAACATTAGATAATTAAATAGTGAGACATAAAT
AGAGTGCTTTTTCATGGAAAAGCCTTCTTATATCTGAAGATTGAAAAATAAATTTACTGAAATACAAAAAAAAAA
AAAAA

FIGURE 752

MASPGCLLCVLGLLLCGAASLELSRPHGDTAKKPIIGILMQKCRNKVMKNYGRYYIAASYVKYLESAGARVVPVR
LDLTEKDYEILFKSINGILFPGGSVDLRRSDYAKVAKIFYNLSIQSFDDGDYFPVWGTCLGFEELSLLISGECLL
TATDTVDVAMPLNFTGGQLHSRMFQNFPTELLLSLAVEPLTANFHKWSLSVKNFTMNEKLKKFFNVLTTNTDGKI
EFISTMEGYKYPVYGVQWHPEKAPYEWKNLDGISHAPNAVKTAFYLAEFFVNEARKNNHHFKSESEEEKALIYQF
SPIYTGNISSFQQCYIFD

FIGURE 753

GAATTCCAACT**ATG**GAGACCCAAATGTCTCAGAATGTATGTCCCAGAAACCTGTGGCTGCTTCAACCATTGACAG
TTTTGCTGCTGCTGGCTTCTGCAGACAGTCAAGCTGCAGCTCCCCCAAAGGCTGTGCTGAAACTTGAGCCCCCGT
GGATCAACGTGCTCCAGGAGGACTCTGTGACTCTGACATGCCAGGGGGCTCGCAGCCCTGAGAGCGACTCCATTC
AGTGGTTCCACAATGGGAATCTCATTCCCACCCACACGCAGCCCAGCTACAGGTTCAAGGCCAACAACAATGACA
GCGGGGAGTACACGTGCCAGACTGGCCAGACCAGCCTCAGCGACCCTGTGCATCTGACTGTGCTTTCCGAATGGC
TGGTGCTCCAGACCCCTCACCTGGAGTTCCAGGAGGGAGAAACCATCATGCTGAGGTGCCACAGCTGGAAGGACA
AGCCTCTGGTCAAGGTCACATTCTTCCAGAATGGAAAATCCCAGAAATTCTCCCGTTTGGATCCCACCTTCTCCA
TCCCACAAGCAAACCACAGTCACAGTGGTGATTACCACTGCACAGGAAACATAGGCTACACGCTGTTCTCATCCA
AGCCTGTGACCATCACTGTCCAAGTGCCCAGCATGGGCAGCTCTTCACCAATGGGGATCATTGTGGCTGTGGTCA
TTGCGACTGCTGTAGCAGCCATTGTTGCTGCTGTAGTGGCCTTGATCTACTGCAGGAAAAAGCGGATTTCAGCCA
ATTCCACTGATCCTGTGAAGGCTGCCCAATTTGAGCCACCTGGACGTCAAATGATTGCCATCAGAAAGAGACAAC
TTGAAGAAACCAACAATGACTATGAAACAGCTGACGGCGGCTACATGACTCTGAACCCCAGGGCACCTACTGACG
ATGATAAAAACATCTACCTGACTCTTCCTCCCAACGACCATGTCAACAGTAATAAC**TAA**AGAGTAACGTTATGCC
ATGTGGTCATACTCTCAGCTTGCTGAGTGGATGACAAAAAGAGGGGAATTGTTAAAGGAAAATTTAAATGGAGAC
TGGAAAAATCCTGAGCAAACAAAACCACCTGGCCCTTAGAAATAGCTTTAACTTTGCTTAAACTACAAACACAAG
CAAAACTTCACGGGGTCATACTACATACAAGCATAAGCAAAACTTAACTTGGATCATTTCTGGTAAATGCTTATG
TTAGAAATAAGACAACCCCAGCCAATCACAAGCAGCCTACTAACATATAATTAGGTGACTAGGGACTTTCTAAGA
AGATACCTACCCCCAAAAAACAATTATGTAATTGAAAACCAACCGATTGCCTTTATTTTGCTTCCACATTTTCCC
AATAAATACTTGCCTGTGACATTTTGCCACTGGAACACTAAACTTCATGAATTGCGCCTCAGATTTTTCCTTTAA
CATCTTTTTTTTTTTTTGACAGAGTCTCAATCTGTTACCCAGGCTGGAGTGCAGTGGTGCTATCTTGGCTCACTGC
AAACCCGCCTCCCAGGTTTAAGCGATTCTCATGCCTCAGCCTCCCAGTAGCTGGGATTAGAGGCATGTGCCATCA
TACCCAGCTAATTTTTGTATTTTTTATTTTTTTTTTTTAGTAGAGACAGGGTTTCGCAATGTTGGCCAGGCCGAT
CTCGAACTTCTGGCCTCTAGCGATCTGCCCGCCTCGGCCTCCCAAAGTGCTGGGATGACCAGCATCAGCCCCAAT
GTCCAGCCTCTTTAACATCTTCTTTCCTATGCCCTCTCTGTGGATCCCTACTGCTGGTTTCTGCCTTCTCCATGC
TGAGAACAAAATCACCTATTCACTGCTTATGCAGTCGGAAGCTCCAGAAGAACAAAGAGCCCAATTACCAGAACC
ACATTAAGTCTCCATTGTTTTGCCTTGGGATTTGAGAAGAGAATTAGAGAGGTGAGGATCTGGTATTTCCTGGAC
TAAATTCCCCTTGGGGAAGACGAAGGGATGCTGCAGTTCCAAAAGAGAAGGACTCTTCCAGAGTCATCTACCTGA
GTCCCAAAGCTCCCTGTCCTGAAAGCCACAGACAATATGGTCCCAAATGACTGACTGCACCTTCTGTGCCTCAGC
CGTTCTTGACATCAAGAATCTTCTGTTCCACATCCACACAGCCAATACAATTAGTCAAACCACTGTTATTAACAG
ATGTAGCAACATGAAAGACGCTATGTTACAGGTTACATGAGAGCAATCATGTAAGTCTATATGACTTCAGAAATG
TTAAAATAGACTAACCTCTAACAACAAATTAAAAGTGCGGAATTC

FIGURE 754

METQMSQNVCPRNLWLLQPLTVLLLLASADSQAAAPPKAVLKLEPPWINVLQEDSVTLTCQGARSPESDSIQWFH
NGNLIPTHTQPSYRFKANNNDSGEYTCQTGQTSLSDPVHLTVLSEWLVLQTPHLEFQEGETIMLRCHSWKDKPLV
KVTFFQNGKSQKFSRLDPTFSIPQANHSHSGDYHCTGNIGYTLFSSKPVTITVQVPSMGSSSPMGIIVAVVIATA
VAAIVAAVVALIYCRKKRISANSTDPVKAAQFEPPGRQMIAIRKRQLEETNNDYETADGGYMTLNPRAPTDDDKN
IYLTLPPNDHVNSNN

FIGURE 755

GGGAAG**ATG**GCGAAGGTCTCAGAGCTTTACGATGTCACTTGGGAAGAAATGAGAGATAAAATGAGAAAATGGAGA
GAAGAAAACTCAAGAAATAGTGAGCAAATTGTGGAAGTTGGAGAAGAATTAATTAATGAATATGCTTCTAAGCTG
GGAGATGATATTTGGATCATATATGAACAGGTGATGATTGCAGCACTAGACTATGGTCGGGATGACTTGGCATTG
TTTTGTCTTCAAGAGCTGAGAAGACAGTTCCCTGGCAGTCACAGAGTCAAGCGATTAACAGGCATGAGATTTGAA
GCCATGGAAAGATATGATGATGCTATACAGCTATATGATAGGATTTTACAAGAAGATCCAACTAACACTGCTGCA
AGAAAGCGTAAGATTGCCATTCGAAAAGCCCAGGGGAAAAATGTGGAGGCCATTCGGGAGCTGAATGAGTATCTG
GAACAATTTGTTGGAGACCAAGAAGCCTGGCATGAACTTGCAGAACTTTACATCAATGAACATGACTATGCAAAA
GCAGCCTTTTGTTTAGAGGAACTAATGATGACTAATCCACACAACCACTTATACTGTCAGCAGTATGCTGAAGTT
AAGTATACCCAAGGTGGACTTGAAAACCTCGAACTTTCAAGAAAGTATTTTGCACAGGCATTGAAACTGAACAAC
AGAAATATGAGAGCTTTGTTTGGACTTTATATGTCGGCAAGTCATATTGCTTCTAATCCAAAAGCAAGTGCAAAA
ACGAAAAAGGACAACATGAAATATGCTAGTTGGGCAGCTAGTCAAATAAACAGAGCTTATCAGTTTGCAGGTCGA
AGTAAGAAGGAAACCAAATATTCTCTTAAGGCTGTCGAAGACATGTTGGAAACATTGCAGATCACCCAGTCT**TAA**

GGTTTCAAAAACTCTTTGACATTAGATTTCACAACTGCACAATTGAACTTATTGGCCTGTAACTTATTTACTAAA
TGCTCAGTGCTATTTATATACTACAGTAATTTTCTGTTAAGAAGGCAGTTGTAAAGAATGTGTTTATATAAACCT
AAAAATGCCTTTTACTGCTAAGTGGGGAGATGGGGGAAATCCATGGAAGAGAGATTTAAGACTTATTGATTGTAC
ATCAGTCTCTTCATATCACATATACATGTATATATATAAAACTCTAATGTAGTATAACCTTGTTAAATAAACCAT
GATGATTTATTAAACTTGC

FIGURE 756

MAKVSELYDVTWEEMRDKMRKWREENSRNSEQIVEVGEELINEYASKLGDDIWIIYEQVMIAALDYGRDDLALFC
LQELRRQFPGSHRVKRLTGMRFEAMERYDDAIQLYDRILQEDPTNTAARKRKIAIRKAQGKNVEAIRELNEYLEQ
FVGDQEAWHELAELYINEHDYAKAAFCLEELMMTNPHNHLYCQQYAEVKYTQGGLENLELSRKYFAQALKLNNRN
MRALFGLYMSASHIASNPKASAKTKKDNMKYASWAASQINRAYQFAGRSKKETKYSLKAVEDMLETLQITQS

FIGURE 757

GAAGCTGGACTGCAGCTGGTTTCAGGAACTTCTCTTGACGAGAAGAGAGACCAAGGAGGCCAAGCAGGGGCTGGG
CCAGAGGTGCCAACATGGGGAAACTGAGGCTCGGCTCGGAAAGGTGAAGTAACTTGTCCAAGATCACAAAGCTGG
TGAACATCAAGTTGGTGCT**ATG**GCAAGGCTGGGAAACTGCAGCCTGACTTGGGCTGCCCTGATCATCCTGCTGCT
CCCCGGAAGTCTGGAGGAGTGCGGGCACATCAGTGTCTCAGCCCCCATCGTCCACCTGGGGGATCCCATCACAGC
CTCCTGCATCATCAAGCAGAACTGCAGCCATCTGGACCCGGAGCCACAGATTCTGTGGAGACTGGGAGCAGAGCT
TCAGCCCGGGGGCAGGCAGCAGCGTCTGTCTGATGGGACCCAGGAATCTATCATCACCCTGCCCCACCTCAACCA
CACTCAGGCCTTTCTCTCCTGCTGCCTGAACTGGGGCAACAGCCTGCAGATCCTGGACCAGGTTGAGCTGCGCGC
AGGCTACCCTCCAGCCATACCCCACAACCTCTCCTGCCTCATGAACCTCACAACCAGCAGCCTCATCTGCCAGTG
GGAGCCAGGACCTGAGACCCACCTACCCACCAGCTTCACTCTGAAGAGTTTCAAGAGCCGGGGCAACTGTCAGAC
CCAAGGGGACTCCATCCTGGACTGCGTGCCCAAGGACGGGCAGAGCCACTGCTGCATCCCACGCAAACACCTGCT
GTTGTACCAGAATATGGGCATCTGGGTGCAGGCAGAGAATGCGCTGGGGACCAGCATGTCCCCACAACTGTGTCT
TGATCCCATGGATGTTGTGAAACTGGAGCCCCCCATGCTGCGGACCATGGACCCCAGCCCTGAAGCGGCCCCTCC
CCAGGCAGGCTGCCTACAGCTGTGCTGGGAGCCATGGCAGCCAGGCCTGCACATAAATCAGAAGTGTGAGCTGCG
CCACAAGCCGCAGCGTGGAGAAGCCAGCTGGGCACTGGTGGGCCCCCTCCCCTTGGAGGCCCTTCAGTATGAGCT
CTGCGGGCTCCTCCCAGCCACGGCCTACACCCTGCAGATACGCTGCATCCGCTGGCCCCTGCCTGGCCACTGGAG
CGACTGGAGCCCCAGCCTGGAGCTGAGAACTACCGAACGGGCCCCCACTGTCAGACTGGACACATGGTGGCGGCA
GAGGCAGCTGGACCCCAGGACAGTGCAGCTGTTCTGGAAGCCAGTGCCCCTGGAGGAAGACAGCGGACGGATCCA
AGGTTATGTGGTTTCTTGGAGACCCTCAGGCCAGGCTGGGGCCATCCTGCCCCTCTGCAACACCACAGAGCTCAG
CTGCACCTTCCACCTGCCTTCAGAAGCCCAGGAGGTGGCCCTTGTGGCCTATAACTCAGCCGGGACCTCTCGCCC
CACCCCGGTGGTCTTCTCAGAAAGCAGAGGCCCAGCTCTGACCAGACTCCATGCCATGGCCCGAGACCCTCACAG
CCTCTGGGTAGGCTGGGAGCCCCCCAATCCATGGCCTCAGGGCTATGTGATTGAGTGGGGCCTGGGCCCCCCCAG
CGCGAGCAATAGCAACAAGACCTGGAGGATGGAACAGAATGGGAGAGCCACGGGGTTTCTGCTGAAGGAGAACAT
CAGGCCCTTTCAGCTCTATGAGATCATCGTGACTCCCTTGTACCAGGACACCATGGGACCCTCCCAGCATGTCTA
TGCCTACTCTCAAGAAATGGCTCCCTCCCATGCCCCAGAGCTGCATCTAAAGCACATTGGCAAGACCTGGGCACA
GCTGGAGTGGGTGCCTGAGCCCCCTGAGCTGGGGAAGAGCCCCCTTACCCACTACACCATCTTCTGGACCAACGC
TCAGAACCAGTCCTTCTCCGCCATCCTGAATGCCTCCTCCCGTGGCTTTGTCCTCCATGGCCTGGAGCCCGCCAG
TCTGTATCACATCCACCTCATGGCTGCCAGCCAGGCTGGGGCCACCAACAGTACAGTCCTCACCCTGATGACCTT
GACCCCAGAGGGGTCGGAGCTACACATCATCCTGGGCCTGTTCGGCCTCCTGCTGTTGCTCACCTGCCTCTGTGG
AACTGCCTGGCTCTGTTGCAGCCCCAACAGGAAGAATCCCCTCTGGCCAAGTGTCCCAGACCCAGCTCACAGCAG
CCTGGGCTCCTGGGTGCCCACAATCATGGAGGAGGATGCCTTCCAGCTGCCCGGCCTTGGCACGCCACCCATCAC
CAAGCTCACAGTGCTGGAGGAGGATGAAAAGAAGCCGGTGCCCTGGGAGTCCCATAACAGCTCAGAGACCTGTGG
CCTCCCCACTCTGGTCCAGACCTATGTGCTCCAGGGGGACCCAAGAGCAGTTTCCACCCAGCCCCAATCCCAGTC
TGGCACCAGCGATCAGGTCCTTTATGGGCAGCTGCTGGGCAGCCCCACAAGCCCAGGGCCAGGGCACTATCTCCG
CTGTGACTCCACTCAGCCCCTCTTGGCGGGCCTCACCCCCAGCCCCAAGTCCTATGAGAACCTCTGGTTCCAGGC
CAGCCCCTTGGGGACCCTGGTAACCCCAGCCCCAAGCCAGGAGGACGACTGTGTCTTTGGGCCACTGCTCAACTT
CCCCCTCCTGCAGGGGATCCGGGTCCATGGGATGGAGGCGCTGGGGAGCTTC**TAG**GGCTTCCTGGGGTTCCCTTC
TTGGGCCTGCCTCTTAAAGGCCTGAGCTAGCTGGAGAAGAGGGGAGGGTCCATAAGCCCATGACTAAAAACTACC
CCAGCCCAGGCTCTCACCATCTCCAGTCACCAGCATCTCCCTCTCCTCCCAATCTCCATAGGCTGGGCCTCCCAG
GCGATCTGCATACTTTAAGGACCAGATCATGCTCCATCCAGCCCCACCCAATGGCCTTTTGTGCTTGTTTCCTAT
AACTTCAGTATTGTAAAC

FIGURE 758

MARLGNCSLTWAALIILLLPGSLEECGHISVSAPIVHLGDPITASCIIKQNCSHLDPEPQILWRLGAELQPGGRQ
QRLSDGTQESIITLPHLNHTQAFLSCCLNWGNSLQILDQVELRAGYPPAIPHNLSCLMNLTTSSLICQWEPGPET
HLPTSFTLKSFKSRGNCQTQGDSILDCVPKDGQSHCCIPRKHLLLYQNMGIWVQAENALGTSMSPQLCLDPMDVV
KLEPPMLRTMDPSPEAAPPQAGCLQLCWEPWQPGLHINQKCELRHKPQRGEASWALVGPLPLEALQYELCGLLPA
TAYTLQIRCIRWPLPGHWSDWSPSLELRTTERAPTVRLDTWWRQRQLDPRTVQLFWKPVPLEEDSGRIQGYVVSW
RPSGQAGAILPLCNTTELSCTFHLPSEAQEVALVAYNSAGTSRPTPVVFSESRGPALTRLHAMARDPHSLWVGWE
PPNPWPQGYVIEWGLGPPSASNSNKTWRMEQNGRATGFLLKENIRPFQLYEIIVTPLYQDTMGPSQHVYAYSQEM
APSHAPELHLKHIGKTWAQLEWVPEPPELGKSPLTHYTIFWTNAQNQSFSAILNASSRGFVLHGLEPASLYHIHL
MAASQAGATNSTVLTLMTLTPEGSELHIILGLFGLLLLLTCLCGTAWLCCSPNRKNPLWPSVPDPAHSSLGSWVP
TIMEEDAFQLPGLGTPPITKLTVLEEDEKKPVPWESHNSSETCGLPTLVQTYVLQGDPRAVSTQPQSQSGTSDQV
LYGQLLGSPTSPGPGHYLRCDSTQPLLAGLTPSPKSYENLWFQASPLGTLVTPAPSQEDDCVFGPLLNFPLLQGI
RVHGMEALGSF

FIGURE 759

GCTGACTCCAGTGTCCCGAGAGGCGCCGCTTCTTCCGCTTTCTCGTCAGGCTCCTGCAACCCCAGGCATGAACCA
AGGTTTCTGAACTACTGGGCGGGAGCCAACGTCTCTTCTTTCTCCCGCTCTGGCGGAGGCTTTGTCGCTGCGGGC
TGGGCCCCAGGGTGTCCCCC**ATG**GCGGGGCCGCGGGTGGAGGTCGATGGCAGCATCATGGAAGGGGGCGGCCAGA
TCCTGAGAGTCTCTACGGCCTTGAGCTGTCTCCTAGGCCTCCCCTTGCGGGTGCAGAAGATCCGAGCCGGCCGGA
GCACGCCAGGCCTGAGGCCTCAACATTTATCTGGACTGGAAATGATTCGAGATTTGTGTGATGGGCAACTGGAGG
GGGCAGAAATTGGCTCAACAGAAATAACCTTTACACCAGAGAAGATCAAAGGTGGAATCCACACAGCAGATACCA
AGACAGCAGGGAGTGTGTGCCTCTTGATGCAGGTCTCAATGCCGTGTGTTCTCTTTGCTGCTTCTCCATCAGAAC
TTCATTTGAAAGGTGGAACTAATGCTGAAATGGCACCACAGATCGATTATACAGTGATGGTCTTCAAGCCAATTG
TTGAAAAATTTGGTTTCATATTTAATTGTGACATTAAAACAAGGGGATATTACCCAAAAGGGGGTGGTGAAGTGA
TTGTTCGAATGTCACCAGTTAAACAATTGAACCCTATAAATTTAACTGAGCGTGGCTGTGTGACTAAGATATATG
GAAGAGCTTTCGTTGCTGGTGTTTTGCCATTTAAAGTAGCAAAAGATATGGCAGCGGCAGCAGTTAGATGCATCA
GAAAGGAGATCCGGGATTTGTATGTTAACATCCAGCCTGTTCAAGAACCTAAAGACCAAGCATTTGGCAATGGAA
ATGGAATAATAATTATTGCTGAGACCTCCACTGGCTGTTTGTTTGCTGGATCATCGCTTGGTAAACGAGGTGTAA
ATGCAGACAAAGTTGGAATTGAAGCTGCCGAAATGCTATTAGCAAATCTTAGACATGGTGGTACTGTGGATGAGT
ATCTGCAAGACCAGCTGATTGTTTTCATGGCATTAGCCAATGGAGTTTCCAGAATAAAAACAGGACCAGTTACAC
TCCATACGCAAACCGCGATACATTTTGCTGAACAAATAGCAAAGGCTAAATTTATTGTGAAGAAATCAGAAGATG
AAGAAGACGCCGCTAAAGATACTTATATTATTGAATGCCAAGGAATTGGGATGACAAATCCAAATCTA**TAG**AGTA
TTTGCCTCTTAAATGATACCTCATTGATATATTGCACTATTTCATAAATACTATAAAATAATGACTAGGAAGTAA
CTTATTAAAGGCTATGACTTAAATTTGAAGATGAAGTACAGTGTTCTAGGTTTGCTGAGAAGGCTTCATTAAATT
AATCTCACTTTGAATATCTCCTGAGAGATGGACAATGAAATATCAGTTGGTGGATATGTGTGATAGCTGATTTCA
ATATTGAAGTATTGAAATAAAATATTCTTTACACCTGAG

FIGURE 760

MAGPRVEVDGSIMEGGGQILRVSTALSCLLGLPLRVQKIRAGRSTPGLRPQHLSGLEMIRDLCDGQLEGAEIGST
EITFTPEKIKGGIHTADTKTAGSVCLLMQVSMPCVLFAASPSELHLKGGTNAEMAPQIDYTVMVFKPIVEKFGFI
FNCDIKTRGYYPKGGGEVIVRMSPVKQLNPINLTERGCVTKIYGRAFVAGVLPFKVAKDMAAAAVRCIRKEIRDL
YVNIQPVQEPKDQAFGNGNGIIIIAETSTGCLFAGSSLGKRGVNADKVGIEAAEMLLANLRHGGTVDEYLQDQLI
VFMALANGVSRIKTGPVTLHTQTAIHFAEQIAKAKFIVKKSEDEEDAAKDTYIIECQGIGMTNPNL

FIGURE 761A

GCGGCCGCTGGCTCCCGGCCGCCGCCACCTTCCCCGTGCAAGACCCGGCCAGCGGCGCCGCTCTGGGCATGGTAG
CCGACTGCGGGGTGCGAGAGGCCCGCGCCGCCGTGCGCGCTGCCTACGAGGCTTTCTGCCGCTGGAGGGAGGTCT
CCGCCAAGGAGAGGAGTTCATTACTTCGGAAGTGGTACAATTTAATGATACAAAATAAGGATGACCTTGCCAGAA
TAATCACAGCTGAAAGTGGAAAGCCACTGAAGGAGGCACATGGAGAAATTCTCTATTCCGCCTTTTTCCTAGAGT
GGTTCTCTGAGGAAGCCCGCCGTGTTTACGGAGACATTATCTACACCCCGGCAAAGGACAGGCGGGGCCCTGGTC
CTCAAGCAGCCCATAGGCGTGGGCTGCAGTCATCACCCCGTGGAATTTCCCCAGTGCCATGATCACCCGGAAGGT
GGGGGCCGCCCTGGCAGCCGGCTGTACTGTCGTGGTGAAGCCTGCCGAAGACACGCCCTTCTCCGCCCTGGCCCT
GGCTGAGCTTGCAAGCCAGGCTGGGATTCCTTCAGGTGTATACAATGTTATTCCCTGTTCTCGAAAGAATGCCAA
GGAAGTAGGGGAGGCAATTTGTACTGATCCTCTGGTGTCCAAAATTTCCTTTACTGGTTCAACAACTACAGGAAA
GATCCTGTTGCACCACGCAGCAAACTCTGTGAAAAGGGTCTCTATGGAGCTGGGCGGCCTTGCTCCATTTATAGT
ATTTGACAGTGCCAACGTGGACCAGGCTGTAGCAGGGGCCATGGCATCTAAATTTAGGAACACTGGACAGACTTG
TGTTTGCTCAAACCAATTCTTGGTGCAAAGGGGCATCCATGATGCCTTTGTAAAAGCATTCGCCGAGGCCATGAA
GAAGAACCTGCGCGTAGGTAATGGATTTGAGGAAGGAACTACTCAGGGCCCATTAATTAATGAAAAAGCGGTAGA
AAAGGTGGAGAAACAGGTGAATGATGCCGTTTCTAAAGGTGCCACCGTTGTGACAGGTGGAAAACGACACCAACT
TGGAAAAAATTTCTTTGAGCCTACCCTGCTGTGCAATGTCACCCAGGACATGCTGTGCACTCATGAAGAGACTTT
CGGGCCTCTGGCACCAGTTATCAAGTTCGATACAGAGGAGGAGGCTATAGCAATCGCTAACGCAGCTGATGTTGG
GTTAGCAGGTTATTTTTACTCTCAAGACCCAGCCCAGATCTGGAGAGTGGCAGAGCAGCTGGAAGTGGGCATGGT
TGGCGTCAACGAAGGATTAATTTCCTCTGTGGAGTGCCCTTTTGGTGGAGTGAAGCAGTCCGGCCTTGGGCGAGA
GGGGTCCAAGTATGGCATTGATGAGTATCTGGAACTCAAGTATGTGTGTTACGGGGGCTTG**TAG**GATTCTTTGGT
TCTTTAAAAAAATTTAAAAGGAGACTTATCTACATATATAGGTACATGCCATCCATTATTTTAAATAAACTAATA
GGTTTTCAGAATTATGAATTTTTCAGAACTCATCCAGTCCTTGTAATCTTAAACAGATGCAAATCCTACCCCTGC
CCTTAATGTAACTAGGGACCAATATGTGCCACGTGCCTGTGGCTGCAGACTCCCAGAGAACCAGCACTGGGTTTA
CAGAATGAGGCCCTGGCTCCCCACCACAGCCCCAGCTGCCTCAGAGCAGGCACAGCACAAGGCAGGCCCAGCCCC
ATGGGCCGTCACAAAGGCTTGATCACTGCCTGGGCAGTGGCACAACCATCCCCCATGTCGCTACAGAACATGGGC
CCAGAGCACCTTGAAGGAGACCCTTGACTGTGACTGGCAGGCAGGTGAGGGGCACAGCACCCCTCCCCGGCATCT
GCCAGCTCAGCACAGAAGACACCGAATGTGCATCTGGAGGTGTTGCGGCAGAGGTTTGAGTGAACCCTCTTTCAA
AGACAATAAATAGCACAGAATTGTCCGTGCTTCTGTGAGGCACGAAGGAGCACCTCTCCCTATTCCTGAACCATA
TTTTAATTGATGCCTTTATTGTCCCAAATTTACCACTTAAAGAATTCTATTTTCATTTCTGTCCTGTTTGCCACT
TCATTTCATTTCCTTGAGTAAATGAGCTGAAGTGTAAAGCAAAGAATAGCAGAAGCAGCTTGGTAGGATGGAAGG
CACGCAGTGGCATGGCCTGGCTCCTTCCCTGAGTGGCCTTGTTGCCTTGGGCGTGTGTTCAGCACCTCCCATCCC
ATGGATACAGTGGAGATTCCATACAGGCCTTACTTAGCTCCTTGCGATACTGTGAGCCAGAGAGAAAGTAAAAGC
ACTTCACAAAAAAATGAAAATTCTAAGGACATACAAGAGCCATTGTTACGAGCAGCACCGCCCAGCCCTTCCTTG
CCTACTGTCAGTGGCTTTGCCAAGATGGGAGGAGGCCAGTGCCCACTTGCCCACCGACCTGAGCCTGAGTAAGTG
GCTGTCACCTGAGCCTGTTCTTTCTGTCCTGGTGTGGTGCTGCTCCCTCACCTCCAAAAGAGCAAAAGTACTTTC
ACCACAGTCAACCCAAAAGGGAAAGAATTTCTGTAATTGCCAACCCACTTTGTAGAAGAGGCATGAGCCCTTGAA
TTTCAGGCACCTTTTATCTAATGAGAGTTTTTACAGCTCATCATTCAAATAACGCACAAAAAACAAAAGCCGCTA
TGACCGGCGTTGCCTCTCACTTTGAAAGAAAGACTCCGTAATCTTAAACAGATGCAAATCCAATTAGGCGGCCAA
GTAGGTGGAGACGAAGCACCTTCCTTTCCCCATCTCTGTCTGTGTAGACTCCACTTACATCTTGTGGTTATTCTG
GGTTGTGGAAGGAAAATGTGAATGAAAGTAGTGCTGGATGCAATTACTCCTGAACCCCACCTAGGATTTAACATC
CCTCATTGAGCCACTGGGAAGCTATGGTTGAGTAACTAAAGGTCTGGCAAGACCCTGGGCACACAGGGAGCTGCC
TAGCATCTGGCCTGGAGTGTACTAGCCACATTCCCAAGGTCCCAAGGAGAAGGAAGAGCTGAAATTCATCTCCTA
GTGACAGTGCCCCGGCCCTGTCAAGAATCACATACTCAGCATTTTGACAGTTAATGTCTTCTCTTTATTTGTGTA
GTTTTTAGGTGGTTTTATATAACATTTTAATTACTTGTGATTTAGATGTATCCATCCTTTNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNTGCTCCAACATTATTTTTTATAACTCTGGATTACCGATGCTGAGATGTGTGCAGGAATACTTCCAA

FIGURE 761B

ATAAATTTTTAACATTGTAAGCCAGTAGATTCTTTGGCTGGGTGGCAAATTTTGAGTCTTCTTGCATATTTGGCT
CATGGGTTCATAAATTGAGGCCAGAGACTCATTGTATATCCTTGATCAATTTTCTAATTAAAGGAAATAGCTTAT
TGTTTAGTAAAATGGCCCTTGGTTGTGGGAAGAAAGAGAATTATTTTTAACTGAACGTTTTTGTTGTTTTTTAAA
TAAAGTAGCCATATGTAACGGGATTTTAAAAATATATACATTTTACAACATGGACTAGAAAAGGACCATTAGATC
AGGGGTTGGCAAACTATGGCCCACGAATCAAACCTGGCCTGCCACCTGTTTTTATACAACCTGTGAGCTAAGAAT
GGTTTATATGTTTTCAAATGATTGGGCAGAAAATCAAAAGAAGAACAATATTTCATGACACCTGAAAATTCTATG
AAATTCAGATTTCAGTGTCCATAAACAAAATGTTATTAGAGCATAGCCACACCCATTCATTTATGGTATTGTCTG
GGACTGCTTTCTTGGCAGAGTTGAATAGTTGGGACAGGGACAGTATAGCCTGCAAAGCCTAAAAGATTTACTACT
TGTCTCCTTAAAGAAAAAGTTTGCCAGCTCCTGATCTAGACCAAGAGGGAGATATTGACCTTACTTGCATTTATC
CGGCATTATTTCAACACCTCCTGTGAAGAAAGTACTTTTCTGGCATAGCTACCGTGAGTTCTCAGCAGGAACTTC
CCAGCGATGATAATGTACATGAAATTAGCCACGTAACAAGAGTCTATTTGCCTTGAAAAAACAATTATCCTTGAA
CTTCCTCCAGCTATGCAGGGATTCTCATTAAAGAGCTGATCTGCATCTGTTTATCCATTTTAGTAGCTTTTAAAT
ATGATTTTATGTGAAGTGCCATTTCTTTATTCTACTAAAGAGAGACAGCAGAAATAAAGATCAGAAGCAAATGTG
AGCAAATCTGTTTTACTGTTAACTTCAATTATGAACTTGAAATTGTGCCACATGACTTTTTCCTCTAAAAACTGG
ATCCTAGTGTTTTAATTACCTGTGTGCAGCTATTTTAAATAGCATTTTACTTGAATAATATGTATGTTGTCATTG
TTTCATGCTATACTTTGTGGGATAAAACTTGGGAATGAGTGTGGTAAGAAATTTATAAAGTTTTGCTTTTAAAAC
GTGGACATAACTCATTTTTCTAGTTTTTGACAATTGTGTGTTTTAGTGTCTAGTCTGCAGAGAGCTGTGTGATTA
ATAAACGTGGAATTAACAGAATTTCCTCTCCCTGTAAAAAAAGAAAAAAAAAACGAAA

FIGURE 762

GRWLPAAATFPVQDPASGAALGMVADCGVREARAAVRAAYEAFCRWREVSAKERSSLLRKWYNLMIQNKDDLARI
ITAESGKPLKEAHGEILYSAFFLEWFSEEARRVYGDIIYTPAKDRRGPGPQAAHRAWAAVITPWNFPSAMITRKV
GAALAAGCTVVVKPAEDTPFSALALAELASQAGIPSGVYNVIPCSRKNAKEVGEAICTDPLVSKISFTGSTTTGK
ILLHHAANSVKRVSMELGGLAPFIVFDSANVDQAVAGAMASKFRNTGQTCVCSNQFLVQRGIHDAFVKAFAEAMK
KNLRVGNGFEEGTTQGPLINEKAVEKVEKQVNDAVSKGATVVTGGKRHQLGKNFFEPTLLCNVTQDMLCTHEETF
GPLAPVIKFDTEEEAIAIANAADVGLAGYFYSQDPAQIWRVAEQLEVGMVGVNEGLISSVECPFGGVKQSGLGRE
GSKYGIDEYLELKYVCYGGL

FIGURE 763

GGGGGTTCCCGCAAGGTCGCTTTGCAGAGCGGGAGCGCGCTTAAGTAACTAGTCCGTAGTTCGAGGGTGCGCCGT
GTCCTTTTGCGTTGGTACCAGCGGCGAC**ATG**ACGGGGTACACTCCGGATGAGAAACTGCGGCTGCAGCAGCTGCG
AGAGCTGAGAAGGCGATGGCTGAAGGACCAGGAGCTGAGCCCTCGGGAGCCGGTGCTGCCCCCACAGAAGATGGG
GCCTATGGAGAAATTCTGGAATAAATTTTTGGAGAATAAATCCCCTTGGAGGAAAATGGTCCATGGGGTATACAA
AAAGAGTATCTTTGTTTTCACTCATGTACTTGTACCTGTCTGGATTATTCATTATTACATGAAGTATCATGTTTC
TGAAAAACCATATGGCATAGTTGAAAAGAAGTCCAGAATATTCCCTGGTGATACAATTCTGGAGACTGGAGAAGT
AATTCCACCAATGAAAGAATTTCCTGATCAACATCAT**TAA**AGATTATGTAAAAAGTTAAAAGGCTTATGAGCCTA
AGTTTGTTCCTATATTACCATATTTACTGAATTTTCTGGAAAAGTAACTTTAATAAAGTTTAATCTCAGAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 764

MTGYTPDEKLRLQQLRELRRRWLKDQELSPREPVLPPQKMGPMEKFWNKFLENKSPWRKMVHGVYKKSIFVFTHV
LVPVWIIHYYMKYHVSEKPYGIVEKKSRIFPGDTILETGEVIPPMKEFPDQHH

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FIGURE 765

TTTCCACATGTGAGGGGCTGAGGGGCTCAAGGAGGGGAGCATCTCCACTGGGTGGAGGCTGGGGGTCCCAGCAGG
AAATGGTGAGACAAAGGGCGCTGGCTGGCAGGGAGACAGCACAGGAAGGTCCTAGAGCTTCCTCAGTGCAGCTGG
ACTCTCCTGGAGACCTTCACACACCCTGATATCTGGGCCTTGCCCGACGAGGGTGCTTTCACTGGTCTGCACCAT
GGCCCAGGCCCTGGGATTTTGAACAGCTCCGCAGGTGAATGAAAGGTGAGGCCAGGCTGGGGAACCACCGCATTA
GAGCCCGACCTGGTTTTCAGCCCCAGCCCCGCCACTGACTGGCTTTGTGAGTGCGGGCAAGTCACTCAGCCTCCC
TAGGCCTCAGTGACTTCCCTGAAAGCAAGAATTCCACTTTCTTGCTGTTGTGATGGTGGTAAGGGAACGGGCCTG
GCTCTGGCCCCTGACGCAGGAAC**ATG**GAGCTGATCCAGGACACCTCCCGCCCGCCACTGGAGTACGTGAAGGGGG
TCCCGCTCATCAAGTACTTTGCAGAGGCACTGGGGCCCCTGCAGAGCTTCCAGGCCCGGCCTGATGACCTGCTCA
TCAGCACCTACCCCAAGTCCGGCACCACCTGGGTGAGCCAGATTCTGGACATGATCTACCAGGGTGGTGACCTGG
AGAAGTGTCACCGAGCTCCCATCTTCATGCGGGTGCCCTTCCTTGAGTTCAAAGCCCCAGGGATTCCCTCAGGGA
TGGAGACTCTGAAAGACACACCGGCCCCACGACTCCTGAAGACACACCTGCCCCTGGCTCTGCTCCCCCAGACTC
TGTTGGATCAGAAGGTCAAGGTGGTCTATGTTGCCCGCAACGCAAAGGATGTGGCAGTTTCCTACTACCACTTCT
ACCACATGGCCAAGGTGCACCCTGAGCCTGGGACCTGGGACAGCTTCCTGGAGAAGTTCATGGTCGGAGAAGTGT
CCTACGGATCCTGGTACCAGCACGTGCAGGAGTGGTGGGAGCTGAGCCGCACCCACCCTGTTCTCTACCTCTTCT
ATGAAGACATGAAGGAGAACCCCAAAAGGGAGATTCAAAAGATCCTGGAGTTTGTGGGGCACTCCCTGCCAGAGG
AGACCGTGGACTTCATGGTTCAGCACACGTCGTTCAAGGAGATGAAGAAGAACCCTATGACCAACTACACCACCG
TCCCCCAGGAGTTCATGGACCACAGCATCTCCCCCTTCATGAGGAAAGGCATGGCTGGGGACTGGAAGACCACCT
TCACCGTGGCGCAGAATGAGCGCTTCGATGCGGACTATGCGGAGAAGATGGCAGGCTGCAGCCTCAGCTTCCGCT
CTGAGCTG**TGA**GAGGGGCTCCTGGGGTCACTGCAGAGGGAGTGTGCGAATCAAACCTGACCAAGCGGCTCAAGAA
TAAAATATGAATTGAGGGCCTGGGACGGTAGGTCATGTCTGTAATCCCAGCAATTTGGAGGCTGAGGTGGGAGGA
TCATTTGAGCCCAGGAGTTCGAGACCAACCTGGGCAACATAGTGAGATTCTGTTAAAAAAATAAAATAAAATAAA
ACCAATTTTT

FIGURE 766

MELIQDTSRPPLEYVKGVPLIKYFAEALGPLQSFQARPDDLLISTYPKSGTTWVSQILDMIYQGGDLEKCHRAPI
FMRVPFLEFKAPGIPSGMETLKDTPAPRLLKTHLPLALLPQTLLDQKVKVVYVARNAKDVAVSYYHFYHMAKVHP
EPGTWDSFLEKFMVGEVSYGSWYQHVQEWWELSRTHPVLYLFYEDMKENPKREIQKILEFVGHSLPEETVDFMVQ
HTSFKEMKKNPMTNYTTVPQEFMDHSISPFMRKGMAGDWKTTFTVAQNERFDADYAEKMAGCSLSFRSEL

FIGURE 767

GACGGCGGTGGCGGCGTCGGAGGCGCCTCCGGGGGACGGTGGCGGCTCCCGGCGGTGAGGCCGCGCCTGTCCGGG
GATCGTCGAGGGACGGCGGGAGCTTGGGCCAGCGGCGGCGGCGGCCTGGGACGCAGGCGGAGCCCCGCGCAGGCC
CAAGGTCCCGGAGGCT**ATG**GCAGCGGCTACCATCGTGCACGACACGTCTGAGGCCGTGGAGCTCTGCCCTGCTTA
CGGCTTGTACCTGAAGCCCATCACCAAGATGACCATCAGCGTGGCACTCCCGCAGCTGAAGCAGCCGGGGAAGTC
CATCTCCAACTGGGAGGTGATGGAGAGGCTGAAGGGCATGGTGCAGAACCACCAGTTCTCCACGCTGCGTATTTC
CAAGAGCACCATGGACTTCATCCGCTTCGAGGGGGAGGTGGAGAACAAGAGCCTGGTCAAGTCTTTTCTGGCCTG
CCTGGACGGCAAGACCATCAAGCTCAGCGGCTTCTCCGACATCCTGAAGGTGCGCGCGGCCGAGTTCAAGATCGA
CTTCCCCACCCGCCACGACTGGGACTCCTTCTTCCGCGACGCCAAGGACATGAACGAGACCCTGCCGGGGGAGCG
GCCGGACACCATCCACCTGGAGGGGCTGCCCTGCAAGTGGTTCGCCCTGAAGGAGTCGGGCTCCGAGAAGCCCAG
CGAGGACGTCCTGGTCAAGGTGTTTGAGAAGTTCGGGGAGATCCGGAATGTGGACATCCCCATGCTGGACCCCTA
CCGGGAGGAGATGACGGGCCGCAACTTCCACACCTTCAGTTTCGGGGGGCACTTGAACTTCGAGGCCTATGTGCA
GTACCGTGAGTACATGGGCTTCATCCAGGCCATGAGCGCCCTGCGCGGGATGAAACTCATGTACAAGGGCGAGGA
CGGCAAGGCCGTGGCCTGCAACATCAAGGTTTCTTTTGATTCGACCAAACACCTGAGTGATGCCTCAATTAAGAA
GCGGCAGCTGGAGAGGCAGAAGCTTCAGGAACTGGAGCAGCAAAGAGAAGAACAAAAGCGCAGAGAGAAGGAAGC
GGAGGAGAGGCAGCGAGCGGAGGAAAGGAAACAAAAGGAGCTGGAAGAGCTGGAGCGAGAGAGGAAAAGAGAAGA
GAAGCTTCGCAAGAGGGAGCAGAAGCAGAGGGACCGTGAGCTGCGCCGGAATCAGAAGAAGCTGGAGAAGCTGCA
GGCGGAGGAGCAGAAGCAGCTGCAGGAGAAGATCAAGCTGGAGGAGCGCAAGCTGCTGCTGGCCCAGAGGAACCT
GCAGTCCATCCGGCTCATCGCCGAGCTGCTCAGCAGAGCCAAGTTG**TGA**TAAGTCCCCGGGAAGGAGCATGACAA
GAGGCTGAGACATGTGGCAGCCCAGTCCTTACCTCATGGCTGTGAAGCTACGGGAACAGGAGCAGAAGGAGGAGA
AGCTGAGGCTCCAGCAGCAGGAGGAGCGGCGGCGGCTGCAGGAGGCCGAGCTGCGGCGCGTGGAGGAGGAGAAGG
AGCGCGCGCTGGGCCTGCAGCGGAAAGAGCGGGAGCTGCGCGAGCGGCTGCTGAGCATCCTGCTGAGCAAGAAGC
CGGACGACAGCCACACACACGACGAGCTGGGCGTGGCACACGCCGACCTGCTGCAGCCCGTCCTGGACATCCTGC
AGACCGTGTCGTCCGGCTGTGTGAGCGCCACCACGCTGCACCCCCTCGGGGGCCAGCCCCCGGCCGGTGCCCCCA
AGGAGAGCGCGGCCCACCCAGAGGCCGACGGCGCTCCCAAAAGCGTGAACGGGAGCGTGGCCGAGGAGGCCCCAT
GCAAGGAGGTTCAGAGCTCCTGTCGTGTGGTCCCCGAGGATGGCTCTCCAGAGAAGAGGTGCCCGGGCGGCGTCC
TCTCCTGCATTCCTGACAACAACCAACAGCCCAAGGGCATCCCTGCCTGCGAGCAGAATGTCTCCAGAAAGGACA
CCCGGTCAGAACAGGACAAGTGCAACCGGGAGCCCAGCAAGGGCCGGGGCCGGGCCACCGGAGACGGGCTTGCTG
ACCGGCACAAGCGGGAGAGGAGCCGGGCCAGGCGGGCCAGCAGCAGGGAGGACGGGAGGCCACGCAAGGAGCGGC
GGCCCCACAAGAAGCACGCCTACAAGGATGACAGCCCCCGCCGGCGCAGCACGAGCCCGGACCACACCCGGTCCC
GGAGGTCCCACAGCAAAGACAGGCACCGGAGGGAGCGGAGCCGGGAGCGGAGGGGCAGCGCCAGCAGGAAGCACA
GCCGCCACCGCCGCCGAAGCGAGCGGTCGCGCTCCCGGTCCCCGAGCAGGCACCGCAGTACCTGGAACAGGTAAT
GACGGGCACGGCCTCCCCACGGCCTGTCCGGGAAAGACCAGGACCTGCTCGAGCCTCCTGGCCGCTCCTTGGCCG
CTCTCCGTCCACCCCTGCAAAGCCAAGACCCTTCTGCAGCCACGAACGTCCACGGAGCCTGCCGGCAGGAAGGAA
GACACCATGCTTTAGAGATCCATCTTTCTCCACTCACCGCAGCGTACTTGGCACTTCAGTTTCAAACACGTAGTC
CTTTAAAACTTGATCCGATAGCTTTAATGCGGCCGGTCCTCTCTCAGTCAGGAAAATTGCACAGACCGACAGTCG
TGAGGATGGCAGAGCTGCTGCATTCCCCCACACGGGGATTTCTGTGTCTGCTTGGCGACCTCCCTGCGTGCACGG
CCTAGGAGGTGCACGGGCCACCATAGTCACACTGGCACTGAAAAGAAAGCGTTGCCCTGGTGATTCTTTCCCCCC
CGTTTGTAATGTTAACTGATCAGGAAGTGCAGTTTGGGTGGGATGCCGAATCGTCGTGCTGACATTGAGTCACGG
ATGAGGAAGGTACAAGTCCTTTAAGATCAAAACTCAAACGGGCCGTTCTTTCTAAGGTGTCGGTATGTGGGGAGT
GGTACAAAATGGTCTGATGCTCCTTCAAAAACATTCACTTTTTACAACGTCAAGGAATTAAGCATAAAAAAGATT
GGTTAAAAGCTTTGGTTTCTAGTAAAGGTTAGTGTGTGTGGTTTTTTTAAGAAGCTGTTTTGCTAAATTATTTTT
ACTTGGAATGTTTCAAACAGATTTCAGGCTGCAAACTTGTTTTATAATCGTTTGCTTCTCCAAGTGAAGCTCAGA
AATACCTAAAAATAGCTGTAACGTTCGCGTTAGGAAAGATGGTGTTTATTCCAGTTTGCATTTTTATGGTGAAAT
AAAATCCG

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FIGURE 768

MAAATIVHDTSEAVELCPAYGLYLKPITKMTISVALPQLKQPGKSISNWEVMERLKGMVQNHQFSTLRISKSTMD
FIRFEGEVENKSLVKSFLACLDGKTIKLSGFSDILKVRAAEFKIDFPTRHDWDSFFRDAKDMNETLPGERPDTIH
LEGLPCKWFALKESGSEKPSEDVLVKVFEKFGEIRNVDIPMLDPYREEMTGRNFHTFSFGGHLNFEAYVQYREYM
GFIQAMSALRGMKLMYKGEDGKAVACNIKVSFDSTKHLSDASIKKRQLERQKLQELEQQREEQKRREKEAEERQR
AEERKQKELEELERERKREEKLRKREQKQRDRELRRNQKKLEKLQAEEQKQLQEKIKLEERKLLLAQRNLQSIRL
IAELLSRAKL

FIGURE 769

GCCACTCCAGCCCCGCGCCCCTCGCCGCGGCCCTCGGGCGTCTGCGCCGCAGCTGCCGCCCCCGCCTCTTTGGAG
TCTCTCGCGGCCTCAAAGCGCGGCCTGCGTCGCTTCCGGCAGTTCCAGACCGCGGGCG**ATG**GCTGCCGCTGGGGG
CGCCCGGCTGCTGCGCGCCGCTTCTGCTGTCCTCGGCGGCCCGGCCGGCCGGTGGCTGCACCACGCTGGGTCCCG
CGCTGGATCCAGCGGCCTGCTGAGGAACCGGGGGCCGGGCGGGAGCGCGGAGGCGAGCCGGTCGCTGAGCGTGTC
GGCGCGGGCCCGGAGCAGCTCAGAAGATAAAATAACAGTCCACTTTATAAACCGTGATGGTGAAACATTAACAAC
CAAAGGAAAAGTTGGTGATTCTCTGCTAGATGTTGTGGTTGAAAATAATCTAGATATTGATGGCTTTGGTGCATG
TGAGGGAACCCTGGCTTGTTCAACCTGTCACCTCATCTTTGAAGATCACATATATGAGAAGTTAGATGCAATCAC
TGATGAGGAGAATGACATGCTCGATCTGGCATATGGACTAACAGACAGATCACGGTTGGGCTGCCAAATCTGTTT
GACAAAATCTATGGACAATATGACTGTTCGAGTGCCTGAAACAGTGGCTGATGCCAGACAATCCATTGATGTGGG
CAAGACCTCC**TGA**ACTAGAACAAATAGGAATATTTTCATGGAATTTTACCTATTTTTATAATTATTATTTCTTAA
AGTGATTAAATGAGAACATGGATGAGTGGACTTCATATTATGACTAGCTTTACTATTTTAATTCACCTTGCATAA
CTACTGAATTTTGTCATTCTTGAAAGTATGCAATTTTTATTTTGGTTATATTACAAAAATGTCAATCAAATATTA
AAAAATAGTTAATGTGATAGAAAAACCTTACATATTTTTTTCTTATGTTTGTTTAGCGACTTTAGCAAAATGTTT
TCATATAATCTCATCTGTTTACCTAGAAGATAGGTTAAGGAAATATATTATTATTCCTGTTTGATGTGGGTGAAG
GCAGAGATCTAACCTGGCTTGTTTAGGGCCATACCACTAATTAGAAAATCTGTGCTAGAACCTGTGTCTTATTCC
TATAAGCTATGTGTTCAGACTGAAACTGGAGAAATTATGACTATTTTATTTATAGTAGTAGTTAAATCTGAATGT
GTATGGACTAAAAATATTTAATTGCTGAGTAAACTGCTTAACTTCAAAGATAGTTATTGACCTTATAAATAAATA
TTTCAAAATTTTGATTCGGAAGACTAAGTCTGGAGCTAGACATTATAATGCTATCAAAGAAGTTGATCTCTGTTT
TGACTAAACTAGAGGAAAAATGATTGGATGAGTTTATTCTTTTCTAAGCAGAATGGTTTAACTTTGTACTCAAAG
AAAAATAATGCTGATTTATAAATCTCTGCCTATAATAGAATGG

FIGURE 770

MAAAGGARLLRAASAVLGGPAGRWLHHAGSRAGSSGLLRNRGPGGSAEASRSLSVSARARSSSEDKITVHFINRD
GETLTTKGKVGDSLLDVVVENNLDIDGFGACEGTLACSTCHLIFEDHIYEKLDAITDEENDMLDLAYGLTDRSRL
GCQICLTKSMDNMTVRVPETVADARQSIDVGKTS

FIGURE 771

CTTCTCTTTTCCCTAGACTGCAGCCAGCGGAGCCCGCAGCCGGCCCGAGCCAGGAACCCAGGTCCGGAGCCTCAA
CTTCAGG**ATG**TTGACAACATTGCTGCCGATACTGCTGCTGTCTGGCTGGGCCTTTTGTAGCCAAGACGCCTCAGA
TGGCCTCCAAAGACTTCATATGCTCCAGATCTCCTACTTCCGCGACCCCTATCACGTGTGGTACCAGGGCAACGC
GTCGCTGGGGGGACACCTAACGCACGTGCTGGAAGGCCCAGACACCAACACCACGATCATTCAGCTGCAGCCCTT
GCAGGAGCCCGAGAGCTGGGCGCGCACGCAGAGTGGCCTGCAGTCCTACCTGCTCCAGTTCCACGGCCTCGTGCG
CCTGGTGCACCAGGAGCGGACCTTGGCCTTTCCTCTGACCATCCGCTGCTTCCTGGGCTGTGAGCTGCCTCCCGA
GGGCTCTAGAGCCCATGTCTTCTTCGAAGTGGCTGTGAATGGGAGCTCCTTTGTGAGTTTCCGGCCGGAGAGAGC
CTTGTGGCAGGCAGACACCCAGGTCACCTCCGGAGTGGTCACCTTCACCCTGCAGCAGCTCAATGCCTACAACCG
CACTCGGTATGAACTGCGGGAATTCCTGGAGGACACCTGTGTGCAGTATGTGCAGAAACATATTTCCGCGGAAAA
CACGAAAGGGAGCCAAACAAGCCGCTCCTACACTTCGCTGGTCCTGGGCGTCCTGGTGGGCGGTTTCATCATTGC
TGGTGTGGCTGTAGGCATCTTCCTGTGCACAGGTGGACGGCGATGT**TAA**TTACTCTCCAGCCCCGTCAGAAGGGG
CTGGATTGATGGAGGCTGGCAAGGGAAAGTTTCAGCTCACTGTGAAGCCAGACTCCCCAACTGAAACACCAGAAG
GTTTGGAGTGACAGCTCCTTTCTTCTCCCACATCTGCCCACTGAAGATTTGAGGGAGGGGAGATGGAGAGGAGAG
GTGGACAAAGTACTTGGTTTGCTAAGAACCTAAGAACGTGTATGCTTTGCTGAATTAGTCTGATAAGTGAATGTT
TATCTATCTTTGTGGAAAACAGATAATGGAGTTGGGGCAGGAAGCCTATGGCCCATCCTCCAAAGACAGACAGAA
TCACCTGAGGCGTTCAAAAGATATAACCAAATAAACAAGTCATCCACAATCAAAATACAACATTCAATACTTCCA
GGTGTGTCAGACTTGGGATGGGACGCTGATATAATAGGGTAGAAAGAAGTAACACGAAGAAGTGGTGGAAATGTA
AAATCCAAGTCATATGGCAGTGATCAATTATTAATCAATTAATAATATTAATAAATTTCTTATATTTAAGGCAAA
AAAAAAATAAAAAAAAAAAAAAAAAAAAAA

FIGURE 772

MLTTLLPILLLSGWAFCSQDASDGLQRLHMLQISYFRDPYHVWYQGNASLGGHLTHVLEGPDTNTTIIQLQPLQE
PESWARTQSGLQSYLLQFHGLVRLVHQERTLAFPLTIRCFLGCELPPEGSRAHVFFEVAVNGSSFVSFRPERALW
QADTQVTSGVVTFTLQQLNAYNRTRYELREFLEDTCVQYVQKHISAENTKGSQTSRSYTSLVLGVLVGGFIIAGV
AVGIFLCTGGRRC

FIGURE 773A

ACTCCCGGCCGGGGTAGCTCTTCACTCCTCAGCGCGACGTCGTGTCGAGTTCCCAAAAAGCTCCGCAGGGGCTGT
AGGGAGGTGATCTCATCCATTAACAGCTGTGTGTTGCCAGTTCCCAAATCTTTATCTATCTCAGACTTCTCTCCT
GCATTCCAGATTCTTATATTCAGCTGCCTTTTGGATATCTCTCCCAGGATGTTCTCAAGGCATACAAGAATTAAA
TTCTGAATAAGTCTGCAGGTAGG**ATG**GACAGTTATTTTAAAGCAGCTGTCAGTGACTTGGACAAACTCCTTGATG
ATTTTGAACAGAACCCAGATGAACAAGATTATCTCCAAGATGTACAAAATGCATATGATTCTAACCACTGCTCAG
TTTCTTCAGAGTTGGCTTCCTCACAGCGAACTTCATTGCTCCCAAAAGACCAAGAGTGCGTTAATAGTTGTGCCT
CATCAGAAACAAGCTATGGAACAAATGAGAGTTCCCTGAATGAAAAAACACTCAAGGGACTTACTTCTATACAAA
ATGAAAAAAATGTAACAGGACTTGATCTTCTTTCTTCTGTGGATGGTGGTACTTCAGATGAAATCCAGCCGTTAT
ATATGGGACGATGTAGTAAACCTATCTGTGATCTGATAAGTGACATGGGTAACTTAGTTCATGCAACCAATAGTG
AAGAAGATATTAAAAAATTATTGCCAGATGATTTTAAGTCTAATGCAGATTCCTTGATTGGATTGGATTTATCTT
CAGTGTCAGATACTCCCTGTGTTTCTTCAACAGACCATGATAGTGATACTGTCAGAGAACAACAGAATGATACCA
GTTCTGAATTACAAAATAGAGAAATCGGAGGAATCAAAGAATTGGGTATAAAAGTAGATACAACACTTTCAGATT
CCTATAATTACAGTGGAACAGAAAATTTAAAAGATAAAAAGATCTTTAATCAGTTAGAATCAATTGTTGATTTTA
ACATGTCATCTGCTTTGACTCGACAAAGTTCCAAAATGTTTCATGCCAAAGACAAGCTACAACACAAGAGCCAGC
CATGTGGATTACTAAAAGATGTTGGCTTAGTAAAAGAGGAAGTAGATGTGGCAGTCATAACTGCCGCAGAATGTT
TAAAAGAAGAGGGCAAGACAAGTGCTTTGACCTGCAGCCTTCCGAAAAATGAAGATTTATGCTTAAATGATTCAA
ATTCAAGAGATGAAAATTTCAAATTACCTGACTTTTCCTTTCAGGAAGATAAGACTGTTATAAAACAATCTGCAC
AAGAAGACTCAAAAAGTTTAGACCTTAAGGATAATGATGTAATCCAAGATTCCTCTTCAGCTTTACATGTTTCCA
GTAAAGATGTGCCGTCCTCATTGTCCTGTCTTCCTGCGTCTGGGTCTATGTGTGGATCATTAATTGAAAGTAAAG
CACGGGGTGATTTTTTACCTCAGCATGAACATAAAGATAATATACAAGATGCAGTGACTATACATGAAGAAATAC
AGAACAGTGTTGTTCTAGGTGGGGAACCATTCAAAGAGAATGATCTTTTGAAACAGGAAAAATGTAAAAGCATAC
TCCTTCAGTCATTAATTGAAGGGATGGAAGACAGAAAGATAGATCCTGACCAGACAGTAATCAGAGCTGAGTCTT
TGGATGGTGGTGACACCAGTTCTACAGTTGTAGAATCTCAAGAGGGGCTTTCTGGCACTCATGTCCCAGAGTCTT
CTGATTGTTGTGAAGGTTTTATTAATACTTTTTCAAGCAATGATATGGATGGGCAAGACTTAGATTACTTTAATA
TTGATGAAGGCGCAAAAAGTGGCCCACTAATTAGTGATGCTGAACTTGATGCCTTTCTGACAGAACAGTATCTTC
AGACCACTAACATAAAGTCTTTTGAAGAAAATGTAAATGACTCTAAATCGCAAATGAATCAGATAGATATGAAAG
GCTTAGATGATGGAAACATCAATAATATATATTTCAATGCAGAAGCAGGAGCTATTGGGGAAAGTCATGGTATTA
ATATAATTTGTGAAACAGTTGATAAACAAAATACAATAGAAAATGGCCTTTCTTTAGGAGAAAAAAGCACTATTC
CAGTTCAACAAGGGTTACCTACCAGTAAGTCTGAGATTACAAATCAATTATCAGTCTCTGATATTAACAGTCAAT
CTGTTGGAGGGGCCAGACCTAAGCAATTGTTTAGCCTTCCATCAAGAACAAGGAGTTCAAAGGACCTGAATAAGC
CAGATGTTCCAGATACAATAGAAAGTGAACCCAGCACAGCAGATACCGTTGTTCCAATCACTTGTGCTATAGATT
CTACAGCTGATCCACAGGTTAGCTTCAACTCTAATTACATTGATATAGAAAGTAATTCTGAAGGTGGATCTAGTT
TCGTAACTGCAAATGAAGATTCTGTACCTGAAAACACTTGCAAAGAAGGCTTGGTTTTGGGCCAGAAACAGCCTA
CTTGGGTTCCTGATTCAGAAGCTCCAAACTGTATGAACTGCCAAGTCAAATTTACTTTTACCAAACGGCGACACC
ATTGCCGAGCATGTGGGAAAGTATTTTGTGGTGTCTGTTGTAATAGGAAGTGTAAACTGCAATATCTAGAAAAGG
AAGCAAGAGTATGTGTAGTCTGCTATGAAACTATTAGTAAAGCTCAGGCATTTGAAAGGATGATGAGTCCAACTG
GTTCTAATCTTAAGTCTAATCATTCTGATGAATGTACTACTGTCCAGCCTCCTCAGGAGAACCAAACATCCAGTA
TACCTTCACCAGCAACTTTGCCAGTCTCAGCACTTAAACAACCAGGTGTTGAAGGACTATGTTCCAAAGAACAGA
AGAGAGTATGGTTTGCAGATGGTATATTGCCCAATGGTGAAGTTGCAGATACAACAAAATTATCATCTGGAAGTA
AAAGATGTTCTGAAGACTTTAGTCCTCTCTCACCTGATGTGCCTATGACAGTAAACACAGTGGATCATTCCCATT
CTACTACAGTGGAAAAGCCAAACAATGAGACAGGAGATATTACAAGAAATGAGATAATTCAGAGTCCTATTTCTC
AGGTTCCATCAGTGGAAAAATTGTCTATGAACACAGGAAATGAGGGGTTACCTACTTCTGGTTCATTTACACTAG
ATGATGATGTTTTTGCAGAAACTGAAGAACCATCTAGTCCTACTGGTGTCTTAGTTAACAGCAATTTACCTATTG
CTAGTATTTCAGATTATAGGTTACTGTGTGATATTAACAAGTATGTCTGCAATAAGATTAGTCTTCTACCTAATG
ATGAGGACAGTTTGCCCCCACTTCTGGTTGCATCTGGAGAAAAGGGATCAGTGCCTGTAGTAGAAGAACATCCAT
CTCATGAGCAGATCATTTTGCTTCTTGAAGGTGAAGGCTTTCATCCTGTTACATTTGTCCTAAATGCTAATCTAC
TCGTGAATGTCAAATTCATATTTTATTCCTCAGACAAATATTGGTACTTTTCAACCAATGGATTGCATGGCTTGG
GACAGGCAGAAATTATTATTCTATTGTTATGTTTGCCAAATGAAGATACTATTCCTAAGGACATCTTCAGACTAT

FIGURE 773B

TTATCACCATATATAAGGATGCTCTAAAAGGAAAATACATAGAAAACTTGGACAATATTACCTTTACTGAGAGTT
TTCTCAGTAGCAAGGATCACGGAGGATTCCTGTTTATTACACCTACTTTTCAGAAACTTGATGATCTCTCATTAC
CAAGTAATCCTTTTCTTTGTGGAATTCTTATCCAGAAGCTTGAGATTCCCTGGGCAAAGGTTTTTCCTATGCGTT
TAATGTTGAGATTGGGTGCAGAATATAAAGCATATCCTGCTCCTCTAACAAGCATCAGAGGCCGAAAACCTCTTT
TTGGAGAAATAGGACACACTATTATGAACTTACTTGTTGACCTTCGAAATTACCAGTATACCTTGCATAATATAG
ATCAACTGTTGATTCATATGGAAATGGGAAAAAGCTGCATAAAAATACCACGGAAAAAGTACAGTGATGTAATGA
AAGTACTAAATTCTTCCAATGAGCATGTCATTAGCATTGGAGCAAGTTTCAGTACAGAAGCAGATTCTCATCTAG
TCTGTATACAGAATGATGGAATTTATGAAACACAGGCCAACAGTGCCACTGGCCATCCTAGAAAAGTGACAGGTG
CAAGTTTTGTGGTATTCAATGGAGCTCTAAAAACATCTTCAGGATTTCTTGCTAAGTCCAGCATAGTTGAAGATG
GCTTAATGGTACAAATAACTCCAGAGACCATGAATGGCTTGCGGCTAGCTTTACGAGAACAGAAAGACTTTAAAA
TTACATGTGGGAAAGTTGATGCAGTAGACCTGAGAGAATACGTGGATATCTGCTGGGTAGATGCTGAAGAAAAAG
GAAACAAAGGAGTTATCAGTTCAGTGGATGGAATATCATTACAAGGATTTCCAAGTGAAAAAATAAAACTGGAAG
CAGATTTTGAAACCGATGAGAAGATTGTAAAATGTACCGAGGTGTTCTACTTTCTAAAGGACCAGGATTTATCTA
TTTTATCAACTTCTTATCAGTTTGCAAAAGAAATAGCCATGGCTTGTAGTGCTGCGCTGTGCCCTCACCTGAAAA
CTCTAAAAAGTAATGGGATGAATAAAATTGGACTCAGAGTTTCCATTGACACTGATATGGTTGAATTTCAGGCAG
GATCTGAAGGCCAACTTCTGCCTCAGCATTATCTAAATGATCTTGATAGTGCTCTGATACCTGTGATCCATGGTG
GGACCTCCAACTCTAGTTTACCATTAGAAATAGAATTAGTGTTTTTCATTATAGAACATCTTTTT**TAG**TGAAAGA
ATGTGCCATATTACATATTGCAACCTAATTTGTTAAAACTAACTCCAGCACTAAAGCTGAAATGCCACAAACACT
AAAAGTATAAATATGTCTGATTTTTGAAACACATAAGCTTTGCTCTTTAGGCAGGAATGATCTTTTCAAATCATT
AGCACAATATTTAAATATCTAAAAATTTAAGAGATCCATACTTTCTGTAGCTTTACAATTAATTTAAGTACTAAA
AAGACAAGGATTTCTTTTAAGAAATTTATAGCATTTACTGTGTTATTTAAATGCTAAGCCAAAGTATCTGCACTT
AGGTATACCTCTTTATGCCAATAATGATTTTAATGAAGGCTCTTTTCAGATGTAACCTTATGAAGGAAATATCTG
CTTTGTGTATATGCCAGTTAGAATACTGGTTTCTAAAGTCTGTCAAATTGTATTTCAGTGGCACAAAAACCAGTT
TTGAGGTCTTAGACTTATAATTCTTTGAATAAAACTGATAACTTATTTGTATAATTGGAGTGGAGACCTACCTCC
ATAATTAGATAAACTCTTTTTGGATTATAATCAGAATTTTGCCTTTTTTCTTCTCAAATTATTACATATGTATGT
ATTATATATCCACATATATAGTTTTCCCTGATTAAATGGATATTAAAATAATTGCGGGTGCTTCAGGACTTTTTG
CTTCTATATTTAAGTATATTGTTTTTATAGCAAGAACATATTCTGAATGTTTTATAAATCTTTAATAATTTATAT
GTAGGTAATATTTTTGTATCACAATGCATTATTTTTTTCCTCCTTTCCTTCCAAACTATACCACTGTATTTACC
ACTTCTAAGAGTGACTGACGACGGGCCAGATGACCCTTGAAGTAGTCATTATGTAGCAATAAATGAAGCCTGAAA
CAGGTTTTTTTACTTCCACTTTAATCCTTAGAAATTTCTTGGCAACTTCGCATATTTTCATTGACACTGGTGTAT
AAGTATAAATTTAAATGAACTAATTACTTTTGCATATTTTAAATTCTTTATATGGTAGTTATTTTTTATAACAGG
ATATTAACATAAGTTAAATCCTATGTATTTGAAATTGTTACAGAGCTTTCCTCTTTACTTCAAACAGCAAAAAAG
TGGGGGGCATATTGTAGTCCTGTCATTTAAGTTATGTAAAAAATTTAATCATTATTTTGATGCTTTAAACATTCT
CATGTGTAATATATGTTTTTGTATCAAAAACACTCATATATTTCAAGAAAAAGAAATTATGTTAAATAGCCCTGT
TTTAAGAAAAATATTTATGAAGCATCTCAACTTGAAGATCAAGTCAAAGTTATAACTCAGGATCTGAGGTCTCAA
GCTAGGAGAGACTGAGAATTTTAATCAGTTTGGGCATATAGTTTGGACTGAATCACATCTGTAGTACTTAGCCAA
AGACAATTTGGAGGAGAATATCAGCCTTCTGGAAGTAGCTACTTCCTGAACAATGTAAAGTGTCGCAGATATTCA
ATAAAATGGCAACCTGTTATAATTTGTGAAATTTATTGAAATGGTGTAAGATGAAAACAATTGCATATCAAACCC
AATTTATGTTTTCTAAATATAGTGTATGTATTCTGCCATGTAAGTAATTGAACAGTCTTAAAATAACCAAATGGT
AGAGGGCTGTTCCATGATGGGACAGCTTTGGATTTGTTTTCATAAAATCTCTACATTCAATAAAAATTGGAATTA
TGTGCCTGAAGTTTGGAGGCACATTTTGAAGT

FIGURE 774

MDSYFKAAVSDLDKLLDDFEQNPDEQDYLQDVQNAYDSNHCSVSSELASSQRTSLLPKDQECVNSCASSETSYGT
NESSLNEKTLKGLTSIQNEKNVTGLDLLSSVDGGTSDEIQPLYMGRCSKPICDLISDMGNLVHATNSEEDIKKLL
PDDFKSNADSLIGLDLSSVSDTPCVSSTDHDSDTVREQQNDTSSELQNREIGGIKELGIKVDTTLSDSYNYSGTE
NLKDKKIFNQLESIVDFNMSSALTRQSSKMFHAKDKLQHKSQPCGLLKDVGLVKEEVDVAVITAAECLKEEGKTS
ALTCSLPKNEDLCLNDSNSRDENFKLPDFSFQEDKTVIKQSAQEDSKSLDLKDNDVIQDSSSALHVSSKDVPSSL
SCLPASGSMCGSLIESKARGDFLPQHEHKDNIQDAVTIHEEIQNSVVLGGEPFKENDLLKQEKCKSILLQSLIEG
MEDRKIDPDQTVIRAESLDGGDTSSTVVESQEGLSGTHVPESSDCCEGFINTFSSNDMDGQDLDYFNIDEGAKSG
PLISDAELDAFLTEQYLQTTNIKSFEENVNDSKSQMNQIDMKGLDDGNINNIYFNAEAGAIGESHGINIICETVD
KQNTIENGLSLGEKSTIPVQQGLPTSKSEITNQLSVSDINSQSVGGARPKQLFSLPSRTRSSKDLNKPDVPDTIE
SEPSTADTVVPITCAIDSTADPQVSFNSNYIDIESNSEGGSSFVTANEDSVPENTCKEGLVLGQKQPTWVPDSEA
PNCMNCQVKFTFTKRRHHCRACGKVFCGVCCNRKCKLQYLEKEARVCVVCYETISKAQAFERMMSPTGSNLKSNH
SDECTTVQPPQENQTSSIPSPATLPVSALKQPGVEGLCSKEQKRVWFADGILPNGEVADTTKLSSGSKRCSEDFS
PLSPDVPMTVNTVDHSHSTTVEKPNNETGDITRNEIIQSPISQVPSVEKLSMNTGNEGLPTSGSFTLDDDVFAET
EEPSSPTGVLVNSNLPIASISDYRLLCDINKYVCNKISLLPNDEDSLPPLLVASGEKGSVPVVEEHPSHEQIILL
LEGEGFHPVTFVLNANLLVNVKFIFYSSDKYWYFSTNGLHGLGQAEIIILLLCLPNEDTIPKDIFRLFITIYKDA
LKGKYIENLDNITFTESFLSSKDHGGFLFITPTFQKLDDLSLPSNPFLCGILIQKLEIPWAKVFPMRLMLRLGAE
YKAYPAPLTSIRGRKPLFGEIGHTIMNLLVDLRNYQYTLHNIDQLLIHMEMGKSCIKIPRKKYSDVMKVLNSSNE
HVISIGASFSTEADSHLVCIQNDGIYETQANSATGHPRKVTGASFVVFNGALKTSSGFLAKSSIVEDGLMVQITP
ETMNGLRLALREQKDFKITCGKVDAVDLREYVDICWVDAEEKGNKGVISSVDGISLQGFPSEKIKLEADFETDEK
IVKCTEVFYFLKDQDLSILSTSYQFAKEIAMACSAALCPHLKTLKSNGMNKIGLRVSIDTDMVEFQAGSEGQLLP
QHYLNDLDSALIPVIHGGTSNSSLPLEIELVFFIIEHLF

FIGURE 775

GGCACGAGGGCGATGCGGGCGCCCCCGGCGGGCGGCCCCGGCGGGCACC**ATG**AGCCCTCTGCTCCGCCGCCTGCT
GCTCGCCGCACTCCTGCAGCTGGCCCCCGCCCAGGCCCCTGTCTCCCAGCCTGATGCCCCTGGCCACCAGAGGAA
AGTGGTGTCATGGATAGATGTGTATACTCGCGCTACCTGCCAGCCCCGGGAGGTGGTGGTGCCCTTGACTGTGGA
GCTCATGGGCACCGTGGCCAAACAGCTGGTGCCCAGCTGCGTGACTGTGCAGCGCTGTGGTGGCTGCTGCCCTGA
CGATGGCCTGGAGTGTGTGCCCACTGGGCAGCACCAAGTCCGGATGCAGATCCTCATGATCCGGTACCCGAGCAG
TCAGCTGGGGGGAGATGTCCCTGGAAGAACACAGCCAGTGTGAATGCAGACCTAAAAAAAAAGGACAGTGCTGTGAA
GCCAGACAGGGCTGCCACTCCCCACCACCGTCCCCAGCCCCGTTCTGTTCCGGGCTGGGACTCTGCCCCCGGAGC
ACCCTCCCCAGCTGACATCACCCATCCCACTCCAGCCCCAGGCCCCTCTGCCCACGCTGCACCCAGCACCACCAG
CGCCCTGACCCCCGGACCTGCCGCTGCCGCTGCCGACGCCGCAGCTTCCTCCGTTGCCAAGGGCGGGGCT**TAG**AG
CTCAACCCAGACACCTGCAGGTGCCGGAAGCTGCGAAGGTGACACATGGCTTTTCAGACTCAGCAGGGTGACTTG
CCTCAGAGGCTATATCCCAGTGGGGGAACAAAGAGGAGCCTGGTAAAAAACAGCCAAGCCCCCAAGACCTCAGCC
CAGGCAGAAGCTGCTCTAGGACCTGGGCCTCTCAGAGGGCTCTTCTGCCATCCCTTGTCTCCCTGAGGCCATCAT
CAAACAGGACAGAGTTGGAAGAGGAGACTGGGAGGCAGCAAGAGGGGTCACATACCAGCTCAGGGGAGAATGGAG
TACTGTCTCAGTTTCTAACCACTCTGTGCAAGTAAGCATCTTACAACTGGCTCTTCCTCCCCTCACTAAGAAGAC
CCAAACCTCTGCATAATGGGATTTGGGCTTTGGTACAAGAACTGTGACCCCCAACCCTGATAAAAGAGATGGAAG
GAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 776

MSPLLRRLLLAALLQLAPAQAPVSQPDAPGHQRKVVSWIDVYTRATCQPREVVVPLTVELMGTVAKQLVPSCVTV
QRCGGCCPDDGLECVPTGQHQVRMQILMIRYPSSQLGEMSLEEHSQCECRPKKKDSAVKPDRAATPHHRPQPRSV
PGWDSAPGAPSPADITHPTPAPGPSAHAAPSTTSALTPGPAAAAADAAASSVAKGGA

FIGURE 777

GCAGCCCACTCTTCCCGAGAGGCCCCGACATCTCCCGGATAATCTGGAGCTTTCAAA**ATG**TTTGCCAAAGCAACC
AGGAATTTTCTTAGAGAAGTTGATGCTGATGGTGACCTGATTGCAGTATCAAATCTGAATGACTCTGATAAGTTA
CAGCTTCTAAGTCTGGTGACAAAAAAGAAGAGATTCTGGTGCTGGCAGAGACCCAAGTACCAGTTTTTATCCCTC
ACCCTTGGCGATGTACTCATAGAAGACCAATTTCCGAGTCCAGTGGTCGTGGAGTCGGACTTTGTGAAATACGAG
GGCAAGTTTGCAAACCACGTGAGTGGAACCCTGGAGACTGCACTGGGGAAGGTCAAGCTGAACCTGGGGGGCAGC
AGCCGCGTAGAGAGCCAGTCTTCATTTGGAACCCTGAGGAAGCAGGAGGTGGATTTGCAGCAGCTCATCAGAGAC
TCTGCCGAGAGAACAATAAATCTGAGAAACCCTGTGCTCCAGCAGGTGCTGGAAGGAAGGAATGAGGTCCTGTGC
GTTTTGACACAGAAGATCACGACGATGCAGAAGTGTGTGATCTCTGAGCACATGCAGGTCGAGGAGAAGTGTGGT
GGCATCGTGGGCATCCAGACCAAGACGGTGCAGGTGTCAGCGACGGAGGATGGGAATGTCACCAAGGACTCCAAC
GTGGTGCTGGAGATCCCAGCTGCCACCACCATTGCCTACGGTGTCATTGAGTTATACGTGAAACTGGACGGCCAG
TTCGAGTTCTGCCTTCTCCGAGGGAAGCAAGGTGGCTTCGAGAACAAGAAGAGAATTGACTCTGTCTACCTGGAC
CCCCTGGTCTTTCGAGAGTTTGCATTCATAGACATGCCAGATGCTGCGCATGGGATATCTTCCCAGGATGGACCA
TTAAGTGTTTTAAAGCAAGCGACCCTGCTCCTGGAGAGGAATTTCCATCCATTTGCGGAGCTGCCTGAGCCACAA
CAGACAGCTTTGAGTGACATCTTCCAGGCGGTCCTATTTGATGATGAACTACTCATGGTCCTGGAACCAGTGTGC
GATGACCTGGTCAGCGGCCTCTCGCCCACAGTGGCGGTGCTGGGGGAGCTGAAGCCCCGGCAGCAGCAGGACCTT
GTGGCCTTCCTGCAGCTGGTGGGGTGCAGCTTACAGGGTGGGTGTCCGGGCCCCGAGGATGCAGGCAGCAAGCAG
CTGTTTATGACAGCCTACTTCTTGGTCAGTGCCCTCGCAGAAATGCCAGATAGCGCGGCAGCTCTGCTGGGCACT
TGCTGCAAACTCCAGATCATTCCCACACTGTGCCACTTGCTTCGTGCTCTGTCTGATGATGGAGTATCTGATCTT
GAAGACCCAACCTTGACTCCCCTGAAAGATACAGAAAGGTTTGGGATTGTGCAGCGCTTGTTTGCCTCAGCTGAC
ATTAGTCTGGAGAGACTGAAGTCATCTGTGAAAGCTGTCATTCTGAAGGACTCTAAAGTCTTCCCACTGCTTCTT
TGTATAACCCTGAATGGACTCTGTGCTTTAGGCAGAGAACATTCA**TGA**TGTCATATGTGAACTAGAAGTACGTGT
TACTGGCCAAGGCTATTTTTCAGAACTGTTAAAGGTCATATGCACGTTAAAAGTTGACCAATGAAATGAATTTAC
AGAACAGTTTAAGAAGTGGTGACATTTTGCATGATGAATGACCTGACTTTTAGCCACCAGGTACTCTTTAAACAG
TTTTCCTTATCAGAGGCCCTCCTGTGCTGGTGACCCAGCATCTGAGTTAGGTTCCAGCATGTAAAGAGCTGGGAG
GGCGGAGAATTCTTAGCATACATTCAGACGTTTTTTCTGCACAATAATAAGTCCATCTGTCACTTGCATTCCACT
TTTTGTTACATAGAAAGAGTCTGACCCTTTAATCCAAAAGGTCTTTTTACATTGTGAATGCTGTGGGAAGGCAAT
TTCTCTGCACACAAGAGGCTACGTTTTGGAAGTGATGTATGTTATTTGATGACTGAAAATGAACTGTAAATGCTC
CTAGAGTATATTCCTCTGCTGAACAAAATTAAACTTCAAAAAAATCTAACAGTAACACACCCCTGCTTGGGACCC
TAGCTATATGCATTTTATGTGACCTTGCCATGCTTCAGTGAACATACTAATTCTATGTCTAGCACATGTTGATTT
CCTATGTATTCTGGGTATTCTATTAAAGGAAACTTTGAACTATTAAAAAAAAAAA

FIGURE 778

MFAKATRNFLREVDADGDLIAVSNLNDSDKLQLLSLVTKKKRFWCWQRPKYQFLSLTLGDVLIEDQFPSPVVVES
DFVKYEGKFANHVSGTLETALGKVKLNLGGSSRVESQSSFGTLRKQEVDLQQLIRDSAERTINLRNPVLQQVLEG
RNEVLCVLTQKITTMQKCVISEHMQVEEKCGGIVGIQTKTVQVSATEDGNVTKDSNVVLEIPAATTIAYGVIELY
VKLDGQFEFCLLRGKQGGFENKKRIDSVYLDPLVFREFAFIDMPDAAHGISSQDGPLSVLKQATLLLERNFHPFA
ELPEPQQTALSDIFQAVLFDDELLMVLEPVCDDLVSGLSPTVAVLGELKPRQQQDLVAFLQLVGCSLQGGCPGPE
DAGSKQLFMTAYFLVSALAEMPDSAAALLGTCCKLQIIPTLCHLLRALSDDGVSDLEDPTLTPLKDTERFGIVQR
LFASADISLERLKSSVKAVILKDSKVFPLLLCITLNGLCALGREHS

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FIGURE 779

GAAGGAGGCCCAGACAGTGAGGGCAGGAGGGAGAGAAGAGACGCAGAAGGAGAGCGAGCGAGAGAGAAAGGGTTC
TGGATTGGAGGGGAGAGCAAGGGAGGGAGGAAGGCGGTGAGAGAGGCGGGGGCCTCGGGAGGGTGAAAGGAGGGA
GGAGAAGGGCGGGGCACGGAGGCCCGAGCGAGGGACAAGACTCCGACTCCAGCTCTGACTTTTTTCGCGGCTCTC
GGCTTCCACTGCAGCC**ATG**TCACTCCTCTTGCTGGTGGTCTCAGCCCTTCACATCCTCATTCTTATACTGCTTTT
CGTGGCCACTTTGGACAAGTCCTGGTGGACTCTCCCTGGGAAAGAGTCCCTGAATCTCTGGTACGACTGCACGTG
GAACAACGACACCAAAACATGGGCCTGCAGTAATGTCAGCGAGAATGGCTGGCTGAAGGCGGTGCAGGTCCTCAT
GGTGCTCTCCCTCATTCTCTGCTGTCTCTCCTTCATCCTGTTCATGTTCCAGCTCTACACCATGCGACGAGGAGG
TCTCTTCTATGCCACCGGCCTCTGCCAGCTTTGCACCAGCGTGGCGGTGTTTACTGGCGCCTTGATCTATGCCAT
TCACGCCGAGGAGATCCTGGAGAAGCACCCGCGAGGGGGCAGCTTCGGATACTGCTTCGCCCTGGCCTGGGTGGC
CTTCCCCCTCGCCCTGGTCAGCGGCATCATCTACATCCACCTACGGAAGCGGGAG**TGA**GCGCCCCGCCTCGCTCG
GCTGCCCCCGCCCCTTCCCGGCCCCCCTCGCCGCGCGTCCTCCAAAAAAATAAAACTTTAACGGCGG

FIGURE 780

MSLLLLVVSALHILILILLFVATLDKSWWTLPGKESLNLWYDCTWNNDTKTWACSNVSENGWLKAVQVLMVLSLI
LCCLSFILFMFQLYTMRRGGLFYATGLCQLCTSVAVFTGALIYAIHAEEILEKHPRGGSFGYCFALAWVAFPLAL
VSGIIYIHLRKRE

FIGURE 781

GGCTCTGGGCATCACCAGCGGCCCCAGGGAAAAAGAAAGAA**ATG**GGAAACAGCATGAAATCCACCCCTGCGCCTG
CCGAGAGGCCCCTGCCCAACCCGGAGGGACTGGATAGCGACTTCCTTGCCGTGCTAAGTGACTACCCGTCTCCTG
ACATCAGCCCCCCGATATTCCGCCGAGGGGAGAAACTGCGTGTGATTTCTGATGAAGGGGGCTGGTGGAAAGCTA
TTTCTCTTAGCACTGGTCGAGAGAGTTACATCCCTGGAATATGTGTGGCCAGAGTTTACCATGGCTGGCTGTTTG
AGGGCCTGGGCAGAGACAAGGCCGAGGAGCTGCTGCAGCTGCCAGACACAAAGGTCGGCTCCTTCATGATCAGAG
AGAGTGAGACCAAGAAAGGGTTTTACTCACTGTCGGTGAGACACAGGCAGGTAAAGCATTACCGCATTTTCCGTC
TGCCGAACAACTGGTACTACATTTCCCCGAGGCTCACCTTCCAGTGCCTGGAGGACCTGGTGAACCACTATTCTG
AGGTGGCTGATGGCCTGTGCTGTGTGCTCACCACGCCCTGCCTGACACAAAGCACGGCTGCCCCAGCAGTGAGGG
CCTCCAGCTCACCTGTCACCTTGCGTCAGAAGACTGTGGACTGGAGGAGAGTGTCCAGACTGCAGGAGGACCCCG
AGGGAACAGAGAACCCGCTTGGGGTAGACGAGTCCCTTTTCAGCTATGGCCTTCGAGAGAGCATTGCCTCTTACC
TGTCCCTGACCAGTGAGGACAACACCTCCTTTGATCGAAAGAAGAAAAGCATCTCCCTGATGTATGGTGGCAGCA
AGAGAAAGAGCTCATTCTTCTCATCACCACCTTACTTTGAGGAC**TAG**CCAAGAACAGACACAATGGTTCATGCCC
AAAAGGAACAGAAGTTCCAACTATTGCCTGGGATCTTGCGAAAAGCGAGGTTCCCTGATCCCTGGGAGCCTCACG
TATTTTAGAAGCCAAGAGAAGCCACATGGAGACTCAAATTCGCATCTTCTCTATCCACATCATGACCAAAGGAAC
CCCTCCCTGGTGTCTGATCAGGGCTGTGGCATCACAAAACATTGGATCATGACATGTCGGGCGATGCTTGGAAAA
GCCCAGCATGTATGTATGCACACATTGTGTGTGTGGGAAGGACAAAGCCACTCTCACAAGAAAGGGCACCAGGAC
TGCTCTCCAAGGAACTGGACCTGTCCAGACAGTTACACTCCAAGGTCATTGGAGAGAACTTCTGTATGGGCAAGC
CTGAGAGGGAGAGGAAACAAAAGCTGTGTCCTGGCAGAAGGTCTGGGTTTGCAGATGGGTGCCCTGAATGGAACT
ACTTTAACTAATCCATAGGGACTTCTGGTATGCTTTCCTCTCTTTTTAAAGGAACTTCGTGACACTAAACATTAG
CCCAAAGGACTTCTTAGCCTTCAATTGGGAGATACCTTTGGTCTGCTCCTGCACCAAAGCCATATGGGTGGAAGT
CAGTTGGCCTCCCTGGTTCTGCAGAGGGCCAGAAGAATGAGAGAGAGGAAGACTGCTGGCAGGGAAATCGAGGAG
GCGAGACTAGAACTGCACCAGCTTCCCTGATGTCTGCAGCCATGGCTTTGCAGCGCAAACAGAACTTCTCTGGGA
TGCTGGGATTCTTGCCTGTATGAATGCATCAAGTATTCATTTATTGCCCGAATAGGCATTGCATTAAGTCCTCTG
TTAGGTGTCAGGCAAGCCAAAAAAAAAAAAAAAGATGCTAAGTCCTAACCCCCAACAGAAGTGTTCACAGTGTAGA
CGGGAAAAAATGTATAAACAAATGTGTAAAAAGAGAAATCAGCTCATGGCTTAGGATGGAATTAGAGACAGGTGA
GGGACACTCAGGAGCTCATTTTCCAGCTGCTCTTCAGAGTGGAAGGGCTGGCTGGATCGGGTAGGTAAGAATAGC
TGGATTTTTTAGAAAAGAAATGGATACAGTCTAAAGAATTAACTCACCCGGTACTTTATTCTAAGAAGGGTCTGG
CATCCATATGAGGAAAAATGCTCAGCTCCAGGAAAGATGGGGAGTCCAAGTGGATTAATGATGTCATGCATAATT
TTAAGAGACAAGGGAGAAAACACAATGTATAGCCAGAGAAGGAGAAGCTCCCATCCAAATCCTACTAGGAAGAGA
GTGGGCTGCAGATGAATCTGTGACTCATGTTTCCCTGTTTCAAAGGGATCCTGGGGAAGGAGGGGAACATGCTTG
CAGTATCTCTCCCTGTCTGTCTGCTCACATAAGCATTCCGTCCATCTAAGCTCATCGTGCTACTGGTATGTGTAT
GTGCAGTTACACAGTTTCCTGTATCATAAATCCTAGTGTGTTTATACAAGGAGACATCTGTGGTTTCCCCAACCG
TTCCAAAAGGCTATTTCAAAGGAACCAGCCCACGTATGAGAAATGAATGTAACACTGTGGACATTGACTTCCCGC
ATAAGGCAGGGTGACCCCCTGAACTCCAGATGTTTGCACAGTATCTTATGTGTTGTTTTCCGTTGTGACGAATGT
GATTGGAACATTTGGGGAGCACCCAGAGGGATTTTTCAGTGGGAAGCATTACACTTTGCTAAATCATGTATTTAT
TCCTGATTAAAACAAACCTAATAAATATTTAACCCTTGGC

FIGURE 782

MGNSMKSTPAPAERPLPNPEGLDSDFLAVLSDYPSPDISPPIFRRGEKLRVISDEGGWWKAISLSTGRESYIPGI
CVARVYHGWLFEGLGRDKAEELLQLPDTKVGSFMIRESETKKGFYSLSVRHRQVKHYRIFRLPNNWYYISPRLTF
QCLEDLVNHYSEVADGLCCVLTTPCLTQSTAAPAVRASSSPVTLRQKTVDWRRVSRLQEDPEGTENPLGVDESLF
SYGLRESIASYLSLTSEDNTSFDRKKKSISLMYGGSKRKSSFFSSPPYFED

FIGURE 783

GGCCAGGAACGCACGCTGCCTGGCCGTATCGCCGCCCCCACCGACGCCGCCGCCGGGACTAGAAGTGAGCCGCCC
GGGTCCCAAACGCCAGCCAGCCAGTCAGTGGGTCCCGCAGTCGCCCGCAACCGGGGCGAATC**ATG**GCGGCCGCCA
AGGTGGCTTTAACCAAGAGAGCAGATCCAGCTGAGCTTAGAACAATATTTTTGAAGTATGCAAGCATTGAGAAAA
ACGGTGAATTTTTCATGTCCCCCAATGACTTTGTCACTCGATACTTGAACATTTTTGGAGAAAGCCAGCCTAATC
CAAAGACTGTGGAACTTTTAAGTGGAGTGGTGGATCAGACCAAAGATGGATTAATATCTTTTCAAGAATTTGTTG
CCTTTGAATCTGTCCTGTGTGCCCCTGATGCTTTGTTTATGGTAGCCTTTCAGCTGTTTGACAAAGCTGGCAAAG
GAGAAGTAACTTTTGAGGATGTTAAGCAAGTTTTTGGACAGACCACAATTCATCAACATATTCCATTTAACTGGG
ATTCAGAATTTGTGCAACTACATTTTGGAAAAGAAAGAAAAAGACACCTGACATATGCGGAATTTACTCAGTTTT
TATTGGAAATACAACTGGAGCACGCAAAGCAAGCCTTTGTGCAACGGGACAATGCTAGGACTGGGAGAGTCACAG
CCATCGACTTCCGAGACATCATGGTCACCATCCGCCCCCATGTCTTGACTCCTTTTGTAGAAGAATGTCTAGTAG
CTGCTGCTGGAGGTACCACATCCCATCAAGTTAGTTTCTCCTATTTTAATGGATTTAATTCGCTCCTTAACAACA
TGGAACTCATTAGAAAGATCTATAGCACTCTGGCTGGCACCAGGAAAGATGTTGAAGTGACTAAGGAGGAGTTTG
TTCTGGCAGCTCAGAAATTTGGTCAGGTTACACCCATGGAAGTTGACATCTTGTTTCAGTTAGCAGATTTATATG
AGCCAAGGGGACGTATGACCTTAGCAGACATTGAACGGATTGCTCCTCTGGAAGAGGGAACTCTGCCCTTTAACT
TGGCTGAGGCCCAGAGGCAGAAGGCCTCAGGTGATTCAGCTCGACCAGTTCTTCTACAAGTTGCAGAGTCGGCCT
ACAGGTTTGGTCTGGGTTCTGTTGCTGGAGCTGTTGGAGCCACTGCTGTGTATCCTATCGATCTTGTAAAAACTC
GAATGCAGAACCAACGATCAACTGGCTCTTTTGTGGGAGAACTCATGTATAAAAACAGCTTTGACTGTTTTAAGA
AAGTGCTACGCTATGAAGGCTTCTTTGGACTGTATAGAGGTCTGTTGCCACAGTTATTGGGAGTTGCCCCAGAGA
AGGCCATAAAACTTACAGTGAACGATTTTGTGAGGGATAAATTTATGCACAAAGATGGTTCGGTCCCACTTGCAG
CAGAAATTCTTGCTGGAGGCTGCGCTGGAGGCTCCCAGGTGATTTTCACAAATCCTTTAGAAATCGTCAAGATCC
GTTTGCAAGTGGCAGGAGAAATCACCACTGGTCCTCGAGTCAGTGCTCTGTCTGTCGTGCGGGACCTGGGGTTTT
TTGGGATCTACAAGGGTGCCAAAGCATGCTTTCTGCGGGACATTCCTTTCTCGGCCATCTACTTTCCGTGCTATG
CTCATGTGAAGGCTTCCTTTGCAAATGAAGATGGGCAGGTTAGCCCAGGAAGCCTGCTCTTAGCTGGTGCCATAG
CTGGTATGCCTGCAGCATCTTTAGTGACCCCTGCTGATGTTATCAAGACGAGATTACAGGTGGCTGCCCGGGCTG
GCCAAACCACTTACAGCGGAGTGATAGACTGCTTTAGAAAGATACTGCGTGAAGAAGGACCAAAAGCTCTGTGGA
AGGGAGCTGGTGCTCGTGTATTTCGATCCTCACCCCAGTTTGGTGTAACTTTGCTGACTTACGAATTGCTACAGC
GATGGTTCTACATTGATTTTGGAGGAGTAAAACCCATGGGATCAGAGCCAGTTCCTAAATCCAGGATCAACCTGC
CTGCCCCGAATCCTGATCACGTTGGGGGCTACAAACTGGCAGTTGCTACATTTGCAGGGATTGAAAACAAATTTG
GACTTTACCTACCTCTCTTCAAGCCATCAGTATCTACCTCAAAGGCTATTGGTGGAGGCCCA**TAG**GAAGATCAGC
CCTGGGATAGTGCTGTCTTTTTGTGGGTACTGCAGTAAAGAACATCCCTCCTGGGAATGAAGCAATGCTTCATCC
CTTTTACGTCCATCTCTTGTTTAAATTCAAGTCCAGGCTTTTTTATCATGTGAAATCATTCATTTTCTGGGTGTT
TTCTTAACCAGATCATTGTGAAATTATTCATAATTATTATTTGGCCCTCTGCCCAGAAACCTTTGTTTGCATCTG
AAAATTGATGGGATTTGGTCAACACTAACATGATTTGGGGAAAGGAGCAAGTCAGAATAGAAATTAGTACTCCCC
TCCTTGAACTAGGATTGTAGTCCCAAAGAGGCTACTGTAAGGCAATCATGGTGCTCAGAGCAGTGTTTCGTGTGT
GTTTTAAACTGGTAGGAAACTAGGTGCATATTTATAAAAATAAAAAACACTGGGAGAAATGAAAAAATATATATC
AAATATATTCAGCCTGGCTTCAAATTGTAAGCATGCACAAATTCTGTCTCTGGATTATATTATGAAGCTTTTATG
TGAAACATGTTTCTTTGTAATGAAAACCACATTGGAGATGTTTAGTAATCATATTGTTACTGGTACCAAGACTAC
TAGGGAAATGCCTTTGTACTTTAGGGAAGTACTTTTGGCATTTTACTGTACAGACAGAAAAAACTGAGATGTAGC
CCCTCTCCTGGAAGTGCTAATTTTGAAAAACTGCTCATATGATGTACATGTACTGATTACTGCCTATTTTAATAA
ACACTCTTGAAAAATGCATGTTGCCCTGTTGCTGCCTGCCCTATTCTCCTCATCTCCCCATCATTGGTACCCACT
TGCTTTTAAAATCCACTTTATCTTGAATAATGTAAGACAAATATGTTCTGACATAAGTATTTAATTCATGTTGCC
TTGCATAATGGTCAGAGGCGCATGAATTTGTGAAGGTGGAAATAAACTATTTGTAAAGTGAAAAAAAAAAAAAAA

FIGURE 784

MAAAKVALTKRADPAELRTIFLKYASIEKNGEFFMSPNDFVTRYLNIFGESQPNPKTVELLSGVVDQTKDGLISF
QEFVAFESVLCAPDALFMVAFQLFDKAGKGEVTFEDVKQVFGQTTIHQHIPFNWDSEFVQLHFGKERKRHLTYAE
FTQFLLEIQLEHAKQAFVQRDNARTGRVTAIDFRDIMVTIRPHVLTPFVEECLVAAAGGTTSHQVSFSYFNGFNS
LLNNMELIRKIYSTLAGTRKDVEVTKEEFVLAAQKFGQVTPMEVDILFQLADLYEPRGRMTLADIERIAPLEEGT
LPFNLAEAQRQKASGDSARPVLLQVAESAYRFGLGSVAGAVGATAVYPIDLVKTRMQNQRSTGSFVGELMYKNSF
DCFKKVLRYEGFFGLYRGLLPQLLGVAPEKAIKLTVNDFVRDKFMHKDGSVPLAAEILAGGCAGGSQVIFTNPLE
IVKIRLQVAGEITTGPRVSALSVVRDLGFFGIYKGAKACFLRDIPFSAIYFPCYAHVKASFANEDGQVSPGSLLL
AGAIAGMPAASLVTPADVIKTRLQVAARAGQTTYSGVIDCFRKILREEGPKALWKGAGARVFRSSPQFGVTLLTY
ELLQRWFYIDFGGVKPMGSEPVPKSRINLPAPNPDHVGGYKLAVATFAGIENKFGLYLPLFKPSVSTSKAIGGGP

FIGURE 785A

GGACTGCGAAAGGAGCAGGGTTGCGGAGCTAGGGCTCCAGCCTGCGGCCGCGCATTCTTGCGTCTGGCCAGCCGC
GAGCTCTAAGGGTCGGCCCCGCCCGGTCCGCCCCCGCGGCTCCCTGCCAGGCTCTCGCGGGCGCGCTCGGGGTGG
GGCCTCGCGGCTGGCGGAGATGCGGCCGGGGCTGCGCGGTGGTGATGCGAGCCTGCTGGGCGGCGCGCCGGGGCA
GCCGGAGCCGCGCGCCGCGGCGCTGTAATCGGACACCAAGAGCGCTCGCCCCCGGCCTCCGGCCACTTTCCATTC
ACTCCGAGGTGCTTGATTGAGCGACGCGGAGAAGAGCTCCGGGTGCCGCGGCACTGCAGCGCTGAGATTCCTTTA
CAAAGAAACTCAGAGGACCGGGAAGAAAGAATTTCACCTTTGCGACGTGCTAGAAAATAAGGTCGTCTGGGAAAA
GGACTGGAGACACAAGCGCATCCAACCCCGGTAGCAAACTGATGACTTTTCCGTGCTGATTTCTTTCAACCTCGG
TATTTTCCCTTGGATATTAACTTGCATATCTGAAGAA**ATG**GCATTCCGGACAATTTGCGTGTTGGTTGGAGTATT
TATTTGTTCTATCTGTGTGAAAGGATCTTCCCAGCCCCAAGCAAGAGTTTATTTAACATTTGATGAACTTCGAGA
AACCAAGACCTCTGAATACTTCAGCCTTTCCCACCATCCTTTAGACTACAGGATTTTATTAATGGATGAAGATCA
GGACCGGATATATGTGGGAAGCAAAGATCACATTCTTTCCCTGAATATTAACAATATAAGTCAAGAAGCTTTGAG
TGTTTTCTGGCCAGCATCTACAATCAAAGTTGAAGAATGCAAAATGGCTGGCAAAGATCCCACACACGGCTGTGG
GAACTTTGTCCGTGTAATTCAGACTTTCAATCGCACACATTTGTATGTCTGTGGGAGTGGCGCTTTCAGTCCTGT
CTGTACTTACTTGAACAGAGGGAGGAGATCAGAGGACCAAGTTTTCATGATTGACTCCAAGTGTGAATCTGGAAA
AGGACGCTGCTCTTTCAACCCCAACGTGAACACGGTGTCTGTTATGATCAATGAGGAGCTTTTCTCTGGAATGTA
TATAGATTTCATGGGGACAGATGCTGCTATTTTTCGAAGTTTAACCAAGAGGAATGCGGTCAGAACTGATCAACA
TAATTCCAAATGGCTAAGTGAACCTATGTTTGTAGATGCACATGTCATCCCAGATGGTACTGATCCAAATGATGC
TAAGGTGTACTTCTTCTTCAAAGAAAAACTGACTGACAATAACAGGAGCACGAAACAGATTCATTCCATGATTGC
TCGAATATGTCCTAATGACACTGGTGGACTGCGTAGCCTTGTCAACAAGTGGACCACTTTCTTAAAGGCGAGGCT
GGTGTGCTCGGTAACAGATGAAGACGGCCCAGAAACACACTTTGATGAATTAGAGGATGTGTTTCTGCTGGAAAC
TGATAACCCGAGGACAACACTAGTGTATGGCATTTTTACAACATCAAGCTCAGTTTTCAAAGGATCAGCCGTGTG
TGTGTATCATTTATCTGATATACAGACTGTGTTTAATGGGCCTTTTGCCCACAAAGAAGGGCCCAATCATCAGCT
GATTTCCTATCAGGGCAGAATTCCATATCCTCGCCCTGGAACTTGTCCAGGAGGAGCATTTACACCCAATATGCG
AACCACCAAGGAGTTCCCAGATGATGTTGTCACTTTTATTCGGAACCATCCTCTCATGTACAATTCCATCTACCC
AATCCACAAAAGGCCTTTGATTGTTCGTATTGGCACTGACTACAAGTACACAAAGATAGCTGTGGATCGAGTGAA
CGCTGCTGATGGGAGATACCATGTCCTGTTTCTCGGAACAGATCGGGGTACTGTGCAAAAAGTGGTTGTTCTTCC
TACTAACAACTCTGTCAGTGGCGAGCTCATTCTGGAGGAGCTGGAAGTCTTTAAGAATCATGCTCCTATAACAAC
AATGAAAATTTCATCTAAAAAGCAACAGTTGTATGTGAGTTCCAATGAAGGGGTTTCCCAAGTATCTCTGCACCG
CTGCCACATCTATGGTACAGCCTGTGCTGACTGCTGCCTGGCGCGGGACCCTTATTGCGCCTGGGATGGCCATTC
CTGTTCCAGATTCTACCCAACTGGGAAACGGAGGAGCCGAAGACAAGATGTGAGACATGGAAACCCACTGACTCA
ATGCAGAGGATTTAATCTAAAAGCATACAGAAATGCAGCTGAAATTGTGCAGTATGGAGTAAAAAATAACACCAC
TTTTCTGGAGTGTGCCCCCAAGTCTCCGCAGGCATCTATCAAGTGGCTGTTACAGAAAGACAAAGACAGGAGGAA
AGAGGTTAAGCTGAATGAACGAATAATAGCCACTTCACAGGGACTCCTGATCCGCTCTGTTCAGGGTTCTGACCA
AGGACTTTATCACTGCATTGCTACAGAAAATAGTTTCAAGCAGACCATAGCCAAGATCAACTTCAAAGTTTTAGA
TTCAGAAATGGTGGCTGTTGTGACGGACAAATGGTCCCCGTGGACCTGGGCCAGCTCTGTGAGGGCTTTACCCTT
CCACCCGAAGGACATCATGGGGGCATTCAGCCACTCAGAAATGCAGATGATTAACCAATACTGCAAAGACACTCG
GCAGCAACATCAGCAGGGAGATGAATCACAGAAAATGAGAGGGGACTATGGCAAGTTAAAGGCCCTCATCAATAG
TCGGAAAAGTAGAAACAGGAGGAATCAGTTGCCAGAGTCA**TAA**TATTTTCTTATGTGGGTCTTATGCTTCCATTA
ACAAATGCTCTGTCTTCAATGATCAAATTTTGAGCAAAGAAACTTGTGCTTTACCAAGGGGAATTACTGAAAAAG
GTGATTACTCCTGAAGTGAGTTTTACACGAACTGAAATGAGCATGCATTTTCTTGTATGATAGTGACTAGCACTA
GACATGTCATGGTCCTCATGGTGCATATAAATATATTTAACTTAACCCAGATTTTATTTATATCTTTATTCACCT
TTTCTTCAAAATCGATATGGTGGCTGCAAAACTAGAATTGTTGCATCCCTCAATTGAATGAGGGCCATATCCCTG
TGGTATTCCTTTCCTGCTTTGGGGCTTTAGAATTCTAATTGTCAGTGATTTTGTATATGAAAACAAGTTCCAAAT
CCACAGCTTTTACGTAGTAAAAGTCATAAATGCATATGACAGAATGGCTATCAAAAGAAATAGAAAAGGAAGACG
GCATTTAAAGTTGTATAAAAACACGAGTTATTCATAAAGAGAAAATGATGAGTTTTTATGGTTCCAATGAAATAT
CTTCCCCTTTTTTTAAGATTGTAAAAATAATCAGTTACTGGTATCTGTCACTGACCTTTGTTTCCTTATTCAGGA
AGATAAAAATCAGTAACCTACCCCATGAAGATATTTGGTGGGAGTTATATCAGTGAAGCAGTTTGGTTTATATTC
TTATGTTATCACCTTCCAAACAAAAGCACTTACTTTTTTTGGAAGTTATTTAATTTATTTTAGACTCAAAGAATA

FIGURE 785B

TAATCTTGCACTACTCAGTTATTACTGTTTGTTCTCTTATTCCCTAGTCTGTGTGGCAAATTAAACAATATAAGA
AGGAAAAATTTGAAGTATTAGACTTCTAAATAAGGGGTGAAATCATCAGAAAGAAAAATCAAAGTAGAAACTACT
AATTTTTTAAGAGGAATTTATAACAAATATGGCTAGTTTTCAACTTCAGTACTCAAATTCAATGATTCTTCCTTT
TATTAAAACCAGTCTCAGATATCATACTGATTTTTAAGTCAACACTATATATTTTATGATCTTTTCAGTGTGATG
GCAAGGTGCTTGTTATGTCTAGAAAGTAAGAAAACAATATGAGGAGACATTCTGTCTTTCAAAAGGTAATGGTAC
ATACGTTCACTGGTCTCTAAGTGTAAAAGTAGTAAATTTTGTGATGAATAAAATAATTATCTCCTAATTGTATGT
TAGAATAATTTTATTAGAATAATTTCATACTGAAATTATTTTCTCCAAATAAAAATTAGATGGAAAAATGTGAAA
AAAATTATTCATGCTCTCATATATATTTTAAAAACACTACTTTTGCTTTTTTATTTACCTTTTAAGACATTTTCA
TGCTTCCAGGTAAAAACAGATATTGTACCATGTACCTAATCCAAATATCATATAAACATTTTATTTATAGTTAAT
AATCTATGATGAAGGTAATTAAAGTAGATTATGGCCTTTTTAAGTATTGCAGTCTAAAACTTCAAAAACTAAAAT
CATTGTCAAAATTAATATGATTATTAATCAGAATATCAGATATGATTCACTATTTAAACTATGATAAATTATGAT
AATATATGAGGAGGCCTCGCTATAGCAAAAATAGTTAAAATGCTGACATAACACCAAACTTCATTTTTTAAAAAA
TCTGTTGTTCCAAATGTGTATAATTTTAAAGTAATTTCTAAAGCAGTTTATTATAATGGTTTGCCTGCTTAAAAG
GTATAATTAAACTTCTTTTCTCTTCTACATTGACACACAGAAATGTGTCAATGTAAAGCCAAAACCATCTTCTGT
GTTTATGGCCAATCTATTCTCAAAGTTAAAAGTAAAATTGTTTCAGAGTCACAGTTCCCTTTATTTCACATAAGC
CCAAACTGATAGACAGTAACGGTGTTTAGTTTTATACTATATTTGTGCTATTTAATTCTTTCTATTTTCACAATT
ATTAAATTGTGTACACTTTCATTACTTTTAAAAATGTAGAAATTCTTCATGAACATAACTCTGCTGAATGTAAAA
GAAAATTTTTTTTCAAAAATGCTGTTAATGTATACTACTGGTGGTTGATTGGTTTTATTTTATGTAGCTTGACAA
TTCAGTGACTTAATATCTATTCCATTTGTATTGTACATAAAATTTTCTAGAAATACACTTTTTTCCAAAGTGTAA
GTTTGTGAATAGATTTTAGCATGATGAAACTGTCATAATGGTGAATGTTCAATCTGTGTAAGAAAACAAACTAAA
TGTAGTTGTCACACTAAAATTTAATTGGATATTGATGAAATCATTGGCCTGGCAAAATAAAACATGTTGAATTCC
CC

FIGURE 786

MAFRTICVLVGVFICSICVKGSSQPQARVYLTFDELRETKTSEYFSLSHHPLDYRILLMDEDQDRIYVGSKDHIL
SLNINNISQEALSVFWPASTIKVEECKMAGKDPTHGCGNFVRVIQTFNRTHLYVCGSGAFSPVCTYLNRGRRSED
QVFMIDSKCESGKGRCSFNPNVNTVSVMINEELFSGMYIDFMGTDAAIFRSLTKRNAVRTDQHNSKWLSEPMFVD
AHVIPDGTDPNDAKVYFFFKEKLTDNNRSTKQIHSMIARICPNDTGGLRSLVNKWTTFLKARLVCSVTDEDGPET
HFDELEDVFLLETDNPRTTLVYGIFTTSSSVFKGSAVCVYHLSDIQTVFNGPFAHKEGPNHQLISYQGRIPYPRP
GTCPGGAFTPNMRTTKEFPDDVVTFIRNHPLMYNSIYPIHKRPLIVRIGTDYKYTKIAVDRVNAADGRYHVLFLG
TDRGTVQKVVVLPTNNSVSGELILEELEVFKNHAPITTMKISSKKQQLYVSSNEGVSQVSLHRCHIYGTACADCC
LARDPYCAWDGHSCSRFYPTGKRRSRRQDVRHGNPLTQCRGFNLKAYRNAAEIVQYGVKNNTTFLECAPKSPQAS
IKWLLQKDKDRRKEVKLNERIIATSQGLLIRSVQGSDQGLYHCIATENSFKQTIAKINFKVLDSEMVAVVTDKWS
PWTWASSVRALPFHPKDIMGAFSHSEMQMINQYCKDTRQQHQQGDESQKMRGDYGKLKALINSRKSRNRRNQLPE
S

FIGURE 787

GACGGCCGCCGGAGCCGCGAGGCCAACTGTCGCCTGGTTGGGCCCGGAAATGGGACGTCGCGCTTTCTCAGGGAG
CGTAGAAGCAGCCAGGGCCTCTCCAAGCCGCTGCTGTGACAGAAAGTGAGTGAGCTGCCGGAGG**ATG**TCCACCGC
CACGACAGTCGCCCCCGCGGGGATCCCGGCGACCCCGGGCCCTGTGAACCCACCCCCCCCGGAGGTCTCCAACCC
CAGCAAGCCCGGCCGCAAGACCAACCAGCTGCAGTACATGCAGAATGTGGTGGTGAAGACGCTCTGGAAACACCA
GTTCGCCTGGCCCTTCTACCAGCCCGTGGACGCAATCAAATTGAACCTGCCGGATTATCATAAAATAATTAAAAA
CCCAATGGATATGGGGACTATTAAGAAGAGACTAGAAAATAATTATTATTGGAGTGCAAGCGAATGTATGCAGGA
CTTCAACACCATGTTTACAAATTGTTACATTTATAACAAGCCCACAGATGACATAGTGCTAATGGCCCAAGCTTT
AGAGAAAATTTTTCTACAAAAAGTGGCCCAGATGCCCCAAGAGGAAGTTGAATTATTACCCCCTGCTCCAAAGGG
CAAAGGTCGGAAGCCGGCTGCGGGAGCCCAGAGCGCAGGTACACAGCAAGTGGCGGCCGTGTCCTCTGTCTCCCC
AGCGACCCCCTTTCAGAGCGTGCCCCCCACCGTCTCCCAGACGCCCGTCATCGCTGCCACCCCTGTACCAACCAT
CACTGCAAACGTCACGTCGGTCCCAGTCCCCCCAGCTGCCGCCCCACCTCCTCCTGCCACACCCATCGTCCCCGT
GGTCCCTCCTACGCCGCCTGTCGTCAAGAAAAAGGGCGTGAAGCGGAAAGCAGACACAACCACTCCCACGACGTC
GGCCATCACTGCCAGCCGGAGTGAGTCGCCCCCGCCGTTGTCAGACCCCAAGCAGGCCAAAGTGGTGGCCCGGCG
GGAGAGTGGTGGCCGCCCCATCAAGCCTCCCAAGAAGGACCTGGAGGACGGCGAGGTGCCCCAGCACGCAGGCAA
GAAGGGCAAGCTGTCGGAGCACCTGCGCTACTGCGACAGCATCCTCAGGGAGATGCTATCCAAGAAGCACGCGGC
CTACGCCTGGCCCTTCTACAAGCCAGTGGATGCCGAGGCCCTGGAGCTGCACGACTACCACGACATCATCAAGCA
CCCGATGGACCTCAGCACCGTGAAAAGGAAGATGGATGGCCGAGAGTACCCAGACGCACAGGGCTTTGCTGCTGA
TGTCCGGCTGATGTTCTCGAATTGCTACAAATACAATCCCCCAGACCACGAGGTTGTGGCCATGGCCCGGAAGCT
CCAGGACGTGTTTGAGATGAGGTTTGCCAAGATGCCAGATGAGCCCGTGGAGGCACCGGCGCTGCCTGCCCCCGC
GGCCCCCATGGTGAGCAAGGGCGCTGAGAGCAGCCGTAGCAGTGAGGAGAGCTCTTCGGACTCAGGCAGCTCGGA
CTCGGAGGAGGAGCGGGCCACCAGGCTGGCGGAGCTGCAGGAGCAGCTGAAGGCCGTGCACGAGCAGCTGGCCGC
CCTGTCTCAGGCCCCAGTAAACAAACCAAAGAAGAAGAAGGAGAAGAAGGAGAAGGAGAAGAAGAAGAAGGACAA
GGAGAAGGAGAAGGAGAAGCACAAAGTGAAGGCCGAGGAAGAGAAGAAGGCCAAGGTGGCTCCGCCTGCCAAGCA
GGCTCAGCAGAAGAAGGCTCCTGCCAAGAAGGCCAACAGCACGACCACGGCCGGCAGACAGCTGAAGAAAGGCGG
CAAGCAGGCATCTGCCTCCTACGACTCAGAGGAAGAGGAGGAGGGCCTGCCCATGAGCTACGATGAAAAGCGCCA
GCTTAGCCTGGACATCAACCGGCTGCCCGGGGAGAAGCTGGGCCGGGTAGTGCACATCATCCAATCTCGGGAGCC
CTCGCTCAGGGACTCCAACCCCGACGAGATAGAAATTGACTTTGAGACTCTGAAACCCACCACTTTGCGGGAACT
GGAGAGATATGTCAAGTCTTGTTTACAGAAAAAGCAAAGGAAACCGTTCTCAGCAAGCGGGAAGAAACAGGCAGC
CAAGTCGAAAGAGGAGCTAGCTCAGGAAAAGAAGAAGGAGCTGGAAAAGCGTCTGCAGGATGTCAGCGGGCAGCT
GAGCAGCAGCAAGAAGCCCGCCCGGAAAGAGAAGCCCGGCTCAGCACCCTCAGGGGGCCCGTCCAGGCTCAGCAG
CAGCAGCTCCTCCGAGTCTGGGAGCAGCAGCTCCAGCGGGTCCAGCTCTGACAGCAGTGACTCAGAA**TGA**ACTGG
CTTCGGACAGAACAGGACAGATGGATGTCGCACACGCCGAGACTCTGCCGTACCCCTCTGTGGTTCATATTACTA
CTTCTGTTCCATGGTGTGCAGGTCTGCTTCTTAATTCAGTGTTATGATATCTTCCAGTTTTTGCTTTCATAGGTC
AGAGATCTATCTTGTGTGTGCGTTAGACTTGATGAGAAGGTGTGAACTCTGCAGAAAGTCTCTTCTTCATCACTG
AATTCAGTCACTTGGAGATGACAACTTCAAATGCTAACCCGATGACCCCAGAAAACCGTGTGAGATTCGTACCGA
AGAACCTTGTGGAATCCCTTTGCTTAGGCCCAACCTGGTCGATAGCTCGAGAAAGAATTTTTTCCAAGGAAATGT
CTCGGATATGGGTACTGTATTTGAAAGCTGTTAGCTTTGTCAACACGCATTGTCCTTGTCATTTGGGCCCCGAGC
TCTGACCCTCGTGTCTGACGCGGCCACCTCTTTCTGGAGGGGCTGAGGACAGATGTGCCTGCTTGTGGAGACCAG
GCTGGGCCTAAGCGAAGGGTCATCGCAGCCCCAGCCCGGAGCGTGGAGCCCTTGGGGGGTGGTCGGGTGGGATGT
GCGTTCTCCGCTCGTGGTGATGTCAGGAGCTCCTCGGAGGGAACAGAGCGGCTGTGTATGCAGCCTGCAGGTTTC
CATACACTGAAGCTTTTACCTCAACTTTAAAAAAAAAAAAGAAGAAAAGATTAAAAAAAAAAAAAAAAAACTCGA
GGCATCTATG

FIGURE 788

MSTATTVAPAGIPATPGPVNPPPPEVSNPSKPGRKTNQLQYMQNVVVKTLWKHQFAWPFYQPVDAIKLNLPDYHK
IIKNPMDMGTIKKRLENNYYWSASECMQDFNTMFTNCYIYNKPTDDIVLMAQALEKIFLQKVAQMPQEEVELLPP
APKGKGRKPAAGAQSAGTQQVAAVSSVSPATPFQSVPPTVSQTPVIAATPVPTITANVTSVPVPPAAAPPPPATP
IVPVVPPTPPVVKKKGVKRKADTTTPTTSAITASRSESPPPLSDPKQAKVVARRESGGRPIKPPKKDLEDGEVPQ
HAGKKGKLSEHLRYCDSILREMLSKKHAAYAWPFYKPVDAEALELHDYHDIIKHPMDLSTVKRKMDGREYPDAQG
FAADVRLMFSNCYKYNPPDHEVVAMARKLQDVFEMRFAKMPDEPVEAPALPAPAAPMVSKGAESSRSSEESSSDS
GSSDSEEERATRLAELQEQLKAVHEQLAALSQAPVNKPKKKKEKKEKEKKKKDKEKEKEKHKVKAEEEKKAKVAP
PAKQAQQKKAPAKKANSTTTAGRQLKKGGKQASASYDSEEEEEGLPMSYDEKRQLSLDINRLPGEKLGRVVHIIQ
SREPSLRDSNPDEIEIDFETLKPTTLRELERYVKSCLQKKQRKPFSASGKKQAAKSKEELAQEKKKELEKRLQDV
SGQLSSSKKPARKEKPGSAPSGGPSRLSSSSSSESGSSSSSGSSSDSSDSE

FIGURE 789A

GAATTCCGGGAGCCCGCGGAGGCTGCTGCAGCAGCCCGAACCGGCGTCCGAGTCCGGGGAAGGCCCCCGCGAGCG
CAGGGAGGGGCCGGAAAGTTCCGGCGAACTGGGGGAGCGGCAGTGGGAGAGCGTCGGGCGGGAGGCGGTGGTCCT
GGGAGCGGCCCCGGCGCCCGAAGCCGCCCCGAGCTGGTGGGGAGGGTCCCGGCCGGTGGGGCCGGGCTGGCGGGG
GAGGGGCGCCTGGGGGTGCAAGAGGCGAATTGGCTGCCCGGGGTGCAGGAGGGACAGGTGGTGCGGGCTGTCAGG
AAACCTACCTGAACGGGAAGGAGCCCCAGGAGGGAGAGGGACCCGGCGAGGGCTCAGGACCCGGAGGCGCCGGCG
GAGGAGGAGGTGGTGACTGGCAGGCCCGGGCCCCACGGTACCTCCGGGGCTGAAGGGGACGCAGGATGTAGGGGC
ATGGGGAGTCGGGCGCAGAAGAGTGCGGGGAACGCTGAGCTCTGGGAGCCACTGCCTGAGGGCAGGCCGCGGCCG
GCGGGAACCTCTTCTGCCGTCTCAGCCTGGGCGTCGCTGAAGCTGTGTCTGCGGGGAGGCAGCGGAAGGCGGCAG
AGGCTGGGAGGCGGCAGA**ATG**CAGCCAGAGGAGGGCACAGGCTGGCTGCTGGAGCTGCTGTCCGAGGTGCAGCTG
CAACAGTACTTCCTGCGGCTCCGAGATGACCTCAACGTCACCCGCCTGTCCCACTTTGAGTACGTCAAGAATGAG
GACCTGGAGAAGATCGGCATGGGTCGGCCTGGCCAGCGGCGGCTGTGGGAGGCTGTGAAGAGGAGGAAGGCCTTG
TGCAAACGCAAGTCGTGGATGAGTAAGGTGTTCAGTGGAAAGCGACTGGAGGCTGAGTTCCCACCTCATCACTCT
CAGAGCACCTTCCGGAAGACCTCGCCCGCCCCTGGGGGCCCAGCAGGGGAGGGGCCCCTGCAGAGCCTCACCTGC
CTCATTGGGGAGAAGGACCTGCGCCTCCTGGAGAAGCTGGGTGATGGTTCCTTTGGCGTGGTGCGCAGGGGCGAG
TGGGACGCGCCCTCAGGGAAGACGGTGAGTGTGGCTGTGAAGTGCCTGAAGCCCGATGTCCTGAGCCAGCCAGAA
GCCATGGACGACTTCATCCGGGAGGTCAATGCCATGCACTCGCTCGACCACCGAAACCTCATCCGCCTCTACGGG
GTGGTGCTCACGCCGCCCATGAAGATGGTGACAGAGCTGGCACCTCTGGGATCGTTGTTGGACCGGCTACGTAAG
CACCAGGGCCACTTCCTCCTGGGGACTCTGAGCCGCTACGCTGTGCAGGTGGCTGAGGGCATGGGCTACCTGGAG
TCCAAGCGCTTTATTCACCGTGACCTGGCTGCCCGCAATCTGCTGTTGGCTACCCGCGACCTGGTCAAGATCGGG
GACTTTGGGCTGATGCGAGCACTACCTCAGAATGACGACCATTACGTCATGCAGGAACATCGCAAGGTGCCCTTC
GCCTGGTGTGCCCCCGAGAGCCTGAAGACACGCACCTTCTCCCATGCCAGCGACACCTGGATGTTCGGGGTGACA
CTGTGGGAAATGTTCACCTACGGCCAGGAGCCCTGGATCGGCCTCAACGGCAGTCAGATCCTGCATAAGATCGAC
AAGGAGGGGGAGCGGCTGCCCCGGCCCGAGGACTGTCCCCAGGACATCTACAACGTCATGGTCCAGTGCTGGGCT
CACAAGCCAGAGGACAGACCCACGTTTGTGGCCCTGCGGGACTTCCTGCTGGAGGCCCAGCCCACAGACATGCGG
GCCCTTCAGGACTTTGAGGAACCGGACAAGCTGCACATCCAGATGAATGATGTCATCACCGTCATCGAGGGAAGG
GCCGAGAACTACTGGTGGCGTGGCCAGAACACACGGACGCTGTGTGTGGGGCCCTTCCCTCGCAACGTGGTGACC
TCCGTGGCCGGCCTGTCGGCCCAGGACATCAGCCAGCCCCTGCAGAACAGCTTCATCCACACAGGGCATGGCGAC
AGTGACCCCCGCCACTGCTGGGGCTTCCCGGACAGGATTGACGAACTGTATCTGGGAAACCCCATGGACCCCCCC
GACCTCCTGAGCGTGGAACTGAGCACCTCCCGGCCCCCCCAGCATCTAGGAGGGGTGAAAAAACCAACCTATGAC
CCTGTGAGCGAGGACCAAGACCCCTTGTCCAGCGACTTCAAGAGGCTGGGCCTGCGGAAGCCAGGCCTGCCCCGA
GGGCTGTGGCTGGCGAAGCCCTCGGCGCGGGTGCCGGGCACCAAGGCCAGCCGAGGCAGCGGGGCTGAGGTCACG
CTCATCGACTTCGGTGAGGAGCCCGTGGTCCCGGCCCTACGGCCCTGCCCGCCCTCCCTGGCGCAGCTGGCCATG
GACGCCTGCTCCCTGCTGGACGAGACCCCGCCTCAGAGCCCCACGCGGGCACTGCCCCGGCCCCTGCACCCCACG
CCTGTGGTGGACTGGGACGCACGCCCGCTGCCCCCCCCGCCCGCCTATGACGACGTGGCCCAGGATGAGGATGAC
TTTGAGATCTGCTCCATCAACAGCACCCTCGTGGGCGCGGGGGTCCCTGCCGGGCCCAGCCAGGGCCAGACCAAC
TACGCCTTTGTGCCTGAGCAGGCGCGGCCGCCCCCTCCCCTGGAGGACAACCTGTTCCTCCCGCCCCAGGGTGGG
GGCAAGCCGCCCAGCTCCGCACAGACCGCAGAGATCTTCCAGGCGCTACAGCAGGAGTGCATGAGGCAACTGCAG
GCTCCGGGCTCCCCGGCCCCCTCTCCCAGCCCGGGGGGTGACGACAAGCCCCAGGTGCCTCCTCGGGTACCCATC
CCCCCTCGGCCCACGCGCCCACACGTCCAGCTGTCTCCAGCCCCCCCGGGCGAGGAGGAGACCAGCCAGTGGCCT
GGACCTGCTTCCCCTCCCCGGGTGCCTCCGCGGGAGCCCCTGTCCCCTCAAGGCTCGAGGACACCCAGCCCCCTG
GTACCACCTGGCAGCTCCCCGCTGCCACCCCGGCTCTCAAGCTCACCTGGGAAGACCATGCCCACCACCCAGAGC
TTTGCCTCAGACCCCAAGTACGCCACCCCCCAGGTGATCCAGGCCCCTGGCGCGGGTGGTCCCTGCATCCTGCCC
ATCGTCCGGGATGGCAAGAAGGTCAGCAGCACCCACTATTACTTGCTGCCCGAGCGACCATCCTACCTGGAGCGC
TACCAGCGCTTCCTGCGTGAGGCCCAGAGCCCCGAGGAGCCTACCCCCCTGCCTGTGCCTCTGCTGCTGCCCCCA
CCCAGCACCCCAGCCCCCGCCGCCCCCACGGCCACCGTGCGGCCGATGCCCCAGGCTGCCTTGGACCCCAAGGCC
AACTTCTCCACCAACAACAGCAACCCAGGGGCCCGGCCACCACCCCCGAGGGCCACTGCTCGGCTGCCACAGAGG
GGCTGCCCTGGCGATGGGCCAGAGGCGGGCCGGCCAGCAGACAAGATCCAGATGGCCATGGTGCATGGGGTGACC
ACAGAGGAGTGCCAGGCGGCCCTGCAGTGCCACGGCTGGAGCGTGCAGAGGGCTGCCCAGTATCTGAAGGTGGAG

FIGURE 789B

CAGCTCTTCGGGCTGGGTCTGCGGCCCAGAGGGGAGTGCCACAAAGTGCTGGAGATGTTCGACTGGAACCTGGAG
CAGGCCGGCTGCCACCTTCTGGGCTCCTGGGGCCCTGCCCACCACAAGCGC**TGA**GATGCGTCTGGAGAGCCAGAG
GGCCTGCCTGAAGGAATCACCTGAGCCTGTCCGTCCACCAGGAGTGGGGAGATGCCCCCATCCAGTCCTGGAGGA
CCCGCTGCTCCTGCTGCTCCCGGGGATGGAGCAAGGCCAAGGCTGCGGGAGGCTGGGAGCCCTGCCCTGCCCATC
CCTCCCGCACCAGTGCTGTCCCTGCACACTTTGGTTCAGTCCCGGTGCCCCTGCCAAGATGTGGAAGGGGCCGGG
TGAAGACAGGCTTGAGGGCCGCCCCAGCAGGCTCTGGGTATGACCTGCCTCTGGCCCTGGTCCTGGGCGGGGCCT
GTGGGTGGAGTAGTACCCCCAGGCCCTGCCCTGGGTGACAGACTGGGAGGAAACCAGGCTGGACCTGGGCAGGCG
GGATGTGTTGGCCACAGGGAGAGGCGGACCGGCACCCGGTGGGACCTCCTAGGACTGGGCCTTCTTCCAGGGGGC
CCCTGGCAGCAGCTGGGGTGTCGGGCAGAATGTGACTTGTGGCCTTACCATGGACTTGAATGGGACTTGGCTGGC
CTCAGGATCTTGTGCCTGGAAATAGCCTGAGGTGGCTCAGGAAGCGGAGAAAGGGTGCCAGACCATTCTCTGGCG
GGGACCAGGGCCCAAGGCCAGGGCTGGAAGGAGACCAAGGGGCAGCCCCTGGAGGACATCAGTGCTTCCTCTTCC
ACCCAATTCCCCCACGCGGTTCCATGTTTTCCCACCAGCCTGTTGGGCGAAGTTGCTGCTCCGGCATTCAGTCCT
GCTTCTTCCAGAGAAATAAAGTTAGTTTCTATTTTATGTTAAAAAAAA

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FIGURE 790

MQPEEGTGWLLELLSEVQLQQYFLRLRDDLNVTRLSHFEYVKNEDLEKIGMGRPGQRRLWEAVKRRKALCKRKSW
MSKVFSGKRLEAEFPPHHSQSTFRKTSPAPGGPAGEGPLQSLTCLIGEKDLRLLEKLGDGSFGVVRRGEWDAPSG
KTVSVAVKCLKPDVLSQPEAMDDFIREVNAMHSLDHRNLIRLYGVVLTPPMKMVTELAPLGSLLDRLRKHQGHFL
LGTLSRYAVQVAEGMGYLESKRFIHRDLAARNLLLATRDLVKIGDFGLMRALPQNDDHYVMQEHRKVPFAWCAPE
SLKTRTFSHASDTWMFGVTLWEMFTYGQEPWIGLNGSQILHKIDKEGERLPRPEDCPQDIYNVMVQCWAHKPEDR
PTFVALRDFLLEAQPTDMRALQDFEEPDKLHIQMNDVITVIEGRAENYWWRGQNTRTLCVGPFPRNVVTSVAGLS
AQDISQPLQNSFIHTGHGDSDPRHCWGFPDRIDELYLGNPMDPPDLLSVELSTSRPPQHLGGVKKPTYDPVSEDQ
DPLSSDFKRLGLRKPGLPRGLWLAKPSARVPGTKASRGSGAEVTLIDFGEEPVVPALRPCPPSLAQLAMDACSLL
DETPPQSPTRALPRPLHPTPVVDWDARPLPPPPAYDDVAQDEDDFEICSINSTLVGAGVPAGPSQGQTNYAFVPE
QARPPPPLEDNLFLPPQGGGKPPSSAQTAEIFQALQQECMRQLQAPGSPAPSPSPGGDDKPQVPPRVPIPPRPTR
PHVQLSPAPPGEEETSQWPGPASPPRVPPREPLSPQGSRTPSPLVPPGSSPLPPRLSSSPGKTMPTTQSFASDPK
YATPQVIQAPGAGGPCILPIVRDGKKVSSTHYYLLPERPSYLERYQRFLREAQSPEEPTPLPVPLLLPPPSTPAP
AAPTATVRPMPQAALDPKANFSTNNSNPGARPPPPRATARLPQRGCPGDGPEAGRPADKIQMAMVHGVTTEECQA
ALQCHGWSVQRAAQYLKVEQLFGLGLRPRGECHKVLEMFDWNLEQAGCHLLGSWGPAHHKR

FIGURE 791A

CAGTCGCTCCGAGCGGCCGCGAGCAGAGCCGCCCAGCCCTGTCAGCTGCGCCGGGACGATAAGGAGTCAGGCCAG
GGCGGGATGACACTCATTGATTCTAAAGCATCTTTAATCTGCCAGGCGGAGGGGGCTTTGCTGGTCTTTCTTGGA
CTATTCCAGAGAGGACAACTGTCATCTGGGAAGTAACAACGCAGG**ATG**CCCCCTGGGGTGGACTGCCCCATGGAA
TTCTGGACCAAGGAGGAGAATCAGAGCGTTGTGGTTGACTTCCTGCTGCCCACAGGGGTCTACCTGAACTTCCCT
GTGTCCCGCAATGCCAACCTCAGCACCATCAAGCAGCTGCTGTGGCACCGCGCCCAGTATGAGCCGCTCTTCCAC
ATGCTCAGTGGCCCCGAGGCCTATGTGTTCACCTGCATCAACCAGACAGCGGAGCAGCAAGAGCTGGAGGACGAG
CAACGGCGTCTGTGTGACGTGCAGCCCTTCCTGCCCGTCCTGCGCCTGGTGGCCCGTGAGGGCGACCGCGTGAAG
AAGCTCATCAACTCACAGATCAGCCTCCTCATCGGCAAAGGCCTCCACGAGTTTGACTCCTTGTGCGACCCAGAA
GTGAACGACTTTCGCGCCAAGATGTGCCAATTCTGCGAGGAGGCGGCCGCCCGCCGGCAGCAGCTGGGCTGGGAG
GCCTGGCTGCAGTACAGTTTCCCCCTGCAGCTGGAGCCCTCGGCTCAAACCTGGGGGCCTGGTACCCTGCGGCTC
CCGAACCGGGCCCTTCTGGTCAACGTTAAGTTTGAGGGCAGCGAGGAGAGCTTCACCTTCCAGGTGTCCACCAAG
GACGTGCCGCTGGCGCTGATGGCCTGTGCCCTGCGGAAGAAGGCCACAGTGTTCCGGCAGCCGCTGGTGGAGCAG
CCGGAAGACTACACGCTGCAGGTGAACGGCAGGCATGAGTACCTGTATGGCAACTACCCGCTCTGCCAGTTCCAG
TACATCTGCAGCTGCCTGCACAGTGGGTTGACCCCTCACCTGACCATGGTCCATTCCTCCTCCATCCTCGCCATG
CGGGATGAGCAGAGCAACCCTGCCCCCCAGGTCCAGAAACCGCGTGCCAAACCACCTCCCATTCCTGCGAAGAAG
CCTTCCTCTGTGTCCCTGTGGTCCCTGGAGCAGCCGTTCCGCATCGAGCTCATCCAGGGCAGCAAAGTGAACGCC
GACGAGCGGATGAAGCTGGTGGTGCAGGCCGGGCTTTTCCACGGCAACGAGATGCTGTGCAAGACGGTGTCCAGC
TCGGAGGTGAGCGTGTGCTCGGAGCCCGTGTGGAAGCAGCGGCTGGAGTTCGACATCAACATCTGCGACCTGCCC
CGCATGGCCCGTCTCTGCTTTGCGCTGTACGCCGTGATCGAGAAAGCCAAGAAGGCTCGCTCCACCAAGAAGAAG
TCCAAGAAGGCGGACTGCCCCATTGCCTGGGCCAACCTCATGCTGTTTGACTACAAGGACCAGCTTAAGACCGGG
GAACGCTGCCTCTACATGTGGCCCTCCGTCCCAGATGAGAAGGGCGAGCTGCTGAACCCCACGGGCACTGTGCGC
AGTAACCCCAACACGGATAGCGCCGCTGCCCTGCTCATCTGCCTGCCCGAGGTGGCCCCGCACCCCGTGTACTAC
CCCGCCCTGGAGAAGATCTTGGAGCTGGGGCGACACAGCGAGTGTGTGCATGTCACCGAGGAGGAGCAGCTGCAG
CTGCGGGAAATCCTGGAGCGGCGGGGGTCTGGGGAGCTGTATGAGCACGAGAAGGACCTGGTGTGGAAGCTGCGG
CATGAAGTCCAGGAGCACTTCCCGGAGGCGCTAGCCCGGCTGCTGCTGGTCACCAAGTGGAACAAGCATGAGGAT
GTGGCCCAGATGCTCTACCTGCTGTGCTCCTGGCCGGAGCTGCCCGTCCTGAGCGCCCTGGAGCTGCTAGACTTC
AGCTTCCCCGATTGCCACGTAGGCTCCTTCGCCATCAAGTCGCTGCGGAAACTGACGGACGATGAGCTGTTCCAG
TACCTGCTGCAGCTGGTGCAGGTGCTCAAGTACGAGTCCTACCTGGACTGCGAGCTGACCAAATTCCTGCTGGAC
CGGGCCCTGGCCAACCGCAAGATCGGCCACTTCCTTTTCTGGCACCTCCGCTCCGAGATGCACGTGCCGTCGGTG
GCCCTGCGCTTCGGCCTCATCCTGGAGGCCTACTGCAGGGGCAGCACCCACCACATGAAGGTGCTGATGAAGCAG
GGGGAAGCACTGAGCAAACTGAAGGCCCTGAATGACTTCGTCAAGCTGAGCTCTCAGAAGACCCCCAAGCCCCAG
ACCAAGGAGCTGATGCACTTGTGCATGCGGCAGGAGGCCTACCTAGAGGCCCTCTCCCACCTGCAGTCCCCACTC
GACCCCAGCACCCTGCTGGCTGAAGTCTGCGTGGAGCAGTGCACCTTCATGGACTCCAAGATGAAGCCCCTGTGG
ATCATGTACAGCAACGAGGAGGCAGGCAGCGGCGGCAGCGTGGGCATCATCTTTAAGAACGGGGATGACCTCCGG
CAGGACATGCTGACCCTGCAGATGATCCAGCTCATGGACGTCCTGTGGAAGCAGGAGGGGCTGGACCTGAGGATG
ACCCCCTATGGCTGCCTCCCCACCGGGGACCGCACAGGCCTCATTGAGGTGGTACTCCGTTCAGACACCATCGCC
AACATCCAACTCAACAAGAGCAACATGGCAGCCACAGCCGCCTTCAACAAGGATGCCCTGCTCAACTGGCTGAAG
TCCAAGAACCCGGGGGGAGGCCCTGGATCGAGCCATTGAGGAGTTCACCCTCTCCTGTGCTGGCTATTGTGTGGCC
ACATATGTGCTGGGCATTGGCGATCGGCACAGCGACAACATCATGATCCGAGAGAGTGGGCAGCTGTTCCACATT
GATTTTGGCCACTTTCTGGGGAATTTCAAGACCAAGTTTGGAATCAACCGCGAGCGTGTCCCATTCATCCTCACC
TATGACTTTGTCCATGTGATTCAGCAGGGGAAGACTAATAATAGTGAGAAATTTGAACGGTTCCGGGGCTACTGT
GAAAGGGCCTACACCATCCTGCGGCGCCACGGGCTTCTCTTCCTCCACCTCTTTGCCCTGATGCGGGCGGCAGGC
CTGCCTGAGCTCAGCTGCTCCAAAGACATCCAGTATCTCAAGGACTCCCTGGCACTGGGGAAAACAGAGGAGGAG
GCACTGAAGCACTTCCGAGTGAAGTTTAACGAAGCCCTCCGTGAGAGCTGGAAAACCAAAGTGAACTGGCTGGCC
CACAACGTGTCCAAAGACAACAGGCAG**TAG**TGGCTCCTCCCAGCCCTGGGCCCAAGAGGAGGCGGCTGCGGGTCG
TGGGGACCAAGCACATTGGTCCTAAAGGGGCTGAAGAGCCTGAACTGCACCTAACGGGAAAGAACCGACATGGCT
GCCTTTTGTTTACACTGGTTATTTATTTATGACTTGAAATAGTTTAAGGAGCTAAACAGCCATAAACGGAAACGC
CTCCTTCATTCAGCGGCGGTGCTGGGCCCCCCGAGGCTGCACCTGGCTCTCGGCTGAGGATTGTCACCCCAAGTC

FIGURE 791B

TTCCAGCTGGTGGATCTGGGCCCAGCAAAGACTGTTCTCCTCCCGAGGGAACCTTCTTCCCAGGCCTCCCGCCAG
ACTGCCTGGGTCCTGGCGCCTGGCGGTCACCTGGTGCCTACTGTCCGACAGGATGCCTCGATCCTCGTGCGACCC
ACCCTGTGTATCCTCCCTAGACTGAGTTCTGGCAGCTCCCCGAGGCAGCCGGGGTACCCTCTAGATTCAGGGATG
CTTGCTCTCCACTTTTCAAGTGGGTCTTGGGTACGAGAATTCCCTCATCTTTCTCTACTGTAAAGTGATTTTGTT
TGCAGGTAAGAAAATAATAGATGACTCACCACACCTCTACGGCTGGGGAGATCAGGCCCAGCCCCATAAAGGAGA
ATCTACGCTGGTCCTCAGGACGTGTTAAAGAGATCTGGGCCTCATGTAGCTCACCCCGGTCACGCATGAAGGCAA
AAGCAGGTCAGAAGCGAATACTCTGCCATTATCTCAAAAATCTTTTTTTTTTTTTTTTTGAGATGGGGTCTTCCT
CTGTTGCCCAGGCTGGAGTGCAGTGGTGCAATCTTGGCTCACTGTAACCTCCGCCTCCCAGGTTCAAGTGATTCT
TCTTGCCTCAGCCTCCTGAGTAGCTGGGATTACAGGTGTGCACCACCCGTACCCAGCTAATTTTTGTATTTTAGT
AGAGACGGGGGTTTCACCATGTTGGCTGGGCTGGTCTCGAACTCCTGACCTCAGGTGATCCACCCGCCTGAGCCT
CCCAAAGTGCTGGGATTACAGGCATGAGCCACCACGCCCGGCCCACTCTGCCATTGTCTAAGCCACCTCTGAAAG
CAGGTTTTAACAAAAGGATGAGGCCAGAACTCTTCCAGAACCATCACCTTTGGGAACCTGCTGTGAGAGTGCTGA
GGTACCAGAAGTGTGAGAACGAGGGGGCGTGCTGGGATCTTTCTCTCTGACTATACTTAGTTTGAAATGGTGCAG
GCTTAGTCTTAAGCCTCCAAAGGCCTGGATTTGAGCAGCTTTAGAAATGCAGGTTCTAGGGCTTCTCCCAGCCTT
CAGAAGCCAACTAACTCTGCAGATGGGGCTAGGACTGTGGGCTTTTAGCAGCCCACAGGTGATCCTAACATATCA
GGCCATGGACTCAGGACCTGCCCGGTGATGCTGTTGATTTCTCAAAGGTCTTCCAAAACTCAACAGAGCCAGAAG
TAGCCGCCCGCTCAGCGGCTCAGGTGCCAGCTCTGTTCTGATTCACCAGGGGTCCGTCAGTAGTCATTGCCACCC
GCGGGGCACCTCCCTGGCCACACGCCTGTTCCCAGCAAGTGCTGAAACTCACTAGACCGTCTGCCTGTTTCGAAA
TGGGGAAAGCCGTGCGTGCGCGTTATTTATTTAAGTGCGCCTGTGTGCGCGGGTGTGGGAGCACACTTTGCAAAG
CCACAGCGTTTCTGGTTTTGGGTGTACAGTCTTGTGTGCCTGGCGAGAAGAATATTTTCTATTTTTTTAAGTCAT
TTCATGTTTCTGTCTGGGGAAGGCAAGTTAGTTAAGTATCACTGATGTGGGTTGAGACCAGCACTCTGTGAAACC
TTGAAATGAGAAGTAAAGGCAGATGAAAAGAAAAAAAAAAAAAAA

FIGURE 792

MPPGVDCPMEFWTKEENQSVVVDFLLPTGVYLNFPVSRNANLSTIKQLLWHRAQYEPLFHMLSGPEAYVFTCINQ
TAEQQELEDEQRRLCDVQPFLPVLRLVAREGDRVKKLINSQISLLIGKGLHEFDSLCDPEVNDFRAKMCQFCEEA
AARRQQLGWEAWLQYSFPLQLEPSAQTWGPGTLRLPNRALLVNVKFEGSEESFTFQVSTKDVPLALMACALRKKA
TVFRQPLVEQPEDYTLQVNGRHEYLYGNYPLCQFQYICSCLHSGLTPHLTMVHSSSILAMRDEQSNPAPQVQKPR
AKPPPIPAKKPSSVSLWSLEQPFRIELIQGSKVNADERMKLVVQAGLFHGNEMLCKTVSSSEVSVCSEPVWKQRL
EFDINICDLPRMARLCFALYAVIEKAKKARSTKKKSKKADCPIAWANLMLFDYKDQLKTGERCLYMWPSVPDEKG
ELLNPTGTVRSNPNTDSAAALLICLPEVAPHPVYYPALEKILELGRHSECVHVTEEEQLQLREILERRGSGELYE
HEKDLVWKLRHEVQEHFPEALARLLLVTKWNKHEDVAQMLYLLCSWPELPVLSALELLDFSFPDCHVGSFAIKSL
RKLTDDELFQYLLQLVQVLKYESYLDCELTKFLLDRALANRKIGHFLFWHLRSEMHVPSVALRFGLILEAYCRGS
THHMKVLMKQGEALSKLKALNDFVKLSSQKTPKPQTKELMHLCMRQEAYLEALSHLQSPLDPSTLLAEVCVEQCT
FMDSKMKPLWIMYSNEEAGSGGSVGIIFKNGDDLRQDMLTLQMIQLMDVLWKQEGLDLRMTPYGCLPTGDRTGLI
EVVLRSDTIANIQLNKSNMAATAAFNKDALLNWLKSKNPGEALDRAIEEFTLSCAGYCVATYVLGIGDRHSDNIM
IRESGQLFHIDFGHFLGNFKTKFGINRERVPFILTYDFVHVIQQGKTNNSEKFERFRGYCERAYTILRRHGLLFL
HLFALMRAAGLPELSCSKDIQYLKDSLALGKTEEEALKHFRVKFNEALRESWKTKVNWLAHNVSKDNRQ

FIGURE 793

CGCTCCTCGGGCTGCCCCTCGGTTGACA**ATG**GTCTCCAGGATGGTCTCTACCATGCTATCTGGCCTACTGTTTTG
GCTGGCATCTGGATGGACTCCAGCATTTGCTTACAGCCCCCGGACCCCTGACCGGGTCTCAGAAGCAGATATCCA
GAGGCTGCTTCATGGTGTTATGGAGCAATTGGGCATTGCCAGGCCCCGAGTGGAATATCCAGCTCACCAGGCCAT
GAATCTTGTGGGCCCCCAGAGCATTGAAGGTGGAGCTCATGAAGGACTTCAGCATTTGGGTCCTTTTGGCAACAT
CCCCAACATCGTGGCAGAGTTGACTGGAGACAACATTCCTAAGGACTTTAGTGAGGATCAGGGGTACCCAGACCC
TCCAAATCCCTGTCCTGTTGGAAAAACAGATGATGGATGTCTAGAAAACACCCCTGACACTGCAGAGTTCAGTCG
AGAGTTCCAGTTGCACCAGCATCTCTTTGATCCGGAACATGACTATCCAGGCTTGGGCAAGTGGAACAAGAAACT
CCTTTACGAGAAGATGAAGGGAGGAGAGAGACGAAAGCGGAGGAGTGTCAATCCATATCTACAAGGACAGAGACT
GGATAATGTTGTTGCAAAGAAGTCTGTCCCCCATTTTTCAGATGAGGATAAGGATCCAGAG**TAA**AGAGAAGATGC
TAGACGAAAACCCACATTACCTGTTAGGCCTCAGCATGGCTTATGTGCACGTGTAAATGGAGTCCCTGTGAATGA
CAGCATGTTTCTTACATAGATAATTATGGATACAAAGCAGCTGTATGTAGATAGTGTATTGTCTTCACACCGATG
ATTCTGCTTTTTGCTAAATTAGAATAAGAGCTTTTTTGTTTCTTGGGTTTTTAAAATGTGAATCTGCAATGATCA
TAAAAATTAAAATGTGAATGTCAACAATAAAAAGCAAGACTATGAAAGGCTCAGATTTCTTGCAGTTTAAAATGG
TGTCTGAGGTTGTACTATTTTGGCCAAGTCTGTAGAAAGCTGTCATTTGATTTTGATTATGTAGTTCATCCAGCC
CTTGGGCATTGTTATACACCAGTAAAGAAGGCTGTACTCAAGAGGAGGAGCTGACACATTTCACTTGGCTGCGTC
TTAATAAACATGAATGCAAGCATTGGC

FIGURE 794

MVSRMVSTMLSGLLFWLASGWTPAFAYSPRTPDRVSEADIQRLLHGVMEQLGIARPRVEYPAHQAMNLVGPQSIE
GGAHEGLQHLGPFGNIPNIVAELTGDNIPKDFSEDQGYPDPPNPCPVGKTDDGCLENTPDTAEFSREFQLHQHLF
DPEHDYPGLGKWNKKLLYEKMKGGERRKRRSVNPYLQGQRLDNVVAKKSVPHFSDEDKDPE

FIGURE 795

GCGAGGCGCCCGAAGCCGTCGCGGCGGGGACC**ATG**TTGCTTCCGAACATCCTGCTCACCGGTACACCAGGGGTTG
GAAAAACCACACTAGGCAAAGAACTTGCGTCAAAATCAGGACTGAAATACATTAATGTGGGTGATTTAGCTCGAG
AAGAGCAATTGTATGATGGCTATGATGAAGAGTATGACTGTCCCATTTTAGATGAAGACAGAGTAGTTGATGAGT
TAGATAACCAAATGAGAGAAGGTGGAGTTATTGTTGATTACCATGGTTGTGATTTCTTCCCTGAACGCTGGTTTC
ATATAGTTTTTGTGCTGAGAACAGATACCAATGTATTGTACGAAAGACTTGAAACAAGGGGTTATAATGAGAAGA
AACTAACAGACAATATTCAGTGTGAGATTTTTCAAGTTCTTTATGAAGAAGCCACAGCATCCTACAAGGAAGAAA
TCGTGCATCAGCTGCCCAGTAATAAACCAGAAGAGCTAGAAAATAATGTAGATCAGATCTTGAAATGGATTGAGC
AGTGGATCAAAGATCATAACTCT**TGA**CTTATAAGGCTAGCTACTTAATAATCACTCTTGTTGATATCTCTGCCGA
CATCATAGAAATTGTTCAAGTGTCAGTAACACTTTATTAAAATCATGTTGCAGAACCAGCAGGTGGATAGTATAT
AGGTTTATGCCTGTGTTTCTTTTTCTCCATGAGAAAGCTAAACATGAAATATAATGAATATAGTATTATTAAGGA
TTGAGACAAAAACTGTGATTTTAATACTTAAATTGCTAAAGAATAAATAAATCTGACAAAATGGGTGGATATCTT
TTAAGTTTATTACAGAAAAAAATGCAGATGATCTCTTAAAATAAAACTAAAGATAAAGCAAAAAAA

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FIGURE 796

MLLPNILLTGTPGVGKTTLGKELASKSGLKYINVGDLAREEQLYDGYDEEYDCPILDEDRVVDELDNQMREGGVI
VDYHGCDFFPERWFHIVFVLRTDTNVLYERLETRGYNEKKLTDNIQCEIFQVLYEEATASYKEEIVHQLPSNKPE
ELENNVDQILKWIEQWIKDHNS

FIGURE 797

CAGTGCCTTGGTAATGACCAGGGCTCCAGAAAGAG**ATG**TCCTTGTGGCTGGGGGCCCCTGTGCCTGACATTCCTC
CTGACTCTGCGGTGGAGCTGTGGAAGCCAGGCGCACAGGATGCAAGCAGCCAGGCCCAGGGAGGCAGCAGCTGCA
TCCTCAGAGAGGAAGCCAGGATGCCCCACTCTGCTGGGGGTACTGCAGGGGTGGGGCTGGAGGCTGCAGAGCCCA
CAGCCCTGCTCACCAGGGCAGAGCCCCCTTCAGAACCCACAGAGATCCGTCCACAAAAGCGGAAAAAGGGGCCAG
CCCCCAAAATGCTGGGGAACGAGCTATGCAGCGTGTGTGGGGACAAGGCCTCGGGCTTCCACTACAATGTTCTGA
GCTGCGAGGGCTGCAAGGGATTCTTCCGCCGCAGCGTCATCAAGGGAGCGCACTACATCTGCCACAGTGGCGGCC
ACTGCCCCATGGACACCTACATGCGTCGCAAGTGCCAGGAGTGTCGGCTTCGCAAATGCCGTCAGGCTGGCATGC
GGGAGGAGTGTGTCCTGTCAGAAGAACAGATCCGCCTGAAGAAACTGAAGCGGCAAGAGGAGGAACAGGCTCATG
CCACATCCTTGCCCCCCAGGCGTTCCTCACCCCCCCAAATCCTGCCCCAGCTCAGCCCGGAACAACTGGGCATGA
TCGAGAAGCTCGTCGCTGCCCAGCAACAGTGTAACCGGCGCTCCTTTTCTGACCGGCTTCGAGTCACGCCTTGGC
CCATGGCACCAGATCCCCATAGCCGGGAGGCCCGTCAGCAGCGCTTTGCCCACTTCACTGAGCTGGCCATCGTCT
CTGTGCAGGAGATAGTTGACTTTGCTAAACAGCTACCCGGCTTCCTGCAGCTCAGCCGGGAGGACCAGATTGCCC
TGCTGAAGACCTCTGCGATCGAGGTGATGCTTCTGGAGACATCTCGGAGGTACAACCCTGGGAGTGAGAGTATCA
CCTTCCTCAAGGATTTCAGTTATAACCGGGAAGACTTTGCCAAAGCAGGGCTGCAAGTGGAATTCATCAACCCCA
TCTTCGAGTTCTCCAGGGCCATGAATGAGCTGCAACTCAATGATGCCGAGTTTGCCTTGCTCATTGCTATCAGCA
TCTTCTCTGCAGACCGGCCCAACGTGCAGGACCAGCTCCAGGTGGAGAGGCTGCAGCACACATATGTGGAAGCCC
TGCATGCCTACGTCTCCATCCACCATCCCCATGACCGACTGATGTTCCCACGGATGCTAATGAAACTGGTGAGCC
TCCGGACCCTGAGCAGCGTCCACTCAGAGCAAGTGTTTGCACTGCGTCTGCAGGACAAAAAGCTCCCACCGCTGC
TCTCTGAGATCTGGGATGTGCACGAA**TGA**CTGTTCTGTCCCCATATTTTCTGTTTTCTTGGCCGGATGGCTGAGG
CCTGGTGGCTGCCTCCTAGAAGTGGAACAGACTGAGAAGGGCAAACATTCCTGGGAGCTGGGCAAGGAGATCCTC
CCGTGGCATTAAAAGAGAGTCAAAGGGT

FIGURE 798

MSLWLGAPVPDIPPDSAVELWKPGAQDASSQAQGGSSCILREEARMPHSAGGTAGVGLEAAEPTALLTRAEPPSE
PTEIRPQKRKKGPAPKMLGNELCSVCGDKASGFHYNVLSCEGCKGFFRRSVIKGAHYICHSGGHCPMDTYMRRKC
QECRLRKCRQAGMREECVLSEEQIRLKKLKRQEEEQAHATSLPPRRSSPPQILPQLSPEQLGMIEKLVAAQQQCN
RRSFSDRLRVTPWPMAPDPHSREARQQRFAHFTELAIVSVQEIVDFAKQLPGFLQLSREDQIALLKTSAIEVMLL
ETSRRYNPGSESITFLKDFSYNREDFAKAGLQVEFINPIFEFSRAMNELQLNDAEFALLIAISIFSADRPNVQDQ
LQVERLQHTYVEALHAYVSIHHPHDRLMFPRMLMKLVSLRTLSSVHSEQVFALRLQDKKLPPLLSEIWDVHE

FIGURE 799

GGCACGAGGCTGCGGCCGCAGTAGCCGGAGCCGGAGCCGCAGCCACCGGTGCCTTCCTTTCCCGCCGCCGCCCAG
CCGCCGTCCGGCCTCCCTCGGGCCCGAGCGCAGACCAGGCTCCAGCCGCGCGGCGCCGGCAGCCTCGCGCTCCCT
CTCGGGTCTCTCTCGGGCCTCGGGCACCGCGTCCTGTGGGCGGCCGCCTGCCTGCCCGCCCGCCCGCAGCCCCTT
GCCTGCCGGCCCCTGGGCGGCCCGTGCC**ATG**GGCACCGACAGCCGCGCGGCCAAGGCGCTCCTGGCGCGGGCCCG
CACCCTGCACCTGCAGACGGGGAACCTGCTGAACTGGGGCCGCCTGCGGAAGAAGTGCCCGTCCACGCACAGCGA
GGAGCTTCATGATTGTATCCAAAAAACCTTGAATGAATGGAGTTCCCAAATCAACCCAGATTTGGTCAGGGAGTT
TCCAGATGTCTTGGAATGCACTGTATCTCATGCAGTAGAAAAGATAAATCCTGATGAAAGAGAAGAAATGAAAGT
TTCTGCAAAACTGTTCATTGTAGAATCAAACTCTTCATCATCAACTAGAAGTGCAGTTGACATGGCCTGTTCAGT
CCTTGGAGTTGCACAGCTGGATTCTGTGATCATTGCTTCACCTCCTATTGAAGATGGAGTTAATCTTTCCTTGGA
GCATTTACAGCCTTACTGGGAGGAATTAGAAAACTTAGTTCAGAGCAAAAAGATTGTTGCCATAGGTACCTCTGA
TCTAGACAAAACACAGTTGGAACAGCTGTATCAGTGGGCACAGGTAAAACCAAATAGTAACCAAGTTAATCTTGC
CTCCTGCTGTGTGATGCCACCAGATTTGACTGCATTTGCTAAACAATTTGACATACAGCTGTTGACTCACAATGA
TCCAAAAGAACTGCTTTCTGAAGCAAGTTTCCAAGAAGCTCTTCAGGAAAGCATTCCTGACATTCAAGCGCACGA
GTGGGTGCCGCTGTGGCTACTGCGGTATTCGGTCATTGTGAAAAGTAGAGGAATTATCAAATCAAAAGGCTACAT
TTTACAAGCTAAAAGAAGGGGTTCT**TAA**CTGACTTAGGAGCATAACTTACCTGTAATTTCCTTCAATATGAGAGA
AAATTGAGATGTGTAAAATCTAGTTACTGCCTGTAAATGGTGTCATTGAGGCAGATATTCTTTCGTCATATTTGA
CAGTATGTTGTCTGTCAAGTTTTAAATACTTATCTTGCCTCCATATCAATCCATTCTCATGAACCTCTGTATTGC
TTTCCTTAAACTATTGTTTTCTAATTGAAATTGTCTATAAAGAAAATACTTGCAATATATTTTTCCTTTATTTTT
ATGACTAATATAAATCAAGAAAATTTGTTGTTAGATATATTTTGGCCTAGGTATCAGGGTAATGTATATACATAT
TTTTTATTTCCAAAAAAAATTCATTAATTGCTTCTTAACTCTTATTATAACCAAGCAATTTAATTACAATTGTTA
AAACTGAAATACTGGAAGAAGATATTTTTCCTGTCATTGATGAGATATATCAGAGTAACTGGAGTAGCTGGGATT
TACTAGTAGTGTAAATAAAATTCACTCTTCAATAC

FIGURE 800

MGTDSRAAKALLARARTLHLQTGNLLNWGRLRKKCPSTHSEELHDCIQKTLNEWSSQINPDLVREFPDVLECTVS
HAVEKINPDEREEMKVSAKLFIVESNSSSSTRSAVDMACSVLGVAQLDSVIIASPPIEDGVNLSLEHLQPYWEEL
ENLVQSKKIVAIGTSDLDKTQLEQLYQWAQVKPNSNQVNLASCCVMPPDLTAFAKQFDIQLLTHNDPKELLSEAS
FQEALQESIPDIQAHEWVPLWLLRYSVIVKSRGIIKSKGYILQAKRRGS

FIGURE 801

AGACACCTCTGCCCTCACC**ATG**AGCCTCTGGCAGCCCCTGGTCCTGGTGCTCCTGGTGCTGGGCTGCTGCTTTGC
TGCCCCCAGACAGCGCCAGTCCACCCTTGTGCTCTTCCCTGGAGACCTGAGAACCAATCTCACCGACAGGCAGCT
GGCAGAGGAATACCTGTACCGCTATGGTTACACTCGGGTGGCAGAGATGCGTGGAGAGTCGAAATCTCTGGGGCC
TGCGCTGCTGCTTCTCCAGAAGCAACTGTCCCTGCCCGAGACCGGTGAGCTGGATAGCGCCACGCTGAAGGCCAT
GCGAACCCCACGGTGCGGGGTCCCAGACCTGGGCAGATTCCAAACCTTTGAGGGCGACCTCAAGTGGCACCACCA
CAACATCACCTATTGGATCCAAAACTACTCGGAAGACTTGCCGCGGGCGGTGATTGACGACGCCTTTGCCCGCGC
CTTCGCACTGTGGAGCGCGGTGACGCCGCTCACCTTCACTCGCGTGTACAGCCGGGACGCAGACATCGTCATCCA
GTTTGGTGTCGCGGAGCACGGAGACGGGTATCCCTTCGACGGGAAGGACGGGCTCCTGGCACACGCCTTTCCTCC
TGGCCCCGGCATTCAGGGAGACGCCCATTTCGACGATGACGAGTTGTGGTCCCTGGGCAAGGGCGTCGTGGTTCC
AACTCGGTTTGGAAACGCAGATGGCGCGGCCTGCCACTTCCCCTTCATCTTCGAGGGCCGCTCCTACTCTGCCTG
CACCACCGACGGTCGCTCCGACGGCTTGCCCTGGTGCAGTACCACGGCCAACTACGACACCGACGACCGGTTTGG
CTTCTGCCCCAGCGAGAGACTCTACACCCGGGACGGCAATGCTGATGGGAAACCCTGCCAGTTTCCATTCATCTT
CCAAGGCCAATCCTACTCCGCCTGCACCACGGACGGTCGCTCCGACGGCTACCGCTGGTGCGCCACCACCGCCAA
CTACGACCGGGACAAGCTCTTCGGCTTCTGCCCGACCCGAGCTGACTCGACGGTGATGGGGGGCAACTCGGCGGG
GGAGCTGTGCGTCTTCCCCTTCACTTTCCTGGGTAAGGAGTACTCGACCTGTACCAGCGAGGGCCGCGGAGATGG
GCGCCTCTGGTGCGCTACCACCTCGAACTTTGACAGCGACAAGAAGTGGGGCTTCTGCCCGGACCAAGGATACAG
TTTGTTCCTCGTGGCGGCGCATGAGTTCGGCCACGCGCTGGGCTTAGATCATTCCTCAGTGCCGGAGGCGCTCAT
GTACCCTATGTACCGCTTCACTGAGGGGCCCCCCTTGCATAAGGACGACGTGAATGGCATCCGGCACCTCTATGG
TCCTCGCCCTGAACCTGAGCCACGGCCTCCAACCACCACCACACCGCAGCCCACGGCTCCCCCGACGGTCTGCCC
CACCGGACCCCCCACTGTCCACCCCTCAGAGCGCCCCACAGCTGGCCCCACAGGTCCCCCCTCAGCTGGCCCCAC
AGGTCCCCCCACTGCTGGCCCTTCTACGGCCACTACTGTGCCTTTGAGTCCGGTGGACGATGCCTGCAACGTGAA
CATCTTCGACGCCATCGCGGAGATTGGGAACCAGCTGTATTTGTTCAAGGATGGGAAGTACTGGCGATTCTCTGA
GGGCAGGGGGAGCCGGCCGCAGGGCCCCTTCCTTATCGCCGACAAGTGGCCCGCGCTGCCCCGCAAGCTGGACTC
GGTCTTTGAGGAGCCGCTCTCCAAGAAGCTTTTCTTCTTCTCTGGGCGCCAGGTGTGGGTGTACACAGGCGCGTC
GGTGCTGGGCCCGAGGCGTCTGGACAAGCTGGGCCTGGGAGCCGACGTGGCCCAGGTGACCGGGGCCCTCCGGAG
TGGCAGGGGGAAGATGCTGCTGTTCAGCGGGCGGCGCCTCTGGAGGTTCGACGTGAAGGCGCAGATGGTGGATCC
CCGGAGCGCCAGCGAGGTGGACCGGATGTTCCCCGGGGTGCCTTTGGACACGCACGACGTCTTCCAGTACCGAGA
GAAAGCCTATTTCTGCCAGGACCGCTTCTACTGGCGCGTGAGTTCCCGGAGTGAGTTGAACCAGGTGGACCAAGT
GGGCTACGTGACCTATGACATCCTGCAGTGCCCTGAGGAC**TAG**GGCTCCCGTCCTGCTTTGCAGTGCCATGTAAA
TCCCCACTGGGACCAACCCTGGGGAAGGAGCCAGTTTGCCGGATACAAACTGGTATTCTGTTCTGGAGGAAAGGG
AGGAGTGGAGGTGGGCTGGGCCCTCTCTTCTCACCTTTGTTTTTTGTTGGAGTGTTTCTAATAAACTTGGATTCT
CTAACCTTT

FIGURE 802

MSLWQPLVLVLLVLGCCFAAPRQRQSTLVLFPGDLRTNLTDRQLAEEYLYRYGYTRVAEMRGESKSLGPALLLLQ
KQLSLPETGELDSATLKAMRTPRCGVPDLGRFQTFEGDLKWHHHNITYWIQNYSEDLPRAVIDDAFARAFALWSA
VTPLTFTRVYSRDADIVIQFGVAEHGDGYPFDGKDGLLAHAFPPGPGIQGDAHFDDDELWSLGKGVVVPTRFGNA
DGAACHFPFIFEGRSYSACTTDGRSDGLPWCSTTANYDTDDRFGFCPSERLYTRDGNADGKPCQFPFIFQGQSYS
ACTTDGRSDGYRWCATTANYDRDKLFGFCPTRADSTVMGGNSAGELCVFPFTFLGKEYSTCTSEGRGDGRLWCAT
TSNFDSDKKWGFCPDQGYSLFLVAAHEFGHALGLDHSSVPEALMYPMYRFTEGPPLHKDDVNGIRHLYGPRPEPE
PRPPTTTTPQPTAPPTVCPTGPPTVHPSERPTAGPTGPPSAGPTGPPTAGPSTATTVPLSPVDDACNVNIFDAIA
EIGNQLYLFKDGKYWRFSEGRGSRPQGPFLIADKWPALPRKLDSVFEEPLSKKLFFFSGRQVWVYTGASVLGPRR
LDKLGLGADVAQVTGALRSGRGKMLLFSGRRLWRFDVKAQMVDPRSASEVDRMFPGVPLDTHDVFQYREKAYFCQ
DRFYWRVSSRSELNQVDQVGYVTYDILQCPED

FIGURE 803

GCGGTGGTGGACACGTCGAGCCGGGTAGAAGTGGAGGGGCCGTTCGAAGAGTCGTGAGGGGGTGACGGGTTAAGA
TTCGGAGAGAGAGGTGCTAGTGGCTGGACTTGACCTGGAAAGAATCTTCTGCTGACTCTCAACTTTTCCTGGAAA
AA**ATG**GATCATTCCCACCATATGGGGATGAGCTATATGGACTCCAACAGTACCATGCAACCTTCTCACCATCACC
CAACCACTTCAGCCTCACACTCCCATGGTGGAGGAGACAGCAGCATGATGATGATGCCTATGACCTTCTACTTTG
GCTTTAAGAATGTGGAACTACTGTTTTCCGGTTTGGTGATCAATACAGCTGGAGAAATGGCTGGAGCTTTTGTGG
CAGTGTTTTTACTAGCAATGTTCTATGAAGGACTCAAGATAGCCCGAGAGAGCCTGCTGCGTAAGTCACAAGTCA
GCATTCGCTACAATTCCATGCCTGTCCCAGGACCAAATGGAACCATCCTTATGGAGACACACAAAACTGTTGGGC
AACAGATGCTGAGCTTTCCTCACCTCCTGCAAACAGTGCTGCACATCATCCAGGTGGTCATAAGCTACTTCCTCA
TGCTCATCTTCATGACCTACAACGGGTACCTCTGCATTGCAGTAGCAGCAGGGGCCGGTACAGGATACTTCCTCT
TCAGCTGGAAGAAGGCAGTGGTAGTGGATATCACAGAGCATTGCCAT**TGA**CATCAAACTCTATGGCGTGGCCTTA
TCGATTGCAGTGGGAAGTTGTTGAAGACTTGAAGACGTGATTCCTGCTCCAATCATCCCTTCTTGCTCCTCTTTG
TGCACGTACACACACACACACACACACACACACACACACACACACCCCTGCTCAACAGAGGTTTAGTTTACAGTCTC
TGAACTAAAGTAGTAACCTCCCAAATTGTTTTTTCTAATAAGCTGAGATTCCCATTTCTCTTAAGGAGAAGCCAC
CCATGAGATGTCTTTTCCTTCTCCATCATCTTAGAGCCAAGTTATATGTTCTTGTCTAATCCATGTAGCTTTTTG
TTCAATGACTTGATCATCTGCTTCCTTTTTGAATTTTTAACAGATAGTAAGTAAATTTGGTGGTTTTTTCCCCTG
GGTCAGTGATGGAAAGGGGTTAACTTCAGCCAGGATTGATGGCAGCTGAGGGAAATTCTTGCCCAACTAAACCCA
GAACTCAAACTTAACATTAGAAAATAAGGTCCAGGGCCGGACACAGTGGCCCATGCCTGTAATCCCAGCACTTTG
GGGGGCCAAGGCAGGCTGGATCACCTGAGGACAGGAGTTCGAGACCAGTCTGGCCAACATGGGGAAACCCCGTCT
CTACTAAAAATACAAAAATTAGCCGGGCATGGTGGTGGGCGCCTGTAATCCCAGCTACTCAGAAGGCTGAGGCAG
GAGAATCACTTGAACCTAGGAGGCGGAGGTTGCAGTGAGCCAAGATGGCGCCATTGCACTCCAGCCTGGGTGACA
AGAGTGAAACTCCATCTCAAAAAAAAAGAAAAGAAGGTCCAGCTTTTGGATTCAATGAGTGGGAAATACATTGTG
CCTTTCTCTAGATGTGATACGTTATACCAAAATCTTTGTAGTGTGCAGAGCGGTGGTTTGAGACTAAATACAGGC
TTAGAACTTGCAGAGTGTGTATTCTTGGATGGCTGATGCATCGACTTGCATTCCCACTTAACACTTTGATTAGCC
ATGAACTTGCCAATCAAAAAATGACAATCAATTTGAGAAAATAGAAATAGATATTTTTAAATAAAACCATTCACA
GTTT

FIGURE 804

MDHSHHMGMSYMDSNSTMQPSHHHPTTSASHSHGGGDSSMMMMPMTFYFGFKNVELLFSGLVINTAGEMAGAFVA
VFLLAMFYEGLKIARESLLRKSQVSIRYNSMPVPGPNGTILMETHKTVGQQMLSFPHLLQTVLHIIQVVISYFLM
LIFMTYNGYLCIAVAAGAGTGYFLFSWKKAVVVDITEHCH

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FIGURE 805

GACAGCCTCGCTTGGACGCAGAGCCCGGCCCGACGCCGCC**ATG**AGCGCCGCGCTCTTCAGCCTGGACGGCCCGGC
GCGCGGCGCGCCCTGGCCTGCGGAGCCTGCGCCCTTCTACGAACCGGGCCGGGCGGGCAAGCCGGGCCGCGGGGC
CGAGCCAGGGGCCCTAGGCGAGCCAGGCGCCGCCGCCCCCGCCATGTACGACGACGAGAGCGCCATCGACTTCAG
CGCCTACATCGACTCCATGGCCGCCGTGCCCACCCTGGAGCTGTGCCACGACGAGCTCTTCGCCGACCTCTTCAA
CAGCAATCACAAGGCGGGCGGCGCGGGGCCCCTGGAGCTTCTTCCCGGCGGCCCCGCGCGCCCCTTGGGCCCGGG
CCCTGCCGCTCCCCGCCTGCTCAAGCGCGAGCCCGACTGGGGCGACGGCGACGCGCCCGGCTCGCTGTTGCCCGC
GCAGGTGGGCCCGTGCGCACAGACCGTGGTGAGCTTGGCGGCCGCAGGGCAGCCCACCCCGCCCACGTCGCCGGA
GCCGCCGCGCAGCAGCCCCAGGCAGACCCCCGCGCCCGGCCCCGCCCGGGAGAAGAGCGCCGGCAAGAGGGGCCC
GGACCGCGGCAGCCCCGAGTACCGGCAGCGGCGCGAGCGCAACAACATCGCCGTGCGCAAGAGCCGCGACAAGGC
CAAGCGGCGCAACCAGGAGATGCAGCAGAAGTTGGTGGAGCTGTCGGCTGAGAACGAGAAGCTGCACCAGCGCGT
GGAGCAGCTCACGCGGGACCTGGCCGGCCTCCGGCAGTTCTTCAAGCAGCTGCCCAGCCCGCCCTTCCTGCCGGC
CGCCGGGACAGCAGACTGCCGG**TAA**CGCGCGGCCGGGGCGGGAGAGACTCAGCAACGACCCATACCTCAGACCCG
ACGGCCCGGAGCGGAGCGCGCCCTGCCCTGGCGCAGCCAGAGCCGCCGGGTGCCCGCTGCAGTTTCTTGGGACAT
AGGAGCGCAAAGAAGCTACAGCCTGGACTTACCACCACTAAACTGCGAGAGAAGCTAAACGTGTTTATTTTCCCT
TAAATTATTTTTGTAATGGTAGCTTTTTCTACATCTTACTCCTGTTGATGCAGCTAAGGTACATTTGTAAAAAGA
AAAAAAACCAGACTTTTCAGACAAACCCTTTGTATTGTAGATAAGAGGAAAAGACTGAGCATGCTCACTTTTTTA
TATTAATTTTTACAGTATTTGTAAGAATAAAGCAGCATTTGAAATCGC

FIGURE 806

MSAALFSLDGPARGAPWPAEPAPFYEPGRAGKPGRGAEPGALGEPGAAAPAMYDDESAIDFSAYIDSMAAVPTLE
LCHDELFADLFNSNHKAGGAGPLELLPGGPARPLGPGPAAPRLLKREPDWGDGDAPGSLLPAQVGPCAQTVVSLA
AAGQPTPPTSPEPPRSSPRQTPAPGPAREKSAGKRGPDRGSPEYRQRRERNNIAVRKSRDKAKRRNQEMQQKLVE
LSAENEKLHQRVEQLTRDLAGLRQFFKQLPSPPFLPAAGTADCR

FIGURE 807

GTGGATATCCCCGAGTCACCGCGTCCCTCTCCTGCAGCTCCCGCGTCGCTGGGAGGAGCGAGGGAGCGAGCGGGA
AGGGGTCTAGCTGGCCTTTGCTCGGCCCTCCCCAGCGCCCGGCTTTGAACCCGCCCTGCACTGCTGTCTGGGCGG
GTCCGGGGACTCAGCACTCGACCCAAAGGTGCAGGCGCGCGAGCACAACCC**ATG**GCTGCGCTGGGCTGCGCGAGG
CTGAGGTGGGCGCTGCGAGGGGCCGGCCGTGGCCTCTGCCCCCACGGGGCCAGAGCCAAGGCCGCGATCCCTGCC
GCCCTCCCCTCGGACAAGGCCACCGGAGCTCCCGGAGCCGGGCCTGGTGTCCGGCGGCGGCAACGGAGCTTAGAG
GAGATTCCACGTCTAGGACAGCTGCGCTTCTTCTTTCAGCTGTTCGTTCAAGGCTATGCCCTGCAACTGCACCAG
TTACAGGTGCTTTACAAGGCCAAGTACGGTCCAATGTGGATGTCCTACTTAGGGCCTCAGATGCACGTGAACCTG
GCCAGTGCCCCGCTCTTGGAGCAAGTGATGCGGCAAGAGGGAAAGTACCCAGTACGGAACGACATGGAGCTATGG
AAGGAGCACCGGGACCAGCACGACCTGACCTATGGGCCGTTCACCACGGAAGGACACCACTGGTACCAGCTGCGC
CAGGCTCTGAACCAGCGGTTGCTGAAGCCAGCGGAAGCAGCGCTCTATACGGATGCTTTCAATGAGGTGATTGAT
GACTTTATGACTCGACTGGACCAGCTGCGGGCAGAGAGTGCTTCGGGGAACCAGGTGTCGGACATGGCTCAACTC
TTCTACTACTTTGCCTTGGAAGCTATTTGCTACATCCTGTTCGAGAAACGCATTGGCTGCCTGCAGCGATCCATC
CCCGAGGACACCGTGACCTTCGTCAGATCCATCGGGTTAATGTTCCAGAACTCACTCTATGCCACCTTCCTCCCC
AAGTGGACTCGCCCCGTGCTGCCTTTCTGGAAGCGATACCTGGATGGTTGGAATGCCATCTTTTCCTTTGGGAAG
AAGCTGATTGATGAGAAGCTCGAAGATATGGAGGCCCAACTGCAGGCAGCAGGGCCAGATGGCATCCAGGTGTCT
GGCTACCTGCACTTCTTACTGGCCAGTGGACAGCTCAGTCCTCGGGAGGCCATGGGCAGCCTGCCTGAGCTGCTC
ATGGCTGGAGTGGACACGACATCCAACACGCTGACATGGGCCCTGTACCACCTCTCAAAGGACCCTGAGATCCAG
GAGGCCTTGCACGAGGAAGTGGTGGGTGTGGTGCCAGCCGGGCAAGTGCCCCAGCACAAGGACTTTGCCCACATG
CCGTTGCTCAAAGCTGTGCTTAAGGAGACTCTGCGTCTCTACCCTGTGGTCCCCACAAACTCCCGGATCATAGAA
AAGGAAATTGAAGTTGATGGCTTCCTCTTCCCCAAGAACACCCAGTTTGTGTTCTGCCACTATGTGGTGTCCCGG
GACCCCACTGCCTTCTCTGAGCCTGAAAGCTTCCAGCCCCACCGCTGGCTGAGAAACAGCCAGCCTGCTACCCCC
AGGATCCAGCACCCATTTGGCTCTGTGCCCTTTGGCTATGGGGTCCGGGCCTGCCTGGGCCGCAGGATTGCAGAG
CTGGAGATGCAGCTACTCCTCGCAAGGCTGATCCAGAAGTACAAGGTGGTCCTGGCCCCGGAGACGGGGGAGTTG
AAGAGTGTGGCCCGCATTGTCCTGGTTCCCAATAAGAAAGTGGGCCTGCAGTTCCTGCAGAGACAGTGC**TGA**GCT
GAGTCTCCGCCTTGCTGGGGCTTGTCCTAGAGGCTCCAGCTCTGGCACAGTGGTTCCTGGCTGCTGCCATGTCTC
AGATGAGGAGGGAGAGAAGGAGGCCGCCAGACTCGAGAGGTGGGAGGAACTCCTTGCACACACCCTGAGCTTTTG
CCACTTCTATCATTTTTGAGCAACTCCCTCTCAGCTAAAAGGCCACCCCTTTATCGCATTGCTGTCCTTGGGTAG
AATATAAAATAAAGGGACTTTTATTTCTTATTGG

FIGURE 808

MAALGCARLRWALRGAGRGLCPHGARAKAAIPAALPSDKATGAPGAGPGVRRRQRSLEEIPRLGQLRFFFQLFVQ
GYALQLHQLQVLYKAKYGPMWMSYLGPQMHVNLASAPLLEQVMRQEGKYPVRNDMELWKEHRDQHDLTYGPFTTE
GHHWYQLRQALNQRLLKPAEAALYTDAFNEVIDDFMTRLDQLRAESASGNQVSDMAQLFYYFALEAICYILFEKR
IGCLQRSIPEDTVTFVRSIGLMFQNSLYATFLPKWTRPVLPFWKRYLDGWNAIFSFGKKLIDEKLEDMEAQLQAA
GPDGIQVSGYLHFLLASGQLSPREAMGSLPELLMAGVDTTSNTLTWALYHLSKDPEIQEALHEEVVGVVPAGQVP
QHKDFAHMPLLKAVLKETLRLYPVVPTNSRIIEKEIEVDGFLFPKNTQFVFCHYVVSRDPTAFSEPESFQPHRWL
RNSQPATPRIQHPFGSVPFGYGVRACLGRRIAELEMQLLLARLIQKYKVVLAPETGELKSVARIVLVPNKKVGLQ
FLQRQC

FIGURE 809

TGCAGCTTCCTTCTCACCTTGAAGAATAATCCTAGAAAACTCACAAA**ATG**TGTGATGCTTTTGTAGGTACCTGGA
AACTTGTCTCCAGTGAAAACTTTGATGATTATATGAAAGAAGTAGGAGTGGGCTTTGCCACCAGGAAAGTGGCTG
GCATGGCCAAACCTAACATGATCATCAGTGTGAATGGGGATGTGATCACCATTAAATCTGAAAGTACCTTTAAAA
ATACTGAGATTTCCTTCATACTGGGCCAGGAATTTGACGAAGTCACTGCAGATGACAGGAAAGTCAAGAGCACCA
TAACCTTAGATGGGGGTGTCCTGGTACATGTGCAGAAATGGGATGGAAAATCAACCACCATAAAGAGAAAACGAG
AGGATGATAAACTGGTGGTGGAATGCGTCATGAAAGGCGTCACTTCCACGAGAGTTTATGAGAGAGCA**TAA**GCCA
AGGGACGTTGACCTGGACTGAAGTTCGCATTGAACTCTACAACATTCTGTGGGATATATTGTTCAAAAAGATATT
GTTGTTTTCCCTGATTTAGCAAGCAAGTAATTTTCTCCCAAGCTGATTTTATTCAATATGGTTACGTTGGTTAAA
TAACTTTTTTTAGATTTAG

FIGURE 810

MCDAFVGTWKLVSSENFDDYMKEVGVGFATRKVAGMAKPNMIISVNGDVITIKSESTFKNTEISFILGQEFDEVT
ADDRKVKSTITLDGGVLVHVQKWDGKSTTIKRKREDDKLVVECVMKGVTSTRVYERA

FIGURE 811

GTAAGGCCGTTTTCTTTTCCCATTCGCTCATCTGCCAGGAAAAGGGACTTGCCGTTGGCGCTTCGGCCTCTTGTT
CATTGAGAAAAAAGAGGAAATACTCCGCGTGCGCTTGTAGAAGGGGAGTCGTCTCCAGCTCCGAACCCCGGAGTG
TTCATCAGCGGGGAATCTGGCTCCGAATTCTCTTTTTTTCTCCCGCCGATTGCTCGGAAGTTGGTCTAAAGCAGA
GGTTGGAAAGAAAGGAAAAAAGTTTGCATCGAGACTGGATTTATTTGCACATCGCAGAAAGAAGAGAATCCAAGG
GAGAGGGGTTGGTGCAAAGCCGCGATCACGGAGTTCAGATGTGTTCTAAGCCTGCTGGAGTGACCACACTTCCAA
GACCTG**ATG**GAGGCCAGAGCTCAGAGTGGCAACGGGTCGCAGCCCTTGCTGCAGACGCCCCGTGACGGTGGCAGA
CAGCGTGGGGAGCCCGACCCCAGAGACGCCCTCACCCAGCAGGTACATGTCTTGTCTCTGGATCAGATCAGAGCC
ATCCGAAACACCAATGAGTACACAGAGGGGCCTACTGTCGTCCCAAGACCTGGGCTCAAGCCTGCTCCTCGCCCC
TCCACTCAGCACAAACACGAGAGACTCCACGGTCTGCCTGAGCACCGCCAGCCTCCTAGGCTCCAGCACTCGCAG
GTCCATTCTTCTGCACGAGCCCCTCTGTCCAGATCCATAAGCACGGTCAGCTCAGGGTCGCGGAGCAGTACGAGG
ACAAGTACCAGCAGCAGCTCCTCTGAACAGAGACTGCTAGGATCATCCTTCTCCTCCGGGCCTGTTGCTGATGGC
ATAATCCGGGTGCAACCCAAATCTGAGCTCAAGCCAGGTGAGCTTAAGCCACTGAGCAAGGAAGATTTGGGCCTG
CACGCCTACAGGTGTGAGGACTGTGGCAAGTGCAAATGTAAGGAGTGCACCTACCCAAGGCCTCTGCCATCAGAC
TGGATCTGCGACAAGCAGTGCCTTTGCTCGGCCCAGAACGTGATTGACTATGGGACTTGTGTATGCTGTGTGAAA
GGTCTCTTCTATCACTGTTCTAATGATGATGAGGACAACTGTGCTGACAACCCATGTTCTTGCAGCCAGTCTCAC
TGTTGTACACGATGGTCAGCCATGGGTGTCATGTCCCTCTTTTTGCCTTGTTTATGGTGTTACCTTCCAGCCAAG
GGTTGCCTTAAATTGTGCCAGGGGTGTTATGACCGGGTTAACAGGCCTGGTTGCCGCTGTAAAAACTCAAACACA
GTTTGCTGCAAAGTTCCCACTGTCCCCCCTAGGAACTTTGAAAAACCAACA**TAG**CATCATTAATCAGGAATATTA
CAGTAATGAGGATTTTTTCTTTCTTTTTTTAATACACATATGCAACCAACTAAACAGTTATAATCTTGGCACTGT
TAATAGAAAGGTGGGATAGTCTTTGCTGTTTGCGGTGAAATGCTTTTTGTCCATGTGCCGTTTTAACTGATATGC
TTGTTAGAACTCAGCTAATGGAGCTCAAAGTATGAGATACAGAACTTGGTGACCCATGTATTGCATAAGCTAAAG
CAACACAGACACTCCTAGGCAAAGTTTTTGTTTGTGAATAGTACTTGCAAAACTTGTAAATTAGCAGATGACTTT
TTTCCATTGTTTTCTCCAGAGAGAATGTGCTATATTTTTGTATATACAATAATATTTGCAACTGTGAAAAACAAG
TTGTGCCATACTACATGGCACAGACACAAAATATTATACTAATATGTTGTACATTCGGAAGAATGTGAATCAATC
AGTATGTTTTTAGATTGTATTTTGCCTTACAGAAAGCCTTTATTGTAAGACTCTGATTTCCCTTTGGACTTCATG
TATATTGTACAGTTACAGTAAAATTCAACCTTTATTTTCTAATTTTTTCAACATATTGTTTAGTGTAAAGAATAT
TTATTTGAAGTTTTATTATTTTATAAAAAAGAATATTTATTTTAAGAGGCATCTTACAAATTTTGCCCCTTTTAT
GAGGATGTGATAGTTGCTGCAAATGAGGGGTTACAGATGCATATGTCCAATATAAAATAGAAAATATATTAACGT
TTGAAATTAAAAAAAAAAAAAAAAAA

FIGURE 812

MEARAQSGNGSQPLLQTPRDGGRQRGEPDPRDALTQQVHVLSLDQIRAIRNTNEYTEGPTVVPRPGLKPAPRPST
QHKHERLHGLPEHRQPPRLQHSQVHSSARAPLSRSISTVSSGSRSSTRTSTSSSSSEQRLLGSSFSSGPVADGII
RVQPKSELKPGELKPLSKEDLGLHAYRCEDCGKCKCKECTYPRPLPSDWICDKQCLCSAQNVIDYGTCVCCVKGL
FYHCSNDDEDNCADNPCSCSQSHCCTRWSAMGVMSLFLPCLWCYLPAKGCLKLCQGCYDRVNRPGCRCKNSNTVC
CKVPTVPPRNFEKPT

FIGURE 813

GGAGGTCCAGAGATCCTGAGAGCCCGAGCGCCCAGCGCCGCGCCGGGAGAGTTGAGAATT**ATG**GCTGCAGGAAAA
TTTGCAAGCCTTCCCAGAAACATGCCGGTGAATCACCAGTTCCCCCTGGCCTCATCCATGGACCTTCTGAGCAGC
AGGTCCCCTCTCGCTGAGCATCGCCCAGATGCCTATCAAGATGTGTCTATACATGGCACCCTTCCACGGAAGAAA
AAAGGTCCTCCTCCCATAAGGTCCTGTGATGACTTCAGTCACATGGGCACCCTCCCCCACTCCAAATCCCCACGG
CAGAACTCGCCTGTGACCCAGGATGGCATCCAGGAGAGCCCATGGCAGGACCGGCACGGCGAAACCTTCACCTTC
AGGGATCCACATCTTCTGGACCCAACTGTGGAATATGTGAAGTTCTCCAAGGAGAGGCACATCATGGACAGGACC
CCCGAGAAACTGAAGAAGGAGCTGGAGGAGGAGCTGCTCCTGAGCAGCGAGGACCTGCGCAGCCATGCCTGGTAC
CACGGCCGCATCCCCCGACAGGTGTCTGAAAACCTTGTGCAGCGAGATGGTGACTTCCTAGTTCGTGACTCTCTG
TCCAGCCCTGGGAACTTTGTCCTGACCTGTCAGTGGAAGAACCTCGCTCAGCACTTCAAAATCAACCGGACAGTT
CTGCGACTCAGCGAGGCCTACAGCCGCGTGCAGTACCAGTTCGAGATGGAGAGCTTCGACTCCATCCCCGGCCTG
GTGCGCTGCTACGTGGGCAACCGCCGGCCCATCTCCCAGCAGAGTGGCGCCATCATCTTCCAGCCCATCAACAGG
ACGGTGCCTCTGCGGTGCCTGGAGGAGCATTATGGCACCTCCCCAGGCCAGGCCCGGGAGGGCAGCCTCACCAAG
GGAAGGCCGGATGTGGCCAAGAGGCTGAGCCTCACCATGGGTGGCGTCCAGGCCCGAGAGCAGAATTTGCCCAGG
GGAAACCTCCTCAGAAACAAAGAAAAGAGTGGTAGCCAGCCCGCCTGCCTGGATCACATGCAGGACAGAAGAGCC
TTGTCCCTCAAAGCCCACCAGTCAGAGAGCTACCTGCCGATTGGCTGCAAGCTGCCACCTCAGTCCTCGGGTGTG
GACACAAGCCCCTGCCCAAACTCACCTGTGTTCAGGACGGGAAGCGAGCCTGCCCTGAGCCCAGCAGTGGTTCGG
AGGGTCTCCTCAGACGCCAGGGCTGGGGAGGCGCTGAGGGGATCAGACAGTCAACTGTGCCCTAAGCCCCCGCCT
AAGCCCTGCAAGGTGCCGTTCCTCAAGGTTCCCTCGTCTCCCTCTGCCTGGCTCAACTCAGAGGCCAACTACTGT
GAACTGAACCCAGCGTTTGCCACAGGCTGCGGCAGGGGAGCAAAGCTACCCTCATGTGCCCAGGGAAGCCACACA
GAACTGCTCACAGCCAAGCAGAATGAGGCGCCAGGTCCCCGGAACTCTGGCGTCAACTACTTGATCCTTGATGAT
GATGACAGGGAAAGACCTTGGGAACCTGCGGCAGCTCAGATGGAGAAGGGGCAGTGGGACAAGGGCGAGTTTGTG
ACGCCCCTCCTGGAGACTGTCTCCTCCTTCAGGCCCAACGAGTTTGAGTCAAAGTTCCTTCCCCCTGAGAATAAG
CCCCTGGAAACAGCAATGTTGAAACGTGCAAAAGAACTGTTCACCAACAACGACCCCAAGGTCATCGCCCAGCAC
GTACTGAGCATGGACTGCAGGGTTGCTAGGATACTTGGAGTCTCTGAAGAGATGAGGAGGAACATGGGGGTGAGC
TCAGGCCTGGAACTCATTACCTTGCCTCACGGACACCAGCTGCGCCTGGACATAATTGAAAGACACAACACAATG
GCCATCGGCATTGCAGTGGACATTCTGGGATGCACGGGCACTTTGGAGGACCGAGCGGCCACTCTGAGTAAGATC
ATCCAGGTGGCGGTGGAACTGAAGGATTCCATGGGGGACCTCTATTCCTTCTCAGCTCTCATGAAAGCCCTGGAA
ATGCCACAGATCACAAGGTTAGAAAAGACGTGGACTGCTCTGCGGCACCAGTACACCCAAACTGCCATTCTCTAT
GAGAAACAGCTGAAGCCCTTCAGCAAACTCCTGCATGAAGGCAGAGAGTCCACATGTGTTCCCCCAAACAATGTA
TCAGTCCCACTGCTGATGCCGCTTGTGACGTTAATGGAGCGCCAGGCTGTGACTTTTGAAGGAACCGACATGTGG
GAAAAAAACGACCAGAGCTGTGAAATCATGCTGAACCATTTGGCAACAGCGCGATTCATGGCCGAGGCTGCAGAC
AGCTACCGGATGAATGCTGAGAGGATCCTGGCAGGTTTTCAACCAGATGAAGAAATGAATGAAATCTGCAAGACT
GAATTTCAAATGCGATTGCTATGGGGCAGCAAAGGTGCACAAGTCAATCAGACAGAGAGATATGAGAAATTCAAC
CAGATTTTAACTGCCCTCTCGCGTAAATTGGAACCTCCTCCTGTAAAGCAGGCAGAGCTT**TGA**TAACTCTCCAGA
GAACCTTTAGAATATCTTTTCAAGTTTCCCCAGCTTCATCTTTGGGAAAGCTTACTGTTTTTGATAAAGTAATAA
TGTGCAAATCTGACAATATACAAGCTTTTAGTATCCACAGGATATTAAACGTGTAAATTGCACAGAGCACACTTA
TTTATGAATTGTCTAAAGTTACTACTGATTTTAAAATGAATAATTTATTATTAAGGTAACTACTGCTAATGTTGA
TCAGCAAATTTAAGAGAAGACCTAGCTATGTTGGCTGGTTGCTTTCTATTATCATGGTATTTGACCATTTTAGTT
TTAATTCCATGTCAGATAAGTGTAAATAGAAGAGTTTAAAAGCATGAAACATTTCAGAAGGTATCAGTTATATGA
TATTCTTTAAACAAATATGAAAAATGTAAATACTCATGAATGAAAATACATCTTTTTGTGAAAAAAAAAAAAAAA
AAAA

FIGURE 814

MAAGKFASLPRNMPVNHQFPLASSMDLLSSRSPLAEHRPDAYQDVSIHGTLPRKKKGPPPIRSCDDFSHMGTLPH
SKSPRQNSPVTQDGIQESPWQDRHGETFTFRDPHLLDPTVEYVKFSKERHIMDRTPEKLKKELEEELLLSSEDLR
SHAWYHGRIPRQVSENLVQRDGDFLVRDSLSSPGNFVLTCQWKNLAQHFKINRTVLRLSEAYSRVQYQFEMESFD
SIPGLVRCYVGNRRPISQQSGAIIFQPINRTVPLRCLEEHYGTSPGQAREGSLTKGRPDVAKRLSLTMGGVQARE
QNLPRGNLLRNKEKSGSQPACLDHMQDRRALSLKAHQSESYLPIGCKLPPQSSGVDTSPCPNSPVFRTGSEPALS
PAVVRRVSSDARAGEALRGSDSQLCPKPPPKPCKVPFLKVPSSPSAWLNSEANYCELNPAFATGCGRGAKLPSCA
QGSHTELLTAKQNEAPGPRNSGVNYLILDDDDRERPWEPAAAQMEKGQWDKGEFVTPLLETVSSFRPNEFESKFL
PPENKPLETAMLKRAKELFTNNDPKVIAQHVLSMDCRVARILGVSEEMRRNMGVSSGLELITLPHGHQLRLDIIE
RHNTMAIGIAVDILGCTGTLEDRAATLSKIIQVAVELKDSMGDLYSFSALMKALEMPQITRLEKTWTALRHQYTQ
TAILYEKQLKPFSKLLHEGRESTCVPPNNVSVPLLMPLVTLMERQAVTFEGTDMWEKNDQSCEIMLNHLATARFM
AEAADSYRMNAERILAGFQPDEEMNEICKTEFQMRLLWGSKGAQVNQTERYEKFNQILTALSRKLEPPPVKQAEL

FIGURE 815

CCTCCCCTCGCCCGGCGCGGTCCCGTCCGCCTCTCGCTCGCCTCCCGCCTCCCCTCGGTCTTCCGAGGCGCCCGG
GCTCCCGGCGCGGCGGCGGAGGGGGCGGGCAGGCCGGCGGGCGGTGATGTGGCAGGACTCTTTATGCGCTGCGGC
AGGATACGCGCTCGGCGCTGGGACGCGACTGCGCTCAGTTCTCTCCTCTCGGAAGCTGCAGCCATGATGGAAGTT
TGAGAGTTGAGCCGCTGTGAGGCGAGGCCGGGCTCAGGCGAGGGAGATGAGAGACGGCGGCGGCCGCGGCCCGGA
GCCCCTCTCAGCGCCTGTGAGCAGCCGCGGGGGCAGCGCCCTCGGGGAGCCGGCCGGCCTGCGGCGGCGGCAGCG
GCGGCGTTTCTCGCCTCCTCTTCGTCTTTTCTAACCGTGCAGCCTCTTCCTCGGCTTCTCCTGAAAGGGAAGGTG
GAAGCCGTGGGCTCGGGCGGGAGCCGGCTGAGGCGCGGCGGCGGCGGCGGCGGCACCTCCCGCTCCTGGAGCGGG
GGGGAGAAGCGGCGGCGGCGGCGGCCGCGGCGGCTGCAGCTCCAGGGAGGGGGTCTGAGTCGCCTGTCACCATTT
CCAGGGCTGGGAACGCCGGAGAGTTGGTCTCTCCCCTTCTACTGCCTCCAACACGGCGGCGGCGGCGGCGGCACA
TCCAGGGACCCGGGCCGGTTTTAAACCTCCCGTCCGCCGCCGCCGCACCCCCCGTGGCCCGGGCTCCGGAGGCCG
CCGGCGGAGGCAGCCGTTCGGAGGATTATTCGTCTTCTCCCCATTCCGCTGCCGCCGCTGCCAGGCCTCTGGCTG
CTGAGGAGAAGCAGGCCCAGTCGCTGCAACCATCCAGCAGCCGCCGCAGCAGCCATTACCCGGCTGCGGTCCAGA
GCCAAGCGGCGGCAGAGCGAGGGGCATCAGCTACCGCCAAGTCCAGAGCCATTTCCATCCTGCAGAAGAAGCCCC
GCCACCAGCAGCTTCTGCCATCTCTCTCCTCCTTTTTCTTCAGCCACAGGCTCCCAGAC**ATG**ACAGCCATCATCA
AAGAGATCGTTAGCAGAAACAAAAGGAGATATCAAGAGGATGGATTCGACTTAGACTTGACCTATATTTATCCAA
ACATTATTGCTATGGGATTTCCTGCAGAAAGACTTGAAGGCGTATACAGGAACAATATTGATGATGTAGTAAGGT
TTTTGGATTCAAAGCATAAAAACCATTACAAGATATACAATCTTTGTGCTGAAAGACATTATGACACCGCCAAAT
TTAATTGCAGAGTTGCACAATATCCTTTTGAAGACCATAACCCACCACAGCTAGAACTTATCAAACCCTTTTGTG
AAGATCTTGACCAATGGCTAAGTGAAGATGACAATCATGTTGCAGCAATTCACTGTAAAGCTGGAAAGGGACGAA
CTGGTGTAATGATATGTGCATATTTATTACATCGGGGCAAATTTTTAAAGGCACAAGAGGCCCTAGATTTCTATG
GGGAAGTAAGGACCAGAGACAAAAAGGGAGTAACTATTCCCAGTCAGAGGCGCTATGTGTATTATTATAGCTACC
TGTTAAAGAATCATCTGGATTATAGACCAGTGGCACTGTTGTTTCACAAGATGATGTTTGAAACTATTCCAATGT
TCAGTGGCGGAACTTGCAATCCTCAGTTTGTGGTCTGCCAGCTAAAGGTGAAGATATATTCCTCCAATTCAGGAC
CCACACGACGGGAAGACAAGTTCATGTACTTTGAGTTCCCTCAGCCGTTACCTGTGTGTGGTGATATCAAAGTAG
AGTTCTTCCACAAACAGAACAAGATGCTAAAAAAGGACAAAATGTTTCACTTTTGGGTAAATACATTCTTCATAC
CAGGACCAGAGGAAACCTCAGAAAAAGTAGAAAATGGAAGTCTATGTGATCAAGAAATCGATAGCATTTGCAGTA
TAGAGCGTGCAGATAATGACAAGGAATATCTAGTACTTACTTTAACAAAAAATGATCTTGACAAAGCAAATAAAG
ACAAAGCCAACCGATACTTTTCTCCAAATTTTAAGGTGAAGCTGTACTTCACAAAAACAGTAGAGGAGCCGTCAA
ATCCAGAGGCTAGCAGTTCAACTTCTGTAACACCAGATGTTAGTGACAATGAACCTGATCATTATAGATATTCTG
ACACCACTGACTCTGATCCAGAGAATGAACCTTTTGATGAAGATCAGCATACACAAATTACAAAAGTC**TGA**ATTT
TTTTTTATCAAGAGGGATAAAACACCATGAAAATAAACTTGAATAAACTGAAAATGGACCTTTTTTTTTTTAATG
GCAATAGGACATTGTGTCAGATTACCAGTTATAGGAACAATTCTCTTTTCCTGACCAATCTTGTTTTACCCTATA
CATCCACAGGGTTTTGACACTTGTTGTCCAGTTGAAAAAAGGTTGTGTAGCTGTGTCATGTATATACCTTTTTGT
GTCAAAAGGACATTTAAAATTCAATTAGGATTAATAAAGATGGCACTTTCCCGTTTTATTCCAGTTTTATAAAAA
GTGGAGACAGACTGATGTGTATACGTAGGAATTTTTTCCTTTTGTGTTCTGTCACCAACTGAAGTGGCTAAAGAG
CTTTGTGATATACTGGTTCACATCCTACCCCTTTGCACTTGTGGCAACAGATAAGTTTGCAGTTGGCTAAGAGAG
GTTTCCGAAAGGTTTTGCTACCATTCTAATGCATGTATTCGGGTTAGGGCAATGGAGGGGAATGCTCAGAAAGGA
AATAATTTTATGCTGGACTCTGGACCATATACCATCTCCAGCTATTTACACACACCTTTCTTTAGCATGCTACAG
TTATTAATCTGGACATTCGAGGAATTGGCCGCTGTCACTGCTTGTTGTTTGCGCATTTTTTTTTAAAGCATATTG
GTGCTAGAAAAGGCAGCTAAAGGAAGTGAATCTGTATTGGGGTACAGGAATGAACCTTCTGCAACATCTTAAGAT
CCACAAATGAAGGGATATAAAAATAATGTCATAGGTAAGAAACACAGCAACAATGACTTAACCATATAAATGTGG
AGGCTATCAACAAAGAATGGGCTTGAAACATTATAAAAATTGACAATGATTTATTAAATATGTTTTCTCAATTGT
AAAAAAAAAA

FIGURE 816

MTAIIKEIVSRNKRRYQEDGFDLDLTYIYPNIIAMGFPAERLEGVYRNNIDDVVRFLDSKHKNHYKIYNLCAERH
YDTAKFNCRVAQYPFEDHNPPQLELIKPFCEDLDQWLSEDDNHVAAIHCKAGKGRTGVMICAYLLHRGKFLKAQE
ALDFYGEVRTRDKKGVTIPSQRRYVYYYSYLLKNHLDYRPVALLFHKMMFETIPMFSGGTCNPQFVVCQLKVKIY
SSNSGPTRREDKFMYFEFPQPLPVCGDIKVEFFHKQNKMLKKDKMFHFWVNTFFIPGPEETSEKVENGSLCDQEI
DSICSIERADNDKEYLVLTLTKNDLDKANKDKANRYFSPNFKVKLYFTKTVEEPSNPEASSSTSVTPDVSDNEPD
HYRYSDTTDSDPENEPFDEDQHTQITKV

FIGURE 817

AGCGGCCGCCGCCGCCACAGCTGCAGTCAGCACCGTCACCCCAGCAGCATCCGCGCGCCTGCACCGCGCGTGCGG
CCCGCCCCGGCCTGACCCCGCCGCCGAACCCGGCGCCAGCCATGGAGCCCGAAGCCCCCCGTCGCCGCCACACCC
ATCAGCGCGGCTACCTGCTGACACGGAACCCTCACCTCAACAAGGACTTGGCCTTTACCCTGGAAGAGAGACAGC
AATTGAACATTCATGGATTGTTGCCACCTTCCTTCAACAGTCAGGAGATCCAGGTTCTTAGAGTAGTAAAAAATT
TCGAGCATCTGAACTCTGACTTTGACAGGTATCTTCTCTTAATGGATCTCCAAGATAGAAATGAAAAACTCTTTT
ATAGAGTGCTGACATCTGACATTGAGAAATTCATGCCTATTGTTTATACTCCCACTGTGGGTCTGGCTTGCCAAC
AATATAGTTTGGTGTTTCGGAAACCAAGAGGTCTCTTTATTACTATCCACGATCGAGGGCATATTGCTTCAGTTC
TCAATGCATGGCCAGAAGATGTCATCAAGGCCATTGTGGTGACTGATGGAGAGCGTATTCTTGGCTTGGGAGACC
TTGGCTGTAATGGAATGGGCATCCCTGTGGGTAAATTGGCTCTATATACAGCTTGCGGAGGGATGAATCCTCAAG
AATGTCTGCCTGTCATTCTGGATGTGGGAACCGAAAATGAGGAGTTACTTAAAGATCCACTCTACATTGGACTAC
GGCAGAGAAGAGTAAGAGGTTCTGAATATGATGATTTTTTGGACGAATTCATGGAGGCAGTTTCTTCCAAGTATG
GCATGAATTGCCTTATTCAGTTTGAAGATTTTGCCAATGTGAATGCATTTCGTCTCCTGAACAAGTATCGAAACC
AGTATTGCACATTCAATGATGATATTCAAGGAACAGCATCTGTTGCAGTTGCAGGTCTCCTTGCAGCTCTTCGAA
TAACCAAGAACAAACTGTCTGATCAAACAATACTATTCCAAGGAGCTGGGGAGGCTGCCCTAGGGATTGCACACC
TGATTGTGATGGCCTTGGAAAAAGAAGGTTTACCAAAAGAGAAAGCCATCAAAAAGATATGGCTGGTTGATTCAA
AAGGATTAATAGTTAAGGGACGTGCTTCCTTAACACAAGAGAAAGAGAAGTTTGCCCATGAACATGAAGAAATGA
AGAACCTAGAAGCCATTGTTCAAGAAATAAAACCAACTGCCCTCATAGGAGTTGCTGCAATTGGTGGTGCATTCT
CAGAACAAATTCTCAAAGATATGGCTGCCTTCAATGAACGGCCTATTATTTTTGCTTTGAGTAATCCAACTAGCA
AAGCAGAATGTTCTGCAGAGCAGTGCTACAAAATAACCAAGGGACGTGCAATTTTTGCCAGTGGCAGTCCTTTTG
ATCCAGTCACTCTTCCAAATGGACAGACCCTATATCCTGGCCAAGGCAACAATTCCTATGTGTTCCCTGGAGTTG
CTCTTGGTGTTGTGGCGTGTGGATTGAGGCAGATCACAGATAATATTTTCCTCACTACTGCTGAGGTTATAGCTC
AGCAAGTGTCAGATAAACACTTGGAAGAGGGTCGGCTTTATCCTCCTTTGAATACCATTAGAGATGTTTCTCTGA
AAATTGCAGAAAAGATTGTGAAAGATGCATACCAAGAAAAGACAGCCACAGTTTATCCTGAACCGCAAAACAAAG
AAGCATTTGTCCGCTCCCAGATGTATAGTACTGATTATGACCAGATTCTACCTGATTGTTATTCTTGGCCTGAAG
AGGTGCAGAAAATACAGACCAAAGTTGACCAG**TAG**GATAATAGCAAACATTTCTAACTCTATTAATGAGGTCTTT
AAACCTTTCATAATTTTTAAAGGTTGGAATCTTTTATAATGATTCATAAGACACTTAGATTAAGATTTTACTTTA
ACAGTCTAAAAATTGATAGAAGAATATCGATATAAATTGGGATAAACATCACATGAGACAATTTTGCTTCACTTT
GCCTTCTGGTTATTTATGGTTTCTGTCTGAATTATTCTGCCTACGTTCTCTTTAAAAGCTGTTGTACGTACTACG
GAGAAACTCATCATTTTTATACAGGACACTAATGGGAAGACCAAAATTACTAATAAATTGACATAACCAACATTA
AAACTCATAATTATTTTGTTGACCATTTTGTTAAAATCTACTTTTCAAAAAAAAAAAAGCTAGAAATGAATCTAG
GCGTAGGTGAACTTTTGCTAAGCAGAAATAACACTACTTTGTTGCCTAGAGAAAGATAACTTCTCAAGTATTTTT
ATTCCAGTCCTAGATCATATATGTTCTTTTGTGCAACGGAATTCTAACAGTTCTAAGAGAAAGATCACTGCTGTT
TACAGCGCCTTGTGCAGCCTTAGATTTTAATATTCTTTTGTCATTGTTACATCTCATAGAGTAAAGCTCTTATTA
CCTTGATCCTGAGTCAGAAATCCCACCTGAAATCACCTTTTTTCCCCCTTGATCAAACATCCCATCCTTCAGCTA
CCATACTGTTGCTACAGGGATTTTGTGGACTGTGGCCCCTGTCCCGAGGTTGGCACCTTCAGTTCAGCACAGCCT
GAGCAGTGAGAAGGTCTGAAAGGAGAGTATATAGTTAAGATCCTTGAGAAAGGGCTGCCTGAGGAACTGACCTCT
TAAAGATCTCAGGATCTTTAAGACAACAAGTTAGGTTCCTACTGGAGTTACCTGCCAGAATGGCCTCTTAATTAA
CTCAGGTAATGAAGAGCTAACTGTGTTATAATCATCTTGCTTTTGCCTGAATTTGGAGAAAGTATTATAATTAAG
TTCCCAGTATCAGAAATGTCCTTACATAAGATTAAAATATCTTGATGACTAATACCATTCTATGAGAAAGAGTAG
TTATATGCCCAGACTGTATTAATTTACTTTAGAAACTAATGTTTGAAGTAATGGAAAAAATTTTAAATTATAAAG
CTAAGGTGCAATAACATTTGCTACTTATTTATAGAATTATTTGAAGAATTTTGTTTTTGAAGTAATGCTTTAAGG
AGTATAAGATATTCAAGATAAATTATACTATAAAATGATTTTATTGAAAGTTGAAGGTTACACAAATTGTTTTAG
GTATGAGCAGAAGAGGTTAAGGTATTTCTAAAGGTAACATATAGTCAAGAGTTTCCTCAAAATAGTTATTTGGAG
AAGAATCAGAATGTCTGTGTATTTCTTGTCTGTTTCTATGTTGTCTTATAGCTCTGACTAAATGTGTTTACCTAT
GCAAAAGATTTATTAAAGCATAGAAAAGGTGAATGAATAACACCCTAAACCCCCCGAAGAGAAAAAGAAATCCCG
AAGAGAGAGAGCAAACACACCTGAGAACATCCGCTGAGTAAGTAGCCCGCTAGGAGAAAAGAAAAAGGGGGGGCC
CCCCCGACTAAGAGGGCCCCTTTCCGCCCCCGGGGAATTTATTT

FIGURE 818

RPPPPQLQSAPSPQQHPRACTARAARPGLTPPPNPAPAMEPEAPRRRHTHQRGYLLTRNPHLNKDLAFTLEERQQ
LNIHGLLPPSFNSQEIQVLRVVKNFEHLNSDFDRYLLLMDLQDRNEKLFYRVLTSDIEKFMPIVYTPTVGLACQQ
YSLVFRKPRGLFITIHDRGHIASVLNAWPEDVIKAIVVTDGERILGLGDLGCNGMGIPVGKLALYTACGGMNPQE
CLPVILDVGTENEELLKDPLYIGLRQRRVRGSEYDDFLDEFMEAVSSKYGMNCLIQFEDFANVNAFRLLNKYRNQ
YCTFNDDIQGTASVAVAGLLAALRITKNKLSDQTILFQGAGEAALGIAHLIVMALEKEGLPKEKAIKKIWLVDSK
GLIVKGRASLTQEKEKFAHEHEEMKNLEAIVQEIKPTALIGVAAIGGAFSEQILKDMAAFNERPIIFALSNPTSK
AECSAEQCYKITKGRAIFASGSPFDPVTLPNGQTLYPGQGNNSYVFPGVALGVVACGLRQITDNIFLTTAEVIAQ
QVSDKHLEEGRLYPPLNTIRDVSLKIAEKIVKDAYQEKTATVYPEPQNKEAFVRSQMYSTDYDQILPDCYSWPEE
VQKIQTKVDQ

FIGURE 819

CCGCCGCCACAGCTGCAGTCAGCACCGTCACCCCAGCAGCATCCGCCGCCTGCACCGCGCGTGCGGCCCGCCCCG
GCCTGACCCCGCCGCCGAACCCGGCGCCAGCC**ATG**GAGCCCGAAGCCCCCCGTCGCCGCCACACCCATCAGCGCG
GCTACCTGCTGACACGGAACCCTCACCTCAACAAGGACTTGGCCTTTACCCTGGAAGAGAGACAGCAATTGAACA
TTCATGGATTGTTGCCACCTTCCTTCAACAGTCAGGAGATCCAGGTTCTTAGAGTAGTAAAAAATTTCGAGCATC
TGAACTCTGACTTTGACAGGTATCTTCTCTTAATGGATCTCCAAGATAGAAATGAAAAACTCTTTTATAGAGTGC
TGACATCTGACATTGAGAAATTCATGCCTATTGTTTATACTCCCACTGTGGGTCTGGCTTGCCAACAATATAGTT
TGGTGTTTCGGAAGCCAAGAGGTCTCTTTATTACTATCCACGATCGAGGGCATATTGCTTCAGTTCTCAATGCAT
GGCCAGAAGATGTCATCAAGGCCATTGTGGTGACTGATGGAGAGCGTATTCTTGGCTTGGGAGACCTTGGCTGTA
ATGGAATGGGCATCCCTGTGGGTAAATTGGCTCTATATACAGCTTGCGGAGGGATGAATCCTCAAGAATGTCTGC
CTGTCATTCTGGATGTGGGAACCGAAAATGAGGAGTTACTTAAAGATCCACTCTACATTGGACTACGGCAGAGAA
GAGTAAGAGGTTCTGAATATGATGATTTTTTGGACGAATTCATGGAGGCAGTTTCTTCCAAGTATGGCATGAATT
GCCTTATTCAGTTTGAAGATTTTGCCAATGTGAATGCATTTCGTCTCCTGAACAAGTATCGAAACCAGTATTGCA
CATTCAATGATGATATTCAAGGAACAGCATCTGTTGCAGTTGCAGGTCTCCTTGCAGCTCTTCGAATAACCAAGA
ACAAACTGTCTGATCAAACAATACTATTCCAAGGAGCTGGAGAGGCTGCCCTAGGGATTGCACACCTGATTGTGA
TGGCCTTGGAAAAAGAAGGTTTACCAAAAGAGAAAGCCATCAAAAAGATATGGCTGGTTGATTCAAAAGGATTAA
TAGTTAAGGGACGTGCTTCCTTAACACAAGAGAAAGAGAAGTTTGCCCATGAACATGAAGAAATGAAGAACCTAG
AAGCCATTGTTCAAGAAATAAAACCAACTGCCCTCATAGGAGTTGCTGCAATTGGTGGTGCATTCTCAGAACAAA
TTCTCAAAGATATGGCTGCCTTCAATGAACGGCCTATTATTTTTGCTTTGAGTAATCCAACTAGCAAAGCAGAAT
GTTCTGCAGAGCAGTGCTACAAAATAACCAAGGGACGTGCAATTTTTGCCAGTGGCAGTCCTTTTGATCCAGTCA
CTCTTCCAAATGGACAGACCCTATATCCTGGCCAAGGCAACAATTCCTACGTGTTCCCTGGAGTTGCTCTTGGTG
TTGTGGCGTGTGGATTGAGGCAGATCACAGATAATATTTTCCTCACTACTGCTGAGGTTATAGCTCAGCAAGTGT
CAGATAAACACTTGGAAGAGGGTCGGCTTTATCCTCCTTTGAATACCATTAGAGATGTTTCTCTGAAAATTGCAG
AAAAGATTGTGAAAGATGCATACCAAGAAAAGACAGCCACAGTTTATCCTGAACCGCAAAACAAAGAAGCATTTG
TCCGCTCCCAGATGTATAGTACTGATTATGACCAGATTCTACCTGATTGTTATTCTTGGCCTGAAGAGGTGCAGA
AAATACAGACCAAAGTTGACCAG**TAG**GATAATAGCAAACATTTCTAACTCTATTAATGAGGTCTTTAAACCTTTC
ATAATTTTTAAAGGTTGGAATCTTTTATAATGATTCATAAGACACTTAGATTAAGATTTTACTTTAACAGTCTAA
AAATTGATAGAAGAATATCGATATAAATTGGGATAAACATCACATGAGACAATTTTGCTTCACTTTGCCTTCTGG
TTATTTATGGTTTCTGTCTGAATTATTCTGCCTACGTTCTCTTTAAAAGCTGTTGTACGTACTACGGAGAAACTC
ATCATTTTTATACAGGACACTAATGGGAAGACCAAAATTACTAATAAATTGAAATAACCAACATTAAAACTCATA
ATTATTTTGTTGACCATTTTGTTAAAATCTACTTTTC

FIGURE 820

MEPEAPRRRHTHQRGYLLTRNPHLNKDLAFTLEERQQLNIHGLLPPSFNSQEIQVLRVVKNFEHLNSDFDRYLLL
MDLQDRNEKLFYRVLTSDIEKFMPIVYTPTVGLACQQYSLVFRKPRGLFITIHDRGHIASVLNAWPEDVIKAIVV
TDGERILGLGDLGCNGMGIPVGKLALYTACGGMNPQECLPVILDVGTENEELLKDPLYIGLRQRRVRGSEYDDFL
DEFMEAVSSKYGMNCLIQFEDFANVNAFRLLNKYRNQYCTFNDDIQGTASVAVAGLLAALRITKNKLSDQTILFQ
GAGEAALGIAHLIVMALEKEGLPKEKAIKKIWLVDSKGLIVKGRASLTQEKEKFAHEHEEMKNLEAIVQEIKPTA
LIGVAAIGGAFSEQILKDMAAFNERPIIFALSNPTSKAECSAEQCYKITKGRAIFASGSPFDPVTLPNGQTLYPG
QGNNSYVFPGVALGVVACGLRQITDNIFLTTAEVIAQQVSDKHLEEGRLYPPLNTIRDVSLKIAEKIVKDAYQEK
TATVYPEPQNKEAFVRSQMYSTDYDQILPDCYSWPEEVQKIQTKVDQ

FIGURE 821

CCTTCAGCATAAAAGCTGATCCACAAACAAGAGGAGCACCAGACCTCCTCTTGGCTTCGAG**ATG**GCTTCGCCACA
CCAAGAGCCCAAACCTGGAGACCTGATTGAGATTTTCCGCCTTGGCTATGAGCACTGGGCCCTGTATATAGGAGA
TGGCTACGTGATCCATCTGGCTCCTCCAAGTGAGTACCCCGGGGCTGGCTCCTCCAGTGTCTTCTCAGTCCTGAG
CAACAGTGCAGAGGTGAAACGGGGGCGCCTGGAAGATGTGGTGGGAGGCTGTTGCTATCGGGTCAACAACAGCTT
GGACCATGAGTACCAACCACGGCCCGTGGAGGTGATCATCAGTTCTGCGAAGGAGATGGTTGGTCAGAAGATGAA
GTACAGTATTGTGAGCAGGAACTGTGAGCACTTTGTCGCCCAGCTGAGATATGGCAAGTCCCGCTGTAAACAGGT
GGAAAAGGCCAAGGTTGAAGTCGGTGTGGCCACGGCGCTTGGAATCCTGGTTGTTGCTGGATGCTCTTTTGCGAT
TAGGAGATACCAAAAAAAAGCAACAGCC**TGA**AGCAGCCACAAAATCCTGTGTTAGAAGCAGCTGTGGGGGTCCCA
GTGGAGATGAGCCTCCCCCATGCCTCCAGCAGCCTGACCCTCGTGCCCTGTCTCAGGCGTTCTCTAGATCCTTTC
CTCTGTTTCCCTCTCTCGCTGGCAAAAGTATGATCTAATTGAAACAAGACTGAAGGATCAATAAACAGCCATCTG
CCCCTTCAAAAAAAAAAA

FIGURE 822

MASPHQEPKPGDLIEIFRLGYEHWALYIGDGYVIHLAPPSEYPGAGSSSVFSVLSNSAEVKRGRLEDVVGGCCYR
VNNSLDHEYQPRPVEVIISSAKEMVGQKMKYSIVSRNCEHFVAQLRYGKSRCKQVEKAKVEVGVATALGILVVAG
CSFAIRRYQKKATA

FIGURE 823A

AGGGGGCGGCGCTCCCGGCCCATCCCTTAGCCCCGCGGCGGCCGTGTGGGCCGGAGGCTGCCTGCACCGCGTCAG
GGAGGCCGGCCTAGAAACCCTCCCTCCCAGAAGAAAGCCGATCCCAGTTCAGGTGGGGTCTTCCTCGGTTGCGTA
CCTGGCTGGAGCCGAGCTGGTGGGCGGCCGGCAGCCGGCGTTTCTGGTGATGACAGCCCCGAAATGAAAGCAGCG
CGGCCGCCGCCTCCGAGGGCTGCAGGGAGATCAGCGTCCAGCAAATAAGAAGCAAGTCCTGGACCCGGAGGAGGA
GGAGCGGCCGAGCATCTCTCTCTGCTCCGCCGTGTCCTTTAGATGAGCACTCCCGGCCGGAGCCGGAGGTGGATC
CGCAGAGCTGCCTCTGGGCGCCTGACCCCGCGCTGACATCACAACCTGTGACAGGCGCATCACGCCCGGTACCTG
CTCCCGGCCGCTGCCCGTCCTCCCAGCCTCTTTGTATGCCGCAGAC**ATG**GCCAGCCAGCAGGATTCGGGCTTCTT
TGAGATCAGTATCAAATATTTACTGAAATCCTGGAGTAATACTTCTCCCGTTGGCAACGGTTACATCAAGCCTCC
GGTTCCACCTGCTTCTGGCACGCACAGGGAGAAAGGGCCGCCAACCATGCTACCCATCAATGTGGACCCAGACAG
TAAACCAGGAGAATATGTCCTCAAAAGTTTATTTGTCAACTTCACCACTCAGGCTGAACGCAAGATTCGTATCAT
TATGGCAGAGCCCCTGGAAAAGCCATTGACGAAATCTCTGCAACGTGGAGAAGACCCCCAATTTGATCAGGTCAT
CAGCTCAATGAGCTCCCTTTCTGAGTACTGCCTGCCTTCCATTCTACGTACATTATTTGACTGGTATAAAAGGCA
AAATGGCATTGAGGATGAATCACATGAATACAGACCAAGAACAAGCAATAAATCAAAAAGCGATGAACAACAGCG
AGATTATTTAATGGAAAGACGGGACCTCGCCATTGATTTTATTTTTTCTTTAGTATTAATAGAAGTTTTGAAACA
GATTCCACTTCATCCTGTAATAGACAGTTTAATACATGATGTTATTAACTTGGCTTTCAAGCACTTTAAATACAA
AGAAGGGTACCTTGGTCCCAACACTGGCAATATGCATATTGTGGCAGACCTGTATGCAGAAGTCATTGGAGTGTT
GGCACAAGCCAAATTCCCTGCTGTAAAGAAGAAATTTATGGCGGAGCTAAAAGAATTACGGCACAAAGAGCAGAA
CCCATATGTGGTTCAAAGCATTATCAGCTTAATAATGGGCATGAAATTCTTTCGAATTAAGATGTATCCAGTGGA
GGATTTTGAGGCCTCTCTTCAGTTTATGCAGGAATGTGCACATTACTTCCTCGAGGTCAAAGACAAAGATATCAA
GCATGCCTTGGCTGGGCTTTTTGTTGAAATACTTGTTCCAGTTGCTGCTGCTGTTAAAAATGAAGTAAATGTTCC
CTGCCTTAGAAATTTTGTGGAAAGCCTGTATGACACCACGCTGGAACTTTCTTCTCGAAAGAAGCATTCCTTGGC
CTTGTACCCCCTGGTGACCTGTTTGCTCTGTGTCAGTCAGAAGCAGCTGTTCCTGAACAGGTGGCACATTTTCCT
CAACAACTGCTTGTCCAACCTTAAAAACAAAGATCCCAAGATGGCTCGAGTTGCACTGGAATCTCTCTACAGATT
ACTTTGGGTTTACATGATTCGAATTAAATGTGAAAGCAACACAGCTACTCAGAGCCGACTTATAACCATCATCAC
AACACTTTTCCCCAAAGGGTCCCGCGGTGTGGTACCAAGGGACATGCCTCTGAACATCTTTGTGAAAATCATCCA
GTTCATTGCCCAGGAACGTTTAGATTTTGCAATGAAAGAAATCATTTTCGATTTTCTTTGTGTGGGAAAACCAGC
AAAAGCATTCAGTCTCAACCCAGAGAGAATGAACATTGGTTTACGGGCATTCTTGGTCATAGCTGATAGCTTGCA
GCAGAAAGATGGGGAACCTCCCATGCCGGTTACAGGAGCCGTTCTTCCTTCAGGAAACACGTTAAGAGTAAAGAA
AACATATTTGAGTAAAACACTAACTGAAGAGGAAGCCAAAATGATAGGCATGTCCTTATATTACTCTCAAGTACG
AAAAGCTGTAGACAACATTTTAAGGCACCTTGATAAAGAAGTAGGAAGGTGTATGATGCTGACTAATGTACAGAT
GTTAAACAAAGAACCGGAAGACATGATCACGGGTGAGAGAAAGCCAAAAATAGATCTTTTCAGGACCTGTGTTGC
TGCTATTCCTCGACTGCTTCCTGATGGGATGTCAAAACTTGAACTTATTGACTTACTGGCTAGGCTCTCTATTCA
TATGGATGATGAATTGCGACATATTGCACAAAATTCTCTTCAGGGTTTACTTGTTGACTTCTCAGATTGGAGGGA
AGATGTACTATTTGGCTTTACCAACTTCCTGCTCCGGGAAGTAAATGATATGCATCACACACTCCTTGATTCGTC
CCTGAAGTTGCTGCTGCAGCTGCTCACCCAGTGGAAACTAGTCATCCAGACACAAGGAAAAGTCTATGAACAAGC
CAACAAAATCAGAAATTCAGAGCTCATCGCAAATGGCTCCAGTCACAGAATTCAGTCGGAACGAGGTCCCCACTG
CAGTGTACTCCACGCTGTAGAAGGTTTTGCTCTGGTTTTACTCTGCAGTTTCCAGGTGGCCACACGCAAACTGTC
CGTTTTAATACTCAAGGAAATTCGAGCGTTGTTTATTGCCCTGGGGCAGCCTGAGGATGACGACAGGCCGATGAT
TGATGTCATGGATCAGCTAAGTTCTTCCATTCTAGAAAGTTTTATTCATGTAGCAGTTTCGGATTCAGCAACATT
ACCACTCACCCACAATGTGGATCTGCAGTGGTTGGTGGAATGGAACGCAGTCCTGGTCAATAGCCATTATGATGT
GAAAAGCCCTTCCCATGTCTGGATATTTGCACAGTCTGTCAAAGACCCCTGGGTCCTCTGCCTCTTCAGCTTCCT
CCGGCAGGAGAACTTACCCAAGCACTGCCCCACAGCCCTCAGCTATGCCTGGCCTTATGCCTTCACTCGGCTCCA
GTCGGTGATGCCTCTGGTGGACCCAAATAGCCCAATTAATGCCAAGAAAACCAGCACTGCCGGCAGCGGAGACAA
CTATGTTACTTTGTGGAGAAATTACCTAATTCTTTGTTTTGGAGTTGCAAAACCCAGTATTATGAGCCCAGGACA
CTTAAGAGCTTCCACTCCAGAAATAATGGCGACCACACCTGATGGTACAGTGAGCTACGATAACAAGGCCATAGG
CACCCCATCGGTGGGAGTTCTGTTAAAGCAGTTGGTGCCTTTGATGAGACTAGAGAGCATTGAGATCACAGAGTC
CTTAGTTTTAGGATTTGGAAGAACAAATTCCCTTGTTTTCAGAGAATTGGTAGAAGAACTTCATCCATTAATGAA
AGAAGCTCTGGAAAGAAGACCAGAGAACAAGAAACGCCGAGAACGGCGAGACTTGTTAAGGCTACAACTACTTCG

FIGURE 823B

AATTTTTGAACTTTTGGCTGATGCTGGTGTAATAAGTGACAGCACAAATGGAGCCCTAGAGCGGGATACTTTAGC
CCTGGGAGCTTTGTTCTTAGAATATGTGGACTTGACCCGCATGCTCCTAGAAGCTGAAAATGACAAAGAAGTTGA
AATTCTTAAAGATATCCGGGCACATTTTAGTGCAATGGTGGCCAACTTGATTCAGTGTGTTCCAGTTCACCACCG
AAGATTTCTCTTCCCCCAGCAAAGTCTGAGGCACCACCTTTTCATCTTATTCAGCCAGTGGGCAGGACCCTTCAG
CATTATGTTCACTCCTCTGGATCGTTACAGTGACAGAAATCATCAGATTACAAGATATCAGTATTGTGCATTAAA
AGCAATGTCAGCAGTACTGTGCTGTGGCCCTGTCTTTGACAATGTGGGCCTTTCCCCAGATGGCTACCTATATAA
ATGGCTTGACAACATTCTGGCTTGTCAAGATTTACGAGTTCATCAACTTGGCTGCGAAGTTGTTGTCTTGCTACT
GGAACTTAATCCTGACCAAATAAATCTTTTTAACTGGGCAATTGACCGATGCTACACAGGTTCCTACCAACTTGC
ATCTGGCTGCTTCAAAGCCATAGCAACTGTGTGTGGAAGCAGGAACTATCCCTTCGACATAGTGACATTGTTAAA
CCTTGTTCTATTCAAGGCCTCTGACACCAACAGAGAGATTTATGAAATCTCCATGCAGCTCATGCAGATCCTTGA
AGCAAAGCTTTTTGTATACTCAAAGAAAGTCGCTGAGCAAAGACCGGGAAGTATTCTCTATGGAACACACGGCCC
GCTGCCACCCCTCTACAGCGTGTCACTCGCCCTCTTGTCATGTGAGCTGGCCAGGATGTACCCTGAGCTCACACT
CCCCCTCTTCTCAGGTAAGCCAGCGATTCCCCACAACACACCCCAACGGGCGCCAGATCATGCTTACCTACCTGC
TGCCCTGGCTGCACAACATCGAGCTGGTGGACAGCAGGCTCCTCCTCCCGGGTCGAGCCCCAGCAGCCCAGAGGA
CGAAGTCAAGGACCGGGAAGGTGACGTGACTGCTTCTCACGGGCTGAGAGGAAATGGCTGGGGCTCTCCAGAAGC
CACGTCACTGGTCCTGAACAACCTCATGTACATGACGGCCAAGTATGGAGATGAAGTTCCTGGGCCAGAAATGGA
AAATGCTTGGAATGCTTTAGCCAACAATGAGAAATGGAGCAACAACCTGAGGATCACCTTGCAGTTCCTGATTAG
CCTCTGTGGGGTCAGCAGCGACACAGTTCTCCTACCCTATATTAAAAAAGTGGCAATATACTTGTGCCGTAACAA
CACCATTCAAACCATGGAAGAGCTTCTCTTTGAGCTGCAGCAGACAGAACCCGTGAACCCCATCGTCCAGCATTG
TGACAACCCGCCCTTCTACCGCTTCACGGCCAGTAGCAAGGCTTCCGCAGCAGCCTCAGGAACCACCTCTAGCAG
CAATACAGTGGTTGCTGGCCAGGAAAATTTCCCAGATGCTGAGGAGAACAAGATATTGAAAGAATCTGATGAAAG
GTTTAGTAATGTCATCAGAGCCCACACTCGCCTCGAGTCAAGATACAGCAATAGCTCTGGAGGATCCTACGATGA
AGATAAAAATGATCCAATTTCTCCCTACACGGGCTGGTTGCTGACTATTACAGAGACCAAGCAGCCGCAGCCCTT
ACCGATGCCTTGTACTGGAGGATGCTGGGCCCCCCTGGTTGACTATCTCCCGGAGACCATCACTCCCCGGGGGCC
ACTCCACAGGTGCAATATTGCTGTAATTTTTATGACTGAAATGGTGGTGGATCACAGTGTACGAGAAGACTGGGC
GCTTCATCTACCATTATTACTTCATGCTGTCTTCTTAGGTTTAGACCACTACCGGCCTGAAGTCTTTGAACACAG
CAAAAAACTGCTTCTTCACCTCTTGATTGCCCTCTCTTGCAACAGCAATTTCCATTCCATTGCTTCCGTGCTCCT
GCAGACCCGAGAGATGGGTGAAGCTAAGACTCTAACCGTGCAGCCAGCCTACCAACCTGAATATCTCTATACAGG
TGGCTTTGACTTCCTGAGAGAGGACCAGTCATCCCCGGTGCCTGACTCAGGGCTTAGTTCAAGCTCCACCTCCTC
TAGCATCAGTCTGGGAGGCAGCAGTGGAAACCTCCCACAGATGACCCAGGAGGTAGAAGATGTGGACACAGCTGC
TGAAACAGATGAGAAGGCAAACAAGCTCATTGAGTTTCTCACGACCAGGGCATTTGGTCCACTTTGGTGCCATGA
AGACATCACACCTAAAAATCAAAATTCAAAGAGTGCTGAACAGCTCACTAATTTTCTACGTCACGTTGTATCTGT
ATTTAAAGATTCCAAATCAGGCTTCCATCTGGAGCACCAGTTGAGTGAAGTTGCATTGCAGACAGCCCTCGCAAG
CTCTTCAAGGCACTATGCTGGTCGGTCCTTCCAGATATTCCGGGCCCTCAAGCAACCTCTGTCAGCACATGCCTT
ATCTGACCTTCTCTCAAGATTGGTGGAGGTGATAGGAGAACATGGAGATGAGATTCAGGGTTATGTAATGGAAGC
GCTCCTAACCTTGGAGGCGGCTGTGGATAACTTGTCTGACTGCTTGAAGAACAGTGACCTCCTAACTGTATTGTC
CCGCTCTTCCTCACCAGATTTAAGCTCCAGCAGTAAACTAACAGCAAGCAGAAAGAGCACAGGACAACTAAACAT
GAACCCGGGAACCACCAGCGGCAACACCGCAACTGCCGAACGGAGCCGGCATCAACGAAGCTTCTCTGTGCCCAA
GAAGTTTGGTGTCATCGACCGATCCTCTGACCCACCTCGAAGTGCCACACTGGACAGAATTCAGGCTTGTACCCA
ACAAGGCCTCTCCTCAAAAACCAGAAGCTCATCCTCCTTGAAGGACAGTCTCACGGACCCATCCCACATAAACCA
TCCCACCAACCTGCTGGCCACCATATTCTGGGTCACAGTGGCCTTGATGGAGTCTGATTTTGAGTTTGAATACTT
AATGGCCTTAAGGCTGTTGAGCAGACTACTGGCACATATGCCACTCGATAAGGCTGAGAACCGAGAAAAGCTTGA
GAAACTCCAGGCACAGCTGAAGTGGGCCGACTTCTCCGGGCTGCAGCAGCTGCTGCTGAAAGGATTCACATCCCT
CACCACCACAGACCTGACCCTGCAGCTCTTCAGTCTGCTGACACCAGTGTCCAAAATATCCATGGTGGATGCATC
CCACGCTATTGGGTTTCCACTGAATGTCTTGTGTCTCCTGCCTCAGCTGATTCAGCATTTTGAAAATCCCAATCA
GTTCTGTAAGGATATAGCCGAAAGGATTGCTCAGGTTTGTTTAGAAGAGAAGAACCCCAAACTTTCAAATCTTGC
ACATGTCATGACTCTTTATAAAACGCACAGCTACACGAGGGACTGTGCCACGTGGGTCAATGTGGTCTGTCGATA
CCTTCATGAAGCATATGCTGACATTACCTTGAATATGGTTACCTACCTGGCAGAGCTGCTGGAGAAGGGCCTCCC

FIGURE 823C

TAGTGTGCAGCAGCCCCTGCTCCAGGTGATCTACAGTCTTCTCAGCTACATGGACCTTTCTGTCGTTCCTGTCAA
ACAGTTCAATGTGGAAGTTCTGAAGACAATTGAAAAATATGTGCAAAGTGTTCACTGGAGAGAAGCTCTGAATAT
CTTGAAGCTGGTAGTTTCTCGGTCAGCCAGCCTTGTTTTACCTTCATACCAGCACAGTGACCTCTCAAAAATAGA
AATACATCGAGTGTGGACTAGTGCTTCCAAGGAATTACCTGGGAAAACCCTGGACTTCCACTTCGATATTTCGGA
GACTCCAATCATCGGGAGGCGGTATGATGAGCTGCAGAATTCTTCTGGGCGTGATGGGAAGCCCAGGGCCATGGC
CGTCACCCGGAGCACATCTTCCACTTCCTCAGGCTCCAACTCCAACGTCCTTGTTCCAGTGAGCTGGAAAAGGCC
CCAGTATTCTCAGAAGAGAACAAAAGAGAAGTTGGTACATGTCCTTTCTCTGTGTGGCCAAGAAGTAGGATTGAG
CAAAAATCCATCAGTGATTTTTTCATCGTGTGGGGATCTGGATCTGCTTGAGCACCAGACAAGCTTGGTATCTTC
TGAGGACGGTGCCCGAGAGCAGGAGAACATGGATGACACAAACAGCGAGCAGCAGTTTAGAGTCTTCAGAGACTT
CGACTTCCTAGATGTGGAGCTGGAGGATGGAGAGGGTGAGAGTATGGACAATTTCAACTGGGGAGTGCGCAGACG
TTCTCTGGACAGCCTGGATAAGTGTGATATGCAGATTCTGGAGGAGCGCCAACTGTCAGGAAGCACTCCTAGCCT
GAATAAAATGCACCATGAGGACTCCGATGAATCATCCGAGGAGGAGGACCTCACAGCCAGCCAGATCCTGGAGCA
CTCAGACCTAATCATGACTCTCTCCCCCTCTGAAGAGACGAATCCCATGGAGCTGCTCACCACAGCCTGTGACTC
GACCCCTGCAGAACCTCATTCCTTTAACACCAGAATGTCCAGCTTTGATGCTTCCTTGCCTGATATGAATAATCT
GCAGATTTCTGAGGGTTCAAAGGCTGAAGCTGTTCGTGAGGAGGAGGACACCACCGTGCATGAGGATGATCTTTC
TAGTTCCATCAATGAACTCCCAGCAGCTTTTGAATGCAGCGACAGCTTTAGCCTGGACATGACTGAGGGGGAAGA
AAAAGGCAATCGGGCACTGGACCAGTTTACCCTGGCGAGCTTTGGAGAAGGTGACAGGGGAGTCTCTCCCCCTCC
CTCGCCCTTCTTCTCAGCCATCCTTGCCGCCTTTCAGCCCGCAGCCTGTGACGATGCCGAGGAGGCCTGGCGCAG
CCACATCAACCAGCTTATGTGTGACTCAGATGGCTCCTGTGCTGTGTATACATTTCATGTGTTCTCCTCCTTGTT
TAAGAATATTCAGAAAAGGTTCTGCTTCCTAACCTGTGATGCAGCCAGTTACCTTGGAGATAACCTCCGGGGAAT
CGGATCCAAATTTGTCAGCTCTTCCCAGATGCTCACCTCCTGCTCTGAATGTCCTACACTTTTTGTGGATGCCGA
GACTCTCCTTTCATGTGGACTTCTGGACAAGCTCAAGTTCAGTGTGTTAGAACTGCAAGAATATTTGGATACCTA
CAACAACAGGAAAGAGGCCACACTCTCTTGGCTTGCAAATTGTAAGGCAACATTTGCAGGGGGATCAAGAGATGG
AGTAATTACCTGTCAACCAGGGGACTCCGAAGAAAAGCAATTGGAACTGTGTCAGAGATTATATAAGCTACACTT
CCAGCTGCTATTGCTTTTTCAGTCCTACTGTAAGCTCATCGGCCAGGTGCACGAAGTTAGCTCCATGCCAGAGCT
GCTGAATATGTCCAGGGAACTGAGTGACCTAAAGAAACACCTGAAGGAAGCCAGTGCAGTCATTGCAGCTGACCC
TCTCTATTCAGACGGCGCGTGGTCCGAGCCCACCTTCACGTCCACTGAAGCAGCCATCCAGTCCATGCTGGAGTG
CCTGAAGAACAACGAACTCGGCAAAGCTTTGCGGCAGATCAGGGAGTGCAGAAGTCTGTGGCCCAATGACATCTT
TGGAAGCAGTTCTGATGATGAGGTCCAGACACTACTGAATATTTATTTCCGTCACCAAACTCTGGGACAGACGGG
TACTTATGCCCTGGTGGGGTCTAACCAGAGCCTGACCGAGATCTGCACCAAGCTGATGGAGCTGAACATGGAGAT
CCGGGACATGATCCGCAGGGCCCAGAGTTACCGAGTCCTCACTACTTTTCTTCCAGACTCCAGTGTTTCTGGCAC
TAGTCTCTGACAGGAGCCTCCTGTCCCCACTGGGTTCCAAACTGCAGTGCTGCCATGCTGGGGCAACGTCATTCA
GTGTCTTCTCGGCCTTCAAAAGGCTTGGACAGACTGTTCTCCCTCTTGTTACCTGTAGGGCTTTTTCTAAAGAGG
ATGGCAGAACTTCCAACGTGTAGCAATACTATAAGAACCAAGGTAGCTTAGAACGTCCTGGACAGACTCCACTCA
TCATGCTGTGTGGCACAAATGTGTTACATTTGACCGAGCATATGCAACTCGCTACTGAAGAAGTGACTTCCGTTG
CATACCAAAGCCGACTACACTGAACAGTACCTTCCTTTCTAGAAACAATTTTAGATTGGCAAAAGTGCAATGTTT
TCTTCACTCAAAAAATTTTATATTCTCAAACATGTATATTCTTTCCCTGTCTTGTTCCATTTTCTTTTCTTTTTT
CTTTTTTCTTTTTCCTTTCTTTCGTGGGCTGAGAAAGGGGCAGGCAAAATGAAGCTGGCCACTGAAAACTGTAAG
ATGGTCAAAAGCTGACAGCCTGTGTATGTGAAAAGGGAATTGTAAATGGACTGCAATGTAATGTACACTGTAATT
TGAATACAATTACTGTATCTAAAAGGAGCTGCTATGAAGTACCTTTCTTATGTTGCTAGGCTACTGTTTCTGAAA
GCCCTGGATCTCTTTGCACCAAAAATGGTCCAGATAGACTCTTTTTAAGGATCTTGGCTGCTTTTTACTAGAAGG
TTGCTTTTATGAGCATATTTATACTGCTGAAGGATGAGTGTTAATTTTAATTAACTTTGCCGTTTTGTAGAGAAA
ACTATTCACAAGATAAATTCCAAGTCTTTTCACCTGTCAGGCATGCATATTTTAATATCTGTTTGGATAGTCAGA
AGTAGAATCATAAAGGTAAAATATGAGTTGTTACTTTGTTTCTTCGATGTCATATTTTATGTGTAATATATATGT
AAAGGGCCATTCTTAAGTTCTCTCCTTAAACTTAATGCTGTCAAGTGTTAGATGTGTGCATGTGAACTTGTTGCA
CTGCAGAAACATATTCAGAGTTTATCTATGTAACTTATTCACTCTGTAAATACATTTAAAGTTTTTGTGATGTAA
GCTTAATTGATATTCTGTTCAGAACTTTCTTTAGACTAAAAAAAAAAAAAAAAGACAAA

FIGURE 824

MASQQDSGFFEISIKYLLKSWSNTSPVGNGYIKPPVPPASGTHREKGPPTMLPINVDPDSKPGEYVLKSLFVNFT
TQAERKIRIIMAEPLEKPLTKSLQRGEDPQFDQVISSMSSLSEYCLPSILRTLFDWYKRQNGIEDESHEYRPRTS
NKSKSDEQQRDYLMERRDLAIDFIFSLVLIEVLKQIPLHPVIDSLIHDVINLAFKHFKYKEGYLGPNTGNMHIVA
DLYAEVIGVLAQAKFPAVKKKFMAELKELRHKEQNPYVVQSIISLIMGMKFFRIKMYPVEDFEASLQFMQECAHY
FLEVKDKDIKHALAGLFVEILVPVAAAVKNEVNVPCLRNFVESLYDTTLELSSRKKHSLALYPLVTCLLCVSQKQ
LFLNRWHIFLNNCLSNLKNKDPKMARVALESLYRLLWVYMIRIKCESNTATQSRLITIITTLFPKGSRGVVPRDM
PLNIFVKIIQFIAQERLDFAMKEIIFDFLCVGKPAKAFSLNPERMNIGLRAFLVIADSLQQKDGEPPMPVTGAVL
PSGNTLRVKKTYLSKTLTEEEAKMIGMSLYYSQVRKAVDNILRHLDKEVGRCMMLTNVQMLNKEPEDMITGERKP
KIDLFRTCVAAIPRLLPDGMSKLELIDLLARLSIHMDDELRHIAQNSLQGLLVDFSDWREDVLFGFTNFLLREVN
DMHHTLLDSSLKLLLQLLTQWKLVIQTQGKVYEQANKIRNSELIANGSSHRIQSERGPHCSVLHAVEGFALVLLC
SFQVATRKLSVLILKEIRALFIALGQPEDDDRPMIDVMDQLSSSILESFIHVAVSDSATLPLTHNVDLQWLVEWN
AVLVNSHYDVKSPSHVWIFAQSVKDPWVLCLFSFLRQENLPKHCPTALSYAWPYAFTRLQSVMPLVDPNSPINAK
KTSTAGSGDNYVTLWRNYLILCFGVAKPSIMSPGHLRASTPEIMATTPDGTVSYDNKAIGTPSVGVLLKQLVPLM
RLESIEITESLVLGFGRTNSLVFRELVEELHPLMKEALERRPENKKRRERRDLLRLQLLRIFELLADAGVISDST
NGALERDTLALGALFLEYVDLTRMLLEAENDKEVEILKDIRAHFSAMVANLIQCVPVHHRRFLFPQQSLRHHLFI
LFSQWAGPFSIMFTPLDRYSDRNHQITRYQYCALKAMSAVLCCGPVFDNVGLSPDGYLYKWLDNILACQDLRVHQ
LGCEVVVLLLELNPDQINLFNWAIDRCYTGSYQLASGCFKAIATVCGSRNYPFDIVTLLNLVLFKASDTNREIYE
ISMQLMQILEAKLFVYSKKVAEQRPGSILYGTHGPLPPLYSVSLALLSCELARMYPELTLPLFSGKPAIPHNTPQ
RAPDHAYLPAALAAQHRAGGQQAPPPGSSPSSPEDEVKDREGDVTASHGLRGNGWGSPEATSLVLNNLMYMTAKY
GDEVPGPEMENAWNALANNEKWSNNLRITLQFLISLCGVSSDTVLLPYIKKVAIYLCRNNTIQTMEELLFELQQT
EPVNPIVQHCDNPPFYRFTASSKASAAASGTTSSSNTVVAGQENFPDAEENKILKESDERFSNVIRAHTRLESRY
SNSSGGSYDEDKNDPISPYTGWLLTITETKQPQPLPMPCTGGCWAPLVDYLPETITPRGPLHRCNIAVIFMTEMV
VDHSVREDWALHLPLLLHAVFLGLDHYRPEVFEHSKKLLLHLLIALSCNSNFHSIASVLLQTREMGEAKTLTVQP
AYQPEYLYTGGFDFLREDQSSPVPDSGLSSSSTSSSISLGGSSGNLPQMTQEVEDVDTAAETDEKANKLIEFLTT
RAFGPLWCHEDITPKNQNSKSAEQLTNFLRHVVSVFKDSKSGFHLEHQLSEVALQTALASSSRHYAGRSFQIFRA
LKQPLSAHALSDLLSRLVEVIGEHGDEIQGYVMEALLTLEAAVDNLSDCLKNSDLLTVLSRSSSPDLSSSSKLTA
SRKSTGQLNMNPGTTSGNTATAERSRHQRSFSVPKKFGVIDRSSDPPRSA

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FIGURE 825

GACGGCGAGACCCCGCCCCATCCCCGACTGCCTGAACCGCGCCAGGAGACGGACCGCAAGTCCAGCGTACCCACA
GACGACTCAGGCGGGAGACGAGCGGTGTC**ATG**GCCGCCGACAGTGACGATGGCGCAGTTTCAGCTCCCGCAGCTT
CCGACGGTGGTGTCAGCAAAAGCACAACATCTGGGGAGGAGCTAGTAGTCCAGGTTCCCGTAGTGGATGTGCAAA
GCAACAACTTCAAGGAGATGTGGCCATCCCTCCTGCTAGCCATAAAGACAGCTAATTTCGTGGCTGTGGACACGG
AGCTGAGTGGGCTTGGGGACAGGAAGAGTTTGCTGAACCAGTGCATTGAGGAACGTTACAAGGCCGTGTGTCATG
CTGCCAGGACCCGTTCTATCCTTTCCCTGGGCCTCGCCTGCTTCAAGCGGCAGCCAGACAAGGGTGAACATTCCT
ATCTGGCTCAAGTGTTCAATCTCACTCTGCTGTGCATGGAGGAGTATGTCATAGAACCAAAGTCTGTGCAGTTCC
TGATACAGCATGGCTTCAACTTCAACCAGCAGTATGCCCAAGGCATCCCCTACCATAAGGGCAATGACAAGGGTG
ATGAGAGCCAGAGCCAGTCAGTACGGACCCTATTCCTGGAGCTAATCCGAGCCCGCCGGCCTCTGGTGCTACACA
ATGGCCTTATAGACTTGGTGTTCCTGTACCAGAACTTCTATGCACACCTCCCTGAGAGTCTGGGAACCTTCACCG
CTGACCTGTGTGAGATGTTCCCAGCAGGCATTTATGACACCAAATATGCTGCTGAGTTTCGTGCCCGTTTCGTGG
CCTCCTACTTAGAATATGCCTTCCGGAAATGTGAACGGGAAAATGGGAAGCAGCGGGCAGCTGGCAGCCCACACC
TTACCCTGGAGTTCTGCAACTATCCTTCCAGCATGAGGGACCATATTGATTACCGCTGCTGCCTGCCCCCAGCAA
CCCACCGTCCTCATCCCACCAGCATCTGTGACAACTTCTCGGCTTATGGCTGGTGCCCCCTGGGACCACAGTGTC
CTCAGTCTCACGATATTGACCTTATCATTGACACTGATGAGGCTGCGGCAGAGGACAAGCGGCGACGGCGACGAC
GTAGGGAAAAACGGAAGAGGGCTTTATTGAACCTACCGGGGACACAGACCTCTGGGGAAGCTAAGGATGGTCCTC
CCAAGAAGCAGGTCTGTGGGGATAGCATCAAGCCTGAAGAAACCGAGCAGGAGGTGGCTGCCGATGAAACTAGGA
ACCTGCCTCACTCCAAGCAAGGCAACAAAAATGACTTAGAGATGGGGATTAAGGCAGCAAGGCCTGAAATAGCTG
ATAGAGCTACCTCAGAAGTGCCAGGGAGCCAAGCCAGTCCTAACCCAGTGCCTGGGGATGGATTGCACCGGGCTG
GTTTTGATGCCTTTATGACAGGTTATGTGATGGCCTATGTGGAAGTGAGCCAGGGACCGCAGCCCTGCAGCTCTG
GACCCTGGCTCCCTGAATGCCACAATAAGGTATATTTGAGTGGCAAAGCTGTACCCCTCACAGTGGCCAAGAGCC
AGTTCTCTCGTTCCTCCAAAGCCCACAATCAGAAGATGAAGCTCACTTGGGGCAGTAGC**TGA**TGCAACTTCCACC
TTGCTCTCAGGTGGAACAGAGGTATTTTGGGTCTCTCTAGCCTGAAATGTCATCCTCAACTGCTACTGAGTTTAG
GGGAGGGGGAATGTCTTGACAGACATCACTGCATTGCCCTGGACCGCCTCCTTTATCCCAGTGTTTGAGGTACAA
GTAAGAAGGCTGACCAGCACCTGTAACACTGACTTTATTTTTAAGTCTGAAAATGTCTTGGGAAAGTTTTAC

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FIGURE 826

MAADSDDGAVSAPAASDGGVSKSTTSGEELVVQVPVVDVQSNNFKEMWPSLLLAIKTANFVAVDTELSGLGDRKS
LLNQCIEERYKAVCHAARTRSILSLGLACFKRQPDKGEHSYLAQVFNLTLLCMEEYVIEPKSVQFLIQHGFNFNQ
QYAQGIPYHKGNDKGDESQSQSVRTLFLELIRARRPLVLHNGLIDLVFLYQNFYAHLPESLGTFTADLCEMFPAG
IYDTKYAAEFRARFVASYLEYAFRKCERENGKQRAAGSPHLTLEFCNYPSSMRDHIDYRCCLPPATHRPHPTSIC
DNFSAYGWCPLGPQCPQSHDIDLIIDTDEAAAEDKRRRRRRREKRKRALLNLPGTQTSGEAKDGPPKKQVCGDSI
KPEETEQEVAADETRNLPHSKQGNKNDLEMGIKAARPEIADRATSEVPGSQASPNPVPGDGLHRAGFDAFMTGYV
MAYVEVSQGPQPCSSGPWLPECHNKVYLSGKAVPLTVAKSQFSRSSKAHNQKMKLTWGSS

FIGURE 827A

TTTTTTTTTTTTTTTACAGCTGTTCCTGCTGATTGCTTTTTAAGCTAGGCTCAAGTGTGGGGCCACGGAATCCTT
CAGGTGCCCTTCAAATCAGACATTACATTTCAGCTCTCAGGGCTAGAATGCTTCCCCCTCTTATCTTGGGCAGGT
CTTTGAAGAAGCCAGTTTAGCCTTGGTAATTTTGAATTTGGCCATAGTATACGGAGGAGAGCTAGGTAGCTATCA
AAACGCTTAGACAAACGTATGGTAAAATGCAGCCCAGCCTGAACCTCCGCAAAACCCCCAAACCTGGAGCAGCAA
GTGGGCAAAGGAGTGTGTGTTTGGGGCAGGGTACTGAGTCCCATATGTAATCAAGAGACCTGGAGGGCCCAAGGA
AGTCAGTGACACCCCCACAAGCTACATATCCTCCAATGGATTGTGGTGGTCATCTCCGGCTACCGAAGCCACCTT
GCTTATTCCCATAGGCTTACAAACATTATGATGCTTCACACGAGTTGTGGGTGAAGTGAAGGAATTGGAAAGTCC
CGGTCTAAGGCCCTGCAAAACTGCTGTCTGGTAAAAACAAGTGACTATGGCAAGGCCCTGAATGTACTACGTATA
GACTTAAGTCAGTATTTGTGCCTAACAGCAAAGCATGCCACAAGAGGCTCCTCAAAAGCCGGGTAATTGATGCCA
TTGTTTTCTTGACCTAGTTGAAGAGTCAAAGAAGAGAAGGTGATGCAGAAACTTCTTTCCAGTGAAGTGACAGAT
CCAAGCAAGGAACACCTGCCTGTGAGGGGAGCGGTAGGGGAGGGGGTAGATTCGGCAGCACTCGGGTAGTGGCAG
GGACCACATATTGTCGGTGTTAACCACTGTTATCACTGGCCCAGGTCGAGTGAGGACGAGTCATTTCCCCACTAA
GCACTTGGGGAGTGGCAGGGACCACATATTGTCAGTGTTAACCACTGTTATGACTGGCCCAGGTCGGGTGACGAC
GAGCCATTTCCGCACTATTGTCCCTTCTTCCTCACTGCACCCCCAGCCCTGCACCCTCAGCTCCAAATACACATT
CTCGTTCACTCAACGTTTGTTGACACCTAGCGTGGGCCCTGTGGGATGGGGTAAAAGTTCGGTGTTGGGAGGAGC
CCCGGTGACAGATTTTTGGTTTTGGTGGTGGCTTTTGGGCAAGGACAGGTCAGTTCATAAAAGATGACGCCCCAG
GTCTGGATCGAATTCTCCTGGGAGCCAGACCAAAGCACCTTCCTGGACTGCAAAGTGTGGAAGCCGCCGCGGGCC
GGGCGCGGGGAGGTGTC**ATG**CGCCGGAACCTGCGCTTGGGGCCAAGCTCTGGAGCTGACGCGCAGGGGCAAGGCG
CCCCGCGTCCCGGACTGGCGGCTCCGCGCATGCTCCTCCCACCGGCGTCGCAGGCCTCGAGAGGCTCCGGAAGTA
CTGGGTGCAGCCTGATGGCGCAGGAGGTAGACACGGCACAGGGCGCCGAGATGCGGCGGGGCGCGGGCGCGGCTC
GGGGACGCGCTTCCTGGTGCTGGGCCCTGGCGCTGCTTTGGCTCGCGGTGGTTCCGGGCTGGTCCCGGGTCTCGG
GCATCCCCTCCCGGCGCCACTGGCCGGTGCCCTACAAGCGCTTTGACTTCCGTCCAAAACCTGATCCTTATTGTC
AAGCTAAGTATACTTTCTGTCCAACTGGCTCACCTATCCCAGTTATGGAGGGTGATGATGACATTGAAGTTTTTC
GATTACAAGCCCCAGTATGGGAATTTAAATATGGAGACCTCCTGGGACACTTGAAAATTATGCATGATGCCATTG
GATTCAGAAGTACATTAACTGGCAAGAACTACACAATGGAATGGTATGAACTTTTCCAACTTGGCAACTGTACAT
TTCCCCATCTCCGACCTGAAATGGATGCCCCTTTCTGGTGTAATCAAGGCGCTGCCTGCTTTTTTGAGGGAATTG
ATGATGTTCACTGGAAGGAAAATGGGACATTAGTTCAAGTAGCAACTATATCAGGAAACATGTTCAACCAAATGG
CAAAGTGGGTGAAACAGGACAATGAAACAGGAATTTATTATGAGACATGGAATGTAAAAGCCAGCCCAGAAAAGG
GGGCAGAGACATGGTTTGATTCCTACGACTGTTCCAAATTTGTGTTAAGGACCTTTAACAAGTTGGCTGAATTTG
GAGCAGAGTTCAAGAACATAGAAACCAACTATACAAGAATATTTCTTTACAGTGGAGAACCTACTTATCTGGGAA
ATGAAACATCTGTTTTTGGGCCAACAGGAAACAAGACTCTTGGTTTAGCCATAAAAAGATTTTATTACCCCTTCA
AACCACATTTGCCAACTAAAGAATTTCTGTTGAGTCTCTTGCAAATTTTTGATGCAGTGATTGTGCACAAACAGT
TCTATTTGTTTTATAATTTTGAATATTGGTTTTTACCTATGAAATTCCCTTTTATTAAAATAACATATGAAGAAA
TCCCTTTACCTATCAGAAACAAAACACTCTCTGGTTTA**TAA**AACACCTTAATTCTACTGCTCTTTTTTCTCCAAT
CACCAGCATCTGTTTTTCAGGGGGTGATTTTACTTTTGTGAATTCCTTAGCCTTTCTTCCTTGGTGCATAAAGTT
AAAATGCACATCAGCAGAATTGCTGCATATTAACATCTCAGGACTCTTCTCTTGTAAAGAAGCTGAAATTCGTAC
TATATTGGCCAAAGTGAGCGAGTTAGGTGATCTTGGTTTCAATTTCCGAGCCTTTGTTAATATGGAGAATTATGG
TTCATATCAGTTATGTAGGACCTTTGGACCCAGGGTCCTACAGATAGATATGGTGTGCCCAGATTTTAAAAATAC
CTTCAAAAATAAAAAATACATTCAGTGACATTTTCATGGTGGGAGCTCTTCTTTCTGATATGGCAGTTACACTTT
TTCACTTAAGTGCTTTAGTTTAGACTAACTTTACAACTTCTATAACTTTTGGAACCAAGTTTAGTATAGTCTGAT
TACATTCCATTCACCTAACTTTAGACATTCGTTTAGACACCATAACTGGAGTGATTGTGCTTCTAGATGTGGCAA
ATCCAGTGTTAACACATATTTCTGGCTGAGATTTTGGAACTAGCTAGTAACTGGCTTGTGTTCTTTAAGCATACT
AACATCACTAAATCTTAGGATTTAGGATTGCTGTAAAGATGTAAGTTGTGTATGTTTGGCAGGTCACATTGAATG
GCAGTGATAATGATTAATCAAAGAACAAATGTCATCCTTGATCTTGCCTAATGTAGTTTATGTGCCAAACTTTCC
AGGGTTTTGTAGTCACCTAGATTTTAAGCTGATAGCATAGTGCTTCAGCGGTTCTTCTAACCGGGGTATGCAGGA
ACATGGCTGCAGACACGTTTGGGTAAACAGGCACCTTCTGACTTCTTCATTGTTTCCTGTAGTTCTCCCTCTTCC
CACAAAGCTGTCAGCGCAGTGGAAGAGGTTGCACTTCTCCGAGAGAGGACAGGTTTCTGTTAAGATCACCAAGTA
GCTGTGCTTTAATTAGAGCCAGACAAGCTTTCAAGGTCCTTTAAGTATTTGATGATCAACTGAACACGTTTCTAT

FIGURE 827B

TCAAGGAGAAAACACCATTCAGTAAGAAGATGGAGTAGATATCAGATAAAACAATTCACGTTTAATATGTAAATG
TACCAATTATGTGATTCAGTTTCAACTTTCAAGTACTTCCTGAGAGGTTAGTACATTATTATTGAGCTCTCACAG
AAAGCTTAATCATAGATATAATTAACCTGATCCAAATGAGTAAAGTGGACCTTAGAAAGGCTAAGTGATCTTTCT
CTGGCTATCCAGCTAGTAGTAATGAAGTCAGGTCTTGAACCCCGGTTCTGCTGACTGAATTGGATGCACTATAGT
ACAGGCTTTTAGCACCGAAGTGTGGTCCTCAGACCAGTGCCTGCCAACCAGATGTTACTGGTCTGTGAGGAAATA
AGTACAGATACTGACAGGAAGCTTTTATAAACAATTTATTGGAGTGTTTTTGTTTCTGTTGGGTCTAATTAAAAA
AATTGGAGCTTGTAAAAAAAAAAAAAAAAA

FIGURE 828

MRRNLRLGPSSGADAQGQGAPRPGLAAPRMLLPPASQASRGSGSTGCSLMAQEVDTAQGAEMRRGAGAARGRASW
CWALALLWLAVVPGWSRVSGIPSRRHWPVPYKRFDFRPKPDPYCQAKYTFCPTGSPIPVMEGDDDIEVFRLQAPV
WEFKYGDLLGHLKIMHDAIGFRSTLTGKNYTMEWYELFQLGNCTFPHLRPEMDAPFWCNQGAACFFEGIDDVHWK
ENGTLVQVATISGNMFNQMAKWVKQDNETGIYYETWNVKASPEKGAETWFDSYDCSKFVLRTFNKLAEFGAEFKN
IETNYTRIFLYSGEPTYLGNETSVFGPTGNKTLGLAIKRFYYPFKPHLPTKEFLLSLLQIFDAVIVHKQFYLFYN
FEYWFLPMKFPFIKITYEEIPLPIRNKTLSGL

FIGURE 829

GGGGGACTGGGAGCGGGCGGCGCGGCCATGGCGGGCTGCTGCTCCGCGCTGGCGGCCTTCCTGTTCGAGTACGAC
ACGCCGCGCATCGTGCTCATCCGCAGCCGCAAAGTGGGGCTCATGAACCGCGCCGTGCAACTGCTCATCCTGGCC
TACGTCATCGGGTGGGTGTTTGTGTGGGAAAAGGGCTACCAGGAAACTGACTCCGTGGTCAGCTCCGTTACGACC
AAGGTCAAGGGCGTGGCTGTGACCAACACTTCTAAACTTGGATTCCGGATCTGGGATGTGGCGGATTATGTGATA
CCAGCTCAGGAGGAAAACTCCCTCTTCGTCATGACCAACGTGATCCTCACCATGAACCAGACACAGGGCCTGTGC
CCCGAGATTCCAGATGCGACCACTGTGTGTAAATCAGATGCCAGCTGTACTGCCGGCTCTGCCGGCACCCACAGC
AACGGAGTCTCAACAGGCAGGTGCGTAGCTTTCAACGGGTCCGTCAAGACGTGTGAGGTGGCGGCCTGGTGCCCG
GTGGAGGATGACACACACGTGCCACAACCTGCTTTTTTAAAGGCTGCAGAAAACTTCACTCTTTTGGTTAAGAAC
AACATCTGGTATCCCAAATTTAATTTCAGCAAGAGGAATATCCTTCCCAACATCACCACTACTTACCTCAAGTCG
TGCATTTATGATGCTAAAACAGATCCCTTCTGCCCCATATTCCGTCTTGGCAAAATAGTGGAGAACGCAGGACAC
AGTTTCCAGGACATGGCCGTGGAGGGAGGCATCATGGGCATCCAGGTCAACTGGGACTGCAACCTGGACAGAGCC
GCCTCCCTCTGCTTGCCCAGGTACTCCTTCCGCCGCCTCGATACACGGGACGTTGAGCACAACGTATCTCCTGGC
TACAATTTCAGGTTTGCCAAGTACTACAGAGACCTGGCTGGCAACGAGCAGCGCACGCTCATCAAGGCCTATGGC
ATCCGCTTCGACATCATTGTGTTTGGGAAGGCAGGGAAATTTGACATCATCCCCACTATGATCAACATCGGCTCT
GGCCTGGCACTGCTAGGCATGGCGACCGTGCTGTGTGACATCATAGTCCTCTACTGCATGAAGAAAAGACTCTAC
TATCGGGAGAAGAAATATAAATATGTGGAAGATTACGAGCAGGGTCTTGCTAGTGAGCTGGACCAGTGAGGCCTA
CCCCACACCTGGGCTCTCCACAGCCCCATCAAAGAACAGAGAGGAGGAGGAGGGAGAAATGGCCACCACATCACC
CCAGAGAAATTTCTGGAATCTGATTGAGTCTCCACTCCACAAGCACTCAGGGTTCCCCAGCAGCTCCTGTGTGTT
GTGTGCAGGATCTGTTTGCCCACTCGGCCCAGGAGGTCA

FIGURE 830

MAGCCSALAAFLFEYDTPRIVLIRSRKVGLMNRAVQLLILAYVIGWVFVWEKGYQETDSVVSSVTTKVKGVAVTN
TSKLGFRIWDVADYVIPAQEENSLFVMTNVILTMNQTQGLCPEIPDATTVCKSDASCTAGSAGTHSNGVSTGRCV
AFNGSVKTCEVAAWCPVEDDTHVPQPAFLKAAENFTLLVKNNIWYPKFNFSKRNILPNITTTYLKSCIYDAKTDP
FCPIFRLGKIVENAGHSFQDMAVEGGIMGIQVNWDCNLDRAASLCLPRYSFRRLDTRDVEHNVSPGYNFRFAKYY
RDLAGNEQRTLIKAYGIRFDIIVFGKAGKFDIIPTMINIGSGLALLGMATVLCDIIVLYCMKKRLYYREKKYKYV
EDYEQGLASELDQ

FIGURE 831

CCGAGCCGAGCGCCGAGCAGGGAGCGGGCGGCCGCGCTCCGGGCCGGGGTCCCGGGGGAGCAGATCCTCAGAATG
GCCCTTGGTGCTGCAGGCGCGGTGGGCTCCGGGCCCAGGCACCGAGGGGGCACTGGATGACTCTCCAGGTGCAGG
ACCCTGCCATCT**ATG**ACTCCAGGTCTTCAGCACCCACCCACCGTGGTACAGCGCCCCGGGATGCCGTCTGGAGCC
CGGATGCCCCACCAGGGGGCGCCCATGGGCCCCCCGGGCTCCCCGTACATGGGCAGCCCCGCCGTGCGACCCGGC
CTGGCCCCCGCGGGCATGGAGCCCGCCCGCAAGCGAGCAGCGCCCCCGCCCGGGCAGAGCCAGGCACAGAGCCAG
GGCCAGCCGGTGCCCACCGCCCCCGCGCGGAGCCGCAGTGCCAAGAGGAGGAAGATGGCTGACAAAATCCTCCCT
CAAAGGATTCGGGAGCTGGTCCCCGAGTCCCAGGCTTACATGGACCTCTTGGCATTTGAGAGGAAACTGGATCAA
ACCATCATGCGGAAGCGGGTGGACATCCAGGAGGCTCTGAAGAGGCCCATGAAGCAAAAGCGGAAGCTGCGACTC
TATATCTCCAACACTTTTAACCCTGCGAAGCCTGATGCTGAGGATTCCGACGGCAGCATTGCCTCCTGGGAGCTA
CGGGTGGAGGGGAAGCTCCTGGATGATCCCAGCAAACAGAAGCGGAAGTTCTCTTCTTTCTTCAAGAGTTTGGTC
ATCGAGCTGGACAAAGATCTTTATGGCCCTGACAACCACCTCGTTGAGTGGCATCGGACACCCACGACCCAGGAG
ACGGACGGCTTCCAGGTGAAACGGCCTGGGGACCTGAGTGTGCGCTGCACGCTGCTCCTCATGCTGGACTACCAG
CCTCCCCAGTTCAAACTGGATCCCCGCCTAGCCCGGCTGCTGGGGCTGCACACACAGAGCCGCTCAGCCATTGTC
CAGGCCCTGTGGCAGTATGTGAAGACCAACAGGCTGCAGGACTCCCATGACAAGGAATACATCAATGGGGACAAG
TATTTCCAGCAGATTTTTGATTGTCCCCGGCTGAAGTTTTCTGAGATTCCCCAGCGCCTCACAGCCCTGCTATTG
CCCCCTGACCCAATTGTCATCAACCATGTCATCAGCGTGGACCCTTCAGACCAGAAGAAGACGGCGTGCTATGAC
ATTGACGTGGAGGTGGAGGAGCCATTAAAGGGGCAGATGAGCAGCTTCCTCCTATCCACGGCCAACCAGCAGGAG
ATCAGTGCTCTGGACAGTAAGATCCATGAGACGATTGAGTCCATAAACCAGCTCAAGATCCAGAGGGACTTCATG
CTAAGCTTCTCCAGAGACCCCAAAGGCTATGTCCAAGACCTGCTCCGCTCCCAGAGCCGGGACCTCAAGGTGATG
ACAGATGTAGCCGGCAACCCTGAAGAGGAGCGCCGGGCTGAGTTCTACCACCAGCCCTGGTCCCAGGAGGCCGTC
AGTCGCTACTTCTACTGCAAGATCCAGCAGCGCAGGCAGGAGCTGGAGCAGTCGCTGGTTGTGCGCAACACC**TAG**

GAGCCCAAAAATAAGCAGCACGACGGAACTTTCAGCCGTGTCCCGGGCCCCAGCATTTTGCCCCGGGCTCCAGCA
TCACTCCTCTGCCACCTTGGGGTGTGGGGCTGGATTAAAAGTCATTCATCTGACA

FIGURE 832

MTPGLQHPPTVVQRPGMPSGARMPHQGRPWAPRAPRTWAAPPCDPAWPPRDGARPQASSAPARQSQAQSQGQPEP
TAPARSRSAKRRKMADKILPQRIRELVPESQAYMDLLAFERKLDQTIMRKGVDIQEALKRPMKQKRKLRLYISNT
FNPAKSDAEDSDGSIASWELRVEGKLLDDPSKQKRKFSSFFKSLVIELDKDLYGPDNHLVEWHRTPTTQETDGFQ
VKRPGDLSVRCTLLLMLDYQPPQFKLDPRLARLLGLHTQSRSAIVQALWQYVKTNRLQDSHDKEYINGDKYFQQI
FDCPRLKFSEIPQRLTALLLPPDPIVINHVISVDPSDQKKTACYDIDVEVEEPLKGQMSSFLLSTANQQEISPLD
SKIHETIESINQLKIQRDFMLSFSRDPKGYVQDLLRSQSRDLKVMTDVAGNPEEERRAEFYHQPWSQEAVSRYFY
CKIQQRRQELEQSLVVRNT

FIGURE 833

TCCTGCGTTGCTGGGAAGTTCTGGAAGGAAGC**ATG**TGCTCCAGAGGTTGGGATTCGTGTCTGGCTCTGGAATTGC
TACTGCTGCCTCTGTCACTCCTGGTGACCAGCATTCAAGGTCACTTGGTACATATGACCGTGGTCTCCGGCAGCA
ACGTGACTCTGAACATCTCTGAGAGCCTGCCTGAGAACTACAAACAACTAACCTGGTTTTATACTTTCGACCAGA
AGATTGTAGAATGGGATTCCAGAAAATCTAAGTACTTTGAATCCAAATTTAAAGGCAGGGTCAGACTTGATCCTC
AGAGTGGCGCACTGTACATCTCTAAGGTCCAGAAAGAGGACAACAGCACCTACATCATGAGGGTGTTGAAAAAGA
CTGGGAATGAGCAAGAATGGAAGATCAAGCTGCAAGTGCTTGACCCTGTACCCAAGCCTGTCATCAAAATTGAGA
AGATAGAAGACATGGATGACAACTGTTATTTGAAACTGTCATGTGTGATACCTGGCGAGTCTGTAAACTACACCT
GGTATGGGGACAAAAGGCCCTTCCCAAAGGAGCTCCAGAACAGTGTGCTTGAAACCACCCTTATGCCACATAATT
ACTCCAGGTGTTATACTTGCCAAGTCAGCAATTCTGTGAGCAGCAAGAATGGCACGGTCTGCCTCAGTCCACCCT
GTACCCTGGCCCGGTCCTTTGGAGTAGAATGGATTGCAAGTTGGCTAGTGGTCACGGTGCCCACCATTCTTGGCC
TGTTACTTACC**TGA**GATGAGCTCTTTTAACTCAAGCGAAACTTCAAGGCCAGAAGATCTTGCCTGTTGGTGATCA
TGCTCCTCACCAGGACAGAGACTGTATAGGCTGACCAGAAGCATGCTGCTGAATTATCAACGAGGATTTTCAAGT
TAACTTTTAAATACTGGTTATTATTTAATTTTATATCCCTTTGTTGTTTTCTAGTACACAGAGATATAGAGATAC
ACATGCTTTTTTCCCACCCAAAATTGTGACAACATTATGTGAATGTTTTATTATTTTTTAAAATAAACATTTGAT
ATAATTATCAATTAACTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 834

MCSRGWDSCLALELLLLPLSLLVTSIQGHLVHMTVVSGSNVTLNISESLPENYKQLTWFYTFDQKIVEWDSRKSK
YFESKFKGRVRLDPQSGALYISKVQKEDNSTYIMRVLKKTGNEQEWKIKLQVLDPVPKPVIKIEKIEDMDDNCYL
KLSCVIPGESVNYTWYGDKRPFPKELQNSVLETTLMPHNYSRCYTCQVSNSVSSKNGTVCLSPPCTLARSFGVEW
IASWLVVTVPTILGLLLT

FIGURE 835

CGCCTTCCCTCCAATCAGCACCGGGGCCGGCTAGCCAGGGGCCGGCCGCGCGGGGTGTGTGAGGACGCGCTCCCA
GTCGCTGAGTGCCTGAGCCGGGAAGCAGTTGCTGTGGTACCTGCGCTGCCCGAGCGGAGTGGATGGCAGAGGTGG
GCTGTAGAGCCAAAGTGGGGTGGGAGCGCGAAG**ATG**GCAGCTGCTGAGGAGGAGCCGAAGCCCAAAAAGCTGAAG
GTGGAGGCGCCGCAAGCGCTGAGAGAAAATATTCTCTTTGGAATGGGAAATCCTCTGCTTGACATCTCTGCTGTA
GTGGACAAAGATTTCCTTGATAAGTATTCTCTGAAACCAAATGACCAAATCTTGGCTGAAGACAAACACAAGGAA
CTGTTTGATGAACTTGTGAAAAAATTCAAAGTCGAATATCATGCTGGTGGCTCTACCCAGAATTCAATTAAAGTG
GCTCAGTGGATGATTCAACAGCCACACAAAGCAGCAACATTTTTTGGATGCATTGGGATAGATAAATTTGGGGAG
ATCCTGAAGAGAAAAGCTGCTGAAGCCCATGTGGATGCTCATTACTACGAGCAGAATGAGCAGCCAACAGGAACT
TGTGCTGCATGCATCACTGGTGACAACAGGTCCCTCATAGCTAATCTTGCTGCTGCCAATTGTTATAAAAAGGAA
AAACATCTTGATCTGGAGAAAAACTGGATGTTGGTAGAAAAAGCAAGAGTTTGTTATATAGCAGGCTTTTTTCTT
CACGTTTCCCCAGAGTCAGTATTAAAGGTGGCTCACCATGCTTCTGAAAACAACAGGATTTTCACTTTGAATCTA
TCTGCACCGTTTATTAGCCAGTTCTACAAGGAATCATTGATGAAAGTTATGCCTTATGTTGATATACTTTTTGGA
AATGAGACAGAAGCTGCCACTTTTGCTAGAGAGCAAGGCTTTGAGACTAAAGACATTAAAGAGATAGCCAAAAAG
ACACAAGCCCTGCCAAAGATGAACTCAAAGAGGCAGCGAATCGTGATCTTCACCCAAGGGAGAGATGACACTATA
ATGGCTACAGAAAGTGAAGTCACTGCTTTTGCTGTCTTGGATCAAGACCAGAAAGAAATTATTGATACCAATGGA
GCTGGAGATGCATTTGTTGGAGGTTTTCTGTCTCAACTGGTCTCTGACAAGCCTCTGACTGAATGTATCCGTGCT
GGCCACTATGCAGCAAGCATCATAATTAGACGGACTGGCTGCACCTTTCCTGAGAAGCCAGACTTCCAC**TGA**TGG
AAGAGCTGAAAACACAAGCCCAGGAGTGCAGACACTGCCCTAATTGCTTCCTGACAATTCCCATATTAATAAAGA
AGAAAATTATCTGCCATTTTTTCCTACTATAATAATGCTGAATCTTAATTTAGAGGGTACAAGGGTATGGTAATG
CTTGTAGAATCTTTATTATCTCAACAATCTAAAAAATGATGTTTATTTCCATAGTTTGATAGTGCCACTTAAATG
CCAATTAAACAAGAATATAACATTTCAATAGAAATTTTTATTTCATTTTCAATTACTTTGTAAATTCGTGTGTAT
TTAGTACACTGATTTGTTTTTTACATTTCTGCTTTGAATGCAGATGCAATTTAATATAATAGATTTTTTAATGAA
TTAATCTTAACATAGTAATCTTTAGCTTTTTATACAAATATATTTAATTTAGGAGTATATGTGTGTCTATACACA
CACATACATAAATATACCACATATACACCTGATAGTCAAATAAGGTACAGAAATTTTATCTTGTCAATTATGCCA
AATAATCTCTTTAATGTGCACTCAACATGTAATAAACTTTGGATAATTAAAAAAAAAAAA

FIGURE 836

MAAAEEEPKPKKLKVEAPQALRENILFGMGNPLLDISAVVDKDFLDKYSLKPNDQILAEDKHKELFDELVKKFKV
EYHAGGSTQNSIKVAQWMIQQPHKAATFFGCIGIDKFGEILKRKAAEAHVDAHYYEQNEQPTGTCAACITGDNRS
LIANLAAANCYKKEKHLDLEKNWMLVEKARVCYIAGFFLHVSPESVLKVAHHASENNRIFTLNLSAPFISQFYKE
SLMKVMPYVDILFGNETEAATFAREQGFETKDIKEIAKKTQALPKMNSKRQRIVIFTQGRDDTIMATESEVTAFA
VLDQDQKEIIDTNGAGDAFVGGFLSQLVSDKPLTECIRAGHYAASIIIRRTGCTFPEKPDFH

FIGURE 837

GGTGTGTCCCGGGTGTGGGGAGGCGACAGAGCCCTGGCACTTGAGGGTTGAGGGGGCCTCCCCAGCGCGGCGAAC
CGTCTAGCCTCCGGAGGCCAGGCCGTGAGTGCGGGAGGTATACGCCAAGGCGGAAGAATTTTGCCACTCACTACC
TGTGTGACCTCGGGTAAATTAGCCTTGGAACGTCAGTTTCTTCGTCTCTATAATTGAAATAATAATAGTACCTCT
CTCAGGATTGTTGTGAGCCGTCAGTGAAACACTTAGAGCAGTTTCTGGCACATGGTAGAATTGGGCTATTTGCTT
GAAGCTTCTTGGTGGCCCTTGCTAGCCCAGGAAGAAACTTACATTTTGATTTTTTTGTACC**ATG**GCTTTGGTTCA
CAAATTGCTGCATGGTACTTATTTTCTCAGAAAATTCTCTAAGCCAACTTCTGCCTTGTATCCATTTTTGGGTAT
CCGCTTTGCAGAGTATTCCAGTAGTCTTCAGAAACCAGTGGCTTCTCCTGGCAAAGCCTCCTCACAGAGGAAGAC
TGAAGGGGATTTGCAAGGAGATCACCAGAAAGAAGTTGCTTTGGATATAACTTCTTCTGAGGAGAAGCCTGATGT
TAGTTTCGATAAAGCAATTAGAGATGAAGCAATATACCATTTTAGGCTTTTGAAGGATGAAATTGTGGATCATTG
GAGAGGACCGGAAGGCCACCCTCTGCATGAGGTCTTGCTGGAACAAGCCAAGGTTGTCTGGCAATTCCGGGGGAA
AGAAGATTTGGATAAGTGGACAGTGACTTCTGATAAGACGATTGGAGGCAGAAGTGAAGTGTTTTTGAAAATGGG
CAAGAATAACCAAAGTGCACTGCTATATGGAACTCTGAGCTCTGAGGCGCCTCAGGACGGCGAGTCTTCCCGAAG
TGGGTACTGTGCAATGATATCCAGGATTCCAAGGGGTGCTTTTAAGAGGAAGATGTCTTACGATTGGTCCCAGTT
CAATACTCTGTATCTCCGTGTACGTGGGGATGGTCGGCCTTGGATGGTGAATATCAAGGAGGACACAGATTTCTT
CCAGAGGACGAATCAGATGTATAGTTACTTCATGTTCACCCGCGGGGGACCCTACTGGCAGGAGGTCAAGATTCC
TTTTTCCAAATTTTTCTTCTCTAATCGAGGAAGAATCCGGGATGTTCAGCATGAGCTTCCGCTTGATAAGATCTC
TTCTATAGGATTCACCTTGGCTGATAAAGTGGATGGTCCATTCTTCCTGGAGATAGATTTTATTGGCGTGTTTAC
TGATCCAGCTCATACAGAAGAATTTGCCTATGAAAATTCTCCAGAGCTTAACCCAAGGCTTTTTAAA**TAA**AGATC
ATATGGTAGTTTTGTTTTACTAATCTAAGGGTACTAGCATCTACAATGATATAGACAAAATAAAATATTTCTTTA
ATGGCATCCAAA

FIGURE 838

MALVHKLLHGTYFLRKFSKPTSALYPFLGIRFAEYSSSLQKPVASPGKASSQRKTEGDLQGDHQKEVALDITSSE
EKPDVSFDKAIRDEAIYHFRLLKDEIVDHWRGPEGHPLHEVLLEQAKVVWQFRGKEDLDKWTVTSDKTIGGRSEV
FLKMGKNNQSALLYGTLSSEAPQDGESSRSGYCAMISRIPRGAFKRKMSYDWSQFNTLYLRVRGDGRPWMVNIKE
DTDFFQRTNQMYSYFMFTRGGPYWQEVKIPFSKFFFSNRGRIRDVQHELPLDKISSIGFTLADKVDGPFFLEIDF
IGVFTDPAHTEEFAYENSPELNPRLFK

FIGURE 839

GGCACGAGGGGGAGGAGGAGGAATGTGGAAGGTGGCGGCGCGCGAGCTGACAGGCGGTTCCTCGGGCGGGCTGCG
GCGACGGCCCGAGCGCTTCTCCTTCGCCGAGGTTGCGCGCCCCCTCCTCGCCGTGCCCCGGGCCCGCGCGGGATC
GTGCGTCGTCCCGCCGCGTCCCTGAAGGGAAGGAAGCGAGGCGGCGGCGGCGGCGCCCGGGAGCCGGAGCCTTCG
CGGCGTCCACGTCCCTCCCCCGCTGCACCCCGCCCCGGCGCGAGAGGAGAGCGCGAGAGCCCCAGCCGCGGGCGG
GCGGGCGGCGAAG**ATG**GCAGAGGCACCGGCTTCCCCGGCCCCGCTCTCTCCGCTCGAAGTGGAGCTGGACCCGGA
GTTCGAGCCCCAGAGCCGTCCGCGATCCTGTACGTGGCCCCTGCAAAGGCCGGAGCTCCAAGCGAGCCCTGCCAA
GCCCTCGGGGGAGACGGCCGCCGACTCCATGATCCCCGAGGAGGAGGACGATGAAGACGACGAGGACGGCGGGGG
ACGGGCCGGCTCGGCCATGGCGATCGGCGGCGGCGGCGGGAGCGGCACGCTGGGCTCCGGGCTGCTCCTTGAGGA
CTCGGCCCGGGTGCTGGCACCCGGAGGGCAAGACCCCGGGTCTGGGCCAGCCACCGCGGCGGGCGGGCTGAGCGG
GGGTACACAGGCGCTGCTGCAGCCTCAGCAACCGCTGCCACCGCCGCAGCCGGGGGCGGCTGGGGGCTCCGGGCA
GCCGAGGAAATGTTCGTCGCGGCGGAACGCCTGGGGAAACCTGTCCTACGCGGACCTGATCACCCGCGCCATCGA
GAGCTCCCCGGACAAACGGCTCACTCTGTCCCAGATCTACGAGTGGATGGTGCGTTGCGTGCCCTACTTCAAGGA
TAAGGGCGACAGCAACAGCTCTGCCGGCTGGAAGAACTCCATCCGGCACAACCTGTCACTGCATAGTCGATTCAT
GCGGGTCCAGAATGAGGGAACTGGCAAGAGCTCTTGGTGGATCATCAACCCTGATGGGGGGAAGAGCGGAAAAGC
CCCCCGGCGGCGGGCTGTCTCCATGGACAATAGCAACAAGTATACCAAGAGCCGTGGCCGCGCAGCCAAGAAGAA
GGCAGCCCTGCAGACAGCCCCCGAATCAGCTGACGACAGTCCCTCCCAGCTCTCCAAGTGGCCTGGCAGCCCCAC
GTCACGCAGCAGTGATGAGCTGGATGCGTGGACGGACTTCCGTTCACGCACCAATTCTAACGCCAGCACAGTCAG
TGGCCGCCTGTCGCCCATCATGGCAAGCACAGAGTTGGATGAAGTCCAGGACGATGATGCGCCTCTCTCGCCCAT
GCTCTACAGCAGCTCAGCCAGCCTGTCACCTTCAGTAAGCAAGCCGTGCACGGTGGAACTGCCACGGCTGACTGA
TATGGCAGGCACCATGAATCTGAATGATGGGCTGACTGAAAACCTCATGGACGACCTGCTGGATAACATCACGCT
CCCGCCATCCCAGCCATCGCCCACTGGGGGACTCATGCAGCGGAGCTCTAGCTTCCCGTATACCACCAAGGGCTC
GGGCCTGGGCTCCCCAACCAGCTCCTTTAACAGCACGGTGTTCGGACCTTCATCTCTGAACTCCCTACGCCAGTC
TCCCATGCAGACCATCCAAGAGAACAAGCCAGCTACCTTCTCTTCCATGTCACACTATGGTAACCAGACACTCCA
GGACCTGCTCACTTCGGACTCACTTAGCCACAGCGATGTCATGATGACACAGTCGGACCCCTTGATGTCTCAGGC
CAGCACCGCTGTGTCTGCCCAGAATTCCCGCCGGAACGTGATGCTTCGCAATGATCCGATGATGTCCTTTGCTGC
CCAGCCTAACCAGGGAAGTTTGGTCAATCAGAACTTGCTCCACCACCAGCACCAAACCCAGGGCGCTCTTGGTGG
CAGCCGTGCCTTGTCGAATTCTGTCAGCAACATGGGCTTGAGTGAGTCCAGCAGCCTTGGGTCAGCCAAACACCA
GCAGCAGTCTCCTGTCAGCCAGTCTATGCAAACCCTCTCGGACTCTCTCTCAGGCTCCTCCTTGTACTCAACTAG
TGCAAACCTGCCCGTCATGGGCCATGAGAAGTTCCCCAGCGACTTGGACCTGGACATGTTCAATGGGAGCTTGGA
ATGTGACATGGAGTCCATTATCCGTAGTGAACTCATGGATGCTGATGGGTTGGATTTTAACTTTGATTCCCTCAT
CTCCACACAGAATGTTGTTGGTTTGAACGTGGGGAACTTCACTGGTGCTAAGCAGGCCTCATCTCAGAGCTGGGT
GCCAGGC**TGA**AGGATCACTGAGGAAGGGGAAGTGGGCAAAGCAGACCCTCAAACTGACACAAGACCTACAGAGAA
AACCCTTTGCCAAATCTGCTCTCAGCAAGTGGACAGTGATACCGTTTACAGCTTAACACCTTTGTGAATCCCACG
CCATTTTCCTAACCCAGCAGAGACTGTTAATGGCCCCTTACCCTGGGTGAAGCACTTACCCTTGGAACAGAACTC
TAAAAAGTATGCAAAATCTTCCTTGTACAGGGTGGTGAGCCGCCTGCCAGTGGAGGACAGCACCCCTCAGCACCA
CCCACCCTCATTCAGAGCACACCGTGAGCCCCCGTCGGCCATTCTGTGGTGTTTTAATATTGCGATGGTTTATGG
GACGTTTTAAGTGTTGTTCTTGTGTTTGTTTTCCTTTGACTTTCTGAGTTTTTCACATGCATTAACTTGCGGTAT
TTTTCTGTTAAAATGTTAACCGTCCTTCCCCTAGCAAATTTAAAAACAGAAAGAAAATGTTGTACCAGTTACCAT
TCCGGGTTCGAGCATCACAAGCTTTTGAGCGCATGGAACTCCATAAACTAACAAATTACATAAACTAAAGGGGGA
TTTTCTTTCTTCTTTTGTTTGGTAGAAAATTATCCTTTTCTAAAAACTGAACAATGGCACAATTGTTTGCTATGT
GCACCCGTCCAGGACAGAACCGTGCATAGGCAAAAGGAGTGGAGCACAGCGTCCGGCCCAGTGTGTTTCCGGTTC
TGAGTCAGGGTGATCTGTGGACGGGACCCCAGCACCAAGTCTACGGGTGCCAGATCAGTAGGGCCTGTGATTTCC
TGTCAGTGTCCTCAGCTAATGTGAACAGTGTTGGTCTGCTGGTTAGAAACTAGAATATTGATATTTTCAGGAAAG
AAATCAGCTCAGCTCTCCACTCATTGCCAAATGTCACTAAAGGGTTTAGTTTTAAGGAGAAAGAAAAAAAAAAAA
AAAAAAAAA

FIGURE 840

MAEAPASPAPLSPLEVELDPEFEPQSRPRSCTWPLQRPELQASPAKPSGETAADSMIPEEEDDEDDEDGGGRAGS
AMAIGGGGGSGTLGSGLLLEDSARVLAPGGQDPGSGPATAAGGLSGGTQALLQPQQPLPPPQPGAAGGSGQPRKC
SSRRNAWGNLSYADLITRAIESSPDKRLTLSQIYEWMVRCVPYFKDKGDSNSSAGWKNSIRHNLSLHSRFMRVQN
EGTGKSSWWIINPDGGKSGKAPRRRAVSMDNSNKYTKSRGRAAKKKAALQTAPESADDSPSQLSKWPGSPTSRSS
DELDAWTDFRSRTNSNASTVSGRLSPIMASTELDEVQDDDAPLSPMLYSSSASLSPSVSKPCTVELPRLTDMAGT
MNLNDGLTENLMDDLLDNITLPPSQPSPTGGLMQRSSSFPYTTKGSGLGSPTSSFNSTVFGPSSLNSLRQSPMQT
IQENKPATFSSMSHYGNQTLQDLLTSDSLSHSDVMMTQSDPLMSQASTAVSAQNSRRNVMLRNDPMMSFAAQPNQ
GSLVNQNLLHHQHQTQGALGGSRALSNSVSNMGLSESSSLGSAKHQQQSPVSQSMQTLSDSLSGSSLYSTSANLP
VMGHEKFPSDLDLDMFNGSLECDMESIIRSELMDADGLDFNFDSLISTQNVVGLNVGNFTGAKQASSQSWVPG

FIGURE 841

CGGCGCGATGCGCGGAGACCCCCGCGGGGGCGGCGGCGGCCGTGAGCCCCG**ATG**AGGCCCGAGCGTCCCCGGCCG
CGCGGCAGCGCCCCCGGCCCGATGGAGACCCCGCCGTGGGACCCAGCCCGCAACGACTCGCTGCCGCCCACGCTG
ACCCCGGCCGTGCCCCCCTACGTGAAGCTTGGCCTCACCGTCGTCTACACCGTGTTCTACGCGCTGCTCTTCGTG
TTCATCTACGTGCAGCTCTGGCTGGTGCTGCGTTACCGCCACAAGCGGCTCAGCTACCAGAGCGTCTTCCTCTTT
CTCTGCCTCTTCTGGGCCTCCCTGCGGACCGTCCTCTTCTCCTTCTACTTCAAAGACTTCGTGGCGGCCAATTCG
CTCAGCCCCTTCGTCTTCTGGCTGCTCTACTGCTTCCCTGTGTGCCTGCAGTTTTTCACCCTCACGCTGATGAAC
TTGTACTTCACGCAGGTGATTTTCAAAGCCAAGTCAAAATATTCTCCAGAATTACTCAAATACCGGTTGCCCCTC
TACCTGGCCTCCCTCTTCATCAGCCTTGTTTTCCTGTTGGTGAATTTAACCTGTGCTGTGCTGGTAAAGACGGGA
AATTGGGAGAGGAAGGTTATCGTCTCTGTGCGAGTGGCCATTAATGACACGCTCTTCGTGCTGTGTGCCGTCTCT
CTCTCCATCTGTCTCTACAAAATCTCTAAGATGTCCTTAGCCAACATTTACTTGGAGTCCAAGGGCTCCTCCGTG
TGTCAAGTGACTGCCATCGGTGTCACCGTGATACTGCTTTACACCTCTCGGGCCTGCTACAACCTGTTCATCCTG
TCATTTTCTCAGAACAAGAGCGTCCATTCCTTTGATTATGACTGGTACAATGTATCAGACCAGGCAGATTTGAAG
AATCAGCTGGGAGATGCTGGATACGTATTATTTGGAGTGGTGTTATTTGTTTGGGAACTCTTACCTACCACCTTA
GTCGTTTATTTCTTCCGAGTTAGAAATCCTACAAAGGACCTTACCAACCCTGGAATGGTCCCCAGCCATGGATTC
AGTCCCAGATCTTATTTCTTTGACAACCCTCGAAGATATGACAGTGATGATGACCTTGCCTGGAACATTGCCCCT
CAGGGACTTCAGGGAGGTTTTGCTCCAGATTACTATGATTGGGGACAACAAACTAACAGCTTCCTGGCACAAGCA
GGAACTTTGCAAGACTCAACTTTGGATCCTGACAAACCAAGCCTTGGG**TAG**CATCAGTTAACAGTTTTATGGACG
ATTCCTCAGATGAAAAGCTTCAGAAAAGCATAGTGACAGCTGAATTTTTAGGGCACTTTTCCTTAAGAAATAGAA
CTTGATTTTTATTTGTTACAGGTTTCCAATGGCCCCATAGGAATAAGCAATAATGTAGACTGATAAACCCTTATT
TTAGTACTAAAGAGGGAGCCTTGCTATTTCAGTGGGTATAATTTAAACTTTTTAAAGAAAATCTGTACTTTTATA
AAGATGTATTTTGTATAACTTAAATAATAATGCTAAAGTATACTAGGGTTTTTTTTTCTTGAGAATGTTACTGCA
ATCATGTTGTAGTTTGCACAGACTTTTATGCATAATTCACTTTAAAAATATAGAATATATGGTCTAATAGTTTTT
TAAAGCTTTTGGACTAAAGTATTCCACAAATCTTACCTCTTTAGGTCACTGATGGTCACTCCGATTCTGAGTGCC
ACATTGGTAGACTCCTAAAATACAGTTGACAACTTAGCCAATTGCAACTCCAGTGTTGATAATTAAAATGAAATG
GTAAAGCAGCAGACTGTAAGGTCTTTAGAGATTTTTTTTTAAGGTTCAGGCCGTAGGTTCCTCAAGGAATCTCTT
AAGTTTTGCCCAAAGACTGGTACTTCCTTTCAGTAGGGCGCTAATGTATACACATTAATGATAAGTTGATAACAT
TAAAAATGTAGCTGACTTATCCTATTAAACCTCCTCTGCTATGTTCAC

FIGURE 842

MRPERPRPRGSAPGPMETPPWDPARNDSLPPTLTPAVPPYVKLGLTVVYTVFYALLFVFIYVQLWLVLRYRHKRL
SYQSVFLFLCLFWASLRTVLFSFYFKDFVAANSLSPFVFWLLYCFPVCLQFFTLTLMNLYFTQVIFKAKSKYSPE
LLKYRLPLYLASLFISLVFLLVNLTCAVLVKTGNWERKVIVSVRVAINDTLFVLCAVSLSICLYKISKMSLANIY
LESKGSSVCQVTAIGVTVILLYTSRACYNLFILSFSQNKSVHSFDYDWYNVSDQADLKNQLGDAGYVLFGVVLFV
WELLPTTLVVYFFRVRNPTKDLTNPGMVPSHGFSPRSYFFDNPRRYDSDDDLAWNIAPQGLQGGFAPDYYDWGQQ
TNSFLAQAGTLQDSTLDPDKPSLG

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FIGURE 843

GCCCGCCGGTCCACGCCGCGCACCGCTCCGAGGGCCAGCGCCACCCGCTCCGCAGCCGGCACC**ATG**CGCGAGATC
GTGCACATCCAGGCGGGCCAGTGCGGCAACCAGATCGGCGCCAAGTTTTGGGAGGTCATCAGCGATGAGCATGGG
ATCGACCCCACAGGCAGTTACCATGGAGACAGTGACTTGCAGCTGGAGAGAATCAACGTGTACTACAATGAGGCT
GCTGGTAACAAATATGTACCTCGGGCCATCCTGGTGGATCTGGAGCCTGGCACCATGGACTCTGTCAGGTCTGGA
CCCTTCGGCCAGATCTTCAGACCAGACAACTTCGTGTTCGGCCAGAGTGGAGCCGGGAATAACTGGGCCAAGGGC
CACTACACAGAGGGAGCCGAGCTGGTCGACTCGGTCCTGGATGTGGTGAGGAAGGAGTCAGAGAGCTGTGACTGT
CTCCAGGGCTTCCAGCTGACCCACTCTCTGGGGGGCGGCACGGGGTCCGGGATGGGCACCCTGCTCATCAGCAAG
ATCCGGGAAGAGTACCCAGACCGCATCATGAACACCTTCAGCGTCATGCCCTCACCCAAGGTGTCAGACACGGTG
GTGGAGCCCTACAACGCCACCCTCTCGGTCCACCAGCTGGTGGAAAACACAGATGAAACCTACTCCATTGATAAC
GAGGCCCTGTATGACATCTGCTTCCGCACCCTGAAGCTGACCACCCCCACCTACGGGGACCTCAACCACCTGGTG
TCGGCCACCATGAGCGGGGTCACCACCTGCCTGCGCTTCCCGGGCCAGCTGAACGCAGACCTGCGCAAGCTGGCG
GTGAACATGGTGCCCTTCCCTCGCCTGCACTTCTTCATGCCCGGCTTCGCGCCCCTGACCAGCCGGGGCAGCCAG
CAGTACCGGGCGCTCACGGTGCCCGAGCTCACCCAGCAGATGTTCGACTCCAAGAACATGATGGCCGCCTGCGAC
CCGCGCCACGGCCGCTACCTGACGGTGGCTGCCATCTTCCGGGGCCGCATGTCCATGAAGGAGGTGGACGAGCAG
ATGCTCAACGTGCAGAACAAGAACAGCAGCTACTTCGTGGAGTGGATCCCCAACAACGTGAAGACGGCCGTGTGC
GACATCCCGCCCCGCGGCCTGAAGATGTCGGCCACCTTCATCGGCAACAGCACGGCCATCCAGGAGCTGTTCAAG
CGCATCTCCGAGCAGTTCACGGCCATGTTCCGGCGCAAGGCCTTCCTGCACTGGTACACGGGCGAGGGCATGGAC
GAGATGGAGTTCACCGAGGCCGAGAGCAACATGAACGACCTGGTGTCCGAGTACCAGCAGTACCAGGACGCCACG
GCCGACGAACAAGGGGAGTTCGAGGAGGAGGAGGGCGAGGACGAGGCT**TAA**AAACTTCTCAGATCAATCGTGCAT
CCTTAGTGAACTTCTGTTGTCCTCAAGCATGGTCTTTCTACTTGTAAACTATGGTGCTCAGTTTTGCCTCTGTTA
GAAATTCACACTGTTGATGTAATGATGTGGAACTCCTCTAAAAATTACAGTATTGTCTGTGAAGGTATCTATACT
AATAAAAAAGCATGTGTAG

FIGURE 844

MREIVHIQAGQCGNQIGAKFWEVISDEHGIDPTGSYHGDSDLQLERINVYYNEAAGNKYVPRAILVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKESESCDCLQGFQLTHSLGGGTGSGMGTL
LISKIREEYPDRIMNTFSVMPSPKVSDTVVEPYNATLSVHQLVENTDETYSIDNEALYDICFRTLKLTTPTYGDL
NHLVSATMSGVTTCLRFPGQLNADLRKLAVNMVPFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQMFDSKNMM
AACDPRHGRYLTVAAIFRGRMSMKEVDEQMLNVQNKNSSYFVEWIPNNVKTAVCDIPPRGLKMSATFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATADEQGEFEEEEGEDEA

FIGURE 845

GCCACGGCGCGGACGCC**ATG**CACACGGACCCTGACTACTCGGCTGCCTATGTCGTCATAGAAACTGATGCAGAAG
ATGGAATCAAGGGGTGTGGAATTACCTTCACTCTGGGAAAAGGCACTGAAGTTGTTGTCTGTGCTGTGAATGCCC
TCGCCCACCATGTGCTCAACAAGGACCTCAAGGACATTGTTGGTGACTTCAGAGGCTTCTATAGGCAGCTCACAA
GTGATGGGCAGCTCAGATGGATTGGTCCAGAAAAGGGCGTGGTGCACCTGGCGACAGCGGCCGTCCTAAACGCGG
TGTGGGACTTGTGGGCCAAGCAGGAGGGAAAGCCTGTCTGGAAGTTACTTGTGGACATGGATCCCAGGATGCTGG
TATCCTGCATAGATTTCAGGTACATCACTGATGTCCTGACTGAGGAGGATGCCCTAGAAATACTGCAGAAAGGTC
AAATTGGTAAAAAAGAAAGAGAGAAGCAAATGCTGGCACAAGGATACCCTGCTTACACGACATCGTGCGCCTGGC
TGGGGTACTCAGATGACACGTTGAAGCAGCTCTGTGCCCAGGCGCTGAAGGATGGCTGGACCAGGTTTAAAGTAA
AGGTGGGTGCTGATCTCCAGGATGACATGCGAAGATGCCAAATCATCCGAGACATGATTGGACCGGAAAAGACTT
TGATGATGGATGCCAACCAGCGCTGGGATGTGCCTGAGGCGGTGGAGTGGATGTCCAAGCTGGCCAAGTTCAAGC
CATTGTGGATTGAGGAGCCAACCTCCCCTGATGACATTCTGGGGCACGCCACCATTTCCAAGGCACTGGTCCCAT
TAGGAATTGGCATTGCCACAGGAGAACAGTGCCACAATAGAGTGATATTTAAGCAACTCCTACAGGCGAAGGCCC
TGCAGTTCCTCCAGATTGACAGTTGCAGACTGGGCAGTGTCAATGAGAACCTCTCAGTATTGCTGATGGCCAAAA
AGTTTGAAATTCCTGTTTGCCCCCATGCTGGTGGAGTTGGCCTCTGTGAACTGGTGCAGCACCTGATTATATTTG
ACTACATATCAGTTTCTGCAAGCCTTGAAAATAGGGTGTGTGAGTATGTTGACCACCTGCATGAGCATTTCAAGT
ATCCCGTGATGATCCAGCGGGCTTCCTACATGCCTCCCAAGGATCCCGGCTACTCAACAGAAATGAAGGAGGAAT
CTGTAAAGAAACACCAGTATCCAGATGGTGAAGTTTGGAAGAAACTCCTTCCTGCTCAAGAAAAT**TAA**GTGCTCA
GCCCCAACAACTTTTTTCTTTCTGAAGTGAAAGGGCTTAAAATTTCTTGGAAATAGTTTTACAAAAATGGATTTA
AAAAATCCTACCGATCAAGATGAGTTCAGCTAGAAGTCATACCACCCTCAGGAATCAGCTAAGTAATTATTACTT
GATTCTTTTAGCAAATCAATGCACGTTATCCTACTTAATCCTTAAATAAGTTTAGATTTAACTAACCCAAAGTCC
AGGAGGATGTTCTTACAAAAATAGCTATATCAAGGGCTGGCACCTAGACATTAAACTGTACTTTGAAAATAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 846

MHTDPDYSAAYVVIETDAEDGIKGCGITFTLGKGIEVVVCAVNALAHHVLNKDLKDIVGDFRGFYRQLTSDGQLR
WIGPEKGVVHLATAAVLNAVWDLWAKQEGKPVWKLLVDMDPRMLVSCIDFRYITDVLTEEDALEILQKGQIGKKE
REKQMLAQGYPAYTTSCAWLGYSDDTLKQLCAQALKDGWTRFKVKVGADLQDDMRRCQIIRDMIGPEKTLMMDAN
QRWDVPEAVEWMSKLAKFKPLWIEEPTSPDDILGHATISKALVPLGIGIATGEQCHNRVIFKQLLQAKALQFLQI
DSCRLGSVNENLSVLLMAKKFEIPVCPHAGGVGLCELVQHLIIFDYISVSASLENRVCEYVDHLHEHFKYPVMIQ
RASYMPPKDPGYSTEMKEESVKKHQYPDGEVWKKLLPAQEN

FIGURE 847

TGCTCCCTGAACACTCGGAGGTGGCGGTGGATCTTACTCCTTCCAGCCAGTGAGGATCCAGCAACCTGCTCCGTG
CCTCCCGCGCCTGTTGGTTGGAAGTGACGACCTTGAAGATCGGCCGGTTGGAAGTGACGACCTTGAAGATCGGCG
GGCGCAGCGGGGCCGAGGGGGCGGGTCTGGCGCTAGGTCCAGCCCCTGCGTGCCGGGAACCCCAGAGGAGGTCGC
AGTTCAGCCCAGCTGAGGCCTGTCTGCAGAATCGACACCAACCAGCATC**ATG**TCCATGACACTGGGGTACTGGGA
CATCCGCGGGCTGGCCCACGCCATCCGCCTGCTCCTGGAATACACAGACTCAAGCTACGAGGAAAAGAAGTATAC
GATGGGGGACGCTCCTGACTATGACAGAAGCCAGTGGCTGAATGAAAAATTCAAGCTGGGCCTGGACTTTCCCAA
TCTGCCCTACTTGATTGATGGGGCTCACAAGATCACCCAGAGCAACGCCATCCTGTGCTACATTGCCCGCAAGCA
CAACCTGTGTGGGGAGACAGAAGAGGAGAAGATTCGTGTGGACATTTTGGAGAACCAGGCTATGGACGTCTCCAA
TCAGCTGGCCAGAGTCTGCTACAGCCCTGACTTTGAGAAACTGAAGCCAGAATACTTGGAGGAACTTCCTACAAT
GATGCAGCACTTCTCACAGTTCCTGGGGAAGAGGCCATGGTTTGTTGGAGACAAGATCACCTTTGTAGATTTCCT
CGCCTATGATGTCCTTGACCTCCACCGTATATTTGAGCCCAACTGCTTGGACGCCTTCCCAAATCTGAAGGACTT
CATCTCCCGCTTTGAGGGCTTGGAGAAGATCTCTGCCTACATGAAGTCCAGCCGCTTCCTCCCAAAACCTCTGTA
CACAAGGGTGGCTGTCTGGGGCAACAAG**TAA**TGCCTTGAAGGCCAGGAGGTGGGAGTGAGGAGCCCATACTCAGC
CTGCTGCCCAGGCTGTGCAGCGCAGCTGGACTCTGCATCCCAGCACCTGCCTCCTCGTTCCTTTCTCCTGTTTAT
TCCCATCTTTACCCCCAAGACTTTATTGGGCCTCTTCACTTCCCCTAAACCCCTGTCCCATGCAGGCCCTTTGAA
GCCTCAGCTACCTACTTTCCTTCATGAACATCCCCCTCCCAACACTACCCTTCCCTGCACTAAAGCCAGCCTGAC
CTTCCTTCCTGTTAGTGGTTGTATCTGCTTTGAAGGGCCTACCTGGCCCCTCGCCTGTGGAGCTCAGCCCTGAGC
TGTCCCCGTGTTGCATGACAGCATTGACTGGTTTACAGGCCCTGCTCCTGCAGCATGGCCCCTGCCTTAGGCCTA
CCTGATCAAAATAAAGCCTCAGCCACAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 848

MSMTLGYWDIRGLAHAIRLLLEYTDSSYEEKKYTMGDAPDYDRSQWLNEKFKLGLDFPNLPYLIDGAHKITQSNA
ILCYIARKHNLCGETEEEKIRVDILENQAMDVSNQLARVCYSPDFEKLKPEYLEELPTMMQHFSQFLGKRPWFVG
DKITFVDFLAYDVLDLHRIFEPNCLDAFPNLKDFISRFEGLEKISAYMKSSRFLPKPLYTRVAVWGNK

FIGURE 849A

CGGGGCTGCCGGGGCCGGGACTGGGGGAGCCGGGCCCGCGGGCCGCCTGCTGCCTCCGCCCGCGCCGGGGTCCCC
AGCCGCCCCCGCTGCCGTGTCCCCTGCGGCCGGCCAGCCGCGTCCCCCAGCCCCGGCCTCCCGCGGACCCATGCC
CGCCCGTATCGGCTACTACGAGATCGACCGCACCATCGGCAAGGGCAACTTCGCGGTGGTCAAGCGGGCCACGCA
CCTCGTCACCAAGGCCAAGGTTGCTATCAAGATCATAGATAAGACCCAGCTGGATGAAGAAAACTTGAAGAAGAT
TTTCCGGGAAGTTCAAATTATGAAGATGCTTTGCCACCCCCATATCATCAGGCTCTACCAGGTTATGGAGACAGA
ACGGATGATTTATCTGGTGACAGAATATGCTAGTGGAGGGGAAATATTTGACCACCTGGTGGCCCATGGTAGAAT
GGCAGAAAAGGAGGCACGTCGGAAGTTCAAACAGATCGTCACAGCTGTCTATTTTTGTCACTGTCGGAACATTGT
TCATCGTGATTTAAAAGCTGAAAATTTACTTCTGGATGCCAATCTGAATATCAAAATAGCAGATTTTGGTTTCAG
TAACCTCTTCACTCCTGGGCAGCTGCTGAAGACCTGGTGTGGCAGCCCTCCCTATGCTGCACCTGAACTCTTTGA
AGGAAAAGAATATGATGGGCCCAAAGTGGACATCTGGAGCCTTGGAGTTGTCCTCTACGTGCTTGTGTGCGGTGC
CCTGCCATTTGATGGAAGCACACTGCAGAATCTGCGGGCCCGCGTGCTGAGTGGAAAGTTCCGCATCCCATTTTT
TATGTCCACAGAATGTGAGCATTTGATCCGCCATATGTTGGTGTTAGATCCCAATAAGCGCCTCTCCATGGAGCA
GATCTGCAAGCACAAGTGGATGAAGCTAGGGGACGCCGATCCCAACTTTGACAGGTTAATAGCTGAATGCCAACA
ACTAAAGGAAGAAAGACAGGTGGACCCCCTGAATGAGGATGTCCTCTTGGCCATGGAGGACATGGGACTGGACAA
AGAACAGACACTGCAGGCGGAGCAGGCAGGTACTGCTATGAACATCAGCGTTCCCCAGGTGCAGCTGATCAACCC
AGAGAACCAAATTGTGGAGCCGGATGGGACACTGAATTTGGACAGTGATGAGGGTGAAGAGCCTTCCCCTGAAGC
ATTGGTGCGCTATTTGTCAATGAGGAGGCACACAGTGGGTGTGGCTGACCCACGCACGGAAGTTATGGAAGATCT
GCAGAAGCTCCTACCTGGCTTTCCTGGAGTCAACCCCCAGGCTCCATTCCTGCAGGTGGCCCCTAATGTGAACTT
CATGCACAACCTGTTGCCTATGCAAAACTTGCAACCAACCGGGCAACTTGAGTACAAGGAGCAGTCTCTCCTACA
GCCGCCCACGCTACAGCTGTTGAATGGAATGGGCCCCCTTGGCCGGAGGGCATCAGATGGAGGAGCCAACATCCA
ACTGCATGCCCAGCAGCTGCTGAAGCGCCCACGGGGACCCTCTCCGCTTGTCACCATGACACCAGCAGTGCCAGC
AGTTACCCCTGTGGACGAGGAGAGCTCAGACGGGGAGCCAGACCAGGAAGCTGTGCAGAGCTCTACCTACAAGGA
CTCCAACACTCTGCACCTCCCTACGGAGCGTTTCTCCCCTGTGCGCCGGTTCTCAGATGGGGCTGCGAGCATCCA
GGCCTTCAAAGCTCACCTGGAAAAAATGGGCAACAACAGCAGCATCAAACAGCTGCAGCAGGAGTGTGAGCAGCT
GCAGAAGATGTACGGGGGGCAGATTGATGAAAGAACCCTGGAGAAGACCCAGCAGCAGCATATGTTATACCAGCA
GGAGCAGCACCATCAAATTCTCCAGCAACAAATTCAAGACTCTATCTGTCCTCCTCAGCCATCTCCACCTCTTCA
GGCTGCATGTGAAAATCAGCCAGCCCTCCTTACCCATCAGCTCCAGAGGTTAAGGATTCAGCCTTCAAGCCCACC
CCCCAACCACCCCAACAACCATCTCTTCAGGCAGCCCAGTAATAGTCCTCCCCCCATGAGCAGTGCCATGATCCA
GCCTCACGGGGCTGCATCTTCTTCCCAGTTTCAAGGCTTACCTTCCCGCAGTGCAATCTTTCAGCAGCAACCTGA
GAACTGTTCCTCTCCTCCCAACGTGGCACTAACCTGCTTGGGTATGCAGCAGCCTGCTCAGTCACAGCAGGTCAC
CATCCAAGTCCAAGAGCCTGTTGACATGCTCAGCAACATGCCAGGCACAGCTGCAGGCTCCAGTGGGCGCGGCAT
CTCCATCAGCCCCAGTGCTGGTCAGATGCAGATGCAGCACCGTACCAACCTGATGGCCACCCTCAGCTATGGGCA
CCGTCCCTTGTCCAAGCAGCTGAGTGCTGACAGTGCAGAGGCTCACAGCTTGAACGTGAATCGGTTCTCCCCTGC
TAACTACGACCAGGCGCATTTACACCCCCATCTGTTTTCGGACCAGTCCCGGGGTTCCCCCAGCAGCTACAGCCC
TTCAACAGGAGTGGGGTTCTCTCCAACCCAAGCCCTGAAAGTCCCTCCACTTGACCAATTCCCCACCTTCCCTCC
CAGTGCACATCAGCAGCCGCCACACTATACCACGTCGGCACTACAGCAGGCCCTGCTGTCTCCCACGCCGCCAGA
CTATACAAGACACCAGCAGGTACCCCACATCCTTCAAGGACTGCTTTCTCCCCGGCATTCGCTCACCGGCCACTC
GGACATCCGGCTGCCCCCAACAGAGTTTGCACAGCTCATTAAAAGGCAGCAGCAACAACGGCAGCAGCAGCAGCA
ACAGCAGCAACAGCAAGAATACCAGGAACTGTTCAGGCACATGAACCAAGGGGATGCGGGGAGTCTGGCTCCCAG
CCTTGGGGGACAGAGCATGACAGAGCGCCAGGCTTTATCTTATCAAAATGCTGACTCTTATCACCACACGATCCA
GAACAGCGACGATGCTTATGTACAGCTGGATAACTTGCCAGGAATGAGTCTCGTGGCTGGGAAAGCACTTAGCTC
TGCCCGGATGTCGGATGCAGTTCTCAGTCAGTCTTCGCTCATGGGCAGCCAGCAGTTTCAGGATGGGGAAAATGA
GGAATGTGGGGCAAGCCTGGGAGGTCATGAGCACCCAGACCTGAGTGATGGCAGCCAGCATTTAAACTCCTCTTG
CTATCCATCTACGTGTATTACAGACATTCTGCTCAGCTACAAGCACCCCGAAGTCTCCTTCAGCATGGAGCAGGC
AGGCGTG**TAA**CAAGAAACAGAGAGAGAGCAAGAGGTCCCGAGTCCCCTCCTAGTCTTTCATCCTGAATTTGCACA
GAGGAAAGCGGGTGCCCGGCATGGCCATCCTGATGTTGCTGGCGGGATCCCCATGCACCTTGTCCTTCTCCACTG
ATACTGGCAGCTCGGCTCCTGGACCCAAGATCCCTTGAGTGGAATTCTGCAGTGCAAGAGCCCTTCGTGGGAGCT
GTCCCATGTTTCCATGGTCCCCAGTCTCCCCTCCACTTGGTGGGGTCACCAACTACTCACCAGAAGGGGGCTTAC

FIGURE 849B

CAAGAAAGCCCTAAAAAGCTGTTGACTTATCTGCGCTTGTTCCAACTCTTATGCCCCCAACCTGCCCTACCACCA
CCACGCGCTCAGCCTGATGTGTTTACATGGTACTGTATGTATGGGAGAGCAGACTGCACCCTCCAGCAACAACAG
ATGAAAGCCAGTGAGCCTACTAACCGTGCCATCTTGCAAACTACACTTTAAAAAAAACTCATTGCTTTGTATTGT
AGTAACCAATATGTGCAGTATACGTTGAATGTATATGAACATACTTTCCTATTTCTGTTCTTTGAAAATGTCAGA
AATATTTTTTTCTTTCTCATTTTATGTTGAACTAAAAAGGATTAAAAAAAAAAATCTCC

FIGURE 850

GAAGAGTGGAGPAGRLLPPPAPGSPAAPAAVSPAAGQPRPPAPASRGPMPARIGYYEIDRTIGKGNFAVVKRATH
LVTKAKVAIKIIDKTQLDEENLKKIFREVQIMKMLCHPHIIRLYQVMETERMIYLVTEYASGGEIFDHLVAHGRM
AEKEARRKFKQIVTAVYFCHCRNIVHRDLKAENLLLDANLNIKIADFGFSNLFTPGQLLKTWCGSPPYAAPELFE
GKEYDGPKVDIWSLGVVLYVLVCGALPFDGSTLQNLRARVLSGKFRIPFFMSTECEHLIRHMLVLDPNKRLSMEQ
ICKHKWMKLGDADPNFDRLIAECQQLKEERQVDPLNEDVLLAMEDMGLDKEQTLQAEQAGTAMNISVPQVQLINP
ENQIVEPDGTLNLDSDEGEEPSPEALVRYLSMRRHTVGVADPRTEVMEDLQKLLPGFPGVNPQAPFLQVAPNVNF
MHNLLPMQNLQPTGQLEYKEQSLLQPPTLQLLNGMGPLGRRASDGGANIQLHAQQLLKRPRGPSPLVTMTPAVPA
VTPVDEESSDGEPDQEAVQSSTYKDSNTLHLPTERFSPVRRFSDGAASIQAFKAHLEKMGNNSSIKQLQQECEQL
QKMYGGQIDERTLEKTQQQHMLYQQEQHHQILQQQIQDSICPPQPSPPLQAACENQPALLTHQLQRLRIQPSSPP
PNHPNNHLFRQPSNSPPPMSSAMIQPHGAASSSQFQGLPSRSAIFQQQPENCSSPPNVALTCLGMQQPAQSQQVT
IQVQEPVDMLSNMPGTAAGSSGRGISISPSAGQMQMQHRTNLMATLSYGHRPLSKQLSADSAEAHSLNVNRFSPA
NYDQAHLHPHLFSDQSRGSPSSYSPSTGVGFSPTQALKVPPLDQFPTFPPSAHQQPPHYTTSALQQALLSPTPPD
YTRHQQVPHILQGLLSPRHSLTGHSDIRLPPTEFAQLIKRQQQQRQQQQQQQQQQEYQELFRHMNQGDAGSLAPS
LGGQSMTERQALSYQNADSYHHTIQNSDDAYVQLDNLPGMSLVAGKALSSARMSDAVLSQSSLMGSQQFQDGENE
ECGASLGGHEHPDLSDGSQHLNSSCYPSTCITDILLSYKHPEVSFSMEQAGV

FIGURE 851A

CGACCGCGGCGGCTGGAACCCTGATTGCTGTCCTTCAACGTGTTCATT**ATG**AAGTTATTAGTAATACTTTTGTTT
TCTGGACTTATAACTGGTTTTAGAAGTGACTCTTCCTCTAGTTTGCCACCTAAGTTACTACTAGTATCCTTTGAT
GGCTTCAGAGCTGATTATCTGAAGAACTATGAATTTCCTCATCTCCAGAATTTTATCAAAGAAGGTGTTTTGGTA
GAGCATGTTAAAAATGTTTTTATCACAAAAACATTTCCAAACCACTACAGTATTGTGACAGGCTTGTATGAAGAA
AGCCATGGCATTGTGGCTAATTCCATGTATGATGCAGTCACAAAGAAACACTTTTCTGACTCTAATGACAAGGAT
CCTTTTTGGTGGAATGAGGCAGTACCTATTTGGGTGACCAATCAGCTTCAGGAAAACAGATCAAGTGCTGCTGCT
ATGTGGCCTGGTACTGATGTACCCATTCACGATACCATCTCTTCCTATTTTATGAATTACAACTCCTCAGTGTCA
TTTGAGGAAAGACTAAATAATATTACTATGTGGCTAAACAATTCGAACCCACCAGTCACCTTTGCAACACTATAT
TGGGAAGAACCAGATGCAAGTGGCCACAAATACGGACCTGAAGATAAAGAAAACATGAGCAGAGTGTTGAAAAAA
ATAGATGATCTTATCGGTGACTTAGTCCAAAGACTCAAGATGTTAGGGCTATGGGAAAATCTTAATGTGATCATT
ACAAGTGATCATGGGATGACCCAGTGTTCTCAGGACAGACTGATAAACCTGGATTCCTGCATCGATCATTCATAC
TACACTCTTATAGATTTGAGCCCAGTTGCTGCAATACTTCCCAAAATAAATAGAACAGAGGTTTATAACAAACTG
AAAAACTGTAGCCCTCATATGAATGTTTATCTCAAAGAAGACATTCCTAACAGATTTTATTACCAACATAATGAT
CGAATTCAGCCCATTATTTTGGTTGCCGATGAAGGCTGGACAATTGTGCTAAATGAATCATCACAAAAATTAGGT
GACCATGGTTATGATAATTCTTTGCCTAGTATGCATCCATTTCTAGCTGCCCACGGACCTGCATTTCACAAAGGC
TACAAGCATAGCACAATTAACATTGTGGATATTTATCCAATGATGTGCCACATCCTGGGATTAAAACCACATCCC
AATAATGGGACCTTTGGTCATACTAAGTGCTTGTTAGTTGACCAGTGGTGCATTAATCTCCCAGAAGCCATCGCG
ATTGTTATCGGTTCACTCTTGGTGTTAACCATGCTAACATGCCTCATAATAATCATGCAGAATAGACTTTCTGTA
CCTCGTCCATTTTCTCGACTTCAGCTACAAGAAGATGATGATGATCCTTTAATTGGG**TGA**CATGTGCTAGGGCTT
ATACAAAGTGTCTTTGATTAATCACAAAACTAAGAATACATCCAAAGAATAGTGTTGTAACTATGAAAAAGAATA
CTTTGAAAGACAAAGAACTTAGACTAAGCATGTTAAAATTATTACTTTGTTTTCCTTGTGTTTTGTTTCGGTGCA
TTTGCTAATAAGATAACGCTGACCATAGTAAAATTGTTAGTAAATCATTAGGTAACATCTTGTGGTAGGAAATCA
TTAGGTAACATCAATCCTAACTAGAAATACTAAAAATGGCTTTTGAGAAAAATACTTCCTCTGCTTGTATTTTGC
GATGAAGATGTGATACATCTTTAAATGAAAATATACCAAAATTTAGTAGGCATGTTTTTCTAATAAATTTATATA
TTTGTAAAGAAAACAACAGAAATCTTTATGCAATTTGTGAATTTTGTATATTAGGGAGGAAAAGCTTCCTATATT
TTTATATTTACCTTTAATTAGTTTGTATCTCAAGTACCCTCTTGAGGTAGGAAATGCTCTGTGATGGTAAATAAA
ATTGGAGCAGACAGAAAAGATATAGCAAATGAAGAAATATTTTAAGGAAACCTATTTGAAAAAAAAAGCAAAGAC
CATTTGATAAAAGCCTGAGTTGTCACCATTATGTCTTAAGCTGTTAGTCTTAAAGATTATTGTTAAAAAATTCAG
AAGAAAAGAGAGACAAGTGCTCTTCTCTCTATCTATGCTTAATGCCTTTATGTAAGTTACTTAGTTGTTTGCGTG
TGCCTGTGCAAGTGTGTTTGTGTGTGGTTGTGTGGACATTATGTGATTTACTATATAAGGAGGTCAGAGATGGAC
TGTGGCCAGGCTTCCACATTCCTGAAGCACACAGATCTCAGGAAAGGTTATTTTTGCACTTCATATTTGTTTACT
TTCTCCTAACTCACAAGTTAAAATCATAACTTAATTTCATTAACTTTTATCATTTAACTCTCTCATGTTTGTTGT
AACCTGAGGTATCCAAATGCTACAGAAAAATTTATGACCCAAATACAAATCTCAATTTGACTGGGACAGAATGAG
GAATGGAGATTTTTGTATTTATCTTTGGGACTTTATGCCTTACTTTTTAGGCTATAGAATAGTTAAGAAATTTTA
AACAAAATTTAGTATCTTTTGGTCTTTCACACCATTCATATGTTAAGTGGCAGAATAGCCTTAGTGCTACCTCCA
CTTTTTTTCTCCAGTATTTGCATCACAGAAATAATCCCTCTGTTTAACATGTTTGTTCAGAGCCAAGGGTTTATT
GTGAAGAACTGTCATCCTGCCTTTGCTAGCTGGTACCTTCTAGTAATCAAAATTAATATGAAGAAACTAGGTTGT
GACAGACTAGATTATATTTAGTAGGGGAAAAATTGGGCTCAAGAACCATTCATCAGTACGTGAGACAAGCAGTTA
ATAGTATGATCTTTAAAGTTTTGACAATATAAAATAAACTTGGTAACTGTTTTACAAATATAAAAGTATAATAAA
TATGCAGCCCAGTTAAATATTGATTATCTGTGATGGTAAAGAACAACAGTGGTGCCAGTCATCAAACATACAGTG
CGTCCTATTGAGTCACTGCTAATTTCTTGAGCCTGGTATTTGCTGCCTATTGTATTTGTGGTTGTTGAGAGGCAT
TTTCAAACCCTGTATAAATAATCCATGCTGTTGGTCATAAGTTAACTGTATTAAGAACAGTAAAATAAATAAAAA
CCAATAGTACTAATTTTGCTTTAAAAAAATTTCTAATTTTTTTCACATAAAACAATTATCCTAAAGGTTAATAGT
TGATCGAAACAGAATAATAGAAAAATTCTACTTTAATTTCCATTAAAAAGCAAATAGCATTGACACATTTAAAGC
TTTTCATTTAAAGTAGTGGATGTTTTTGAAGTATCTAAAATAGTAGCAGAATATTTTATACTTGGTCCTTGCAAT
GGTGTGAGTTTTAATGATTGCATTATCGTGATTGGTGGTTATGAGTTTCAGAAATCTATACTTGGCATCCAACTC
ATGAGTGGATTTTATATAGGATGGAACAGGAAGGTATGTCCTGTCAGTATCTTAACCCTTTCAACAAGACATTTA
CCTATTTGTCTTTCCTTACGTTCTCAAAATATTAACTCGAATTGTAAATTAAGCAAAAATTTAAAAAGTATATGT

FIGURE 851B

TGATGGGACAAGAAGAATAGTATTTATTTAATAAAACATATATTATATTGAACTATGTGTTAATTCATTTGTATC
TTTTAAAAAATTATCACTGTTAAAGCCATTGACTCCTTTAGTACACTGAGAAAAATCTTATAGTAAAACTAGCCT
TTCACATTAAGGTTTTGGTGTGTATTTTGTTAAATAACTAACATGCTGCTCTATTTTCTGGGTGTAGAAAGTATT
TGGCTCTAGGAAACATTTACTTGTTTGTGAAAACAATACCCCAAGGTAATAGGAAAAGTTTGAGTTAAGTGTTTT
TAATTCAGTCAGTGAATTCAGAATAAGTACATTCATGTATAACATAGGGACAGTTCTGCTGCTGTTATTTATATG
CAATTCTTCTGGTAAATAGCAATAGAATAAAACATATTTCAATGTTTGTGTATAGGTTTTATATTATTATTCCAC
TAGGAATGGCATAAGAATTTATAGATAAATTCTTGTAACATTAAAGGATTAAAATGTTTTTACATTGTTTTTGGG
TGTCTCCTTCTTGTGCCCATATCTGATAAGCTTTATGGATTATTGCATTTAATTCCTTTTATTTGGAGGGTTTTA
CTTCCTTGTTAACATATAAAGTTATAAATGAAGGACAAGGAGGAGATGGAAAATGTGTATTTATTGTTAATTCTT
AAAATAGTGTGTAAATAAAATAACATCAGTGTGCTTT

FIGURE 852

MKLLVILLFSGLITGFRSDSSSSLPPKLLLVSFDGFRADYLKNYEFPHLQNFIKEGVLVEHVKNVFITKTFPNHY
SIVTGLYEESHGIVANSMYDAVTKKHFSDSNDKDPFWWNEAVPIWVTNQLQENRSSAAAMWPGTDVPIHDTISSY
FMNYNSSVSFEERLNNITMWLNNSNPPVTFATLYWEEPDASGHKYGPEDKENMSRVLKKIDDLIGDLVQRLKMLG
LWENLNVIITSDHGMTQCSQDRLINLDSCIDHSYYTLIDLSPVAAILPKINRTEVYNKLKNCSPHMNVYLKEDIP
NRFYYQHNDRIQPIILVADEGWTIVLNESSQKLGDHGYDNSLPSMHPFLAAHGPAFHKGYKHSTINIVDIYPMMC
HILGLKPHPNNGTFGHTKCLLVDQWCINLPEAIAIVIGSLLVLTMLTCLIIIMQNRLSVPRPFSRLQLQEDDDDP
LIG

969/2825

FIGURE 853

GAGATGGGTGCCCCCATCCGCACACTGTCCTTTGGCCACCGGACATC**ATG**CCTCCCAAGAAGGATGTTCCCGTGA
AGAAACCAGCAGGGCCCTCCATCTCCAAACCTGCTGCTAAGCCAGCAGCAGCAGGGGCTCCTCCAGCCAAGACCA
AAGCTGAGCCAGCTGTCCCCCAGGCCCCTCAGAAAACCCAGGAGCCTCCAGTCGATCTCTCCAAAGTGGTGATCG
AGTTTAACAAGGACCAGCTGGAGGAGTTCAAGGAGGCCTTCGAGCTGTTTGACCGAGTGGGGGATGGCAAGATCC
TGTACAGCCAGTGTGGGGACGTGATGAGGGCCCTGGGCCAGAACCCCACCAACGCCGAGGTGCTCAAGGTCCTGG
GGAACCCCAAGAGTGATGAGCTGAAGTCGCGGCGTGTGGACTTTGAGACTTTCCTGCCCATGCTCCAGGCAGTGG
CCAAGAACCGAGGCCAAGGCACATATGAGGACTACTTGGAGGGGTTTCGTGTGTTTGACAAGGAGGGGAACGGCA
AAGTCATGGGAGCAGAGCTCAGACATGTTCTCACCACCCTTGGAGAGAAGATGACTGAGGAGGAGGTGGAGACCG
TTCTGGCAGGACACGAGGACAGCAACGGCTGCATCAACTACGAGGCCTTCTTGAAACACATCCTAAGCGTC**TGA**G
TGCTGCAGATCCAGTGGGGTCCGGACACTGGGCCCCGCAGGCGAAAGCACGTTCCAGCCACCAGGAGGCCACCTA
TTGTTTCAAAATAAAGACTGGGTTCCTC

FIGURE 854

MPPKKDVPVKKPAGPSISKPAAKPAAAGAPPAKTKAEPAVPQAPQKTQEPPVDLSKVVIEFNKDQLEEFKEAFEL
FDRVGDGKILYSQCGDVMRALGQNPTNAEVLKVLGNPKSDELKSRRVDFETFLPMLQAVAKNRGQGTYEDYLEGF
RVFDKEGNGKVMGAELRHVLTTLGEKMTEEEVETVLAGHEDSNGCINYEAFLKHILSV

FIGURE 855

ACTTCCCCTTCCTGTACAGGGCAGGTTGTGCAGCTGGAGGCAGAGCAGTCCTCTCTGGGGAGCCTGAAGCAAACA
TGGATCAAGAAACTGTAGGCAATGTTGTCCTGTTGGCCATCGTCACCCTCATCAGCGTGGTCCAGAATGGATTCT
TTGCCCATAAAGTGGAGCACGAAAGCAGGACCCAGAATGGGAGGAGCTTCCAGAGGACCGGAACACTTGCCTTTG
AGCGGGTCTACACTGCCAACCAGAACTGTGTAGATGCGTACCCCACTTTCCTCGCTGTGCTCTGGTCTGCGGGGC
TACTTTGCAGCCAAGTTCCTGCTGCGTTTGCTGGACTGATGTACTTGTTTGTGAGGCAAAAGTACTTTGTCGGTT
ACCTAGGAGAGAGAACGCAGAGCACCCCTGGCTACATATTTGGGAAACGCATCATACTCTTCCTGTTCCTCATGT
CCGTTGCTGGCATATTCAACTATTACCTCATCTTCTTTTTCGGAAGTGACTTTGAAAACTACATAAAGACGATCT
CCACCACCATCTCCCCTCTACTTCTCATTCCCTAACTCTCTGCTGAATATGGGGTTGGTGTTCTCATCTAATCAA
TACCTACAAGTCATCATAATTCAGCTCTTGAGAGCATTCTGCTCTTCTTTAGATGGCTGTAAATCTATTGGCCAT
CTGGGCTTCACAGCTTGAGTTAACCTTGCTTTTCCGGGAACAAAATGATGTCATGTCAGCTCCGCCCCTTGAACA
TGACCGTGGCCCCAAATTTGCTATTCCCATGCATTTTGTTTGTTTCTTCACTTATCCTGTTCTCTGAAGATGTTT
TGTGACCAGGTTTGTGTTTTCTTAAAATAAAATGCAGAGACATGTTTT

FIGURE 856

MDQETVGNVVLLAIVTLISVVQNGFFAHKVEHESRTQNGRSFQRTGTLAFERVYTANQNCVDAYPTFLAVLWSAG
LLCSQVPAAFAGLMYLFVRQKYFVGYLGERTQSTPGYIFGKRIILFLFLMSVAGIFNYYLIFFFGSDFENYIKTI
STTISPLLLIP

FIGURE 857

GTCTCCCCCACTGTCAGCACCTCTTCTGTGTGGTGAGTGGACCGCTTACCCCACTAGGTGAAG**ATG**TCAGCCCAG
GAGAGCTGCCTCAGCCTCATCAAGTACTTCCTCTTCGTTTTCAACCTCTTCTTCTTCGTCCTCGGCAGCCTGATC
TTCTGCTTCGGCATCTGGATCCTCATCGACAAGACCAGCTTCGTGTCCTTTGTGGGCTTGGCCTTCGTGCCTCTG
CAGATCTGGTCCAAAGTCCTGGCCATCTCAGGAATCTTCACCATGGGCATCGCCCTCCTGGGTTGTGTGGGGGCC
CTCAAGGAGCTCCGCTGCCTCCTGGGCCTGTATTTTGGGATGCTGCTGCTCCTGTTTGCCACACAGATCACCCTG
GGAATCCTCATCTCCACTCAGCGGGCCCAGCTGGAGCGAAGCTTGCGGGACGTCGTAGAGAAAACCATCCAAAAG
TACGGCACCAACCCCGAGGAGACCGCGGCCGAGGAGAGCTGGGACTATGTGCAGTTCCAGCTGCGCTGCTGCGGC
TGGCACTACCCGCAGGACTGGTTCCAAGTCCTCATCCTGAGAGGTAACGGGTCGGAGGCGCACCGCGTGCCCTGC
TCCTGCTACAACTTGTCGGCGACCAACGACTCCACAATCCTAGATAAGGTGATCTTGCCCCAGCTCAGCAGGCTT
GGACACCTGGCGCGGTCCAGACACAGTGCAGACATCTGCGCTGTCCCTGCAGAGAGCCACATCTACCGCGAGGGC
TGCGCGCAGGGCCTCCAGAAGTGGCTGCACAACAACCTTATTTCCATAGTGGGCATTTGCCTGGGCGTCGGCCTA
CTCGAGCTCGGGTTCATGACGCTCTCGATATTCCTGTGCAGAAACCTGGACCACGTCTACAACCGGCTCGCTCGA
TACCGT**TAG**GCCCCGCCCTCCCCAAAGTCCCGCCCCGCCCCCGTCACGTGCGCTGGGCACTTCCCTGCTGCCTGT
AAATATTTGTTTAATCCCCAGTTCGCCTGGAGCCCTCCGCCTTCACATTCCCCTGGGGACCCACGTGGCTGCGTG
CCCCTGCTGCTGTCACCTCTCCCACGGGACCTGGGGCTTTCGTCCACAGCTTCCTGTCCCCATCTGTCGGCCTAC

FIGURE 858

MSAQESCLSLIKYFLFVFNLFFFVLGSLIFCFGIWILIDKTSFVSFVGLAFVPLQIWSKVLAISGIFTMGIALLG
CVGALKELRCLLGLYFGMLLLLFATQITLGILISTQRAQLERSLRDVVEKTIQKYGTNPEETAAEESWDYVQFQL
RCCGWHYPQDWFQVLILRGNGSEAHRVPCSCYNLSATNDSTILDKVILPQLSRLGHLARSRHSADICAVPAESHI
YREGCAQGLQKWLHNNLISIVGICLGVGLLELGFMTLSIFLCRNLDHVYNRLARYR

FIGURE 859

AGCCGAATAGAGCCGGAGAGACCCGAGTATGACCGGAGAAGCCCAGGCCGGCCGGAAGAGGAGCCGAGCGCGGCC
GGAAGGAACCGAGCCCGTCCGAAGGGAGCGGAGCGCAGCCTGGCCTGGGGCCCGGTCGAGCCCGCGCC**ATG**GCGG
CCGAGGCGACAGCTGTGGCCGGAAGCGGGGCTGTTGGCGGCTGCCTGGCCAAAGACGGCTTGCAGCAGTCTAAGT
GCCCGGACACTACCCCAAAACGGCGGCGCGCCTCGTCGCTGTCGCGTGACGCCGAGCGCCGAGCCTACCAATGGT
GCCGGGAGTACTTGGGCGGGGCCTGGCGCCGAGTGCAGCCCGAGGAGCTGAGGGTTTACCCCGTGAGCGGAGGCC
TCAGCAACCTGCTCTTCCGCTGCTCGCTCCCGGACCACCTGCCCAGCGTTGGCGAGGAGCCCCGGGAGGTGCTTC
TGCGGCTGTACGGAGCCATCTTGCAGGGCGTGGACTCCCTGGTGCTAGAAAGCGTGATGTTCGCCATACTTGCGG
AGCGGTCGCTGGGGCCCCAGCTGTACGGAGTCTTCCCAGAGGGCCGGCTGGAACAGTACATCCCAAGTCGGCCAT
TGAAAACTCAAGAGCTTCGAGAGCCAGTGTTGTCAGCAGCCATTGCCACGAAGATGGCGCAATTTCATGGCATGG
AGATGCCTTTCACCAAGGAGCCCCACTGGCTGTTTGGGACCATGGAGCGGTACCTAAAACAGATCCAGGACCTGC
CCCCAACTGGCCTCCCTGAGATGAACCTGCTGGAGATGTACAGCCTGAAGGATGAGATGGGCAACCTCAGGAAGT
TACTAGAGTCTACCCCATCGCCAGTCGTCTTCTGCCACAATGACATCCAGGAAGGGAACATCTTGCTGCTCTCAG
AGCCAGAAAATGCTGACAGCCTCATGCTGGTGGACTTCGAGTACAGCAGTTATAACTATAGGGGCTTTGACATTG
GGAACCATTTTTGTGAGTGGGTTTATGATTATACTCACGAGGAATGGCCTTTCTACAAAGCAAGGCCCACAGACT
ACCCCACTCAAGAACAGCAGTTGCATTTTATTCGTCATTACCTGGCAGAGGCAAAGAAAGGTGAGACCCTCTCCC
AAGAGGAGCAGAGAAAACTGGAAGAAGATTTGCTGGTAGAAGTCAGTCGGTATGCTCTGGCATCCCATTTCTTCT
GGGGTCTGTGGTCCATCCTCCAGGCATCCATGTCCACCATAGAATTTGGTTACTTGGACTATGCCCAGTCTCGGT
TCCAGTTCTACTTCCAGCAGAAGGGGCAGCTGACCAGTGTCCACTCCTCATCC**TGA**CTCCACCCTCCCACTCCTT
GGATTTCTCCTGGAGCCTCCAGGGCAGGACCTTGGAGGGAGGAACAACGAGCAGAAGGCCCTGGCGACTGGGCTG
AGCCCCCAAGTGAAACTGAGGTTCAGGAGACCGGCCTGTTCCTGAGTTTGAGTAGGTCCCCATGGCTGGCAGGCC
AGAGCCCCGTGCTGTGTATGTAACACAATAAACAAGCTTC

FIGURE 860

MAAEATAVAGSGAVGGCLAKDGLQQSKCPDTTPKRRRASSLSRDAERRAYQWCREYLGGAWRRVQPEELRVYPVS
GGLSNLLFRCSLPDHLPSVGEEPREVLLRLYGAILQGVDSLVLESVMFAILAERSLGPQLYGVFPEGRLEQYIPS
RPLKTQELREPVLSAAIATKMAQFHGMEMPFTKEPHWLFGTMERYLKQIQDLPPTGLPEMNLLEMYSLKDEMGNL
RKLLESTPSPVVFCHNDIQEGNILLLSEPENADSLMLVDFEYSSYNYRGFDIGNHFCEWVYDYTHEEWPFYKARP
TDYPTQEQQLHFIRHYLAEAKKGETLSQEEQRKLEEDLLVEVSRYALASHFFWGLWSILQASMSTIEFGYLDYAQ
SRFQFYFQQKGQLTSVHSSS

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FIGURE 861

CCGGCTCGGAGTGTGATCTAAGCAGGTCGCGTACCTTCCTCAGGTGACTCCGGCCACAGCCCATTGTCCGCGGCC
ACCGGCGGAGTTTAGCCGCAGACCTCGAAGCGCCCCGGGGTCCTTCCCGAACGGCAGCGGCTGCGGCGGGTCCATG
GGAGAAGGGCCCTGTGCGGGCACCGGCGGAGAAGCCGCGGGGCGCCAGGTGCAGCAATGGGTTCCCCGAGCGGGA
TCCGCCGCGGCCCGGGCCCAGCAGGCCGGCGGAGAAGCCCCCGCGGCCCGAGGCCAAGAGCGCGCAGCCCGCGGA
CGGCTGGAAGGGCGAGCGGCCCCGCAGCGAGGAGGATAACGAGCTGAACCTCCCTAACCTGGCAGCCGCCTACTC
GTCCATCCTGAGCTCGCTGGGCGAGAACCCCCAGCGGCAAGGGCTGCTCAAGACGCCCTGGAGGGCGGCCTCGGC
CATGCAGTTCTTCACCAAGGGCTACCAGGAGACCATCTCAGATGTCCTAAACGATGCTATATTTGATGAAGATCA
TGATGAGATGGTGATTGTGAAGGACATAGACATGTTTTCCATGTGTGAGCATCACTTGGTTCCATTTGTTGGAAA
GGTCCATATTGGTTATCTTCCTAACAAGCAAGTCCTTGGCCTCAGCAAACTTGCGAGGATTGTAGAAATCTATAG
TAGAAGACTACAAGTTCAGGAGCGCCTTACAAAACAAATTGCTGTAGCAATCACGGAAGCCTTGCGGCCTGCTGG
AGTCGGGGTAGTGGTTGAAGCAACACACATGTGTATGGTAATGCGAGGTGTACAGAAAATGAACAGCAAAACTGT
GACCAGCACAATGTTGGGTGTGTTCCGGGAGGATCCAAAGACTCGGGAAGAGTTCCTGACTCTCATTAGGAGCTGA
AGCTTCATTCAGTGTGTGTGCGTTGGTTGCCGATCGTACTGCCAGTAGCATTGTCTGTCTGTCCGGTCTTGTTTG
TACATTCCATTTTCAATTGTTACAGATGTGAACTTTATTCCTTGTCACTAATTATATTTAAAATTATTTCTAGGA
AGTCAAATAAATATAATAAAGGGTTGAGCCTCTACTTTCTTCTTGCCACCTTTTTGTGGCAATATTAAAGTGAAC
TGCTAATAGTGTAAGTATGTGCACAAAACCACTGCCAGATAACCAGAGGGGCCTGGGAAGGGAGAAGAATTAGTG
TATTTTTTTCAAATAGTACAGTAATTTGCCTCATAAGCATAGGAGCATTGGGAATGAGAGGGAACTGTGCCCAGT
ATACTGTTTTTTTTCTTCCTCCAATAAAAGTGGTGTAGTGCCGAAAGTGCTAAAATATTTAGTGCGGTATTGCTC
TGTGAATTCAAGTTCAACAGACTTCACTTTGGTCATGTTTATTAAACCACCAGTGACATTTAAAAATATATTTTT
AGCAGTCGTAATGTTAGTCACCAAGGGAAGGTGGTGGAATGTCTATGTTTTTGATTTTACTGTGAGTTAAAAAGG
CACATTTCTACCTTCTATTGTTTTTAAATTCAAGAATAGGGAATTAGTTCCTGGTGTTGTTTACGAGTGTATTCT
CGTGTCAACATACAGGGATTTAGACATTTAACTCTCTGTGCCTTGATAAGAATATCATTTAGAGTGTAGATACTT
TTGCCTTTTTAAAAAAGCCATTATTTTATGAGACTTAGTACTCACACTGCAAATAACTAGTCAGCTCAGTTTTAA
CTTTATAGGTTTATTGAGTTTCCTTTGTGTGATCCATGTAGATGCCTCAAAATGTTTCTTCTTCTTCTTTTTTTT
AATCTTATAAGATATTTTTCTAAGTATTTCCAGAAACATTTGAGAGTGCCCATCATTTTCAGGTCTGCAGAACCA
TAGCTTCCACGCACCTGAACGAGCACAGAATGAACTGACGGTGGAAGACATTATGAGCTGTGTCCAACGTTTTAA
CCAAAGCGTATCGTACCAACGATCTGTGAAAATGCACTGGAAGCTTCTGGTCCCGGTTTCCTTTGTGGTCTATGT
GGGTCTTGTCCTCATTGTAACTCCGTATAGATGGTATAGGTATTTTAATCCTGGAAGCTGTTGCCTTATTAATGA
TTATCTTAAAATTTCCTCCATTGGGGCAGCGTGGGCCAAATTAAAACAAACAAAACCGCAACTCCTCCACAGAAA
CACAAACACAGTTATTCCATGAAGTTTAGTATTTGGTTGACATAGTGCTCTTCAAATTCATCCCATTACCCTAAA
AGTAATAACTTTGATGCTTGCTTTAACTTTAGTCCCATCTCTGCCACTTTGATGCTATTTGGGTTATGATGGGGC
AAGATGGCAGAGGTATTGGGTTTTTTTGTTTTTTTCCATTCCTCTCTACTTCTGTTCCTAGCTTTTTCTTTCTG
GAGTTTAAGTACAGTGATGGTTGGCTTGAGTACCTTTTTAAATCTAGCCCAGTATAAACATTAGCCTGCTTAATA
TTTAGACATTTATAGGTAGAATTCTGAGCACTCAACTCATGTTTGGCATTTTAAAGTAAAAACAAGTGTGACTTC
GAGGACCAAAGAAATTGTCAGCTATACATTTATCTTTATGAACTCATTTATATTCCTTTTTAATGACTCGTTGTT
CTAACATTTCCTAGAAGTGTTCTTATAAAGGTCTAATGTATCCACAGGCTGTTGTCTTATTAGTAAATGCAAAGT
AATGACTTTGTCTGTTTTACTCTAGTCTTTAGTACTTCAAAATTACCTTTTCATATCCATGATCTTGAGTCCATT
TGGGGGATTTTTAAGAATTTGATGTATTTCAATACACTGTTCAAAATTAAATTGTTTAATTTTATGTATGAGTAT
GTATGTTCCTGAAGTTGGTCCTATTTAAATTATTAAACTATTGTAACTTTAAAAAAAAAAAAAAAAAAAAA

FIGURE 862

MEKGPVRAPAEKPRGARCSNGFPERDPPRPGPSRPAEKPPRPEAKSAQPADGWKGERPRSEEDNELNLPNLAAAY
SSILSSLGENPQRQGLLKTPWRAASAMQFFTKGYQETISDVLNDAIFDEDHDEMVIVKDIDMFSMCEHHLVPFVG
KVHIGYLPNKQVLGLSKLARIVEIYSRRLQVQERLTKQIAVAITEALRPAGVGVVVEATHMCMVMRGVQKMNSKT
VTSTMLGVFREDPKTREEFLTLIRS

FIGURE 863

GCGCGGGCGGCTGGGGA**ATG**GCTGCTGCCATGGTGCCGGGGCGCAGCGAGAGCTGGGAGCGCGGGGAGCCTGGCC
GCCCGGCCCTGTACTTCTGCGGGAGCATTCGCGGCGGACGCGAGGACAGGACGCTGTACGAGCGGATCGTGTCTC
GGCTGCGGCGATTCGGGACAGTGCTCACCGAGCACGTGGCGGCCGCCGAGCTGGGCGCGCGCGGGGAAGAGGCTG
CTGGGGGTGACAGGCTCATCCATGAGCAGGACCTGGAGTGGCTGCAGCAGGCGGACGTGGTCGTGGCAGAAGTGA
CACAGCCATCCTTGGGTGTAGGCTATGAGCTGGGCCGGGCCGTGGCCTTTAACAAGCGGATCCTGTGCCTGTTCC
GCCCGCAGTCTGGCCGCGTGCTTTCGGCCATGATCCGGGGAGCAGCAGATGGCTCTCGGTTCCAGGTGTGGGACT
ATGAGGAGGGAGAGGTGGAGGCCCTGCTGGATCGATACTTCGAGGCTGATCCTCCAGGGCAGGTGGCTGCCTCCC
CTGACCCAACCACT**TGA**CTTAATCTCACTTTCTTAAATTCTTCTATTCTCAGACACTGCTCTAGTACCATTCCTT
CCTCTTAGCCCCAGGAGCAAATTAAAAGGTACAGTTAAAATCCT

FIGURE 864

MAAAMVPGRSESWERGEPGRPALYFCGSIRGGREDRTLYERIVSRLRRFGTVLTEHVAAAELGARGEEAAGGDRL
IHEQDLEWLQQADVVVAEVTQPSLGVGYELGRAVAFNKRILCLFRPQSGRVLSAMIRGAADGSRFQVWDYEEGEV
EALLDRYFEADPPGQVAASPDPTT

FIGURE 865

CGCAGGGGTCCCCCGGCCGCCGCG**ATG**CAGAAATACGAGAAACTGGAAAAGATTGGGGAAGGCACCTACGGAACT
GTGTTCAAGGCCAAAAACCGGGAGACTCATGAGATCGTGGCTCTGAAACGGGTGAGGCTGGATGACGATGATGAG
GGTGTGCCGAGTTCCGCCCTCCGGGAGATCTGCCTACTCAAGGAGCTGAAGCACAAGAACATCGTCAGGCTTCAT
GACGTCCTGCACAGCGACAAGAAGCTGACTTTGGTTTTTGAATTCTGTGACCAGGACCTGAAGAAGTATTTTGAC
AGTTGCAATGGTGACCTCGATCCTGAGATTGTAAAGTCATTCCTCTTCCAGCTACTAAAAGGGCTGGGATTCTGT
CATAGCCGCAATGTGCTACACAGGGACCTGAAGCCCCAGAACCTGCTAATAAACAGGAATGGGGAGCTGAAATTG
GCTGATTTTGGCCTGGCTCGAGCCTTTGGGATTCCCGTCCGCTGTTACTCAGCTGAGGTGGTCACACTGTGGTAC
CGCCCACCGGATGTCCTCTTTGGGGCCAAGCTGTACTCCACGTCCATCGACATGTGGTCAGCCGGCTGCATCTTT
GCAGAGCTGGCCAATGCTGGGCGGCCTCTTTTTCCCGGCAATGATGTCGATGACCAGTTGAAGAGGATCTTCCGA
CTGCTGGGGACGCCCACCGAGGAGCAGTGGCCCTCTATGACCAAGCTGCCAGACTATAAGCCCTATCCGATGTAC
CCGGCCACAACATCCCTGGTGAACGTCGTGCCCAAACTCAATGCCACAGGGAGGGATCTGCTGCAGAACCTTCTG
AAGTGTAACCCTGTCCAGCGTATCTCAGCAGAAGAGGCCCTGCAGCACCCCTACTTCTCCGACTTCTGTCCGCCC
TAGGCCCCGGGACCCCCGCCTCCAGGCTGGGCCTGGCCTATTTAAGCCCCCTCTTGAGAGGGTGAGACAGTGGGG
GTGCCTGG

FIGURE 866

MQKYEKLEKIGEGTYGTVFKAKNRETHEIVALKRVRLDDDDEGVPSSALREICLLKELKHKNIVRLHDVLHSDKK
LTLVFEFCDQDLKKYFDSCNGDLDPEIVKSFLFQLLKGLGFCHSRNVLHRDLKPQNLLINRNGELKLADFGLARA
FGIPVRCYSAEVVTLWYRPPDVLFGAKLYSTSIDMWSAGCIFAELANAGRPLFPGNDVDDQLKRIFRLLGTPTEE
QWPSMTKLPDYKPYPMYPATTSLVNVVPKLNATGRDLLQNLLKCNPVQRISAEEALQHPYFSDFCPP

FIGURE 867A

TCTTTAGAGCAAAAGGTGAATCAAAGGAGAGTCCCAGAAAACCTGTGACTGTTGAAGAAAATTCATCTGTGAATT
TTTATATTCAAGGAGTCAGTATTTATATTCATCTTTTAAACTGGGAAGATTTATATTTTACTTTAAAACTTCTTG
ATAATAATTTACA**ATG**AATGGACACAGTGATGAAGAAAGTGTTAGAAACAGTAGTGGAGAATCAAGCCAGTCGGA
TGATGATTCTGGGTCAGCTTCAGGCTCTGGATCTGGTTCGAGTTCTGGAAGCAGTAGTGATGGAAGCAGTAGCCA
GTCAGGTAGCAGTGACTCTGACTCCGGATCTGAATCAGGCAGTCAGTCAGAGTCTGAGTCAGACACTTCCCGAGA
AAACAAAGTTCAAGCAAAACCACCGAAAGTTGATGGAGCTGAGTTTTGGAAATCTAGTCCTAGTATTCTGGCCGT
TCAGAGATCTGCAATCCTCAAGAAGCAGCAACAGCAGCAGCAGCAACAACAACATCAAGCCTCATCTAATAGCGG
ATCAGAAGAGGATTCCTCTAGCAGTGAAGATTCCGATGACTCATCAAGTGAGGTCAAAAGGAAAAAGCATAAAGA
TGAAGATTGGCAAATGTCTGGGTCAGGATCTCCATCTCAGTCTGGTTCAGATTCAGAATCTGAAGAAGAGAGAGA
GAAAAGCAGTTGTGATGAAACAGAATCTGATTATGAGCCAAAAAACAAAGTCAAAAGCAGAAAACCTCAAAATAG
ATCTAAGTCAAAAAATGGAAAGAAGATTCTTGGACAAAAAAAGAGACAGATTGATTCATCTGAGGAGGATGATGA
TGAAGAAGATTATGATAATGATAAAAGAAGTTCTCGTCGCCAAGCAACTGTTAATGTTAGCTATAAGGAGGATGA
AGAAATGAAAACAGATTCTGATGACCTACTGGAAGTCTGTGGAGAGGATGTTCCTCAACCTGAGGAAGAGGAATT
TGAAACCATAGAAAGATTTATGGATTGTCGGATTGGGAGAAAAGGAGCTACTGGTGCTACTACAACCATCTATGC
AGTTGAAGCAGATGGTGACCCAAATGCAGGCTTTGAAAAAAACAAAGAACCAGGAGAGATTCAGTATTTAATTAA
ATGGAAAGGATGGTCCCATATCCACAACACTTGGGAGACAGAAGAAACCCTCAAGCAGCAGAATGTTAGAGGAAT
GAAAAAATTGGATAATTATAAGAAAAAAGATCAGGAAACAAAAAGATGGTTGAAAAATGCCTCTCCAGAAGATGT
GGAATATTATAATTGCCAGCAAGAACTTACAGATGATCTACATAAACAGTATCAAATAGTGGGACGTATAATTGC
TCATTCCAATCAAAAGTCAGCAGCTGGTTATCCTGATTATTACTGCAAATGGCAGGGCCTTCCATACTCAGAGTG
CAGCTGGGAAGATGGAGCTCTCATTTCCAAAAAGTTTCAAGCATGCATTGATGAGTATTTTAGCAGGAACCAATC
AAAAACCACTCCTTTTAAAGATTGCAAAGTATTAAAACAAAGGCCAAGGTTTGTAGCCCTGAAGAAGCAGCCATC
CTATATTGGAGGACATGAGGGCTTAGAATTAAGAGATTATCAACTGAATGGTTTAAATTGGCTTGCTCATTCTTG
GTGCAAAGGAAATAGTTGCATACTCGCTGATGAAATGGGCCTTGGAAAAACAATACAGACGATCTCATTTCTGAA
TTATTTGTTTCATGAACATCAATTATATGGACCTTTTTTATTGGTAGTACCGCTCTCCACTCTTACTTCCTGGCA
AAGGGAAATTCAGACTTGGGCTTCTCAAATGAATGCTGTGGTTTATTTAGGTGACATTAACAGCAGAAACATGAT
AAGAACTCATGAATGGACGCATCATCAGACCAAACGGTTAAAATTTAATATATTGTTAACAACTTATGAAATTTT
ATTAAAAGATAAGGCATTCCTTGGAGGTCTAAATTGGGCATTTATAGGTGTTGATGAAGCACACCGATTAAAGAA
TGATGACTCCCTTCTGTATAAAACTTTAATAGATTTTAAATCCAATCATCGTCTCCTTATCACTGGAACTCCTCT
ACAGAATTCCCTCAAAGAGCTCTGGTCTTTGCTACATTTCATTATGCCAGAAAAGTTTTCTTCCTGGGAAGATTT
TGAAGAAGAACATGGCAAAGGGAGAGAATATGGTTATGCAAGCCTTCACAAGGAGCTTGAGCCATTTCTGTTACG
CCGAGTTAAGAAAGATGTGGAAAAATCTCTTCCTGCCAAGGTTGAGCAGATTTTAAGAATGGAAATGAGTGCTTT
ACAGAAACAATATTACAAATGGATTTTAACTAGGAATTACAAAGCCCTCAGCAAAGGTTCCAAGGGCAGTACCTC
AGGCTTTTTGAACATTATGATGGAGCTAAAGAAATGTTGTAACCATTGCTACCTCATTAAACCACCAGATAATAA
TGAATTCTATAATAAACAGGAGGCCTTACAACACTTAATTCGTAGTAGCGGAAAATTGATTCTTCTTGACAAGCT
ATTAATTCGCCTAAGAGAACGAGGCAATCGAGTTCTTATTTTTTCACAAATGGTGCGGATGTTAGATATACTTGC
AGAATATTTGAAATATCGTCAATTCCCCTTTCAAAGATTAGATGGATCAATAAAAGGAGAACTGAGGAAACAAGC
TCTAGATCATTTTAATGCTGAGGGATCAGAGGATTTTTGCTTTTTGCTGTCCACAAGAGCTGGAGGTCTAGGGAT
TAATTTAGCCTCTGCTGACACTGTTGTTATATTTGATTCCGATTGGAATCCACAGAATGATCTTCAGGCACAGGC
TAGAGCCCATCGAATTGGCCAAAAGAAACAGGTGAATATTTATCGTCTAGTTACAAAGGGATCAGTTGAAGAAGA
TATTCTTGAAAGGGCGAAAAAGAAGATGGTTTTAGATCATCTTGTAATTCAAAGAATGGACACAACTGGGAAGAC
AGTACTACATACAGGTTCTGCCCCATCAAGTTCTACTCCTTTCAATAAAGAAGAGTTATCAGCCATTTTAAAGTT
TGGTGCTGAAGAACTTTTTAAGGAACCTGAAGGAGAAGAACAAGAGCCCCAGGAAATGGATATAGATGAAATCTT
GAAGAGAGCTGAAACTCATGAAAATGAACCAGGTCCTTTAACTGTAGGAGATGAATTGCTTTCCCAGTTCAAGGT
TGCCAACTTCTCAAATATGGATGAGGATGACATTGAGTTGGAACCTGAAAGAAATTCAAAGAATTGGGAGGAAAT
TATTCCAGAAGATCAAAGAAGACGATTAGAAGAAGAAGAAAGACAAAAGGAACTTGAAGAAATTTATATGCTCCC
AAGAATGAGAAATTGTGCAAAACAGATTAGTTTCAATGGAAGTGAAGGGAGGCGCAGTAGAAGTAGGAGATACTC
TGGATCTGATAGTGATTCCATCTCAGAAGGGAAAAGGCCAAAGAAACGTGGAAGACCACGGACTATTCCTCGGGA
GAATATTAAAGGATTTAGTGATGCAGAAATTAGGCGGTTTATCAAGAGCTATAAGAAATTTGGTGGTCCTCTGGA

FIGURE 867B

AAGATTAGATGCAATTGCTCGAGATGCTGAGTTAGTTGATAAGTCAGAAACAGACCTTAGACGACTGGGAGAATT
GGTACATAATGGTTGCATTAAAGCATTAAAGGATAGTTCTTCAGGAACAGAACGAACAGGTGGTAGACTCGGAAA
AGTGAAGGGTCCAACATTCCGAATATCAGGAGTACAGGTGAATGCCAAACTAGTCATCTCCCATGAAGAAGAATT
AATACCTTTGCACAAATCCATTCCTTCTGATCCAGAAGAAAGAAAGCAGTATACTATCCCATGCCACACAAAGGC
AGCTCATTTTGATATAGACTGGGGCAAAGAAGATGATTCCAATTTGTTAATTGGCATCTATGAATATGGATATGG
AAGCTGGGAAATGATTAAAATGGATCCTGACCTCAGTCTAACACACAAGATTCTTCCAGATGATCCCGATAAAAA
ACCACAAGCAAAACAGTTGCAGACCCGTGCAGACTACCTCATCAAATTACTTAGTAGAGATCTTGCAAAAAAAGA
AGCTCTTTCTGGTGCGGGAAGTTCAAAGAGGAGAAAAGCAAGAGCTAAGAAGAATAAAGCAATGAAGTCTATAAA
AGTGAAAGAGGAAATAAAGAGTGATTCTTCTCCTCTGCCTTCAGAGAAGTCTGATGAAGATGATGATAAATTGAG
TGAATCCAAGTCTGATGGTAGGGAAAGATCCAAGAAATCTTCAGTGTCAGATGCTCCAGTTCATATCACGGCAAG
TGGTGAACCAGTTCCCATTTCTGAAGAATCTGAAGAGCTGGATCAGAAGACATTCAGCATTTGTAAAGAAAGAAT
GAGGCCTGTTAAAGCAGCTTTGAAACAACTTGATAGGCCTGAGAAAGGCCTTTCAGAAAGAGAACAACTAGAACA
TACTAGACAATGTTTAATAAAAATTGGAGACCATATCACAGAATGTCTAAAAGAGTATACAAATCCTGAACAAAT
TAAGCAATGGAGAAAAAACCTGTGGATTTTTGTATCTAAGTTTACTGAATTTGATGCAAGAAAATTACATAAATT
ATATAAGCATGCTATTAAAAAACGGCAGGAGTCTCAGCAAAACAGTGATCAAAACAGCAACTTGAATCCTCACGT
GATTAGAAATCCAGATGTGGAAAGATTAAAAGAGAATACAAATCACGATGATAGCAGCAGGGACAGTTATTCCTC
TGATAGACACTTAACTCAGTACCATGATCATCATAAAGACCGACATCAGGGAGATTCTTACAAAAAAAGTGATTC
CAGGAAAAGACCCTATTCTTCTTTTAGTAATGGTAAAGACCATCGTGATTGGGATCACTACAAGCAAGACAGCAG
ATATTACAGTGACAGAGAGAAACACAGAAAACTGGATGATCACAGGAGTAGAGATCACAGGTCAAATTTGGAAGG
AAGTTTAAAAGATAGATCTCATTCTGATCATCGTTCTCACTCAGATCATCGGTTACATTCAGACCACCGGTCAAG
TTCTGAATATACGCACCATAAATCTTCCAGGGATTATAGGTATCACTCAGACTGGCAAATGGACCACAGAGCTTC
CAGCAGTGGCCCTAGGTCACCACTAGATCAGAGATCTTATGGCTCCAGATCTCCATTTGAACATTCAGTTGAACA
CAAAAGTACACCGGAGCATACCTGGAGTAGTCGGAAAACA**TAA**CAAAAACTGATACTTCGTCTTTCTGGACTTTT
CTTTTAGCCATATATCATAAACCAACACAGTAATTGCCTTACATGACTTGAAAGATATAAACAGATCTTCTATCA
GTAGCAGTATTGTTACTTCTTTCCAGGATGCAAGGTCTATTATCCCAACAGAAGAGAAAATATTTTTATATTTAA
GGATTATGCTGCACTGTACTACAAAATTGTAGTACTTTTTTTTGTTTTCTTTTTTAAAGAAATGGAAAATGTTTA
CTATTACAGGGACCTCAACACTGCCCTCCCATACAGGCTGGATAAAACTGTTTTTAAGTCAGTGATTTTAGACTG
ACCTCCATTTAAATTATGTTTATATATGAACTTTACTCTGACCTGTGATCATGTTTCAGGAAGGAATGAAAGAGA
GTTCTTTCTTAATAAAGAAAAACACTCAAGGACTTTGTTCATTTCCAAAGCTACTTGTTTACATTGTACACTGCG
ACCACCTTGCCGCTTTTCATCACAAGCTTGAATATTTAAATTCTGTACTTATATCTGTAAAATAGCCAGGAATTT
CCTGTTTGTGATCTATTATGCCTTTTTACAAAAAAAATGGCTGTAAATTATTGTAAATATTAAAGGAACTTTCCT
TACAAAAAAAAAAAAAAAAAAA

FIGURE 868

MNGHSDEESVRNSSGESSQSDDDSGSASGSGSGSSSGSSSDGSSSQSGSSDSDSGSESGSQSESESDTSRENKVQ
AKPPKVDGAEFWKSSPSILAVQRSAILKKQQQQQQQQQQHQASSNSGSEEDSSSSEDSDDSSSEVKRKKHKDEDWQ
MSGSGSPSQSGSDSESEEEREKSSCDETESDYEPKNKVKSRKPQNRSKSKNGKKILGQKKRQIDSSEEDDDEEDY
DNDKRSSRRQATVNVSYKEDEEMKTDSDDLLEVCGEDVPQPEEEEEFETIERFMDCRIGRKGATGATTTIYAVEAD
GDPNAGFEKNKEPGEIQYLIKWKGWSHIHNTWETEETLKQQNVRGMKKLDNYKKKDQETKRWLKNASPEDVEYYN
CQQELTDDLHKQYQIVGRIIAHSNQKSAAGYPDYYCKWQGLPYSECSWEDGALISKKFQACIDEYFSRNQSKTTP
FKDCKVLKQRPRFVALKKQPSYIGGHEGLELRDYQLNGLNWLAHSWCKGNSCILADEMGLGKTIQTISFLNYLFH
EHQLYGPFLLVVPLSTLTSWQREIQTWASQMNAVVYLGDINSRNMIRTHEWTHHQTKRLKFNILLTTYEILLKDK
AFLGGLNWAFIGVDEAHRLKNDDSLLYKTLIDFKSNHRLLITGTPLQNSLKELWSLLHFIMPEKFSSWEDFEEEH
GKGREYGYASLHKELEPFLLRRVKKDVEKSLPAKVEQILRMEMSALQKQYYKWILTRNYKALSKGSKGSTSGFLN
IMMELKKCCNHCYLIKPPDNNEFYNKQEALQHLIRSSGKLILLDKLLIRLRERGNRVLIFSQMVRMLDILAEYLK
YRQFPFQRLDGSIKGELRKQALDHFNAEGSEDFCFLLSTRAGGLGINLASADTVVIFDSDWNPQNDLQAQARAHR
IGQKKQVNIYRLVTKGSVEEDILERAKKKMVLDHLVIQRMDTTGKTVLHTGSAPSSSTPFNKEELSAILKFGAEE
LFKEPEGEEQEPQEMDIDEILKRAETHENEPGPLTVGDELLSQFKVANFSNMDEDDIELEPERNSKNWEEIIPED
QRRRLEEEERQKELEEIYMLPRMRNCAKQISFNGSEGRRSRSRRYSGSDSDSISEGKRPKKRGRPRTIPRENIKG
FSDAEIRRFIKSYKKFGGPLERLDAIARDAELVDKSETDLRRLGELVHNGCIKALKDSSSGTERTGGRLGKVKGP
TFRISGVQVNAKLVISHEEELIPLHKSIPSDPEERKQYTIPCHTKAAHFDIDWGKEDDSNLLIGIYEYGYGSWEM
IKMDPDLSLTHKILPDDPDKKPQAKQLQTRADYLIKLLSRDLAKKEALSGAGSSKRRKARAKKNKAMKSIKVKEE
IKSDSSPLPSEKSDEDDDKLSESKSDGRERSKKSSVSDAPVHITASGEPVPISEESEELDQKTFSICKERMRPVK
AALKQLDRPEKGLSEREQLEHTRQCLIKIGDHITECLKEYTNPEQIKQWRKNLWIFVSKFTEFDARKLHKLYKHA
IKKRQESQQNSDQNSNLNPHVIRNPDVERLKENTNHDDSSRDSYSSDRHLTQYHDHHKDRHQGDSYKKSDSRKRP
YSSFSNGKDHRDWDHYKQDSRYYSDREKHRKLDDHRSRDHRSNLEGSLKDRSHSDHRSHSDHRLHSDHRSSSEYT
HHKSSRDYRYHSDWQMDHRASSSGPRSPLDQRSYGSRSPFEHSVEHKSTPEHTWSSRKT

FIGURE 869

CCGGAGCGGGGATCACCTTAACTTGACTGTGGTCCCCCAGCCCTCCAAGAAATGCCCATAAACCAAGGAGGAGAG
GGTAAAAAAATAGAAGAATACATGGAATTGGGGAGAAGAATGGGAAAAAAGATGGGAGTGACTGCATAATGTCAGC
ATTTTGTGCTTTTGGCTCAGCATTTGGATTGGATGGAGGATTTTCATCCTGAAACCAGCCCTCCGTCGCCACCGA
CCATGGAATAATTGTCTTCCACGAAACTCTTCCCTGGTGCCAAAAAGGGTTTTATGTATATATTTGAGAGCTCCA
CATCCCTGGATCTGAATCCTCCACTTCCCACTGGAACCATGCCCCTCCCAGTCCCGTTTCTCCCCTCTAGGGGATG
GGAGGCTGAGAGACCCCAGGAAGAAGAGGATGGTGAGCAGGGCCCCCCTCAGGATGAGGAAGGCTGGCCCCCTCC
AAACTCCACCACTCGGCCTTGGCGATCTGCTCCTCCATCCCCTCCTCCTCCAGGGACCCGCCACACAGCCCTGGG
ACCCCGCTCGGCCTCCCTGCTCTCCCTGCAGACTGAACTCCTTCTGGACCTGGTGGCTGAAGCCCAGTCCCGCCG
CCTGGAGGAGCAGAGGGCCACCTTCTACACCCCCCAAAACCCCTCAAGCCTAGCCCCTGCCCCACTCCGTCCTCT
CGAGGACAGAGAACAGCTTTACAGCACTATCCTCAGTCACCAGTGCCAGCGGATGGAAGCCCAGCGGTCAGAGCC
TCCCCTCCCTCCAGGGGGGCAAGAGCTCCTGGAGTTGCTGCTGAGAGTTCAGGGTGGGGGTCGAATGGAGGAGCA
AAGGTCCCGGCCCCCCACACACACCTGCTGAGACTTGAGCCCCAACCAGCCCTTCCTTGCCACTGGTCTCAAAGC
TGGGCAGCCCATTGCATGCCCTCAACTCTTGCTTGGCAGGGGTACCAGAGACTGAAAGACACGGCACAAATCTCA
ATATTCATCTCCCACATCACCTTCCCTGGGAACTGGACAGGGTGAAAGTCCTCAAACTCTGGGAACAGGCGAGAT
GGAACAGGGATTTAACTCCCCGCCCACAGGTCCATGGGAGCTTGAGGCAGTAAGGGGGATCCCAGGCACCCATCT
CAAGGAGTGGCTGGGAGTCTTTTCCCTAACTTGTGGGGACACCACCAGTTGTCAAGCTACTAGGCAGTAGGGTCT
GAGGGCTCAGGCCTCCACCTGAGAGGTTATAACCTGAGAGACAGCTCTACCCTTCCTCCCAGTAAGAAGGGAAGG
TGGGTGGGCACCTGAGAGATTAAGACTATTCTCCCAGTCCCACTACCAGCACCCCCGATCCCTGAGACTGAGGGG
TTTACGGGCTGTGAATGGACCTTCAGCCCTGCCCACCCTCCCTCCCCACTGCTGCTGAGTCTGTCTGATGTTTTG
GTTGTGTGAATAAATATAATTCCCCTCTGGAAAAAAAAAAAAAAAAA

FIGURE 870

MEAERPQEEEDGEQGPPQDEEGWPPPNSTTRPWRSAPPSPPPPGTRHTALGPRSASLLSLQTELLLDLVAEAQSR
RLEEQRATFYTPQNPSSLAPAPLRPLEDREQLYSTILSHQCQRMEAQRSEPPLPPGGQELLELLLRVQGGGRMEE
QRSRPPTHTC

FIGURE 871

CGGGCACTCACCGTGTGTAGTTGGCATCTCCGCGCGTCCGGACACCCGATCCCAGCATCCCTGCCTGCAGGACTG
TTCGTGTTCAGCTCGCGTCCTGCAGCTGTCCGAGGTGCTCCAGTTGGAGGCTGAGGTTCCCGGGCTCTGTCGCTG
AGTGGGCGGCGGCACCGGCGGAG**ATG**CCTGGGAAGAAGGCGCGCAAGAACGCTCAACCGAGCCCCGCGCGGGCTC
CAGCAGAGCTGGAAGTCGAGTGTGCTACTCAACTCAGGAGATTTGGAGACAAACTGAACTTCCGGCAGAAACTTC
TGAATCTGATATCCAAACTCTTCTGCTCAGGAACC**TGA**CTGCATCAAAAACTTGCATGAGGGGACTCCTTCAAAA
GAGTTTTCTCAGGAGGTGCACGTTTCATCAATTTGAAGAAAGACTGCATTGTAATTGAGAGGAATGTGAAGGTGC
ATTCATGGGTGCCCTTGGAAACGGAAGATGGAATACATCAAAGTGAATTTCTGTTCAAGTTTTCCCAGATTATCA
TTCTTTGGGATGAGAGAACATTATAAAACCACTTTGTTTATTTTAAAGCAAGAATGGAAGACCCTTGAAAATAAA
GAAGTAATTATTGACACATTTCTTTTTTACTTAGAGAATCGTTCTAGTGTTTTTGCCGAAGATTACCGCTGGCCT
ACTGTGAAGGTAGATGACCTGTGATTAGACTGGGCGGCTGGGGAGAAACAGTTCAGTGCATTGTTGTTGTTGCTG
TTTTTGGTGTTTTGCTTTTCAGTGCCAACTCAGCACATTGTATATGATTCGGTTTATACATATTACCTTGTTATA
ATGAAAAAACTCATTCTGAGAACACTGAAATGTTATACTCAGTGTTGATTTCTTCGGTCACTACACAACGTAAAA
TCATTTGTTTCTTTTGACTCAAATTGTATTGCTTCTGTTCAGATGATCTTTCATTCAATGTGTTCCTGTTGGGCG
TTACTAGAAACTATGGAAAACTGGAAAATAACTTTGAAAAAATTGGATAAAGTATAGGAGGGTTACTTGGGGCCA
GTAAATCAGTAGACTGAACATTCAATATAATAAAAGAACATGGGGATTTTGTATAACCAGGGATAATAAAAAGAA
AAAGAAGTTAATTTTTAATTGATGTTTTTGAAACTTAGTAGAACAAATATTCAGAAGTAACTTGATAAGATATGA
ATGTTTCTAAAGAGTTTCTAAAGGTTCGAAATGCTCCTTGTCACATTAGTGTGCATCCTACAAAAAGTGATCTCT
TAATGTAAATTAAGAATATTTTCATAATTGGAATATACTTTTCTTAAAAAAAAGGAACAGTTAGTTCTCATCTAG
AATGAAAGTTCCATATATGCATTGGTGAATATATATGTATACACATACTTACATACTTATATGGGTATCTGTATA
GATAATTTGTATTAGAGTATTATATAGCTTCTTAGTAGGGTCTCAAGTAAGTTCATTTTTTTTATCTGGGCTATA
TACAGTCCTCAAATAAATAATGTCTTGATTTTATTTCAGCAGGAATAATTTTATTTATTTTGCCTATTTATAATT
AAAGTATTTTTCTTTAGTTTGAAATGTGTATTAAAGTTACATTTTTGAGTTACAAGAGTCTTATAACTACTTGAA
TTTTTAGTTAAAATGTCTTAATGTAGGTTGTAGTCACTTTAGATGGAAAATTACCTCACATCTGTTTTCTTCAGT
ATTACTTAAGATTGTTTATTTAGTGGTAGAGAGATTTTTTTTTTCAGCCTAGAGGCAGCTATTTTACCATCTGGT
ATTTATGGTCTAATTTGTATTTAAACATATGCACACATATAAAAGTTGATACTGTGGCAGTAAACTATTAAAAGT
TTTCACTGTT

FIGURE 872

MPGKKARKNAQPSPARAPAELEVECATQLRRFGDKLNFRQKLLNLISKLFCSGT

FIGURE 873

GCTCCTCACAGGCGCGGGTTGCTTCACCCACACCGTCATGTACTACGGCCACTACAGTAACGCCACGCTGAACCA
GCCGTGTGGCAGCCCCCTGGATGGCAGCCAGTGCACACCCAGGGTGGGTGGCCTGCCCTACAACATGCCCCTGGC
CTACCTCTCCACTGTGGGCGTGAGCTTCTTTATCACCTGCATCACCCTGGTGTACAGC**ATG**GCTCACTCTTTCGG
GGAGAGCTACCGGGTGGGCAGCACCTCTGGCATCCACGCCATCACCGTCTTCTGCTCCTGGGACTACAAGGTGAC
GCAGAAGCGGGCCTCCCGCCTCCAGCAGGACAATATTCGCACCCGGCTGAAGGAGCTGCTGGCCGAGTGGCAGCT
GCGGCACAGCCCCAGGAGCGTGTGCGGGAGGCTGCGGCAGGCGGCTGTGCTGGGGCTTGTGTGGCTGCTGTGTCT
GGGGACCGCGCTGGGCTGCGCCGTGGCCGTCCACGTCTTCTCGGAGTTCATGATCCAGAGTCCAGAGGCTGCTGG
CCAGGAGGCTGTGCTGCTGGTCCTGCCCCTGGTGGTTGGCCTCCTCAACCTGGGGGCCCCCTACCTGTGCCGTGT
CCTGGCCGCCCTGGAGCCGCATGACTCCCCGGTACTGGAGGTGTACGTGGCCATCTGCAGGAACCTCATCCTCAA
GCTGGCCATCCTGGGGACACTGTGCTACCACTGGCTGGGCCGCAGGGTGGGCGTCCTGCAGGGCCAGTGCTGGGA
GGATTTTGTGGGCCAGGAGCTGTACCGGTTCCTGGTGATGGACTTCGTCCTCATGTTGCTGGACACGCTTTTTGG
GGAACTGGTGTGGAGGATTATCTCCGAGAAGAAGCTGAAGAGGAGGCGGAAGCCGGAGTTTGACATTGCCCGGAA
TGTCCTGGAGCTGATTTATGGGCAGACTCTGACCTGGCTGGGGGTGCTCTTCTCGCCCCTCCTCCCCGCCGTGCA
GATCATCAAGCTGCTGCTCGTCTTCTATGTCAAGAAGACCAGCCTTCTGGCCAACTGCCAGGCGCCGCGCCGGCC
CTGGCTGGCCTCACACATGAGCACCGTCTTCCTCACGCTGCTCTGCTTCCCCGCCTTCCTGGGCGCCGCTGTCTT
CCTCTGCTACGCCGTCTGGCAGGTGAAGCCCTCGAGCACCTGCGGCCCCTTCCGGACCCTGGACACCATGTACGA
GGCCGGCAGGGTGTGGGTGCGCCACCTGGAGGCGGCAGGCCCCAGGGTCTCCTGGCTGCCCTGGGTGCACCGGTA
CCTGATGGAAAACACCTTCTTTGTCTTCCTGGTGTCAGCCCTGCTGCTGGCCGTGATCTACCTCAACATCCAGGT
GGTGCGGGGCCAGCGCAAGGTCATCTGCCTGCTCAAGGAGCAGATCAGCAATGAGGGTGAGGACAAAATCTTCTT
AATCAACAAGCTTCACTCCATCTACGAGAGGAAGGAGAGGGAGGAGAGGAGCAGGGTTGGGACAACCGAGGAGGC
TGCGGCACCCCCTGCCCTGCTCACAGATGAACAGGATGCC**TAG**GGGGACGGCGATGGGCCTCACGGGCCCGCCCA
GCACCCTGAGACCACACTGTTGCCTCCCAGTGACCCTGCTGGGACACCAGGACAAGGAAGACAGTTTCGCCTCTC
GAAAGCCGCAGCTGCGCCTAGGCTGGAGCTGGAAGGGTGGGTGAATCCGGCTTGGGCATCCCCAATGAACTCTGC
CCTGCCTGGGACTCTATTTATTCTGATTAAAGGGGTTTTGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAA

FIGURE 874

MAHSFGESYRVGSTSGIHAITVFCSWDYKVTQKRASRLQQDNIRTRLKELLAEWQLRHSPRSVCGRLRQAAVLGL
VWLLCLGTALGCAVAVHVFSEFMIQSPEAAGQEAVLLVLPLVVGLLNLGAPYLCRVLAALEPHDSPVLEVYVAIC
RNLILKLAILGTLCYHWLGRRVGVLQGQCWEDFVGQELYRFLVMDFVLMLLDTLFGELVWRIISEKKLKRRRKPE
FDIARNVLELIYGQTLTWLGVLFSPLLPAVQIIKLLLVFYVKKTSLLANCQAPRRPWLASHMSTVFLTLLCFPAF
LGAAVFLCYAVWQVKPSSTCGPFRTLDTMYEAGRVWVRHLEAAGPRVSWLPWVHRYLMENTFFVFLVSALLLAVI
YLNIQVVRGQRKVICLLKEQISNEGEDKIFLINKLHSIYERKEREERSRVGTTEEAAAPPALLTDEQDA

FIGURE 875

CGGCGCTGGGCTGAGGGGAGGGGTTGTCTTAAAAGTCTCTCCTTCCCCCTGTAGGGGCGGCCGGCGAGTCCCAGT
GAGAGCGGAGGGTGCCAGAGGTAGGGGGCCGAGAAACAAAGTTCCCGGGGCTTCCTCCGGGGCCGCGGTCGGGGC
TGCGCGTTTGACCGCCCCCCTCCTCGCGAAGCA**ATG**GCTTCCAAACTCCTGCGCGCGGTCATCCTCGGGCCGCCC
GGCTCGGGCAAGGGCACCGTGTGCCAGAGGATCGCCCAGAACTTTGGTCTCCAGCATCTCTCCAGCGGCCACTTC
TTGCGGGAGAACATCAAGGCCAGCACCGAAGTTGGTGAGATGGCAAAGCAGTATATAGAGAAAAGTCTTTTGGTT
CCAGACCATGTGATCACACGCCTAATGATGTCCGAGTTGGAGAACAGGCGTGGACAGCACTGGCTCCTTGATGGT
TTTCCTAGGACATTAGGACAAGCCGAAGCCCTGGACAAAATCTGTGAAGTGGATCTAGTGATCAGTTTGAATATT
CCATTTGAAACACTTAAAGATCGTCTCAGCCGCCGTTGGATTCACCCTCCTAGCGGAAGGGTATATAACCTGGAC
TTCAATCCACCTCATGTACATGGTATTGATGACGTCACTGGTGAACCGTTAGTCCAGCAGGAGGATGATAAACCC
GAAGCAGTTGCTGCCAGGCTAAGACAGTACAAAGACGTGGCAAAGCCAGTCATTGAATTATACAAGAGCCGAGGA
GTGCTCCACCAATTTTCCGGAACGGAGACGAACAAAATCTGGCCCTACGTTTACACACTTTTCTCAAACAAGATC
ACACCTATTCAGTCCAAAGAAGCATAT**TGA**CCCTGCCCAATGGAAGAACCAGGAAGATGTGGTCATTCATTCAAT
AGTGTGTGTAGTATTGGTGCTGTGTCCAAATTAGAAGCTAGCTGAGGTAGCTTGCAGCATCTTTTCTAGTTGAAA
TGGTGAACTGATAGGAAAACAAATGAGTAGAAAGAGTTCATGAAGAGGCCCTCCTCTGCCTTTCAAAAGGCTGGT
CACCTACACATGTTTAAGGTGTCTCTGCACATGTCTCAAGCCCATCACAAGAAAGCAAGTACAGTGTGGATTTCA
AATGGTGTGTAACTTCAGCTCCAGCTGGTTTTTGACAGCTGTTGCTGTGGTAATATTTTTGACATGTGATGGTGA
TAGTCTCTGGTTCTCCCCATCCCCACAAAGGCTGTTGAACCACAGCACCAGGAAGCCTGAGAATGAATCCTGAGG
GCTCTAGCCCAGGCTTTGTCCCAGGCTTTCTGGTGTGTGCCCTCCTGGTAACAGTGAAATTGAAGCTACTTACTC
ATAGTGGTTGTTTCTCTGGTCTTGAGTGACTGTGTCCACAGTTCATTTTTTTCCGGTAGGAATAACTCCTTTTCT
ACATCCACGCTCCATAGAGTCTCTCCTTTTCAGACATCCTGGGATGAAAGAATTTGGCTTTTTTTTTTCTTTTTT
TTTTGGACATCTGTTTTCACTCTTAGGCTTTTAAACAATAGTTATTGCTTTTATCCCTCTCAGATTCTAATAACT
GAGAGCGATGGGGCTATATTGAATCTCTGTATGCACTGAGAACTGAGCTATGAAGAGAATCTTATTAAACTGCTG
GTCTGACTTTATGGATTGACACTGTTCCTTTCTTTTATTGTGAAAAAAAAAAAAAAA

FIGURE 876

MASKLLRAVILGPPGSGKGTVCQRIAQNFGLQHLSSGHFLRENIKASTEVGEMAKQYIEKSLLVPDHVITRLMMS
ELENRRGQHWLLDGFPRTLGQAEALDKICEVDLVISLNIPFETLKDRLSRRWIHPPSGRVYNLDFNPPHVHGIDD
VTGEPLVQQEDDKPEAVAARLRQYKDVAKPVIELYKSRGVLHQFSGTETNKIWPYVYTLFSNKITPIQSKEAY

FIGURE 877

GCGCCGAGCCGGTTTCCCCGCCGGTGTCCGAGAGGCGCCCCCGGCCCGGCCCGGCCCGGCCCGCGCCCTCCGCCC
CCGCCTCCCCGGGCCGGCGGCGGTGGGCGAGCTCGCGGGCCCGGCCGCCCCCAGCCCCAGCCCCGCCGGGCCCCG
CCCCCCGTCGAGTGCATGAGGTTGACGCTACTTTGTTGCACCTGGAGGGAAGAACGTATGGGAGAGGAAGGAAGC
GAGTTGCCCGTGTGTGCAAGCTGCGGCCAGAGGATCTATGATGGCCAGTACCTCCAGGCCCTGAACGCGGACTGG
CACGCAGACTGCTTCAGGTGTTGTGACTGCAGTGCCTCCCTGTCGCACCAGTACTATGAGAAGGATGGGCAGCTC
TTCTGCAAGAAGGACTACTGGGCCCGCTATGGCGAGTCCTGCCATGGGTGCTCTGAGCAAATCACCAAGGGACTG
GTTATGGTGGCTGGGGAGCTGAAGTACCACCCCGAGTGTTTCATCTGCCTCACGTGTGGGACCTTTATCGGTGAC
GGGGACACCTACACGCTGGTGGAGCACTCCAAGCTGTACTGCGGGCACTGCTACTACCAGACTGTGGTGACCCCC
GTCATCGAGCAGATCCTGCCTGACTCCCCTGGCTCCCACCTGCCCCACACCGTCACCCTGGTGTCCATCCCAGCC
TCATCTCATGGCAAGCGTGGACTTTCAGTCTCCATTGACCCCCCGCACGGCCCACCGGGCTGTGGCACCGAGCAC
TCACACACCGTCCGCGTCCAGGGAGTGGATCCGGGCTGCATGAGCCCAGATGTGAAGAATTCCATCCACGTCGGA
GACCGGATCTTGGAAATCAATGGCACGCCCATCCGAAATGTGCCCCTGGACGAGATTGACCTGCTGATTCAGGAA
ACCAGCCGCCTGCTCCAGCTGACCCTCGAGCATGACCCTCACGATACACTGGGCCACGGGCTGGGGCCTGAGACC
AGCCCCCTGAGCTCTCCGGCTTATACTCCCAGCGGGGAGGCGGGCAGCTCTGCCCGGCAGAAACCTGTCTTCGCA
AGGACCTGGGTCGCTCTGAGTCCCTCCGCGTAGTCTGCCGGCCACACCGCATCTTCCGGCCGTCGGACCTCATCC
ACGGGGAGGTGCTGGGCAAGGGCTGCTTCGGCCAGGCTATCAAGGTGACACACCGTGAGACAGGTGAGGTGATGG
TGATGAAGGAGCTGATCCGGTTCGACGAGGAGACCCAGAGGACGTTCCTCAAGGAGGTGAAGGTCATGCGATGCC
TGGAACACCCCAACGTGCTCAAGTTCATCGGGGTGCTCTACAAGGACAAGAGGCTCAACTTCATCACTGAGTACA
TCAAGGGCGGCACGCTCCGGGGCATCATCAAGAGCATGGACAGCCAGTACCCATGGAGCCAGAGAGTGAGCTTTG
CCAAGGACATCGCATCAGGGATGGCCTACCTCCACTCCATGAACATCATCCACCGAGACCTCAACTCCCACAACT
GCCTGGTCCGCGAGAACAAGAATGTGGTGGTGGCTGACTTCGGGCTGGCGCGTCTCATGGTGGACGAGAAGACTC
AGCCTGAGGGCCTGCGGAGCCTCAAGAAGCCAGACCGCAAGAAGCGCTACACCGTGGTGGGCAACCCCTACTGGA
TGGCACCTGAGATGATCAACGGCCGCAGCTATGATGAGAAGGTGGATGTGTTCTCCTTTGGGATCGTCCTGTGCG
AGATCATCGGGCGGGTGAACGCAGACCCTGACTACCTGCCCCGCACCATGGACTTTGGCCTCAACGTGCGAGGAT
TCCTGGACCGCTACTGCCCCCCAAACTGCCCCCCGAGCTTCTTCCCCATCACCGTGCGCTGTTGCGATCTGGACC
CCGAGAAGAGGCCATCCTTTGTGAAGCTGGAACACTGGCTGGAGACCCTCCGCATGCACCTGGCCGGCCACCTGC
CACTGGGCCCACAGCTGGAGCAGCTGGACAGAGGTTTCTGGGAGACCTACCGGCGCGGCGAGAGCGGACTGCCTG
CCCACCCTGAGGTCCCCGACTGAGCCAGGGCCACTCAGCTGCCCCTGTCCCCACCTCTGGAGAATCCACCCCCAC
CAGATTCCTCCGCGGGAGGTGGCCCTCAGCTGGGACAGTGGGGACCCAGGCTTCTCCTCAGAGCCAGGCCCTGAC
TTGCCTTCTCCCACCCCGTGGACCGCTTCCCCTGCCTTCTCTCTGCCGTGGCCCAGAGCCGGCCCAGCTGCACAC
ACACACCATGCTCTCGCCCTGCTGTAACCTCTGTCTTGGCAGGGCTGTCCCCTCTTGCTTCTCCTTGCATGAGCT
GGAGGGCCTGTGTGAGTTACGCCCCTTTCCACACGCCGCTGCCCCAGCAACCCTGTTCACGCTCCACCTGTCTGG
TCCATAGCTCCCTGGAGGCTGGGCCAGGAGGCAGCCTCCGAACCATGCCCCATATAACGCTTGGGTGCGTGGGAG
GGCGCACATCAGGGCAGAGGCCAAGTTCCAGGTGTCTGTGTTCCCAGGAACCAAATGGGGAGTCTGGGGCCCGTT
TTCCCCCCAGGGGGTGTCTAGGTAGCAACAGGTATCGAGGACTCTCCAAACCCCCAAAGCAGAGAGAGGGCTGAT
CCCATGGGGCGGAGGTCCCCAGTGGCTGAGCAAACAGCCCCTTCTCTCGCTTTGGGTCTTTTTTTTGTTTCTTTC
TTAAAGCCACTTTAGTGAGAAGCAGGTACCAAGCCTCAGGGTGAAGGGGGTCCCTTGAGGGAGCGTGGAGCTGCG
GTGCCCTGGCCGGCGATGGGGAGGAGCCGGCTCCGGCAGTGAGAGGATAGGCACAGTGGACCGGGCAGGTGTCCA
CCAGCAGCTCAGCCCCTGCAGTCATCTCAGAGCCCCTTCCCGGGCCTCTCCCCCAAGGCTCCCTGCCCCTCCTCA
TGCCCCTCTGTCCTCTGCGTTTTTTCTGTGTAATCTATTTTTTAAGAAGAGTTTGTATTATTTTTTCATACGGCT
GCAGCAGCAGCTGCCAGGGGCTTGGGATTTTATTTTTGTGGCGGGCGGGGGTGGGAGGGCCATTTTGTCACTTTG
CCTCAGTTGAGCATCTAGGAAGTATTAAAACTGTGAAGCTTTCTCAGTGCACTTTGAACCTGGAAAACAATCCCA
ACAGGCCCGTGGGACCATGACTTAGGGAGGTGGGACCCACCCACCCCCATCCAGGAACCGTGACGTCCAAGGAAC
CAAACCCAGACGCAGAACAATAAAATAAATTCCGTACTCCCCACCC

FIGURE 878

MHHQQRLRANGGRGGTGLGAGSGPVSGGHSPLCAHCRGQLLPHPEEPIVMALGQQWHCDCFRCSVCEGHLHNWYF
EREGLLYCREDYYGRFGDACQQCMAVITGPVMVAGEHKFHPECFCCTACGSFIGEGESYALVERSKLYCGQCYGK
RSCQPADAKARITTAGKPMHSIRLVEIPKDATPGLRVDGVALDDGCPTVRITDLFCNFFLWLTSMAEQCCGAPYR
IDVNLTNLHIGDRILEVNGTPVSDSSVEQIDKLIRSNEKMLQLTVEHDPVQVCRSCSQADIQRAMSASTLILPLS
TSASSVEVGRERLYKTPGEQGTKARKLRQATNASTTIPPAAGATAMTQLKEKERCSSLSKLLDEQHQAQQHSAHP
QLYDLSRTQSCRVVQKPQRIFRATDLVIGEKLGEGFFGKVFKVTHRQSGEVMVLKELHRADEEAQRNFIKEVAVL
RLLDHRHVLKFIGVLYKDKKLHMVTEYVAGGCLKELIHDPAQVLPWPQRVRLARDIACGMSYLHSMNIIHRDLNS
MNCLVREDRSVIVADFGLARSVDAPRLPSGNMTPGGYGSGANSDAPMSPSGTLRRSKSRQRRQRYTVVGNPYWMA
PEMMKGLKYDEKLDVFSFGIMLCEIIGRVEADPDFMPRNSDFSLNQQEFREKFCAQCPEPFVKVAFVCCDLNPDM
RPCFETLHVWLQRLADDLAADRVPPERLLHEIETFQEWYASSEDALSPTSQRSLNNLDELVKSAVDSEISPVEKE
KENMVIKPQDIPKSPHLGKDFSPSGERLRDSMRARRRQRFLGAQEERRNLTPDTESKERALKKALKKCRPFGERG
YLVDLRAGAELQLEDVRDLNTYSDVDSSCDTSLNYHDVNNLPAAQEDENTVKPGKEELLEESTNKPSNQESQHHR
LAIDDMRTRLNQCRSKFEHLEEASRRNFNQSQHSMKNFFKTPPVALKMFQRLEHEAAALNGGNNCPPPPPRTQRI
NQTPIFGRKNPPVAIVGQKLQHAESLEDLASSGVAKQLATPAPKRSKATATTKGGQSSNPPLFLPPSLNISVALN
SNGNVTTTTNTNSSCPPSASDWLPKKHKLTLPLPSAQQQRTSSNHRLPMCNNKGKTLKPLPSRTGSQGIPASNCV
SPTRSSRPGSPTKHLAQRHTAATAQRLTNAAATHQQQHQQQSSKTTRLNILSPEKVHRLGARLTDQKQKMREEAA
ATASSVGGAGCAAGTAAGSLNGHRTIGSSGTPNSAVGERRRRAAPSPPVRTHFNTRC

FIGURE 879

AAGTAGCTATGGCAGTGCCTGATACAAAATAAACTCCAAATGTGTATTTATTAGATGGTTGGATGGAAGTTATTT
GCGTGTGAAAGCGCGTTTTACCCGAAGGCGCTCTGTGAGGGCCAGCGGGTCCCCTTCGGCCCTGGAGCCGGGGTC
ACACGCTCCCCACCGCGTGCGGTCACGAGACGCCCCCAAGGGAGTATCCTGGTACCCGGAAGCCGCGACTCCTGG
CCCTGAGCCCGGGCTTAGCCTTCGGGTCCACGTGGCCGGAGGCGGCAGCTGATTGGACGCGGGCCGCCCCACCCC
CTGGCCGTCGCGGGACCCGCAGGACTGAGACC**ATG**GAGGCGGTGGCGGTGGCCGCGGCGGTGGGGGTCCTTCTCC
TGGCCGGGGCCGGGGGCGCGGCAGGCGACGAGGCCCGGGAGGCGGCGGCCGTGCGGGCGCTCGTGGCCCGGCTGC
TGGGGCCAGGCCCCGCGGCCGACTTCTCCGTGTCGGTGGAGCGCGCTCTGGCTGCCAAGCCGGGCTTGGACACCT
ACAGCCTGGGCGGCGGCGGCGCGGCGCGCGTGCGGGTGCGCGGCTCCACGGGCGTGGCGGCCGCCGCGGGGCTGC
ACCGCTACCTGCGCGACTTCTGTGGCTGCCACGTGGCCTGGTCCGGCTCTCAGCTGCGCCTGCCGCGGCCACTGC
CAGCCGTGCCGGGGGAGCTGACCGAGGCCACGCCCAACAGGTACCGCTATTACCAGAATGTGTGCACGCAAAGCT
ACTCCTTCGTGTGGTGGGACTGGGCCCGCTGGGAGCGAGAGATAGACTGGATGGCGCTGAATGGCATCAACCTGG
CACTGGCCTGGAGCGGCCAGGAGGCCATCTGGCAGCGGGTGTACCTGGCCTTGGGCCTGACCCAGGCAGAGATCA
ATGAGTTCTTTACTGGTCCTGCCTTCCTGGCCTGGGGGCGAATGGGCAACCTGCACACCTGGGATGGCCCCCTGC
CCCCCTCCTGGCACATCAAGCAGCTTTACCTGCAGCACCGGGTCCTGGACCAGATGCGCTCCTTCGGCATGACCC
CAGTGCTGCCTGCATTCGCGGGGCATGTTCCCGAGGCTGTCACCAGGGTGTTCCCTCAGGTCAATGTCACGAAGA
TGGGCAGTTGGGGCCACTTTAACTGTTCCTACTCCTGCTCCTTCCTTCTGGCTCCGGAAGACCCCATATTCCCCA
TCATCGGGAGCCTCTTCCTGCGAGAGCTGATCAAAGAGTTTGGCACAGACCACATCTATGGGGCCGACACTTTCA
ATGAGATGCAGCCACCTTCCTCAGAGCCCTCCTACCTTGCCGCAGCCACCACTGCCGTCTATGAGGCCATGACTG
CAGTGGATACTGAGGCTGTGTGGCTGCTCCAAGGCTGGCTCTTCCAGCACCAGCCGCAGTTCTGGGGGCCCGCCC
AGATCAGGGCTGTGCTGGGAGCTGTGCCCCGTGGCCGCCTCCTGGTTCTGGACCTGTTTGCTGAGAGCCAGCCTG
TGTATACCCGCACTGCCTCCTTCCAGGGCCAGCCCTTCATCTGGTGCATGCTGCACAACTTTGGGGGAAACCATG
GTCTTTTTGGAGCCCTAGAGGCTGTGAACGGAGGCCCAGAAGCTGCCCGCCTCTTCCCCAACTCCACCATGGTAG
GCACGGGCATGGCCCCCGAGGGCATCAGCCAGAACGAAGTGGTCTATTCCCTCATGGCTGAGCTGGGCTGGCGAA
AGGACCCAGTGCCAGATTTGGCAGCCTGGGTGACCAGCTTTGCCGCCCGGCGGTATGGGGTCTCCCACCCGGACG
CAGGGGCAGCGTGGAGGCTACTGCTCCGGAGTGTGTACAACTGCTCCGGGGAGGCCTGCAGGGGCCACAATCGTA
GCCCGCTGGTCAGGCGGCCGTCCCTACAGATGAATACCAGCATCTGGTACAACCGATCTGATGTGTTTGAGGCCT
GGCGGCTGCTGCTCACATCTGCTCCCTCCCTGGCCACCAGCCCCGCCTTCCGCTACGACCTGCTGGACCTCACTC
GGCAGGCAGTGCAGGAGCTGGTCAGCTTGTACTATGAGGAGGCAAGAAGCGCCTACCTGAGCAAGGAGCTGGCCT
CCCTGTTGAGGGCTGGAGGCGTCCTGGCCTATGAGCTGCTGCCGGCACTGGACGAGGTGCTGGCTAGTGACAGCC
GCTTCTTGCTGGGCAGCTGGCTAGAGCAGGCCCGAGCAGCGGCAGTCAGTGAGGCCGAGGCCGATTTCTACGAGC
AGAACAGCCGCTACCAGCTGACCTTGTGGGGGCCAGAAGGCAACATCCTGGACTATGCCAACAAGCAGCTGGCGG
GGTTGGTGGCCAACTACTACACCCCTCGCTGGCGGCTTTTCCTGGAGGCGCTGGTTGACAGTGTGGCCCAGGGCA
TCCCTTTCCAACAGCACCAGTTTGACAAAAATGTCTTCCAACTGGAGCAGGCCTTCGTTCTCAGCAAGCAGAGGT
ACCCCAGCCAGCCGCGAGGAGACACTGTGGACCTGGCCAAGAAGATCTTCCTCAAATATTACCCCGGCTGGGTGG
CCGGCTCTTGG**TGA**TAGATTCGCCACCACTGGGCCTTGTTTTCCGCTAATTCCAGGGCAGATTCCAGGGCCCAGA
GCTGGACAGACATCACAGGATAACCCAGGCCTGGGAGGAGGCCCCACGGCCTGCTGGTGGGGTCTGACCTGGGGG
GATTGGAGGGAAATGACCTGCCCTCCACCACCACCCAAAGTGTGGGATTAAAGTACTGTTTTCTTTCCACTTAAA

FIGURE 880

MEAVAVAAAVGVLLLAGAGGAAGDEAREAAAVRALVARLLGPGPAADFSVSVERALAAKPGLDTYSLGGGGAARV
RVRGSTGVAAAAGLHRYLRDFCGCHVAWSGSQLRLPRPLPAVPGELTEATPNRYRYYQNVCTQSYSFVWWDWARW
EREIDWMALNGINLALAWSGQEAIWQRVYLALGLTQAEINEFFTGPAFLAWGRMGNLHTWDGPLPPSWHIKQLYL
QHRVLDQMRSFGMTPVLPAFAGHVPEAVTRVFPQVNVTKMGSWGHFNCSYSCSFLLAPEDPIFPIIGSLFLRELI
KEFGTDHIYGADTFNEMQPPSSEPSYLAAATTAVYEAMTAVDTEAVWLLQGWLFQHQPQFWGPAQIRAVLGAVPR
GRLLVLDLFAESQPVYTRTASFQGQPFIWCMLHNFGGNHGLFGALEAVNGGPEAARLFPNSTMVGTGMAPEGISQ
NEVVYSLMAELGWRKDPVPDLAAWVTSFAARRYGVSHPDAGAAWRLLLRSVYNCSGEACRGHNRSPLVRRPSLQM
NTSIWYNRSDVFEAWRLLLTSAPSLATSPAFRYDLLDLTRQAVQELVSLYYEEARSAYLSKELASLLRAGGVLAY
ELLPALDEVLASDSRFLLGSWLEQARAAAVSEAEADFYEQNSRYQLTLWGPEGNILDYANKQLAGLVANYYTPRW
RLFLEALVDSVAQGIPFQQHQFDKNVFQLEQAFVLSKQRYPSQPRGDTVDLAKKIFLKYYPGWVAGSW

FIGURE 881

GGAGAGAGCCGCCGAGCCGAGCCGAGCCCCAGCTCCAGCAAGAGCGCGGGCGGGTGGCCCAGGCACGCAGCGGTG
AGGACCGCGGCCACAGCTCGGCGCCAACCACCGCGGGCCTCCCAGCCAGCCCCGCGGCGGGGCAGCCGCAGGAGC
CCTGGCTGTGGTCGGGGGGCAGTGGGCC**ATG**CTGGGGGCAGTGGAAGGCCCCAGGTGGAAGCAGGCGGAGGACAT
TAGAGACATCTACGACTTCCGAGATGTTCTGGGCACGGGGGCCTTCTCGGAGGTGATCCTGGCAGAAGATAAGAG
GACGCAGAAGCTGGTGGCCATCAAATGCATTGCCAAGGAGGCCCTGGAGGGCAAGGAAGGCAGCATGGAGAATGA
GATTGCTGTCCTGCACAAGATCAAGCACCCCAACATTGTAGCCCTGGATGACATCTATGAGAGTGGGGGCCACCT
CTACCTCATCATGCAGCTGGTGTCGGGTGGGGAGCTCTTTGACCGTATTGTGGAAAAAGGCTTCTACACGGAGCG
GGACGCCAGCCGCCTCATCTTCCAGGTGCTGGATGCTGTGAAATACCTGCATGACCTGGGCATTGTACACCGGGA
TCTCAAGCCAGAGAATCTGCTGTACTACAGCCTGGATGAAGACTCCAAAATCATGATCTCCGACTTTGGCCTCTC
CAAGATGGAGGACCCGGGCAGTGTGCTCTCCACCGCCTGTGGAACTCCGGGATACGTGGCCCCTGAAGTCCTGGC
CCAGAAGCCCTACAGCAAGGCTGTGGATTGCTGGTCCATAGGTGTCATCGCCTACATCTTGCTCTGCGGTTACCC
TCCCTTCTATGACGAGAATGATGCCAAACTCTTTGAACAGATTTTGAAGGCCGAGTACGAGTTTGACTCTCCTTA
CTGGGACGACATCTCTGACTCTGCCAAAGATTTCATCCGGCACTTGATGGAGAAGGACCCAGAGAAAAGATTCAC
CTGTGAGCAGGCCTTGCAGCACCCATGGATTGCAGGAGATACAGCTCTAGATAAGAATATCCACCAGTCGGTGAG
TGAGCAGATCAAGAAGAACTTTGCCAAGAGCAAGTGGAAGCAAGCCTTCAATGCCACGGCTGTGGTGCGGCACAT
GAGGAAACTGCAGCTGGGCACCAGCCAGGAGGGGCAGGGGCAGACGGCGAGCCATGGGGAGCTGCTGACACCAGT
GGCTGGGGGGCCGGCAGCTGGCTGTTGCTGTCGAGACTGCTGCGTGGAGCCGGGCACAGAACTGTCCCCCACACT
GCCCCACCAGCTC**TAG**GGCCCTGGACCTCGGGTCATGATCCTCTGCGTGGGAGGGCTTGGGGGCAGCCTGCTCCC
CTTCCCTCCCTGAACCGGGAGTTTCTCTGCCCTGTCCCCTCCTCACCTGCTTCCCTACCACTCCTCACTGCATTT
TCCATACAAATGTTTCTATTTTATTGTTCCTTCTTGTAATAAAGGGAAGATAAAACCAAAAAAAAAAAAAAAAAA
A

FIGURE 882

MLGAVEGPRWKQAEDIRDIYDFRDVLGTGAFSEVILAEDKRTQKLVAIKCIAKEALEGKEGSMENEIAVLHKIKH
PNIVALDDIYESGGHLYLIMQLVSGGELFDRIVEKGFYTERDASRLIFQVLDAVKYLHDLGIVHRDLKPENLLYY
SLDEDSKIMISDFGLSKMEDPGSVLSTACGTPGYVAPEVLAQKPYSKAVDCWSIGVIAYILLCGYPPFYDENDAK
LFEQILKAEYEFDSPYWDDISDSAKDFIRHLMEKDPEKRFTCEQALQHPWIAGDTALDKNIHQSVSEQIKKNFAK
SKWKQAFNATAVVRHMRKLQLGTSQEGQGQTASHGELLTPVAGGPAAGCCCRDCCVEPGTELSPTLPHQL

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FIGURE 883

CAGAGGGAGGAAGAAGCGGCGGCGCGGCGGCGGCGGCTCCTCTTTGCAGAGGGGGAAACTCTTGGGCTGAGAGCA
GGAACAACGCGGTAGGCAAGGCGGGCTGCTGGCTCCCCCGGCTCCGGCAGCAGCGGCGGCAGCCCGAGCAGCGGC
AGCAGCAGCGGCAGCACCCCAGGCGCTGACAGCCCCGCCGGCCGGCTCCGTTGCTGACCGCCGACTGTCA**ATG**GA
GCTGGAAAACATCGTGGCCAACACGGTCTTGCTGAAAGCCAGGGAAGGGGGCGGAGGAAAGCGCAAAGGGAAAAG
CAAGAAGTGGAAAGAAATCCTGAAGTTCCCTCACATTAGCCAGTGTGAAGACCTCCGAAGGACCATAGACAGAGA
TTACTGCAGTTTATGTGACAAGCAGCCAATCGGGAGGCTGCTTTTCCGGCAGTTTTGTGAAACCAGGCCTGGGCT
GGAGTGTTACATTCAGTTCCTGGACTCCGTGGCAGAATATGAAGTTACTCCAGATGAAAAACTGGGAGAGAAAGG
GAAGGAAATTATGACCAAGTACCTCACCCCAAAGTCCCCTGTTTTCATAGCCCAAGTTGGCCAAGACCTGGTCTC
CCAGACGGAGGAGAAGCTCCTACAGAAGCCGTGCAAAGAACTCTTTTCTGCCTGTGCACAGTCTGTCCACGAGTA
CCTGAGGGGAGAACCATTCCACGAATATCTGGACAGCATGTTTTTTGACCGCTTTCTCCAGTGGAAGTGGTTGGA
AAGGCAACCGGTGACCAAAAACACTTTCAGGCAGTATCGAGTGCTAGGAAAAGGGGGCTTCGGGGAGGTCTGTGC
CTGCCAGGTTCGGGCCACGGGTAAAATGTATGCCTGCAAGCGCTTGGAGAAGAAGAGGATCAAAAAGAGGAAAGG
GGAGTCCATGGCCCTCAATGAGAAGCAGATCCTCGAGAAGGTCAACAGTCAGTTTGTGGTCAACCTGGCCTATGC
CTACGAGACCAAGGATGCACTGTGCTTGGTCCTGACCATCATGAATGGGGGTGACCTGAAGTTCCACATCTACAA
CATGGGCAACCCTGGCTTCGAGGAGGAGCGGGCCTTGTTTTATGCGGCAGAGATCCTCTGCGGCTTAGAAGACCT
CCACCGTGAGAACACCGTCTACCGAGATCTGAAACCTGAAAACATCCTGTTAGATGATTATGGCCACATTAGGAT
CTCAGACCTGGGCTTGGCTGTGAAGATCCCCGAGGGAGACCTGATCCGCGGCCGGGTGGGCACTGTTGGCTACAT
GGCCCCCGAAGTCCTGAACAACCAGAGGTACGGCCTGAGCCCCGACTACTGGGGCCTTGGCTGCCTCATCTATGA
GATGATCGAGGGCCAGTCGCCGTTCCGCGGCCGTAAGGAGAAGGTGAAGCGGGAGGAGGTGGACCGCCGGGTCCT
GGAGACGGAGGAGGTGTACTCCCACAAGTTCTCCGAGGAGGCCAAGTCCATCTGCAAGATGCTGCTCACGAAAGA
TGCGAAGCAGAGGCTGGGCTGCCAGGAGGAGGGGGCTGCAGAGGTCAAGAGACACCCCTTCTTCAGGAACATGAA
CTTCAAGCGCTTAGAAGCCGGGATGTTGGACCCTCCCTTCGTTCCAGACCCCCGCGCTGTGTACTGTAAGGACGT
GCTGGACATCGAGCAGTTCTCCACTGTGAAGGGCGTCAATCTGGACCACACAGACGACGACTTCTACTCCAAGTT
CTCCACGGGCTCTGTGTCCATCCCATGGCAAAACGAGATGATAGAAACAGAATGCTTTAAGGAGCTGAACGTGTT
TGGACCTAATGGTACCCTCCCGCCAGATCTGAACAGAAACCACCCTCCGGAACCGCCCAAGAAAGGGCTGCTCCA
GAGACTCTTCAAGCGGCAGCATCAGAACAATTCCAAGAGTTCGCCCAGCTCCAAGACCAGTTTTAACCACCACAT
AAACTCAAACCATGTCAGCTCGAACTCCACCGGAAGCAGC**TAG**TTTCGGCTCTGGCCTCCAAGTCCACAGTGGAA
CCAGCCCAGACCCTTCTCCTTAGAAGTGGAAGTAGTGGAGCCCCTGCTCTGGTGGGGCTGCCAGGGGAGACCCCG
GGAGCCGGAAGGAGGCCGTCCATCCCGTCGACGTAGAACCTCGAGGTTTCTCAAAGAAATTTCCACTCAGGTCTG
TTTTCCGAGGCGGCCCCGGGCGGGTGGATTGGATTTGTCTTTGGTGAACATTGCAATAGAAATCCAATTGGATAC
GACAACTTGCACGTATTTTAATAGCGTCATAACTAGAACTGAATTTTGTCTTTATGATTTTTAAAGAAAAGTTTT
GTAAATTTCTCTACTGTCTCAGTTTACATTTTCGGTATATTTGTATTTAAATGAAGTGAGACTTTGAGGGTGTAT
ATTTTCTGTGCAGCCACTGTTAAGCCATGTGTTCCAAGGCATTTTAGCGGGGAGGGGGTTATCAAAAAAAAAAAA
AATGTGACTCAAGACTTCCAGAGCCTCAAATGAGAAAATGTCTTTATTAAATGTAGAAAGTGATCCATACTTCAA
AAAAAAA

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FIGURE 884

MELENIVANTVLLKAREGGGGKRKGKSKKWKEILKFPHISQCEDLRRTIDRDYCSLCDKQPIGRLLFRQFCETRP
GLECYIQFLDSVAEYEVTPDEKLGEKGKEIMTKYLTPKSPVFIAQVGQDLVSQTEEKLLQKPCKELFSACAQSVH
EYLRGEPFHEYLDSMFFDRFLQWKWLERQPVTKNTFRQYRVLGKGGFGEVCACQVRATGKMYACKRLEKKRIKKR
KGESMALNEKQILEKVNSQFVVNLAYAYETKDALCLVLTIMNGGDLKFHIYNMGNPGFEEERALFYAAEILCGLE
DLHRENTVYRDLKPENILLDDYGHIRISDLGLAVKIPEGDLIRGRVGTVGYMAPEVLNNQRYGLSPDYWGLGCLI
YEMIEGQSPFRGRKEKVKREEVDRRVLETEEVYSHKFSEEAKSICKMLLTKDAKQRLGCQEEGAAEVKRHPFFRN
MNFKRLEAGMLDPPFVPDPRAVYCKDVLDIEQFSTVKGVNLDHTDDDFYSKFSTGSVSIPWQNEMIETECFKELN
VFGPNGTLPPDLNRNHPPEPPKKGLLQRLFKRQHQNNSKSSPSSKTSFNHHINSNHVSSNSTGSS

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FIGURE 885

GTCCTTCGGTGTCTGGGTGTGGTGAGTAGAGGTGTGTGTCACAAAGTACAGACCATTGTGTGTGACAAAGCCCAT
CGTGTGTCTGTGTGTGTCTTTATCCACGTGGATGGACGTCTCTTTCTTGCTCTGCCCCAAGACACACCCTAGCCC
CTCCTTATTCTCAAAAGGGGGAGCTGGGGAGCCTCCCCCTACCCTGGGGCCTCCCCTGCCCCTCCCCGCCCTGCC
TGGCCGTCACCACTCCCCAGAGGGCACAGGGCTCTGCTGTGCCTCAGAGCAAAAGTCCCAGAGCCAGCAGAGCAG
GCTGACGACCTGCAAGCCACAGTGGCTGCCCTGTGCGTGCTGCGAGGTGGGGGACCCTGGGCAGGAAGCTGGCTG
AGCCCCAAGACCCCGGGGGCC**ATG**GGCGGGGATCTGGTGCTTGGCCTGGGGGCCTTGAGACGCCGAAAGCGCTTG
CTGGAGCAGGAGAAGTCTCTGGCCGGCTGGGCACTGGTGCTGGCAGGAACTGGCATTGGACTCATGGTGCTGCAT
GCAGAGATGCTGTGGTTCGGGGGGTGCTCGTGGGCGCTCTACCTGTTCCTGGTTAAATGCACGATCAGCATTTCC
ACCTTCTTACTCCTCTGCCTCATCGTGGCCTTTCATGCCAAAGAGGTCCAGCTGTTCATGACCGACAACGGGCTG
CGGGACTGGCGCGTGGCGCTGACCGGGCGGCAGGCGGCGCAGATCGTGCTGGAGCTGGTGGTGTGTGGGCTGCAC
CCGGCGCCCGTGCGGGGCCCGCCGTGCGTGCAGGATTTAGGGGCGCCGCTGACCTCCCCGCAGCCCTGGCCGGGA
TTCCTGGGCCAAGGGGAAGCGCTGCTGTCCCTGGCCATGCTGCTGCGTCTCTACCTGGTGCCCCGCGCCGTGCTC
CTGCGCAGCGGCGTCCTGCTCAACGCTTCCTACCGCAGCATCGGCGCTCTCAATCAAGTCCGCTTCCGCCACTGG
TTCGTGGCCAAGCTTTACATGAACACGCACCCTGGCCGCCTGCTGCTCGGCCTCACGCTTGGCCTCTGGCTGACC
ACCGCCTGGGTGCTGTCCGTGGCCGAGAGGCAGGCTGTTAATGCCACTGGGCACCTTTCAGACACACTTTGGCTG
ATCCCCATCACATTCCTGACCATCGGCTATGGTGACGTGGTGCCGGGCACCATGTGGGGCAAGATCGTCTGCCTG
TGCACTGGAGTCATGGGTGTCTGCTGCACAGCCCTGCTGGTGGCCGTGGTGGCCCGGAAGCTGGAGTTTAACAAG
GCAGAGAAGCACGTGCACAACTTCATGATGGATATCCAGTATACCAAAGAGATGAAGGAGTCCGCTGCCCGAGTG
CTACAAGAAGCCTGGATGTTCTACAAACATACTCGCAGGAAGGAGTCTCATGCTGCCCGCAGGCATCAGCGCAAG
CTGCTGGCCGCCATCAACGCGTTCCGCCAGGTGCGGCTGAAACACCGGAAGCTCCGGGAACAAGTGAACTCCATG
GTGGACATCTCCAAGATGCACATGATCCTGTATGACCTGCAGCAGAATCTGAGCAGCTCACACCGGGCCCTGGAG
AAACAGATTGACACGCTGGCGGGGAAGCTGGATGCCCTGACTGAGCTGCTTAGCACTGCCCTGGGGCCGAGGCAG
CTTCCAGAACCCAGCCAGCAGTCCAAG**TAG**CTGGACCCACGAGGAGGAACCAGGCTACTTTCCCCAGTACTGAGG
TGGTGGACATCGTCTCTGCCACTCCTGACCCAGCCCTGAACAAAGCACCTCAAGTGCAAGGACCAAAGGGGGCCC
TGGCTTGGAGTGGGTTGGCTTGCTGATGGCTGCTGGAGGGGACGCTGGCTAAAGTGGGTAGGCCTTGGCCCACCT
GAGGCCCCAGGTGGGAACATGGTCACCCCCACTCTGCATACCCTCATCAAAAACACTCTCACTATGCTGCTATGG
ACGACCTCCAGCTCTCAGTTACAAGTGCAGGCGACTGGAGGCAGGACTCCTGGGTCCCTGGGAAAGAGGGTACTA
GGGGCCCGGATCCAGGATTCTGGGAGGCTTCAGTTACCGCTGGCCGAGCTGAAGAACTGGGTATGAGGCTGGGGC
GGGGCTGGAGGTGGCGCCCCCTGGTGGGACAACAAAGAGGACACCATTTTTCCAGAGCTGCAGAGAGCACCTGGT
GGGGAGGAAGAAGTGTAACTCACCAGCCTCTGCTCTTATCTTTGTAATAAATGTTAAAGCCAG

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FIGURE 886

MGGDLVLGLGALRRRKRLLEQEKSLAGWALVLAGTGIGLMVLHAEMLWFGGCSWALYLFLVKCTISISTFLLLCL
IVAFHAKEVQLFMTDNGLRDWRVALTGRQAAQIVLELVVCGLHPAPVRGPPCVQDLGAPLTSPQPWPGFLGQGEA
LLSLAMLLRLYLVPRAVLLRSGVLLNASYRSIGALNQVRFRHWFVAKLYMNTHPGRLLLGLTLGLWLTTAWVLSV
AERQAVNATGHLSDTLWLIPITFLTIGYGDVVPGTMWGKIVCLCTGVMGVCCTALLVAVVARKLEFNKAEKHVHN
FMMDIQYTKEMKESAARVLQEAWMFYKHTRRKESHAARRHQRKLLAAINAFRQVRLKHRKLREQVNSMVDISKMH
MILYDLQQNLSSSHRALEKQIDTLAGKLDALTELLSTALGPRQLPEPSQQSK

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FIGURE 887

ACCTCCCAACCAAGCCCTCCAGCAAGGATTCAGGAGTGCCCCTCGGGCCTCGCC**ATG**AGGCTCTTCCTGTCGCTC
CCGGTCCTGGTGGTGGTTCTGTCGATCGTCTTGGAAGGCCCAGCCCCAGCCCAGGGGACCCCAGACGTCTCCAGT
GCCTTGGATAAGCTGAAGGAGTTTGGAAACACACTGGAGGACAAGGCTCGGGAACTCATCAGCCGCATCAAACAG
AGTGAACTTTCTGCCAAGATGCGGGAGTGGTTTTCAGAGACATTTCAGAAAGTGAAGGAGAAACTCAAGATTGAC
TCA**TGA**GGACCTGAAGGGTGACATCCAGGAGGGGCCTCTGAAATTTCCCACACCCCAGCGCCTGTGCTGAGGACT
CCCGCCATGTGGCCCCAGGTGCCACCAATAAAAATCCTACCG

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FIGURE 888

MRLFLSLPVLVVVLSIVLEGPAPAQGTPDVSSALDKLKEFGNTLEDKARELISRIKQSELSAKMREWFSETFQKV
KEKLKIDS

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FIGURE 889

CGTGGGAGCAGTGGGGTTCGACGGCGCGGCCGCGAGGCCGCC**ATG**GCCGCTCACGGGAAGCTGCGGCGGGAGCGG
GGGCTGCAGGCTGAGTATGAGACGCAAGTCAAAGAGATGCGCTGGCAGCTGAGCGAGCAGCTGCGCTGCCTGGAG
CTGCAGGGCGAGCTGCGGCGGGAGTTGCTGCAGGAGCTGGCAGAGTTCATGCGGCGCCGCGCTGAGGTGGAGCTG
GAATACTCCCGGGGCCTGGAAAAGCTGGCCGAGCGCTTCTCCAGCCGTGGAGGCCGCCTGGGGAGCAGCCGGGAG
CACCAAAGCTTCCGGAAGGAGCCGTCCCTCCTGTCGCCCTTGCACTGCTGGGCGGTGCTGCTGCAGCACACGCGG
CAGCAGAGCCGGGAGAGCGCGGCCCTGAGTGAGGTGCTGGCCGGGCCCCTGGCCCAGCGCCTGAGTCACATTGCA
GAGGACGTGGGGCGCCTGGTCAAGAAGAGCAGGGATCTGGAGCAGCAGCTGCAGGATGAGCTCCTGGAGGTGGTC
TCAGAGCTCCAGACGGCCAAGAAGACGTACCAGGCATATCACATGGAGAGCGTGAATGCCGAGGCCAAGCTCCGG
GAGGCCGAGCGGCAGGAGGAGAAGCGGGCAGGCCGGAGTGTCCCCACCACCACCGCTGGTGCCACTGAGGCAGGG
CCCCTCCGCAAGAGCTCCCTCAAGAAGGGAGGGAGGCTGGTGGAGAAGCGGCAGGCCAAGTTCATGGAGCACAAA
CTCAAGTGCACAAAGGCGCGCAACGAGTACCTGCTTAGCCTGGCTAGTGTCAACGCTGCTGTCAGTAACTACTAC
CTGCATGACGTCTTGGACCTCATGGACTGCTGTGACACAGGGTTCCACCTGGCCCTGGGGCAGGTGCTCCGGAGC
TACACGGCCGCTGAGAGCCGCACCCAAGCCTCCCAAGTGCAGGGCCTGGGCAGCCTGGAAGAAGCTGTGGAGGCC
CTGGATCCTCCAGGGGACAAAGCCAAGGTTCTCGAGGTGCATGCTACCGTCTTCTGTCCCCCGCTGCGCTTTGAC
TACCACCCCCATGATGGGGATGAGGTGGCTGAGATCTGCGTTGAAATGGAGCTGCGGGACGAGATTCTGCCCAGA
GCCCAGAACATCCAGAGCCGCCTGGACCGACAGACCATTGAGACAGAGGAGGTGAACAAGACTCTGAAGGCGACA
CTGCAGGCCCTGCTGGAGGTGGTGGCCTCGGATGACGGGGATGTGCTTGATTCCTTCCAGACCAGCCCCTCCACC
GAGTCCCTCAAGTCCACCAGCTCAGACCCAGGCAGCCGGCAGGCGGGCCGGAGGCGCGGCCAGCAGCAGGAGACC
GAAACCTTCTACCTCACGAAGCTCCAGGAGTATCTGAGTGGACGGAGCATCCTCGCCAAGCTGCAGGCCAAGCAC
GAGAAGCTGCAGGAGGCCCTTCAGCGAGGTGACAAGGAGGAGCAGGAGGTGTCTTGGACCCAGTACACACAGAGA
AAATTCCAGAAGAGCCGCCAGCCCCGCCCCAGCTCCCAGTATAACCAGAGACTCTTTGGGGGAGACATGGAGAAG
TTTATCCAGAGCTCAGGCCAGCCTGTGCCCCTGGTGGTGGAGAGCTGCATTCGCTTCATCAACCTCAATGGCCTG
CAGCATGAAGGCATCTTCCGGGTATCGGGTGCCCAGCTCCGGGTCTCAGAGATCCGTGATGCCTTCGAGAGAGGG
GAGGACCCACTGGTGGAGGGCTGCACTGCCCATGACCTGGACTCGGTGGCCGGGGTGCTGAAGCTCTACTTCCGG
AGCCTGGAGCCCCCACTCTTCCCCCCAGACCTGTTCGGCGAGCTGCTGGCTTCTTCGGAGCTGGAGGCCACAGCG
GAGAGGGTGGAGCACGTGAGCCGCCTGCTGTGGCGGCTGCCCGCGCCGGTGCTGGTGGTTCTGCGCTACCTCTTC
ACCTTCCTCAACCACCTGGCCCAGTACAGCGATGAGAACATGATGGACCCCTACAACCTGGCCGTGTGCTTCGGG
CCCACGCTGCTACCGGTGCCCGCTGGGCAGGACCCGGTGGCGCTGCAGGGCCGGGTGAACCAGCTGGTGCAGACG
CTCATAGTGCAGCCCGATCGGGTCTTCCCGCCCCTGACCTCGCTGCCTGGCCCCGTCTACGAGAAGTGCATGGCA
CCGCCTTCCGCCAGCTGCCTGGGGGACGCCCAGCTGGAGAGCCTGGGGGCGGACAATGAGCCGGAGCTGGAAGCC
GAGATGCCCGCACAGGAGGATGACCTGGAGGGGGTCGTGGAGGCTGTGGCCTGCTTTGCCTACACGGGCCGCACA
GCCCAGGAGCTGAGCTTCCGGCGGGGGGACGTACTGCGGCTGCACGAGAGGGCCTCGAGCGACTGGTGGCGGGGG
GAGCACAACGGCATGCGGGGCCTCATCCCCCACAAGTATATCACGCTGCCCGCCGGGACGGAGAAGCAGGTGGTG
GGCGCAGGGCTGCAGACTGCAGGGGAGTCTGGGAGCAGTCCCGAGGGCCTCCTGGCATCGGAGCTGGTCCACCGG
CCAGAGCCATGCACCTCACCTGAGGCCATGGGACCCTCTGGACACAGACGACGCTGCTTGGTCCCAGCCTCCCCA
GAGCAACACGTGGAGGTGGATAAGGCTGTGGCACAGAACATGGACTCTGTGTTTAAGGAGCTCTTGGGAAAGACC
TCTGTCCGCCAGGGCCTTGGGCCAGCATCTACCACCTCTCCCAGTCCTGGGCCCCGAAGCCCAAAGGCCCCGCCC
AGCAGCCGCCTGGGCAGGAACAAAGGCTTCTCCCGGGGCCCTGGGGCCCCAGCCTCACCCTCAGCTTCCCACCCC
CAGGGCCTAGACACGACCCCCAAGCCACAC**TGA**GGTGCCGCTGCTGGAGATGCGTGCCCCCGGCGGCTACCCGCT
GGACCGGCCACTCTCCCCAGCCCCCTTGCTTCTCTCCAGCCCTGTCCAGCAAGTGCAGGGTGCCTGCACTTCACC
CTGTGCAGAGAGGTGGGATGGGGCCGTGCACACAGGGATGCCCGCTCCACATCCTGCCTGCCCCTCAGCCCTGGC
CCAGGCCCCTTTTGGAGGCAGCTGAGGAAGGATGCTGGGGAAAGCCCTCTTCTGCAGCTTTGTGGAAGGCTGATC
AGTGGCTGCTGGGTGGCGGGTACCCTTGCTCAGATGCCTGGCAGGGCTGGGTGGCGATTCATAAAGACCTCGTGT
TGATTCCCCG

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FIGURE 890

MAAHGKLRRERGLQAEYETQVKEMRWQLSEQLRCLELQGELRRELLQELAEFMRRRAEVELEYSRGLEKLAERFS
SRGGRLGSSREHQSFRKEPSLLSPLHCWAVLLQHTRQQSRESAALSEVLAGPLAQRLSHIAEDVGRLVKKSRDLE
QQLQDELLEVVSELQTAKKTYQAYHMESVNAEAKLREAERQEEKRAGRSVPTTTAGATEAGPLRKSSLKKGGRLV
EKRQAKFMEHKLKCTKARNEYLLSLASVNAAVSNYYLHDVLDLMDCCDTGFHLALGQVLRSYTAAESRTQASQVQ
GLGSLEEAVEALDPPGDKAKVLEVHATVFCPPLRFDYHPHDGDEVAEICVEMELRDEILPRAQNIQSRLDRQTIE
TEEVNKTLKATLQALLEVVASDDGDVLDSFQTSPSTESLKSTSSDPGSRQAGRRRGQQQETETFYLTKLQEYLSG
RSILAKLQAKHEKLQEALQRGDKEEQEVSWTQYTQRKFQKSRQPRPSSQYNQRLFGGDMEKFIQSSGQPVPLVVE
SCIRFINLNGLQHEGIFRVSGAQLRVSEIRDAFERGEDPLVEGCTAHDLDSVAGVLKLYFRSLEPPLFPPDLFGE
LLASSELEATAERVEHVSRLLWRLPAPVLVVLRYLFTFLNHLAQYSDENMMDPYNLAVCFGPTLLPVPAGQDPVA
LQGRVNQLVQTLIVQPDRVFPPLTSLPGPVYEKCMAPPSASCLGDAQLESLGADNEPELEAEMPAQEDDLEGVVE
AVACFAYTGRTAQELSFRRGDVLRLHERASSDWWRGEHNGMRGLIPHKYITLPAGTEKQVVGAGLQTAGESGSSP
EGLLASELVHRPEPCTSPEAMGPSGHRRRCLVPASPEQHVEVDKAVAQNMDSVFKELLGKTSVRQGLGPASTTSP
SPGPRSPKAPPSSRLGRNKGFSRGPGAPASPSASHPQGLDTTPKPH

FIGURE 891A

GGGAACTTGGATTAGGTGGAGAGGCAGTTGGGGGGCCTCGTTGTTTTGCGTCTTAGTTCCGCCCTCCTGTCCATC
AGGAGAAGGAAAGGATAAACCCTGGGCC**ATG**AGGCTACCCCTGCTCCTGGTTTTTGCCTCTGTCATTCCGGGTGC
TGTTCTCCTACTGGACACCAGGCAATTTTTAATCTATAATGAAGATCACAAGCGCTGCGTGGATGCAGTGAGTCC
CAGTGCCGTCCAAACCGCAGCTTGCAACCAGGATGCCGAATCACAGAAATTCCGATGGGTGTCCGAATCTCAGAT
TATGAGTGTTGCATTTAAATTATGCCTGGGAGTGCCATCAAAAACAGACTGGGTTGCTATCACTCTCTATGCCTG
TGACTCAAAAAGTGAATTTCAGAAATGGGAGTGCAAAAATGACACACTTTTGGGGATCAAAGGAGAAGATTTATT
TTTTAACTACGGCAACAGACAAGAAAAGAATATTATGCTCTACAAGGGATCGGGTTTATGGAGCAGGTGGAAGAT
CTATGGAACCACAGACAATCTGTGCTCCAGAGGTTATGAAGCCATGTATACGCTACTAGGCAATGCCAATGGAGC
AACCTGTGCATTCCCGTTCAAGTTTGAAAACAAGTGGTACGCAGATTGCACGAGTGCTGGGCGGTCGGATGGATG
GCTCTGGTGCGGAACCACTACTGACTATGACACAGACAAGCTATTTGGATATTGTCCATTGAAATTTGAGGGCAG
TGAAAGCTTATGGAATAAAGACCCGCTGACCAGCGTTTCCTACCAGATAAACTCCAAATCCGCTTTAACGTGGCA
CCAAGCGAGGAAAAGCTGCCAACAACAGAACGCTGAGCTCCTGAGCATCACAGAGATACATGAGCAAACATACCT
GACAGGATTAACCAGTTCCTTGACCTCAGGACTCTGGATTGGACTTAACAGTCTGAGCTTCAACAGCGGTTGGCA
GTGGAGTGACCGCAGTCCTTTCCGATATTTGAACTGGTTACCAGGAAGTCCATCAGCTGAACCTGGAAAAAGCTG
TGTGTCACTAAATCCTGGAAAAAATGCTAAATGGGAAAATCTGGAATGTGTTCAGAAACTGGGCTATATTTGCAA
AAAGGGCAACACCACTTTAAATTCTTTTGTTATTCCCTCAGAAAGTGATGTGCCTACTCACTGTCCTAGTCAGTG
GTGGCCGTATGCCGGTCACTGTTACAAGATTCACAGAGATGAGAAAAAAATCCAGAGGGATGCTCTGACCACCTG
CAGGAAGGAAGGCGGTGACCTCACAAGTATCCACACCATCGAGGAATTGGACTTTATTATCTCCCAGCTAGGATA
TGAGCCAAATGACGAATTGTGGATCGGCTTAAATGACATTAAGATTCAAATGTACTTTGAGTGGAGTGATGGGAC
CCCTGTAACGTTTACCAAATGGCTTCGTGGAGAACCAAGCCATGAAAACAACAGACAGGAGGATTGTGTGGTGAT
GAAAGGCAAGGATGGGTACTGGGCAGATCGGGGCTGTGAGTGGCCTCTTGGCTACATCTGCAAGATGAAATCACG
AAGCCAAGGTCCAGAAATAGTGGAAGTCGAAAAAGGCTGCAGGAAAGGCTGGAAAAAACATCACTTTTACTGCTA
TATGATTGGACATACGCTTTCAACATTTGCAGAAGCAAACCAAACCTGTAATAATGAGAATGCTTATTTAACAAC
TATTGAAGACAGATATGAACAAGCCTTCCTGACTAGTTTCGTTGGCTTAAGGCCTGAAAAATATTTCTGGACAGG
ACTTTCAGATATACAAACCAAAGGGACTTTTCAGTGGACCATCGAGGAAGAGGTTCGGTTCACCCACTGGAATTC
AGATATGCCAGGGCGAAAGCCAGGGTGTGTTGCCATGAGAACCGGGATTGCAGGGGGCTTATGGGATGTTTTGAA
ATGTGATGAAAAGGCAAAATTTGTGTGCAAGCACTGGGCAGAAGGAGTAACCCACCCACCGAAGCCCACGACGAC
TCCCGAACCCAAATGTCCGGAGGATTGGGGCGCCAGCAGTAGAACAAGCTTGTGTTTCAAGCTGTATGCAAAAGG
AAAACATGAGAAGAAAACGTGGTTTGAATCTCGAGATTTTTGTCGAGCTCTGGGTGGAGACTTAGCTAGCATCAA
TAACAAAGAGGAACAGCAAACAATATGGCGATTAATAACAGCTAGTGGAAGCTACCACAAACTGTTTTGGTTGGG
ATTGACATATGGAAGCCCTTCAGAAGGTTTTACTTGGAGTGATGGTTCTCCTGTTTCATATGAAAACTGGGCTTA
TGGAGAACCTAATAATTATCAAAATGTTGAATACTGTGGTGAGCTGAAAGGTGACCCTACTATGTCTTGGAATGA
TATTAATTGTGAACACCTTAACAACTGGATTTGCCAGATACAAAAAGGACAAACACCAAAACCTGAGCCAACACC
AGCTCCTCAAGACAATCCACCAGTTACTGAAGATGGGTGGGTTATTTACAAAGACTACCAGTATTATTTCAGCAA
AGAGAAGGAAACCATGGACAATGCGCGAGCGTTTTGCAAGAGGAATTTTGGTGATCTTGTTTCTATTCAAAGTGA
AAGTGAAAAGAAGTTTCTATGGAAATATGTAAACAGAAATGATGCACAGTCTGCATATTTTATTGGTTTATTGAT
CAGCTTGGATAAAAAGTTTGCTTGGATGGATGGAAGCAAAGTGGATTACGTGTCTTGGGCCACAGGTGAACCCAA
TTTTGCAAATGAAGATGAAAACTGTGTGACCATGTATTCAAATTCAGGGTTTTGGAATGACATTAACTGTGGCTA
TCCAAACGCCTTCATTTGCCAGCGACATAACAGTAGTATCAATGCTACCACAGTTATGCCTACCATGCCCTCGGT
CCCATCAGGGTGCAAGGAAGGTTGGAATTTCTACAGCAACAAGTGTTTCAAAATCTTTGGATTTATGGAAGAAGA
AAGAAAAAATTGGCAAGAGGCACGAAAAGCTTGTATAGGCTTTGGAGGGAATCTGGTCTCCATACAAAATGAAAA
AGAGCAAGCATTTCTTACCTATCACATGAAGGACTCCACTTTCAGTGCCTGGACTGGGCTGAATGATGTCAATTC
AGAACACACGTTCCTTTGGACGGATGGACGAGGAGTCCATTACACAAACTGGGGGAAAGGTTACCCTGGTGGAAG
AAGAAGCAGTCTTTCTTATGAAGATGCTGACTGTGTTGTTATTATTGGAGGTGCATCAAATGAAGCAGGAAAATG
GATGGATGATACCTGCGACAGTAAACGAGGCTACATATGCCAGACACGATCCGACCCTTCCTTGACTAATCCTCC
AGCAACGATTCAAACAGATGGCTTTGTTAAATATGGCAAAAGCAGCTATTCACTCATGAGACAAAAATTTCAATG
GCATGAAGCGGAGACATACTGCAAGCTTCACAATTCCCTTATAGCCAGCATTCTGGATCCCTACAGTAATGCATT
TGCGTGGCTGCAGATGGAAACATCTAATGAACGTGTGTGGATCGCCCTGAACAGTAACTTGACTGATAATCAATA

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FIGURE 891B

CACTTGGACTGATAAGTGGAGGGTGAGGTACACTAACTGGGCTGCTGATGAGCCCAAATTGAAATCAGCATGTGT
TTATCTGGATCTTGATGGCTACTGGAAGACAGCACATTGCAATGAAAGTTTTTACTTTCTCTGTAAAAGATCAGA
TGAAATCCCTGCTACTGAACCCCCACAACTGCCTGGCAGATGCCCGGAGTCAGATCACACAGCATGGATTCCTTT
CCATGGTCACTGTTACTATATTGAGTCCTCATATACAAGAAACTGGGGCCAAGCTTCTCTGGAATGTCTTCGAAT
GGGTTCCTCTCTGGTTTCCATTGAAAGTGCTGCAGAATCCAGTTTTCTGTCATATCGGGTTGAGCCACTTAAAAG
TAAAACCAATTTTTGGATAGGATTGTTCAGAAATGTTGAAGGGACGTGGCTGTGGATAAATAACAGTCCGGTCTC
CTTTGTCAACTGGAACACAGGAGATCCCTCTGGTGAACGGAATGATTGTGTAGCTTTACATGCGTCTTCTGGGTT
TTGGAGTAATATTCACTGTTCTTCCTACAAAGGATATATTTGTAAAAGACCAAAAATTATTGATGCTAAACCTAC
TCATGAATTACTTACAACAAAAGCTGACACAAGGAAGATGGACCCTTCTAAACCGTCTTCCAACGTGGCCGGAGT
AGTCATCATTGTGATCCTCCTGATTTTAACGGGTGCTGGCCTTGCCGCCTATTTCTTTTATAAGAAAAGACGTGT
GCACCTACCTCAAGAGGGCGCCTTTGAAAACACTCTGTATTTTAACAGTCAGTCAAGCCCAGGAACTAGTGATAT
GAAAGATCTCGTGGGCAATATTGAACAGAATGAACACTCGGTCATC**TAG**TACCTCAATGCGATTCTGAGATATTT
GAATTTCATAAAATTGTAACTGAAATTTAAAATTTTTAGTTCAATGTGATTGTTTTCTTTAAAATGAGTACTGAA
TTGTACTGGTCTGTCCTTTTTTCCTTTGCCTAATTGAAGAAATAATTGCTTGTTTTCTAGCCTGGCAAGATATTT
TCATAAAAGAGGGATAACAATGCTGATTACTACCTTTTAAAATATTTTAGATAAATGCACAGCACCACAGCACCA
CATCTAAGCATTAGTGATGGGTAGCTGATGTCAGCTTCATGTGGATTTTAAGCACTCTAGAAACAATGAAGCTTC
TTGGCATATTTTAAGGAGCTCCCAAAATGTGTTACCTATTAAATTGTAACTCAGCAAGTAGAAGACCATTTGAAA
AGTCAGGTACAAATTTCCTCAAGTGGCATAAAAATGTAGTCAGTTTTCTCTTTTACCAGTTTTTATTTCCACTCC
AATTATTTAGAACTTTATTTGTACATGTGCAGAAGAATAAGGCAGCTGAGAATCTTGTTTCCCCCAAGAGAGTTT
TACAGGCTGAGTGTTGCAAATGTGTTCTTTGTCCTGTTATATGTATATCAGGAATACAAGGATGTGAAATAAAAC
TGTAAATTTGCATAACTGGATGTACTTAGATAATGTGAAATAAACATTAAAGACAAGGTCTATTTTTAATAAAAA
AAAAAAAAAA

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FIGURE 892

MRLPLLLVFASVIPGAVLLLDTRQFLIYNEDHKRCVDAVSPSAVQTAACNQDAESQKFRWVSESQIMSVAFKLCL
GVPSKTDWVAITLYACDSKSEFQKWECKNDTLLGIKGEDLFFNYGNRQEKNIMLYKGSGLWSRWKIYGTTDNLCS
RGYEAMYTLLGNANGATCAFPFKFENKWYADCTSAGRSDGWLWCGTTTDYDTDKLFGYCPLKFEGSESLWNKDPL
TSVSYQINSKSALTWHQARKSCQQQNAELLSITEIHEQTYLTGLTSSLTSGLWIGLNSLSFNSGWQWSDRSPFRY
LNWLPGSPSAEPGKSCVSLNPGKNAKWENLECVQKLGYICKKGNTTLNSFVIPSESDVPTHCPSQWWPYAGHCYK
IHRDEKKIQRDALTTCRKEGGDLTSIHTIEELDFIISQLGYEPNDELWIGLNDIKIQMYFEWSDGTPVTFTKWLR
GEPSHENNRQEDCVVMKGKDGYWADRGCEWPLGYICKMKSRSQGPEIVEVEKGCRKGWKKHHFYCYMIGHTLSTF
AEANQTCNNENAYLTTIEDRYEQAFLTSFVGLRPEKYFWTGLSDIQTKGTFQWTIEEEVRFTHWNSDMPGRKPGC
VAMRTGIAGGLWDVLKCDEKAKFVCKHWAEGVTHPPKPTTTPEPKCPEDWGASSRTSLCFKLYAKGKHEKKTWFE
SRDFCRALGGDLASINNKEEQQTIWRLITASGSYHKLFWLGLTYGSPSEGFTWSDGSPVSYENWAYGEPNNYQNV
EYCGELKGDPTMSWNDINCEHLNNWICQIQKGQTPKPEPTPAPQDNPPVTEDGWVIYKDYQYYFSKEKETMDNAR
AFCKRNFGDLVSIQSESEKKFLWKYVNRNDAQSAYFIGLLISLDKKFAWMDGSKVDYVSWATGEPNFANEDENCV
TMYSNSGFWNDINCGYPNAFICQRHNSSINATTVMPTMPSVPSGCKEGWNFYSNKCFKIFGFMEEERKNWQEARK
ACIGFGGNLVSIQNEKEQAFLTYHMKDSTFSAWTGLNDVNSEHTFLWTDGRGVHYTNWGKGYPGGRRSSLSYEDA
DCVVIIGGASNEAGKWMDDTCDSKRGYICQTRSDPSLTNPPATIQTDGFVKYGKSSYSLMRQKFQWHEAETYCKL
HNSLIASILDPYSNAFAWLQMETSNERVWIALNSNLTDNQYTWTDKWRVRYTNWAADEPKLKSACVYLDLDGYWK
TAHCNESFYFLCKRSDEIPATEPPQLPGRCPESDHTAWIPFHGHCYYIESSYTRNWGQASLECLRMGSSLVSIES
AAESSFLSYRVEPLKSKTNFWIGLFRNVEGTWLWINNSPVSFVNWNTGDPSGERNDCVALHASSGFWSNIHCSSY
KGYICKRPKIIDAKPTHELLTTKADTRKMDPSKPSSNVAGVVIIVILLILTGAGLAAYFFYKKRRVHLPQEGAFE
NTLYFNSQSSPGTSDMKDLVGNIEQNEHSVI

FIGURE 893

AGCGCAGCACTCCCCGCTCGTTGGCCCGGGTATCCCAGCGCGGACCCACGCGATACGCTGACGCCCCGACGCCGA
TCCGGCCGAGCCAAGTAAGGGGGACGGCCCGAGACGGAGAAGGGAGAGAGTGGGAGTTTCCCAGCCCGCAGAACT
TTCGAAGTTGAGAAGAGAACCCCTGGAACGTGCGCTCAGCACTGGGATTTTCTGGACTCAACG**ATG**ACTCTGAAT
AATGTCACCATGCGCCAGGGCACTGTGGGCATGCAGCCACAGCAGCAGCGCTGGAGCATCCCAGCTGATGGCAGG
CATCTGATGGTCCAGAAAGAGCCCCACCAGTACAGCCACCGCAACCGCCATTCTGCTACCCCTGAGGACCACTGC
CGCCGAAGCTGGTCCTCTGACTCCACAGACTCAGTCATCTCCTCTGAGTCAGGGAACACCTACTACCGAGTGGTG
CTCATAGGGGAGCAGGGGGTGGGCAAGTCCACTCTGGCCAACATCTTTGCAGGTGTGCATGACAGCATGGACAGC
GACTGCGAGGTGCTGGGAGAAGATACATATGAACGAACCCTGATGGTTGATGGGGAAAGTGCAACGATTATACTC
CTGGATATGTGGGAAAATAAGGGGGAAAATGAATGGCTCCATGACCACTGCATGCAGGTCGGGGACGCATACCTG
ATTGTCTACTCAATCACAGACCGAGCGAGCTTCGAGAAGGCATCTGAGCTGCGAATCCAGCTCCGCAGGGCCCGG
CAGACAGAGGACATTCCCATAATTTTGGTTGGCAACAAAAGTGACTTAGTGCGGTGCCGAGAAGTGTCTGTATCA
GAAGGGAGAGCCTGTGCAGTGGTGTTTGACTGCAAGTTCATCGAGACCTCTGCAGCTGTCCAGCACAACGTGAAG
GAGCTGTTTGAGGGCATTGTGCGACAGGTGCGCCTTCGGCGGGACAGCAAGGAGAAGAATGAACGGCGGCTGGCC
TACCAGAAAAGGAAGGAGAGCATGCCCAGGAAAGCCAGGCGCTTCTGGGGCAAGATCGTGGCCAAAAACAACAAG
AATATGGCCTTCAAGCTCAAGTCCAAATCCTGCCATGACCTCTCTGTACTC**TAG**GAACCCAGGGTCACCCAGATG
TCCCTTTGATGGCCCTTGTTGAAGGCCATTGGGACCAATAATCTATATTAGATTGAATACTTAAGTTAGATGTGG
TTTCCCCCATTGTAGCAGGGAGCTAGCGTATTAGCCTTGTGGGCAACATGATGCATGGGAAATGAAAGATTTTTG
TAAAAAGTCAGTATTTATTTCCAGGAAAAGCCTGACCTTGCTATTTGAACACCCAAGACTCTTTAGAGGATGTGT
TTGGTGTTCACATGTGTTTCTTCTATTTTGGATAGTAGGGAAGTAAAGCTTACAAAGAATGCCTAGAACAAGAAC
TTTTCATCATTAAAAATTTTTCCCAGTGTTCTGATATGTGACTTTGAGGCCAATGAGTCATAAACAAATATAAGA
AAGCTGTCAATGAGTTTCTTCAAAGGAGGGAAAACTTTCTACGAATCTAAGATCCATGGAGCTAGAATTGTAGAA
CTAGGCTCATCAGAATCGTGACTATTATTGCTCCATCAAACTGTGAAAAGAAATGATGTGGACCTTGCTGGAAAC
AAAGGCTTAGCAAACAATTTTTGTTCAATGCCCACCGAGACATATAGAATTGGGAACTGATACATGTGTCCCTTA
TAGGCTCAAAAATTATATCTTACAATTTCTTATTTAGGGGGAAATTATTTGAATCAGATTCTATTTAGTCAAACC
ACCTTTTATGTTTTATTATTTTTGAATTCATGGAGCCATCATAAAAATATTTTTAAAATCAGAATTATTGATACC
CTGTAGTGCAAAATGTCAATTTTTAATGTATAATCAGAAGTCTGAATTTTCATAAAACATATAGCATAAAAACCT
CCAGTACTTTGGTTGACCCTTGTATGTCACAGCTCTGCTCTATTTATTATTATTTTGCAAAATAACCATTTTAAC
ATTTGATAAAGCATATTTATGAACATATTTCTTAATAAGAAAAATATCCATTTTATTACCATTTTCTATCTTTTT
CAAAATATGCAAGTTTTTACCTATATGTCTTATAATAAAAGAAATAAAATATTTGA

FIGURE 894

MTLNNVTMRQGTVGMQPQQQRWSIPADGRHLMVQKEPHQYSHRNRHSATPEDHCRRSWSSDSTDSVISSESGNTY
YRVVLIGEQGVGKSTLANIFAGVHDSMDSDCEVLGEDTYERTLMVDGESATIILLDMWENKGENEWLHDHCMQVG
DAYLIVYSITDRASFEKASELRIQLRRARQTEDIPIILVGNKSDLVRCREVSVSEGRACAVVFDCKFIETSAAVQ
HNVKELFEGIVRQVRLRRDSKEKNERRLAYQKRKESMPRKARRFWGKIVAKNNKNMAFKLKSKSCHDLSVL

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FIGURE 895

GGGCGGGTAGTCGACCGTGTCCGCGCGCCTGGGAGACGCTGCCTCGGCCCGGACGCGCCCGCGCCCCCGCGGCTG
GAGGGTGGTCGCCACTGGGACACTGTGAACCAGGAGTGAGTCGGAGCTGCCGCGCTGCCCAGGCC**ATG**GACTGTG
AGGTCAACAACGGTTCCAGCCTCAGGGATGAGTGCATCACAAACCTACTGGTGTTTGGCTTCCTCCAAAGCTGTT
CTGACAACAGCTTCCGCAGAGAGCTGGACGCACTGGGCCACGAGCTGCCAGTGCTGGCTCCCCAGTGGGAGGGCT
ACGATGAGCTGCAGACTGATGGCAACCGCAGCAGCCACTCCCGCTTGGGAAGAATAGAGGCAGATTCTGAAAGTC
AAGAAGACATCATCCGGAATATTGCCAGGCACCTCGCCCAGGTCGGGGACAGCATGGACCGTAGCATCCCTCCGG
GCCTGGTGAACGGCCTGGCCCTGCAGCTCAGGAACACCAGCCGGTCGGAGGAGGACCGGAACAGGGACCTGGCCA
CTGCCCTGGAGCAGCTGCTGCAGGCCTACCCTAGAGACATGGAGAAGGAGAAGACCATGCTGGTGCTGGCCCTGC
TGCTGGCCAAGAAGGTGGCCAGTCACACGCCGTCCTTGCTCCGTGATGTCTTTCACACAACAGTGAATTTTATTA
ACCAGAACCTACGCACCTACGTGAGGAGCTTAGCCAGAAATGGGATGGAC**TGA**ACGGACAGTTCCAGAAGTGTGA
CTGGCTAAAGCTTGATGTGGTCACAGCTGTATAGCTGCTTCCAGTGTAGACGGAGCCCTGGCATGTCAACAGCGT
TCCTAGAGAAGACAGGCTGGAAGATAGCTGTGACTTCTATTTTAAAGACAATGTTAAACTTATAACCCACTTTAA
AATATCTACATTAATATACTTGAATGAAAATGTCCATTTACACGTATTTGAATGGCCTTCATATCATCCACACAT
GAATCTGCACATCTGTAAATCTACACACGGTGCCTTTATTTCCACTGTGCAGGTTCCCACTTAAAAATTAAATTG
GAAAGCAGGTTTCAAGGAAGTAGAAACAAAATACAATTTTTTTGGTAAAAAAAAA

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FIGURE 896

MDCEVNNGSSLRDECITNLLVFGFLQSCSDNSFRRELDALGHELPVLAPQWEGYDELQTDGNRSSHSRLGRIEAD
SESQEDIIRNIARHLAQVGDSMDRSIPPGLVNGLALQLRNTSRSEEDRNRDLATALEQLLQAYPRDMEKEKTMLV
LALLLAKKVASHTPSLLRDVFHTTVNFINQNLRTYVRSLARNGMD

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FIGURE 897

GGCACGAGGGACAAAGGCTGCAGGGGGACCCTGCCTGCCCAGGAGGGCCCCTCAGGGAGTAAACCCCTAAGGGGC
TCACTTAAGGAGGAGGTAGCCCTGGATTTGAGTGTGAGGAAGCCCACAGCAGAGGCCTCCCCTGTCAAGGCTTCC
CGTTCTGTGGAGCATGCCAAGCCTACTGCAGCCATGGATGTGCCAGATGTGGGCAACATGGTGTCAGATCTGCCA
GGCCTGAAAAAGATAGACACAGAAGCACCAGGCTTGCCTGGGGTGCCAGTGACCACAGATGCCATGCCAAGGACC
AACTTCCACAGCTCTGTGGCCTTCATGTTCCGAAAGTTCAAGATCCTCCGTCCGGCACCTTTGCCTGCAGCCGTG
GTCCCGTCCACGCCCACCTCAGCTCCTGCTCCCACACAGCCTGCACCCACCCCCACATCTGGGCCCATTGGACTG
CGGATTCTCGCTCAACAGCCCTTGTCTGTGACCTGCTTCAGCCTGGCACTGCCCAGCCCTCCAGCCGTAGCTGTG
GCCTCCCCTGCCCCTGCTCCAGCTCCATCCCCTGCTCCGGCTCGAGCTCAGGCTCCAGCTTCAGCCCGGGATCCA
GCTCCAGCTCCAGCTCCAGTTGCAGGCCCTGCTCCAGCATCTACTTCAGCCCCAGGGGACTCCCTGGAGCAGCAT
TTTACAGGACTACATGCGTCCCTGTGTGATGCTATTTCTGGCTCCGTCGCCCACTCTCCTCCAGAGAAGCTTCGC
GAGTGGCTAGAGACGGCTGGGCCCTGGGGCCAGGCTGCGTGGCAGGACTGCCAGGGTGTGCAGGGGCTGCTGGCC
AAGCTGCTGTCTCAGCTGCAGCGCTTCGATCGCACCCACCGGTGCCCCTTCCCCCATGTGGTGCGAGCTGGCGCC
ATCTTCGTGCCCATTCACCTGGTGAAGGAGCGGCTCTTCCCTCGGCTGCCACCCGCTTCTGTGGACCATGTGCTG
CAGGAGCATCGTGTGGAGCTGCGGCCCACCACGCTGTCGGAGGAGCGGGCACTGCGGGAGCTCGCCCTGCCAGGC
TGCACCTCACGCATGCTGAAGTTACTGGCGCTGCGCCAGCTGCCGGACATTTACCCCGACCTTCTCGGCCTGCAG
TGGCGCGACTGTGTACGCCGCCAGCTGGGTGAGC**ATG**GGGCAGCCCCAGTGGCCACCGGAGCTGTGTGAGCAAGT
GACAGGTGACTTTGACACTGAGGCTGGAGCTGTGTCCTCCTCAGAGCCCACTGTGGCCAGAGATGAGCCAGAGAG
CCTAGCCCTGGCTCAGAAGTCACCGGCCCCCAAGGTCAGGAAGCCAGGCAGGAAGCCACCAACCCCTGGCCCGGA
GAAAGCAGAGGCAGCTGCTGGGGAAGAGTCCTGTGGTGCCTCCCCTACCCCTGCTACCAGTGCCAGCCCACCTGG
CCCCACACTGAAGGCCCGCTTCCGCAGTCTGCTGGAGACCGCCTGGCTCAATGGCCTGGCTCTGCCCACCTGGGG
CCACAAGTCCTCAAGACCAGACCAGCCCTCACCCTGCCCACAGCTGCTGGACAGCCAGAGCCATCACCTG**TAG**CA
CTGGTTGCCAGTGCTGTGTGTATAGCAGTCACTCTCCACCCTTCCCTTCTGCCTGCCCAGCTGCCCCGGGGCCAC
GAGTGGATGCTGGGGCTGTGGCTGCTCCCCTGGAGGGGTTCCATCTCTGACCCTGTGGCCCATTCAGGGTGGGCT
GAAGAGCCCCTGAGCTTTTAACGTGAGGGTCTTTATTGGATAGGACTACTCCCTATTTCTTGCCTAGAGAACACA
CATGGGCTTTGGAGCCCGACAGACCTGGGCTTGAATCCCGGCTCGTGTTCTTGCTGCAGGACCTGGGCAAGAAAC
TTCACCTCTGCTGAGCCCTCATTCCCCATGTGTAAAATGGGACAACGCAACCTACCTCACAGGGTTGTTGTGGGG
ATGCTGCCTGATACATACCCTGTCACCATTTGGTCTCTGCTTCCTCTCTGGGACAGGGCCTAGAATTGGAGGCAG
AGAACCTTCCTATAGAAAGTCTTCGTGTGTCCTAGGACTTGGCTATCGTAGAGTGGTACCTTAGGCAGTGGATGT
GACTCACACTCTCAGGAGTCACCCCCCAGCATTTGGGGTTGGGTTGGCCCTACTCCAGCCTGGAGCTCCCTGAGG
GAGCCTGCACTCCCTGCTCCCAATCCCCGCTACTGGTGCAGGGATGCAGCCTGGAGCTGGCGTCCTTGTTCTGGG
CCTGCTGCTGCCGCCACCCCAGGAGGCCCCAGGCCTGTCCTGAATTGACATCAGTGCTTCCCTGAACTGCCTCCC
CCACCCCTGGCATTATCCCAGGAAACTTATGTTTTCTAGAAGCTAAGCAGCTGCTGGGACTCAGGGACTGGTGCA
GGTAGGCTGAGTGGCAGCTCAGTCCTAGAAGGTCTCTGAAGATCTGGACTGAGGACCCTGCTACTCCCCAAGCCA
GAGCCCATCAGCCAGGCCTGCTGTGAGCCACCTGCCTGTGGAGTGCTGAGCTCAACCAAAGGCTGGCAAGCTCTG
GGCCTCATTTAAGGGATTCTGATGAGCCGATGGGCCCTGGAGGCAGCCCATTAAAGCATCTGGCTCGTTTTTGGA
AAAAAAAAAAAAAAAAA

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FIGURE 898

MGQPQWPPELCEQVTGDFDTEAGAVSSSEPTVARDEPESLALAQKSPAPKVRKPGRKPPTPGPEKAEAAAGEESC
GASPTPATSASPPGPTLKARFRSLLETAWLNGLALPTWGHKSSRPDQPSPCPQLLDSQSHHL

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FIGURE 899

GGCACGAGGCCCGTCAGCTGTCCCAGAGCCTGTGTCGCGCCCGTGCCGGTAGCGCCCGTGCCGGTAGCGCCGCTG
CCACCGCTCACC**ATG**GGCCCGGGTCCTCGGCTGCTGCTACCTCTCGTGCTTTGCGTGGGGCTCGGCGCACTTGTG
TTTTCTTCGGGGGCCGAGGGCTTCCGCAAGCGAGGCCCCTCGGTGACGGCCAAGGTCTTCTTTGATGTGAGGATT
GGAGACAAAGATGTTGGCAGAATTGTGATTGGCCTCTTTGGAAAAGTTGTGCCCAAGACAGTGGAAAATTTTGTT
GCTCTAGCAACAGGAGAGAAAGGATATGGATATAAAGGAAGCAAGTTTCATCGTGTCATCAAGGATTTCATGATT
CAAGGAGGTGACATCACCACTGGAGATGGCACTGGGGGTGTGAGCATCTATGGTGAGACATTTCCAGATGAGAAC
TTCAAGCTGAAGCACTATGGCATTGGGTGGGTCAGCATGGCCAACGCTGGGCCTGACACCAATGGCTCTCAGTTC
TTTATCACCTTGACCAAGCCCACCTGGTTGGACGGCAAACATGTGGTGTTTGGAAAAGTCATTGATGGGATGACA
GTGGTGCACTCCATAGAGCTCCAAGCAACTGATGGGCATGACCGTCCACTCACCAACTGCTCGATCATCAACAGT
GGCAAGATAGACGTGAAAACGCCTTTTGTGGTTGAGATCGCTGATTGG**TGA**CACAACTGGCAGAAAACAAGGATA
TGCTTTGGCAGGGGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTTGTGTTGTCTTTCAATTATTTGCTTTTTTTTT
TTACTTTCTTTTTGTATTCTATCCCAGATCACAGGAAAGTTATAAAAATCAAACCGTCACCCTTTAGTTTGCTTG
AACTTTAGTAAACCACCTGCTTAGGGACTTTGAACTTAAATATATCCCCTTCCTCAAGTGGTGCTATTTTAAAAC
TAAAAAAAACTTTGAATTGGCAAAAAAAAAAAAAAAAAA

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FIGURE 900

MGPGPRLLLPLVLCVGLGALVFSSGAEGFRKRGPSVTAKVFFDVRIGDKDVGRIVIGLFGKVVPKTVENFVALAT
GEKGYGYKGSKFHRVIKDFMIQGGDITTGDGTGGVSIYGETFPDENFKLKHYGIGWVSMANAGPDTNGSQFFITL
TKPTWLDGKHVVFGKVIDGMTVVHSIELQATDGHDRPLTNCSIINSGKIDVKTPFVVEIADW

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FIGURE 901

GGCACGAGGCCCGTCAGCTGTCCCAGAGCCTGTGTCGCGCCCGTGCCGGTAGCGCCCGTGCCGGTAGCGCCGCTG
CCACCGCTCACC**ATG**GGCCCGGGTCCTCGGCTGCTGCTACCTCTCGTGCTTTGCGTGGGGCTCGGCGCACTTGTG
TTTTCTTCGGGGGCCGAGGGCTTCCGCAAGCGAGGCCCCTCGGTGACGGCCAAGGTCTTCTTTGATGTGAGGATT
GGAGACAAAGATGTTGGCAGAATTGTGATTGGCCTCTTTGGAAAAGTTGTGCCCAAGACAGTGGAAAATTTTGTT
GCTCTAGCAACAGGAGAGAAAGGATATGGATATAAAGGAAGCAAGTTTCATCGTGTCATCAAGGATTTCATGATT
CAAGGAGGTGACATCACCACTGGAGATGGCACTGGGGGTGTGAGCATCTATGGTGAGACATTTCCAGATGAGAAC
TTCAAGCTGAAGCACTATGGCATTGGGTGGGTCAGCATGGCCAACGCTGGGCCTGACACCAATGGCTCTCAGTTC
TTTATCACCTTGACCAAGCCCACCTGGTTGGACGGCAAACATGTGGTGTTTGGAAAAGTCATTGATGGGATGACA
GTGGTGCACTCCATAGAGCTCCAAGCAACTGATGGGCATGACCGTCCACTCACCAACTGCTCGATCATCAACAGT
GGCAAGATAGACGTGAAAACGCCTTTTGTGGTTGAGATCGCTGATTGG**TGA**CACAACTGGCAGAAAACAAGGATA
TGCTTTGGCAGGGGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTTGTGTTGTCTTTCAATTATTTGCTTTTTTTTT
TTACTTTCTTTTTGTATTCTATCCCAGATCACAGGAAAGTTATAAAAATCAAACCGTCACCCTTTAGTTTGCTTG
AACTTTAGTAAACCACCTGCTTAGGGACTTTGAACTTAAATATATCCCCTTCCTCAAGTGGTGCTATTTTAAAAC
TAAAAAAAACTTTGAATTGGCAAAAAAAAAAAAAAAAAA

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FIGURE 902

MGPGPRLLLPLVLCVGLGALVFSSGAEGFRKRGPSVTAKVFFDVRIGDKDVGRIVIGLFGKVVPKTVENFVALAT
GEKGYGYKGSKFHRVIKDFMIQGGDITTGDGTGGVSIYGETFPDENFKLKHYGIGWVSMANAGPDTNGSQFFITL
TKPTWLDGKHVVFGKVIDGMTVVHSIELQATDGHDRPLTNCSIINSGKIDVKTPFVVEIADW

FIGURE 903A

CCACGCGTCCGCCCGGCGCTAAGCCGGGAGACAAGATCCGATCTACTGAGAGCTGCGAGGTACTGCCCTGGATGT
GGTGGAGCTGGGCTGGGACCTCCGGGCTGCTGGTCTGTGAGCCTGGCTTTGAAAATTGGTTACTGGGTCTCCTCT
CAAGAAATCTCAAGATATTAAAGTTACTGCTGTTAAAAAGTGCACGAGCATAGCTGTGTCTCGGAAATGGTTGGC
TTTGGGCAGTTCAGGAGGAGGACTCCATCTCATTCAGAAAGAAGGCTGGAAGCACAGGCTTTTTCTTTCACACAG
GGAAGGTGCAATTTCTCAAGTCGCCTGTTGTTTACATGATGATGATTATGTTGCTGTAGCTACCAGTCAAGGTCT
TGTGGTTGTTTGGGAATTAAATCAAGAGCGTCGTGGGAAACCGGAACAA**ATG**TATGTGTCTTCAGAACACAAAGG
CCGAAGAGTCACAGCTCTCTGCTGGGATACAGCTATTCTTAGAGTTTTTGTAGGTGATCATGCTGGGAAGGTTTC
TGCTATCAAACTCAATACTTCTAAACAAGCAAAGGCAGCTGCTGCTTTTGTGATGTTTCCTGTTCAGACAATCAC
AACTGTTGACTCCTGTGTTGTACAGTTAGATTATTTGGATGGAAGGCTACTTATATCTTCACTTACTCGATCCTT
CTTGTGTGACACTGAGAGAGAAAAGTTTTGGAAAATTGGAAACAAGGAAAGAGATGGAGAATATGGAGCTTGTTT
CTTTCCTGGAAGATGTTCTGGGGGCCAGCAACCTCTGATATATTGTGCTCGCCCAGGCTCTAGGATGTGGGAAGT
GAACTTTGATGGAGAAGTTATAAGTACACATCAGTTCAAGAAACTCCTCTCGTTGCCACCTCTCCCTGTGATTAC
TCTAAGATCAGAACCTCAGTATGATCATACAGCTGGATCCTCCCAGTCTTTGTCTTTCCCCAAACTCTTACATCT
TAGTGAGCATTGTGTGCTGACTTGGACAGAAAGAGGAATTTATATTTTCATTCCTCAGAATGTTCAAGTTCTTCT
TTGGAGTGAAGTCAAAGATATTCAGGATGTGGCTGTCTGTAGGAATGAATTGTTCTGTTTGCACCTAAATGGGAA
AGTCTCACATCTCTCCCTGATATCTGTGGAGCGCTGTGTGGAACGCCTGCTAAGAAGAGGCCTATGGAACTTGGC
TGCTCGTACATGCTGTCTTTTCCAAAATTCTGTCATTGCCAGCAGAGCAAGAAAAACTTTGACTGCAGATAAATT
GGAGCATTTGAAATCTCAGCTGGACCATGGCACCTACAATGATCTAATTTCTCAACTGGAAGAATTGATCTTAAA
ATTTGAACCTTTGGATTCAGCTTGTAGCAGTAGAAGAAGCTCCATTTCATCACATGAAAGTTTCAGCATCTTGGA
CTCTGGTATTTATCGTATCATTAGTAGTAGAAGAGGCAGTCAGTCAGATGAAGACTCTTGCTCCCTTCACAGCCA
AACCCTCTCAGAAGATGAGAGATTTAAAGAATTCACCTCACAGCAGGAAGAGGACCTGCCAGATCAGTGTTGTGG
CTCACACGGAAATGAAGACAATGTTTCTCATGCTCCAGTGATGTTTGAGACAGATAAGAATGAAACTTTTCTCCC
GTTCGGCATTCCATTACCATTTCGTTCTCCATCTCCTCTTGTGTCTCTTCAGGCTGTCAAAGAAAGTGTTTCTAG
CTTTGTGCGTAAAACTACTGAGAAGATTGGCACCCTTCACACGAGCCCTGATCTGAAAGTGAGACCAGAGCTCAG
GGGTGATGAGCAATCATGTGAAGAGGATGTGAGTTCAGATACCTGCCCAAAGGAGGAAGACACTGAGGAGGAAAA
AGAGGTAACTAGTCCACCTCCAGAAGAAGACAGGTTCCAGGAGCTTAAAGTAGCAACAGCAGAAGCAATGACCAA
GCTACAGGACCCTCTGGTTTTATTTGAATCCGAGTCTCTGAGAATGGTTTTACAGGAGTGGCTTTCACATTTAGA
AAAAACATTTGCCATGAAGGACTTTTCAGGTGTTTCAGATACTGACAACTCATCCATGAAATTGAACCAGGATGT
GCTATTAGTTAATGAATCAAAAAAGGGAATATTAGATGAAGATAATGAAAAAGAAAAAAGGGACTCTTTAGGCAA
TGAAGAATCTGTTGATAAAACAGCATGTGAATGTGTAAGGAGTCCAAGGGAGTCTTTGGATGACCTGTTTCAAAT
ATGTTCTCCATGCGCCATTGCAAGTGGTCTTCGGAACGACCTGGCTGAATTGACAACATTATGTTTGGAGTTGAA
TGTATTGAATTCTAAGATCAAAAGCACCAGTGGACATGTGGACCACACTTTGCAACAGTACTCTCCTGAAATTCT
GGCTTGCCAGTTCCTGAAGAAGTACTTTTTTCTCCTGAACTTGAAAAGAGCGAAGGAGAGTATCAAGCTTAGTTA
CAGTAATAGCCCTTCTGTTTGGGATACTTTTATTGAAGGATTGAAAGAAATGGCAAGTTCCAATCCTGTGTATAT
GGAGATGGAAAAAGGAGATCTACCAACAAGGTTAAAGTTACTAGATGACGAGGTTCCTTTTGATAGTCCGTTGTT
GGTTGTTTATGCTACCCGGTTGTATGAAAAGTTTGGGGAGTCTGCTCTTCGATCCTTAATCAAGTTCTTTCCATC
CATTTTGCCATCGGATATCATACAACTTTGTCATCATCATCCTGCTGAGTTTTTGGCCTATTTAGACAGTCTGGT
GAAATCAAGGCCTGAAGATCAGCGGTCATCTTTTCTTGAGTCCCTTCTGCAACCAGAGTCTTTAAGGTTGGATTG
GCTGCTTTTGGCAGTGTCCCTTGATGCTCCACCAAGCACCAGCACAATGGATGATGAAGGTTATCCCAGGCCTCA
TTCACACTTGCTTTCCTGGGGTTACAGTCAGCTGATCCTTCATCTAATTAAACTTCCTGCAGATTTTATAACCAA
AGAGAAAATGACAGACATCTGCAGGTCTTGTGGTTTCTGGCCTGGATATCTAATTCTCTGTTTGGAGCTGGAGAG
AAGAAGAGAGGCCTTCACCAATATTGTGTATCTGAATGATATGAGCCTGATGAAAGGGGACAATGGTTGGATCCC
AGAGACCGTGGAGGAATGGAAGCTTCTCCTTCATCTCATACAGAGCAAGAGCACGAGGCCAGCCCCCCAGGAGTC
ACTAAATGGGAGCCTCAGTGATGGGCCTTCCCCCATCAATGTGGAGAATGTGGCACTTCTGTTAGCTAAGGCCAT
GGGCCCAGATCGGGCTTGGTCACTGCTACAGGAATGTGGTCTGGCCCTTGAGTTGTCAGAGAAGTTTACCAGAAC
CTGCGATATCCTGAGGATTGCTGAGAAAAGGCAGAGGGCCTTGATACAAAGCATGCTTGAAAAATGCGATCGGTT
TCTCTGGTCCCAGCAGGCC**TAG**TGGGAGAAGATTCAGCAGGATGTCATGACATTTTGAGAAAAACTAAATCATGC
TCCTGAACCTTCTGAACGCATTTGTTATTGAAGGAAAGACACCACCCCCAAATCCTGCCATCTTATTGGGGCTAC

FIGURE 903B

TTTTGTCAGTGTCTGTACCCTTGGCATCGGCATCTGTGACTCTTTATCCATGACCTCAGTGTTTCTTAACCAAAG
TTGTACTCAGCATTTCTTAACCAAAGTTGAATTTTGAAAAGAGTCAGTCCTTGTTTGCTGGAATTAGAATGTTAA
TGTCCTAGTATTATTCCGAACTACAGTATTAACTGCTTGTTGCTAGTGGATTAGACAGATTCTTTTCTTACTGTG
GCTTCCATGTTGGGAGCAGAAGCTTTTCATCCTGGTCACATGAAGACAGATGGTATTATTGACTGGAGTTGAATT
ATTTTTATATCTTGTCTGGCACAATATGGAAATTAATGAAATAAGACGGTGTATAATGGAATTAACACCCAAAAT
AAGTAGAACACTGAAGATTTGAATTTGATATTTAAGTAAAATGGGACTGGGTGCAGTGGCTCAGGCCTGTAATCC
CAACCCTTTGGAAGGTAAAGACGGGAGGATCACTTGAGGCCAGGAGTTCAAGACCAGCCTGGGCAACATAGTGAG
AATGCATCTCTACAAAAAATAAAAAAAATTAGCTAGGCATAGTACCTGAGGCCAGGAGGTCCAGGCCGCAATGAG
ATGTGTTTGTGCCATTGCACACCAGTCTGGGTGACAGAGAAAGACCCTGTCTCAAAAACAAATTAAATAAAATAT
CTTCATATATAAATTAAGCTAATTAAAAATATTTTTCCCTGTATTTATTTAATATTTTCTAATCTGAACCCATAT
ACAGCTGACTAATTCATTCTTAGAAATGTGTTATCTGTAATCTTTCCTAAACAGAGTAGCCCACAAGAATCATGC
ACTTTTTAAAATTATTTCTAAGAAGCCATAACAAAGCTGTGTACTAATAAAGACTGCAGCAAGCACTTGTGTTAT
TTAAATTATGTAAGTAGATTGTCATTTGTCAGGCTCCTGTACATTTACATAGCATGTTATATTAATAATAAATGT
AAAATATGACTAAAGTTTTCATTGGAAAAAAAAAAAAAAA

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FIGURE 904

MYVSSEHKGRRVTALCWDTAILRVFVGDHAGKVSAIKLNTSKQAKAAAAFVMFPVQTITTVDSCVVQLDYLDGRL
LISSLTRSFLCDTEREKFWKIGNKERDGEYGACFFPGRCSGGQQPLIYCARPGSRMWEVNFDGEVISTHQFKKLL
SLPPLPVITLRSEPQYDHTAGSSQSLSFPKLLHLSEHCVLTWTERGIYIFIPQNVQVLLWSEVKDIQDVAVCRNE
LFCLHLNGKVSHLSLISVERCVERLLRRGLWNLAARTCCLFQNSVIASRARKTLTADKLEHLKSQLDHGTYNDLI
SQMEELILKFEPLDSACSSRRSSISSHESFSILDSGIYRIISSRRGSQSDEDSCSLHSQTLSEDERFKEFTSQQE
EDLPDQCCGSHGNEDNVSHAPVMFETDKNETFLPFGIPLPFRSPSPLVSLQAVKESVSSFVRKTTEKIGTLHTSP
DLKVRPELRGDEQSCEEDVSSDTCPKEEDTEEEKEVTSPPPEEDRFQELKVATAEAMTKLQDPLVLFESESLRMV
LQEWLSHLEKTFAMKDFSGVSDTDNSSMKLNQDVLLVNESKKGILDEDNEKEKRDSLGNEESVDKTACECVRSPR
ESLDDLFQICSPCAIASGLRNDLAELTTLCLELNVLNSKIKSTSGHVDHTLQQYSPEILACQFLKKYFFLLNLKR
AKESIKLSYSNSPSVWDTFIEGLKEMASSNPVYMEMEKGDLPTRLKLLDDEVPFDSPLLVVYATRLYEKFGESAL
RSLIKFFPSILPSDIIQLCHHHPAEFLAYLDSLVKSRPEDQRSSFLESLLQPESLRLDWLLLAVSLDAPPSTSTM
DDEGYPRPHSHLLSWGYSQLILHLIKLPADFITKEKMTDICRSCGFWPGYLILCLELERRREAFTNIVYLNDMSL
MEGDNGWIPETVEEWKLLLHLIQSKSTRPAPQESLNGSLSDGPSPINVENVALLLAKAMGPDRAWSLLQECGLAL
ELSEKFTRTCDILRIAEKRQRALIQSMLEKCDRFLWSQQA

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FIGURE 905

CTCCCTTTGGGCAAGGACCTGAGACCCTTGTGCTAAGTCAAGAGGCTCAATGGGCTGCAGAAGAACTAGAGAAGG
ACCAAGCAAAGCC**ATG**ATATTTCCATGGAAATGTCAGAGCACCCAGAGGGACTTATGGAACATCTTCAAGTTGTG
GGGGTGGACAATGCTCTGTTGTGATTTCCTGGCACATCATGGAACCGACTGCTGGACTTACCATTATTCTGAAAA
ACCCATGAACTGGCAAAGGGCTAGAAGATTCTGCCGAGACAATTACACAGATTTAGTTGCCATACAAAACAAGGC
GGAAATTGAGTATCTGGAGAAGACTCTGCCTTTCAGTCGTTCTTACTACTGGATAGGAATCCGGAAGATAGGAGG
AATATGGACGTGGGTGGGAACCAACAAATCTCTTACTGAAGAAGCAGAGAACTGGGGAGATGGTGAGCCCAACAA
CAAGAAGAACAAGGAGGACTGCGTGGAGATCTATATCAAGAGAAACAAAGATGCAGGCAAATGGAACGATGACGC
CTGCCACAAACTAAAGGCAGCCCTCTGTTACACAGCTTCTTGCCAGCCCTGGTCATGCAGTGGCCATGGAGAATG
TGTAGAAATCATCAATAATTACACCTGCAACTGTGATGTGGGGTACTATGGGCCCCAGTGTCAGTTTGTGATTCA
GTGTGAGCCTTTGGAGGCCCCAGAGCTGGGTACCATGGACTGTACTCACCCTTTGGGAAACTTCAGCTTCAGCTC
ACAGTGTGCCTTCAGCTGCTCTGAAGGAACAAACTTAACTGGGATTGAAGAAACCACCTGTGGACCATTTGGAAA
CTGGTCATCTCCAGAACCAACCTGTCAAGTGATTCAGTGTGAGCCTCTATCAGCACCAGATTTGGGGATCATGAA
CTGTAGCCATCCCCTGGCCAGCTTCAGCTTTACCTCTGCATGTACCTTCATCTGCTCAGAAGGAACTGAGTTAAT
TGGGAAGAAGAAAACCATTTGTGAATCATCTGGAATCTGGTCAAATCCTAGTCCAATATGTCAAAAATTGGACAA
AAGTTTCTCAATGATTAAGGAGGGTGATTATAACCCCCTCTTCATTCCAGTGGCAGTCATGGTTACTGCATTCTC
TGGGTTGGCATTTATCATTTGGCTGGCAAGGAGATTAAAAAAAGGCAAGAAATCCAAGAGAAGTATGAATGACCC
ATAT**TAA**ATCGCCCTTGGTGAAAGAAAATTCTTGGAATACTAAAAATCATGAGATCCTTTAAATCCTTCCATGAA
ACGTTTTGTGTGGTGGCACCTCCTACGTCAAACATGAAGTGTGTTTCCTTCAGTGCATCTGGGAAGATTTCTACC
TGACCAACAGTTCCTTCAGCTTCCATTTCGCCCCTCATTTATCCCTCAACCCCCAGCCCACAGGTGTTTATACAG
CTCAGCTTTTTGTCTTTTCTGAGGAGAAACAAATAAGACCATAAAGGGAAAGGATTCATGTGGAATATAAAGATG
GCTGACTTTGCTCTTTCTTGACTCTTGTTTTCAGTTTCAATTCAGTGCTGTACTTGATGACAGACACTTCTAAAT
GAAGTGCAAATTTGATACATATGTGAATATGGACTCAGTTTTCTTGCAGATCAAATTTCACGTCGTCTTCTGTAT
ACTGTGGAGGTACACTCTTATAGAAAGTTCAAAAAGTCTACGCTCTCCTTTCTTTCTAACTCCAGTGAAGTAATG
GGGTCCTGCTCAAGTTGAAAGAGTCCTATTTGCACTGTAGCCTCGCCGTCTGTGAATTGGACCATCCTATTTAAC
TGGCTTCAGCCTCCCCACCTTCTTCAGCCACCTCTCTTTTTCAGTTGGCTGACTTCCACACCTAGCATCTCATGA
GTGCCAAGCAAAAGGAGAGAAGAGAGAAATAGCCTGCGCTGTTTTTTAGTTTGGGGGTTTTGCTGTTTCCTTTTA
TGAGACCCATTCCTATTTCTTATAGTCAATGTTTCTTTTATCACGATATTATTAGTAAGAAAACATCACTGAAAT
GCTAGCTGCAAGTGACATCTCTTTGATGTCATATGGAAGAGTTAAAACAGGTGGAGAAATTCCTTGATTCACAAT
GAAATGCTCTCCTTTCCCCTGCCCCCAGACCTTTTATCCACTTACCTAGATTCTACATATTCTTTAAATTTCATC
TCAGGCCTCCCTCAACCCCACCACTTCTTTTATAACTAGTCCTTTACTAATCCAACCCATGATGAGCTCCTCTTC
CTGGCTTCTTACTGAAAGGTTACCCTGTAACATGCAATTTTGCATTTGAATAAAGCCTGCTTTTTAAGTGTTAA

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FIGURE 906

MIFPWKCQSTQRDLWNIFKLWGWTMLCCDFLAHHGTDCWTYHYSEKPMNWQRARRFCRDNYTDLVAIQNKAEIEY
LEKTLPFSRSYYWIGIRKIGGIWTWVGTNKSLTEEAENWGDGEPNNKKNKEDCVEIYIKRNKDAGKWNDDACHKL
KAALCYTASCQPWSCSGHGECVEIINNYTCNCDVGYYGPQCQFVIQCEPLEAPELGTMDCTHPLGNFSFSSQCAF
SCSEGTNLTGIEETTCGPFGNWSSPEPTCQVIQCEPLSAPDLGIMNCSHPLASFSFTSACTFICSEGTELIGKKK
TICESSGIWSNPSPICQKLDKSFSMIKEGDYNPLFIPVAVMVTAFSGLAFIIWLARRLKKGKKSKRSMNDPY

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FIGURE 907

GAAAGTCAGTGAGCAAATCGCGGACCACCGGGGCTGCCAGCTCGCCTGACTCCCGGCCTCTTGCGCTCCTAGGGG
CGGAGAAGGGTGCGGGCTCTTCGCCCTTTGTGTCCTCCTTCTTTCACTAACTTCTGGACTTTCCAGCTCTTCCGA
AGTTCGTTCTTGCGCAAAGCCCAAAGGCTGGAAAACCGTCCACG**ATG**ACCAGCATGACTCAGTCTCTGCGGGAGG
TGATAAAGGCCATGACCAAGGCTCGCAATTTTGAGAGAGTTTTGGGAAAGATTACTCTTGTCTCTGCTGCTCCTG
GGAAAGTGATTTGTGAAATGAAAGTAGAAGAAGAGCATACCAATGCAATAGGCACTCTCCACGGCGGTTTGACAG
CCACGTTAGTAGATAACATATCAACAATGGCTCTGCTATGCACGGAAAGGGGAGCACCCGGAGTCAGTGTCGATA
TGAACATAACGTACATGTCACCTGCAAAATTAGGAGAAGATATAGTGATTACAGCACATGTTCTGAAGCAAGGAA
AAACACTTGCATTTACCTCTGTGGATCTGACCAACAAGGCCACAGGAAAATTAATAGCACAAGGAAGACACACAA
AACACCTGGGAAAC**TGA**GAGAACAGCAGAATGACCTAAAGAAACCCAACAATGAATATCAAGTATAGATTTGACT
CAAACAATTGTAATTTTTGAAATAAACTAGCAAAACCAGAAAAAAAAAAAAAAAAAAAA

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FIGURE 908

MTSMTQSLREVIKAMTKARNFERVLGKITLVSAAPGKVICEMKVEEEHTNAIGTLHGGLTATLVDNISTMALLCT
ERGAPGVSVDMNITYMSPAKLGEDIVITAHVLKQGKTLAFTSVDLTNKATGKLIAQGRHTKHLGN

FIGURE 909

GAATTCCGGTTTCTTCCTAAAAAATGTCTG**ATG**GCCGCTTTCTCGGTCGGCACCGCCATGAATGCCAGCAGTTAC
TCTGCAGAGATGACGGAGCCCAAGTCGGTGTGTGTCTCGGTGGATGAGGTGGTGTCCAGCAACATGGAGGCCACT
GAGACGGACCTGCTGAATGGACATCTGAAAAAAGTAGATAATAACCTCACGGAAGCCCAGCGCTTCTCCTCCTTG
CCTCGGAGGGCAGCTGTGAACATTGAATTCAGGGACCTTTCCTATTCGGTTCCTGAAGGACCCTGGTGGAGGAAG
AAAGGATACAAGACCCTCCTGAAAGGAATTTCCGGGAAGTTCAATAGTGGTGAGTTGGTGGCCATTATGGGTCCT
TCCGGGGCCGGGAAGTCCACGCTGATGAACATCCTGGCTGGATACAGGGAGACGGGCATGAAGGGGGCCGTCCTC
ATCAACGGCCTGCCCCGGGACCTGCGCTGCTTCCGGAAGGTGTCCTGCTACATCATGCAGGATGACATGCTGCTG
CCGCATCTCACTGTGCAGGAGGCCATGATGGTGTCGGCACATCTGAAGCTTCAGGAGAAGGATGAAGGCAGAAGG
GAAATGGTCAAGGAGATACTGACAGCGCTGGGCTTGCTGTCTTGCGCCAACACGCGGACCGGGAGCCTGTCAGGT
GGTCAGCGCAAGCGCCTGGCCATCGCGCTGGAGCTGGTGAACAACCCTCCAGTCATGTTCTTCGATGAGCCCACC
AGCGGCCTGGACAGCGCCTCCTGCTTCCAGGTGGTCTCGCTGATGAAAGGGCTCGCTCAAGGGGGTCGCTCCATC
ATTTGCACCATCCACCAGCCCAGCGCCAAACTCTTCGAGCTGTTCGACCAGCTTTACGTCCTGAGTCAAGGACAA
TGTGTGTACCGGGGAAAAGTCTGCAATCTTGTGCCATATTTGAGGGATTTGGGTCTGAACTGCCCAACCTACCAC
AACCCAGCAGATTTTGTCATGGAGGTTGCATCCGGCGAGTACGGTGATCAGAACAGTCGGCTGGTGAGAGCGGTT
CGGGAGGGCATGTGTGACTCAGACCACAAGAGAGACCTCGGGGGTGATGCCGAGGTGAACCCTTTTCTTTGGCAC
CGCCCCTCTGAAGAGGTAAAGCAGACAAAACGATTAAAGGGGTTGAGAAAGGACTCCTCGTCCATGGAAGGCTGC
CACAGCTTCTCTGCCAGCTGCCTCACGCAGTTCTGCATCCTCTTCAAGAGGACCTTCCTCAGCATCATGAGGGAC
TCGGTCCTGACACACCTGCGCATCACCTCGCACATTGGGATCGGCCTCCTCATTGGCCTGCTGTACTTGGGGATC
GGGAACGAAACCAAGAAGGTCTTGAGCAACTCCGGCTTCCTCTTCTTCTCCATGCTGTTCCTCATGTTCGCGGCC
CTCATGCCTACTGTTCTGACATTTCCCCTGGAGATGGGAGTCTTTCTTCGGGAACACCTGAACTACTGGTACAGC
CTGAAGGCCTACTACCTGGCCAAGACCATGGCAGACGTGCCCTTTCAGATCATGTTCCCAGTGGCCTACTGCAGC
ATCGTGTACTGGATGACGTCGCAGCCGTCCGACGCCGTGCGCTTTGTGCTGTTTGCCGCGCTGGGCACCATGACC
TCCCTGGTGGCACAGTCCCTGGGCCTGCTGATCGGAGCCGCCTCCACGTCCCTGCAGGTGGCCACTTTCGTGGGC
CCAGTGACAGCCATCCCGGTGCTCCTGTTCTCGGGGTTCTTCGTCAGCTTCGACACCATCCCCACGTACCTACAG
TGGATGTCCTACATCTCCTATGTCAGGTATGGGTTCGAAGGGGTCATCCTCTCCATCTATGGCTTAGACCGGGAA
GATCTGCACTGTGACATCGACGAGACGTGCCACTTCCAGAAGTCGGAGGCCATCCTGCGGGAGCTGGACGTGGAA
AATGCCAAGCTGTACCTGGACTTCATCGTACTCGGGATTTTCTTCATCTCCCTCCGCCTCATTGCCTATTTGGTC
CTCAGGTACAAAATCCGGGCAGAGAGG**TAA**AACACCTGAATGCCAGGAAACAGGAAGATTAGACACTGTGGCCGA
GGGCACGTCTAGAATCGAGGAGGCAAGCCTGTGCCCGACCGACGACACAGAGACTCTTCTGATCCAACCCCTAGA
ACCGCGTTGGGTTTGTGGGTGTCTCGTGCTCAGCCACTCTGCCCAGCTGGGTTGGATCTTCTCTCCATTCCCCTT
TCTAGCTTTAACTAGGAAGATGTAGGCAGATTGGTGGTTTTTTTTTTTTTTTAACATACAGAATTTTAAATACC
ACAACTGGGGCAGAATTTAAAGCTGCAACACAGCTGGTGATGAGAGGCTTCCTCAGTCCAGTCGCTCCTTAGCAC
CAGGCACCGTGGGTCCTGGATGGGGAACTGCAAGCAGCCTCTCAGCTGATGGCTGCACAGTCAGATGTCTGGTGG
CAGAGAGTCCGAGCATGGAGCGATTCCATTTTATGACTGTTGTTTTTCACATTTTCATCTTTCTAAGGTGTGTCT
CTTTTCCAATGAGAAGTCATTTTTGCAAGCCAAAAGTCGATCAATCGCATTCATTTTAAGAAATTATACCTTTTT
AGTACTTGCTGAAGAATGATTCAGGGTAAATCACATACTTTGTTTAGAGAGGCGAGGGGTTTAACCCGAGTCACC
CAGCTGGTCTCATACATAGACAGCACTTGTGAAGGATTGAATGCAGGTTCCAGGTGGAGGGAAGACGTGGACACC
ATCTCCACTGAGCCATGCAGACATTTTTAAAAGCTATACACAAAATTGTGAGAAGACATTGGCCAACTCTTTCAA
AGTCTTTCTTTTTCCACGTGCTTCTTATTTTAAGCGAAATATATTGTTTGTTTCTTCCTAAAAAAAAAAAAAAAA
AAAAA

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FIGURE 910

MAAFSVGTAMNASSYSAEMTEPKSVCVSVDEVVSSNMEATETDLLNGHLKKVDNNLTEAQRFSSLPRRAAVNIEF
RDLSYSVPEGPWWRKKGYKTLLKGISGKFNSGELVAIMGPSGAGKSTLMNILAGYRETGMKGAVLINGLPRDLRC
FRKVSCYIMQDDMLLPHLTVQEAMMVSAHLKLQEKDEGRREMVKEILTALGLLSCANTRTGSLSGGQRKRLAIAL
ELVNNPPVMFFDEPTSGLDSASCFQVVSLMKGLAQGGRSIICTIHQPSAKLFELFDQLYVLSQGQCVYRGKVCNL
VPYLRDLGLNCPTYHNPADFVMEVASGEYGDQNSRLVRAVREGMCDSDHKRDLGGDAEVNPFLWHRPSEEVKQTK
RLKGLRKDSSSMEGCHSFSASCLTQFCILFKRTFLSIMRDSVLTHLRITSHIGIGLLIGLLYLGIGNETKKVLSN
SGFLFFSMLFLMFAALMPTVLTFPLEMGVFLREHLNYWYSLKAYYLAKTMADVPFQIMFPVAYCSIVYWMTSQPS
DAVRFVLFAALGTMTSLVAQSLGLLIGAASTSLQVATFVGPVTAIPVLLFSGFFVSFDTIPTYLQWMSYISYVRY
GFEGVILSIYGLDREDLHCDIDETCHFQKSEAILRELDVENAKLYLDFIVLGIFFISLRLIAYLVLRYKIRAER

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FIGURE 911

TCTGTGGCCGGAGGCTGATCAGTGTTCTAGAACAGATCAGACATTTTGTA**ATG**ATGCCTGAAATAAACACTAACC
ACCTCGACAAGCAACAGGTTCAACTCCTGGCAGAGATGTGTATCCTTATTGATGAAAATGACAATAAAATTGGAG
CTGAGACCAAGAAGAATTGTCACCTGAACGAGAACATTGAGAAAGGATTATTGCATCGAGCTTTTAGTGTCTTCT
TATTCAACACCGAAAATAAGCTTCTGCTACAGCAAAGATCAGATGCTAAGATTACCTTTCCAGGTTGTTTTACGA
ATACGTGTTGTAGTCATCCATTAAGCAATCCAGCCGAGCTTGAGGAAAGTGACGCCCTTGGAGTGAGGCGAGCAG
CACAGAGACGGCTGAAAGCTGAGCTAGGAATTCCCTTGGAAGAGGTTCCTCCAGAAGAAATTAATTATTTAACAC
GAATTCACTACAAAGCTCAGTCTGATGGTATCTGGGGTGAACATGAAATTGATTACATTTTGTTGGTGAGGAAGA
ATGTAACTTTGAATCCAGATCCCAATGAGATTAAAAGCTATTGTTATGTGTCAAAGGAAGAACTAAAAGAACTTC
TGAAAAAAGCAGCCAGTGGTGAAATTAAGATAACGCCATGGTTTAAAATTATTGCAGCGACTTTTCTCTTTAAAT
GGTGGGATAACTTAAATCATTTGAATCAGTTTGTTGACCATGAGAAAATATACAGAATG**TGA**ATATGTAGGTAAA
TGATTACAGAAAAATTTATGTGCTTAACAAACTTAGAATGACTTTTTCCTTTTAAATTTAGTTCTATCATTAATT
TATCATTAAATTTAGTTCTATCATTTGGTACTATCATTAATGTATTATAAAACTTGTGTGGAAAAAACTAACTTA
TAATTTTGTATCACACACCCTGGATATGTGTTCTGTTTCTAAGCGACATTTGTGAGAGATTATTGTAAAATGAGA
GCGAGAAATAAAACTTAATTTAATCTTTGCAGATACATACTTATGGGAAATTTGAACAAATGAGTGAAACTCTGT
TTTTAGTAGGCCGTGATAAACATTTCCGGAGCACTTGCAGAGGACTTGCTATTTGCCAGGTGCTTTATGTATCAT
TAAATTTTTCTCATAGTTCAGAAAAATGTGCAAAGGAAACTATTGTCTCGCTCCTTCAAAACAGTCTTAATTAAC
TTTCATATTAGCAGATTAAACTAGCAGAGCAAGGTTCAAATTAAATGATATGACCCTAATTTGTATCATTCTGAG
TTGATTGTGTGGTTTATTCATTCTGAAACATGTTGATACTTACAGTCACCGACTGCTTTTGATAAGTGATATTGA
TTAGGTTGAATCTTCTTGTAAATAGTATTTACCAGTTAGCAAAGTCTGTGTTTTCAGAATTACAGTGAGCACAGA
GGTGTTCATAAAATGGGAATTGAGTCCCACTCGGTAAGAGTTGCTTAAACTTGACACTGTTGACATTTGGGCTGG
ATAAAACCCCTGTGGTGGGGTCTGTGCTGTGCATTGCAGGATGGTGAGCAGCGTCCCTCTCATGTGACACCCACA
GTTATGCCGGATGTTGCCAGATGCCCCTAGGGACAGAGTCAACCCCCAACTGAGGACCACTGTCTACAGAGTCAG
GAAATATTGTAGGGAGAAAAAAATAACAACAACAAAGGCCTATATTAATGTTAAATAGAGGAGATTATGGAATGT
GTATATTAATGTTAAAAATTATTCCTTATTCAATGTATTTTTATCAAATCGATAGATATCTCAGATTTGAAACTC
AAGACAG

FIGURE 912

MMPEINTNHLDKQQVQLLAEMCILIDENDNKIGAETKKNCHLNENIEKGLLHRAFSVFLFNTENKLLLQQRSDAK
ITFPGCFTNTCCSHPLSNPAELEESDALGVRRAAQRRLKAELGIPLEEVPPEEINYLTRIHYKAQSDGIWGEHEI
DYILLVRKNVTLNPDPNEIKSYCYVSKEELKELLKKAASGEIKITPWFKIIAATFLFKWWDNLNHLNQFVDHEKI
YRM

FIGURE 913

TAATATAGGTACTTTGTCCCTGATTAAA**TAA**TGTGACGGATAGAATGCATCAAGTGTTTATTATGAAAAGAGTGG
AAAAGTATATAGCTTTTAGCAAAAGGTGTTTGCCCATTCTAAGAAATGAGCGAATATATAGAAATAGTGTGGGCA
TTTCTTCCTGTTAGGTGGAGTGTATGTGTTGACATTTCTCCCCATCTCTTCCCACTCTGTTTTCTCCCCATTATT
TGAATAAAGTGACTGCTGAAGATGACTTTGAATCCTTATCCACTTAATTTAATGTTTAAAGAAAAACCTGTAATG
GAAAGTGAGACTCCTTCCCTAATTTCAGTTTAGAGCAACTTGAAGAAGAGTAGACAAAAAATAAAATGCACATAG
AAAAAGAGAAAAAGGGCACAAAGGGATTGGCCCAATATTGATTCTTTTTTATAAAACCTCCTTTGGCTTAGAAGG
AATGACTCTAGCTACAATAATACACAGTATGTTTAAGCAGGTTCCCTTGGTTGTTGCATTAAATGTAATCCACCT
TTAGGTATTTTAGAGCACAGAACAACACTGTGTTGATCTAGTAGGTTTCTATTTTTCCTTTCTCTTTACAATGCA
CATAATACTTTCCTGTATTTATATCATAACGTGTATAGTGTAAAATGTGAATGACTTTTTTTGTGAATGAAAATC
TAAAATCTTTGTAACTTTTTATATCTGCTTTTGTTTCACCAAAGAAACCTAAAATCCTTCTTTTACTACAAAAAA
AAAAAAAAAGGGC

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FIGURE 914

NIGTLSLIK

FIGURE 915A

GCTGCCCCGAGCCTTTCTGGGGAAGAACTCCAGGCGTGCGGACGCAACAGCCGAGAACATTAGGTGTTGTGGACA
GGAGCTGGGACCAAGATCTTCGGCCAGCCCCGCATCCTCCCGCATCTTCCAGCACCGTCCCGCACCCTCCGCATC
CTTCCCCGGGCCACCACGCTTCCTATGTGACCCGCCTGGGCAACGCCGAACCCAGTCGCGCAGCGCTGCAGTGAA
TTTTCCCCCCAAACTGCAATAAGCCGCCTTCCAAGGCCAAG**ATG**TTCATAAATATAAAGAGCATCTTATGGATGT
GTTCAACCTTAATAGTAACCCATGCGCTACATAAAGTCAAAGTGGGAAAAAGCCCACCGGTGAGGGGCTCCCTCT
CTGGAAAAGTCAGCCTACCTTGTCATTTTTCAACGATGCCTACTTTGCCACCCAGTTACAACACCAGTGAATTTC
TCCGCATCAAATGGTCTAAGATTGAAGTGGACAAAAATGGAAAAGATTTGAAAGAGACTACTGTCCTTGTGGCCC
AAAATGGAAATATCAAGATTGGTCAGGACTACAAAGGGAGAGTGTCTGTGCCCACACATCCCGAGGCTGTGGGCG
ATGCCTCCCTCACTGTGGTCAAGCTGCTGGCAAGTGATGCGGGTCTTTACCGCTGTGACGTCATGTACGGGATTG
AAGACACACAAGACACGGTGTCACTGACTGTGGATGGGGTTGTGTTTCACTACAGGGCGGCAACCAGCAGGTACA
CACTGAATTTTGAGGCTGCTCAGAAGGCTTGTTTGGACGTTGGGGCAGTCATAGCAACTCCAGAGCAGCTCTTTG
CTGCCTATGAAGATGGATTTGAGCAGTGTGACGCAGGCTGGCTGGCTGATCAGACTGTCAGATATCCCATCCGGG
CTCCCAGAGTAGGCTGTTATGGAGATAAGATGGGAAAGGCAGGAGTCAGGACTTATGGATTCCGTTCTCCCCAGG
AAACTTACGATGTGTATTGTTATGTGGATCATCTGGATGGTGATGTGTTCCACCTCACTGTCCCCAGTAAATTCA
CCTTCGAGGAGGCTGCAAAAGAGTGTGAAAACCAGGATGCCAGGCTGGCAACAGTGGGGGGAACTCCAGGCGGCAT
GGAGGAACGGCTTTGACCAGTGCGATTACGGGTGGCTGTCGGATGCCAGCGTGCGCCACCCTGTGACTGTGGCCA
GGGCCCAGTGTGGAGGTGGTCTACTTGGGGTGAGAACCCTGTATCGTTTTGAGAACCAGACAGGCTTCCCTCCCC
CTGATAGCAGATTTGATGCCTACTGCTTTAAACCTAAAGAGGCTACAACCATCGATTTGAGTATCCTCGCAGAAA
CTGCATCACCCAGTTTATCCAAAGAACCACAAATGGTTTCTGATAGAACTACACCAATCATCCCTTTAGTTGATG
AATTACCTGTCATTCCAACAGAGTTCCCTCCCGTGGGAAATATTGTCAGTTTTGAACAGAAAGCCACAGTCCAAC
CTCAGGCTATCACAGATAGTTTAGCCACCAAATTACCCACACCTACTGGCAGTACCAAGAAGCCCTGGGATATGG
ATGACTACTCACCTTCTGCTTCAGGACCTCTTGGAAAGCTAGACATATCAGAAATTAAGGAAGAAGTGCTCCAGA
GTACAACTGGCGTCTCTCATTATGCTACGGATTCATGGGATGGTGTCGTGGAAGATAAACAAACACAAGAATCGG
TTACACAGATTGAACAAATAGAAGTGGGTCCTTTGGTAACATCTATGGAAATCTTAAAGCACATTCCTTCCAAGG
AATTCCCTGTAACTGAAACACCATTGGTAACTGCAAGAATGATCCTGGAATCCAAAACTGAAAAGAAAATGGTAA
GCACTGTTTCTGAATTGGTAACCACAGGTCACTATGGATTCACCTTGGGAGAAGAGGATGATGAAGACAGAACAC
TTACAGTTGGATCTGATGAGAGCACCTTGATCTTTGACCAAATTCCTGAAGTCATTACGGTGTCAAAGACTTCAG
AAGACACCATCCACACTCATTTAGAAGACTTGGAGTCAGTCTCAGCATCCACAACTGTTTCCCCTTTAATTATGC
CTGATAATAATGGATCATCCATGGATGACTGGGAAGAGAGACAAACTAGTGGTAGGATAACGGAAGAGTTTCTTG
GCAAATATCTGTCTACTACACCTTTTCCATCACAGCATCGTACAGAAATAGAATTGTTTCCTTATTCTGGTGATA
AAATATTAGTAGAGGGAATTTCCACAGTTATTTATCCTTCTCTACAAACAGAAATGACACATAGAAGAGAAAGAA
CAGAAACACTAATACCAGAGATGAGAACAGATACTTATACAGATGAAATACAAGAAGAGATCACTAAAAGTCCAT
TTATGGGAAAAACAGAAGAAGAAGTCTTCTCTGGGATGAAACTCTCTACATCTCTCTCAGAGCCAATTCATGTTA
CAGAGTCTTCTGTGGAAATGACCAAGTCTTTTGATTTCCCAACATTGATAACAAAGTTAAGTGCAGAGCCAACAG
AAGTAAGAGATATGGAGGAAGACTTTACAGCAACTCCAGGTACTACAAAATATGATGAAAATATTACAACAGTGC
TTTTGGCCCATGGTACTTTAAGTGTTGAAGCAGCCACTGTATCAAAATGGTCATGGGATGAAGATAATACAACAT
CCAAGCCTTTAGAGTCTACAGAACCTTCAGCCTCTTCAAAATTGCCCCCTGCCTTACTCACAACTGTGGGGATGA
ATGGAAAGGATAAAGACATCCCAAGTTTCACTGAAGATGGAGCAGATGAATTTACTCTTATTCCAGATAGTACTC
AAAAGCAGTTAGAGGAGGTTACTGATGAAGACATAGCAGCCCATGGAAAATTCACAATTAGATTTCAGCCAACTA
CATCAACTGGTATTGCAGAAAAGTCAACTTTGAGAGATTCTACAACTGAAGAAAAAGTTCCACCTATCACAAGCA
CTGAAGGCCAAGTTTATGCAACCATGGAAGGAAGTGCTTTGGGTGAAGTAGAAGATGTGGACCTCTCTAAGCCAG
TATCTACTGTTCCCCAATTTGCACACACTTCAGAGGTGGAAGGATTAGCATTTGTTAGTTATAGTAGCACCCAAG
AGCCTACTACTTATGTAGACTCTTCCCATACCATTCCTCTTTCTGTAATTCCCAAGACAGACTGGGGAGTGTTAG
TACCTTCTGTTCCATCAGAAGATGAAGTTCTAGGTGAACCCTCTCAAGACATACTTGTCATTGATCAGACTCGCC
TTGAAGCGACTATTTCTCCAGAAACTATGAGAACAACAAAAATCACAGAGGGAACAACTCAGGAAGAATTCCCTT
GGAAAGAACAGACTGCAGAGAAACCAGTTCCTGCTCTCAGTTCTACAGCTTGGACTCCCAAGGAGGCAGTAACAC
CACTGGATGAACAAGAGGGCGATGGATCAGCATATACAGTCTCTGAAGATGAATTGTTGACAGGTTCTGAGAGGG
TCCCAGTTTTAGAAACAACTCCAGTTGGAAAAATTGATCACAGTGTGTCTTATCCACCAGGTGCTGTAACTGAGC

FIGURE 915B

ACAAAGTGAAAACAGATGAAGTGGTAACACTAACACCACGCATTGGGCCAAAAGTATCTTTAAGTCCAGGGCCTG
AACAAAAATATGAAACAGAAGGTAGTAGTACAACAGGATTTACATCATCTTTGAGTCCTTTTAGTACCCACATTA
CCCAGCTTATGGAAGAAACCACTACTGAGAAAACATCCCTAGAGGATATTGATTTAGGCTCAGGATTATTTGAAA
AGCCCAAAGCCACAGAACTCATAGAATTTTCAACAATCAAAGTCACAGTTCCAAGTGATATTACCACTGCCTTCA
GTTCAGTAGACAGACTTCACACAACTTCAGCATTCAAGCCATCTTCCGCGATCACTAAGAAACCACCTCTCATCG
ACAGGGAACCTGGTGAAGAAACAACCAGTGACATGGTAATCATTGGAGAATCAACATCTCATGTTCCTCCCACTA
CCCTTGAAGATATTGTAGCCAAGGAAACAGAAACCGATATTGATAGAGAGTATTTCACGACTTCAAGTCCTCCTG
CTACACAGCCAACAAGACCACCCACTGTGGAAGACAAAGAGGCCTTTGGACCTCAGGCGCTTTCTACGCCACAGC
CCCCAGCAAGCACAAAATTTCACCCTGACATTAATGTTTATATTATTGAGGTCAGAGAAAATAAGACAGGTCGAA
TGAGTGATTTGAGTGTAATTGGTCATCCAATAGATTCAGAATCTAAAGAAGATGAACCTTGTAGTGAAGAAACAG
ATCCAGTGCATGATCTAATGGCTGAAATTTTACCTGAATTCCCTGACATAATTGAAATAGACCTATACCACAGTG
AAGAAAATGAAGAAGAAGAAGAAGAGTGTGCAAATGCTACTGATGTGACAACCACCCCATCTGTGCAGTACATAA
ATGGGAAGCATCTCGTTACCACTGTGCCCAAGGACCCAGAAGCTGCAGAAGCTAGGCGTGGCCAGTTTGAAAGTG
TTGCACCTTCTCAGAATTTCTCGGACAGCTCTGAAAGTGATACTCATCCATTTGTAATAGCCAAAACGGAATTGT
CTACTGCTGTGCAACCTAATGAATCTACAGAAACAACTGAGTCTCTTGAAGTTACATGGAAGCCTGAGACTTACC
CTGAAACATCAGAACATTTTTCAGGTGGTGAGCCTGATGTTTTCCCCACAGTCCCATTCCATGAGGAATTTGAAA
GTGGAACAGCCAAAAAAGGGGCAGAATCAGTCACAGAGAGAGATACTGAAGTTGGTCATCAGGCACATGAACATA
CTGAACCTGTATCTCTGTTTCCTGAAGAGTCTTCAGGAGAGATTGCCATTGACCAAGAATCTCAGAAAATAGCCT
TTGCAAGGGCTACAGAAGTAACATTTGGTGAAGAGGTAGAAAAAAGTACTTCTGTCACATACACTCCCACTATAG
TTCCAAGTTCTGCATCAGCATATGTTTCAGAGGAAGAAGCAGTTACCCTAATAGGAAATCCTTGGCCAGATGACC
TGTTGTCTACCAAAGAAAGCTGGGTAGAAGCAACTCCTAGACAAGTTGTAGAGCTCTCAGGGAGTTCTTCGATTC
CAATTACAGAAGGCTCTGGAGAAGCAGAAGAAGATGAAGATACAATGTTCACCATGGTAACTGATTTATCACAGA
GAAATACTACTGATACACTCATTACTTTAGACACTAGCAGGATAATCACAGAAAGCTTTTTTGAGGTTCCTGCAA
CCACCATTTATCCAGTTTCTGAACAACCTTCTGCAAAAGTGGTGCCTACCAAGTTTGTAAGTGAAACAGACACTT
CTGAGTGGATTTCCAGTACCACTGTTGAGGAAAAGAAAAGGAAGGAGGAGGAGGGAACTACAGGTACGGCTTCTA
CATTTGAGGTATATTCATCTACACAGAGATCGGATCAATTAATTTTACCCTTTGAATTAGAAAGTCCAAATGTAG
CTACATCTAGTGATTCAGGTACCAGGAAAAGTTTTATGTCCTTGACAACACCAACACAGTCTGAAAGGGAAATGA
CAGATTCTACTCCTGTCTTTACAGAAACAAATACATTAGAAAATTTGGGGGCACAGACCACTGAGCACAGCAGTA
TCCATCAACCTGGGGTTCAGGAAGGGCTGACCACTCTCCCACGTAGTCCTGCCTCTGTCTTTATGGAGCAGGGCT
CTGGAGAAGCTGCTGCCGACCCAGAAACCACCACTGTTTCTTCATTTTCATTAAACGTAGAGTATGCAATTCAAG
CCGAAAAGGAAGTAGCTGGCACTTTGTCTCCGCATGTGGAAACTACATTCTCCACTGAGCCAACAGGACTGGTTT
TGAGTACAGTAATGGACAGAGTAGTTGCTGAAAATATAACCCAAACATCCAGGGAAATAGTGATTTCAGAGCGAT
TAGGAGAACCAAATTATGGGGCAGAAATAAGGGGCTTTTCCACAGGTTTTCCTTTGGAGGAAGATTTCAGTGGTG
ACTTTAGAGAATACTCAACAGTGTCTCATCCCATAGCAAAAGAAGAAACGGTAATGATGGAAGGCTCTGGAGATG
CAGCATTTAGGGACACCCAGACTTCACCATCTACAGTACCTACTTCAGTTCACATCAGTCACATATCTGACTCAG
AAGGACCCAGTAGCACCATGGTCAGCACTTCAGCCTTCCCCTGGGAAGAGTTTACATCCTCAGCTGAGGGCTCAG
GTGAGCAACTGGTCACAGTCAGCAGCTCTGTTGTTCCAGTGCTTCCCAGTGCTGTGCAAAAGTTTTCTGGTACAG
CTTCCTCCATTATCGACGAAGGATTGGGAGAAGTGGGTACTGTCAATGAAATTGATAGAAGATCCACCATTTTAC
CAACAGCAGAAGTGGAAGGTACGAAAGCTCCAGTAGAGAAGGAGGAAGTAAAGGTCAGTGGCACAGTTTCAACAA
ACTTTCCCCAAACTATAGAGCCAGCCAAATTATGGTCTAGGCAAGAAGTCAACCCTGTAAGACAAGAAATTGAAA
GTGAAACAACATCAGAGGAACAAATTCAAGAAGAAAAGTCATTTGAATCCCCTCAAAACTCTCCTGCAACAGAAC
AAACAATCTTTGATTCACAGACATTTACTGAAACTGAACTCAAAACCACAGATTATTCTGTACTAACAACAAAGA
AAACTTACAGTGATGATAAAGAAATGAAGGAGGAAGACACTTCTTTAGTTAACATGTCTACTCCAGATCCAGATG
CAAATGGCTTGGAATCTTACACAACTCTCCCTGAAGCTACTGAAAAGTCACATTTTTTCTTAGCTACTGCATTAG
TAACTGAATCTATACCAGCTGAACATGTAGTCACAGATTCACCAATCAAAAAGGAAGAAAGTACAAAACATTTTC
CGAAAGGCATGAGACCAACAATTCAAGAGTCAGATACTGAGCTCTTATTCTCTGGACTGGGATCAGGAGAAGAAG
TTTTACCTACTCTACCAACAGAGTCAGTGAATTTTACTGAAGTGGAACAAATCAATAACACATTATATCCCCACA
CTTCTCAAGTGGAAAGTACCTCAAGTGACAAAATTGAAGACTTTAACAGAATGGAAAATGTGGCAAAAGAAGTTG

FIGURE 915C

GACCACTCGTATCTCAAACAGACATCTTTGAAGGTAGTGGGTCAGTAACCAGCACAACATTAATAGAAATTTTAA
GTGACACTGGAGCAGAAGGACCCACGGTGGCACCTCTCCCTTTCTCCACGGACATCGGACATCCTCAAAATCAGA
CTGTCAGGTGGGCAGAAGAAATCCAGACTAGTAGACCACAAACCATAACTGAACAAGACTCTAACAAGAATTCTT
CAACAGCAGAAATTAACGAAACAACAACCTCATCTACTGATTTTCTGGCTAGAGCTTATGGTTTTGAAATGGCCA
AAGAATTTGTTACATCAGCACCAAAACCATCTGACTTGTATTATGAACCTTCTGGAGAAGGATCTGGAGAAGTGG
ATATTGTTGATTCATTTCACACTTCTGCAACTACTCAGGCAACCAGACAAGAAAGCAGCACCACATTTGTTTCTG
ATGGGTCCCTGGAAAAACATCCTGAGGTGCCAAGCGCTAAAGCTGTTACTGCTGATGGATTCCCAACAGTTTCAG
TGATGCTGCCTCTTCATTCAGAGCAGAACAAAAGCTCCCCTGATCCAACTAGCACACTGTCAAATACAGTGTCAT
ATGAGAGGTCCACAGACGGTAGTTTCCAAGACCGTTTCAGGGAATTCGAGGATTCCACCTTAAAACCTAACAGAA
AAAAACCCACTGAAAATATTATCATAGACCTGGACAAAGAGGACAAGGATTTAATATTGACAATTACAGAGAGTA
CCATCCTTGAAATTCTACCTGAGCTGACATCGGATAAAAATACTATCATAGATATTGATCATACTAAACCTGTGT
ATGAAGACATTCTTGGAATGCAAACAGATATAGATACAGAGGTACCATCAGAACCACATGACAGTAATGATGAAA
GTAATGATGACAGCACTCAAGTTCAAGAGATCTATGAGGCAGCTGTCAACCTTTCTTTAACTGAGGAAACATTTG
AGGGCTCTGCTGATGTTCTGGCTAGCTACACTCAGGCAACACATGATGAATCAATGACTTATGAAGATAGAAGCC
AACTAGATCACATGGGCTTTCACTTCACAACTGGGATCCCTGCTCCTAGCACAGAAACAGAATTAGACGTTTTAC
TTCCCACGGCAACATCCCTGCCAATTCCTCGTAAGTCTGCCACAGTTATTCCAGAGATTGAAGGAATAAAAGCTG
AAGCAAAAGCCCTGGATGACATGTTTGAATCAAGCACTTTGTCTGATGGTCAAGCTATTGCAGACCAAAGTGAAA
TAATACCAACATTGGGCCAATTTGAAAGGACTCAGGAGGAGTATGAAGACAAAAAACATGCTGGTCCTTCTTTTC
AGCCAGAATTCTCTTCAGGAGCTGAGGAGGCATTAGTAGACCATACTCCCTATCTAAGTATTGCTACTACCCACC
TTATGGATCAGAGTGTAACAGAGGTGCCTGATGTGATGGAAGGATCCAATCCCCCATATTACACTGATACAACAT
TAGCAGTTTCAACATTTGCGAAGTTGTCTTCTCAGACACCATCATCTCCCCTCACTATCTACTCAGGCAGTGAAG
CCTCTGGACACACAGAGATCCCCCAGCCCAGTGCTCTGCCAGGAATAGACGTCGGCTCATCTGTAATGTCCCCAC
AGGATTCTTTTAAGGAAATTCATGTAAATATTGAAGCAACTTTCAAACCATCAAGTGAGGAATACCTTCACATAA
CTGAGCCTCCCTCTTTATCTCCTGACACAAAATTAGAACCTTCAGAAGATGATGGTAAACCTGAGTTATTAGAAG
AAATGGAAGCTTCTCCCACAGAACTTATTGCTGTGGAAGGAACTGAGATTCTCCAAGATTTCCAAAACAAAACCG
ATGGTCAAGTTTCTGGAGAAGCAATCAAGATGTTTCCCACCATTAAAACACCTGAGGCTGGAACTGTTATTACAA
CTGCCGATGAAATTGAATTAGAAGGTGCTACACAGTGGCCACACTCTACTTCTGCTTCTGCCACCTATGGGGTCG
AGGCAGGTGTGGTGCCTTGGCTAAGTCCACAGACTTCTGAGAGGCCCACGCTTTCTTCTTCTCCAGAAATAAACC
CTGAAACTCAAGCAGCTTTAATCAGAGGGCAGGATTCCACGATAGCAGCATCAGAACAGCAAGTGGCAGCGAGAA
TTCTTGATTCCAATGATCAGGCAACAGTAAACCCTGTGGAATTTAATACTGAGGTTGCAACACCACCATTTTCCC
TTCTGGAGACTTCTAATGAAACAGATTTCCTGATTGGCATTAATGAAGAGTCAGTGGAAGGCACGGCAATCTATT
TACCAGGACCTGATCGCTGCAAAATGAACCCGTGCCTTAACGGAGGCACCTGTTATCCTACTGAAACTTCCTACG
TATGCACCTGTGTGCCAGGATACAGCGGAGACCAGTGTGAACTTGATTTTGATGAATGTCACTCTAATCCCTGTC
GTAATGGAGCCACTTGTGTTGATGGTTTTAACACATTCAGGTGCCTCTGCCTTCCAAGTTATGTTGGTGCACTTT
GTGAGCAAGATACCGAGACATGTGACTATGGCTGGCACAAATTCCAAGGGCAGTGCTACAAATACTTTGCCCATC
GACGCACATGGGATGCAGCTGAACGGGAATGCCGTCTGCAGGGTGCCCATCTCACAAGCATCCTGTCTCACGAAG
AACAAATGTTTGTTAATCGTGTGGGCCATGATTATCAGTGGATAGGCCTCAATGACAAGATGTTTGAGCATGACT
TCCGTTGGACTGATGGCAGCACACTGCAATACGAGAATTGGAGACCCAACCAGCCAGACAGCTTCTTTTCTGCTG
GAGAAGACTGTGTTGTAATCATTTGGCATGAGAATGGCCAGTGGAATGATGTTCCCTGCAATTACCATCTCACCT
ATACGTGCAAGAAAGGAACAGTTGCTTGCGGCCAGCCCCCTGTTGTAGAAAATGCCAAGACCTTTGGAAAGATGA
AACCTCGTTATGAAATCAACTCCCTGATTAGATACCACTGCAAAGATGGTTTCATTCAACGTCACCTTCCAACTA
TCCGGTGCTTAGGAAATGGAAGATGGGCTATACCTAAAATTACCTGCATGAACCCATCTGCATACCAAAGGACTT
ATTCTATGAAATACTTTAAAAATTCCTCATCAGCAAAGGACAATTCAATAAATACATCCAAACATGATCATCGTT
GGAGCCGGAGGTGGCAGGAGTCGAGGCGCTGATCCCTAAAATGGCGAACATGTGTTTTCATCATTTCAGCCAAAG
TCCTAACTTCCTGTGCCTTTCCTATCACCTCGAGAAGTAATTATCAGTTGGTTTGGATTTTTGGACCACCGTTCA
GTCATTTTGGGTTGCCGTGCTCCCAAAACATTTTAAATGAAAGTATTGGCATTCAAAAAGACAGCAGACAAAATG
AAAGAAAATGAGAGCAGAAAGTAAGCATTTCCAGCCTATCTAATTTCTTTAGTTTTCTATTTGCCTCCAGTGCAG
TCCATTTCCTAATGTATACCAGCCTACTGTACTATTTAAAATGCTCAATTTCAGCACCGATGGCCATGTAAATAA

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FIGURE 915D

GATGATTTAATGTTGATTTTAATCCTGTATATAAAATAAAAAGTCACAATGAGTTTGGGCATATTTAATGATGAT
TATGGAGCCTTAGAGGTCTTTAATCATTGGTTCGGCTGCTTTTATGTAGTTTAGGCTGGAAATGGTTTCACTTGC
TCTTTGACTGTCAGCAAGACTGAAGATGGCTTTTCCTGGACAGCTAGAAAACACAAAATCTTGTAGGTCATTGCA
CCTATCTCAGCCATAGGTGCAGTTTGCTTCTACATGATGCTAAAGGCTGCGAATGGGATCCTGATGGAACTAAGG
ACTCCAATGTCGAACTCTTCTTTGCTGCATTCCTTTTTCTTCACTTACAAGAAAGGCCTGAATGGAGGACTTTTC
TGTAACCAGG

FIGURE 916

MFINIKSILWMCSTLIVTHALHKVKVGKSPPVRGSLSGKVSLPCHFSTMPTLPPSYNTSEFLRIKWSKIEVDKNG
KDLKETTVLVAQNGNIKIGQDYKGRVSVPTHPEAVGDASLTVVKLLASDAGLYRCDVMYGIEDTQDTVSLTVDGV
VFHYRAATSRYTLNFEAAQKACLDVGAVIATPEQLFAAYEDGFEQCDAGWLADQTVRYPIRAPRVGCYGDKMGKA
GVRTYGFRSPQETYDVYCYVDHLDGDVFHLTVPSKFTFEEAAKECENQDARLATVGELQAAWRNGFDQCDYGWLS
DASVRHPVTVARAQCGGGLLGVRTLYRFENQTGFPPPDSRFDAYCFKPKEATTIDLSILAETASPSLSKEPQMVS
DRTTPIIPLVDELPVIPTEFPPVGNIVSFEQKATVQPQAITDSLATKLPTPTGSTKKPWDMDDYSPSASGPLGKL
DISEIKEEVLQSTTGVSHYATDSWDGVVEDKQTQESVTQIEQIEVGPLVTSMEILKHIPSKEFPVTETPLVTARM
ILESKTEKKMVSTVSELVTTGHYGFTLGEEDDEDRTLTVGSDESTLIFDQIPEVITVSKTSEDTIHTHLEDLESV
SASTTVSPLIMPDNNGSSMDDWEERQTSGRITEEFLGKYLSTTPFPSQHRTEIELFPYSGDKILVEGISTVIYPS
LQTEMTHRRERTETLIPEMRTDTYTDEIQEEITKSPFMGKTEEEVFSGMKLSTSLSEPIHVTESSVEMTKSFDFP
TLITKLSAEPTEVRDMEEDFTATPGTTKYDENITTVLLAHGTLSVEAATVSKWSWDEDNTTSKPLESTEPSASSK
LPPALLTTVGMNGKDKDIPSFTEDGADEFTLIPDSTQKQLEEVTDEDIAAHGKFTIRFQPTTSTGIAEKSTLRDS
TTEEKVPPITSTEGQVYATMEGSALGEVEDVDLSKPVSTVPQFAHTSEVEGLAFVSYSSTQEPTTYVDSSHTIPL
SVIPKTDWGVLVPSVPSEDEVLGEPSQDILVIDQTRLEATISPETMRTTKITEGTTQEEFPWKEQTAEKPVPALS
STAWTPKEAVTPLDEQEGDGSAYTVSEDELLTGSERVPVLETTPVGKIDHSVSYPPGAVTEHKVKTDEVVTLTPR
IGPKVSLSPGPEQKYETEGSSTTGFTSSLSPFSTHITQLMEETTTEKTSLEDIDLGSGLFEKPKATELIEFSTIK
VTVPSDITTAFSSVDRLHTTSAFKPSSAITKKPPLIDREPGEETTSDMVIIGESTSHVPPTTLEDIVAKETETDI
DREYFTTSSPPATQPTRPPTVEDKEAFGPQALSTPQPPASTKFHPDINVYIIEVRENKTGRMSDLSVIGHPIDSE
SKEDEPCSEETDPVHDLMAEILPEFPDIIEIDLYHSEENEEEEEECANATDVTTTPSVQYINGKHLVTTVPKDPE
AAEARRGQFESVAPSQNFSDSSESDTHPFVIAKTELSTAVQPNESTETTESLEVTWKPETYPETSEHFSGGEPDV
FPTVPFHEEFESGTAKKGAESVTERDTEVGHQAHEHTEPVSLFPEESSGEIAIDQESQKIAFARATEVTFGEEVE
KSTSVTYTPTIVPSSASAYVSEEEAVTLIGNPWPDDLLSTKESWVEATPRQVVELSGSSSIPITEGSGEAEEDED
TMFTMVTDLSQRNTTDTLITLDTSRIITESFFEVPATTIYPVSEQPSAKVVPTKFVSETDTSEWISSTTVEEKKR
KEEEGTTGTASTFEVYSSTQRSDQLILPFELESPNVATSSDSGTRKSFMSLTTPTQSEREMTDSTPVFTETNTLE
NLGAQTTEHSSIHQPGVQEGLTTLPRSPASVFMEQGSGEAAADPETTTVSSFSLNVEYAIQAEKEVAGTLSPHVE
TTFSTEPTGLVLSTVMDRVVAENITQTSREIVISERLGEPNYGAEIRGFSTGFPLEEDFSGDFREYSTVSHPIAK
EETVMMEGSGDAAFRDTQTSPSTVPTSVHISHISDSEGPSSTMVSTSAFP

FIGURE 917

GCTCGCGCACGGCTCCGCGGTCCCTTTTGCCTGTCCAGCCGGCCGCCTGTCCCTGCTCCCTCCCTCCGTGAGTGT
CCGGGTTCCCTTCGCCCAGCTCTCCCACCCCTACCCGACCCCGGCGCCCGGGCTCCCAGAGGGAACTGCACTTCG
GCAGAGTTGAATGAATGAAGAGAGACGCGGAGAACTCCTAAGGAGGAGATTGGACAGGCTGGACTCCCCATTGCT
TTTCTAAAAATCTTGGAAACTTTGTCCTTCATTGAATTACGACACTGTCCACCTTTAATTTCCTCGAAAACGCCT
GTAACTCGGCTGAAGCC**ATG**CCTTGTGTTCAGGCGCAGTATGGGTCCTCGCCTCAAGGAGCCAGCCCCGCTTCTC
AGAGCTACAGTTACCACTCTTCGGGAGAATACAGCTCCGATTTCTTAACTCCAGAGTTTGTCAAGTTTAGCATGG
ACCTCACCAACACTGAAATCACTGCCACCACTTCTCTCCCCAGCTTCAGTACCTTTATGGACAACTACAGCACAG
GCTACGACGTCAAGCCACCTTGCTTGTACCAAATGCCCCTGTCCGGACAGCAGTCCTCCATTAAGGTAGAAGACA
TTCAGATGCACAACTACCAGCAACACAGCCACCTGCCCCCCCAGTCTGAGGAGATGATGCCGCACTCCGGGTCGG
TTTACTACAAGCCCTCCTCGCCCCCGACGCCCACCACCCCGGGCTTCCAGGTGCAGCACAGCCCCATGTGGGACG
ACCCGGGATCTCTCCACAACTTCCACCAGAACTACGTGGCCACTACGCACATGATCGAGCAGAGGAAAACGCCAG
TCTCCCGCCTCTCCCTCTTCTCCTTTAAGCAATCGCCCCCTGGCACCCCGGTGTCTAGTTGCCAGATGCGCTTCG
ACGGGCCCCTGCACGTCCCCATGAACCCGGAGCCCGCCGGCAGCCACCACGTGGTGGACGGGCAGACCTTCGCTG
TGCCCAACCCCATTCGCAAGCCCGCGTCCATGGGCTTCCCGGGCCTGCAGATCGGCCACGCGTCTCAGCTGCTCG
ACACGCAGGTGCCCTCACCGCCGTCGCGGGGCTCCCCCTCCAACGAGGGGCTGTGCGCTGTGTGTGGGGACAACG
CGGCCTGCCAACACTACGGCGTGCGCACCTGTGAGGGCTGCAAAGGCTTCTTTAAGCGCACAGTGCAAAAAAATG
CAAAATACGTGTGTTTAGCAAATAAAAACTGCCCAGTGGACAAGCGTCGCCGGAATCGCTGTCAGTACTGCCGAT
TTCAGAAGTGCCTGGCTGTTGGGATGGTCAAAGAAGTGGTTCGCACAGACAGTTTAAAAGGCCGGAGAGGTCGTT
TGCCCTCGAAACCGAAGAGCCCACAGGAGCCCTCTCCCCCTTCGCCCCCGGTGAGTCTGATCAGTGCCCTCGTCA
GGGCCCATGTCGACTCCAACCCGGCTATGACCAGCCTGGACTATTCCAGGTTCCAGGCGAACCCTGACTATCAAA
TGAGTGGAGATGACACCCAGCATATCCAGCAATTCTATGATCTCCTGACTGGCTCCATGGAGATCATCCGGGGCT
GGGCAGAGAAGATCCCTGGCTTCGCAGACCTGCCCAAAGCCGACCAAGACCTGCTTTTTGAATCAGCTTTCTTAG
AACTGTTTGTCCTTCGATTAGCATACAGGTCCAACCCAGTGGAGGGTAAACTCATCTTTTGCAATGGGGTGGTCT
TGCACAGGTTGCAATGCGTTCGTGGCTTTGGGGAATGGATTGATTCCATTGTTGAATTCTCCTCCAACTTGCAGA
ATATGAACATCGACATTTCTGCCTTCTCCTGCATTGCTGCCCTGGCTATGGTCACAGAGAGACACGGGCTCAAGG
AACCCAAGAGAGTGGAAGAACTGCAAAACAAGATTGTAAATTGTCTCAAAGACCACGTGACTTTCAACAATGGGG
GGTTGAACCGCCCCAATTATTTGTCCAAACTGTTGGGGAAGCTCCCAGAACTTCGTACCCTTTGCACACAGGGGC
TACAGCGCATTTTCTACCTGAAATTGGAAGACTTGGTGCCACCGCCAGCAATAATTGACAAACTTTTCCTGGACA
CTTTACCTTTC**TAA**GACCTCCTCCCAAGCACTTCAAAGGAACTGGAATGATAATGGAAACTGTCAAGAGGGGGCA
AGTCACATGGGCAGAGATAGCCGTGTGAGCAGTCTCAGCTCAAGCTGCCCCCCATTTCTGTAACCCTCCTAGCCC
CCTTGATCCCTAAAGAAAACAAACAAACAAACAAAAACTGTTGCTATTTCCTAACCTGCAGGCAGAACCTGAAAG
GGCATTTTGGCTCCGGGGCATCCTGGATTTAGAACATGGACTACACACAATACAGTGGTATAAACTTTTTATTCT
CAGTTTAAAAATCAGTTTGTTGTTCAGAAGAAAGATTGCTATAAGGTATAATGGGAAATGTTTGGCCATGCTTGG
TTGTTGCAGTTCAGACAAATGTAACACACACACACATACACACACACACACACAGAGACACATCTTAAGGGGA
CCCACAAGTATTGCCCTTTAACAAGACTTCAAAGTTTTCTGCTGTAAAGAAAGCTGTAATATATAGTAAAACTAA
ATGTTGCGTGGGTGGCATGAGTTGAAGAAGGCAAAGGCTTGTAAATTTACCCAATGCAGTTTGGCTTTTTAAATT
ATTTTGTGCCTATTTATGAATAAATATTACAAATTCTAAAAGATAAGTGTGTTTGCAAAAAAAAAGAAAATAAAT
ACATAAAAAAGGGACAAGCATGTTGATTCTAGGTTGAAAATGTTATAGGCACTTGCTACTTCAGTAATGTCTATA
TTATATAAATAGTATTTCAGACACTATGTAGTCTGTTAGATTTTATAAAGATTGGTAGTTATCTGAGCTTAAACA
TTTTCTCAATTGTAAAATAGGTGGGCACAAGTATTACACATCAGAAAATCCTGACAAAAGGGACACATAGTGTTT
GTAACACCGTCCAACATTCCTTGTTTGTAAGTGTTGTATGTACCGTTGATGTTGATAAAAAGAAAGTTTATATCT
TGATTATTTTGTTGTCTAAAGCTAAACAAAACTTGCATGCAGCAGCTTTTGACTGTTTCCAGAGTGCTTATAATA
TACATAACTCCCTGGAAATAACTGAGCACTTTGAATTTTTTTTATGTCTAAAATTGTCAGTTAATTTATTATTTT
GTTTGAGTAAGAATTTTAATATTGCCATATTCTGTAGTATTTTTCTTTGTATATTTCTAGTATGGCACATGATAT
GAGTCACTGCCTTTTTTTCTATGGTGTATGACAGTTAGAGATGCTGATTTTTTTTCTGATAAATTCTTTCTTTGA
GAAAGACAATTTTAATGTTTACAACAATAAACCATGTAAATGAAAAAAAAAA

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FIGURE 918

MPCVQAQYGSSPQGASPASQSYSYHSSGEYSSDFLTPEFVKFSMDLTNTEITATTSLPSFSTFMDNYSTGYDVKP
PCLYQMPLSGQQSSIKVEDIQMHNYQQHSHLPPQSEEMMPHSGSVYYKPSSPPTPTTPGFQVQHSPMWDDPGSLH
NFHQNYVATTHMIEQRKTPVSRLSLFSFKQSPPGTPVSSCQMRFDGPLHVPMNPEPAGSHHVVDGQTFAVPNPIR
KPASMGFPGLQIGHASQLLDTQVPSPPSRGSPSNEGLCAVCGDNAACQHYGVRTCEGCKGFFKRTVQKNAKYVCL
ANKNCPVDKRRRNRCQYCRFQKCLAVGMVKEVVRTDSLKGRRGRLPSKPKSPQEPSPPSPPVSLISALVRAHVDS
NPAMTSLDYSRFQANPDYQMSGDDTQHIQQFYDLLTGSMEIIRGWAEKIPGFADLPKADQDLLFESAFLELFVLR
LAYRSNPVEGKLIFCNGVVLHRLQCVRGFGEWIDSIVEFSSNLQNMNIDISAFSCIAALAMVTERHGLKEPKRVE
ELQNKIVNCLKDHVTFNNGGLNRPNYLSKLLGKLPELRTLCTQGLQRIFYLKLEDLVPPPAIIDKLFLDTLPF

FIGURE 919A

CGCCGCGGGAGGCGGACGAGATGCGAGCGCGGCCGCGGCCCCGGCCGCTCTGGGCGACTGTGCTGGCGCTGGGGG
CGCTGGCGGGCGTTGGCGTAGGAGGGCCCAACATCTGTACCACGCGAGGTGTGAGCTCCTGCCAGCAGTGCCTGG
CTGTGAGCCCCATGTGTGCCTGGTGCTCTGATGAGGCCCTGCCTCTGGGCTCACCTCGCTGTGACCTGAAGGAGA
ATCTGCTGAAGGATAACTGTGCCCCAGAATCCATCGAGTTCCCAGTGAGTGAGGCCCGAGTACTAGAGGACAGGC
CCCTCAGCGACAAGGGCTCTGGAGACAGCTCCCAGGTCACTCAAGTCAGTCCCCAGAGGATTGCACTCCGGCTCC
GGCCAGATGATTCGAAGAATTTCTCCATCCAAGTGCGGCAGGTGGAGGATTACCCTGTGGACATCTACTACTTGA
TGGACCTGTCTTACTCCATGAAGGATGATCTGTGGAGCATCCAGAACCTGGGTACCAAGCTGGCCACCCAGATGC
GAAAGCTCACCAGTAACCTGCGGATTGGCTTCGGGGCATTTGTGGACAAGCCTGTGTCACCATACATGTATATCT
CCCCACCAGAGGCCCTCGAAAACCCCTGCTATGATATGAAGACCACCTGCTTGCCCATGTTTGGCTACAAACACG
TGCTGACGCTAACTGACCAGGTGACCCGCTTCAATGAGGAAGTGAAGAAGCAGAGTGTGTCACGGAACCGAGATG
CCCCAGAGGGTGGCTTTGATGCCATCATGCAGGCTACAGTCTGTGATGAAAAGATTGGCTGGAGGAATGATGCAT
CCCACTTGCTGGTGTTTACCACTGATGCCAAGACTCATATAGCATTGGACGGAAGGCTGGCAGGCATTGTCCAGC
CTAATGACGGGCAGTGTCATGTTGGTAGTGACAATCATTACTCTGCCTCCACTACCATGGATTATCCCTCTTTGG
GGCTGATGACTGAGAAGCTATCCCAGAAAAACATCAATTTGATCTTTGCAGTGACTGAAAATGTAGTCAATCTCT
ATCAGAACTATAGTGAGCTCATCCCAGGGACCACAGTTGGGGTTCTGTCCATGGATTCCAGCAATGTCCTCCAGC
TCATTGTTGATGCTTATGGGAAAATCCGTTCTAAAGTAGAGCTGGAAGTGCGTGACCTCCCTGAAGAGTTGTCTC
TATCCTTCAATGCCACCTGCCTCAACAATGAGGTCATCCCTGGCCTCAAGTCTTGTATGGGACTCAAGATTGGAG
ACACGGTGAGCTTCAGCATTGAGGCCAAGGTGCGAGGCTGTCCCCAGGAGAAGGAGAAGTCCTTTACCATAAAGC
CCGTGGGCTTCAAGGACAGCCTGATCGTCCAGGTCACCTTTGATTGTGACTGTGCCTGCCAGGCCCAAGCTGAAC
CTAATAGCCATCGCTGCAACAATGGCAATGGGACCTTTGAGTGTGGGGTATGCCGTTGTGGGCCTGGCTGGCTGG
GATCCCAGTGTGAGTGCTCAGAGGAGGACTATCGCCCTTCCCAGCAGGACGAGTGCAGCCCCCGAGAGGGTCAGC
CCGTCTGCAGCCAGCGGGGCGAGTGCCTCTGTGGTCAATGTGTCTGCCACAGCAGTGACTTTGGCAAGATCACGG
GCAAGTACTGCGAGTGTGACGACTTCTCCTGTGTCCGCTACAAGGGGGAGATGTGCTCAGGCCATGGCCAGTGCA
GCTGTGGGGACTGCCTGTGTGACTCCGACTGGACCGGCTACTACTGCAACTGTACCACGCGTACTGACACCTGCA
TGTCCAGCAATGGGCTGCTGTGCAGCGGCCGCGGCAAGTGTGAATGTGGCAGCTGTGTCTGTATCCAGCCGGGCT
CCTATGGGGACACCTGTGAGAAGTGCCCCACCTGCCCAGATGCCTGCACCTTTAAGAAAGAATGTGTGGAGTGTA
AGAAGTTTGACCGGGGAGCCCTACATGACGAAAATACCTGCAACCGTTACTGCCGTGACGAGATTGAGTCAGTGA
AAGAGCTTAAGGACACTGGCAAGGATGCAGTGAATTGTACCTATAAGAATGAGGATGACTGTGTCGTCAGATTCC
AGTACTATGAAGATTCTAGTGGAAAGTCCATCCTGTATGTGGTAGAAGAGCCAGAGTGTCCCAAGGGCCCTGACA
TCCTGGTGGTCCTGCTCTCAGTGATGGGGGCCATTCTGCTCATTGGCCTTGCCGCCCTGCTCATCTGGAAACTCC
TCATCACCATCCACGACCGAAAAGAATTCGCTAAATTTGAGGAAGAACGCGCCAGAGCAAAATGGGACACAGCCA
ACAACCCACTGTATAAAGAGGCCACGTCTACCTTCACCAATATCACGTACCGGGGCACT**TAA**TGATAAGCAGTCA
TCCTCAGATCATTATCAGCCTGTGCCACGATTGCAGGAGTCCCTGCCATCATGTTTACAGAGGACAGTATTTGTG
GGGAGGGATTTGGGGCTCAGAGTGGGGTAGGTTGGGAGAATGTCAGTATGTGGAAGTGTGGGTCTGTGTGTGTGT
ATGTGGGGGTCTGTGTGTTTATGTGTGTGTGTTGTGTGTGGGAGTGTGTAATTTAAAATTGTGATGTGTCCTGAT
AAGCTGAGCTCCTTAGCCTTTGTCCCAGAATGCCTCCTGCAGGGATTCTTCCTGCTTAGCTTGAGGGTGACTATG
GAGCTGAGCAGGTGTTCTTCATTACCTCAGTGAGAAGCCAGCTTTCCTCATCAGGCCATTGTCCCTGAAGAGAAG
GGCAGGGCTGAGGCCTCTCATTCCAGAGGAAGGGACACCAAGCCTTGGCTCTACCCTGAGTTCATAAATTTATGG
TTCTCAGGCCTGACTCTCAGCAGCTATGGTAGGAACTGCTGGGCTTGGCAGCCCGGGTCATCTGTACCTCTGCCT
CCTTTCCCCTCCCTCAGGCCGAAGGAGGAGTCAGGGAGAGCTGAACTATTAGAGCTGCCTGTGCCTTTTGCCATC
CCCTCAACCCAGCTATGGTTCTCTCGCAAGGGAAGTCCTTGCAAGCTAATTCTTTGACCTGTTGGGAGTGAGGAT
GTCTGGGCCACTCAGGGGTCATTCATGGCCTGGGGGATGTACCAGCATCTCCCAGTTCATAATCACAACCCTTCA
GATTTGCCTTATTGGCAGCTCTACTCTGGAGGTTTGTTTAGAAGAAGTGTGTCACCCTTAGGCCAGCACCATCTC
TTTACCTCCTAATTCCACACCCTCACTGCTGTAGACATTTGCTATGAGCTGGGGATGTCTCTCATGACCAAATGC
TTTTCCTCAAAGGGAGAGAGTGCTATTGTAGAGCCAGAGGTCTGGCCCTATGCTTCCGGCCTCCTGTCCCTCATC
CATAGCACCTCCACATACCTGGCCCTGAGCCTTGGTGTGCTGTATCCATCCATGGGGCTGATTGTATTTACCTTC
TACCTCTTGGCTGCCTTGTGAAGGAATTATTCCCATGAGTTGGCTGGGAATAAGTGCCAGGATGGAATGATGGGT
CAGTTGTATCAGCACGTGTGGCCTGTTCTTCTATGGGTTGGACAACCTCATTTTAACTCAGTCTTTAATCTGAGA

FIGURE 919B

GGCCACAGTGCAATTTTATTTTATTTTTCTCATGATGAGGTTTTCTTAACTTAAAAGAACATGTATATAAACATG
CTTGCATTATATTTGTAAATTTATGTGATGGCAAAGAAGGAGAGCATAGGAAACCACACAGACTTGGGCAGGGTA
CAGACACTCCCACTTGGCATCATTCACAGCAAGTCACTGGCCAGTGGCTGGATCTGTGAGGGGCTCTCTCATGAT
AGAAGGCTATGGGGATAGATGTGTGGACACATTGGACCTTTCCTGAGGAAGAGGGACTGTTCTTTTGTCCCAGAA
AAGCAGTGGCTCCATTGGTGTTGACATACATCCAACATTAAAAGCCACCCCCAAATGCCCAAGAAAAAAAGAAAG
ACTTATCAACATTTGTTCCATGAGCAGAAAACTGGAGCTCTGGCCTCAGTGTTACAGCTAAATAATCTTTAATTA
AGGCAAGTCACTTTCTTCTTCTTAAAGCTGTTTTCTAGTTTGAGAAATGATGGGATTTTAGCAGCCAGTCTTGAA
GGTCTCTTTCAGTATCAACATTCTAAGATGCTGGGACTTACTGTGTCATCAAATGTGCGGTTAAGATTCTCTGGG
ATATTGATACTGTTTGTGTTTTTAGTTGGGAGATCTGAGAGACCTGGCTTTGGCAAGAGCAGATGTCATTCCATA
TCACCTTTCTCAATGAAAGTCTCATTCTATCCTCTCTCCAAACCCGTTTTCCAACATTTGTTAATAGTTACGTCT
CTCCTGATGTAGCACTTAAGCTTCATTTAGTTATTATTTCTTTCTTCACTTTGCACACATTTGCATCCACATATT
AGGGAAGAGGAATCCATAAGTAGCTGAAATATCTATTCTGTATTATTGTGTTAACATTGAGAATAAGCCTTGGAA
TTAGATATGGGGCAATGACTGAGCCCTGTCTCACCCATGGATTACTCCTTACTGTAGGGAATGGCAGTATGGTAG
AGGGATAAATAGGGGGCGGGGAGGGATAGTCATGGATCCAAGAAGTCCTTAGAAATAGTGGCAGGGAACAGGTGT
GGAAGCTCATGCCTGTAATTATAACCTTCAGCTACTAAGACAGGTGTGGTGGCTCACGCCTGTGATTATAATCTT
CAGTTACTAAGACAGAGTCCATGAGAGTGTTAATGGGACATTTTCTTTAGATAAGATGTTTTATATGAAGAAACT
GTATCAAAGGGGGAAGAAAATGTATTTAACAGGTGAATCAAATCAGGAATCTTGTCTGAGCTACTGGAATGAAGT
TCACAGGTCTTGAAGACCAATATTATTTGTCAATATGTGGGGATAACCTGTAGCTGCATTCATGAGGTAGCAAAT
AGCAGTTTTGGCCTGTGGGGTGAACAGCTAAACAGTGTTCTGGCATCAGATAACACGGCACAAAGGGATTGTGTC
TAGCTCTTTTGGAGAAAATTTATGTCCAGTCTCAGGATCTGTGGACAATAACGGAAAACTTTGAATATTCCTGAC
AAGTTGCCATATTAGGAGTCAGTTCTTTACTTCTCTGAGATTCCCAGGTCATCCATGATTTTTTTTTTAATTTGA
GACAAAG

FIGURE 920

PREADEMRARPRPRPLWATVLALGALAGVGVGGPNICTTRGVSSCQQCLAVSPMCAWCSDEALPLGSPRCDLKEN
LLKDNCAPESIEFPVSEARVLEDRPLSDKGSGDSSQVTQVSPQRIALRLRPDDSKNFSIQVRQVEDYPVDIYYLM
DLSYSMKDDLWSIQNLGTKLATQMRKLTSNLRIGFGAFVDKPVSPYMYISPPEALENPCYDMKTTCLPMFGYKHV
LTLTDQVTRFNEEVKKQSVSRNRDAPEGGFDAIMQATVCDEKIGWRNDASHLLVFTTDAKTHIALDGRLAGIVQP
NDGQCHVGSDNHYSASTTMDYPSLGLMTEKLSQKNINLIFAVTENVVNLYQNYSELIPGTTVGVLSMDSSNVLQL
IVDAYGKIRSKVELEVRDLPEELSLSFNATCLNNEVIPGLKSCMGLKIGDTVSFSIEAKVRGCPQEKEKSFTIKP
VGFKDSLIVQVTFDCDCACQAQAEPNSHRCNNGNGTFECGVCRCGPGWLGSQCECSEEDYRPSQQDECSPREGQP
VCSQRGECLCGQCVCHSSDFGKITGKYCECDDFSCVRYKGEMCSGHGQCSCGDCLCDSDWTGYYCNCTTRTDTCM
SSNGLLCSGRGKCECGSCVCIQPGSYGDTCEKCPTCPDACTFKKECVECKKFDRGALHDENTCNRYCRDEIESVK
ELKDTGKDAVNCTYKNEDDCVVRFQYYEDSSGKSILYVVEEPECPKGPDILVVLLSVMGAILLIGLAALLIWKLL
ITIHDRKEFAKFEEERARAKWDTANNPLYKEATSTFTNITYRGT

FIGURE 921A

GCGGGAGGCGGACGAG**ATG**CGAGCGCGGCCGCGGCCCCGGCCGCTCTGGGCGACTGTGCTGGCGCTGGGGGCGCT
GGCGGGCGTTGGCGTAGGAGGGCCCAACATCTGTACCACGCGAGGTGTGAGCTCCTGCCAGCAGTGCCTGGCTGT
GAGCCCCATGTGTGCCTGGTGCTCTGATGAGGCCCTGCCTCTGGGCTCACCTCGCTGTGACCTGAAGGAGAATCT
GCTGAAGGATAACTGTGCCCCAGAATCCATCGAGTTCCCAGTGAGTGAGGCCCGAGTACTAGAGGACAGGCCCCT
CAGCGACAAGGGCTCTGGAGACAGCTCCCAGGTCACTCAAGTCAGTCCCCAGAGGATTGCACTCCGGCTCCGGCC
AGATGATTCGAAGAATTTCTCCATCCAAGTGCGGCAGGTGGAGGATTACCCTGTGGACATCTACTACTTGATGGA
CCTGTCTTACTCCATGAAGGATGATCTGTGGAGCATCCAGAACCTGGGTACCAAGCTGGCCACCCAGATGCGAAA
GCTCACCAGTAACCTGCGGATTGGCTTCGGGGCATTTGTGGACAAGCCTGTGTCACCATACATGTATATCTCCCC
ACCAGAGGCCCTCGAAAACCCCTGCTATGATATGAAGACCACCTGCTTGCCCATGTTTGGCTACAAACACGTGCT
GACGCTAACTGACCAGGTGACCCGCTTCAATGAGGAAGTGAAGAAGCAGAGTGTGTCACGGAACCGAGATGCCCC
AGAGGGTGGCTTTGATGCCATCATGCAGGCTACAGTCTGTGATGAAAAGATTGGCTGGAGGAATGATGCATCCCA
CTTGCTGGTGTTTACCACTGATGCCAAGACTCATATAGCATTGGACGGAAGGCTGGCAGGCATTGTCCAGCCTAA
TGACGGGCAGTGTCATGTTGGTAGTGACAATCATTACTCTGCCTCCACTACCATGGATTATCCCTCTTTGGGGCT
GATGACTGAGAAGCTATCCCAGAAAAACATCAATTTGATCTTTGCAGTGACTGAAAATGTAGTCAATCTCTATCA
GAACTATAGTGAGCTCATCCCAGGGACCACAGTTGGGGTTCTGTCCATGGATTCCAGCAATGTCCTCCAGCTCAT
TGTTGATGCTTATGGGAAAATCCGTTCTAAAGTAGAGCTGGAAGTGCGTGACCTCCCTGAAGAGTTGTCTCTATC
CTTCAATGCCACCTGCCTCAACAATGAGGTCATCCCTGGCCTCAAGTCTTGTATGGGACTCAAGATTGGAGACAC
GGTGAGCTTCAGCATTGAGGCCAAGGTGCGAGGCTGTCCCCAGGAGAAGGAGAAGTCCTTTACCATAAAGCCCGT
GGGCTTCAAGGACAGCCTGATCGTCCAGGTCACCTTTGATTGTGACTGTGCCTGCCAGGCCCAAGCTGAACCTAA
TAGCCATCGCTGCAACAATGGCAATGGGACCTTTGAGTGTGGGGTATGCCGTTGTGGGCCTGGCTGGCTGGGATC
CCAGTGTGAGTGCTCAGAGGAGGACTATCGCCCTTCCCAGCAGGACGAATGCAGCCCCCGGGAGGGTCAGCCCGT
CTGCAGCCAGCGGGGCGAGTGCCTCTGTGGTCAATGTGTCTGCCACAGCAGTGACTTTGGCAAGATCACGGGCAA
GTACTGCGAGTGTGACGACTTCTCCTGTGTCCGCTACAAGGGGGAGATGTGCTCAGGCCATGGCCAGTGCAGCTG
TGGGGACTGCCTGTGTGACTCCGACTGGACCGGCTACTACTGCAACTGTACCACGCGTACTGACACCTGCATGTC
CAGCAATGGGCTGCTGTGCAGCGGCCGCGGCAAGTGTGAATGTGGCAGCTGTGTCTGTATCCAGCCGGGCTCCTA
TGGGGACACCTGTGAGAAGTGCCCCACCTGCCCAGATGCCTGCACCTTTAAGAAAGAATGTGTGGAGTGTAAGAA
GTTTGACCGGGAGCCCTACATGACCGAAAATACCTGCAACCGTTACTGCCGTGACGAGATTGAGTCAGTGAAAGA
GCTTAAGGACACTGGCAAGGATGCAGTGAATTGTACCTATAAGAATGAGGATGACTGTGTCGTCAGATTCCAGTA
CTATGAAGATTCTAGTGGAAAGTCCATCCTGTATGTGGTAGAAGAGCCAGAGTGTCCCAAGGGCCCTGACATCCT
GGTGGTCCTGCTCTCAGTGATGGGGGCCATTCTGCTCATTGGCCTTGCCGCCCTGCTCATCTGGAAACTCCTCAT
CACCATCCACGACCGAAAAGAATTCGCTAAATTTGAGGAAGAACGCGCCAGAGCAAAATGGGACACAGCCAACAA
CCCACTGTATAAAGAGGCCACGTCTACCTTCACCAATATCACGTACCGGGGCACT**TAA**TGATAAGCAGTCATCCT
CAGATCATTATCAGCCTGTGCCACGATTGCAGGAGTCCCTGCCATCATGTTTACAGAGGACAGTATTTGTGGGGA
GGGATTTGGGGCTCAGAGTGGGGTAGGTTGGGAGAATGTCAGTATGTGGAAGTGTGGGTCTGTGTGTGTGTATGT
GGGGGTCTGTGTGTTTATGTGTGTGTGTTGTGTGTGGGAGTGTGTAATTTAAAATTGTGATGTGTCCTGATAAGC
TGAGCTCCTTAGCCTTTGTCCCAGAATGCCTCCTGCAGGGATTCTTCCTGCTTAGCTTGAGGGTGACTATGGAGC
TGAGCAGGTGTTCTTCATTACCTCAGTGAGAAGCCAGCTTTCCTCATCAGGCCATTGTCCCTGAAGAGAAGGGCA
GGGCTGAGGCCTCTCATTCCAGAGGAAGGGACACCAAGCCTTGGCTCTACCCTGAGTTCATAAATTTATGGTTCT
CAGGCCTGACTCTCAGCAGCTATGGTAGGAACTGCTGGGCTTGGCAGCCCGGGTCATCTGTACCTCTGCCTCCTT
TCCCCTCCCTCAGGCCGAAGGAGGAGTCAGGGAGAGCTGAACTATTAGAGCTGCCTGTGCCTTTTGCCATCCCCT
CAACCCAGCTATGGTTCTCTCGCAAGGGAAGTCCTTGCAAGCTAATTCTTTGACCTGTTGGGAGTGAGGATGTCT
GGGCCACTCAGGGGTCATTCATGGCCTGGGGGATGTACCAGCATCTCCCAGTTCATAATCACAACCCTTCAGATT
TGCCTTATTGGCAGCTCTACTCTGGAGGTTTGTTTAGAAGAAGTGTGTCACCCTTAGGCCAGCACCATCTCTTTA
CCTCCTAATTCCACACCCTCACTGCTGTAGACATTTGCTATGAGCTGGGGATGTCTCTCATGACCAAATGCTTTT
CCTCAAAGGGAGAGAGTGCTATTGTAGAGCCAGAGGTCTGGCCCTATGCTTCCGGCCTCCTGTCCCTCATCCATA
GCACCTCCACATACCTGGCCCTGAGCCTTGGTGTGCTGTATCCATCCATGGGGCTGATTGTATTTACCTTCTACC
TCTTGGCTGCCTTGTGAAGGAATTATTCCCATGAGTTGGCTGGGAATAAGTGCCAGGATGGAATGATGGGTCAGT
TGTATCAGCACGTGTGGCCTGTTCTTCTATGGGTTGGACAACCTCATTTTAACTCAGTCTTTAATCTGAGAGGCC

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FIGURE 921B

ACAGTGCAATTTTATTTTATTTTTCTCATGATGAGGTTTTCTTAACTTAAAAGAACATGTATATAAACATGCTTG
CATTATATTTGTAAATTTATGTGTATGGCAAAGAAGGAGAGCATAGGAAACCACACAGACTTGGGCAGGGTACAG
ACACTCCCACTTGGCATCATTCACAGCAAGTCACTGGCCAGTGGCTGGATCTGTGAGGGGCTCTCTCATGATAGA
AGGCTATGGGGATAGATGTGTGGACACATTGGACCTTTCCTGAGGAAGAGGGACTGTTCTTTTGTCCCAGAAAAG
CAGTGGCTCCATTGGTGTTGACATACATCCAACATTAAAAGCCACCCCCAAATGCCCAAGAAAAAAAGAAAGACT
TATCAACATTTGTTCCATGAGG

FIGURE 922

MRARPRPRPLWATVLALGALAGVGVGGPNICTTRGVSSCQQCLAVSPMCAWCSDEALPLGSPRCDLKENLLKDNC
APESIEFPVSEARVLEDRPLSDKGSGDSSQVTQVSPQRIALRLRPDDSKNFSIQVRQVEDYPVDIYYLMDLSYSM
KDDLWSIQNLGTKLATQMRKLTSNLRIGFGAFVDKPVSPYMYISPPEALENPCYDMKTTCLPMFGYKHVLTLTDQ
VTRFNEEVKKQSVSRNRDAPEGGFDAIMQATVCDEKIGWRNDASHLLVFTTDAKTHIALDGRLAGIVQPNDGQCH
VGSDNHYSASTTMDYPSLGLMTEKLSQKNINLIFAVTENVVNLYQNYSELIPGTTVGVLSMDSSNVLQLIVDAYG
KIRSKVELEVRDLPEELSLSFNATCLNNEVIPGLKSCMGLKIGDTVSFSIEAKVRGCPQEKEKSFTIKPVGFKDS
LIVQVTFDCDCACQAQAEPNSHRCNNGNGTFECGVCRCGPGWLGSQCECSEEDYRPSQQDECSPREGQPVCSQRG
ECLCGQCVCHSSDFGKITGKYCECDDFSCVRYKGEMCSGHGQCSCGDCLCDSDWTGYYCNCTTRTDTCMSSNGLL
CSGRGKCECGSCVCIQPGSYGDTCEKCPTCPDACTFKKECVECKKFDREPYMTENTCNRYCRDEIESVKELKDTG
KDAVNCTYKNEDDCVVRFQYYEDSSGKSILYVVEEPECPKGPDILVVLLSVMGAILLIGLAALLIWKLLITIHDR
KEFAKFEEERARAKWDTANNPLYKEATSTFTNITYRGT

FIGURE 923

AGGGAATAAAGGCTCAGGGACCGGCAGTTCTACTCTAGAGCCCACCAGCCTCTCAGAGCCTCCGGTGACTGGCCT
GTGTCTCCCCCTGG**ATG**GACATGTGGACGGCGCTGCTCATCCTGCAAGCCTTGTTGCTACCCTCCCTGGCTGATG
GTGCCACCCCTGCCCTGCGCTTTGTAGCCGTGGGTGACTGGGGAGGGGTCCCCAATGCCCCATTCCACACGGCCC
GGGAAATGGCCAATGCCAAGGAGATCGCTCGGACTGTGCAGATCCTGGGTGCAGACTTCATCCTGTCTCTAGGGG
ACAATTTTTACTTCACTGGTGTGCAAGACATCAATGACAAGAGGTTCCAGGAGACCTTTGAGGACGTATTCTCTG
ACCGCTCCCTTCGCAAAGTGCCCTGGTACGTGCTAGCCGGAAACCATGACCACCTTGGCAATGTCTCTGCCCAGA
TTGCATACTCTAAGATCTCCAAGCGCTGGAACTTCCCCAGCCCTTTCTACCGCCTGCACTTCAAGATCCCACAGA
CCAATGTGTCTGTGGCCATTTTTATGCTGGACACAGTGACACTATGTGGCAACTCAGATGACTTCCTCAGCCAGC
AGCCTGAGAGGCCCCGAGACGTGAAGCTGGCCCGCACACAGCTGTCCTGGCTCAAGAAACAGCTGGCGGCGGCCA
GGGAGGACTACGTGCTGGTGGCTGGCCACTACCCCGTGTGGTCCATAGCCGAGCACGGGCCTACCCACTGCCTGG
TCAAGCAGCTACGGCCACTGCTGGCCACATACGGGGTCACTGCCTACCTGTGCGGCCACGATCACAATCTGCAGT
ACCTGCAAGATGAGAATGGCGTGGGCTACGTGCTGAGTGGGGCTGGGAATTTCATGGACCCCTCAAAGCGGCACC
AGCGCAAGGTCCCCAACGGCTATCTGCGCTTCCACTATGGGACTGAAGACTCACTGGGTGGCTTTGCCTATGTGG
AGATCAGCTCCAAAGAGATGACTGTCACTTACATCGAGGCCTCGGGCAAGTCCCTCTTTAAGACCAGGCTGCCGA
GGCGAGCCAGGCCC**TGA**ACTCCCATGACTGCCCAGCTCTGAGGCCCGATCTCCACTGTTGGGTGGGTGGCCTGCC
GGGACCCTGCTCACAGGCAGGCTTTTCCTCCAACCTGTGGCGCTGCAGCAGGGCAGGAAGGGGAAACACAGCTGA
TGAACTGTGGTGCCACATGACCCTTGTGGCACAGATGCCCACGTATGTGAAACACACATGGACATGTGTCCCAGC
CACAGTGTTATGCTCTGTGGCTGGCTCACCTTTGCTGAGTTCCGGGGTGCAATGGGGGAGGGAGGGAGGGAAAGC
TTCCTCCTAAATCAAGCATCTTTCTGTTACTGATGTTCAATAAAAGAATAGTTGCCAAGGCTG

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FIGURE 924

MDMWTALLILQALLLPSLADGATPALRFVAVGDWGGVPNAPFHTAREMANAKEIARTVQILGADFILSLGDNFYF
TGVQDINDKRFQETFEDVFSDRSLRKVPWYVLAGNHDHLGNVSAQIAYSKISKRWNFPSPFYRLHFKIPQTNVSV
AIFMLDTVTLCGNSDDFLSQQPERPRDVKLARTQLSWLKKQLAAAREDYVLVAGHYPVWSIAEHGPTHCLVKQLR
PLLATYGVTAYLCGHDHNLQYLQDENGVGYVLSGAGNFMDPSKRHQRKVPNGYLRFHYGTEDSLGGFAYVEISSK
EMTVTYIEASGKSLFKTRLPRRARP

FIGURE 925

CGGGCCGCCGGGACGGGCACGGGCGCGCGGGCTCCGGCGGGCGCCGGCTGCCTTCCTCCGTCGCTCGCTGTCTCT
CCCGGCCGCATTCTCCTCCGCTGCGGGGCCGAGCTCTCCCCAGCGCTCGCAGGAAGGAAGAAGGGAGCCGAGGAC
GCCGAGAAGTTCCCGCGGCAGCCGCGGATCCCGGCCAAGGCGGAGGCTGCGGCTCCGACGGGGCAGGAGCGCGAT
CCACGGCGAGGGGCGTACGGCCAAAGGGTCCGCGGCGTGGAGCGCTCGGACCTTCCGCTCTCCCCCGGGCGTGGG
CCGGGACCCC**ATG**AGACGCGCCCACGAGGGGCGCGAGATTCCTAGCTTGGGCGGCGCTAGGCGGAGGGAGGTGTT
GCAGGCCGGCCGGAGCCAGAGAGCTGCCGGCAGGAGGCGGCGGCGGCAAGAACTTGAACTTGGCGTCGGGAGCGG
GCGCCCCGGAGGCCCCCCGCCGGGGCCGGGGCGCCGAGGGACCTGCGCCGCAGCGCTGCCCCCCGAATGGCCGCG
GCGGCGGACCGGGCTCCCGCGCCGCGGCCCTAGGCCGCCTCTCGCCATGGCCAAGTGGCTAAACAAGTACTTCAG
CTTGGGCAACAGCAAGACCAAGAGCCCCCCGCAGCCGCCGCGGCCAGACTACCGCGAGCAGCGGCGCCGAGGCGA
GCGGCCTTCGCAGCCCCCCCAGGCCGTGCCGCAGGCCTCCTCCGCCGCCTCGGCGTCCTGCGGTCCGGCCACCGC
CTCCTGCTTCTCAGCCTCTTCGGGCTCGCTGCCCGACGACAGCGGCAGCACCAGCGACCTCATCCGCGCCTACCG
CGCGCAGAAGGAGCGACACTTCCAGGACCCCTACAACGGGCCTGGCTCGTCGCTGCGCAAACTGCGCGCCATGTG
CCGCCTGGACTACTGCGGCGGCAGCGGGGAGCCAGGCGGGGTCCAGCGCGCCTTCTCGGCCTCGTCCGCGTCGGG
CGCCGCGGGCTGTTGCTGCGCCTCCTCGGGCGCGGGCGCCGCCGCGTCCTCGTCCTCGTCCTCCGGCTCTCCGCA
TCTCTACCGCAGCAGCAGCGAGCGGCGGCCCGCCACGCCGGCCGAGGTGCGCTACATCTCCCCCAAGCACCGCCT
CATCAAAGTGGAGAGCGCCGCGGGCGGTGGGGCCGGGGACCCCCTGGGGGGCGCCTGCGCGGGCGGCCGCACCTG
GAGCCCGACGGCCTGCGGAGGCAAGAAACTGCTCAACAAGTGCGCCGCCTCAGCCGCGGAGGAGAGCGGGGCCGG
CAAGAAGGACAAGGTGACCATAGCCGATGACTACTCAGATCCCTTTGATGCCAAGAATGATCTCAAGAGCAAAGC
AGGAAAGGGGGAGAGTGCTGGCTACATGGAGCCCTATGAGGCACAGAGGATCATGACAGAATTTCAGAGGCAGGA
AAGTGTCCGGTCCCAGCATAAAGGTATCCAGTTATATGACACCCCTTACGAACCTGAAGGCCAAAGTGTTGACTC
GGACTCGGAGAGCACAGTCAGCCCCCGACTGCGGGAGAGCAAGCTGCCCCAGGATGACGACAGGCCCGCCGATGA
GTACGACCAGCCTTGGGAGTGGAACCGGGTCACCAGCCCAGCCCTGGCAGCACAGTTTAATGGCAACGAGAAGCG
GCAGTCATCCCCCTCACCTTCGCGGGACCGGCGGCGCCAGCTTCGTGCCCCTGGAGGGGGCTTTAAGCCTATCAA
ACATGGGAGCCCTGAGTTCTGCGGGATCCTAGGAGAAAGGGTGGATCCTGCCGTCCCCCTGGAGAAGCAAATATG
GTATCACGGAGCCATCAGCAGAGGAGACGCCGAGAACCTGCTGCGACTCTGCAAGGAGTGTAGCTACCTTGTCCG
GAACAGCCAGACCAGCAAGCATGACTACCCCCTCTCCCTGAGGAGCAACCAGGGTTTTATGCACATGAAACTGGC
CAAAACCAAAGAGAAATACGTTCTGGGTCAGAACAGCCCTCCGTTCGACAGTGTCCCGGAAGTCATCCACTACTA
CACCACCAGAAAGCTACCCATCAAAGGGGCTGAGCACTTGTCCCTCCTCTATCCCGTGGCTGTGAGGACCCTG**TG**
AGCGGACCAGACCTGCCCTGCTCTGTGACAGAGCCTGGAGACTTGGAGGTGCCAGAGGCCCCCCACCAACCAGCC
CCCAGCCACTGTTGCTGGCTGTGTCGTTTGTGTTGTGTGTATGGTACTAGCACACCACTGCATGTCTCTAGAATG
CTGTTGCCACTTACGGGGGCTGGAGGCCTGGATAAAGACAGAAGGGCGGCAACACC

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FIGURE 926

MRRAHEGREIPSLGGARRREVLQAGRSQRAAGRRRRRQELELGVGSGRPGGPPPGPGRRGTCAAALPPEWPRRRT
GLPRRGPRPPLAMAKWLNKYFSLGNSKTKSPPQPPRPDYREQRRRGERPSQPPQAVPQASSAASASCGPATASCF
SASSGSLPDDSGSTSDLIRAYRAQKERHFQDPYNGPGSSLRKLRAMCRLDYCGGSGEPGGVQRAFSASSASGAAG
CCCASSGAGAAASSSSSSGSPHLYRSSSERRPATPAEVRYISPKHRLIKVESAAGGGAGDPLGGACAGGRTWSPT
ACGGKKLLNKCAASAAEESGAGKKDKVTIADDYSDPFDAKNDLKSKAGKGESAGYMEPYEAQRIMTEFQRQESVR
SQHKGIQLYDTPYEPEGQSVDSDSESTVSPRLRESKLPQDDDRPADEYDQPWEWNRVTSPALAAQFNGNEKRQSS
PSPSRDRRRQLRAPGGGFKPIKHGSPEFCGILGERVDPAVPLEKQIWYHGAISRGDAENLLRLCKECSYLVRNSQ
TSKHDYPLSLRSNQGFMHMKLAKTKEKYVLGQNSPPFDSVPEVIHYYTTRKLPIKGAEHLSLLYPVAVRTL

FIGURE 927

GAGTCCCGGCAGTGCGGGACTCCGGTAGCCGCCCCTCCGGTAGCCGCCCCTCCTCCCCCCGCGCCGCCGCCCTAT
ATGTTGCCCGCCGCGGCCTCTGGGGCATGGAGCACGCTGCCCAGCCCTGGCG**ATG**GCAACGGCGACGGGGGTGGC
GGAGGAGCGCCTGCTGGCCGCGCTCGCCTACCTGCAGTGCGCCGTGGGCTGCGCGGTCTTCGCGCGGAATCGTCA
GACGAACTCAGTGTACGGCCGCCACGCGCTGCCCAGCCACAGGCTCCGAGTGCCGGCGCGGGCCGCCTGGGTGGT
GCAGGAGCTGCCCTCGCTGGCCCTGCCGCTCTACCAGTACGCCAGCGAGTCCGCCCCGCGTCTCCGCAGCGCGCC
CAACTGCATCCTCCTGGCCATGTTCCTCGTCCACTACGGGCATCGGTGCTTAATTTACCCGTTTCTGATGCGAGG
AGGAAAGCCTATGCCACTGTTGGCATGTACAATGGCGATTATGTTCTGTACCTGTAACGGCTATTTGCAAAGCAG
ATACTTGAGCCATTGTGCAGTGTATGCTGATGACTGGGTAACAGATCCCCGTTTTCTAATAGGTTTTGGCTTGTG
GTTAACAGGCATGTTGATAAACATCCATTCAGATCATATCCTAAGGAATCTCAGAAAACCAGGAGATACTGGATA
CAAAATACCAAGGGGAGGCTTATTTGAATACGTAACTGCAGCCAACTATTTTGGAGAAATCATGGAGTGGTGTGG
CTATGCCCTGGCCAGCTGGTCTGTCCAAGGCGCGGCTTTTGCTTTCTTCACGTTTTGTTTTTTATCTGGTAGAGC
AAAAGAGCATCATGAGTGGTACCTCCGGAAATTTGAAGAGTATCCAAAGTTCAGAAAAATTATAATTCCATTTTT
GTTT**TAA**GTGCGTTTTTCATGAAATTATCTTCAACTTGAAGCTTTCCAATGGCGCTTCTCTATGGACTTTGTAAA
TAAGTTATATCTTTGTAATTTTCCTGCTACTTTATCATTTTCAAGATGTCCTCTAGGAATTTTTTTTCTAGTAAT
TTTGCAATCTACCTAATAAGTACCTAAATACGCTGAAATGGAGGTTGAATATCCTACTGTGTAACAGGTCAGAAT
TTCAAGCTCTGGGTAATAACTGCTGATATTTTTTCTAATTTCAAATTTACCTCTTTTGGCTATGTCTTGCCAAGT
GTGTATGAGACTAGACTTTACAACTGTCTTTGATGGCATTTTCAGAACAATAAATGTCACAATCCCTTCTATAGC
CCCCTACAGTGATCTCTTCAAGGTCAACTGCAGTGTTGCTTCCCTCCCCCTATAGGGCTGGAATCTGTCTAGGAG
CCCTCTCTCGGAGGCCATAGAGGCTGGGGGTAGCCATTGTGCAGTCATGGCCCGGGGGAAACTTGCCAACCTTCG
TGTCAGGTGCTGTGTATAAGTGGAGAACTTGGGGATAGAGGAGGAAGCTCCTCGTGGCCCTTCCAAGGTGAGGCA
AAGGCATCTGGACTTGTTCCAGCCCAGCCCACCGGGTGACATCACCGGGCAGGGAGGGGTGCTGGTGGTGGTTCA
TACGGAGTAAGCTGCTCTGCCTGTGTGAGTGGCTCCTGGGCCCTAAACAGGCACCTTTAGGCCATGGGTCACTCA
CCGTGAGCCATCAATGTGCTCTGGTCTGACATGGTTTCTCTCTGTCTTCTAGTCTAGACCTAGTTTTTTTGTTCT
GTTCCCCACGTATGGATATAGTAGAGATTGTTGTCTGTGAAATTTCTCTTTTGTAGATTTTGAGTTTTCCCTTGT
AGTGTAAAGAATGATCACTTTCTGTAACAATAACAAGACCACTTTTTAAGATTTATCCTGTTTGTTCTTTGTTGA
TTGAAACATAATAATTGTTAAAATTCTCTACAGCCTTCTTTTTCTTCCATAGCTAATCTTCCTTCTAATAGTTTT
TGCTTTCTGTTTTGCTGTTGTTGCTTTGCAAAGCTTTCCCCTCATAGCCTGTACCTGTTATCAATATAAAATAAT
CTTCCTGTTGAATGCTTCATGACTTGAATTCTACTTTGATAAAAACATTGCCATACTGCTTTTTATCTTGATGAA
TTCATCTGGCATTGCTTTGCCTTATCATCTCATCTGGAGTTTTTAAATGCCATTTGTTTCAGTTGTCTTTAACAA
CATAATAAATAGACTTTGCCATTTAAAAAAAAAAAAAAAAAAAAAA

FIGURE 928

MATATGVAEERLLAALAYLQCAVGCAVFARNRQTNSVYGRHALPSHRLRVPARAAWVVQELPSLALPLYQYASES
APRLRSAPNCILLAMFLVHYGHRCLIYPFLMRGGKPMPLLACTMAIMFCTCNGYLQSRYLSHCAVYADDWVTDPR
FLIGFGLWLTGMLINIHSDHILRNLRKPGDTGYKIPRGGLFEYVTAANYFGEIMEWCGYALASWSVQGAAFAFFT
FCFLSGRAKEHHEWYLRKFEEYPKFRKIIIPFLF

FIGURE 929A

TCATTGCAGCTGGGACAGCCCGGAGTGTGGTTAGCAGCTCGGCAAGCGCTGCCCAGGTCCTGGGGTGGTGGCAGC
CAGCGGGAGCAGGAAAGGAAGC**ATG**TTCCCAGGCTGCCCACGCCTCTGGGTCCTGGTGGTCTTGGGCACCAGCTG
GGTAGGCTGGGGGAGCCAAGGGACAGAAGCGGCACAGCTAAGGCAGTTCTACGTGGCTGCTCAGGGCATCAGTTG
GAGCTACCGACCTGAGCCCACAAACTCAAGTTTGAATCTTTCTGTAACTTCCTTTAAGAAAATTGTCTACAGAGA
GTATGAACCATATTTTAAGAAAGAAAAACCACAATCTACCATTTCAGGACTTCTTGGGCCTACTTTATATGCTGA
AGTCGGAGACATCATAAAAGTTCACTTTAAAAATAAGGCAGATAAGCCCTTGAGCATCCATCCTCAAGGAATTAG
GTACAGTAAATTATCAGAAGGTGCTTCTTACCTTGACCACACATTCCCTGCAGAGAAGATGGACGACGCTGTGGC
TCCAGGCCGAGAATACACCTATGAATGGAGTATCAGTGAGGACAGTGGACCCACCCATGATGACCCTCCATGCCT
CACACACATCTATTACTCCCATGAAAATCTGATCGAGGATTTCAACTCTGGGCTGATTGGGCCCCTGCTTATCTG
TAAAAAAGGGACCCTAACTGAGGGTGGGACACAGAAGACGTTTGACAAGCAAATCGTGCTACTATTTGCTGTGTT
TGATGAAAGCAAGAGCTGGAGCCAGTCATCATCCCTAATGTACACAGTCAATGGATATGTGAATGGGACAATGCC
AGATATAACAGTTTGTGCCCATGACCACATCAGCTGGCATCTGCTGGGAATGAGCTCGGGGCCAGAATTATTCTC
CATTCATTTCAACGGCCAGGTCCTGGAGCAGAACCATCATAAGGTCTCAGCCATCACCCTTGTCAGTGCTACATC
CACTACCGCAAATATGACTGTGGGCCCAGAGGGAAAGTGGATCATATCTTCTCTCACCCCAAAACATTTGCAAGC
TGGGATGCAGGCTTACATTGACATTAAAAACTGCCCAAAGAAAACCAGGAATCTTAAGAAAATAACTCGTGAGCA
GAGGCGGCACATGAAGAGGTGGGAATACTTCATTGCTGCAGAGGAAGTCATTTGGGACTATGCACCTGTAATACC
AGCGAATATGGACAAAAAATACAGGTCTCAGCATTTGGATAATTTCTCAAACCAAATTGGAAAACATTATAAGAA
AGTTATGTACACACAGTACGAAGATGAGTCCTTCACCAAACATACAGTGAATCCCAATATGAAAGAAGATGGGAT
TTTGGGTCCTATTATCAGAGCCCAGGTCAGAGACACACTCAAAATCGTGTTCAAAAATATGGCCAGCCGCCCCTA
TAGCATTTACCCTCATGGAGTGACCTTCTCGCCTTATGAAGATGAAGTCAACTCTTCTTTCACCTCAGGCAGGAA
CAACACCATGATCAGAGCAGTTCAACCAGGGGAAACCTATACTTATAAGTGGAACATCTTAGAGTTTGATGAACC
CACAGAAAATGATGCCCAGTGCTTAACAAGACCATACTACAGTGACGTGGACATCATGAGAGACATCGCCTCTGG
GCTAATAGGACTACTTCTAATCTGTAAGAGCAGATCCCTGGACAGGCGAGGAATACAGAGGGCAGCAGACATCGA
ACAGCAGGCTGTGTTTGCTGTGTTTGATGAGAACAAAAGCTGGTACCTTGAGGACAACATCAACAAGTTTTGTGA
AAATCCTGATGAGGTGAAACGTGATGACCCCAAGTTTTATGAATCAAACATCATGAGCACTATCAATGGCTATGT
GCCTGAGAGCATAACTACTCTTGGATTCTGCTTTGATGACACTGTCCAGTGGCACTTCTGTAGTGTGGGGACCCA
GAATGAAATTTTGACCATCCACTTCACTGGGCACTCATTCATCTATGGAAAGAGGCATGAGGACACCTTGACCCT
CTTCCCCATGCGTGGAGAATCTGTGACGGTCACAATGGATAATGTTGGAACTTGGATGTTAACTTCCATGAATTC
TAGTCCAAGAAGCAAAAAGCTGAGGCTGAAATTCAGGGATGTTAAATGTATCCCAGATGATGATGAAGACTCATA
TGAGATTTTTGAACCTCCAGAATCTACAGTCATGGCTACACGGAAAATGCATGATCGTTTAGAACCTGAAGATGA
AGAGAGTGATGCTGACTATGATTACCAGAACAGACTGGCTGCAGCATTAGGAATTAGGTCATTCCGAAACTCATC
ATTGAACCAGGAAGAAGAAGAGTTCAATCTTACTGCCCTAGCTCTGGAGAATGGCACTGAATTCGTTTCTTCGAA
CACAGATATAATTGTTGGTTCAAATTATTCTTCCCCAAGTAATATTAGTAAGTTCACTGTCAATAACCTTGCAGA
ACCTCAGAAAGCCCCTTCTCACCAACAAGCCACCACAGCTGGTTCCCCACTGAGACACCTCATTGGCAAGAACTC
AGTTCTCAATTCTTCCACAGCAGAGCATTCCAGCCCATATTCTGAAGACCCTATAGAGGATCCTCTACAGCCAGA
TGTCACAGGGATACGTCTACTTTCACTTGGTGCTGGAGAATTCAGAAGTCAAGAACATGCTAAGCGTAAGGGACC
CAAGGTAGAAAGAGATCAAGCAGCAAAGCACAGGTTCTCCTGGATGAAATTACTAGCACATAAAGTTGGGAGACA
CCTAAGCCAAGACACTGGTTCTCCTTCCGGAATGAGGCCCTGGGAGGACCTTCCTAGCCAAGACACTGGTTCTCC
TTCCAGAATGAGGCCCTGGGAGGACCCTCCTAGTGATCTGTTACTCTTAAAACAAAGTAACTCATCTAAGATTTT
GGTTGGGAGATGGCATTTGGCTTCTGAGAAAGGTAGCTATGAAATAATCCAAGATACTGATGAAGACACAGCTGT
TAACAATTGGCTGATCAGCCCCCAGAATGCCTCACGTGCTTGGGGAGAAAGCACCCCTCTTGCCAACAAGCCTGG
AAAGCAGAGTGGCCACCCAAAGTTTCCTAGAGTTAGACATAAATCTCTACAAGTAAGACAGGATGGAGGAAAGAG
TAGACTGAAGAAAAGCCAGTTTCTCATTAAGACACGAAAAAAGAAAAAAGAGAAGCACACACACCATGCTCCTTT
ATCTCCGAGGACCTTTCACCCTCTAAGAAGTGAAGCCTACAACACATTTTCAGAAAGAAGACTTAAGCATTCGTT
GGTGCTTCATAAATCCAATGAAACATCTCTTCCCACAGACCTCAATCAGACATTGCCCTCTATGGATTTTGGCTG
GATAGCCTCACTTCCTGACCATAATCAGAATTCCTCAAATGACACTGGTCAGGCAAGCTGTCCTCCAGGTCTTTA
TCAGACAGTGCCCCCAGAGGAACACTATCAAACATTCCCCATTCAAGACCCTGATCAAATGCACTCTACTTCAGA
CCCCAGTCACAGATCCTCTTCTCCAGAGCTCAGTGAAATGCTTGAGTATGACCGAAGTCACAAGTCCTTCCCCAC

FIGURE 929B

AGATATAAGTCAAATGTCCCCTTCCTCAGAACATGAAGTCTGGCAGACAGTCATCTCTCCAGACCTCAGCCAGGT
GACCCTCTCTCCAGAACTCAGCCAGACAAACCTCTCTCCAGACCTCAGCCACACGACTCTCTCTCCAGAACTCAT
TCAGAGAAACCTTTCCCCAGCCCTCGGTCAGATGCCCATTTCTCCAGACCTCAGCCATACAACCCTTTCTCCAGA
CCTCAGCCATACAACCCTTTCTTTAGACCTCAGCCAGACAAACCTCTCTCCAGAACTCAGTCAGACAAACCTTTC
TCCAGCCCTCGGTCAGATGCCCCTTTCTCCAGACCTCAGCCATACAACCATTTCTCTAGACTTCAGCCAGACAAA
CCTCTCTCCAGAACTCAGCCATATGACTCTCTCTCCAGAACTCAGTCAGACAAACCTTTCCCCAGCCCTCGGTCA
GATGCCCATTTCTCCAGACCTCAGCCATACAACCCTTTCTCTAGACTTCAGCCAGACAAACCTCTCTCCAGAACT
CAGTCAAACAAACCTTTCCCCAGCCCTCGGTCAGATGCCCCTTTCTCCAGACCCCAGCCATACAACCCTTTCTCT
AGACCTCAGCCAGACAAACCTCTCTCCAGAACTCAGTCAGACAAACCTTTCCCCAGACCTCAGTGAGATGCCCCT
CTTTGCAGATCTCAGTCAAATTCCCCTTACCCCAGACCTCGACCAGATGACACTTTCTCCAGACCTTGGTGAGAC
AGATCTTTCCCCAAACTTTGGTCAGATGTCCCTTTCCCCAGACCTCAGCCAGGTGACTCTCTCTCCAGACATCAG
TGACACCACCCTTCTCCCGGATCTCAGCCAGATATCACCTCCTCCAGACCTTGATCAGATATTCTACCCTTCTGA
ATCTAGTCAGTCATTGCTTCTTCAAGAATTTAATGAGTCTTTTCCTTATCCAGACCTTGGTCAGATGCCATCTCC
TTCATCTCCTACTCTCAATGATACTTTTCTATCAAAGGAATTTAATCCACTGGTTATAGTGGGCCTCAGTAAAGA
TGGTACAGATTACATTGAGATCATTCCAAAGGAAGAGGTCCAGAGCAGTGAAGATGACTATGCTGAAATTGATTA
TGTGCCCTATGATGACCCCTACAAAACTGATGTTAGGACAAACATCAACTCCTCCAGAGATCCTGACAACATTGC
AGCATGGTACCTCCGCAGCAACAATGGAAACAGAAGAAATTATTACATTGCTGCTGAAGAAATATCCTGGGATTA
TTCAGAATTTGTACAAAGGGAAACAGATATTGAAGACTCTGATGATATTCCAGAAGATACCACATATAAGAAAGT
AGTTTTTCGAAAGTACCTCGACAGCACTTTTACCAAACGTGATCCTCGAGGGGAGTATGAAGAGCATCTCGGAAT
TCTTGGTCCTATTATCAGAGCTGAAGTGGATGATGTTATCCAAGTTCGTTTTAAAAATTTAGCATCCAGACCGTA
TTCTCTACATGCCCATGGACTTTCCTATGAAAAATCATCAGAGGGAAAGACTTATGAAGATGACTCTCCTGAATG
GTTTAAGGAAGATAATGCTGTTCAGCCAAATAGCAGTTATACCTACGTATGGCATGCCACTGAGCGATCAGGGCC
AGAAAGTCCTGGCTCTGCCTGTCGGGCTTGGGCCTACTACTCAGCTGTGAACCCAGAAAAAGATATTCACTCAGG
CTTGATAGGTCCCCTCCTAATCTGCCAAAAAGGAATACTACATAAGGACAGCAACATGCCTGTGGACATGAGAGA
ATTTGTCTTACTATTTATGACCTTTGATGAAAAGAAGAGCTGGTACTATGAAAAGAAGTCCCGAAGTTCTTGGAG
ACTCACATCCTCAGAAATGAAAAAATCCCATGAGTTTCACGCCATTAATGGGATGATCTACAGCTTGCCTGGCCT
GAAAATGTATGAGCAAGAGTGGGTGAGGTTACACCTGCTGAACATAGGCGGCTCCCAAGACATTCACGTGGTTCA
CTTTCACGGCCAGACCTTGCTGGAAAATGGCAATAAACAGCACCAGTTAGGGGTCTGGCCCCTTCTGCCTGGTTC
ATTTAAAACTCTTGAAATGAAGGCATCAAAACCTGGCTGGTGGCTCCTAAACACAGAGGTTGGAGAAAACCAGAG
AGCAGGGATGCAAACGCCATTTCTTATCATGGACAGAGACTGTAGGATGCCAATGGGACTAAGCACTGGTATCAT
ATCTGATTCACAGATCAAGGCTTCAGAGTTTCTGGGTTACTGGGAGCCCAGATTAGCAAGATTAAACAATGGTGG
ATCTTATAATGCTTGGAGTGTAGAAAAACTTGCAGCAGAATTTGCCTCTAAACCTTGGATCCAGGTGGACATGCA
AAAGGAAGTCATAATCACAGGGATCCAGACCCAAGGTGCCAAACACTACCTGAAGTCCTGCTATACCACAGAGTT
CTATGTAGCTTACAGTTCCAACCAGATCAACTGGCAGATCTTCAAAGGGAACAGCACAAGGAATGTGATGTATTT
TAATGGCAATTCAGATGCCTCTACAATAAAAGAGAATCAGTTTGACCCACCTATTGTGGCTAGATATATTAGGAT
CTCTCCAACTCGAGCCTATAACAGACCTACCCTTCGATTGGAACTGCAAGGTTGTGAGGTAAATGGATGTTCCAC
ACCCCTGGGTATGGAAAATGGAAAGATAGAAAACAAGCAAATCACAGCTTCTTCGTTTAAGAAATCTTGGTGGGG
AGATTACTGGGAACCCTTCCGTGCCCGTCTGAATGCCCAGGGACGTGTGAATGCCTGGCAAGCCAAGGCAAACAA
CAATAAGCAGTGGCTAGAAATTGATCTACTCAAGATCAAGAAGATAACGGCAATTATAACACAGGGCTGCAAGTC
TCTGTCCTCTGAAATGTATGTAAAGAGCTATACCATCCACTACAGTGAGCAGGGAGTGGAATGGAAACCATACAG
GCTGAAATCCTCCATGGTGGACAAGATTTTTGAAGGAAATACTAATACCAAAGGACATGTGAAGAACTTTTTCAA
CCCCCCAATCATTTCCAGGTTTATCCGTGTCATTCCTAAAACATGGAATCAAAGTATTGCACTTCGCCTGGAACT
CTTTGGCTGTGATATTTACTAGAATTGAACATTCAAAAACCCCTGGAAGAGACTCTTTAAGACCTCAAACCATTT
AGAATGGGCAATGTATTTTACGCTGTGTTAAATGTTAACAGTTTTCCACTATTTCTCTTTCTTTTCTATTAGTGA
ATAAAATTTTATAC

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FIGURE 930

MFPGCPRLWVLVVLGTSWVGWGSQGTEAAQLRQFYVAAQGISWSYRPEPTNSSLNLSVTSFKKIVYREYEPYFKK
EKPQSTISGLLGPTLYAEVGDIIKVHFKNKADKPLSIHPQGIRYSKLSEGASYLDHTFPAEKMDDAVAPGREYTY
EWSISEDSGPTHDDPPCLTHIYYSHENLIEDFNSGLIGPLLICKKGTLTEGGTQKTFDKQIVLLFAVFDESKSWS
QSSSLMYTVNGYVNGTMPDITVCAHDHISWHLLGMSSGPELFSIHFNGQVLEQNHHKVSAITLVSATSTTANMTV
GPEGKWIISSLTPKHLQAGMQAYIDIKNCPKKTRNLKKITREQRRHMKRWEYFIAAEEVIWDYAPVIPANMDKKY
RSQHLDNFSNQIGKHYKKVMYTQYEDESFTKHTVNPNMKEDGILGPIIRAQVRDTLKIVFKNMASRPYSIYPHGV
TFSPYEDEVNSSFTSGRNNTMIRAVQPGETYTYKWNILEFDEPTENDAQCLTRPYYSDVDIMRDIASGLIGLLLI
CKSRSLDRRGIQRAADIEQQAVFAVFDENKSWYLEDNINKFCENPDEVKRDDPKFYESNIMSTINGYVPESITTL
GFCFDDTVQWHFCSVGTQNEILTIHFTGHSFIYGKRHEDTLTLFPMRGESVTVTMDNVGTWMLTSMNSSPRSKKL
RLKFRDVKCIPDDDEDSYEIFEPPESTVMATRKMHDRLEPEDEESDADYDYQNRLAAALGIRSFRNSSLNQEEEE
FNLTALALENGTEFVSSNTDIIVGSNYSSPSNISKFTVNNLAEPQKAPSHQQATTAGSPLRHLIGKNSVLNSSTA
EHSSPYSEDPIEDPLQPDVTGIRLLSLGAGEFRSQEHAKRKGPKVERDQAAKHRFSWMKLLAHKVGRHLSQDTGS
PSGMRPWEDLPSQDTGSPSRMRPWEDPPSDLLLLKQSNSSKILVGRWHLASEKGSYEIIQDTDEDTAVNNWLISP
QNASRAWGESTPLANKPGKQSGHPKFPRVRHKSLQVRQDGGKSRLKKSQFLIKTRKKKKEKHTHHAPLSPRTFHP
LRSEAYNTFSERRLKHSLVLHKSNETSLPTDLNQTLPSMDFGWIASLPDHNQNSSNDTGQASCPPGLYQTVPPEE
HYQTFPIQDPDQMHSTSDPSHRSSSPELSEMLEYDRSHKSFPTDISQMSPSSEHEVWQTVISPDLSQVTLSPELS
QTNLSPDLSHTTLSPELIQRNLSPALGQMPISPDLSHTTLSPDLSHTTLSLDLSQTNLSPELSQTNLSPALGQMP
LSPDLSHTTISLDFSQTNLSPELSHMTLSPELSQTNLSPALGQMPISPDLSHTTLSLDFSQTNLSPELSQTNLSP
ALGQMPLSPDPSHTTLSLDLSQTNLSPELSQTNLSPDLSEMPLFADLSQIPLTPDLDQMTLSPDLGETDLSPNFG
QMSLSPDLSQVTLSPDISDTTLLPDLSQISPPPDLDQIFYPSESSQSLLLQEFNESFPYPDLGQMPSPSSPTLND
TFLSKEFNPLVIVGLSKDGTDYIEIIPKEEVQSSEDDYAEIDYVPYDDPYKTDVRTNINSSRDPDNIAAWYLRSN
NGNRRNYYIAAEEISWDYSEFVQRETDIEDSDDIPEDTTYKKVVFRKYLDSTFTKRDPRGEYEEHLGILGPIIRA
EVDDVIQVRFKNLASRPYSLHAHGLSYEKSSEGKTYEDDSPEWFKEDNAVQPNSSYTYVWHATERSGPESPGSAC
RAWAYYSAVNPEKDIHSGLIGPLLICQKGILHKDSNMPVDMREFVLLFMTFDEKKSWYYEKKSRSSWRLTSSEMK
KSHEFHAINGMIYSLPGLKMYEQEWVRLHLLNIGGSQDIHVVHFHGQTLLENGNKQHQLGVWPLLPGSFKTLEMK
ASKPGWWLLNTEVGENQRAGMQTPFLIMDRDCRMPMGLSTGIISDSQIKASEFLGYWEPRLARLNNGGSYNAWSV
EKLAAEFASKPWIQVDMQKEVIITGIQTQGAKHYLKSCYTTEFYVAYSSN

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FIGURE 931

GGCACGAGGCCAAGAGCTACGCGGCGGCGGCGGAGCGCAGGCCTCGTGCCGTTACGGCCATCACGGCGGCCGCAG
TGGCGTCCTGGAGCCCTCCTCAGTGCTGAAGCTGCTGAAAG**ATG**GCAGAAGAAGTGGTGGTAGTAGCCAAATTTG
ATTATGTGGCCCAACAAGAACAAGAGTTGGACATCAAGAAGAATGAGAGATTATGGCTTCTGGATGATTCTAAGT
CCTGGTGGCGAGTTCGAAATTCCATGAATAAAACAGGTTTTGTGCCTTCTAACTATGTGGAAAGGAAAAACAGTG
CTCGGAAAGCATCTATTGTGAAAAACCTAAAGGATACCTTAGGCATTGGAAAAGTGAAAAGAAAACCTAGTGTGC
CAGATTCTGCATCTCCTGCTGATGATAGTTTTGTTGACCCAGGGGAACGTCTCTATGACCTCAACATGCCCGCTT
ATGTGAAATTTAACTACATGGCTGAGAGAGAGGATGAATTATCATTGATAAAGGGGACAAAGGTGATCGTCATGG
AGAAATGCAGTGATGGGTGGTGGCGTGGTAGCTACAATGGACAAGTTGGATGGTTCCCTTCAAACTATGTAACTG
AAGAAGGTGACAGTCCTTTGGGTGACCATGTGGGTTCTCTGTCAGAGAAATTAGCAGCAGTCGTCAATAACCTAA
ATACTGGGCAAGTGTTGCATGTGGTACAGGCTCTTTACCCATTCAGCTCATCTAATGATGAAGAACTTAATTTCG
AGAAAGGAGATGTAATGGATGTTATTGAAAAACCTGAAAATGACCCAGAGTGGTGGAAATGCAGGAAGATCAATG
GTATGGTTGGTCTAGTACCAAAAAACTATGTTACCGTTATGCAGAATAATCCATTAACTTCAGGTTTGGAACCAT
CACCTCCACAGTGTGATTACATTAGGCCTTCACTCACTGGAAAGTTTGCTGGCAATCCTTGGTATTATGGCAAAG
TCACCAGGCATCAAGCAGAAATGGCATTAAATGAAAGAGGACATGAAGGGGATTTCCTCATTCGTGATAGTGAAT
CTTCGCCAAATGATTTCTCAGTATCACTAAAAGCACAAGGGAAAAACAAGCATTTTAAAGTCCAACTAAAAGAGA
CTGTCTACTGCATTGGGCAGCGTAAATTCAGCACCATGGAAGAACTTGTAGAACATTACAAAAAGGCACCAATTT
TTACAAGTGAACAAGGAGAAAAATTATATCTTGTCAAGCATTTATCA**TGA**TACTGCTGACCAGAAGTGACTGCTG
TGTAGCTGTAATTTGTCATGTAATTGAAGACTGAGAAAATGTTGGGTCCAGTCGTGCTTGATTGGAAATTGTTGT
TTCTAAATCTATATGAGAATTGACAATAAGTATTTTTATTATAACTCAGCCCATACATATATACTATGTATGCAG
TGCATCTGCATAGAACAGTTCCTTATCCTTGGCCTTCTGTTTTATTGTTTTTTTCTTTGCTGTTTTCCCTTTGCT
TCTAATATTACAGTTTTGTATTTTGTAAACAAAAATCAAATAATGCATATCAGAATCTTTATATGGAAGAAATCC
TTTATTGCCTTTCCTTTGTTTCCTTGTAAAGGCACCCTGTTCTGTTATGGTTTTTCATTATATAAAATTATTATA
TCTATATATGACATATGCTAAAATTTCTTGGAGAGTGTTAATCTTTTCTGTGACTAAATAGCAATAATAAGTGGA
AAATTAGAAATTATTTCCAGGTATTATATTTGTCACAGGCCATTGTAAATACCAAGTATATTGTGTCTGCCATAA
TTTTTAAAAATACATTCATTGTCTTCAGTCATACAGCAAGACACATGAGACATAGATTAGAAAACATGTTGTACA
ATTTTAATTTACAACTGTTGGAAATAAAAATCACTTAATTTTTTTCCAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 932

MAEEVVVVAKFDYVAQQEQELDIKKNERLWLLDDSKSWWRVRNSMNKTGFVPSNYVERKNSARKASIVKNLKDTL
GIGKVKRKPSVPDSASPADDSFVDPGERLYDLNMPAYVKFNYMAEREDELSLIKGTKVIVMEKCSDGWWRGSYNG
QVGWFPSNYVTEEGDSPLGDHVGSLSEKLAAVVNNLNTGQVLHVVQALYPFSSSNDEELNFEKGDVMDVIEKPEN
DPEWWKCRKINGMVGLVPKNYVTVMQNNPLTSGLEPSPPQCDYIRPSLTGKFAGNPWYYGKVTRHQAEMALNERG
HEGDFLIRDSESSPNDFSVSLKAQGKNKHFKVQLKETVYCIGQRKFSTMEELVEHYKKAPIFTSEQGEKLYLVKH
LS

FIGURE 933A

CGGGCAGCGTGGACCCCGGATGAGTTGCTTTTAGGCTTGCTGGCCCGCGGGGCTGTCCAGGCACGCGAGGCCCCT
CAGGTACGCCCTCTCTTCCCTGCAGGATCCGGCCCTCAAAGACGAGGGTCACGCACGCGTTACAACCCCGAAACA
GTAGCACAAGATTTAATTTTTAAAAGAGCGTGTTTCTTCGGGGCTTGCCGTTCGTTCGTTTCCAGCCTCAGGAAT
TTATGGTCGCCTTTTTGAATGAGCAACAAA**ATG**CTTCAACAAGTTCCAGAAAACATAAATTTTCCTGCTGAAGAA
GAGAAAATCTTGGAGTTTTGGACTGAATTTAATTGTTTTCAGGAATGCTTAAAGCAATCAAAACATAAACCAAAA
TTTACCTTCTATGATGGTCCTCCTTTTGCAACTGGACTGCCTCACTATGGACATATACTTGCGGGTACAATTAAA
GATATAGTTACAAGATATGCTCACCAGAGTGGGTTTCATGTTGACAGAAGATTTGGATGGGATTGCCATGGCTTA
CCTGTGGAATATGAAATTGATAAGACACTGGGAATCAGAGGACCAGAGGATGTGGCCAAAATGGGGATTACAGAG
TATAACAATCAGTGCCGAGCAATTGTGATGAGATATTCTGCTGAGTGGAAGTCTACTGTTAGCAGACTTGGCCGA
TGGATTGACTTTGACAATGACTATAAAACTCTGTATCCACAATTCATGGAATCAGTCTGGTGGGTCTTCAAACAA
CTCTATGATAAAGGCCTTGTTTATAGAGGTGTGAAAGTCATGCCCTTCTCTACGGCATGTAACACTCCACTTTCC
AACTTCGAGTCACACCAGAATTATAAGGATGTTCAAGATCCTTCAGTATTTGTAACTTTCCCTTTGGAAGAAGAT
GAAACTGTATCTTTAGTTGCTTGGACAACCACTCCCTGGACTCTACCTAGTAACCTTGCTGTGTGTGTTAATCCA
GAAATGCAATATGTGAAAATTAAAGATGTTGCCAGAGGACGATTACTCATTTTAATGGAAGCCAGATTGTCAGCC
CTCTATAAATTGGAGAGTGACTATGAGATCCTTGAAAGATTTCCTGGTGCCTATCTTAAAGGCAAGAAGTACAGG
CCCCTGTTTGACTATTTCCTGAAGTGTAAAGAGAATGGCGCTTTCACTGTGCTTGTTGACAACTATGTGAAGGAA
GAAGAAGGCACAGGGGTTGTCCACCAAGCTCCTTACTTCGGTGCTGAGGACTATCGGGTCTGTATGGACTTTAAC
ATTATTCGGAAAGACTCACTCCCTGTTTGCCCTGTGGATGCTTCAGGCTGCTTCACAACGGAGGTGACAGATTTC
GCAGGACAGTATGTGAAGGATGCTGACAAAAGTATCATCAGGACTTTGAAGGAACAAGGCCGACTTCTGGTTGCC
ACCACCTTCACTCACAGCTACCCTTTTTGCTGGAGATCAGACACTCCTCTAATTTACAAAGCAGTGCCCAGCTGG
TTTGTGCGAGTGGAGAACATGGTGGACCAGCTCCTAAGGAACAATGACCTGTGCTACTGGGTCCCAGAGTTGGTA
CGAGAAAAACGATTTGGAAATTGGCTGAAAGATGCACGTGACTGGACAATTTCCAGAAACAGATACTGGGGCACC
CCCATCCCACTGTGGGTCAGCGATGACTTTGAGGAGGTGGTATGCATTGGGTCAGTGGCGGAACTTGAAGAACTG
TCAGGAGCAAAGATCTCAGATCTCCACAGAGAGAGTGTTGACCACCTGACCATTCCTTCACGCTGTGGGAAGGGA
TCCTTGCACCGCATCTCTGAAGTGTTTGACTGTTGGTTTGAGAGTGGCAGCATGCCCTATGCTCAGGTTCATTAC
CCGTTTGAAAACAAGAGGGAGTTTGAGGATGCTTTTCCTGCAGATTTCATTGCCGAGGGCATCGACCAAACCAGA
GGATGGTTTTATACCCTGCTGGTGCTGGCCACGGCCCTCTTTGGACAACCGCCTTTCAAGAACGTAATTGTGAAT
GGGCTTGTCCTGGCAAGTGATGGCCAAAAAATGAGCAAACGGAAAAAGAATTATCCAGATCCAGTTTCCATCATC
CAGAAGTATGGTGCTGATGCCCTCAGATTATATCTGATTAACTCCCCTGTGGTGAGAGCAGAAAACCTCCGCTTT
AAAGAAGAGGGTGTGCGGGACGTCCTTAAGGATGTACTGCTCCCATGGTACAATGCCTATCGCTTCTTAATCCAG
AACGTTCTGAGGCTCCAGAAGGAGGAAGAAATAGAATTTCTCTACAATGAGAACACGGTTAGAGAAAGCCCCAAC
ATTACAGACCGGTGGATCCTGTCCTTCATGCAGTCTCTCATTGGCTTCTTTGAGACTGAAATGGCAGCTTATAGG
CTTTATACTGTGGTGCCTCGCCTGGTCAAGTTTGTAGATATTCTGACCAATTGGTATGTTAGAATGAACCGCAGA
AGATTAAAGGGTGAAAATGGGATGGAGGATTGTGTCATGGCCCTAGAAACCTTGTTTAGTGTTCTGCTTTCTCTT
TGCAGACTTATAGCTCCCTACACACCTTTTCTCACTGAATTGATGTACCAGAATCTAAAGGTGCTGATTGACCCT
GTTTCTGTTCAGGACAAGGACACACTCAGCATTCACTACCTCATGCTGCCCCGTGTTCGAGAAGAATTGATTGAC
AAGAAAACAGAGAGTGCAGTATCTCAGATGCAGTCTGTGATTGAACTTGGAAGAGTGATCAGAGACCGAAAAACT
ATTCCCATAAAGTATCCTTTGAAAGAAATTGTGGTTATCCATCAAGATCCAGAAGCTCTTAAAGATATCAAGTCT
TTGGAGAAGTATATCATTGAGGAACTCAATGTTCGAAAAGTTACACTGTCTACAGATAAAAACAAGTATGGCATT
CGGCTAAGGGCAGAACCAGATCACATGGTCCTGGGGAAGCGTCTGAAGGGAGCCTTTAAGGCAGTGATGACGTCC
ATCAAGCAGTTGAGCAGTGAGGAGCTGGAGCAGTTCCAGAAGACTGGGACCATTGTTGTGGAAGGCCATGAATTG
CACGATGAAGACATCCGCCTCATGTACACCTTTGATCAGGCCACAGGTGGGACTGCGCAATTTGAAGCACACTCA
GATGCTCAGGCTTTGGTCCTCTTAGATGTCACTCCTGACCAGTCAATGGTAGATGAAGGAATGGCTCGGGAAGTC
ATCAATCGCATACAGAAACTTCGCAAAAAGTGCAATCTGGTTCCAACTGATGAAATCACAGTGTACTATAAAGCA
AAGTCTGAAGGAACATATCTGAATAGTGTTATTGAAAGCCACACAGAGTTCATATTTACCACCATAAAGGCTCCC
TTGAAACCATATCCAGTTTCTCCATCGGATAAAGTCCTTATTCAAGAAAAAACACAGTTGAAGGGATCTGAACTG
GAAATTACACTCACCAGAGGATCTTCCCTTCCTGGTCCTGCTTGTGCATATGTCAATCTTAACATTTGTGCAAAT
GGCAGTGAACAAGGTGGAGTATTGCTCCTGGAAAATCCAAAAGGTGACAATAGGTTGGACCTTTTAAAGCTGAAG

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FIGURE 933B

AGTGTTGTCACTAGCATTTTTGGTGTGAAAAATACAGAGCTGGCTGTCTTCCATGATGAAACAGAAATACAAAAC
CAAACTGACTTACTGAGTCTTAGTGGAAAAACACTTTGTGTGACTGCAGGATCGGCTCCCTCTCTGATCAACAGT
TCTAGTACTCTTCTTTGTCAGTATATCAACCTACAGCTCCTGAATGCAAAGCCACAAGAGTGTTTAATGGGGACA
GTGGGCACTCTCCTGCTTGAAAACCCACTTGGGCAGAATGGACTCACCCACCAAGGTCTTCTGTATGAAGCAGCC
AAGGTGTTTGGCCTTCGGAGCAGGAAGCTAAAGCTGTTTCTGAATGAGACCCAAACGCAGGAAATTACAGAAGAC
ATCCCCGTGAAGACTTTGAATATGAAGACTGTGTATGTTTCTGTGTTACCAACAACAGCAGACTTC**TAG**CATGTA
CTTATCAATGTTGTTCGGTCAGCCCTTCCCTAATTACACCTATCCCCTACACATACATGCACATAGACACACACA
TGAACACACTGAAGATATTTCCTTCAGGTGTGTGTAAAATATGCTGCTTGGATTGAAATTCAAATGGGATTGATT
AGTCAAGTAACTTGAGACCTCACAGTAATCTTCACACTTAACCTTAGACACCTATGCAGTCATGTTGGGAGCAGG
TTACAATGTTACTTCAGCCCACAGTTTATTTCTATTCTTGAGTTCTTAAGTACAGAAGATAGAAGTGATTTAAAT
GGCATAGTATATATATCATTTTCTGGCCTTTTAAAATTTATTTGAGACCTCTTGATGAAATGGACATATTATATA
TTTCTGCCACCTGGATTTTCCTGGATAATTTGATGGAATATTTTAAGTTTCAGTAAATCAGAACAATAAACAAAC
TCAGATAT

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FIGURE 934

MLQQVPENINFPAEEEKILEFWTEFNCFQECLKQSKHKPKFTFYDGPPFATGLPHYGHILAGTIKDIVTRYAHQS
GFHVDRRFGWDCHGLPVEYEIDKTLGIRGPEDVAKMGITEYNNQCRAIVMRYSAEWKSTVSRLGRWIDFDNDYKT
LYPQFMESVWWVFKQLYDKGLVYRGVKVMPFSTACNTPLSNFESHQNYKDVQDPSVFVTFPLEEDETVSLVAWTT
TPWTLPSNLAVCVNPEMQYVKIKDVARGRLLILMEARLSALYKLESDYEILERFPGAYLKGKKYRPLFDYFLKCK
ENGAFTVLVDNYVKEEEGTGVVHQAPYFGAEDYRVCMDFNIIRKDSLPVCPVDASGCFTTEVTDFAGQYVKDADK
SIIRTLKEQGRLLVATTFTHSYPFCWRSDTPLIYKAVPSWFVRVENMVDQLLRNNDLCYWVPELVREKRFGNWLK
DARDWTISRNRYWGTPIPLWVSDDFEEVVCIGSVAELEELSGAKISDLHRESVDHLTIPSRCGKGSLHRISEVFD
CWFESGSMPYAQVHYPFENKREFEDAFPADFIAEGIDQTRGWFYTLLVLATALFGQPPFKNVIVNGLVLASDGQK
MSKRKKNYPDPVSIIQKYGADALRLYLINSPVVRAENLRFKEEGVRDVLKDVLLPWYNAYRFLIQNVLRLQKEEE
IEFLYNENTVRESPNITDRWILSFMQSLIGFFETEMAAYRLYTVVPRLVKFVDILTNWYVRMNRRRLKGENGMED
CVMALETLFSVLLSLCRLIAPYTPFLTELMYQNLKVLIDPVSVQDKDTLSIHYLMLPRVREELIDKKTESAVSQM
QSVIELGRVIRDRKTIPIKYPLKEIVVIHQDPEALKDIKSLEKYIIEELNVRKVTLSTDKNKYGIRLRAEPDHMV
LGKRLKGAFKAVMTSIKQLSSEELEQFQKTGTIVVEGHELHDEDIRLMYTFDQATGGTAQFEAHSDAQALVLLDV
TPDQSMVDEGMAREVINRIQKLRKKCNLVPTDEITVYYKAKSEGTYLNSVIESHTEFIFTTIKAPLKPYPVSPSD
KVLIQEKTQLKGSELEITLTRGSSLPGPACAYVNLNICANGSEQGGVLLLENPKGDNRLDLLKLKSVVTSIFGVK
NTELAVFHDETEIQNQTDLLSLSGKTLCVTAGSAPSLINSSSTLLCQYINLQLLNAKPQECLMGTVGTLLLENPL
GQNGLTHQGLLYEAAKVFGLRSRKLKLFLNETQTQEITEDIPVKTLNMKTVYVSVLPTTADF

FIGURE 935

GGGGGCTGTAGCTGGTGAGAGGAAGTCCTAGAGGCTATGGACACTCTGCTGCTGGGATCACCGAG**ATG**AGCAGCA
GCTGCTCAGGGCTGAGCAGGGTCCTGGTGGCCGTGGCTACAGCCCTGGTGTCTGCCTCCTCCCCCTGCCCCCAGG
CCTGGGGCCCCCCAGGGGTCCAGTATGGGCAGCCAGGCAGGTCCGTGAAGCTGTGTTGTCCTGGAGTGACTGCCG
GGGACCCAGTGTCCTGGTTTCGGGATGGGGAGCCAAAGCTGCTCCAGGGACCTGACTCTGGGCTAGGGCATGAAC
TGGTCCTGGCCCAGGCAGACAGCACTGATGAGGGCACCTACATCTGCCAGACCCTGGATGGTGCACTTGGGGGCA
CAGTGACCCTGCAGCTGGGCTACCCTCCAGCCCGCCCTGTTGTCTCCTGCCAAGCAGCCGACTATGAGAACTTCT
CTTGCACTTGGAGTCCCAGCCAGATCAGCGGTTTACCCACCCGCTACCTCACCTCCTACAGGAAGAAGACAGTCC
TAGGAGCTGATAGCCAGAGGAGGAGTCCATCCACAGGGCCCTGGCCATGCCCACAGGATCCCCTAGGGGCTGCCC
GCTGTGTTGTCCACGGGGCTGAGTTCTGGAGCCAGTACCGGATTAATGTGACTGAGGTGAACCCACTGGGTGCCA
GCACACGCCTGCTGGATGTGAGCTTGCAGAGCATCTTGCGCCCTGACCCACCCCAGGGCCTGCGGGTAGAGTCAG
TACCAGGTTACCCCCGACGCCTGCGAGCCAGCTGGACATACCCTGCCTCCTGGCCGTGCCAGCCCCACTTCCTGC
TCAAGTTCCGTTTGCAGTACCGTCCGGCGCAGCATCCAGCCTGGTCCACGGTGGAGCCAGCTGGACTGGAGGAGG
TGATCACAGATGCTGTGGCTGGGCTGCCCCATGCTGTACGAGTCAGTGCCCGGGACTTTCTAGATGCTGGCACCT
GGAGCACCTGGAGCCCGGAGGCCTGGGGAACTCCGAGCACTGGGACCATACCAAAGGAGATACCAGCATGGGGCC
AGCTACACACGCAGCCAGAGGTGGAGCCTCAGGTGGACAGCCCTGCTCCTCCAAGGCCCTCCCTCCAACCACACC
CTCGGCTACTTGATCACAGGGACTCTGTGGAGCAGGTAGCTGTGCTGGCGTCTTTGGGAATCCTTTCTTTCCTGG
GACTGGTGGCTGGGGCCCTGGCACTGGGGCTCTGGCTGAGGCTGAGACGGGGTGGGAAGGATGGATCCCCAAAGC
CTGGGTTCTTGGCCTCAGTGATTCCAGTGGACAGGCGTCCAGGAGCTCCAAACCTG**TAG**AGGACCCAGGAGGGCT
TCGGCAGATTCCACCTATAATTCTGTCTTGCTGGTGTGGATAGAAACCAGGCAGGACAGTAGATCCCTATGGTTG
GATCTCAGCTGGAAGTTCTGTTTGGAGCCCATTTCTGTGAGACCCTGTATTTCAAATTTGCAGCTGAAAGGTGCT
TGTACCTCTGATTTCACCCCAGAGTTGGAGTTCTGCTCAAGGAACGTGTGTAATGTGTACATCTGTGTCCATGTG
TGACCATGTGTCTGTGAGGCAGGGAACATGTATTCTCTGCATGCATGTATGTAGGTGCCTGGGGAGTGTGTGTGG
GTCCTTGGCTCTTGGCCTTTCCCCTTGCAGGGGTTGTGCAGGTGTGAATAAAGAGAATAAGGAAGTTCTTGGAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 936

MSSSCSGLSRVLVAVATALVSASSPCPQAWGPPGVQYGQPGRSVKLCCPGVTAGDPVSWFRDGEPKLLQGPDSGL
GHELVLAQADSTDEGTYICQTLDGALGGTVTLQLGYPPARPVVSCQAADYENFSCTWSPSQISGLPTRYLTSYRK
KTVLGADSQRRSPSTGPWPCPQDPLGAARCVVHGAEFWSQYRINVTEVNPLGASTRLLDVSLQSILRPDPPQGLR
VESVPGYPRRLRASWTYPASWPCQPHFLLKFRLQYRPAQHPAWSTVEPAGLEEVITDAVAGLPHAVRVSARDFLD
AGTWSTWSPEAWGTPSTGTIPKEIPAWGQLHTQPEVEPQVDSPAPPRPSLQPHPRLLDHRDSVEQVAVLASLGIL
SFLGLVAGALALGLWLRLRRGGKDGSPKPGFLASVIPVDRRPGAPNL

FIGURE 937

AGTTGCAGTGGAAAGAAATGTGTCATCTGTGGTTTGGTTTTTAAAAGTGGAAAACTAGCTGCACATATCCTTTTT
TACTGCAGATTTACTTTAAGGCTCATATTCTCCAAGTCTATTCTGCTTTAAAAAGAAGACAAGAAAAGAAGTGGT
TTATCAAAATCACGTTATAATCAGATTTTGACCAAGCATTTTGTAAGATTGCCAAGTATGCCCACGGAC**ATG**GAA
CACACAGGACATTACCTACATCTTGCCTTTCTGATGACAACAGTTTTTTCTTTGTCTCCTGGAACAAAAGCAAAC
TATACCCGTCTGTGGGCTAACAGTACTTCTTCCTGGGATTCAGTTATTCAAAACAAGACAGGCAGAAACCAAAAT
GAAAACATTAACACAAACCCTATAACTCCTGAAGTAGATTATAAAGGTAATTCTACAAACATGCCTGAAACATCT
CACATCGTAGCTTTAACTTCTAAATCTGAACAGGAGCTTTATATACCTTCTGTCGTCAGCAACAGTCCTTCAACA
GTACAGAGCATTGAAAACACAAGCAAAAGTCATGGTGAAATTTTCAAAAAGGATGTCTGTGCGGAAAACAACAAC
AACATGGCTATGCTAATTTGCTTAATTATAATTGCAGTGCTTTTTCTTATCTGTACCTTTCTATTTCTATCAACT
GTGGTTTTGGCAAACAAAGTCTCTTCTCTCAGACGATCAAAACAAGTAGGCAAGCGTCAGCCTAGAAGCAATGGC
GATTTTCTGGCAAGCGGTCTATGGCCCGCTGAATCAGACACTTGGAAAAGAACAAAACAGCTCACAGGACCCAAC
CTAGTGATGCAATCTACTGGAGTGCTCACAGCTACAAGGGAAAGAAAAGATGAAGAAGGAACTGAAAAACTTACT
AACAAACAGATAGGT**TAG**TGAAGAAAAATGCAAAGTAGCAATGAGAAGGCTTATGGAGTAAAAATGAAGTCAGTT
GGTATTTAATCCCAAAGTGTTGTTCTGATTATCTAAAATTTGACATGGTAGACCTTGCAATTTAGAATCAAGCAG
GTGAGACAGGGAGAAGTATGCCTGCTTAATTATTTAAACTGTGTACTTTTGTTTTGACACTGAATATTTTAAAAA
GCAAATAATAAAATAACTAAGCATTTGAGGAAAATTTTAAGGATAAATTGAGGAAACTGATTAATAGAGATAGCA
AGGGATAATTAAATAAATATTCCCTATGTAGCAACAGTGGTTAGATGATCTTTGTCTGAATGTAATAAAACTTTG
AATAGTTTTAGTGTGTCCTTAAAGCCAAGTATATGCTTTAACATCAAATGGAAGTCAAATTCCTAATGCATAGAT
AGAGAGAGCTAAACTGTGTAATTTAATGGTATCTTCCTTGCTGGATGTGGCAGAATCCACACCAGCTTATCAACC
AACACAGCTAATTTTAGAATAGGTCCTTTATCTTTCCATATGGCACACGTAAGAAAGTGTTTTTCTACTATTAAT
ATTAAATTAAAACCTTTACTTTTGTATAATAAATTAAAACTCAGAATAAACCTGTGACCACGT

FIGURE 938

MEHTGHYLHLAFLMTTVFSLSPGTKANYTRLWANSTSSWDSVIQNKTGRNQNENINTNPITPEVDYKGNSTNMPE
TSHIVALTSKSEQELYIPSVVSNSPSTVQSIENTSKSHGEIFKKDVCAENNNNMAMLICLIIIAVLFLICTFLFL
STVVLANKVSSLRRSKQVGKRQPRSNGDFLASGLWPAESDTWKRTKQLTGPNLVMQSTGVLTATRERKDEEGTEK
LTNKQIG

FIGURE 939

GGTAGCAGGAGGCTGGAAGAAAGGACAGAAGTAGCTCTGGCTGTG**ATG**GGGATCTTACTGGGCCTGCTACTCCTG
GGGCACCTAACAGTGGACACTTATGGCCGTCCCATCCTGGAAGTGCCAGAGAGTGTAACAGGACCTTGGAAAGGG
GATGTGAATCTTCCCTGCACCTATGACCCCCTGCAAGGCTACACCCAAGTCTTGGTGAAGTGGCTGGTACAACGT
GGCTCAGACCCTGTCACCATCTTTCTACGTGACTCTTCTGGAGACCATATCCAGCAGGCAAAGTACCAGGGCCGC
CTGCATGTGAGCCACAAGGTTCCAGGAGATGTATCCCTCCAATTGAGCACCCTGGAGATGGATGACCGGAGCCAC
TACACGTGTGAAGTCACCTGGCAGACTCCTGATGGCAACCAAGTCGTGAGAGATAAGATTACTGAGCTCCGTGTC
CAGAAACTCTCTGTCTCCAAGCCCACAGTGACAACTGGCAGCGGTTATGGCTTCACGGTGCCCCAGGGAATGAGG
ATTAGCCTTCAATGCCAGGCTCGGGGTTCTCCTCCCATCAGTTATATTTGGTATAAGCAACAGACTAATAACCAG
GAACCCATCAAAGTAGCAACCCTAAGTACCTTACTCTTCAAGCCTGCGGTGATAGCCGACTCAGGCTCCTATTTC
TGCACTGCCAAGGGCCAGGTTGGCTCTGAGCAGCACAGCGACATTGTGAAGTTTGTGGTCAAAGACTCCTCAAAG
CTACTCAAGACCAAGACTGAGGCACCTACAACCATGACATACCCCTTGAAAGCAACATCTACAGTGAAGCAGTCC
TGGGACTGGACCACTGACATGGATGGCTACCTTGGAGAGACCAGTGCTGGGCCAGGAAAGAGCCTGCCTGTCTTT
GCCATCATCCTCATCATCTCCTTGTGCTGTATGGTGGTTTTTACCATGGCCTATATCATGCTCTGTCGGAAGACA
TCCCAACAAGAGCATGTCTACGAAGCAGCCAGGGCACATGCCAGAGAGGCCAACGACTCTGGAGAAACCATGAGG
GTGGCCATCTTCGCAAGTGGCTGCTCCAGTGATGAGCCAACTTCCCAGAATCTGGGCAACAACTACTCTGATGAG
CCCTGCATAGGACAGGAGTACCAGATCATCGCCCAGATCAATGGCAACTACGCCCGCCTGCTGGACACAGTTCCT
CTGGATTATGAGTTTCTGGCCACTGAGGGCAAAAGTGTCTGT**TAA**AAATGCCCCATTAGGCCAGGATCTGCTGAC
ATAATTGCCTAGTCAGTCCTTGCCTTCTGCATGGCCTTCTTCCCTGCTACCTCTCTTCCTGGATAGCCCAAAGTG
TCCGCCTACCAACACTGGAGCCGCTGGGAGTCACTGGCTTTGCCCTGGAATTTGCCAGATGCATCTCAAGTAAGC
CAGCTGCTGGATTTGGCTCTGGGCCCTTCTAGTATCTCTGCCGGGGGCTTCTGGTACTCCTCTCTAAATACCAGA
GGGAAGATGCCCATAGCACTAGGACTTGGTCATCATGCCTACAGACACTATTCAACTTTGGCATCTTGCCACCAG
AAGACCCGAGGGAGGCTCAGCTCTGCCAGCTCAGAGGACCAGCTATATCCAGGATCATTTCTCTTTCTTCAGGGC
CAGACAGCTTTTAATTGAAATTGTTATTTCACAGGCCAGGGTTCAGTTCTGCTCCTCCACTATAAGTCTAATGTT
CTGACTCTCTCCTGGTGCTCAATAAATATCTAATCATAACAGCAAAAAAAAAAAAAAAAAAA

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FIGURE 940

MGILLGLLLLGHLTVDTYGRPILEVPESVTGPWKGDVNLPCTYDPLQGYTQVLVKWLVQRGSDPVTIFLRDSSGD
HIQQAKYQGRLHVSHKVPGDVSLQLSTLEMDDRSHYTCEVTWQTPDGNQVVRDKITELRVQKLSVSKPTVTTGSG
YGFTVPQGMRISLQCQARGSPPISYIWYKQQTNNQEPIKVATLSTLLFKPAVIADSGSYFCTAKGQVGSEQHSDI
VKFVVKDSSKLLKTKTEAPTTMTYPLKATSTVKQSWDWTTDMDGYLGETSAGPGKSLPVFAIILIISLCCMVVFT
MAYIMLCRKTSQQEHVYEAARAHAREANDSGETMRVAIFASGCSSDEPTSQNLGNNYSDEPCIGQEYQIIAQING
NYARLLDTVPLDYEFLATEGKSVC

FIGURE 941

AAAACAGCTAAGCCAGGCGCGCAAGGAGTTGGAGACCCTGCGGGAGCGCTTCAGCGAATCGACCGCCATGGGCGC
CTCCAGGCGTCCCCCAGAGCCTGAGAAAGCGCCTCCCGCTGCCCCGACGCGGCCCTCGGCCCTGGAGCTGAAGGT
GGAGGAGCTGGAGGAGAAGGGGTTAATCCGTATTCTGCGGGGGCCGGGGGATGCTGTCTCCATCGAGATCCTCCC
CGTCGCTGTGGCAACTCCGAGCGGCGGTGATGCTCCGACTCCGGGGGTGCCGACCGGCTCCCCCAGCCCAGATCT
CGCACCTGCAGCAGAGCCGGCTCCCGGAGCAGCGCCACCGCCGCCGCCCCCACTGCCCGGCCTCCCCTCCCCGCA
GGAAGCCCCGCCCTCTGCGCCCCCACAGGCCCCGCCTCTCCCTGGCAGCCCGGAGCCCCCGCCTGCGCCGCCGCT
GCCCGGAGACCTGCCGCCCCCACCCCCGCCACCGCCACCACCTCCGGGCACTGACGGGCCGGTGCCTCCGCCGCC
GCCGCCGCCGCCGCCGCCTCCCGGAGGTCCTCCTGATGCCCTAGGAAGACGCGACTCAGAATTGGGCCCAGGAGT
GAAGGCCAAGAAGCCCATCCAGACTAAGTTCCGA**ATG**CCACTCTTGAACTGGGTGGCACTGAAACCCAGCCAGAT
CACCGGCACTGTCTTCACAGAGCTCAATGATGAGAAGGTGCTGCAGGAGCTAGACATGAGTGATTTTGAGGAACA
GTTCAAGACCAAGTCCCAAGGCCCCAGCCTGGACCTCAGCGCTCTCAAGAGTAAGGCAGCCCAGAAGGCCCCCAG
CAAGGCGACACTCATTGAGGCCAACCGGGCCAAGAACTTGGCCATCACCCTGCGGAAGGGCAACCTGGGGGCCGA
GCGCATCTGCCAAGCCATTGAGGCGTACGACCTGCAGGCTCTGGGCCTGGACTTCCTGGAGCTGCTGATGCGCTT
CCTGCCCACAGAGTATGAGCGCAGCCTCATCACCCGCTTTGAGCGGGAGCAGCGGCCAATGGAGGAGCTGTCAGA
GGAGGACCGCTTCATGCTATGCTTCAGCCGCATCCCGCGCCTGCCGGAGCGCATGACCACACTCACCTTCCTGGG
CAACTTCCCGGACACAGCCCAGCTGCTCATGCCGCAACTGAATGCCATCATTGCAGCCTCAATGTCCATCAAGTC
CTCTGACAAACTCCGCCAGATCCTGGAGATTGTCCTGGCCTTTGGCAACTACATGAACAGTAGCAAGCGTGGGGC
AGCCTATGGCTTCCGGCTCCAGAGCCTGGATGCGCTGTTGGAGATGAAGTCGACTGATCGCAAGCAGACGCTGCT
GCACTACCTGGTGAAGGTCATTGCTGAGAAGTACCCGCAACTCACAGGCTTCCACAGCGACCTGCACTTCCTGGA
CAAGGCGGGCTCAGTGTCCCTGGACAGTGTCCTGGCGGACGTGCGCTCCCTGCAGCGAGGCCTAGAGTTGACACA
GAGAGAGTTTGTGCGGCAGGATGACTGCATGGTGCTCAAGGAGTTCCTGAGGGCCAACTCGCCCACCATGGACAA
GCTGCTGGCAGACAGCAAGACGGCTCAGGAGGCCTTTGAGTCTGTGGTGGAGTACTTCGGAGAGAACCCCAAGAC
CACATCCCCAGGCCTGTTCTTCTCCCTCTTTAGCCGCTTCATTAAGGCCTACAAGAAAGCTGAGCAGGAGGTGGA
ACAGTGGAAAAAAGAAGCCGCTGCCCAGGAGGCAGGCGCTGATACCCCGGGCAAAGGGGAGCCCCCAGCACCCAA
GTCACCGCCAAAGGCCCGGCGGCCACAGATGGACCTCATCTCTGAGCTGAAACGGAGGCAGCAGAAGGAGCCACT
CATTTATGAGAGCGACCGTGATGGGGCCATTGAAGACATCATCACAGATCTGCGGAACCAGCCCTACATCCGCGC
AGACACAGGCCGCCGCAGTGCCCGTCGGCGTCCCCCGGGCCCCCCACTGCAGGTCACCTCCGACCTCTCGCTG**TA**
GCCGCTATTTCTGCAGGTGGATTCTGCAGGGGTGTGGGGCCGTGGACAGGCTGAGGCTCAAGGAAGGTGGTCCTC
AGCTCGGCTGGCCGGGCAGCCCCTCCTCCGCTGTGGCCCGCCTCAAACGGGCTGGTGCATCCTCCTCTTGGCCAC
AGAGGGCAGCATCGCCCGCCCCTTCCCCCAAATGCTGCTTGCAGCACCCACCCTAAAGCCCCCTCCAAATAGCCA
TACTTAGCCTCAGCAGGAGCCTGGCCTGTAACTTATAAAGTGCACCTCGCCCCCGCAAGCCCCAGCCCCGAGGAC
CGTCCATGGACCTTATTTTTATATGAGATTAATAAAGATGTTTGCAAAAGAAAAAAAAA

FIGURE 942

MPLLNWVALKPSQITGTVFTELNDEKVLQELDMSDFEEQFKTKSQGPSLDLSALKSKAAQKAPSKATLIEANRAK
NLAITLRKGNLGAERICQAIEAYDLQALGLDFLELLMRFLPTEYERSLITRFEREQRPMEELSEEDRFMLCFSRI
PRLPERMTTLTFLGNFPDTAQLLMPQLNAIIAASMSIKSSDKLRQILEIVLAFGNYMNSSKRGAAYGFRLQSLDA
LLEMKSTDRKQTLLHYLVKVIAEKYPQLTGFHSDLHFLDKAGSVSLDSVLADVRSLQRGLELTQREFVRQDDCMV
LKEFLRANSPTMDKLLADSKTAQEAFESVVEYFGENPKTTSPGLFFSLFSRFIKAYKKAEQEVEQWKKEAAAQEA
GADTPGKGEPPAPKSPPKARRPQMDLISELKRRQQKEPLIYESDRDGAIEDIITDLRNQPYIRADTGRRSARRRP
PGPPLQVTSDLSL

FIGURE 943

GGCACGAGCGGAGAGCCGCGCAGGGCGCGGGCCGCGCGGGGTGGGGCAGCCGGAGCGCAGGCCCCCGATCCCCGG
CGGGCGCCCCCGGGCCCCCGCGCGCGCCCCGGCCTCCGGGAGACTGGCGCATGCCACGGAGCGCCCCTCGGGCCG
CCGCCGCTCCTGCCCGGGCCCCTGCTGCTGCTGCTGTCGCCTGCGCCTGCTGCCCCAACTCGGCGCCCGACTTCT
TCATGGTGTGCGGAGGTCATGTTCGCTCCTTAGCAGGCAAACGACTTTTCTCCTCGCCTCCTCGCCCCGC**ATG**TT
CAGGACCAAACGATCTGCGCTCGTCCGGCGTCTCTGGAGGAGCCGTGCGCCCGGCGGCGAGGACGAGGAGGAGGG
CGCAGGGGGAGGTGGAGGAGGAGGCGAGCTGCGGGGAGAAGGGGCGACGGACAGCCGAGCGCATGGGGCCGGTGG
CGGCGGCCCGGGCAGGGCTGGATGCTGCCTGGGCAAGGCGGTGCGAGGTGCCAAAGGTCACCACCATCCCCACCC
GCCAGCCGCGGGCGCCGGCGCGGCCGGGGGCGCCGAGGCGGATCTGAAGGCGCTCACGCACTCGGTGCTCAAGAA
ACTGAAGGAGCGGCAGCTGGAGCTGCTGCTCCAGGCCGTGGAGTCCCGCGGCGGGACGCGCACCGCGTGCCTCCT
GCTGCCCGGCCGCCTGGACTGCAGGCTGGGCCCGGGGGCGCCCGCCGGCGCGCAGCCTGCGCAGCCGCCCTCGTC
CTACTCGCTCCCCCTCCTGCTGTGCAAAGTGTTCAGGTGGCCGGATCTCAGGCATTCCTCGGAAGTCAAGAGGCT
GTGTTGCTGTGAATCTTACGGGAAGATCAACCCCGAGCTGGTGTGCTGCAACCCCCATCACCTTAGCCGACTCTG
CGAACTAGAGTCTCCCCCCCCTCCTTACTCCAGATACCCGATGGATTTTCTCAAACCAACTGCAGACTGTCCAGA
TGCTGTGCCTTCCTCCGCTGAAACAGGGGGAACGAATTATCTGGCCCCTGGGGGGCTTTCAGATTCCCAACTTCT
TCTGGAGCCTGGGGATCGGTCACACTGGTGCGTGGTGGCATACTGGGAGGAGAAGACGAGAGTGGGGAGGCTCTA
CTGTGTCCAGGAGCCCTCTCTGGATATCTTCTATGATCTACCTCAGGGGAATGGCTTTTGCCTCGGACAGCTCAA
TTCGGACAACAAGAGTCAGCTGGTGCAGAAGGTGCGGAGCAAAATCGGCTGCGGCATCCAGCTGACGCGGGAGGT
GGATGGTGTGTGGGTGTACAACCGCAGCAGTTACCCCATCTTCATCAAGTCCGCCACACTGGACAACCCGGACTC
CAGGACGCTGTTGGTACACAAGGTGTTCCCCGGTTTCTCCATCAAGGCTTTCGACTACGAGAAGGCGTACAGCCT
GCAGCGGCCCAATGACCACGAGTTTATGCAGCAGCCGTGGACGGGCTTTACCGTGCAGATCAGCTTTGTGAAGGG
CTGGGGTCAGTGCTACACCCGCCAGTTCATCAGCAGCTGCCCGTGCTGGCTAGAGGTCATCTTCAACAGCCGG**TA**
GCCGCGTGCGGAGGGGACAGAGCGTGAGCTGAGCAGGCCACACTTCAAACTACTTTGCTGCTAATATTTTCCTCC
TGAGTGCTTGCTTTTCATGCAAACTCTTTGGTCGTTTTTTTTTTGTTTGTTGGTTGGTTTTCTTCTTCTCGTCCT
CGTTTGTGTTCTGTTTTGTTTCGCTCTTTGAGAAATAGCTTATGAAAAGAATTGTTGGGGGTTTTTTTGGAAGAA
GGGGCAGGTATGATCGGCAGGACACCCTGATAGGAAGAGGGGAAGCAGAAATCCAAGCACCACCAAACACAGTGT
ATGAAGGGGGGCGGTCATCATTTCACTTGTCAGGAGTGTGTGTGAGTGTGAGTGTGCGGCTGTGTGTGCACGCGT
GTGCAGGAGCGGCAGATGGGGAGACAACGTGCTCTTTGTTTTGTGTCTCTTATGGATGTCCCCAGCAGAGAGGTT
TGCAGTCCCAAGCGGTGTCTCTCCTGCCCCTTGGACACGCTCAGTGGGGCAGAGGCAGTACCTGGGCAAGCTGGC
GGCTGGGGTCCCAGCAGCTGCCAGGAGCACGGCTCTGTCCCCAGCCTGGGAAAGCCCCTGCCCCTCCTCTCCCTC
ATCAAGGACACGGGCCTGTCCACAGGCTTCTGAGCAGCGAGCCTGCTAGTGGCCGAACCAGAACCAATTATTTTC
ATCCTTGTCTTATTCCCTTCCTGCCAGCCCCTGCCATTGTAGCGTCTTTCTTTTTTGGCCATCTGCTCCTGGATC
TCCCTGAGATGGGCTTCCCAAGGGCTGCCGGGGCAGCCCCCTCACAGTATTGCTCACCCAGTGCCCTCTCCCCTC
AGCCTCTCCCCTGCCTGCCCTGGTGACATCAGGTTTTTCCCGGACTTAGAAAACCAGCTCAGCACTGCCTGCTCC
CATCCTGTGTGTTAAGCTCTGCTATTAGGCCAGCAAGCGGGGATGTCCCTGGGAGGGACATGCTTAGCAGTCCCC
TTCCCTCCAAGAAGGATTTGGTCCGTCATAACCCAAGGTACCATCCTAGGCTGACACCTAACTCTTCTTTCATTT
CTTCTACAACTCATACACTCGTATGATACTTCGACACTGTTCTTAGCTCAATGAGCATGTTTAGACTTTAACATA
AGCTATTTTTCTAACTACAAAGGTTTAAATGAACAAGAGAAGCATTCTCATTGGAAATTTAGCATTGTAGTGCTT
TGAGAGAGAAAGGACTCCTGAAAAAAAACCTGAGATTTATTAAAGAAAAAAATGTATTTTATGTTATATATAAAT
ATATTATTACTTGTAAATATAAAGACGTTTTATAAGCATCATTATTTATGTATTGTGCAATGTGTATAAACAAGA
AAAATAAAGAAAAGATGCACTTTGCTTTAATATAAATGCAAATAACAAATGCCAAATTAAAAAAGATAAACACAA
GATTGGTGTTTTTTCCTATGGGTGTTATCACCTAGCTGAATGTTTTTCTAAAGGAGTTTATGTTCCATTAAACGA
TTTTTAAAATGTACACTTGAAAAAAAAAAAAAAAA

FIGURE 944

MFRTKRSALVRRLWRSRAPGGEDEEEGAGGGGGGGELRGEGATDSRAHGAGGGGPGRAGCCLGKAVRGAKGHHHP
HPPAAGAGAAGGAEADLKALTHSVLKKLKERQLELLLQAVESRGGTRTACLLLPGRLDCRLGPGAPAGAQPAQPP
SSYSLPLLLCKVFRWPDLRHSSEVKRLCCCESYGKINPELVCCNPHHLSRLCELESPPPPYSRYPMDFLKPTADC
PDAVPSSAETGGTNYLAPGGLSDSQLLLEPGDRSHWCVVAYWEEKTRVGRLYCVQEPSLDIFYDLPQGNGFCLGQ
LNSDNKSQLVQKVRSKIGCGIQLTREVDGVWVYNRSSYPIFIKSATLDNPDSRTLLVHKVFPGFSIKAFDYEKAY
SLQRPNDHEFMQQPWTGFTVQISFVKGWGQCYTRQFISSCPCWLEVIFNSR

FIGURE 945

ATGGCGCCCCGAAGCCTCCTCCTGCTGCTCTCAGGGGCCCTGGCCCTGACCGATACTTGGGCGGGCTCCCACTCC
TTGAGGTATTTCAGCACCGCTGTGTCGCGGCCCGGCCGCGGGGAGCCCCGCTACATCGCCGTGGAGTACGTAGAC
GACACGCAATTCCTGCGGTTCGACAGCGACGCCGCGATTCCGAGGATGGAGCCGCGGGAGCCGTGGGTGGAGCAA
GAGGGGCCGCAGTATTGGGAGTGGACCACAGGGTACGCCAAGGCCAACGCACAGACTGACCGAGTGGCCCTGAGG
AACCTGCTCCGCCGCTACAACCAGAGCGAGGCTGGGTCTCACACCCTCCAGGGAATGAATGGCTGCGACATGGGG
CCCGACGGACGCCTCCTCCGCGGGTATCACCAGCACGCGTACGACGGCAAGGATTACATCTCCCTGAACGAGGAC
CTGCGCTCCTGGACCGCGGCGGACACCGTGGCTCAGATCACCCAGCGCTTCTATGAGGCAGAGGAATATGCAGAG
GAGTTCAGGACCTACCTGGAGGGCGAGTGCCTGGAGTTGCTCCGCAGATACTTGGAGAATGGGAAGGAGACGCTA
CAGCGCGCAGATCCTCCAAAGGCACACGTTGCCCACCACCCCATCTCTGACCATGAGGCCACCCTGAGGTGCTGG
GCCCTGGGCTTCTACCCTGCGGAGATCACGCTGACCTGGCAGCGGGATGGGGAGGAACAGACCCAGGACACAGAG
CTTGTGGAGACCAGGCCTGCAGGGGATGGAACCTTCCAGAAGTGGGCCGCTGTGGTGGTGCCTTCTGGAGAGGAA
CAGAGATACACATGCCATGTGCAGCACGAGGGGCTGCCCCAGCCCCTCATCCTGAGATGGGAGCAGTCTCCCCAG
CCCACCATCCCCATCGTGGGCATCGTTGCTGGCCTTGTTGTCCTTGGAGCTGTGGTCACTGGAGCTGTGGTCGCT
GCTGTGATGTGGAGGAAGAAGAGCTCAGATAGAAACAGAGGGAGCTACTCTCAGGCTGCAGTCACTGACAGTGCC
CAGGGCTCTGGGGTGTCTCTCACAGCTAATAAAGTG**TGA**GACAGCTTCCTTGTGTGGGACTGAGAAGCAAGATAT
CAATGTAGCAGAATTGCACTTGTGCCTCACGAACATACATAAATTTTAAAAATAAAGAATAAA

FIGURE 946

MAPRSLLLLLSGALALTDTWAGSHSLRYFSTAVSRPGRGEPRYIAVEYVDDTQFLRFDSDAAIPRMEPREPWVEQ
EGPQYWEWTTGYAKANAQTDRVALRNLLRRYNQSEAGSHTLQGMNGCDMGPDGRLLRGYHQHAYDGKDYISLNED
LRSWTAADTVAQITQRFYEAEEYAEEFRTYLEGECLELLRRYLENGKETLQRADPPKAHVAHHPISDHEATLRCW
ALGFYPAEITLTWQRDGEEQTQDTELVETRPAGDGTFQKWAAVVVPSGEEQRYTCHVQHEGLPQPLILRWEQSPQ
PTIPIVGIVAGLVVLGAVVTGAVVAAVMWRKKSSDRNRGSYSQAAVTDSAQGSGVSLTANKV

FIGURE 947

TTACTCAATCTCAGGCATTTATTCATAGCAATGCAAGAACTAATACAAATTGTAAAAAGTATAGTATAGTAAATA
CATAAACCAGTAACATAGTCATTTATTGTCATTATTAAATATTATGTACAGGACATAATTGCTGTACTTTTACTT
GACTGGCAGTGCAATAGATTTGTTTACACCAGTATCACCACAAACACGTGAGGATGTATTGCAATACATATGTCA
TCACTAGGCTATGACATCACTAGGCGATAGAAATTTTTCAGCTCCATTATAATCTTATGGGACCACTATCATATA
TGTAGTCTACCACTGACTGAAATGTCATTATGTGGCATACATAATGTAGAGTTTTCAAGGGTACCTTAAAGAACA
TCTATAAATACATACACACACAAACACATTTATACACCCAGTAGTCAAAATGATTTTXAAAATCACGTTAGCTCA
AAAAGXTAATTAACTTTTATTATTCATTAAAAATGAGCTTTCTAAAXTATTAGTAXATTTCXTTTTAAG

FIGURE 948

CGCACTCCCTGCTGGGTGAGCAGCACTGTAAAG**ATG**AAGCTGGCTAACTGGTACTGGCTGAGCTCAGCTGTTCTT
GCCACTTACGGTTTTTTGGTTGTGGCAAACAATGAAACAGAGGAAATTAAAGATGAAAGAGCAAAGGATGTCTGC
CCAGTGAGACTAGAAAGCAGAGGGAAATGCGAAGAGGCAGGGGAGTGCCCCTACCAGGTAAGCCTGCCCCCCTTG
ACTATTCAGCTCCCGAAGCAATTCAGCAGGATCGAGGAGGTGTTCAAAGAAGTCCAAAACCTCAAGGAAATCGTA
AATAGTCTAAAGAAATCTTGCCAAGACTGCAAGCTGCAGGCTGATGACAACGGAGACCCAGGCAGAAACGGACTG
TTGTTACCCAGTACAGGAGCCCCGGGAGAGGTTGGTGATAACAGAGTTAGAGAATTAGAGAGTGAGGTTAACAAG
CTGTCCTCTGAGCTAAAGAATGCCAAAGAGGAGATCAATGTACTTCATGGTCGCCTGGAGAAGCTGAATCTTGTA
AATATGAACAACATAGAAAATTATGTTGACAGCAAAGTGGCAAATCTAACATTTGTTGTCAATAGTTTGGATGGC
AAATGTTCAAAGTGTCCCAGCCAAGAACAAATACAGTCACGTCCAGTTCAACATCTAATATATAAAGATTGCTCT
GACTACTACGCAATAGGCAAAAGAAGCAGTGAGACCTACAGAGTTACACCTGATCCCAAAAATAGTAGCTTTGAA
GTTTACTGTGACATGGAGACCATGGGGGGAGGCTGGACAGTGCTGCAGGCACGTCTCGATGGGAGCACCAACTTC
ACCAGAACATGGCAAGACTACAAAGCAGGCTTTGGAAACCTCAGAAGGGAATTTTGGCTGGGGAACGATAAAATT
CATCTTCTGACCAAGAGTAAGGAAATGATTCTGAGAATAGATCTTGAAGACTTTAATGGTGTCGAACTATATGCC
TTGTATGATCAGTTTTATGTGGCTAATGAGTTTCTCAAATATCGTTTACACGTTGGTAACTATAATGGCACAGCT
GGAGATGCATTACGTTTCAACAAACATTACAACCACGATCTGAAGTTTTTCACCACTCCAGATAAAGACAATGAT
CGATATCCTTCTGGGAACTGTGGGCTGTACTACAGTTCAGGCTGGTGGTTTGATGCATGTCTTTCTGCAAACTTA
AATGGCAAATATTATCACCAAAAATACAGAGGTGTCCGTAATGGGATTTTCTGGGGTACCTGGCCTGGTGTAAGT
GAGGCACACCCTGGTGGCTACAAGTCCTCCTTCAAAGAGGCTAAGATGATGATCAGACCCAAGCACTTTAAGCCA
TAAATCACTCTGTTCATTCCTCCAGGTATTCGTTATCTAATAGGGCAATTAATTCCTTCAGCACTTTAGAATATG
CCTTGTTTCATATTTTTCATAGCTAAAAAATGTTTGACATCCTTTGAGATATTTTATTACTAAAATCTGCC

FIGURE 949

MKLANWYWLSSAVLATYGFLVVANNETEEIKDERAKDVCPVRLESRGKCEEAGECPYQVSLPPLTIQLPKQFSRI
EEVFKEVQNLKEIVNSLKKSCQDCKLQADDNGDPGRNGLLLPSTGAPGEVGDNRVRELESEVNKLSSELKNAKEE
INVLHGRLEKLNLVNMNNIENYVDSKVANLTFVVNSLDGKCSKCPSQEQIQSRPVQHLIYKDCSDYYAIGKRSSE
TYRVTPDPKNSSFEVYCDMETMGGGWTVLQARLDGSTNFTRTWQDYKAGFGNLRREFWLGNDKIHLLTKSKEMIL
RIDLEDFNGVELYALYDQFYVANEFLKYRLHVGNYNGTAGDALRFNKHYNHDLKFFTTPDKDNDRYPSGNCGLYY
SSGWWFDACLSANLNGKYYHQKYRGVRNGIFWGTWPGVSEAHPGGYKSSFKEAKMMIRPKHFKP

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FIGURE 950

GCCCCGCCGCCGGCAGTGGACCGCTGTGCGCGAACCCTGAACCCTACGGTCCCGACCCGCGGGCGAGGCCGGGTA
CCTGGGCTGGGATCCGGAGCAAGCGGGCGAGGGCAGCGCCCTAAGCAGGCCCGGAGCG**ATG**GCAGCCTTGATGAC
CCCGGGAACCGGGGCCCCACCCGCGCCTGGTGACTTCTCCGGGGAAGGGAGCCAGGGACTTCCCGACCCTTCGCC
AGAGCCCAAGCAGCTCCCGGAGCTGATCCGCATGAAGCGAGACGGAGGCCGCCTGAGCGAAGCGGACATCAGGGG
CTTCGTGGCCGCTGTGGTGAATGGGAGCGCGCAGGGCGCACAGATCGGGGCCATGCTGATGGCCATCCGACTTCG
GGGCATGGATCTGGAGGAGACCTCGGTGCTGACCCAGGCCCTGGCTCAGTCGGGACAGCAGCTGGAGTGGCCAGA
GGCCTGGCGCCAGCAGCTTGTGGACAAGCATTCCACAGGGGGTGTGGGTGACAAGGTCAGCCTGGTCCTCGCACC
TGCCCTGGCGGCATGTGGCTGCAAGGTGCCAATGATCAGCGGACGTGGTCTGGGGCACACAGGAGGCACCTTGGA
TAAGCTGGAGTCTATTCCTGGATTCAATGTCATCCAGAGCCCAGAGCAGATGCAAGTGCTGCTGGACCAGGCGGG
CTGCTGTATCGTGGGTCAGAGTGAGCAGCTGGTTCCTGCGGACGGAATCCTATATGCAGCCAGAGATGTGACAGC
CACCGTGGACAGCCTGCCACTCATCACAGCCTCCATTCTCAGTAAGAAACTCGTGGAGGGGCTGTCCGCTCTGGT
GGTGGACGTTAAGTTCGGAGGGGCCGCCGTCTTCCCCAACCAGGAGCAGGCCCGGGAGCTGGCAAAGACGCTGGT
TGGCGTGGGAGCCAGCCTAGGGCTTCGGGTCGCGGCAGCGCTGACCGCCATGGACAAGCCCCTGGGTCGCTGCGT
GGGCCACGCCCTGGAGGTGGAGGAGGCGCTGCTCTGCATGGACGGCGCAGGCCCGCCAGACTTAAGGGACCTGGT
CACCACGCTCGGGGGCGCCCTGCTCTGGCTCAGCGGACACGCGGGGACTCAGGCTCAGGGCGCTGCCCGGGTGGC
CGCGGCGCTGGACGACGGCTCGGCCCTTGGCCGCTTCGAGCGGATGCTGGCGGCGCAGGGCGTGGATCCCGGTCT
GGCCCGAGCCCTGTGCTCGGGAAGTCCCGCAGAACGCCGGCAGCTGCTGCCTCGCGCCCGGGAGCAGGAGGAGCT
GCTGGCGCCCGCAGATGGCACCGTGGAGCTGGTCCGGGCGCTGCCGCTGGCGCTGGTGCTGCACGAGCTCGGGGC
CGGGCGCAGCCGCGCTGGGGAGCCGCTCCGCCTGGGGGTGGGCGCAGAGCTGCTGGTCGACGTGGGTCAGAGGCT
GCGCCGTGGGACCCCCTGGCTCCGCGTGCACCGGGACGGCCCCGCGCTCAGCGGCCCGCAGAGCCGCGCCCTGCA
GGAGGCGCTCGTACTCTCCGACCGCGCGCCATTCGCCGCCCCCTCGCCCTTCGCAGAGCTCGTTCTGCCGCCGCA
GCAA**TAA**AGCTCCTTTGCCGCGAAA

FIGURE 951

MAALMTPGTGAPPAPGDFSGEGSQGLPDPSPEPKQLPELIRMKRDGGRLSEADIRGFVAAVVNGSAQGAQIGAML
MAIRLRGMDLEETSVLTQALAQSGQQLEWPEAWRQQLVDKHSTGGVGDKVSLVLAPALAACGCKVPMISGRGLGH
TGGTLDKLESIPGFNVIQSPEQMQVLLDQAGCCIVGQSEQLVPADGILYAARDVTATVDSLPLITASILSKKLVE
GLSALVVDVKFGGAAVFPNQEQARELAKTLVGVGASLGLRVAAALTAMDKPLGRCVGHALEVEEALLCMDGAGPP
DLRDLVTTLGGALLWLSGHAGTQAQGAARVAAALDDGSALGRFERMLAAQGVDPGLARALCSGSPAERRQLLPRA
REQEELLAPADGTVELVRALPLALVLHELGAGRSRAGEPLRLGVGAELLVDVGQRLRRGTPWLRVHRDGPALSGP
QSRALQEALVLSDRAPFAAPSPFAELVLPPQQ

FIGURE 952

AGAACGCAGACCAGCCCAAGCTGACAGCTTGAGTATGCCTTCTTCTGCTGCCTGGTTTTGGGGGCTGTATGACGT
ACTGGTCGGTAGTAAAGATTAATATGTAAGAAATGTGGAGCTAGGATCAAGTCATACTCCACAGCCTGCCTGGCA
AACTATGTTTTACTTCTGACTTTGCTCTCTCGCTGAGAACATTAATCTGTCAAGCTGGCGGGCTCCTTTGATAGC
AACTTTCCCAGGGGC**ATG**ATGTGGCAATGCCACCTCTCAGCCCAGGACTACCGCTATTACCCCGTGGACGGCTAC
TCCCTGCTTAAACGCTTCCCTCTTCATCCTCTTACAGGACCCAGATGCCCTGTCCAAACAGTGGGACAATGGTTG
GAAAGCATTGGGCTACCTCAGTACGAGAACCACCTGATGGCTAATGGATTTGACAATGTGCAGTTTATGGGAAGC
AATGTTATGGAAGATCAGGATTTGTTGGAAATTGGAATCCTTAATTCTGGGCACAGACAAAGAATTCTACAGGCA
ATCCAGCTCCTTCCAAAGATGAGACCCATTGGGCATGATGGCTACCATCCCACCTCTGTAGCTGAGTGGCTGGAT
TCCATTGAACTGGGCGACTACACCAAAGCCTTTCTAATTAATGGCTACACTTCGATGGACCTGTTGAAAAAAATC
TGGGAGGTTGAACTTATTAATGTTTTAAAAATCAATTTGATTGGCCACAGGAAACGTATTTTGGCATCTCTGGGA
GACAGGCTGCACGACGATCCCCCACAGAAGCCCCCTCGGTCCATCACCCTCAGGACAGGAGACTGGGGAGAACCT
TCCATTACCTTGCGACCTCCGAATGAAGCCACAGCCTCTACCCCGGTACAGTACTGGCAGCATCACCCAGAAAAG
CTTATCTTCCAGTCGTGTGATTACAAAGCTTTTTATTTAGGTTCTATGCTGATAAAAGAGCTTAGGGGGACAGAA
TCAACCCAAGATGCTTGTGCAAAAATGCGGGCTAACTGTCAGAAGTCTACAGAGCAAATGAAGAAGGTCCCTACT
ATTATTCTTTCTGTCTCATATAAAGGAGTCAAATTTATTGATGCAACAAATAAGAACATAATTGCTGAGCATGAA
ATTCGTAATATCTCCTGTGCTGCCCAGGACCCAGAAGACCTCTCAACATTTGCCTATATCACAAAAGATTTGAAG
TCTAATCACCACTACTGTCATGTGTTTACTGCCTTTGATGTGAATTTAGCCTATGAAATCATCCTAACCCTGGGA
CAGGCATTCGAAGTCGCTTACCAGCTAGCACTACAAGCAAGAAAAGGGGGACACTCCTCCACACTTCCAGAAAGC
TTTGAAAACAAACCCTCCAAACCCATCCCCAAGCCCCGCGTTAGCATTCGCAAGTCCGTGGATCTTCTTCATGCC
AGCCATACCGGGCAGGAACCATCAGAGAGACACACTGAGGAGGCACTCAGAAAATTT**TGA**TAGAATTGAATTTAC
ATATAGCTGATAAAGCCTAAATAGAAAGGTTGATGTATTTAGCTTGAATCCTTCACTTTAGTGGTCTAATCAACA
GATAAATGACAAGCAAAGAATGAAACAATCCAAAAATGTTTTTCAAAACAATTTTGTGAATTTTATTTTTACAAA
AATTTTTTAAATTCATATTTTAAAATGTATACCAAGGCAAAAAAATCATATAAGCTATATCATAAATACAAGAGT
TTCAAAACATACAAGAGACATATAATG

FIGURE 953

MMWQCHLSAQDYRYYPVDGYSLLKRFPLHPLTGPRCPVQTVGQWLESIGLPQYENHLMANGFDNVQFMGSNVMED
QDLLEIGILNSGHRQRILQAIQLLPKMRPIGHDGYHPTSVAEWLDSIELGDYTKAFLINGYTSMDLLKKIWEVEL
INVLKINLIGHRKRILASLGDRLHDDPPQKPPRSITLRTGDWGEPSITLRPPNEATASTPVQYWQHHPEKLIFQS
CDYKAFYLGSMLIKELRGTESTQDACAKMRANCQKSTEQMKKVPTIILSVSYKGVKFIDATNKNIIAEHEIRNIS
CAAQDPEDLSTFAYITKDLKSNHHYCHVFTAFDVNLAYEIILTLGQAFEVAYQLALQARKGGHSSTLPESFENKP
SKPIPKPRVSIRKSVDLLHASHTGQEPSERHTEEALRKF

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FIGURE 954A

TGCATGAAGACAAAAGGTCCTGTGCTCACCTGGGACCCTTCTGGACGTTGCCCTGTGTACCTCTTCGACTGCCTG
TTCATCTACGACGAACCCCGGGTATTGACCCCAGACAACAATGCCACTTCATATTGGGGACTTCGTCTGGGATTC
CAAGGTGCATTCATTGCAAAGTTCCTTAAATATTTTCTCACTGCTTCCTACTAAAGGACGGACAGAGCATTTGTT
CTTCAGCCACATACTTTCCTTCCACTGGCCAGCATTCTCCTCTATTAGACTAGAACTGTGGATAAACCTCAGAAA
ATGGCCACCCAGCAGAAAGCCTCTGACGAGAGGATCTCCCAGTTTGATCACAATTTGCTGCCAGAGCTGTCTGCT
CTTCTGGGCCTAGATGCAGTTCAGTTGGCAAAGGAACTAGAAGAAGAGGAGCAGAAGGAGCGAGCAAAAATGCAG
AAAGGCTACAACTCTCAAATGCGCAGTGAAGCAAAAAGGTTAAAGACTTTTGTGACTTATGAGCCGTACAGCTCA
TGGATACCACAGGAGATGGCGGCCGCTGGGTTTTACTTCACTGGGGTAAAATCTGGGATTCAGTGCTTCTGCTGT
AGCCTAATCCTCTTTGGTGCCGGCCTCACGAGACTCCCCATAGAAGACCACAAGAGGTTTCATCCAGATTGTGGG
TTCCTTTTGAACAAGGATGTTGGTAACATTGCCAAGTACGACATAAGGGTGAAGAATCTGAAGAGCAGGCTGAGA
GGAGGTAAAATGAGGTACCAAGAAGAGGAGGCTAGACTTGCGTCCTTCAGGAACTGGCCATTTTATGTCCAAGGG
ATATCCCCTTGTGTGCTCTCAGAGGCTGGCTTTGTCTTTACAGGTAAACAGGACACGGTACAGTGTTTTTCCTGT
GGTGGATGTTTAGGAAATTGGGAAGAAGGAGATGATCCTTGGAAGGAACATGCCAAATGGTTCCCCAAATGTGAA
TTTCTTCGGAGTAAGAAATCCTCAGAGGAAATTACCCAGTATATTCAAAGCTACAAGGGATTTGTTGACATAACG
GGAGAACATTTTGTGAATTCCTGGGTCCAGAGAGAATTACCTATGGCATCAGCTTATTGCAATGACAGCATCTTT
GCTTACGAAGAACTACGGCTGGACTCTTTTAAGGACTGGCCCCGGGAATCAGCTGTGGGAGTTGCAGCACTGGCC
AAAGCAGGTCTTTTCTACACAGGTATAAAGGACATCGTCCAGTGCTTTTCCTGTGGAGGGTGTTTAGAGAAATGG
CAGGAAGGTGATGACCCATTAGACGATCACACCAGATGTTTTCCCAATTGTCCATTTCTCCAAAATATGAAGTCC
TCTGCGGAAGTGACTCCAGACCTTCAGAGCCGTGGTGAACTTTGTGAATTACTGGAAACCACAAGTGAAAGCAAT
CTTGAAGATTCAATAGCAGTTGGTCCTATAGTGCCAGAAATGGCACAGGGTGAAGCCCAGTGGTTTCAAGAGGCA
AAGAATCTGAATGAGCAGCTGAGAGCAGCTTATACCAGCGCCAGTTTCCGCCACATGTCTTTGCTTGATATCTCT
TCCGATCTGGCCACGGACCACTTGCTGGGCTGTGATCTGTCTATTGCTTCAAAACACATCAGCAAACCTGTGCAA
GAACCTCTGGTGCTGCCTGAGGTCTTTGGCAACTTGAACTCTGTCATGTGTGTGGAGGGTGAAGCTGGAAGTGGA
AAGACGGTCCTCCTGAAGAAAATAGCTTTTCTGTGGGCATCTGGATGCTGTCCCCTGTTAAACAGGTTCCAGCTG
GTTTTCTACCTCTCCCTTAGTTCCACCAGACCAGACGAGGGGCTGGCCAGTATCATCTGTGACCAGCTCCTAGAG
AAAGAAGGATCTGTTACTGAAATGTGCATGAGGAACATTATCCAGCAGTTAAAGAATCAGGTCTTATTCCTTTTA
GATGACTACAAAGAAATATGTTCAATCCCTCAAGTCATAGGAAAACTGATTCAAAAAAACCACTTATCCCGGACC
TGCCTATTGATTGCTGTCCGTACAAACAGGGCCAGGGACATCCGCCGATACCTAGAGACCATTCTAGAGATCAAA
GCATTTCCCTTTTATAATACTGTCTGTATATTACGGAAGCTCTTTTCACATAATATGACTCGTCTGCGAAAGTTT
ATGGTTTACTTTGGAAAGAACCAAAGTTTGCAGAAGATACAGAAAACTCCTCTCTTTGTGGCGGCGATCTGTGCT
CATTGGTTTCAGTATCCTTTTGACCCATCCTTTGATGATGTGGCTGTTTTCAAGTCCTATATGGAACGCCTTTCC
TTAAGGAACAAAGCGACAGCTGAAATTCTCAAAGCAACTGTGTCCTCCTGTGGTGAGCTGGCCTTGAAAGGGTTT
TTTTCATGTTGCTTTGAGTTTAATGATGATGATCTCGCAGAAGCAGGGGTTGATGAAGATGAAGATCTAACCATG
TGCTTGATGAGCAAATTTACAGCCCAGAGACTAAGACCATTCTACCGGTTTTTAAGTCCTGCCTTCCAAGAATTT
CTTGCGGGGATGAGGCTGATTGAACTCCTGGATTCAGATAGGCAGGAACATCAAGATTTGGGACTGTATCATTTG
AAACAAATCAACTCACCCATGATGACTGTAAGCGCCTACAACAATTTTTTGAACTATGTCTCCAGCCTCCCTTCA
ACAAAAGCAGGGCCCAAAATTGTGTCTCATTTGCTCCATTTAGTGGATAACAAAGAGTCATTGGAGAATATATCT
GAAAATGATGACTACTTAAAGCACCAGCCAGAAATTTCACTGCAGATGCAGTTACTTAGGGGATTGTGGCAAATT
TGTCCACAAGCTTACTTTTCAATGGTTTCAGAACATTTACTGGTTCTTGCCCTGAAAACTGCTTATCAAAGCAAC
ACTGTTGCTGCGTGTTCTCCATTTGTTTTGCAATTCCTTCAAGGGAGAACACTGACTTTGGGTGCGCTTAACTTA
CAGTACTTTTTCGACCACCCAGAAAGCTTGTCATTGTTGAGGAGCATCCACTTCCCAATACGAGGAAATAAGACA
TCACCCAGAGCACATTTTTCAGTTCTGGAAACATGTTTTGACAAATCACAGGTGCCAACTATAGATCAGGACTAT
GCTTCTGCCTTTGAACCTATGAATGAATGGGAGCGAAATTTAGCTGAAAAAGAGGATAATGTAAAGAGCTATATG
GATATGCAGCGCAGGGCATCACCAGACCTTAGTACTGGCTATTGGAAACTTTCTCCAAAGCAGTACAAGATTCCC
TGTCTAGAAGTCGATGTGAATGATATTGATGTTGTAGGCCAGGATATGCTTGAGATTCTAATGACAGTTTTCTCA
GCTTCACAGCGCATCGAACTCCATTTAAACCACAGCAGAGGCTTTATAGAAAGCATCCGCCCAGCTCTTGAGCTG
TCTAAGGCCTCTGTCACCAAGTGCTCCATAAGCAAGTTGGAACTCAGCGCAGCCGAACAGGAACTGCTTCTCACC
CTGCCTTCCCTGGAATCTCTTGAAGTCTCAGGGACAATCCAGTCACAAGACCAAATCTTTCCTAATCTGGATAAG

FIGURE 954B

TTCCTGTGCCTGAAAGAACTGTCTGTGGATCTGGAGGGCAATATAAATGTTTTTTCAGTCATTCCTGAAGAATTT
CCAAACTTCCACCATATGGAGAAATTATTGATCCAAATTTCAGCTGAGTATGATCCTTCCAAACTAGTAAAATTA
ATTCAAAATTCTCCAAACCTTCATGTTTTCCATCTGAAGTGTAACTTCTTTTCGGATTTTGGGTCTCTCATGACT
ATGCTTGTTTCCTGTAAGAAACTCACAGAAATTAAGTTTTCGGATTCATTTTTTCAAGCCGTCCCATTTGTTGCC
AGTTTGCCAAATTTTATTTCTCTGAAGATATTAAATCTTGAAGGCCAGCAATTTCCTGATGAGGAAACATCAGAA
AAATTTGCCTACATTTTAGGTTCTCTTAGTAACCTGGAAGAATTGATCCTTCCTACTGGGGATGGAATTTATCGA
GTGGCCAAACTGATCATCCAGCAGTGTCAGCAGCTTCATTGTCTCCGAGTCCTCTCATTTTTCAAGACTTTGAAT
GATGACAGCGTGGTGGAAATTGCCAAAGTAGCAATCAGTGGAGGTTTCCAGAAACTTGAGAACCTAAAGCTTTCA
ATCAATCACAAGATTACAGAGGAAGGATACAGAAATTTCTTTCAAGCACTGGACAACATGCCAAACTTGCAGGAG
TTGGACATCTCCAGGCATTTCACAGAGTGTATCAAAGCTCAGGCCACAACAGTCAAGTCTTTGAGTCAATGTGTG
TTACGACTACCAAGGCTCATTAGACTGAACATGTTAAGTTGGCTCTTGGATGCAGATGATATTGCATTGCTTAAT
GTCATGAAAGAAAGACATCCTCAATCTAAGTACTTAACTATTCTCCAGAAATGGATACTGCCGTTCTCTCCAATC
ATTCAGAAA**TAA**AAGATTCAGCTAAAAACTGCTGAATCAATAATTTGTCTTGGGGCATATTGAGGATGTAAAAAA
AGTTGTTGATTAATGCTAAAAACCAAATTATCCAAAATTATTTTATTAAATATTGCATACAAAAGAAAATGTGTA
AGGCTTGCTAAAAAACAAAACAAAACAAAACACAGTCCTGCATACTCACCACCAAGCTCAAGAAATAAATCATCA
CCAATACCTTTGAGGTCCCTGAGTAATCCACCCCAGCTAAAGGCAAACCCTTCAATCAAGTTTATACAGCAAACC
CTCCATTGTCCATGGTCAACAGGGAAGGGGTTGGGGACAGGTCTGCCAATCTATCTAAAAGCCACAATATGGAAG
AAGTATTCAATTTATATAATAAATGGCTAACTTAACGGTTGAATCACTTTCATACATGGATGAAACGGGTTTAAC
ACAGGATCCACATGAATCTTCTGTGGGCCAAGAGATGTTCCTTAATCCTTGTAGAACCTGTTTTCTATATTGAAC
TAGCTTTGGTACAGTAGAGTTAACTTACTTTCCATTTATCCACTGCCAATATAAAGAGGAAACAGGGGTTAGGGA
AAAATGACTTCATTCCAGAGGCTTCTCAGAGTTCAACATATGCTATAATTTAGAATTTTCTTATGAATCCACTCT
ACTTGGGTAGAAAATATTTTATCTCTAGTGATTGCATATTATTTCCATATCATAGTATTTCATAGTATTATATTT
GATATGAGTGTCTATATCAATGTCAGTGTCCAGAATTTCGTTCCTACCAGTTAAGTAGTTTTCTGAACGGCCAGA
AGACCATTCGAAATTCATGATACTACTATAAGTTGGTAAACAACCATACTTTTATCCTCATTTTTATTCTCACTA
AGAAAAAAGTCAACTCCCCTCCCCTTGCCCAAGTATGAAATATAGGGACAGTATGTATGGTGTGGTCTCATTTGT
TTAGAAAACCACTTATGACTGGGTGCGGTGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCTGAGGCGGGCGA
ATCATTTGAGGTGAGGAATTCGAGACCAGCCTGGCCAGCATGGTGAAACCCCATCTCTACTAAAAATACAAAAAT
TAGCCAGGTGTGGTGGCACATGCCTGTAGTCCCAGCCACTAGGGCGGCTGAGACGCAAGACTTGCTTGAACCCGG
GAGGCAGAGGTTGCAGTGAGCCAAGATGGCGCCACTGCATTCCAGCCTGGGCAACAGAGCAAGACCCTGTCTGTC
TCAAAACAAAAAACAAAACCACTTATATTGCTAGCTACATTAAGAATTTCTGAATATGTTACTGAGCTTGCTTGT
GGTAACCATTTATAATATCAGAAAGTATATGTACACCAAAACATGTTGAACATCCATGTTGTACAACTGAAATAT
AAATAATTTTGTCAATTATACCTAAATAAAACTGGAAAAAAATTTCTGGAAGTTTATATCTAAAAATGTTAATAG
TGCGTACCTCTAGGAAGTGGGCCTGGAAGCCATTCTTACTTTTCAGTCTCTCCCATTCTGTACTGTTTTTTGTTT
TACTTTCGTGCCTGCATTATTTTTCTATTTAAAACAAAAATAAATCTAGTTTAGCACT

FIGURE 955

MATQQKASDERISQFDHNLLPELSALLGLDAVQLAKELEEEEQKERAKMQKGYNSQMRSEAKRLKTFVTYEPYSS
WIPQEMAAAGFYFTGVKSGIQCFCCSLILFGAGLTRLPIEDHKRFHPDCGFLLNKDVGNIAKYDIRVKNLKSRLR
GGKMRYQEEEARLASFRNWPFYVQGISPCVLSEAGFVFTGKQDTVQCFSCGGCLGNWEEGDDPWKEHAKWFPKCE
FLRSKKSSEEITQYIQSYKGFVDITGEHFVNSWVQRELPMASAYCNDSIFAYEELRLDSFKDWPRESAVGVAALA
KAGLFYTGIKDIVQCFSCGGCLEKWQEGDDPLDDHTRCFPNCPFLQNMKSSAEVTPDLQSRGELCELLETTSESN
LEDSIAVGPIVPEMAQGEAQWFQEAKNLNEQLRAAYTSASFRHMSLLDISSDLATDHLLGCDLSIASKHISKPVQ
EPLVLPEVFGNLNSVMCVEGEAGSGKTVLLKKIAFLWASGCCPLLNRFQLVFYLSLSSTRPDEGLASIICDQLLE
KEGSVTEMCMRNIIQQLKNQVLFLLDDYKEICSIPQVIGKLIQKNHLSRTCLLIAVRTNRARDIRRYLETILEIK
AFPFYNTVCILRKLFSHNMTRLRKFMVYFGKNQSLQKIQKTPLFVAAICAHWFQYPFDPSFDDVAVFKSYMERLS
LRNKATAEILKATVSSCGELALKGFFSCCFEFNDDDLAEAGVDEDEDLTMCLMSKFTAQRLRPFYRFLSPAFQEF
LAGMRLIELLDSDRQEHQDLGLYHLKQINSPMMTVSAYNNFLNYVSSLPSTKAGPKIVSHLLHLVDNKESLENIS
ENDDYLKHQPEISLQMQLLRGLWQICPQAYFSMVSEHLLVLALKTAYQSNTVAACSPFVLQFLQGRTLTLGALNL
QYFFDHPESLSLLRSIHFPIRGNKTSPRAHFSVLETCFDKSQVPTIDQDYASAFEPMNEWERNLAEKEDNVKSYM
DMQRRASPDLSTGYWKLSPKQYKIPCLEVDVNDIDVVGQDMLEILMTVFSASQRIELHLNHSRGFIESIRPALEL
SKASVTKCSISKLELSAAEQELLLTLPSLESLEVSGTIQSQDQIFPNLDKFLCLKELSVDLEGNINVFSVIPEEF
PNFHHMEKLLIQISAEYDPSKLVKLIQNSPNLHVFHLKCNFFSDFGSLMTMLVSCKKLTEIKFSDSFFQAVPFVA
SLPNFISLKILNLEGQQFPDEETSEKFAYILGSLSNLEELILPTGDGIYRVAKLIIQQCQQLHCLRVLSFFKTLN
DDSVVEIAKVAISGGFQKLENLKLSINHKITEEGYRNFFQALDNMPNLQELDISRHFTECIKAQATTVKSLSQCV
LRLPRLIRLNMLSWLLDADDIALLNVMKERHPQSKYLTILQKWILPFSPIIQK

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FIGURE 956

TCCCAGCTGCGCGTCGCAGTCCCGACGCGAGAAGGGCTGGAGTCGGCGTCCAGCCTAGAGCCCCCGGTGGGAGCC
AGGCCGGGACGCGTGCACC**ATG**CCCTACCTGCTCATCAGCACCCAGATCCGCATGGAGGTGGGCCCCACTATGGT
GGGCGATGAACAGTCGGATCCAGAGCTGATGCAGCATCTGGGGGCTTCAAAGAGAAGAGCCTTGGGAAACAACTT
TTATGAATACTACGTCGATGACCCTCCCCGCATAGTCCTGGACAAGCTGGAACGCAGGGGCTTCCGTGTGCTGAG
CATGACGGGGGTGGGCCAGACGCTGGTGTGGTGTCTGCACAAGGAG**TGA**CCTTCTCATGCTGATTTGCAGACGGG
GCACCCCTGTGGAGGGGCTGCTGTGGGCCCTGACCTCCAAGCTCCTGCCTCACCGTCTGCCTTGCTCCTCTCTTC
CCAAATCATCACCGCCATGGGCCCAGCCCCAAAGGGCAGTGAATGGCCTTCTCTGAAACCCTGCGTCAAGCAGTG
GGAGAGGGCAGTGCCCGGTGCCCTGGTGCTCCCAGCTGCCCTCCTGCTTCGGGCCTGGGCCGAGGGCCTTGTGTA
GGCCATGTTCCTCGGGCAGCTGCCCCGGGCCGGAGCTGGGCACTCCAGCGGCCCTGGCGCGTGGCTCCTGCATAG
CTAGCCCAAGCCAATAAAGGGCTGTGATGAGTGGCTGC

FIGURE 957

MPYLLISTQIRMEVGPTMVGDEQSDPELMQHLGASKRRALGNNFYEYYVDDPPRIVLDKLERRGFRVLSMTGVGQ
TLVWCLHKE

FIGURE 958

GGAAAGGAAGGTTTAAAATAATTAATTTAAAATGTCACTAAGTATAGACTGATGACTGTATAGAGATGTGAAATG
TATAATTACACATGGAAGCAATATGTTGCTGTGTTGTTATTAGGTTTTTTTGTTTTTGTTTTCTACATCTTTTAA
AGACTTTTGGAAATTTGGCTGAACAATTAGAACACAACAGGCCAACTCATACTCATTTGGATCTATTTAGACAAC
GTTAACCAATATATCTATAGCTTTAGATTATATTCGATAAAAGTAATTGGACTTTTTTTCTTTTTTTGACTCGTT
GACAAGTGTCTTTGTAATATGTTTTTAGTTCCCTTTTTTTGTTGTATTATAGGCAGATGAACAAATTAAATTTGG
CCTCAAAGAGAGAACTTACTCCCTTCTGGATATTTTTGCCACATTTCTTTGCAAAAGGAGATATATATATCTTTA
GTCAGTTTTGTTGTTATGAGAAATTATGGGTTATTTTGTGGCATGCTCTTTGGGAGCTGCACAGTT**ATG**GGGAGG
ACTCCCACTGCTGTGCAAGTTAAGTCTTTTACAAAACAAGGACAGCAGAGGAGGGTTTGCAGAGACCTCCCTCTG
AAAAACACAAAGAATGGACTCTCTCCTGGGATGAGGACTTGCTTTCTTTACCTCCGGTTCTTTCCATGTCTTAGT
TGGATGTCCCTGAAATGGACACAGGCTGTGCATTGTGCCAGAAACATTGTGTTATCTTTTATGTTGTTGTTGTTG
CTGTTAAACTATAATATG**TGA**CTTCTTTTTTTATTATTTTTTGTTTGAATGCTTTAAAAATCTTTAAGTCTGTGG
ACTGCTGATGTACAGTGCCTTTGCTGCTATGGATCAAATCAAAGACCGTGTAGATATACTTTATTGTATAAGTAG
AAAATTACTTAATTTCATACTAGAAATGGATGGATGCTGCAAGTTGAAATGGACTGTCCATTGACGTTCCTAATG
TGGTAGCAGAAAAAAATGGTGTCTTAAGTGCTTAGTGTTTGATGTCATTAACAGTTTCGTAAAACTCTACAGTGT
AGAAAGATTTTGATACTAAACTGTGCGTTGTACATAGTTCTAATGCATTGTATTGACCACCAGTACTTCTATAAT
GGTAGATTGTTTGTGAATTCAGACTTTTAAGCATTAAACATAAATAACTTCT

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FIGURE 959

MGRTPTAVQVKSFTKQGQQRRVCRDLPLKNTKNGLSPGMRTCFLYLRFFPCLSWMSLKWTQAVHCARNIVLSFML
LLLLLNYNM

FIGURE 960

GAGGCGAACCGGAGCGCGGGGCCGCGGTCGCCCCGACCAGAGCCGGGAGACCGCAGCACCCGCAGCCGCCCGCGA
GCGCGCCGAAGACAGCGCGCAGGCGAGAGCGCGCGGGCGGGGGCGCGCAGGCCCTGCCCGCCCCTTCCGTCCCCA
CCCCCCTCCGCCCTTTCCTCTCCCCACCTTCCTCTCGCCTCCCGCGCCCCCGCACCGGGCGCCCACCCTGTCCTC
CTCCTGCGGGAGCGTTGTCCGTGTTGGCGGCCGCAGCGGGCCGGGCCGGTCCGGCGGGCCGGGGGATGGCGCTGC
TGGACCTGGCCTTGGAGGGAATGGCCGTCTTCGGGTTCGTCCTCTTCTTGGTGCTGTGGCTGATGCATTTCATGG
CTATCATCTACACCCGATTACACCTCAACAAGAAGGCAACTGACAAACAGCCTTATAGCAAGCTCCCAGGTGTCT
CTCTTCTGAAACCACTGAAAGGGGTAGATCCTAACTTAATCAACAACCTGGAAACATTCTTTGAATTGGATTATC
CCAAATATGAAGTGCTCCTTTGTGTACAAGATCATGATGATCCAGCCATTGATGTATGTAAGAAGCTTCTTGGAA
AATATCCAAATGTTGATGCTAGATTGTTTATAGGTGGTAAAAAAGTTGGCATTAATCCTAAAATTAATAATTTAA
TGCCAGGATATGAAGTTGCAAAGTATGATCTTATATGGATTTGTGATAGTGGAATAAGAGTAATTCCAGATACGC
TTACTGACATGGTGAATCAAATGACAGAAAAAGTAGGCTTGGTTCACGGGCTGCCTTACGTAGCAGACAGACAGG
GCTTTGCTGCCACCTTAGAGCAGGTATATTTTGGAACTTCACATCCAAGATACTATATCTCTGCCAATGTAACTG
GTTTCAAATGTGTGACAGGAATGTCTTGTTTAATGAGAAAAGATGTGTTGGATCAAGCAGGAGGACTTATAGCTT
TTGCTCAGTACATTGCCGAAGATTACTTTATGGCCAAAGCGATAGCTGACCGAGGTTGGAGGTTTGCAATGTCCA
CTCAAGTTGCAATGCAAAACTCTGGCTCATATTCAATTTCTCAGTTTCAATCCAGAATGATCAGGTGGACCAAAC
TACGAATTAACATGCTTCCTGCTACAATAATTTGTGAGCCAATTTCAGAATGCTTTGTTGCCAGTTTAATTATTG
GATGGGCAGCCCACCATGTGTTCAGATGGGATATTATGGTATTTTTCATGTGTCATTGCCTGGCATGGTTTATAT
TTGACTACATTCAACTCAGGGGTGTCCAGGGTGGCACACTGTGTTTTTCAAAACTTGATTATGCAGTCGCCTGGT
TCATCCGCGAATCCATGACAATATACATTTTTTTGTCTGCATTATGGGACCCAACTATAAGCTGGAGAACTGGTC
GCTACAGATTACGCTGTGGGGGTACAGCAGAGGAAATCCTAGATGTATAACTACAGCTTTGTGACTGTATATAAA
GGAAAAAAGAGAAGTATTATAAATTATGTTTATATAAATGCTTTTAAAAATCTACCTTCTGTAGTTTTATCACAT
GTATGTTTTGGTATCTGTTCTTTAATTTATTTTTGCATGGCACTTGCATCTGTGAAAAAAAA

FIGURE 961

MALLDLALEGMAVFGFVLFLVLWLMHFMAIIYTRLHLNKKATDKQPYSKLPGVSLLKPLKGVDPNLINNLETFFE
LDYPKYEVLLCVQDHDDPAIDVCKKLLGKYPNVDARLFIGGKKVGINPKINNLMPGYEVAKYDLIWICDSGIRVI
PDTLTDMVNQMTEKVGLVHGLPYVADRQGFAATLEQVYFGTSHPRYYISANVTGFKCVTGMSCLMRKDVLDQAGG
LIAFAQYIAEDYFMAKAIADRGWRFAMSTQVAMQNSGSYSISQFQSRMIRWTKLRINMLPATIICEPISECFVAS
LIIGWAAHHVFRWDIMVFFMCHCLAWFIFDYIQLRGVQGGTLCFSKLDYAVAWFIRESMTIYIFLSALWDPTISW
RTGRYRLRCGGTAEEILDV

FIGURE 962A

AAAGAGCTGGAGGCGCGCAGGCCGGCTCCGCTCCGGCCCCGGACGATGCGGCGCGCCCAGG**ATG**CTGCCGTGCCT
CGTAGTGCTGCTGGCGGCGCTCCTCAGCCTCCGTCTTGGCTCAGACGCTCATGGGACAGAGCTGCCCAGCCCTCC
GTCTGTGTGGTTTGAAGCAGAATTTTTCCACCACATCCTCCACTGGACACCCATCCCAAATCAGTCTGAAAGTAC
CTGCTATGAAGTGGCGCTCCTGAGGTATGGAATAGAGTCCTGGAACTCCATCTCCAACTGTAGCCAGACCCTGTC
CTATGACCTTACCGCAGTGACCTTGGACCTGTACCACAGCAATGGCTACCGGGCCAGAGTGCGGGCTGTGGACGG
CAGCCGGCACTCCAACTGGACCGTCACCAACACCCGCTTCTCTGTGGATGAAGTGACTCTGACAGTTGGCAGTGT
GAACCTAGAGATCCACAATGGCTTCATCCTCGGGAAGATTCAGCTACCCAGGCCCAAGATGGCCCCCGCGAATGA
CACATATGAAAGCATCTTCAGTCACTTCCGAGAGTATGAGATTGCCATTCGCAAGGTGCCGGGAAACTTCACGTT
CACACACAAGAAAGTAAAACATGAAAACTTCAGCCTCCTAACCTCTGGAGAAGTGGGAGAGTTCTGTGTCCAGGT
GAAACCATCTGTCGCTTCCCGAAGTAACAAGGGGATGTGGTCTAAAGAGGAGTGCATCTCCCTCACCAGGCAGTA
TTTCACCGTGACCAACGTCATCATCTTCTTTGCCTTTGTCCTGCTGCTCTCCGGAGCCCTCGCCTACTGCCTGGC
CCTCCAGCTGTATGTGCGGCGCCGAAAGAAGCTACCCAGTGTCCTGCTCTTCAAGAAGCCCAGCCCCTTCATCTT
CATCAGCCAGCGTCCCTCCCCAGAGACCCAAGACACCATCCACCCGCTTGATGAGGAGGCCTTTTTGAAGGTGTC
CCCAGAGCTGAAGAACTTGGACCTGCACGGCAGCACAGACAGTGGCTTTGGCAGCACCAAGCCATCCCTGCAGAC
TGAAGAGCCCCAGTTCCTCCTCCCTGACCCTCACCCCCAGGCTGACAGAACGCTGGGAAACGGGGAGCCCCCTGT
GCTGGGGGACAGCTGCAGTAGTGGCAGCAGCAATAGCACAGACAGCGGGATCTGCCTGCAGGAGCCCAGCCTGAG
CCCCAGCACAGGGCCCACCTGGGAGCAACAGGTGGGGAGCAACAGCAGGGGCCAGGATGACAGTGGCATTGACTT
AGTTCAAAACTCTGAGGGCCGGGCTGGGGACACACAGGGTGGCTCGGCCTTGGGCCACCACAGTCCCCCGGAGCC
TGAGGTGCCTGGGGAAGAAGACCCAGCTGCTGTGGCATTCCAGGGTTACCTGAGGCAGACCAGATGTGCTGAAGA
GAAGGCAACCAAGACAGGCTGCCTGGAGGAAGAATCGCCCTTGACAGATGGCCTTGGCCCCAAATTCGGGAGATG
CCTGGTTGATGAGGCAGGCTTGCATCCACCAGCCCTGGCCAAGGGCTATTTGAAACAGGATCCTCTAGAAATGAC
TCTGGCTTCCTCAGGGGCCCCAACGGGACAGTGGAACCAGCCCACTGAGGAATGGTCACTCCTGGCCTTGAGCAG
CTGCAGTGACCTGGGAATATCTGACTGGAGCTTTGCCCATGACCTTGCCCCTCTAGGCTGTGTGGCAGCCCCAGG
TGGTCTCCTGGGCAGCTTTAACTCAGACCTGGTCACCCTGCCCCTCATCTCTAGCCTGCAGTCAAGTGAG**TGA**CT
CGGGCTGAGAGGCTGCTTTTGATTTTAGCCATGCCTGCTCCTCTGCCTGGACCAGGAGGAGGGCCCTGGGGCAGA
AGTTAGGCACGAGGCAGTCTGGGCACTTTTCTGCAAGTCCACTGGGGCTGGCCCAGCCAGGCTGCAGGGCTGGTC
AGGGTGTCTGGGGCAGGAGGAGGCCAACTCACTGAACTAGTGCAGGGTATGTGGGTGGCACTGACCTGTTCTGTT
GACTGGGGCCCTGCAGACTCTGGCAGAGCTGAGAAGGGCAGGGACCTTCTCCCTCCTAGGAACTCTTTCCTGTAT
CATAAAGGATTATTTGCTCAGGGGAACCATGGGGCTTTCTGGAGTTGTGGTGAGGCCACCAGGCTGAAGTCAGCT
CAGACCCAGACCTCCCTGCTTAGGCCACTCGAGCATCAGAGCTTCCAGCAGGAGGAAGGGCTGTAGGAATGGAAG
CTTCAGGGCCTTGCTGCTGGGGTCATTTTTAGGGGAAAAAGGAGGATATGATGGTCACATGGGGAACCTCCCCTC
ATCGGGCCTCTGGGGCAGGAAGCTTGTCACTGGAAGATCTTAAGGTATATATTTTCTGGACACTCAAACACATCA
TAATGGATTCACTGAGGGGAGACAAAGGGAGCCGAGACCCTGGATGGGGCTTCCAGCTCAGAACCCATCCCTCTG
GTGGGTACCTCTGGCACCCATCTGCAAATATCTCCCTCTCTCCAACAAATGGAGTAGCATCCCCCTGGGGCACTT
GCTGAGGCCAAGCCACTCACATCCTCACTTTGCTGCCCCACCATCTTGCTGACAACTTCCAGAGAAGCCATGGTT
TTTTGTATTGGTCATAACTCAGCCCTTTGGGCGGCCTCTGGGCTTGGGCACCAGCTCATGCCAGCCCCAGAGGGT
CAGGGTTGGAGGCCTGTGCTTGTGTTTGCTGCTAATGTCCAGCTACAGACCCAGAGGATAAGCCACTGGGCACTG
GGCTGGGGTCCCTGCCTTGTTGGTGTTCAGCTGTGTGATTTTGGACTAGCCACTTGTCAGAGGGCCTCAATCTCC
CATCTGTGAAATAAGGACTCCACCTTTAGGGGACCCTCCATGTTTGCTGGGTATTAGCCAAGCTGGTCCTGGGAG
AATGCAGATACTGTCCGTGGACTACCAAGCTGGCTTGTTTCTTATGCCAGAGGCTAACAGATCCAATGGGAGTCC
ATGGTGTCATGCCAAGACAGTATCAGACACAGCCCCAGAAGGGGGCATTATGGGCCCTGCCTCCCCATAGGCCAT
TTGGACTCTGCCTTCAAACAAAGGCAGTTCAGTCCACAGGCATGGAAGCTGTGAGGGGACAGGCCTGTGCGTGCC
ATCCAGAGTCATCTCAGCCCTGCCTTTCTCTGGAGCATTCTGAAAACAGATATTCTGGCCCAGGGAATCCAGCCA
TGACCCCCACCCCTCTGCCAAAGTACTCTTAGGTGCCAGTCTGGTAACTGAACTCCCTCTGGAGGCAGGCTTGAG
GGAGGATTCCTCAGGGTTCCCTTGAAAGCTTTATTTATTTATTTTGTTCATTTATTTATTGGAGAGGCAGCATTG
CACAGTGAAAGAATTCTGGATATCTCAGGAGCCCCGAAATTCTAGCTCTGACTTTGCTGTTTCCAGTGGTATGAC
CTTGGAGAAGTCACTTATCCTCTTGGAGCCTCAGTTTCCTCATCTGCAGAATAATGACTGACTTGTCTAATTCAT
AGGGATGTGAGGTTCTGCTGAGGAAATGGGTATGAATGTGCCTTGAACACAAAGCTCTGTCAATAAGTGATACAT

FIGURE 962B

GTTTTTTATTCCAATAAATTGTCAAGACCACA

FIGURE 963

MLPCLVVLLAALLSLRLGSDAHGTELPSPPSVWFEAEFFHHILHWTPIPNQSESTCYEVALLRYGIESWNSISNC
SQTLSYDLTAVTLDLYHSNGYRARVRAVDGSRHSNWTVTNTRFSVDEVTLTVGSVNLEIHNGFILGKIQLPRPKM
APANDTYESIFSHFREYEIAIRKVPGNFTFTHKKVKHENFSLLTSGEVGEFCVQVKPSVASRSNKGMWSKEECIS
LTRQYFTVTNVIIFFAFVLLLSGALAYCLALQLYVRRRKKLPSVLLFKKPSPFIFISQRPSPETQDTIHPLDEEA
FLKVSPELKNLDLHGSTDSGFGSTKPSLQTEEPQFLLPDPHPQADRTLGNGEPPVLGDSCSSGSSNSTDSGICLQ
EPSLSPSTGPTWEQQVGSNSRGQDDSGIDLVQNSEGRAGDTQGGSALGHHSPPEPEVPGEEDPAAVAFQGYLRQT
RCAEEKATKTGCLEEESPLTDGLGPKFGRCLVDEAGLHPPALAKGYLKQDPLEMTLASSGAPTGQWNQPTEEWSL
LALSSCSDLGISDWSFAHDLAPLGCVAAPGGLLGSFNSDLVTLPLISSLQSSE

FIGURE 964

CAGTGTTTGGTGTTGCAAGCAGGATCCAAAGGAGACCTATAGTGACTCCCAGGAGCTCTTAGTGACCAAGTGAAG
GTACCTGTGGGGCTCATTGTGCCCATTGCTCTTTCACTGCTTTCAACTGGTAGTTGTGGGTTGAAGCACTGGACA
ATGCCACATACTTTGTGGATGGTGTGGGTCTTGGGGGTCATCATCAGCCTCTCCAAGGAAGAATCCTCCAATCAG
GCTTCTCTGTCTTGTGACCGCAATGGTATCTGCAAGGGCAGCTCAGGATCTTTAAACTCCATTCCCTCAGGGCTC
ACAGAAGCTGTAAAAAGCCTTGACCTGTCCAACAACAGGATCACCTACATTAGCAACAGTGACCTACAGAGGTGT
GTGAACCTCCAGGCTCTGGTGCTGACATCCAATGGAATTAACACAATAGAGGAAGATTCTTTTTCTTCCCTGGGC
AGTCTTGAACATTTAGACTTATCCTATAATTACTTATCTAATTTATCGTCTTCCTGGTTCAAGCCCCTTTCTTCT
TTAACATTCTTAAACTTACTGGGAAATCCTTACAAAACCCTAGGGGAAACATCTCTTTTTTCTCATCTCACAAAA
TTGCAAATCCTGAGAGTGGGAAATATGGACACCTTCACTAAGATTCAAAGAAAAGATTTTGCTGGACTTACCTTC
CTTGAGGAACTTGAGATTGATGCTTCAGATCTACAGAGCTATGAGCCAAAAAGTTTGAAGTCAATTCAGAATGTA
AGTCATCTGATCCTTCATATGAAGCAGCATATTTTACTGCTGGAGATTTTTGTAGATGTTACAAGTTCCGTGGAA
TGTTTGGAACTGCGAGATACTGATTTGGACACTTTCCATTTTTCAGAACTATCCACTGGTGAAACAAATTCATTG
ATTAAAAAGTTTACATTTAGAAATGTGAAAATCACCGATGAAAGTTTGTTTCAGGTTATGAAACTTTTGAATCAG
ATTTCTGGATTGTTAGAATTAGAGTTTGATGACTGTACCCTTAATGGAGTTGGTAATTTTAGAGCATCTGATAAT
GACAGAGTTATAGATCCAGGTAAAGTGGAAACGTTAACAATCCGGAGGCTGCATATTCCAAGGTTTTACTTATTT
TATGATCTGAGCACTTTATATTCACTTACAGAAAGAGTTAAAAGAATCACAGTAGAAAACAGTAAAGTTTTTCTG
GTTCCTTGTTTACTTTCACAACATTTAAAATCATTAGAATACTTGGATCTCAGTGAAAATTTGATGGTTGAAGAA
TACTTGAAAAATTCAGCCTGTGAGGATGCCTGGCCCTCTCTACAAACTTTAATTTTAAGGCAAAATCATTTGGCA
TCATTGGAAAAAACCGGAGAGACTTTGCTCACTCTGAAAAACTTGACTAACATTGATATCAGTAAGAATAGTTTT
CATTCTATGCCTGAAACTTGTCAGTGGCCAGAAAAGATGAAATATTTGAACTTATCCAGCACACGAATACACAGT
GTAACAGGCTGCATTCCCAAGACACTGGAAATTTTAGATGTTAGCAACAACAATCTCAATTTATTTTCTTTGAAT
TTGCCGCAACTCAAAGAACTTTATATTTCCAGAAATAAGTTGATGACTCTACCAGATGCCTCCCTCTTACCCATG
TTACTAGTATTGAAAATCAGTAGGAATGCAATAACTACGTTTTCTAAGGAGCAACTTGACTCATTTCACACACTG
AAGACTTTGGAAGCTGGTGGCAATAACTTCATTTGCTCCTGTGAATTCCTCTCCTTCACTCAGGAGCAGCAAGCA
CTGGCCAAAGTCTTGATTGATTGGCCAGCAAATTACCTGTGTGACTCTCCATCCCATGTGCGTGGCCAGCAGGTT
CAGGATGTCCGCCTCTCGGTGTCGGAATGTCACAGGACAGCACTGGTGTCTGGCATGTGCTGTGCTCTGTTCCTG
CTGATCCTGCTCACGGGGGTCCTGTGCCACCGTTTCCATGGCCTGTGGTATATGAAAATGATGTGGGCCTGGCTC
CAGGCCAAAAGGAAGCCCAGGAAAGCTCCCAGCAGGAACATCTGCTATGATGCATTTGTTTCTTACAGTGAGCGG
GATGCCTACTGGGTGGAGAACCTTATGGTCCAGGAGCTGGAGAACTTCAATCCCCCCTTCAAGTTGTGTCTTCAT
AAGCGGGACTTCATTCCTGGCAAGTGGATCATTGACAATATCATTGACTCCATTGAAAAGAGCCACAAAACTGTC
TTTGTGCTTTCTGAAAACTTTGTGAAGAGTGAGTGGTGCAAGTATGAACTGGACTTCTCCCATTTCCGTCTTTTT
GATGAGAACAATGATGCTGCCATTCTCATTCTTCTGGAGCCCATTGAGAAAAAAGCCATTCCCCAGCGCTTCTGC
AAGCTGCGGAAGATAATGAACACCAAGACCTACCTGGAGTGGCCCATGGACGAGGCTCAGCGGGAAGGATTTTGG
GTAAATCTGAGAGCTGCGATAAAGTCC**TAG**GTTCCCATATTTAAGACCAGTCTTTGTCTAGTTGGGATCTTTATG
TCACTAGTTATAGTTAAGTTCATTCAGACATAATTATATAAAAACTACGTGGATGTACCGTCATTTGAGGA

FIGURE 965

MPHTLWMVWVLGVIISLSKEESSNQASLSCDRNGICKGSSGSLNSIPSGLTEAVKSLDLSNNRITYISNSDLQRC
VNLQALVLTSNGINTIEEDSFSSLGSLEHLDLSYNYLSNLSSSWFKPLSSLTFLNLLGNPYKTLGETSLFSHLTK
LQILRVGNMDTFTKIQRKDFAGLTFLEELEIDASDLQSYEPKSLKSIQNVSHLILHMKQHILLLEIFVDVTSSVE
CLELRDTDLDTFHFSELSTGETNSLIKKFTFRNVKITDESLFQVMKLLNQISGLLELEFDDCTLNGVGNFRASDN
DRVIDPGKVETLTIRRLHIPRFYLFYDLSTLYSLTERVKRITVENSKVFLVPCLLSQHLKSLEYLDLSENLMVEE
YLKNSACEDAWPSLQTLILRQNHLASLEKTGETLLTLKNLTNIDISKNSFHSMPETCQWPEKMKYLNLSSTRIHS
VTGCIPKTLEILDVSNNNLNLFSLNLPQLKELYISRNKLMTLPDASLLPMLLVLKISRNAITTFSKEQLDSFHTL
KTLEAGGNNFICSCEFLSFTQEQQALAKVLIDWPANYLCDSPSHVRGQQVQDVRLSVSECHRTALVSGMCCALFL
LILLTGVLCHRFHGLWYMKMMWAWLQAKRKPRKAPSRNICYDAFVSYSERDAYWVENLMVQELENFNPPFKLCLH
KRDFIPGKWIIDNIIDSIEKSHKTVFVLSENFVKSEWCKYELDFSHFRLFDENNDAAILILLEPIEKKAIPQRFC
KLRKIMNTKTYLEWPMDEAQREGFWVNLRAAIKS

FIGURE 966

CAGCTCTCTGTCAGA**ATG**GCCACCATGGTACCATCCGTGTTGTGGCCCAGGGCCTGCTGGACTCTGCTGGTCTGC
TGTCTGCTGACCCCAGGTGTCCAGGGGCAGGAGTTCCTTTTGCGGGTGGAGCCCCAGAACCCTGTGCTCTCTGCT
GGAGGGTCCCTGTTTGTGAACTGCAGTACTGATTGTCCCAGCTCTGAGAAAATCGCCTTGGAGACGTCCCTATCA
AAGGAGCTGGTGGCCAGTGGCATGGGCTGGGCAGCCTTCAATCTCAGCAACGTGACTGGCAACAGTCGGATCCTC
TGCTCAGTGTACTGCAATGGCTCCCAGATAACAGGCTCCTCTAACATCACCGTGTACGGGCTCCCGGAGCGTGTG
GAGCTGGCACCCCTGCCTCCTTGGCAGCCGGTGGGCCAGAACTTCACCCTGCGCTGCCAAGTGGAGGGTGGGTCG
CCCCGGACCAGCCTCACGGTGGTGCTGCTTCGCTGGGAGGAGGAGCTGAGCCGGCAGCCCGCAGTGGAGGAGCCA
GCGGAGGTCACTGCCACTGTGCTGGCCAGCAGAGACGACCACGGAGCCCCTTTCTCATGCCGCACAGAACTGGAC
ATGCAGCCCCAGGGGCTGGGACTGTTCGTGAACACCTCAGCCCCCCGCCAGCTCCGAACCTTTGTCCTGCCCGTG
ACCCCCCCGCGCCTCGTGGCCCCCCGGTTCTTGGAGGTGGAAACGTCGTGGCCGGTGGACTGCACCCTAGACGGG
CTTTTTCCAGCCTCAGAGGCCCAGGTCTACCTGGCGCTGGGGGACCAGATGCTGAATGCGACAGTCATGAACCAC
GGGGACACGCTAACGGCCACAGCCACAGCCACGGCGCGCGCGGATCAGGAGGGTGCCCGGGAGATCGTCTGCAAC
GTGACCCTAGGGGGCGAGAGACGGGAGGCCCGGGAGAACTTGACGGTCTTTAGCTTCCTAGGACCCATTGTGAAC
CTCAGCGAGCCCACCGCCCATGAGGGGTCCACAGTGACCGTGAGTTGCATGGCTGGGGCTCGAGTCCAGGTCACG
CTGGACGGAGTTCCGGCCGCGGCCCCGGGGCAGCCAGCTCAACTTCAGCTAAATGCTACCGAGAGTGACGACGGA
CGCAGCTTCTTCTGCAGTGCCACTCTCGAGGTGGACGGCGAGTTCTTGCACAGGAACAGTAGCGTCCAGCTGCGA
GTCCTGTATGGTCCCAAAATTGACCGAGCCACATGCCCCCAGCACTTGAAATGGAAAGATAAAACGAGACACGTC
CTGCAGTGCCAAGCCAGGGGCAACCCGTACCCCGAGCTGCGGTGTTTGAAGGAAGGCTCCAGCCGGGAGGTGCCG
GTGGGGATCCCGTTCTTCGTCAACGTAACACATAATGGTACTTATCAGTGCCAAGCGTCCAGCTCACGAGGCAAA
TACACCCTGGTCGTGGTGATGGACATTGAGGCTGGGAGCTCCCACTTTGTCCCCGTCTTCGTGGCGGTGTTACTG
ACCCTGGGCGTGGTGACTATCGTACTGGCCTTAATGTACGTCTTCAGGGAGCACCAACGGAGCGGCAGTTACCAT
GTTAGGGAGGAGAGCACCTATCTGCCCCTCACGTCTATGCAGCCGACAGAAGCAATGGGGGAAGAACCGTCCAGA
GCTGAG**TGA**CGCTGGGATCCGGGATCAAAGTTGGCGGGGGCTTGGCTGTGCCCTCAGATTCCGCACCAATAAAGC
CTTCAAACTCCCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 967

MATMVPSVLWPRACWTLLVCCLLTPGVQGQEFLLRVEPQNPVLSAGGSLFVNCSTDCPSSEKIALETSLSKELVA
SGMGWAAFNLSNVTGNSRILCSVYCNGSQITGSSNITVYGLPERVELAPLPPWQPVGQNFTLRCQVEGGSPRTSL
TVVLLRWEEELSRQPAVEEPAEVTATVLASRDDHGAPFSCRTELDMQPQGLGLFVNTSAPRQLRTFVLPVTPPRL
VAPRFLEVETSWPVDCTLDGLFPASEAQVYLALGDQMLNATVMNHGDTLTATATATARADQEGAREIVCNVTLGG
ERREARENLTVFSFLGPIVNLSEPTAHEGSTVTVSCMAGARVQVTLDGVPAAAPGQPAQLQLNATESDDGRSFFC
SATLEVDGEFLHRNSSVQLRVLYGPKIDRATCPQHLKWKDKTRHVLQCQARGNPYPELRCLKEGSSREVPVGIPF
FVNVTHNGTYQCQASSSRGKYTLVVVMDIEAGSSHFVPVFVAVLLTLGVVTIVLALMYVFREHQRSGSYHVREES
TYLPLTSMQPTEAMGEEPSRAE

FIGURE 968

GAGCACGCAGTCCCTTGGTCTCTTCGGTCTCCTGCCGCCCCCGGGAAGCGCGCTGCGCTGCCGAGGCGAGCTAAG
CGCCCGCTCGCC**ATG**GGGAGCCCCGCACATCGGCCCGCGCTGCTGCTGCTGCTGCCGCCTCTGCTGCTGCTGCTG
CTGCTGCGCGTCCCGCCCAGCCGCAGCTTCCCAGGATCGGGAGACTCACCACTAGAAGACGATGAAGTCGGGTAT
TCACACCCTAGATATAAAGATACCCCGTGGTGCTCCCCCATCAAGGTGAAGTATGGGGATGTGTACTGCAGGGCC
CCTCAAGGAGGATACTACAAAACAGCCCTGGGAACCAGGTGCGACATTCGCTGCCAGAAGGGCTACGAGCTGCAT
GGCTCTTCCCTACTGATCTGCCAGTCAAACAAACGATGGTCTGACAAGGTCATCTGCAAACAAAAGCGATGTCCT
ACCCTTGCCATGCCAGCAAATGGAGGGTTTAAGTGTGTAGATGGTGCCTACTTTAACTCCCGGTGTGAGTATTAT
TGTTCACCAGGATACACGTTGAAAGGGGAGCGGACCGTCACATGTATGGACAACAAGGCCTGGAGCGGCCGGCCA
GCCTCCTGTGTGGATATGGAACCTCCTAGAATCAAGTGCCCAAGTGTGAAGGAACGCATTGCAGAACCCAACAAA
CTGACAGTCCGGGTGTCCTGGGAGACACCCGAAGGAAGAGACACAGCAGATGGAATTCTTACTGATGTCATTCTA
AAAGGCCTCCCCCCAGGCTCCAACTTTCCAGAAGGAGACCACAAGATCCAGTACACAGTCTATGACAGAGCTGAG
AATAAGGGCACTTGCAAATTTCGAGTTAAAGTAAGAGTCAAACGCTGTGGCAAACTCAATGCCCCAGAGAATGGT
TACATGAAGTGCTCCAGCGACGGTGATAATTATGGAGCCACCTGTGAGTTCTCCTGCATCGGCGGCTATGAGCTC
CAGGGTAGCCCTGCCCGAGTATGTCAATCCAACCTGGCTTGGTCTGGCACGGAGCCCACCTGTGCAGCCATGAAC
GTCAATGTGGGTGTCAGAACGGCAGCTGCACTTCTGGATCAGTTTTATGAGAAAAGGAGACTCCTCATTGTGTCC
ACACCCACAGCCCGAAACCTCCTTTACCGGCTCCAGCTAGGAATGCTGCAGCAAGCACAGTGTGGCCTTGATCTT
CGACACATCACCGTGGTGGAGCTGGTGGGTGTGTTCCCGACTCTCATTGGCAGGATAGGAGCAAAGATTATGCCT
CCAGCCCTAGCGCTGCAGCTCAGGCTGTTGCTGCGAATCCCACTCTACTCCTTCAGTATGGTGCTAGTGGATAAG
CATGGCATGGACAAAGAGCGCTATGTCTCCCTGGTGATGCCTGTGGCCCTGTTCAACCTGATTGACACTTTTCCC
TTGAGAAAAGAAGAGATGGTCCTACAAGCCGAAATGAGCCAGACCTGTAACACC**TGA**CATGATGGTTCCTCTCTT
GGCAATTCCTCTTCATTGTCTACATAGTGACATGCACACGGGAAAGCCTTAAAAATATCCTTGATGTACAGATTT
TATTTGTAATTTTAAAAGTCTATTTTATTATGAGCTTTCTTTGCACTTAAAAATTAGCATGCTGCTTTTTGTACT
TGGAAGTGTTTCAAAAAATTATATGACCATATTTACTCTTTCTAACTTTCTTTACTCCATCATGGCTGGTTGATT
TTGTAGAGAAATTAGAACCCATAACCATACACAGGCTATCAACATGTTATTCAATGTGACACCTAACTCTTTTCT
ATTTTGTTTTTTAAGTAAGACTTTTATTAATAAAACAAAATGTTTTGGAGCAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 969

MGSPAHRPALLLLLPPLLLLLLLRVPPSRSFPGSGDSPLEDDEVGYSHPRYKDTPWCSPIKVKYGDVYCRAPQGG
YYKTALGTRCDIRCQKGYELHGSSLLICQSNKRWSDKVICKQKRCPTLAMPANGGFKCVDGAYFNSRCEYYCSPG
YTLKGERTVTCMDNKAWSGRPASCVDMEPPRIKCPSVKERIAEPNKLTVRVSWETPEGRDTADGILTDVILKGLP
PGSNFPEGDHKIQYTVYDRAENKGTCKFRVKVRVKRCGKLNAPENGYMKCSSDGDNYGATCEFSCIGGYELQGSP
ARVCQSNLAWSGTEPTCAAMNVNVGVRTAAALLDQFYEKRRLLIVSTPTARNLLYRLQLGMLQQAQCGLDLRHIT
VVELVGVFPTLIGRIGAKIMPPALALQLRLLLRIPLYSFSMVLVDKHGMDKERYVSLVMPVALFNLIDTFPLRKE
EMVLQAEMSQTCNT

FIGURE 970

ATTGAGAGTGGCTCTAACAAGTGCCATTTTTCCTTGTTAGCTTTCATTTCTCAGCCCTTTACAAGATTAAAATAG
TCTGCAGTTTAATCTCTCCAAAGCTTTACGGACAGTGATTCTGTCCTAAACAAGACAGTGACTCCAGGATTTCTG
AAGACTATTGTGGAAGAAGCATCCATTAAGGCCAAGCTATAACATCAGAA**ATG**GTGAATGAATACAAGAAAATTC
TTTTGCTGAAAGGATTTGAGCTCATGGATGATTATCATTTTACATCAATTAAGTCCTTACTGGCCTATGATTTAG
GACTAACTACAAAAATGCAAGAGGAATACAACAGAATTAAGATTACAGATTTGATGGAAAAAAAGTTCCAAGGCG
TTGCCTGTCTAGACAAACTAATAGAACTTGCCAAAGATATGCCATCACTTAAAAACCTTGTTAACAATCTTCGAA
AAGAGAAGTCAAAAGTTGCTAAGAAAATTAAAACACAAGAAAAAGCTCCAGTGAAAAAAATAAACCAGGAAGAAG
TGGGTCTTGCGGCACCTGCACCCACCGCAAGAAACAAACTGACATCGGAAGCAAGAGGGAGGATTCCTGTAGCTC
AGAAAAGAAAAACTCCAAACAAAGAAAAGACTGAAGCCAAAAGGAATAAGGTGTCCCAAGAGCAGAGTAAGCCCC
CAGGTCCCTCAGGAGCCAGCACATCTGCAGCTGTGGATCATCCCCCACTACCCCAGACCTCATCATCAACTCCAT
CCAACACTTCGTTTACTCCGAATCAGGAAACCCAGGCCCAACGGCAGGTGGATGCAAGAAGAAATGTTCCCCAAA
ACGACCCAGTGACAGTGGTGGTACTGAAAGCAACAGCGCCATTTAAATACGAGTCCCCAGAAAATGGGAAAAGCA
CAATGTTTCATGCTACAGTGGCCAGTAAGACTCAATATTTCCATGTGAAAGTCTTCGACATCAACTTGAAAGAGA
AATTTGTAAGGAAGAAGGTCATTACCATATCTGATTACTCTGAATGTAAAGGAGTAATGGAAATAAAGGAAGCAT
CATCTGTGTCTGACTTTAATCAAAATTTTGAGGTCCCAAACAGAATTATCGAAATAGCAAATAAAACTCCCAAGA
TCAGTCAACTTTACAAGCAAGCATCTGGAACAATGGTGTATGGGTTGTTTATGTTACAAAAGAAAAGCGTACACA
AGAAGAACACAATTTATGAAATACAGGATAATACAGGATCCATGGATGTAGTGGGGAGTGGAAAATGGCACAATA
TCAAGTGTGAGAAAGGAGATAAACTTCGACTCTTCTGCCTTCAACTGAGAACAGTTGACCGCAAGCTGAAACTGG
TGTGTGGAAGTCACAGCTTCATCAAGGTCATCAAGGCCAAGAAAAACAAGGAAGGACCAATGAATGTTAAT**TGA**A
ATATGAAAGCTGAAATGCAACAAACAACTTCCGCTTAAAACAATTAAGTTGTTAATAACTGTGATTTTGTAAATT
TCAGTAATTCATTTAAATGATGTTTCAGTAGATATATTCTAGCATATTAAGAGCTTTTATAACTGAGTTATAGAT
TAGTTTGCTTTCTGGAATAAAATTTTCTTCTTATACTCTTCCTTTTTTTTAGATATTACATTTTGCTTTTATGAC
ATTCACGAGGCAAAAAACCG

FIGURE 971

MVNEYKKILLLKGFELMDDYHFTSIKSLLAYDLGLTTKMQEEYNRIKITDLMEKKFQGVACLDKLIELAKDMPSL
KNLVNNLRKEKSKVAKKIKTQEKAPVKKINQEEVGLAAPAPTARNKLTSEARGRIPVAQKRKTPNKEKTEAKRNK
VSQEQSKPPGPSGASTSAAVDHPPLPQTSSSTPSNTSFTPNQETQAQRQVDARRNVPQNDPVTVVVLKATAPFKY
ESPENGKSTMFHATVASKTQYFHVKVFDINLKEKFVRKKVITISDYSECKGVMEIKEASSVSDFNQNFEVPNRII
EIANKTPKISQLYKQASGTMVYGLFMLQKKSVHKKNTIYEIQDNTGSMDVVGSGKWHNIKCEKGDKLRLFCLQLR
TVDRKLKLVCGSHSFIKVIKAKKNKEGPMNVN

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FIGURE 972

GGCCACCCAGTC**ATG**GGGGACACCTTCATCCGTCACATCGCCCTGCTGGGCTTTGAGAAGCGCTTCGTACCCAGC
CAGCACTATGTGTACATGTTCCTGGTGAAATGGCAGGACCTGTCGGAGAAGGTGGTCTACCGGCGCTTCACCGAG
ATCTACGAGTTCCATAAAACCTTAAAAGAAATGTTCCCTATTGAGGCAGGGGCGATCAATCCAGAGAACAGGATC
ATCCCCCACCTCCCAGCTCCCAAGTGGTTTGACGGGCAGCGGGCCGCCGAGAACCGCCAGGGCACACTTACCGAG
TACTGCAGCACGCTCATGAGCCTGCCCACCAAGATCTCCCGCTGTCCCCACCTCCTCGACTTCTTCAAGGTGCGC
CCTGATGACCTCAAGCTCCCCACAGACAACCAGACAAAAAAGCCAGAGACATACTTGATGCCCAAAGATGGCAAG
AGTACCGCGACAGACATCACCGGCCCCATCATCCTGCAGACGTACCGCGCCATTGCCGACTACGAGAAGACCTCG
GGCTCCGAGATGGCTCTGTCCACGGGGGACGTGGTGGAGGTCGTGGAGAAGAGCGAGAGCGGTTGGTGGTTCTGT
CAGATGAAAGCAAAGCGAGGCTGGATCCCAGCATCCTTCCTCGAGCCCCTGGACAGTCCTGACGAGACGGAAGAC
CCTGAGCCCAACTATGCAGGTGAGCCATACGTCGCCATCAAGGCCTACACTGCTGTGGAGGGGGACGAGGTGTCC
CTGCTCGAGGGTGAAGCTGTTGAGGTCATTCACAAGCTCCTGGACGGCTGGTGGGTCATCAGGAAAGACGACGTC
ACAGGCTACTTTCCGTCCATGTACCTGCAAAAGTCGGGGCAAGACGTGTCCCAGGCCCAACGCCAGATCAAGCGG
GGGGCGCCGCCCCGCAGGTCGTCCATCCGCAACGCGCACAGCATCCATCAGCGGTCGCGGAAGCGCCTCAGCCAG
GACGCCTATCGCCGCAACAGCGTCCGTTTTCTGCAGCAGCGACGCCGCCAGGCGCGGCCGGGACCGCAGAGCCCC
GGGAGCCCGCTCGAGGAGGAGCGGCAGACGCAGCGCTCTAAACCGCAGCCGGCGGTGCCCCCGCGGCCGAGCGCC
GACCTCATCCTGAACCGCTGCAGCGAGAGCACCAAGCGGAAGCTGGCGTCTGCCGTC**TGA**GGCTGGAGCGCAGTC
CCCAGCTAGCGTCTCGGCCCTTGCCGCCCCGTGCCTGTACATACGTGTTCTATAGAGCCTGGCGTCTGGACGCCG
AGGGCAGCCCCGACCCCTGTCCAGCGCGGCTCCCGCCACCCTCAATAAATGTTGCTTGGAGTGG

FIGURE 973

MGDTFIRHIALLGFEKRFVPSQHYVYMFLVKWQDLSEKVVYRRFTEIYEFHKTLKEMFPIEAGAINPENRIIPHL
PAPKWFDGQRAAENRQGTLTEYCSTLMSLPTKISRCPHLLDFFKVRPDDLKLPTDNQTKKPETYLMPKDGKSTAT
DITGPIILQTYRAIADYEKTSGSEMALSTGDVVEVVEKSESGWWFCQMKAKRGWIPASFLEPLDSPDETEDPEPN
YAGEPYVAIKAYTAVEGDEVSLLEGEAVEVIHKLLDGWWVIRKDDVTGYFPSMYLQKSGQDVSQAQRQIKRGAPP
RRSSIRNAHSIHQRSRKRLSQDAYRRNSVRFLQQRRRQARPGPQSPGSPLEEERQTQRSKPQPAVPPRPSADLIL
NRCSESTKRKLASAV

FIGURE 974A

AATTCGGCACGAGACAAAAAGAGAAAGAAA**ATG**CCGAAACCAATCAACGTAAGAGTAACTACAATGGATGCTGAG
CTGGAATTTGCCATTCAGCCCAATACAACTGGCAAACAACTTTTTGACCAGGTGGTGAAAACAGTTGGTTTGCGT
GAGGTCTGGTTTTTTGGGCTGCAGTATGTAGACAGCAAAGGTTATTCTACATGGCTTAAACTAAATAAAAAGGTA
ACACAGCAGGATGTTAAAAAAGAGAATCCTTTACAGTTCAAGTTTAGAGCTAAATTCTTTCCTGAAGATGTTTCT
GAGGAATTAATTCAAGAAATAACCCAGAGACTCTTCTTCTTGCAAGTTAAAGAAGCCATCTTAAATGATGAGATA
TATTGCCCGCCAGAAACTGCAGTTCTTTTGGCTTCCTATGCTGTCCAAGCCAAGTATGGAGATTACAATAAAGAG
ATTCATAAGCCAGGCTACCTGGCTAATGATAGACTCCTACCCCAGCGTGTATTGGAACAACACAAACTAACAAAA
GAACAGTGGGAAGAAAGAATACAGAACTGGCATGAAGAACATAGAGGAATGTTAAGGGAGGATTCTATGATGGAA
TACCTGAAGATTGCACAAGATCTAGAAATGTATGGAGTCAACTATTTTGAAATAAAAAATAAAAAAGGAACTGAA
TTGTGGCTAGGTGTTGATGCTTTGGGTCTGAATATTTATGAGCATGACGACAAGTTAACACCTAAAATTGGTTTT
CCCTGGAGTGAAATCAGAAATATTTCATTTAATGACAAAAAATTTGTTATAAAGCCAATCGACAAAAAGGCACCT
GATTTTGTGTTTTATGCACCTCGTCTGAGAATCAATAAGCGGATTTTGGCCTTATGTATGGGAAACCATGAACTA
TACATGCGAAGAAGGAAGCCTGATACTATTGAAGTACAACAGATGAAGGCTCAGGCTAGGGAGGAGAAACATCAG
AAGCAGTTGGAAAGGGCACAATTAGAGAATGAAAAGAAGAAAAGAGAAATAGCAGAAAAGGAAAAGGAAAGAATA
GAACGTGAAAAGGAAGAGCTAATGGAACGTCTAAAACAAATTGAAGAGCAGACAATTAAAGCTCAGAAAGAACTA
GAAGAACAGACTCGAAAAGCTCTAGAACTGGATCAAGAACGAAAACGAGCAAAAGAAGAAGCAGAACGACTTGAA
AAGGAGCGTCGAGCTGCTGAAGAGGCAAAGTCTGCCATAGCAAAACAAGCTGCCGACCAGATGAAGAATCAGGAG
CAGCTAGCAGCAGAACTTGCTGAATTCACTGCCAAGATTGCACTTCTAGAGGAAGCCAAGAAGAAAAAGGAAGAG
GAAGCAACTGAGTGGCAACACAAAGCTTTTGCAGCCCAGGAAGACTTGGAAAAGACCAAAGAAGAGTTAAAAACT
GTGATGTCTGCCCCCCCTCCACCTCCACCACCACCAGTCATTCCTCCAACAGAAAACGAACATGATGAACACGAT
GAGAATAATGCTGAAGCTAGTGCTGAATTATCAAATGAAGGGGTAATGAACCATAGAAGCGAGGAAGAACGTGTA
ACCGAAACACAGAAAAATGAGCGTGTTAAGAAGCAACTTCAGGCATTAAGTTCAGAATTAGCCCAAGCCAGAGAT
GAAACCAAGAAAACACAAAATGATGTTCTTCATGCTGAGAATGTTAAAGCAGGCCGTGATAAGTACAAGACTCTG
CGACAGATTCGACAAGGCAATACAAAGCAGCGTATCGATGAGTTTGAAGCAATG**TGA**GAGCTGTTATTTTGCATA
TATGTTCTTCATAAGCTGAACCACCAACAGAGAAAAGCAGGCCTTTGCAGATATGATGGAATGCATCCCACCTTG
CCAAAGCACTTACACCAGTTTGACTGTGCTAGCTAAAAGACAAATTTAAGGGGAGCTCTTCAACATTAAGGCAGT
ATGATATCATGCTTGGTTTTCTTTTTTCTTTTGGTCCAGGGAATGGAGAATGGTGTTCCATTGCCTCTTTTCACA
TTTTTTTTCTTTTTCTTTTTTTTTTTCTGTTGAAGATTAACACTAATTATCACGTCTGACAAATGTGTATGTGTGG
TTTCAGTTCTGTGTACATTTTAAAGGATAATGGTGAACATTTTAATGGGTTTCCCTTGCCCTTTCCATATTTAAC
CTATTTCCACATTCTCTCTCACTCACATTTTCTCAGTGTGCCCTTCTCTTATCTGCCATGTCCATAGCCATAATT
CCACCATCATACAGATCAGGCAGTGTTTAAAATGATGGTAGGTAGCACAGTGGACAGTCTTTGATCATCATGTAG
AATATGGCTATGAATCAGGAAAGAGATTAGAACATTTAATAATGTATGTACAGCTGGTGCTTAGTTTTTTTTTAA
TCTAAATTTAATTACCTTATTGGATATTTGATATTTGGTTATTTAATCACAGTCATCTTTAACAGCTTACACTGA
TTGGTGTTTTATCTCCTGTGATCCTTTGATGGCTTTTTTTGCCTACCATTTCACAGAGGTTTAGACAGCAGTAGT
AGCTCCCTAGGAGAGTTTACTGATGAAACAGCCTCTGCAAGATTTTAAAAGTTTTGTTCTTTTATAGACTGATTT
AGAAAAACAAATGATTAGTTAAAAAAAGAAAATATACATTTGTTGGTAACTAATGTTATTTTTTAAAACCTGGAC
CTTTCTGGAAGGGCAGCATATAAAAACATCAGTCCCGAGGAGGGGACAACAATACTACCTCACTACTACATCTGT
GATGACTGGTTGTTCAAACACAATGGAGTGTGTAAGGTATATGTTTTATAATTCATAACCATAGCCTCGATCATC
AAGAAATACTTTCGAAATTTCATTTTCCTTCAGAATATCTTAAGAGTGCTAAATTTTTAACTGCCTTTTTGTCGA
GTCAAACTGTGGGATTCTGATTTGTATTAAAATTGTAAGCTCCTCACTGGTATACTATCATCCTGGAGGGGTGTT
GTATGGCTGAGCAAGAGAGAGAGAGAATGAGAGAGAGACTGTGTGTGTGTGTGTGTGTGTACTCTGTGTGT
GTATGAGAGAGAGAGAGAAATGCTAACCTTGTAGCATGTGAAGAATGTCTGTACCTTGATACGATAGTTACATAA
TCAGTATATTTGGTTTCTAGATCACTGTGCTTATTTTGTTTCAATCTCTGACTAAAAATACTTAAATTTGGTTTG
TTAATTCTTATTTTAGAAATTATAATTTTAGTTTATATTAATTTCGGTTATAGCTTACTGAAGAAATCTTTCCAG
TTAGAAGGAGGTTCTAATATTCACATGTTCTAATACTTTGTTTATTGTAAAACAGCTAAATTTGGAGATACGTAA
AGCCTTGTTTTCTCTGTGTGGTTCAGCTACTTTCCATTTGGTATTACACAGTCAAATTTACATTTATCTATTAAA
ATTGCCATTTTATTAAACATTTTCATGCACAGTAGATTCAAGTTGTGTCTGAAAATATCTCTTGTGCTTTTTTGA
TTTTGCTGACTTTAAAAGGATTAATCTGGGCAGACATTATGTAAAAGAAAGGTTGCGTTTAATATATTTTTTGAA

FIGURE 974B

CTTTGTAGGACAAAACATAGCTGGTTAACCTTGAAGTGACTGTTGTACCATGGTTGTGCACATGCTTCAGAATCC
TATGGAAGAGAATATTCCTACTTGCAGTACATCAAAGGAATGGATGGTGGACCCTACTATTCATGTTTTGAGACA
TAAATGTTCACTTTAAAGCAATTGCATAATAGATAAAAACCTGAACTTTCATTGGATTTTTGTTAATTTTCCTCA
TTTTGAATTATGTGCACTACCATAGCTACATCAGTTTGATACAGTATTGAAAAATTATCAGTTATATTTTGCTGT
TTATGATCTATTTGTAGATTAGGATTAAAATGGATTTAATCCATTTTTAAGGCTGTGTGAATTTTTCTAAACAAG
AACCATTTGCAATATGGATTTCTTAGAGATTAAACCAATTATAACTTATTAGCAGTCGCGAGCACATGTTCATAT
AGTCAATGTAAAAATACACTAATGAGTATTTGGTAAATCCCAGTAGGCTTTTACCATTAGCATAATTTTGTGTTG
TACAATTAAGTTACAATTACATCTCTAATTTTGGATAATATTCATTGGTTAACAATAAAGTGACAAAAGCTCATG
CAAAAAAAAAAAAAAAAAAA

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FIGURE 975

MPKPINVRVTTMDAELEFAIQPNTTGKQLFDQVVKTVGLREVWFFGLQYVDSKGYSTWLKLNKKVTQQDVKKENP
LQFKFRAKFFPEDVSEELIQEITQRLFFLQVKEAILNDEIYCPPETAVLLASYAVQAKYGDYNKEIHKPGYLAND
RLLPQRVLEQHKLTKEQWEERIQNWHEEHRGMLREDSMMEYLKIAQDLEMYGVNYFEIKNKKGTELWLGVDALGL
NIYEHDDKLTPKIGFPWSEIRNISFNDKKFVIKPIDKKAPDFVFYAPRLRINKRILALCMGNHELYMRRRKPDTI
EVQQMKAQAREEKHQKQLERAQLENEKKKREIAEKEKERIEREKEELMERLKQIEEQTIKAQKELEEQTRKALEL
DQERKRAKEEAERLEKERRAAEEAKSAIAKQAADQMKNQEQLAAELAEFTAKIALLEEAKKKKEEEATEWQHKAF
AAQEDLEKTKEELKTVMSAPPPPPPPPVIPPTENEHDEHDENNAEASAELSNEGVMNHRSEEERVTETQKNERVK
KQLQALSSELAQARDETKKTQNDVLHAENVKAGRDKYKTLRQIRQGNTKQRIDEFEAM

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FIGURE 976

ACTTCCCTGTTCACTTTGGTTCCAGCATCCTGTCCAGCAAAGAAGCAATCAGCCAAA**ATG**ATACCTGGAGGCTTA
TCTGAGGCCAAACCCGCCACTCCAGAAATCCAGGAGATTGTTGATAAGGTTAAACCACAGCTTGAAGAAAAAACA
AATGAGACTTATGGAAAATTGGAAGCTGTGCAGTATAAAACTCAAGTTGTTGCTGGAACAAATTACTACATTAAG
GTACGAGCAGGTGATAATAAATATATGCACTTGAAAGTATTCAAAAGTCTTCCCGGACAAAATGAGGACTTGGTA
CTTACTGGATACCAGGTTGACAAAAACAAGGATGACGAGCTGACGGGCTTT**TAG**CAGCATGTACCCAAAGTGTTC
TGATTCCTTCAACTGGCTACTGAGTCATGATCCTTGCTGATAAATATAACCATCAATAAAGAAGCATTCTTTTCC
A

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FIGURE 977

MIPGGLSEAKPATPEIQEIVDKVKPQLEEKTNETYGKLEAVQYKTQVVAGTNYYIKVRAGDNKYMHLKVFKSLPG
QNEDLVLTGYQVDKNKDDELTGF

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FIGURE 978A

GCCTGGCACCGGGGACCGTTGCCTGACGCGAGGCCCAGCTCTACTTTTCGCCCCGCGTCTCCTCCGCCTGCTCGC
CTCTTCCACCAACTCCAACTCCTTCTCCCTCCAGCTCCACTCGCTAGTCCCCGACTCCGCCAGCCCTCGGCCCGC
TGCCGTAGCGCCGCTTCCCGTCCGGTCCCAAAGGTGGGAACGCGTCCGCCCCGGCCCGCACC**ATG**GCACGGTTCG
GCTTGCCCGCGCTTCTCTGCACCCTGGCAGTGCTCAGCGCCGCGCTGCTGGCTGCCGAGCTCAAGTCGAAAAGTT
GCTCGGAAGTGCGACGTCTTTACGTGTCCAAAGGCTTCAACAAGAACGATGCCCCCCTCCACGAGATCAACGGTG
ATCATTTGAAGATCTGTCCCCAGGGTTCTACCTGCTGCTCTCAAGAGATGGAGGAGAAGTACAGCCTGCAAAGTA
AAGATGATTTCAAAAGTGTGGTCAGCGAACAGTGCAATCATTTGCAAGCTGTCTTTGCTTCACGTTACAAGAAGT
TTGATGAATTCTTCAAAGAACTACTTGAAAATGCAGAGAAATCCCTGAATGATATGTTTGTGAAGACATATGGCC
ATTTATACATGCAAAATTCTGAGCTATTTAAAGATCTCTTCGTAGAGTTGAAACGTTACTACGTGGTGGGAAATG
TGAACCTGGAAGAAATGCTAAATGACTTCTGGGCTCGCCTCCTGGAGCGGATGTTCCGCCTGGTGAACTCCCAGT
ACCACTTTACAGATGAGTATCTGGAATGTGTGAGCAAGTATACGGAGCAGCTGAAGCCCTTCGGAGATGTCCCTC
GCAAATTGAAGCTCCAGGTTACTCGTGCTTTTGTAGCAGCCCGTACTTTCGCTCAAGGCTTAGCGGTTGCGGGAG
ATGTCGTGAGCAAGGTCTCCGTGGTAAACCCCACAGCCCAGTGTACCCATGCCCTGTTGAAGATGATCTACTGCT
CCCACTGCCGGGGTCTCGTGACTGTGAAGCCATGTTACAACTACTGCTCAAACATCATGAGAGGCTGTTTGGCCA
ACCAAGGGGATCTCGATTTTGAATGGAACAATTTCATAGATGCTATGCTGATGGTGGCAGAGAGGCTAGAGGGTC
CTTTCAACATTGAATCGGTCATGGATCCCATCGATGTGAAGATTTCTGATGCTATTATGAACATGCAGGATAATA
GTGTTCAAGTGTCTCAGAAGGTTTTCCAGGGATGTGGACCCCCCAAGCCCCTCCCAGCTGGACGAATTTCTCGTT
CCATCTCTGAAAGTGCCTTCAGTGCTCGCTTCAGACCACATCACCCCGAGGAACGCCCAACCACAGCAGCTGGCA
CTAGTTTGGACCGACTGGTTACTGATGTCAAGGAGAAACTGAAACAGGCCAAGAAATTCTGGTCCTCCCTTCCGA
GCAACGTTTGCAACGATGAGAGGATGGCTGCAGGAAACGGCAATGAGGATGACTGTTGGAATGGGAAAGGCAAAA
GCAGGTACCTGTTTGCAGTGACAGGAAATGGATTAGCCAACCAGGGCAACAACCCAGAGGTCCAGGTTGACACCA
GCAAACCAGACATACTGATCCTTCGTCAAATCATGGCTCTTCGAGTGATGACCAGCAAGATGAAGAATGCATACA
ATGGGAACGACGTGGACTTCTTTGATATCAGTGATGAAAGTAGTGGAGAAGGAAGTGGAAGTGGCTGTGAGTATC
AGCAGTGCCCTTCAGAGTTTGACTACAATGCCACTGACCATGCTGGGAAGAGTGCCAATGAGAAAGCCGACAGTG
CTGGTGTCCGTCCTGGGGCACAGGCCTACCTCCTCACTGTCTTCTGCATCTTGTTCCTGGTTATGCAGAGAGAGT
GGAGA**TAA**TTCTCAAACTCTGAGAAAAAGTGTTCATCAAAAAGTTAAAAGGCACCAGTTATCACTTTTCTACCAT
CCTAGTGACTTTGCTTTTTAAATGAATGGACAACAATGTACAGTTTTTACTATGTGGCCACTGGTTTAAGAAGTG
CTGACTTTGTTTTCTCATTCAGTTTTGGGAGGAAAAGGGACTGTGCATTGAGTTGGTTCCTGCTCCCCCAAACCA
TGTTAAACGTGGCTAACAGTGTAGGTACAGAACTATAGTTAGTTGTGCATTTGTGATTTTATCACTCTATTATTT
GTTTGTATGTTTTTTTCTCATTTCGTTTGTGGGTTTTTTTTTCCAACTGTGATCTCGCCTTGTTTCTTACAAGCA
AACCAGGGTCCCTTCTTGGCACGTAACATGTACGTATTTCTGAAATATTAAATAGCTGTACAGAAGCAGGTTTTA
TTTATCATGTTATCTTATTAAAAGAAAAAGCCCAAAAAGCAGTAAAATTTCCATTTCTCCCTGTTATTTTAGTTG
CCTTATCTGGAGAGACGTGGAGGTGATTTTCTTTTTTTTAAATTATTATTAAGACAGAATGTGAGGGCACAAGCA
GGCTTCTGAGCCACTTGTCAGATTGTATTCAAAGCATCAATCCAAGAAGGAGGTTATGTGTACTTCATTTATTGG
TGATAGTTGGAAGAGACTGCAGACTACTGCTTTGAATGAGTTGAATTACATAAGCTAAGATCACTATAGGTCCAT
TTCTTGAACCCACTTATACATAAAATGTAACCCATTTAGAAAAAGATTCTGGATATCATCCCCCTTGAAAGATAG
AAAGCATTCAGGATGTCCCAGTTATCACATGTTCACACTTGGGTTTAGGGGTGTTTTTTTTTAAAACCAGGCAGG
TTAGCTAGCCCACCCTGTGCTAGTTTTCATGTTCACACTGACCCTATTTGAATTAATATCCTTTGTTAGAGTGGT
CGAGATTTCAAACCCAATTATGTACAGGGAGCTGTCTGAGAGCTAGCCAGAACTGGGGTACAGCCTGGGCTCAGG
GAATAGCTGTCAACACTCGGGCAAAGTTTTTGTCTGTGCATGTGTATCTCCATTTGTTTTGGGATCCCAGTTTTT
GTTTTAAGAGAGTATAAGGTGTCTCATTTGAGTCTTTTTCTTACCTAGCCCCCTCTTATCAGTAAAACAAAGGAC
TTGCCATGGTTCACAGCAATGTGCTACGATCCAAGATATCAGCCAAGGAGCCCACTTAGGGGAGAACTAGGTGTC
CAGATTTTTGTATGTGTTGTTTTTCTTGGGGGATGGGGTGGGGTGGGAGTAGGTAGAGCTGAGAATACTACATCT
TAGTGGTGACCTTTAGCCACGTGGGTGAAGTGGCAAAGGCCATGGCCATATCTGTTGTCCCAGGCCAAAGACTAA
CAACTGCCTTGGGAATCCCTTCCTTGTGTCCTTACCAAATGATAGCTCATAAAACTCTGATAATGTAACAAATCA
CTTTCAAAGGAGTTCCCAGAAGTCTTCAGAAAGACTAAAATTCTGTCTCTTCCTGCTTTAGACAGCCATTAAGAT
CCCAACTAATTTTACCGAACCTAAAACCCACAAAGAGGTTGTTTGTGTTATTGTTCAATCTTCAGTTGTAAGAGT
AATTCTCTATTTTTATATTGAAACATAATTACTTGATAGCTCAGGGTCTACATTTCATTCAACTTTTTACACCAA

FIGURE 978B

ATTCTGCAGAGTGGTCAAAATGGAATATTGGGGGCTGTTGTAAACAGAGGCTTAATTTTATTAGAAGTAGCCAGT
TATTTATTAAAGCATGATGTTAATAAAATAGGCATATTC

FIGURE 979

MARFGLPALLCTLAVLSAALLAAELKSKSCSEVRRLYVSKGFNKNDAPLHEINGDHLKICPQGSTCCSQEMEEKY
SLQSKDDFKSVVSEQCNHLQAVFASRYKKFDEFFKELLENAEKSLNDMFVKTYGHLYMQNSELFKDLFVELKRYY
VVGNVNLEEMLNDFWARLLERMFRLVNSQYHFTDEYLECVSKYTEQLKPFGDVPRKLKLQVTRAFVAARTFAQGL
AVAGDVVSKVSVVNPTAQCTHALLKMIYCSHCRGLVTVKPCYNYCSNIMRGCLANQGDLDFEWNNFIDAMLMVAE
RLEGPFNIESVMDPIDVKISDAIMNMQDNSVQVSQKVFQGCGPPKPLPAGRISRSISESAFSARFRPHHPEERPT
TAAGTSLDRLVTDVKEKLKQAKKFWSSLPSNVCNDERMAAGNGNEDDCWNGKGKSRYLFAVTGNGLANQGNNPEV
QVDTSKPDILILRQIMALRVMTSKMKNAYNGNDVDFFDISDESSGEGSGSGCEYQQCPSEFDYNATDHAGKSANE
KADSAGVRPGAQAYLLTVFCILFLVMQREWR

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FIGURE 980

AAGAGATGATTTCTCCATCCTGAACGTGCAGCGAGCTTGTCAGGAAGATCGGAGGTGCCAAGTAGCAGAGAAAGC
ATCCCCCAGCTCTGACAGGGAGACAGCAC**ATG**TCTAAGGCCCACAAGCCTTGGCCCTACCGGAGGAGAAGTCAAT
TTTCTTCTCGAAAATACCTGAAAAAAGAAATGAATTCCTTCCAGCAACAGCCACCGCCATTCGGCACAGTGCCAC
CACAAATGATGTTTCCTCCAAACTGGCAGGGGGCAGAGAAGGACGCTGCTTTCCTCGCCAAGGACTTCAACTTTC
TCACTTTGAACAATCAGCCACCACCAGGAAACAGGAGCCAACCAAGGGCAATGGGGCCCGAGAACAACCTGTACA
GCCAGTACGAGCAGAAGGTGCGCCCCTGCATTGACCTCATCGACTCCCTGCGGGCTCTGGGTGTGGAGCAGGACC
TGGCCCTGCCAGCCATCGCCGTCATCGGGGACCAGAGCTCGGGCAAGAGCTCTGTGCTGGAGGCACTGTCAGGAG
TCGCGCTTCCCAGAGGCAGCGGAATCGTAACCAGGTGTCCGCTGGTGCTGAAACTGAAAAAGCAGCCCTGTGAGG
CATGGGCCGGAAGGATCAGCTACCGGAACACCGAGCTAGAGCTTCAGGACCCTGGCCAGGTGGAGAAAGAGATAC
ACAAAGCCCAGAACGTCATGGCCGGGAATGGCCGGGGCATCAGCCATGAGCTCATCAGCCTGGAGATCACCTCCC
CTGAGGTTCCAGACCTGACCATCATTGACCTTCCCGGCATCACCAGGGTGGCTGTGGACAACCAGCCCCGAGACA
TCGGACTGCAGATCAAGGCTCTCATCAAGAAGTACATCCAGAGGCAGCAGACGATCAACTTGGTGGTGGTTCCCT
GTAACGTGGACATTGCCACCACGGAGGCGCTGAGCATGGCCCATGAGGTGGACCCGGAAGGGGACAGGACCATCG
GTATCCTGACCAAACCAGATCTAATGGACAGGGGCACTGAGAAAAGCGTCATGAATGTGGTGCGGAACCTCACGT
ACCCCCTCAAGAAGGGCTACATGATTGTGAAGTGCCGGGGCCAGCAGGAGATCACAAACAGGCTGAGCTTGGCAG
AGGCAACCAAGAAAGAAATTACATTCTTTCAAACACATCCATATTTCAGAGTTCTCCTGGAGGAGGGGTCAGCCA
CGGTTCCCCGACTGGCAGAAAGACTTACCACTGAACTCATCATGCATATCCAAAAATCGCTCCCGTTGTTAGAAG
GACAAATAAGGGAGAGCCACCAGAAGGCGACCGAGGAGCTGCGGCGTTGCGGGGCTGACATCCCCAGCCAGGAGG
CCGACAAGATGTTCTTTCTAATTGAGAAAATCAAGATGTTTAATCAGGACATCGAAAAGTTAGTAGAAGGAGAAG
AAGTTGTAAGGGAGAATGAGACCCGTTTATACAACAAAATCAGAGAGGATTTTAAAAACTGGGTAGGCATACTTG
CAACTAATACCCAAAAAGTTAAAAATATTATCCACGAAGAAGTTGAAAAATATGAAAAGCAGTATCGAGGCAAGG
AGCTTCTGGGATTTGTCAACTACAAGACATTTGAGATCATCGTGCATCAGTACATCCAGCAGCTGGTGGAGCCCG
CCCTTAGCATGCTCCAGAAAGCCATGGAAATTATCCAGCAAGCTTTCATTAACGTGGCCAAAAAACATTTTGGCG
AATTTTTCAACCTTAACCAAACTGTTCAGAGCACGATTGAAGACATAAAAGTGAAACACACAGCAAAGGCAGAAA
ACATGATCCAACTTCAGTTCAGAATGGAGCAGATGGTTTTTTGTCAAGATCAGATTTACAGTGTTGTTCTGAAGA
AAGTCCGAGAAGAGATTTTTAACCCTCTGGGGACGCCTTCACAGAATATGAAGTTGAACTCTCATTTTCCCAGTA
ATGAGTCTTCGGTTTCCTCCTTTACTGAAATAGGCATCCACCTGAATGCCTACTTCTTGGAAACCAGCAAACGTC
TCGCCAACCAGATCCCATTTATAATTCAGTATTTTATGCTCCGAGAGAATGGTGACTCCTTGCAGAAAGCCATGA
TGCAGATACTACAGGAAAAAAATCGCTATTCCTGGCTGCTTCAAGAGCAGAGTGAGACCGCTACCAAGAGAAGAA
TCCTTAAGGAGAGAATTTACCGGCTCACTCAGGCGCGACACGCACTCTGTCAATTCTCCAGCAAAGAGATCCAC**T**
GAAGGGCGGCGATGCCTGTGGTTGTTTTCTTGTGCGTACTCATTCATTCTAAGGGGAGTCGGTGCAGGATGCCGC
TTCTGCTTTGGGGCCAAACTCTTCTGTCACTATCAGTGTCCATCTCTACTGTACTCCCTCAGCATCAGAGCATGC
ATCAGGGGTCCACACAGGCTCAGCTCTCTCCACCACCCAGCTCTTCCCTGACCTTCACGAAGGGATGGCTCTCCA
GTCCTTGGGTCCCGTAGCACACAGTTACAGTGTCCTAAGATACTGCTATCATTCTTCGCTAATTTGTATTTGTAT
TCCCTTCCCCCTACAAGATTATGAGACCCCAGAGGGGGAAGGTCTGGGTCAAATTCTTCTTTTGTATGTCCAGTC
TCCTGCACAGCACCTGCAGCATTGTAACTGCTTAATAAATGACATCTCACTGAACGAATGAGTGCTGTGTAAGTG
ATGGAGATACCTGAGGCTATTGCTCAAGCCCAGGCCTTGGACATTTAGTGACTGTTAGCCGGTCCCTTTCAGATC
CAGTGGCCATGCCCCCTGCTTCCCATGGTTCACTGTCATTGTGTTTCCCAGCCTCTCCACTCCCCCGCCAGAAAG
GAGCCTGAGTGATTCTCTTTTCTTCTTGTTTCCCTGATTATGATGAGCTTCCATTGTTCTGTTAAGTCTTGAAGA
GGAATTTAATAAAGCAAAGAAACTTTTTAAAAACGT

FIGURE 981

MSKAHKPWPYRRRSQFSSRKYLKKEMNSFQQQPPPFGTVPPQMMFPPNWQGAEKDAAFLAKDFNFLTLNNQPPPG
NRSQPRAMGPENNLYSQYEQKVRPCIDLIDSLRALGVEQDLALPAIAVIGDQSSGKSSVLEALSGVALPRGSGIV
TRCPLVLKLKKQPCEAWAGRISYRNTELELQDPGQVEKEIHKAQNVMAGNGRGISHELISLEITSPEVPDLTIID
LPGITRVAVDNQPRDIGLQIKALIKKYIQRQQTINLVVVPCNVDIATTEALSMAHEVDPEGDRTIGILTKPDLMD
RGTEKSVMNVVRNLTYPLKKGYMIVKCRGQQEITNRLSLAEATKKEITFFQTHPYFRVLLEEGSATVPRLAERLT
TELIMHIQKSLPLLEGQIRESHQKATEELRRCGADIPSQEADKMFFLIEKIKMFNQDIEKLVEGEEVVRENETRL
YNKIREDFKNWVGILATNTQKVKNIIHEEVEKYEKQYRGKELLGFVNYKTFEIIVHQYIQQLVEPALSMLQKAME
IIQQAFINVAKKHFGEFFNLNQTVQSTIEDIKVKHTAKAENMIQLQFRMEQMVFCQDQIYSVVLKKVREEIFNPL
GTPSQNMKLNSHFPSNESSVSSFTEIGIHLNAYFLETSKRLANQIPFIIQYFMLRENGDSLQKAMMQILQEKNRY
SWLLQEQSETATKRRILKERIYRLTQARHALCQFSSKEIH

FIGURE 982A

GGGAGAAGCTAGGAAAAAATGTCTTTGAGCTGTGAGATGCTTGTATATTTTGAAAATATGATTATATGCATGTGT
TTGTATTTTATGACTTGGATAATCTGAAAATCAATTTGCTTTGTCAATGCTTCCTGGATTAGAATTCCACTATTT
GGTCCCTATCCTAGTCTACTAAAGAAAATTGAGCGGGAAACATGGCGGGAAAGTGGCGTTTCATTAATTGCTACT
GTAACTCGTCTAATGGAGAGGTTGTTAGATTACAGAACTTCTATAAGACTGAACTGAACAAGGAGGAGATGTATA
TACGCTACATTCACAAACTCTATGATCTGCATCTCAAAGCACAGAACTTTACAGAAGCTGCATATACCCTCCTCT
TATATGACGAGCTACTGGAATGGTCTGATCGGCCCCTCAGGGAGTTCCTGACCTACCCCATGCAAACAGAATGGC
AGCGCAAAGAGCACCTGCACCTCACCATCATCCAGAACTTTGACAGAGGCAAATGTTGGGAGAATGGCATTATCT
TGTGCCGGAAGATTGCAGAGCAGTATGAGAGTTATTATGACTACAGAAACCTGAGCAAGATGCGGATGATGGAAG
CCTCTTTGTATGACAAAATTATGGACCAGCAACGTCTTGAACCAGAGTTCTTCAGAGTTGGATTTTATGGAAAAA
AATTTCCATTTTTCTTAAGAAATAAGGAGTTTGTGTGTCGAGGGCATGACTACGAGAGGCTGGAAGCCTTCCAAC
AGAGAATGCTGAACGAGTTCCCCCATGCCATCGCCATGCAGCACGCCAACCAGCCCGATGAGACCATCTTCCAGG
CAGAAGCTCAGTATTTGCAGATATATGCTGTGACTCCCATTCCAGAGAGCCAGGAGGTCCTGCAGAGAGAGGGTG
TTCCGGACAACATCAAAAGCTTCTATAAAGTGAATCACATCTGGAAATTCCGCTATGACCGACCATTTCACAAAG
GCACAAAAGATAAAGAGAATGAATTCAAGAGTCTCTGGGTGGAGAGAACGTCATTATACTTGGTGCAGAGTTTGC
CTGGCATCTCTCGCTGGTTTGAAGTGGAAAAGCGTGAAGTGGTAGAAATGAGTCCTCTGGAAAATGCAATTGAAG
TGCTAGAAAATAAGAATCAGCAGCTGAAGACTCTGATTAGTCAGTGTCAGACAAGACAGATGCAGAATATTAATC
CCCTGACTATGTGCCTGAATGGAGTTATAGATGCTGCAGTTAATGGTGGCGTTTCCAGGTATCAAGAGGCATTCT
TTGTCAAAGAATATATCTTAAGTCACCCTGAAGATGGGGAGAAAATTGCACGATTAAGAGAGCTGATGCTTGAGC
AGGCACAGATTCTGGAATTTGGTTTGGCCGTGCATGAGAAGTTTGTACCTCAAGATATGAGACCCCTTCACAAAA
AGCTGGTTGACCAATTCTTTGTGATGAAGTCGAGCTTAGGGATACAGGAGTTCTCTGCTTGTATGCAAGCCAGTC
CTGTCCATTTTCCTAATGGAAGCCCTCGTGTGTGTAGAAACTCAGCACCTGCTTCTGTGAGCCCAGATGGTACCA
GGGTAATTCCTAGACGCAGCCCGTTAAGTTACCCAGCTGTCAACCGATATTCTTCCTCCTCACTGTCCTCACAAG
CTTCTGCTGAAGTAAGCAATATTACAGGGCAATCAGAAAGCTCTGATGAAGTCTTTAACATGCAGCCAAGTCCAT
CTACCTCAAGCTTGAGTTCTACTCACTCGGCTTCACCTAATGTGACAAGTTCTGCTCCATCGAGTGCCAGAGCTT
CTCCTTTGTTGTCTGACAAACACAAACATTCCCGAGAAAACTCTTGCCTGTCACCAAGAGAGAGACCATGCAGTG
CCATCTATCCAACACCTGTGGAGCCTTCGCAGAGGATGCTGTTTAATCATATTGGAGACGGGGCCTTGCCACGCA
GTGACCCAAATCTCTCTGCACCTGAAAAAGCTTCACCAGCAAGACACACGACATCAGTATCCCCCTCGCCTGCCG
GGCGATCTCCATTGAAGGGCTCTGTGCAGTCTTTCACCCCCTCTCCAGTGGAGTACCACTCGCCAGGACTCATCT
CCAACTCCCCTGTCTTGTCGGGCAGCTACAGCAGTGGGATTTCTTCTCTCAGCCGGTGCAGCACGTCGGAAACCT
CAGGCTTTGAAAATCAGGTGAATGAACAGTCGGCCCCCCTGCCGGTGCCAGTGCCGGTGCCCGTGCCGAGCTACG
GCGGGGAGGAGCCAGTGCGCAAGGAGAGCAAGACTCCGCCCCCGTACAGCGTCTACGAGCGGACTCTGCGGCGCC
CCGTCCCGCTACCTCACAGCCTCTCCATCCCCGTCACGTCGGAGCCGCCCGCGCTGCCCCCCAAGCCTCTGGCAG
CGCGATCCAGCCACCTGGAGAATGGGGCCCGGAGGACTGACCCCGGCCCGCGGCCCAGGCCCCTGCCCCGCAAGG
TCTCTCAGTTATAAGTCACTTTTCTATGTACCTGCGATGCATTCTTTGCCCGTTTACAAAATAAGAAGTATGATG
AGAAGACATTTAGTGTAGGCACTTTAATAACTTACTCAGCTCCTTCGATGAATGGAATTAAAACTTGCTTATTAA
ATATCATGTTGCACAATATTAAAAGTTGCTGATCTAAAACGCCAGATGTTAAATGAAGTATGGCTGAATTTCATT
AAAACGTTTCTCATTTGGAAGTGGTAAATAGTGATAAAGACTCCTTTTGTACCTTTTTATGTTCACTTTTTTTTA
TATAGTTTAATCTTAAAACCAATACGATATTGTCAAACGATACAATGTGTGACAATGTTGTATCGTTTTTACTGA
ATACTTGATACTTGGAGAAAGCTTATTAAGTCAGTGCACATCCTAACACAGTGGTCCTTATTTTAGAAGACTTCT
GTAAATAAGGCAAGGTTTATCAGTGCAGATCATCAGAATTAAAGTTCAAGCAGGCGAGCAAGACAGTATACTTAA
GGGGTTGCAAAGCTTGGGACTGGAAATTGTTTTGTTCTTGAAACAAAATACTTCTTTAAGGTTGCTTTTGCTGTT
TGACTGCTGTCTACATTCGTAAAATTCTATTTTGTGAATTGGTAGCTAAATCCCTTACTACCCTGACACCGTGGT
ATCTACTGTATTTCTTTTCAAGGTGCAATTTGCTTCAGAGTTCCAATCAGCTAGATTAAGCAAGAGGCTCCAGAA
GAAATGTTTACTTGAATTTTGCGCTTCCTTTCTTGATAGTTTCCTATATAAAATTTGTCATTGAACAAGAGCAAA
TGCTGAAGTATTAATGAGGCACAAATGACTGTGCCCCATTAGCAAGAATTCAGGAATCAATACAGACAGTATTAA
ATTAATAGCTTAAGTGAAGAAAAAAAAAAACTTAGTGAAAATGTATTAGCACGATTAAATGGCAAAAGGACTTAT
AAAAGGCAAGGGCATTAACTTTCAGTCCTGCACAAAATAAAAAATTCCTCACGACTCTCCACTTTTACCAGTGGA
GTTTGTCTTAGCTGACCTGTCGTCTTTCTCTTGAAGGAGGATTGCTGTAGACTTCTCTAGCTTGAATATTGCAAC

FIGURE 982B

ATAGCATCTTAGGTCTAGATAGGGATGCTAATGCCAGTTGTAGAAGTGTGAAAAAAGCACCTTGTATGTAGTAAT
GTATTTTATATCTTTGTTTTTTCTTTTACTGACTGTTTATAACACTCAATTGACAATAGATATGAACTGTATTTT
AAATCATACTGTTAAATATTTTCCCTCTTTTGTTGGGAAGCTCATTTTAGTTTAACCATGTTTGTTTTGTTGGTA
GCTTACCTGGAAGGCAGTGACCACTTTTTTATATTCTCTTAATGAAACCATTCAGCAGGTATATGCTGTTGAGGC
TGGTTATAGAGGTTTTCTATAATAAATGTTCAAGTATTTTTGTATATAACTGGTTAATTTTAATAAGAGATACCA
TTATGTGTAAAAAAAAGTAAAAATAAACGCAAACAGTTGTTGATGCAGTATGATTGTTATAATTATGCCAAATAC
TTTACGTATGGAAAAAGAATATTTGTACATATGTGCTTTTAACAATTCTGCCATATTGACTTTACAATTTTGAAT
GTCGGAAAAATTAATATATGTTAAATATTTATGTTTAGTGAAAGTGTTCATAATTGAGAAAAGGAACATATGCAT
TTTAGCTTTGTATCTTGCAAGTTTTGCAGTCAGAAATTTTTTGAACTAGCTTTTGCTTTTGATAACACTTCGTGT
TTGTAACCACATTCATATATATATACATATATATGTGAAGCTCCATATTTCTGTTGCTTTAAAGAAGTAAAACCT
TCCATTTAAATAAGATGACATGCATAAGATAACAAAGCTTCCTTGATTTCCTTTTCCTGTGTAATTTAATAGATT
TGTTGACTAGTGCTTGGGCACATTATAAATCAGTGTTATTTGCTCTTGGAGCCATTTTTTAAAAAAAATTTTGGC
AGTGAGCAGTTGAATTTATCTTGAATTTATCATGTGTGTGTATTTCTGAAGCAGCTACATAGCAGAACATTTTAA
GAGATTCTGTTAGCCCACATGTTCATGTTGGTTGCTGCTGAATGGTAAATATTAAATAAAATTACCAGATTAATC
TT

FIGURE 983

MAGKWRFINCYCNSSNGEVVRLQNFYKTELNKEEMYIRYIHKLYDLHLKAQNFTEAAYTLLLYDELLEWSDRPLR
EFLTYPMQTEWQRKEHLHLTIIQNFDRGKCWENGIILCRKIAEQYESYYDYRNLSKMRMMEASLYDKIMDQQRLE
PEFFRVGFYGKKFPFFLRNKEFVCRGHDYERLEAFQQRMLNEFPHAIAMQHANQPDETIFQAEAQYLQIYAVTPI
PESQEVLQREGVPDNIKSFYKVNHIWKFRYDRPFHKGTKDKENEFKSLWVERTSLYLVQSLPGISRWFEVEKREV
VEMSPLENAIEVLENKNQQLKTLISQCQTRQMQNINPLTMCLNGVIDAAVNGGVSRYQEAFFVKEYILSHPEDGE
KIARLRELMLEQAQILEFGLAVHEKFVPQDMRPLHKKLVDQFFVMKSSLGIQEFSACMQASPVHFPNGSPRVCRN
SAPASVSPDGTRVIPRRSPLSYPAVNRYSSSSLSSQASAEVSNITGQSESSDEVFNMQPSPSTSSLSSTHSASPN
VTSSAPSSARASPLLSDKHKHSRENSCLSPRERPCSAIYPTPVEPSQRMLFNHIGDGALPRSDPNLSAPEKASPA
RHTTSVSPSPAGRSPLKGSVQSFTPSPVEYHSPGLISNSPVLSGSYSSGISSLSRCSTSETSGFENQVNEQSAPL
PVPVPVPVPSYGGEEPVRKESKTPPPYSVYERTLRRPVPLPHSLSIPVTSEPPALPPKPLAARSSHLENGARRTD
PGPRPRPLPRKVSQL

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FIGURE 984

CTCCGGCCCGGCCCCGAGCACCGCCTCCCCAGCCAGCGCCGCCGCG**ATG**GCGGAGGACAGCGAGTCTGCGGCCAG
CCAGCAGAGCCTGGAACTGGACGACCAGGACACGTGCGGGATAGACGGGGACAATGAGGAGGAGACGGAGCACGC
CAAAGGAAGTCCTGGAGGGTATTTGGGAGCCAAAAAGAAAAAGAAGAAACAGAAGAGAAAAAAGGAGAAACCAAA
TTCCGGAGGCACCAAGTCAGACTCGGCATCTGATTCCCAGGAGATTAAAATTCAGCAGCCTTCGAAAAATCCCAG
TGTTCCAATGCAGAAGTTGCAGGATATCCAGAGAGCAATGGAGCTGCTATCCGCATGCCAGGGCCCAGCCAGGAA
CATTGATGAGGCTGCAAAGCACAGATACCAGTTTTGGGACACACAACCGGTACCAAAACTAGATGAAGTCATAAC
ATCTCATGGTGCAATTGAACCAGATAAAGACAACGTACGCCAAGAACCGTATTCTTTGCCACAGGGTTTTATGTG
GGACACTTTAGACTTGAGTGATGCCGAAGTGCTCAAGGAGTTATACACGTTGTTAAATGAGAATTACGTAGAAGA
TGATGACAATATGTTCCGATTTGACTATTCACCCGAGTTCCTGTTGTGGGCTCTGCGTCCACCAGGCTGGCTCCT
GCAGTGGCACTGTGGGGTCAGAGTGTCTTCAAATAAAAAACTGGTCGGGTTCATAAGTGCCATCCCAGCAAACAT
TCGGATTTATGACAGTGTGAAGAAGATGGTAGAAATCAACTTTCTTTGTGTTCATAAGAAGTTGAGATCGAAACG
GGTAGCCCCAGTGCTAATCCGAGAGATCACTAGAAGAGTGAACCTGGAAGGGATCTTCCAGGCTGTGTACACCGC
GGGAGTGGTTCTTCCTAAGCCCATAGCCACATGCAGATACTGGCATCGATCACTAAACCCCAGAAAATTGGTAGA
AGTGAAATTTTCTCACTTGAGTAGAAATATGACTTTACAGAGAACAATGAAGCTATACAGACTTCCAGATGTTAC
AAAGACTTCAGGTTTGAGACCAATGGAACCAAAAGATATCAAATCAGTTCGAGAATTAATCAACACTTACCTGAA
GCAGTTTCATCTGGCTCCAGTGATGGATGAAGAGGAAGTAGCCCACTGGTTCCTCCCCCGGGAGCACATTATTGA
CACGTTTGTAGTGGAGAGCCCCAACGGTAAACTGACTGATTTCCTGAGCTTCTATACGCTCCCCTCCACGGTGAT
GCACCACCCTGCTCACAAGAGCCTCAAAGCCGCCTACTCATTCTACAACATCCACACAGAGACGCCCCTGCTGGA
CCTCATGAGCGACGCGCTCATCCTGGCTAAATCGAAAGGATTTGATGTATTCAATGCACTGGATTTGATGGAAAA
TAAGACATTCTTGGAAAAACTCAAGTTTGGTATAGGAGATGGCAATTTGCAGTATTACCTGTACAATTGGAGGTG
TCCAGGTACAGATTCTGAAAAGGTTGGACTAGTACTACAA**TAG**ATGGATATTTTTATTTCTAGAACTCTGACATC
ATCATTTGTTAATATTTAATGATTTCTGGAACTGCCATTCCAAAGAAGAATAAAAGCACAACTCAAGTGAAATTG
AAGTAGTCGATAATCAGAAAAGATGACAAAAGTCCACATGTGACATTTGTACGTTTCTAGCTAGAATGTTAAACT
TCATCCTTTTTTTACTGTTGACCTATTTGTGGGAGGGATGAAAGGCTACAAAGAGCACATTCTTGTAATTTTCAA
ATTTTTGCCTGTCTCTTGAAGAGGTATTTTTTCACCCTTAGAAAAGGGACTGTTTTTCTATGGACTAAGTAGAAG
TTACAGAGTCATGTAAGAAAATCTTTGCTATTGTGTGGAGAGAAATTGCTGCATTTCTGTTTCTTAAGTGATGGT
ACATTTGTCCATGTAACAGAACAAAAGATCCATTTGGAAATTTTTTTTACTGGTATCACCTTACATGGTATCACT
GGGAACATTTATGGAATCAACACTTCTGTAGCTCAGTGACAGGTGGTGGTTGTTTAAGTGCAGAGCAATATTAAA
TGTACTGGTGACTAGTACATGTATTTCTCCATAAGCAGAGTTGCCGAATCAATAAACATGCAAGTTTGTACTTTG
ATCTTTACCAGGTCAGTGGATTGCTTCAAAAGCAGAGTTTTGTGCAAGCACTCACTGTGCTCTCTGAAAGAGCCT
GAGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGTGGGCAGATCATGAGGTCAGG
AGATCGAGACCATTCTGGCCAACATAGTGAAACCCCATCTCTACTAAAAATACAAAAATTAGCCGGGCGTGGTGG
CGTGTGCCTGTAGTCCCAGCTGCTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCTGAGAGGTGAGGTTGCAGT
GAGCCGAGATCGAGCCACTGCACTCCAGCCTGGGTGACAGAGCGTGAGACTCCGTCTCAAAAAAAAAAAAAAAAG
AAAGAGCCTGTACCCGCGACTAACTAGACTTTTCTTGCTGTTGTGCAAAGTTCAGTTTCTTCTCAGCAACATCAA
GGATATATGAAGAAAAGGAAATAAAAAACTGTAAAGTCAAAAGAGATGCCTGGTGGAACTTATTCGTGCTATCAG
GGCATTGATAGTTTGAATGTTTTTATTACTTATGCAAAATTGCACATACTCCTCTATGCTGATTTTATCATGAAA
ACTGTCATGTGTCATGCTAATGGAAAATGTCTTATTTGTAAATAAGTATTCATAATTTTGCCG

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FIGURE 985

MAEDSESAASQQSLELDDQDTCGIDGDNEEETEHAKGSPGGYLGAKKKKKKQKRKKEKPNSGGTKSDSASDSQEI
KIQQPSKNPSVPMQKLQDIQRAMELLSACQGPARNIDEAAKHRYQFWDTQPVPKLDEVITSHGAIEPDKDNVRQE
PYSLPQGFMWDTLDLSDAEVLKELYTLLNENYVEDDDNMFRFDYSPEFLLWALRPPGWLLQWHCGVRVSSNKKLV
GFISAIPANIRIYDSVKKMVEINFLCVHKKLRSKRVAPVLIREITRRVNLEGIFQAVYTAGVVLPKPIATCRYWH
RSLNPRKLVEVKFSHLSRNMTLQRTMKLYRLPDVTKTSGLRPMEPKDIKSVRELINTYLKQFHLAPVMDEEEVAH
WFLPREHIIDTFVVESPNGKLTDFLSFYTLPSTVMHHPAHKSLKAAYSFYNIHTETPLLDLMSDALILAKSKGFD
VFNALDLMENKTFLEKLKFGIGDGNLQYYLYNWRCPGTDSEKVGLVLQ

FIGURE 986

GCACACCATGGTGCACTTCTGTGGCCTACTCACCCTCCACCGGGAGCCAGTGCCGCTGAAGAGTATCTCTGTGAG
CGTGAACATTTACGAGTTTGTGGCTGGTGTGTCTGCAACTTTGAACTACGAGAATGAGGAGAAAGTTCCTTTGGA
GGCCTTCTTTGTGTTCCCCATGGATGAAGACTCTGCTGTTTACAGCTTTGAGGCCTTGGTGGATGGGAAGAAAAT
TGTAGCAGAATTACAAGACAAGATGAAGGCCCGCACCAACTATGAGAAAGCCATCTCCCAGGGCCACCAGGCCTT
CTTATTGGAGGGGGACAGCAGCTCCAGGGATGTCTTCTCTTGCAATGTGGGTAACCTCCAACCTGGGTCGAAGGC
GGCAGTCACCCTGAAGTATGTGCAGGAGCTGCCTCTGGAAGCAGATGGGGCTCTGCGCTTTGTGCTCCCAGCTGT
CCTGAATCCTAGATACCAGTTCTCTGGGTCGTCTAAGGACAGTTGCCTTAATGTGAAGACTCCTATAGTCCCTGT
GGAGGACCTGCCCTACACACTCAGCATGGTCGCCACCATAGATTCCCAGCATGGCATTGAGAAGGTCCAATCCAA
CTGCCCCTTGAGTCCTACCGAGTACCTAGGAGAGGACAAGACTTCTGCTCAGGTTTCCCTGGCTGCTGGACACAA
GTTTGATCGGGACGTGGAACTCCTGATTTACTACAATGAGGTGCATACCCCCAGCGTGGTTTTGGAGATGGGGAT
GCCTAACATGAAGCCAGGTCATTTGATGGGAGATCCATCTGCAATGGTGAGTTTCTATCCAAATATCCCAGAAGA
TCAACCATCAAATACCTGTGGAGAGTTTATCTTTCTCATGGACCGCTCGGGAAGTATGCAGAGCCCCATGAGTAG
CCAGGATACATCTCGCTGCGAATACAGGCAGCCAAGGAAACACTGATTTTGCTGCTGAAGAGTTTACCTATAGGC
TGTTATTTCAACATCTATGGATTTGGCTCTTCCTATGAGGCATGCTTTCCGGAGAGTGTGAAGTACACTCAGCAA
ACA**ATG**GAGGAGGCTCTGGGGAGAGTGAAGCTTATGCAGGCCGACCTAGGGGGCACTGAAATCTTGGCACCACTC
CAGAACATTTACAGGGGACCCTCCATCCCAGGCCACCCCCTACAGCTTTTTGTCTTTACAGATGGAGAAGTTACA
GACACGTTTAGTGTAATTAAAGAAGTTAGGATCAACAGACAGAAACACAGGTGTTTCTCATTTGGTATTGGAGAA
GGCACCTCCACCAGCCTAATAAAAGGTATTGCCCGGGCATCAGGGGGCACCTCAGAATTTATCACAGGCAAAGAC
AGGATGCAGTCCAAGGCTCTCAGGACTCTGAAACGCTCTCTGCAGCCTGTGGTAGAGGATGTCTCTCTGAGCTGG
CATTTGCCTCCTGGTCTGTCTGCTAAAATGCTTTCCCCAGAACAGACTGTCATCTTTAGGGGTCAGAGATTAATC
AGCTATGCCCAGCTGACCGGGAGGATGCCAGCAGCAGAGACAACAGGAGAAGTATGCCTCAAATATACACTCCAG
GGCAAGACTTTTGAGGATAAGGTGACATTTCCTCTACAACCCAAGCCTGATGTCAACCTCACCATTCACCGCCTT
GCTGCCAAGTCCTTGCTCCAGACCAAGGACATGGGCCTCAGGGAGACTCCAGCAAGTGATAAAAAAGATGCATTG
AACCTTAGCCTTGAGTCTGGTGTCATAAGCTCCTTCACAGCTTTCATTGCTATCAATAAGGAGCTCAACAAGCCG
GTTCAGGGGCCTCTGGCTCATAGGGACGTCCCAAGGCCAATTCTGTTGGGTGCTTCTGCCCCATTGAAGATAAAA
TGCCAATCAGGTTTTCGAAAGGCCTTACACTCTGACCGTCCTCCTTCTGCATCTCAGCCCAGAGGGGAACTTATG
TGTTATAAGGCCAAGACATTCCAGATGGACGATTACAGTCTCTGTGGGTTGATAAGTCACAAGGACCAGCACAGT
CCAGGCTTTGGAGAGAATCACCTTGTGCAGCTGATTTACCACCAAAATGCAAATGGTTCCTGGGATCTGAATGAA
GATCTAGCCAAGATCCTAGGTATGAGTTTGGAAGAAATAATGGCTGCACAGCCTGCCGAGCTTGTGGATTCCTCA
GGCTGGGCCACCATCCTGGCCGTGATCTGGCTGCACAGCAATGGTAAGGACTTGAAGTGTGAATGGGAGCTTCTG
GAAAGGAAGGCCGTGGCCTGGATGCGTGCCCATGCAGGCTCCACCATGCCTTCGGTTGTGAAAGCTGCTATTACT
TTCCTGAAGTCATCTGTGGATCCTGCTATCTTTGCCTTT**TGA**AGATACCATCCAGAAAAAGAAGTGCCTTTAATT
TGCTACTGTCATTTCCTCTAGTATCACTTTTGCTGTGATGATGTGTTCTTGTGTATTATAACTCTTTATTTTTTG
CCATAAAAGTAAAGGATGCTTACTCCACTTCGCTTCTCTGCTCCAGGTTCACTTTGGATATGATCTTTCTTTTCC
CAACATATGCCCTCAGAAAAGTGACAGTGGTCCCAGAACCTATTCCCTTTCTTGAGGGAGTTCAAAACATTCATA
GGCAGTAATGTTCCTCCCAGGGTTTCCAGGGAAACAACATGAAAAACAGGTGACATGAACTACAGACTAAAGATT
GCAGCATTTATGTTAGAGAATGCTTGAATTAGAGAATTTTCTGCATTATCTTTGTCTGTTCACTTTCTATCTTAT
ATACTTATCAGGGCCATACTGGTAAGCTTGCGTAGGAGGAGTTAGAGGGAAGTTGAAAGCCAACATCTGGATCAA
TGTAATGTCAAGATCACAAAGACAGAGACTGCAGGGGTCCACTGTGAGAGGTGACACTGTTGGGGACCTTCCTGA
TTCATTCTTCTTGGGCTTTGCTAGCCTGTACAACCTACATGTCTTTTCTTCCACTGCCTGAAAGACTTGGGTTGA
ACTATAACTGTTGGAGAGAGATGTTCCTCTTTAATCATGAAACACCTTAAGAAGTCTATAATGCAATCCTTAGTC
CTACCCTGAACCTATGTGTCCTCTAAGTCAGGCCCTGATCTAGTGCAGTAAAGGGAAGGGTGGGCTTAATGGGAG
CTTTGCCTGGGACCTGAACCTGGAGCACTTACCGCATTAGGAAGAAAGGAGCTCCCCGTAATCGTTCCTGACCCT
TGTGTCTCATATACCCTATCCTGGTGGAAATGACCCTATTTGATATGCTGTCCCTTAAAATAACTTGTATCAATA
TTAAAATGACTATTTCTACCCTTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAA

FIGURE 987

MEEALGRVKLMQADLGGTEILAPLQNIYRGPSIPGHPLQLFVFTDGEVTDTFSVIKEVRINRQKHRCFSFGIGEG
TSTSLIKGIARASGGTSEFITGKDRMQSKALRTLKRSLQPVVEDVSLSWHLPPGLSAKMLSPEQTVIFRGQRLIS
YAQLTGRMPAAETTGEVCLKYTLQGKTFEDKVTFPLQPKPDVNLTIHRLAAKSLLQTKDMGLRETPASDKKDALN
LSLESGVISSFTAFIAINKELNKPVQGPLAHRDVPRPILLGASAPLKIKCQSGFRKALHSDRPPSASQPRGELMC
YKAKTFQMDDYSLCGLISHKDQHSPGFGENHLVQLIYHQNANGSWDLNEDLAKILGMSLEEIMAAQPAELVDSSG
WATILAVIWLHSNGKDLKCEWELLERKAVAWMRAHAGSTMPSVVKAAITFLKSSVDPAIFAF

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FIGURE 988

AAGCCACAGGCTCCCTGGCTGGCGTCAGCTAAAGTGGCTGTTGGGTGTCCGCAGGCTTCTGCCTGGCCGCCGCCG
CCTATAAGCTACCAGGAGGAGCTTTACGACTTCCCGTCCTGCGGGAAGTGGCGGGCACGATCGCAAGGTAGCGCA
GAAGCTTCTCA**ATG**GCCAGCGCCAGCTGCAGCCCCGGCGGCGCACTCGCCTCACCTGAGCCTGGGAGGAAAATTC
TTCCAAGGATGATCTCCCACTCAGAGCTGAGGAAGCTTTTCTACTCAGCAGATGCTGTGTGTTTTGATGTTGACA
GCACGGTCATCAGTGAAGAAGGAATCGGATGCTTTCATTGGATTTGGAGGAAATGTGATCAGGCAACAAGTCAAG
GA**TAA**CGCCAAATGGTATATCACTGATTTTGTAGAGCTGCTGGGAGAACCGGAAGAATAACATCCATTGTCATAC
AGCTCCAAACAACTTCAGATGAATTTTTACAAGTTACACAGATTGATACTGTTTGCTTACAATTGCCTATTACAA
CTTGCTATAAAAAGTTGGTACAGATGATCTGCACTGTCAAGTAAACTACAGTTAGGAATCCTCAAAGATTGGTTT
GTTTGTTTTTAACTGTAGTTCCAGTATTATATGATCACTATCGATTTCCTGGAGAGTTTTGTAATCTGAATTCTT
TATGTATATTCCTAGCTATATTTCATACAAAGTGTTTTAAGAGTGGAGAGTCAATTAAACACCTTTACTCTTAGG
AATATAGATTCGGCAGCCTTCAGTGAATATTGGTTTTTTTCCCTTTGGTATGTCAATAAAAGTTTATCCATGTGT
CAGAAAAAAAAAAA

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FIGURE 989

MASASCSPGGALASPEPGRKILPRMISHSELRKLFYSADAVCFDVDSTVISEEGIGCFHWIWRKCDQATSQG

FIGURE 990A

GCCCGGGCAGGTGGTTGCAGCATTGCAGAAGAGAAAAGTAGTTTGTTGGCAGAGAATCAGGTATTAATGGAAAGA
CTCAATCAATCTGATTCTATAGAAGACCCTAACAGTCCAGCAGGAAGAAGGCATTTGCAGCTCCAGACTCAATTA
GAACAGCTCCAAGAAGAAACATTCAGACTAGAAGCAGCCAAAGATGATTATCGAATACGTTGTGAAGAGTTAGAA
AAGGAGATCTCTGAACTTCGGCAACAGAATGATGAACTGACCACTTTGGCAGATGAAGCTCAGTCTCTGAAAGAT
GAGATCGACGTGCTGAGACATTCTTCTGATAAAGTATCTAAACTAGAAGGTCAAGTATCACTAGAATTCAGCGGC
CGCTGAATTCTAGGGAGGCGCGCCCCCCGGCTGGGCGCCGCGCGCACC**ATG**GGGCTCCCAGCGCTCGAGTTCAGC
GACTGCTGCCTCGATAGTCCGCACTTCCGAGAGACGCTCAAGTCGCACGAAGCAGAGCTGGACAAGACCAACAAA
TTCATCAAGGAGCTCATCAAGGACGGGAAGTCACTCATAAGCGCGCTCAAGAATTTGTCTTCAGCGAAGCGGAAG
TTTGCAGATTCCTTAAATGAATTTAAATTTCAGTGCATAGGAGATGCAGAAACAGATGATGAGATGTGTATAGCA
AGGTCTTTGCAGGAGTTTGCCACTGTCCTCAGGAATCTTGAAGATGAACGGATACGGATGATTGAGAATGCCAGC
GAGGTGCTCATCACTCCCTTGGAGAAGTTTCGAAAGGAACAGATCGGGGCTGCCAAGGAAGCCAAAAAGAAATAT
GACAAAGAGACAGAAAAGTATTGTGGCATCTTAGAAAAACACTTGAATTTGTCTTCCAAAAAGAAAGAATCTCAG
CTTCAGGAGGCAGACAGCCAAGTGGACCTGGTCCGGCAGCATTTCTATGAAGTATCCCTGGAATATGTCTTCAAG
GTGCAGGAAGTCCAAGAGAGAAAGATGTTTGAGTTTGTGGAGCCTCTGCTGGCCTTCCTGCAAGGACTCTTCACT
TTCTATCACCATGGTTACGAACTGGCCAAGGATTTCGGGGACTTCAAGACACAGTTAACCATTAGCATACAGAAC
ACAAGAAATCGCTTTGAAGGCACTAGATCAGAAGTGGAATCACTGATGAAAAAGATGAAGGAGAATCCCCTTGAG
CACAAGACCATCAGTCCCTACACCATGGAGGGATACCTCTACGTGCAGGAGAAACGTCACTTTGGAACTTCTTGG
GTGAAGCACTACTGTACATATCAACGGGATTCCAAACAAATCACCATGGTACCATTTGACCAAAAGTCAGGAGGA
AAAGGGGGAGAAGATGAATCAGTTATCCTCAAATCCTGCACACGGCGGAAAACAGACTCCATTGAGAAGAGGTTT
TGCTTTGATGTGGAAGCAGTAGACAGGCCAGGGGTTATCACCATGCAAGCTTTGTCGGAAGAGGACCGGAGGCTC
TGGATGGAAGCCATGGATGGCCGGGAACCTGTCTACAACTCGAACAAAGACAGCCAGAGTGAAGGGACTGCGCAG
TTGGACAGCATTGGCTTCAGCATAATCAGGAAATGCATCCATGCTGTGGAAACCAGAGGGATCAACGAGCAAGGG
CTGTATCGAATTGTGGGGGTCAACTCCAGAGTGCAGAAGTTGCTGAGTGTCCTGATGGACCCCAAGACTGCTTCT
GAGACAGAAACAGATATCTGTGCTGAATGGGAGATAAAGACCATCACTAGTGCTCTGAAGACCTACCTAAGAATG
CTTCCAGGACCACTCATGATGTACCAGTTTCAAAGAAGTTTCATCAAAGCAGCAAAACTGGAGAACCAGGAGTCT
CGGGTCTCTGAAATCCACAGCCTTGTTCATCGGCTCCCAGAGAAAAATCGGCAGATGTTACAGCTGCTCATGAAC
CACTTGGCAAATGTTGCTAACAACCACAAGCAGAATTTGATGACGGTGGCAAACCTTGGTGTGGTGTTTGGACCC
ACTCTGCTGAGGCCTCAGGAAGAAACAGTAGCAGCCATCATGGACATCAAATTTCAGAACATTGTCATTGAGATC
CTAATAGAAAACCACGAAAAGATATTTAACACCGTGCCCGATATGCCTCTCACCAATGCCCAGCTGCACCTGTCT
CGGAAGAAGAGCAGTGACTCCAAGCCCCCGTCCTGCAGCGAGAGGCCCCTGACGCTCTTCCACACCGTTCAGTCA
ACAGAGAAACAGGAACAAAGGAACAGCATCATCAACTCCAGTTTGGAATCTGTCTCATCAAATCCAAACAGCATC
CTTAATTCCAGCAGCAGCTTACAGCCCAACATGAACTCCAGTGACCCAGACCTGGCTGTGGTCAAACCCACCCGG
CCCAACTCACTCCCCCCGAATCCAAGCCCAACTTCACCCCTCTCGCCATCTTGGCCCATGTTCTCGGCGCCATCC
AGCCCTATGCCCACCTCATCCACGTCCAGCGACTCATCCCCCGTCAGGTCTGTTGCAGGGTTTGTTTGGTTTTCT
GTTGCTGCCGTTGTTCTCTCATTGGCTCGGTCCTCTCTTCATGCAGTGTTCAGCCTCCTCGTCAACTTTGTTCCC
TGCCATCCAAACCTGCACTTGCTTTTTGACAGGCCAGAAGAAGCGGTACATGAAGACTCCAGCACACCGTTCCGG
AAGGCAAAAGCCTTGTATGCCTGCAAAGCTGAACATGACTCAGAACTTTCGTTCACAGCAGGCACGGTCTTCGAT
AATGTTCACCCATCTCAGGAGCCTGGCTGGTTGGAGGGGACTCTGAACGGAAAGACTGGCCTCATCCCTGAGAAT
TACGTGGAGTTCCTC**TAA**CCGTGGGCCCCAGCAGAACTGCTGAGCTTTACATGGTATCCATGACAACTGCTGATT
CCAGTGTCGAGGCCATTTCTCTTTGCCACTGAGAAATGCAGCGTGACTGACTCTGTTGCTACCTGTCAACATGAA
TGTTTCTGTGAGCTCTGGTGTCACTCATCTCCATGATCATCTCAGCCAACATGCATCAGTACTGCAAGAAAAGAA
GTCAATCAGCAGAGGAGAGCATTTGATAACTAAGAGGAAGACTTGCAAAGCCGTTTTCTCATGAGTACCCTGAAT
AGGGGGCACTCATTTTGTTTCAACGGTCCAAACGCCCAACCTTCAGAAAGAGGAAGTCAGATAGAAATAGTCCCT
GAGAGCACACTGTGTAGCTAAGCCTGCTGGGGCTGGGTGAAGAAATTGGCGCTGAGATCCAGGCTGGATCCATTG
CTTTTGTTTACAATAGGCACTCTCTCTACCCCACCTCTCAGTACTTGAGACTTAAAGTGCTACAGGCAGCTGGAT
CTGTTTGCATGCAGGATGAAGAGGGTTAAAACACTGTTTATATAAGATCCAATCTCTCACCATCTCTAAAGCAGC
CGTTGGCCTGTCATCAGTGAGATACAATCCAGTCTTCTCATGCACGGGAACACACACACCCTGCGTTTCTCCCTC
CCAGGCTAGGAACCTCTCTGCCACCAAGGGCTGCCATCCATCGCCTAGTAACCACGGCAACCCAACCTACTCTAA

FIGURE 990B

AACCAAACCAAAAAAATAAAATAACACATCCTCTTTGCATGACACATTTTTTTTCTCCCCTTTTTGGTACACTTT
TTTTGAATGGTTTTCTAACAACTTGAAGCACAGGATCAAGGAATTAGGGTGGTCTACTTGAGGCAGATGGGATAG
TAGCTGGGAACTGTTCCCTTTCTGATTAATTTCAGCAGCATCGGAATATATTTGGAGCACACCCTAGTAACCTCT
TGAGATTAAATTACATAGTCTTAATATTTCTGTTCCTCCATGCAACTGATGTTTGTTTTTTAAAGGGTAAGATGC
TGCCTCCCAATGGGTGATGCCATCTGACTGGTTTCCCCATGTCCTCCCATTCACCCATCTCTGCTCCCACCCTTG
CCTGCCTCTAACCCACCACTGGCCAGCCCCCTTGCCCTACTCTGGGCTGCTGAACACTGGTGCTGTGGTGGTTTT
CAAGGTTAATTCCTAGGCTAACCGTATGGCCTATAGTTTAAAAGCACATCTATGTTCACTGCCACTCTGAAAAAG
GGAATTATTTCTCAGTCTTTCAAGGCTTGAGACTAATATAGGCCATTGTGATTCAGGAAGAAACCCAAGGTTGGA
GGGTGGGATGAGTACCCTCTGAAAAAGGGAATTTGCTGGTGAAAAGAGGCTGGATCTTGTGGAAGACTGTCTTGG
ATGGGGAAGTACTACCTGGAGATTTCAAATTCACTTGGCCTGCAAACAACAGAGTTATCCGTATCTTCCACATGT
GAATGTCATTGCAAGGGTGACTCTAGACAAACTACAAACCGATGGACCGTCAAGCTCCCCAGGAGCCCCTTGGAT
GGCAGCGTTGCTTCAGAGTGTTTCCTGTTTCTGGAATTCCTTGTTAGGGAACTTTAAAGAAGAAAAGAAAAACTT
GAATTGTGTTGAATTACTGTATCTTTTACTTTTTTTTTTTGAAAAGATAAACTTGTAAATAGAGTGATTTGAAAT
ACTATATGGCAAAGTTTTATATTTGATATTCTTTAAGTTAGTTGCTCACACACTTAGGCTTTGATTGCTGAAGAA
GTATGTTTAAGAGGGAGAGAGGGGAGGCAAAGCTGAAGAGAGTCAAGGTCACTGTCCCCGCTTCGGCCTGAAGGA
AAGAGAAGACATTTCTATGGCCTTGCTCTCTGCTGTCCTGTTGGTGGGCACGACACATCAGTGGTGTTCAGTCTT
TATGTGTTTTTAAGCATCCCTTGGGCTTTGGATTTGGAGATGGGAAGAGCATCTCCAGGCAATGAGTTTTTCAAA
GAATGCCTACTTAGTAGTAAGATGAAGCTCAGGATTTAAATAAGTGGGGTCAGGCATTCGAGTTTTTGTCTTTCT
TCTCAGGTGTATTTCTTGGTACCCCCAAGATATCAGGCCAGAAAGAGATGAGTCAGTTGCTGTGCTCTTTACTTC
TTTTTCTCCACATCTTCTGAGGCTTTAGAAATGTGGACAAGCTAGTTTTCAAATTTTGTGTGCGTCTGTAAGTTC
TTAAAGAACCAGCTTCTTAGAATGTTCAGTTCTCAATGTGCTGCTGCTTTCCCTTCTCCTAAACATTTTAAAACT
CTTCCCTTTCACCTCCAATTCCCGTGATCCCAAAAGAAGAGGAAGACTCCAGGAGGGGTATAGATTGTGCCGTCA
TAGCTTTACAGGTGGTTTTAAAGTTAGCAGGGGTTTGTCATGGTGATTCACTACTCAGTTTATCAGCTCAAGGAT
TATACAGCTCTTTTCCGGGAACTCACCCAGGAGCAAGCGAGACACTACCATTGAATCAGGGAATGAGAATTAAGA
ATGGACAGGACCAAGACAGAACTCAAGAAAGCCACTGGGGAAAACTCGAGAAGAAAGGGAGTATACTAGTAGGTT
AGATCTGTGAACCTGAGGACAAGAAGACCTTGGGAAATGGAGGCCTCAGGGGATGTGCATTCACATACTATTACG
CTTCTCAAAGAGAGACCAACATCATGCTTTTAACACATTTGATGAGGTTTTTTATTTGTGTTTTTGTTTGTTTTT
TGAGATGGAGTCTCACTCTGTGGCCCAGGCTGGAGTGCAGTGGCGCGGTCTTGGCTCACTGCAACCTCCGCCTCC
CGGGTTCAAGTGATTCTCCTGTCTCAGCCTCCCAAGTAGCTGGGACTGCAGGCATGAGCCATCACACCCGGCTGG
TTTTTTGTGTTTTTAGTAGAGATGGGGTTTTGCCATGTTTGCCGGGCTGATCTCGAACTCCTGACCTCAAGTGAT
CTGCCCACTTCGGACCCCCAAAGTGCTGGGATTCCAGGTGTGAGCCGCTGCGGCCGACCACATTTGATGTTTGAA
GTTGTAATCTGTCCCATCATAAACTTACCTGGAGCTCATGTGGAGGAACAGAAGGCCAAGATCCTTGCTTTGGGG
GTGCCTCACGAAGCATCCCTGTAGACACTTGGCCCCAGCTTCACTGCTTGGAAGCATGTCCCTCCCTCTTGAGTT
GGCTCTGATTTGAAATCGGGAGAAACAGAGCTGCTGCCAATGGGATCTTTTAGGTAACTCCCTCCCTAGCTTCCG
TGTGTCTGTGCAGTGCCCATGAGCTGCTGCCAATGGGATCTTTCAGGTACCCCCTCCCCAGCTTCCCTGTGGCTG
TGCGGTGCCCTTGACAGATGGCTTCTCTGTTTCCCTTTGCCCAGCCAGGCTCCCCTCCTTCCTATTAGCTACAAA
ACTGGATAAACTTCAGAATATGAGCCAATGAGTAGGAAGGAACTTGAAGACTAAAGATTTTACTCTCTCCCCTAT
CCATGCCCCCTACCTCTGACTCTCTCTGTGTGAACAGGAAACTTTAGGGTAGATGAGGAGAATGAATTGGTTATC
AGAGTGGAAGACCATGGCCCAGGATCCCTGAGCTTTCCCAGTAGCCTCCAGTTTCCTTTGTAAGACCCAGGGATC
ACTTAGCCATAGCCTGAATCTTTTAGGGGTATTAAGGTCAGCCTCTCACTCTTCCTTCAGGTTACTAACAAAATT
TCGTAGCTAAAGAATGCCATGGCCGGGTGCAGTGGCTCACGCCTATAATCCCAGCACTTTGGGAGGCCGAGGCGG
GCGGATCACGAGGTCAGGAGATTGAGACCATCCTGGCTACGACGGTGAAGCCCCGTCTCTGCTAAGAGTGCAAAA
AATTAGCCGGGTGTGGTGGCGGGCGCCTGTAGTCCCAGCTACTCTGGAGGCTGAGGCAGGAGAATGGCATGAGCC
CGGGAGGCGGAGATTGCGGTGAGCCAAGATCGCGCCCCTGCACTCCAGCCTGGGTGACAGAGCCAGACTCCGTCT
CAAAGG

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FIGURE 991

MGLPALEFSDCCLDSPHFRETLKSHEAELDKTNKFIKELIKDGKSLISALKNLSSAKRKFADSLNEFKFQCIGDA
ETDDEMCIARSLQEFATVLRNLEDERIRMIENASEVLITPLEKFRKEQIGAAKEAKKKYDKETEKYCGILEKHLN
LSSKKKESQLQEADSQVDLVRQHFYEVSLEYVFKVQEVQERKMFEFVEPLLAFLQGLFTFYHHGYELAKDFGDFK
TQLTISIQNTRNRFEGTRSEVESLMKKMKENPLEHKTISPYTMEGYLYVQEKRHFGTSWVKHYCTYQRDSKQITM
VPFDQKSGGKGGEDESVILKSCTRRKTDSIEKRFCFDVEAVDRPGVITMQALSEEDRRLWMEAMDGREPVYNSNK
DSQSEGTAQLDSIGFSIIRKCIHAVETRGINEQGLYRIVGVNSRVQKLLSVLMDPKTASETETDICAEWEIKTIT
SALKTYLRMLPGPLMMYQFQRSFIKAAKLENQESRVSEIHSLVHRLPEKNRQMLQLLMNHLANVANNHKQNLMTV
ANLGVVFGPTLLRPQEETVAAIMDIKFQNIVIEILIENHEKIFNTVPDMPLTNAQLHLSRKKSSDSKPPSCSERP
LTLFHTVQSTEKQEQRNSIINSSLESVSSNPNSILNSSSSLQPNMNSSDPDLAVVKPTRPNSLPPNPSPTSPLSP
SWPMFSAPSSPMPTSSTSSDSSPVRSVAGFVWFSVAAVVLSLARSSLHAVFSLLVNFVPCHPNLHLLFDRPEEAV
HEDSSTPFRKAKALYACKAEHDSELSFTAGTVFDNVHPSQEPGWLEGTLNGKTGLIPENYVEFL

FIGURE 992

TTTTTTTTTTTTTTGCCGGAGTCGAGCGGGTGCTGCTAGCGGAGGCGCCATATTGGAGGGGACAAAACTCCGGCG
ACAGCGAGTGACACAAATAAACCCCTGGACCCCCTTGTTCCCTCAGCTCTAAGGGCCGCG**ATG**TTGTACCTAGAA
GACTATCTGGAAATGATTGAGCAGCTTCCTATGGATCTGCGGGACCGCTTCACGGAAATGCGCGAGATGGACCTG
CAGGTGCAGAATGCAATGGATCAACTAGAACAAAGAGTCAGTGAATTCTTTATGAATGCAAAGAAAAATAAACCT
GAGTGGAGGGAAGAGCAAATGGCATCCATCAAAAAAGACTACTATAAAGCTTTGGAAGATGCAGATGAGAAGGTT
CAGTTGGCAAACCAGATATATGACTTGGTAGATCGACACTTGAGAAAGCTGGATCAGGAACTGGCTAAGTTTAAA
ATGGAGCTGGAAGCTGATAATGCTGGAATTACAGAAATATTAGAGAGGCGATCTTTGGAATTAGACACTCCTTCA
CAGCCAGTGAACAATCACCATGCTCATTCACATACTCCAGTGGAAAAAAGGAAATATAATCCAACTTCTCACCAT
ACGACAACAGATCATATTCCTGAAAAGAAATTTAAATCTGAAGCTCTTCTATCCACCCTTACGTCAGATGCCTCT
AAGGAAAATACACTAGGTTGTCGAAATAATAATTCCACAGCCTCTTCTAACAATGCCTACAATGTGAATTCCTCC
CAACCTCTGGGATCCTATAACATTGGCTCGTTATCTTCAGGAACTGGTGCAGGGGCAATTACCATGGCAGCTGCT
CAAGCAGTTCAGGCTACAGCTCAGATGAAGGAGGGACGAAGAACATCAAGTTTAAAAGCCAGTTATGAAGCATTT
AAGAATAATGACTTTCAGTTGGGAAAAGAATTTTCAATGGCCAGGGAAACAGTTGGCTATTCATCATCTTCGGCA
CTTATGACAACATTAACACAGAATGCCAGTTCATCAGCAGCCGACTCACGGAGTGGTCGAAAGAGCAAAAACAAC
AACAAGTCTTCAAGCCAGCAGTCATCATCTTCCTCCTCCTCTTCTTCCTTATCATCGAGTTCTTCATCATCAACT
GTTGTACAAGAAATCTCTCAACAAACAACTGTAGTGCCAGAATCTGATTCAAATAGTCAGGTTGATTGGACTTAC
GACCCAAATGAACCTCGATACTGCATTTGTAATCAGGTATCTTATGGTGAGATGGTGGGATGTGATAACCAAGAT
TGCCCTATAGAATGGTTCCATTATGGCTGCGTTGGATTGACAGAGGCACCAAAAGGCAAATGGTACTGTCCACAG
TGCACTGCTGCAATGAAGAGAAGAGGCAGCAGACACAAA**TAA**AGGTGGTCCTTTTGTTTGATGAAGAAATAAACT
TCAGCTGAAGATTTTATATAGGACTTTAAAAAGAAGAGAAGAGAAAGAAGAAACAATGCATTTCCAGGCAACCAC
TTAAAGGATTTACATAGACAATCCTATAAGATCTTGAACTTGAATTTTATGGGTTGTATTTTAATAATGTAAGTA
AATTATTTATGCACTCCTGGTGTGCTATGAATATTATTCCAGTTAGCCTTGGATTATTTCAGTGGCCAACATATG
CAGACATTTGTACTCCTCAACCATTTTCTCAAAGTAATGGGCATTCTATGATTTAGACTTCAAGGAATTCCAATG
ATGAAGATTTTAAGGAAAGTATTTTATATTCAACAGGTATATTCTGCTGCATGTACTGTACTCCAGAGCTGTTAT
GTAACACTGTATATAAATGGTTACAAAAAAAAAAAAAAA

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FIGURE 993

MLYLEDYLEMIEQLPMDLRDRFTEMREMDLQVQNAMDQLEQRVSEFFMNAKKNKPEWREEQMASIKKDYYKALED
ADEKVQLANQIYDLVDRHLRKLDQELAKFKMELEADNAGITEILERRSLELDTPSQPVNNHHAHSHTPVEKRKYN
PTSHHTTTDHIPEKKFKSEALLSTLTSDASKENTLGCRNNNSTASSNNAYNVNSSQPLGSYNIGSLSSGTGAGAI
TMAAAQAVQATAQMKEGRRTSSLKASYEAFKNNDFQLGKEFSMARETVGYSSSSALMTTLTQNASSSAADSRSGR
KSKNNNKSSSQQSSSSSSSSSLSSSSSSSTVVQEISQQTTVVPESDSNSQVDWTYDPNEPRYCICNQVSYGEMVG
CDNQDCPIEWFHYGCVGLTEAPKGKWYCPQCTAAMKRRGSRHK

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FIGURE 994

GCGGCCCAGGCCCGGAACCTTCCCTGGTCGTGCGCCCTATGTAAGGCCAGCCGCGGCAGGACCAAGGCGGCGGTG
TCAGCTCGCGAGCCTACCCTCCGCGGACGGTCTTGGGTCGCCTGCTGCCTGGCTTGCCTGGTCGGCGGCGGGTGC
CCCGCGCGCACGCGCAAAGCCCGCCGCGTTCCCCGACCCCAGGCCGCGCTCTGTGGGCCTCTGAGGGCGGC**ATG**C
GGGACTACGACGAGGTGACCGCCTTCCTGGGCGAGTGGGGGCCCTTCCAGCGCCTCATCTTCTTCCTGCTCAGCG
CCAGCATCATCCCCAATGGCTTCACCGGCCTGTCCTCCGTGTTCCTGATAGCGACCCCGGAGCACCGCTGCCGGG
TGCCGGACGCCGCGAACCTGAGCAGCGCCTGGCGCAACCACACTGTCCCACTGCGGCTGCGGGACGGCCGCGAGG
TGCCCCACAGCTGCCGCCGCTACCGGCTCGCCACCATCGCCAACTTCTCGGCGCTCGGGCTGGAGCCGGGGCGCG
ACGTGGACCTGGGGCAGCTGGAGCAGGAGAGCTGTCTGGATGGCTGGGAGTTCAGTCAGGACGTCTACCTGTCCA
CCATTGTGACCGAGTGGAACCTGGTGTGTGAGGACGACTGGAAGGCCCCACTCACAATCTCCTTGTTCTTCGTGG
GTGTGCTGTTGGGCTCCTTCATTTCAGGGCAGCTGTCAGACAGGTTTGGCCGGAAGAATGTGCTGTTCGTGACCA
TGGGCATGCAGACAGGCTTCAGCTTCCTGCAGATCTTCTCGAAGAATTTTGAGATGTTTGTCGTGCTGTTTGTCC
TTGTAGGCATGGGCCAGATCTCCAACTATGTGGCAGCATTTGTCCTGGGGACAGAAATTCTTGGCAAGTCAGTTC
GTATAATATTCTCTACGTTAGGAGTGTGCATATTTTATGCATTTGGCTACATGGTGCTGCCACTGTTTGCTTACT
TCATCCGAGACTGGCGGATGCTGCTGGTGGCGCTGACGATGCCGGGGGTGCTGTGCGTGGCACTCTGGTGGTTCA
TCCCTGAGTCCCCCCGATGGCTCATCTCTCAGGGACGATTTGAAGAGGCAGAGGTGATCATCCGCAAGGCTGCCA
AAGCCAATGGGATTGTTGTGCCTTCCACTATCTTTGACCCGAGTGAGTTACAAGACCTAAGTTCCAAGAAGCAAC
AGTCCCACAACATTCTGGATCTGCTTCGAACCTGGAATATCCGGATGGTCACCATCATGTCCATAATGCTGTGGA
TGACCATATCAGTGGGCTATTTTGGGCTTTCGCTTGATACTCCTAACTTGCATGGGGACATCTTTGTGAACTGCT
TCCTTTCAGCGATGGTTGAAGTCCCAGCATATGTGTTGGCCTGGCTGCTGCTGCAATATTTGCCCCGGCGCTATT
CCATGGCCACTGCCCTCTTCCTGGGTGGCAGTGTCCTTCTCTTCATGCAGCTGGTACCCCCAGACTTGTATTATT
TGGCTACAGTCCTGGTGATGGTGGGCAAGTTTGGAGTCACGGCTGCCTTTTCCATGGTCTACGTGTACACAGCCG
AGCTGTATCCCACAGTGGTGAGAAACATGGGTGTGGGAGTCAGCTCCACAGCATCCCGCCTGGGCAGCATCCTGT
CTCCCTACTTCGTTTACCTTGGTGCCTACGACCGCTTCCTGCCCTACATTCTCATGGGAAGTCTGACCATCCTGA
CAGCCATCCTCACCTTGTTTCTCCCAGAGAGCTTCGGTACCCCACTCCCAGACACCATTGACCAGATGCTAAGAG
TCAAAGGAATGAAACACAGAAAAACTCCAAGTCACACAAGGATGTTAAAAGATGGTCAAGAAAGGCCCACAATCC
TTAAAAGCACAGCCTTC**TAA**CATCGCTTCCAGTAAGGGAGAAACTGAAGAGGAAAGACTGTCTTGCTAGAAATGG
CCAGCTTGTGCAGACTCCGAGTCCTTCAGTGACAAAGGCCTTTGCTGTTTGTCCTCTTGACCTGTGTCTGACTTG
CTCCTGGATGGGCACCCACACTCAGAGGCTACATATGGCCCTAGAGCACCACCTTCCTCTAGGGACACTGGGGCT
ACCTACAGACAACTTCATCTAAGTCCTAACTATTACAATGATGGACTCAGCACCTCCAAAGCAGTTAATTTTTCA
CTAGAACCAGTGAGATCTGGAGGAATGTGAGAAGCATATGCTAAATGTACATTTTAATTTTAGACTACTTGAAAA
GGCCCCTAATAAGGCTAGAGGTCTAAGTCCCCCACCCCTTTCCCCACTCCCCTCTAGTGGTGAACTTTAGAGGAA
AAGGAAGTAATTGCACAAGGAGTTTGATTCTTACCTTTTCTCAGTTACAGAGGACATTAACTGGATCATTGCTTC
CCCAGGGCAGGAGAGCGCAGAGCTAGGGAAAGTGAAAGGTAATGAAGATGGAGCAGAATGAGCAGATGCAGATCA
CCAGCAAAGTGCACTGATGTGTGAGCTCTTAAGACCACTCAGCATGACGACTGAGTAGACTTGTTTACATCTGAT
CAAAGCACTGGGCTTGTCCAGGCTCATAATAAATGCTCCATTGAATCTACTATTCTTGTTTTCCACTGCTGTGGA
AACCTCCTTGCTACTATAGCGTCTTATGTATGGTTTAAAGGAAATTTATCAGGTGAGAGAGATGAGCAACGTTGT
CTTTTCTCTCAAAGCTGTAATGTGGGTTTTGTTTTACTGTTTATTTGTTTGTTGTTGTATCCTTTTCTCCTTGTT
ATTTGCCCTTCAGAATGCACTTGGGAAAGGCTGGTTCCTTAGCCTCCTGGTTTGTGTCTTTTTTTTTTTTTTTTT
AAACACAGAATCACTCTGGCAATTGTCTGCAGCTGCCACTGGTGCAAGGCCTTACCAGCCCTAGCCTCTAGCACT
TCTCTAAGTGCCAAAAACAGTGTCATTGTGTGTGTTCCTTTCTTGATACTTAGTCATGGGAGGATATTACAAAAA
AGAAATTTAAATTGTGTTCATAGTCTTTCAGAGTAGCTCACTTTAGTCCTGTAACTTTATTGGGTGATATTTTGT
GTTCAGTGTAATTGTCTTCTCTTTGCTGATTATGTTACCATGGTACTCCTAAAGCATATGCCTCACCTGGTTAAA
AAAGAACAAACATGTTTTTGTGAAAGCTACTGAAGTGCCTTGGGAAATGAGAAAGTTTTAATAAGTAAAATGATT
TTTTAAATATCAAAAAAAAAAAAAAA

FIGURE 995

MRDYDEVTAFLGEWGPFQRLIFFLLSASIIPNGFTGLSSVFLIATPEHRCRVPDAANLSSAWRNHTVPLRLRDGR
EVPHSCRRYRLATIANFSALGLEPGRDVDLGQLEQESCLDGWEFSQDVYLSTIVTEWNLVCEDDWKAPLTISLFF
VGVLLGSFISGQLSDRFGRKNVLFVTMGMQTGFSFLQIFSKNFEMFVVLFVLVGMGQISNYVAAFVLGTEILGKS
VRIIFSTLGVCIFYAFGYMVLPLFAYFIRDWRMLLVALTMPGVLCVALWWFIPESPRWLISQGRFEEAEVIIRKA
AKANGIVVPSTIFDPSELQDLSSKKQQSHNILDLLRTWNIRMVTIMSIMLWMTISVGYFGLSLDTPNLHGDIFVN
CFLSAMVEVPAYVLAWLLLQYLPRRYSMATALFLGGSVLLFMQLVPPDLYYLATVLVMVGKFGVTAAFSMVYVYT
AELYPTVVRNMGVGVSSTASRLGSILSPYFVYLGAYDRFLPYILMGSLTILTAILTLFLPESFGTPLPDTIDQML
RVKGMKHRKTPSHTRMLKDGQERPTILKSTAF

FIGURE 996

CACACCTTTCCAAGGACCCCCAAACTCTGCTCCGTGCACGTCAAATGCTCCTTTCCCTTGTGTCCAACCCCCTAC
CCCTCTCCCTAACACCCCTCTTCTCAACAAGACTCAGCCTCTCCCCGAGGTGGGTGAGCATCCTTGAGGTTTCCC
ACCCTTAACTGCTGTGTCCCCGGATGGAGCCAGAGAAATGTGGTGGGGGGGCCGGGGCAGAGTTTCAACATTGCC
CCCCAGAAGGAGGAGCCAGAG**ATG**GGGTCTGTCCAGGAAAACAGGATGCCGGAGCCCAGGAGTCGTCAGCCTAGC
AGTTGCCTGGCCTCCAGATGCCTCCCAGGGGAGCAGATCCTAGCATGGGCCCCAGGGGTGAGGAAGGGCCTGGAA
CCAGAATTGTCTGGAACCCTGATCTGTACCAACTTTAGGGTCACCTTCCAGCCCTGTGGATGGCAGTGGAATCAG
GACACTCCCTTGAACAGTGAATACGATTTTGCCCTGGTCAACATTGGACGATTAGAGGCTGTGAGCGGCTTGTCC
CGAGTCCAGCTCCTCCGTCCAGGGTCCCTGCATAAATTTATCCCTGAGGAGATTCTGATTCATGGCCGAGACTTC
CGGCTGCTCAGAGTTGGTTTTGAGGCTGGAGGCCTAGAGCCTCAGGCTTTTCAGGTGACCATGGCCATTGTCCAA
GCCAGAGCTCAGAGCAATCAAGCCCAACAGTATTCGGGGATAACCCTGAGCAAGGCTGGCCAGGGTTCTGGCTCC
AGAAAACCACCAATTCCTCTCATGGAGACAGCGGAAGACTGGGAGACTGAGCGGAAGAAGCAGGCAGCCAGAGGC
TGGAGGGTCAGCACGGTCAACGAGAGGTTCGACGTAGCCACCAGGCTCCGGTGTTTCTCCTCTTCCTTGATTGTG
TCTGGCAGCTCCTCCAGCAGTTTCCAGCTGATTTTGAATTCTCTGAGTTTTTCCTTCTTGCTCTTCATGACAGTG
TCAGGGTTCCTGACACCCTTACCTTCC**TGA**GAAATACCCCCTGGGAGCGCGGAAAGCAGAGCGGACAGGTCAGTG
ACTTCTATTTTTGACTCGTGTTTTTTTTTCCATTGAGATGTACTCTCTGAAGTTTGGTCTTGATTTGTTTTATGA
GAAGTGAGGTCTGTGAGTGGGGAGGGGGAGATTTATTCTCATTTTCAGGACGAGACTTTTGCCCTACATCTTTCC
TAGAATAAGAGGTGAGAATCTCATGATTTGTCTCTAGATGTGGGAGGATTGTGTGTAACCATCCTTTTTCTTGCT
TCCTCTGTCCAGTTAAACTCCTATACACAAGTCTACACCCCAGGATACTCCAGCCTCCAGCTGGGAACTCTTTTA
ACCTGCAGCTGTCTGTCTGGGACTGGGATTTACGTTATAGCAATGCACAGATACTACAATTCCAGAATCCTGGCT
ATGACCCAGAACACTGTCCAGATTCCTGGCTCCCTAGACCACAGCCAAGCTTCATGGTTCCTGGACCCCCCAGTT
TTGTGTGGCTCTTCTCTAGAGGAGCATTGACCCCCCTGAATCAGCTCTGTCCTTGGCGGGACAGTCCTTCCCTGC
TGGCAGTCTCTTCTCGTTGGCTCCCTCGACCTGCTATCTCCTCTGAAAGCTGGCTGACCAGGAATGGGGTCTCCC
CTCACATTGGGGAGCTTGCCCTTTACCTCCAGGGCTGCTGCTGCCTGGGTATCTGGGACCCCAGATCAGGCTCTG
GAGACGCTGCTACCTGAGGGGAAGGCCTGAGGTCCAGGTAAGAAGGGAAAATAGACTGGGAGTGGGACAAGGGAC
TTGACTCTGCTGAACCAGATGAACAGGAGCTGGAAAGGCAAGGAGCTGAAGCCTCTGGGAGTCTGGGAAGTGAAG
TTCTACTCCTCTTGGCATCAAACAAGGTTTGGGAGTGTAGGAGGTGCGGGAAAGTGCTTGTGGCTTAGATTAAGT
GGAATTTAGGGCATAGCTGAAAGGGGAAACAGAATTAAAGACACCAGAAGTAGCAGAGAAGCAGGGGGCCAGAGC
TACAACAGTATTCTTCTCTGTTCCTCTTTGCCTCCTCCCCAGATGGGCCTCTCATCTCCCACAATCTCTGGCCTC
CAGGATGAGCTATCCCATCTTCAGGAGTTATTACGGAAAGGACACCAAGAATATCTCCTGAGGATCACTCCAAGA
AAAGAGATCCACATACCATTCTCAATCCCACTGAAATTGCTGGCATTCTCAAAGGCAGGGCAGAGGGGGATCTGG
GGTAGAGGGAGGGTTCTGTCTAATCTTTTTTTTTTCTTTTGTATCTGCACTTGCAGCCTCAGCTTTCATACTTCA
GCCCTTAAGTTCACTAAGAAGGTCTGAGTTTCTGCTGCAGATAGTGGTGTTAACTGCTCCAACTCTTGTCTTGCT
TAGTTTCTACAAATATTTTTGCTTCTTGTCATTTGAAGGATTAAGAAACAAAAACAATCCAGAAATTGATCGGTT
TTTTTAGGCCAATCCCATCCCTTCTGGATAACCAGATGTTAAATCATGAGATCAGAGATGCTGTTCATCAGTCCC
AACAAGATGGCCTAGAAATCGCATTCTCACCTCGCCTTGCTGCTGCTTTAATTCCAAGTTCTATTTCTTCCCTTA
TAGTTTTCTATGGGAATGAGGCGGATACAGGAAACACCCTATCTCCTCTGTATTTTTGTAGTGGAATTTCTATTT
AAGGGGCTCATTAAAGCATAGTATTTATACAC

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FIGURE 997

MGSVQENRMPEPRSRQPSSCLASRCLPGEQILAWAPGVRKGLEPELSGTLICTNFRVTFQPCGWQWNQDTPLNSE
YDFALVNIGRLEAVSGLSRVQLLRPGSLHKFIPEEILIHGRDFRLLRVGFEAGGLEPQAFQVTMAIVQARAQSNQ
AQQYSGITLSKAGQGSGSRKPPIPLMETAEDWETERKKQAARGWRVSTVNERFDVATRLRCFSSSLIVSGSSSSS
FQLILNSLSFSFLLFMTVSGFLTPLPS

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FIGURE 998

CCCAGACCTAGAACTACCCAGAGCAAGACCACAGCTGGTGAACAGTCCAGGAGCAGACAAG**ATG**GAGACAAATTC
CTCTCTCCCCACGAACATCTCTGGAGGGACACCTGCTGTATCTGCTGGCTATCTCTTCCTGGATATCATCACTTA
TCTGGTATTTGCAGTCACCTTTGTCCTCGGGGTCCTGGGCAACGGGCTTGTGATCTGGGTGGCTGGATTCCGGAT
GACACACACAGTCACCACCATCAGTTACCTGAACCTGGCCGTGGCTGACTTCTGTTTCACCTCCACTTTGCCATT
CTTCATGGTCAGGAAGGCCATGGGAGGACATTGGCCTTTCGGCTGGTTCCTGTGCAAATTCGTCTTTACCATAGT
GGACATCAACTTGTTCGGAAGTGTCTTCCTGATCGCCCTCATTGCTCTGGACCGCTGTGTTTGCGTCCTGCATCC
AGTCTGGACCCAGAACCACCGCACCGTGAGCCTGGCCAAGAAGGTGATCATTGGGCCCTGGGTGATGGCTCTGCT
CCTCACATTGCCAGTTATCATTCGTGTGACTACAGTACCTGGTAAAACGGGGACAGTAGCCTGCACTTTTAACTT
TTCGCCCTGGACCAACGACCCTAAAGAGAGGATAAATGTGGCCGTTGCCATGTTGACGGTGAGAGGCATCATCCG
GTTCATCATTGGCTTCAGCGCACCCATGTCCATCGTTGCTGTCAGTTATGGGCTTATTGCCACCAAGATCCACAA
GCAAGGCTTGATTAAGTCCAGTCGTCCCTTACGGGTCCTCTCCTTTGTCGCAGCAGCCTTTTTTCTCTGCTGGTC
CCCATATCAGGTGGTGGCCCTTATAGCCACAGTCAGAATCCGTGAGTTATTGCAAGGCATGTACAAAGAAATTGG
TATTGCAGTGGATGTGACAAGTGCCCTGGCCTTCTTCAACAGCTGCCTCAACCCCATGCTCTATGTCTTCATGGG
CCAGGACTTCCGGGAGAGGCTGATCCACGCCCTTCCCGCCAGTCTGGAGAGGGCCCTGACCGAGGACTCAACCCA
AACCAGTGACACAGCTACCAATTCTACTTTACCTTCTGCAGAGGTGGAGTTACAGGCAAAG**TGA**GGAGGGAGCTG
GGGGACACTTTCGAGCTCCCAGCTCCAGCTTCGTCTCACCTTGAGTTAGGCTGAGCACAGGCATTTCCTGCTTAT
TTTAGGATTACCCACTCATCAGAAAAAAAAAAAAAAAGCCTTTGTGTCCCCTGATTTGGGGAGAATAAACAGATAT
GAGTTT

FIGURE 999

METNSSLPTNISGGTPAVSAGYLFLDIITYLVFAVTFVLGVLGNGLVIWVAGFRMTHTVTTISYLNLAVADFCFT
STLPFFMVRKAMGGHWPFGWFLCKFVFTIVDINLFGSVFLIALIALDRCVCVLHPVWTQNHRTVSLAKKVIIGPW
VMALLLTLPVIIRVTTVPGKTGTVACTFNFSPWTNDPKERINVAVAMLTVRGIIRFIIGFSAPMSIVAVSYGLIA
TKIHKQGLIKSSRPLRVLSFVAAAFFLCWSPYQVVALIATVRIRELLQGMYKEIGIAVDVTSALAFFNSCLNPML
YVFMGQDFRERLIHALPASLERALTEDSTQTSDTATNSTLPSAEVELQAK

FIGURE 1000

GCTACACTAGAGCAGAGTACGAGTCTGAGGCGGAGGGAGTA**ATG**GCAGGACAAGCGTTTAGAAAGTTTCTTCCAC
TCTTTGACCGAGTATTGGTTGAAAGGAGTGCTGCTGAAACTGTAACCAAAGGAGGCATTATGCTTCCAGAAAAAT
CTCAAGGAAAAGTATTGCAAGCAACAGTAGTCGCTGTTGGATCGGGTTCTAAAGGAAAGGGTGGAGAGATTCAAC
CAGTTAGCGTGAAAGTTGGAGATAAAGTTCTTCTCCCAGAATATGGAGGCACCAAAGTAGTTCTAGATGACAAGG
ATTATTTCCTATTTAGAGATGGTGACATTCTTGGAAAGTACGTAGAC**TGA**AATAAGTCACTATTGAAATGGCATC
AACATGATGCTGCCCATTCCACTGAAGTTCTGAAATCTTTCGTCATGTAAATAATTTCCATATTTCTCTTTTATA
ATAAACTAATGATAACTAATGACATCCAGTGTCTCCAAAATTGTTTCCTTGTACTGATATAAACACTTCCAAATA
AAAATATGTAAAT

FIGURE 1001

MAGQAFRKFLPLFDRVLVERSAAETVTKGGIMLPEKSQGKVLQATVVAVGSGSKGKGGEIQPVSVKVGDKVLLPE
YGGTKVVLDDKDYFLFRDGDILGKYVD

FIGURE 1002

GAAGCAGGCCTGAGCCTCCCCAAAGGCAGCTCCTGGGGACTCCCAGGACCACAGGCTGAGACGAGACGCAGGGTG
GCTGGAGGAAGTGAGAGGTGAACTCAGCCTGGGACTGGCTGGGCGAGACTCTCCACCTGCTCCCTGGGACCATCG
CCCACC**ATG**GCTGTGGCCCAGCAGCTGCGGGCCGAGAGTGACTTTGAACAGCTTCCGGATGATGTTGCCATCTCG
GCCAACATTGCTGACATCGAGGAGAAGAGAGGCTTCACCAGCCACTTTGTTTTCGTCATCGAGGTGAAGACAAAA
GGAGGATCCAAGTACCTCATCTACCGCCGCTACCGCCAGTTCCATGCTTTGCAGAGCAAGCTGGAGGAGCGCTTC
GGGCCAGACAGCAAGAGCAGTGCCCTGGCCTGTACCCTGCCCACACTCCCAGCCAAAGTCTACGTGGGTGTGAAA
CAGGAGATCGCCGAGATGCGGATACCTGCCCTCAACGCCTACATGAAGAGCCTGCTCAGCCTGCCGGTCTGGGTG
CTGATGGATGAGGACGTCCGGATCTTCTTTTACCAGTCGCCCTATGACTCAGAGCAGGTGCCCCAGGCACTCCGC
CGGCTCCGCCCGCGCACCCGGAAAGTCAAGAGCGTGTCCCCACAGGGCAACAGCGTTGACCGCATGGCAGCTCCG
AGAGCAGAGGCTCTATTTGACTTCACTGGAAACAGCAAACTGGAGCTGAATTTCAAAGCTGGAGATGTGATCTTC
CTCCTCAGTCGGATCAACAAAGACTGGCTGGAGGGCACTGTCCGGGGAGCCACGGGCATCTTCCCTCTCTCCTTC
GTGAAGATCCTCAAAGACTTCCCTGAGGAGGACGACCCCACCAACTGGCTGCGTTGCTACTACTACGAAGACACC
ATCAGCACCATCAAGTCTGTGGCCTGGGAGGGAGGGGCCTGTCCAGCCTTCCTGCCATCCCTACGACCACCGCCC
CTCACATCACCTTCTCATGGGTCCCTCTCCCACTCCAAAGCCCCCAGTGGCTCCCAGATGAGCCACAATGCTGTA
ACAAGCCATCAACGTCCAGGGTGGCCTGGCCAGCCTCATTCCCCTTTCCCCCACCCCACACCCCACTTCCAGCCT
GATGCCTCCTTACTCCAGCCTGTCACCCCCTTAGGGACATCGCGGTGGAGGAAGATCTCAGCAGCACTCCCCTAT
TGAAAGACCTGCTGGAGCTCACAAGGCGGGAGTTCCAGAGAGAGGACATAGCTCTGAATTACCGGGACGCTGAGG
GGGATCTGGTTCGGCTGCTGTCGGATGAGGACGTAGCGCTCATGGTGCGGCAGGCTCGTGGCCTCCCCTCCCAGA
AGCGCCTCTTCCCCTGGAAGCTGCACATCACGCAGAAGGACAACTACAGGGTCTACAACACGATGCCATGA

FIGURE 1003

MAVAQQLRAESDFEQLPDDVAISANIADIEEKRGFTSHFVFVIEVKTKGGSKYLIYRRYRQFHALQSKLEERFGP
DSKSSALACTLPTLPAKVYVGVKQEIAEMRIPALNAYMKSLLSLPVWVLMDEDVRIFFYQSPYDSEQVPQALRRL
RPRTRKVKSVSPQGNSVDRMAAPRAEALFDFTGNSKLELNFKAGDVIFLLSRINKDWLEGTVRGATGIFPLSFVK
ILKDFPEEDDPTNWLRCYYYEDTISTIKSVAWEGGACPAFLPSLRPPPLTSPSHGSLSHSKAPSGSQMSHNAVTS
HQRPGWPGQPHSPFPHPTPHFQPDASLLQPVTPLGTSRWRKISAALPY

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FIGURE 1004

GTCAGCAGAGGCCTCGCTCGGGCGCCCAGTGGTCCTGCCGCCTGGTCTCACCTCGCT**ATG**GTTCGTCTGCCTCTG
CAGTGCGTCCTCTGGGGCTGCTTGCTGACCGCTGTCCATCCAGAACCACCCACTGCATGCAGAGAAAAACAGTAC
CTAATAAACAGTCAGTGCTGTTCTTTGTGCCAGCCAGGACAGAAACTGGTGAGTGACTGCACAGAGTTCACTGAA
ACGGAATGCCTTCCTTGCGGTGAAAGCGAATTCCTAGACACCTGGAACAGAGAGACACACTGCCACCAGCACAAA
TACTGCGACCCCAACCTAGGGCTTCGGGTCCAGCAGAAGGGCACCTCAGAAACAGACACCATCTGCACCTGTGAA
GAAGGCTGGCACTGTACGAGTGAGGCCTGTGAGAGCTGTGTCCTGCACCGCTCATGCTCGCCCGGCTTTGGGGTC
AAGCAGATTGCTACAGGGGTTTCTGATACCATCTGCGAGCCCTGCCCAGTCGGCTTCTTCTCCAATGTGTCATCT
GCTTTCGAAAAATGTCACCCTTGGACAAGCTGTGAGACCAAAGACCTGGTTGTGCAACAGGCAGGCACAAACAAG
ACTGATGTTGTCTGTGGTCCCCAGGATCGGCTGAGAGCCCTGGTGGTGATCCCCATCATCTTCGGGATCCTGTTT
GCCATCCTCTTGGTGCTGGTCTTTATCAAAAAGGTGGCCAAGAAGCCAACCAATAAGGCCCCCCACCCCAAGCAG
GAACCCCAGGAGATCAATTTTCCCGACGATCTTCCTGGCTCCAACACTGCTGCTCCAGTGCAGGAGACTTTACAT
GGATGCCAACCGGTCACCCAGGAGGATGGCAAAGAGAGTCGCATCTCAGTGCAGGAGAGACAG**TGA**GGCTGCACC
CACCCAGGAGTGTGGCCACGTGGGCAAACAGGCAGTTGGCCAGAGAGCCTGGTGCTGCTGCTGCTGTGGCGTGAG
GGTGAGGGGCTGGCACTGACTGGGCATAGCTCCCCGCTTCTGCCTGCACCCCTGCAGTTTGAGACAGGAGACCTG
GCACTGGATGCAGAAACAGTTCACCTTGAAGAACCTCTCACTTCACCCTGGAGCCCATCCAGTCTCCCAACTTGT
ATTAAAGACAGAGGCAGAAAAAAAAAAAAAA

FIGURE 1005

MVRLPLQCVLWGCLLTAVHPEPPTACREKQYLINSQCCSLCQPGQKLVSDCTEFTETECLPCGESEFLDTWNRET
HCHQHKYCDPNLGLRVQQKGTSETDTICTCEEGWHCTSEACESCVLHRSCSPGFGVKQIATGVSDTICEPCPVGF
FSNVSSAFEKCHPWTSCETKDLVVQQAGTNKTDVVCGPQDRLRALVVIPIIFGILFAILLVLVFIKKVAKKPTNK
APHPKQEPQEINFPDDLPGSNTAAPVQETLHGCQPVTQEDGKESRISVQERQ

FIGURE 1006

GACCCGGCC**ATG**CGCGGCCTCGGGCTCTGGCTGCTGGGCGCGATGATGCTGCCTGCGATTGCCCCCAGCCGGCCC
TGGGCCCTCATGGAGCAGTATGAGGTCGTGTTGCCGCGGCGTCTGCCAGGCCCCCGAGTCCGCCGAGCTCTGCCC
TCCCACTTGGGCCTGCACCCAGAGAGGGTGAGCTACGTCCTTGGGGCCACAGGGCACAACTTCACCCTCCACCTG
CGGAAGAACAGGGACCTGCTGGGTTCCGGCTACACAGAGACCTATACGGCTGCCAATGGCTCCGAGGTGACGGAG
CAGCCTCGCGGGCAGGACCACTGCTTATACCAGGGCCACGTAGAGGGGTACCCGGACTCAGCCGCCAGCCTCAGC
ACCTGTGCCGGCCTCAGGGGTTTCTTCCAGGTGGGGTCAGACCTGCACCTGATCGAGCCCCTGGATGAAGGTGGC
GAGGGCGGACGGCACGCCGTGTACCAGGCTGAGCACCTGCTGCAGACGGCCGGGACCTGCGGGGTCAGCGACGAC
AGCCTGGGCAGCCTCCTGGGACCCCGGACGGCAGCCGTCTTCAGGCCTCGGCCCGGGGACTCTCTGCCATCCCGA
GAGACCCGCTACGTGGAGCTGTATGTGGTCGTGGACAATGCAGAGTTCCAGATGCTGGGGAGCGAAGCAGCCGTG
CGTCATCGGGTGCTGGAGGTGGTGAATCACGTGGACAAGCTATATCAGAAACTCAACTTCCGTGTGGTCCTGGTG
GGCCTGGAGATTTGGAATAGTCAGGACAGGTTCCACGTCAGCCCCGACCCCAGTGTCACACTGGAGAACCTCCTG
ACCTGGCAGGCACGGCAACGGACACGGCGGCACCTGCATGACAACGTACAGCTCATCACGGGTGTCGACTTCACC
GGGACTACTGTGGGGTTTGCCAGGGTGTCCGCCATGTGCTCCCACAGCTCAGGGGCTGTGAACCAGGACCACAGC
AAGAACCCCGTGGGCGTGGCCTGCACCATGGCCCATGAGATGGGCCACAACCTGGGCATGGACCATGATGAGAAC
GTCCAGGGCTGCCGCTGCCAGGAACGCTTCGAGGCCGGCCGCTGCATCATGGCAGGCAGCATTGGCTCCAGTTTC
CCCAGGATGTTCAGTGACTGCAGCCAGGCCTACCTGGAGAGCTTTTTGGAGCGGCCGCAGTCGGTGTGCCTCGCC
AACGCCCCTGACCTCAGCCACCTGGTGGGCGGCCCCGTGTGTGGGAACCTGTTTGTGGAGCGTGGGGAGCAGTGC
GACTGCGGCCCCCCCGAGGACTGCCGGAACCGCTGCTGCAACTCTACCACCTGCCAGCTGGCTGAGGGGGCCCAG
TGTGCGCACGGTACCTGCTGCCAGGAGTGCAAGGTGAAGCCGGCTGGTGAGCTGTGCCGTCCCAAGAAGGACATG
TGTGACCTCGAGGAGTTCTGTGACGGCCGGCACCCTGAGTGCCCGGAAGACGCCTTCCAGGAGAACGGCACGCCC
TGCTCCGGGGGCTACTGCTACAACGGGGCCTGTCCCACACTGGCCCAGCAGTGCCAGGCCTTCTGGGGGCCAGGT
GGGCAGGCTGCCGAGGAGTCCTGCTTCTCCTATGACATCCTACCAGGCTGCAAGGCCAGCCGGTACAGGGCTGAC
ATGTGTGGCGTTCTGCAGTGCAAGGGTGGGCAGCAGCCCCTGGGGCGTGCCATCTGCATCGTGGATGTGTGCCAC
GCGCTCACCACAGAGGATGGCACTGCGTATGAACCAGTGCCCGAGGGCACCCGGTGTGGACCAGAGAAGGTTTGC
TGGAAAGGACGTTGCCAGGACTTACACGTTTACAGATCCAGCAACTGCTCTGCCCAGTGCCACAACCATGGGGTG
TGCAACCACAAGCAGGAGTGCCACTGCCACGCGGGCTGGGCCCCGCCCCACTGCGCGAAGCTGCTGACTGAGGTG
CACGCAGCGTCCGGGAGCCTCCCCGTCCTCGTGGTGGTGGTTCTGGTGCTCCTGGCAGTTGTGCTGGTCACCCTG
GCAGGCATCATCGTCTACCGCAAAGCCCGGAGCCGCATCCTGAGCAGGAACGTGGCTCCCAAGACCACAATGGGG
CGCTCCAACCCCCTGTTCCACCAGGCTGCCAGCCGCGTGCCGGCCAAGGGCGGGGCTCCAGCCCCATCCAGGGGC
CCCCAAGAGCTGGTCCCCACCACCCACCCGGGCCAGCCCGCCCGACACCCGGCCTCCTCGGTGGCTCTGAAGAGG
CCGCCCCCTGCTCCTCCGGTCACTGTGTCCAGCCCACCCTTCCCAGTTCCTGTCTACACCCGGCAGGCACCAAAG
CAGGTCATCAAGCCAACGTTCGCACCCCCAGTGCCCCCAGTCAAACCCGGGGCTGGTGCGGCCAACCCTGGTCCA
GCTGAGGGTGCTGTTGGCCCAAAGGTTGCCCTGAAGCCCCCCATCCAGAGGAAGCAAGGAGCCGGAGCTCCCACA
GCACCC**TAG**GGGGGCACCTGCGCCTGTGTGGAAATTTGGAGAAGTTGCGGCAGAGAAGCCATGCGTTCCAGCCTT
CCACGGTCCAGCTAGTGCCGCTCAGCCCTAGACCCTGACTTTGCAGGCTCAGCTGCTGTTCTAACCTCAGTAATG
CATCTACCTGAGAGGCTCCTGCTGTCCACGCCCTCAGCCAATTCCTTCTCCCCGCCTTGGCCACGTGTAGCCCCA
GCTGTCTGCAGGCACCAGGCTGGGATGAGCTGTGTGCTTGCGGGTGCGTGTGTGTGTACGTGTCTCCAGGTGGCC
GCTGGTCTCCCGCTGTGTTCAGGAGGCCACATATACAGCCCCTCCCAGCCACACCTGCCCCTGCTCTGGGGCCTG
CTGAGCCGGCTGCCCTGGGCACCCGGTTCCAGGCAGCACAGACGTGGGGCATCCCCAGAAAGACTCCATCCCAGG
ACCAGGTTCCCCTCCGTGCTCTTCGAGAGGGTGTCAGTGAGCAGACTGCACCCCAAGCTCCCGACTCCAGGTCCC
CTGATCTTGGGCCTGTTTCCCATGGGATTCAAGAGGGACAGCCCCAGCTTTGTGTGTGTTTAAGCTTAGGAATGC
CCTTTATGGAAAGGGCTATGTGGGAGAGTCAGCTATCTTGTCTGGTTTTCTTGAGACCTCAGATGTGTGTTCAGC
AGGGCTGAAAGCTTTTATTCTTTAATAATGAGAAATGTATATTTTACTAATAAATTATTGACCGAGTTCTGTAGA
TTCTTGTTAGA

FIGURE 1007

MRGLGLWLLGAMMLPAIAPSRPWALMEQYEVVLPRRLPGPRVRRALPSHLGLHPERVSYVLGATGHNFTLHLRKN
RDLLGSGYTETYTAANGSEVTEQPRGQDHCLYQGHVEGYPDSAASLSTCAGLRGFFQVGSDLHLIEPLDEGGEGG
RHAVYQAEHLLQTAGTCGVSDDSLGSLLGPRTAAVFRPRPGDSLPSRETRYVELYVVVDNAEFQMLGSEAAVRHR
VLEVVNHVDKLYQKLNFRVVLVGLEIWNSQDRFHVSPDPSVTLENLLTWQARQRTRRHLHDNVQLITGVDFTGTT
VGFARVSAMCSHSSGAVNQDHSKNPVGVACTMAHEMGHNLGMDHDENVQGCRCQERFEAGRCIMAGSIGSSFPRM
FSDCSQAYLESFLERPQSVCLANAPDLSHLVGGPVCGNLFVERGEQCDCGPPEDCRNRCCNSTTCQLAEGAQCAH
GTCCQECKVKPAGELCRPKKDMCDLEEFCDGRHPECPEDAFQENGTPCSGGYCYNGACPTLAQQCQAFWGPGGQA
AEESCFSYDILPGCKASRYRADMCGVLQCKGGQQPLGRAICIVDVCHALTTEDGTAYEPVPEGTRCGPEKVCWKG
RCQDLHVYRSSNCSAQCHNHGVCNHKQECHCHAGWAPPHCAKLLTEVHAASGSLPVLVVVVLVLLAVVLVTLAGI
IVYRKARSRILSRNVAPKTTMGRSNPLFHQAASRVPAKGGAPAPSRGPQELVPTTHPGQPARHPASSVALKRPPP
APPVTVSSPPFPVPVYTRQAPKQVIKPTFAPPVPPVKPGAGAANPGPAEGAVGPKVALKPPIQRKQGAGAPTAP

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FIGURE 1008

GAGGAAAATTCTTCCAGCG**ATG**GTCTCCCACTCAGAGCTGAGGAAGCTTTTCTACTCAGCAGATGCTGTGTGTTT
TGATGTTGACAGCACGGTCATCAGAGAAGAAGGAATCGATGAGCTAGCCAAAATCTGTGGCGTTGAGGACGCGGT
GTCAGAAATGACACGGCGAGCCATGGGCGGGGCAGTGCCTTTCAAAGCTGCTCTCACAGAGCGCTTAGCCCTCAT
CCAGCCCTCCAGGGAGCAGGTGCAGAGACTCATAGCAGAGCAACCCCCACACCTGACCCCCGGCATAAGGGAGCT
GGTAAGTCGCCTACAGGAGCGAAATGTTCAGGTTTTCCTAATATCTGGTGGCTTTAGGAGTATTGTAGAGCATGT
TGCTTCAAAGCTCAATATCCCAGCAACCAATGTATTTGCCAATAGGCTGAAATTCTACTTTAACGGTGAATATGC
AGGTTTTGATGAGACGCAGCCAACAGCTGAATCTGGTGGAAAAGGAAAAGTGATTAAACTTTTAAAGGAAAAATT
TCATTTTAAGAAAATAATCATGATTGGAGATGGTGCCACAGATATGGAAGCCTGTCCTCCTGCTGATGCTTTCAT
TGGATTTGGAGGAAATGTGATCAGGCAACAAGTCAAGGATAACGCCAAATGGTATATCACTGATTTTGTAGAGCT
GCTGGGAGAACTGGAAGAA**TAA**CATCCATTGTCGTACAGCTCCAAACAACTTCAGATGAATTTTTACAAGTTATA
CAGATTGATACTGTTTGCTTACAGTTGCCTATTACAACTTGCTATAGAAAGTTGGTACAAATGATCTGTACTTTA
AACTACAGTTAGGAATCCTAGAAGATTGCTTTTTTTTTTTTTTTAACTGTAGTTCCAGTATTATATGATGACTAT
TGATTTCCTGGAGAGGTTTTTTTTTTTTTGAGACAGAATCTTGCTCTGTTGCCCAGGCTGGAGTGCAGTGGCGC
GGTCTCGGCTCACTGCAAGCTCTGCCTCCCAGGTTCACGCCATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGAC
TACAGGCACCCGCCACCACATCCGGCTAATTTTTTGTATTTTTAGTAGAGACGGGGTTTGACCGTGTTAGCCAGG
ATGGTCTTGATCTCCTGACCTTGTGATCCGCCTGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCTTGGGCCAC
CGCGCCCAGCCAATGTCCTAGAGAGTTTTGTGATCTGAATTCTTTATGTATATTTGTAGCTATATTTCATACAAA
GTGCTTTAAGTGTGGAGAGTCAATTAAACACCTTTACTCTTAGAAATACGGATTCGGCAGCCTTCAGTGAATATT
GGTTTCTCTTTGGTATGTCAATAAAAGTTTATCCGTATGTCAGAACGGATTTGTGGAAAAAAAAAAAAAAAAAAA
AAAAAAA

FIGURE 1009

MISHSELRKLFYSADAVCFDVDSTVIREEGIDELAKICGVEDAVSEMTRRAMGGAVPFKAALTERLALIQPSREQ
VQRLIAEQPPHLTPGIRELVSRLQERNVQVFLISGGFRSIVEHVASKLNIPATNVFANRLKFYFNGEYAGFDETQ
PTAESGGKGKVIKLLKEKFHFKKIIMIGDGATDMEACPPADAFIGFGGNVIRQQVKDNAKWYITDFVELLGELEE

FIGURE 1010

CTCCGCTGCTGTCGCCAGGAGTCACTTCACGAGAAGCCAGGTCACAACCGTCGGCCCTTGTCTGGAAAAGTAAAA
GTGGATCCTGCCACGTTCGGAGCTCCCTGGCGCCTCGCCCGGCTGGAGCTAGAGAACTCGTCCTGTGGCGGCCCC
CGGCGTGGGGCGGGACAGCGGCCCCCTGGAGGGGGCAGTCCCGGGAGAACCTGCGGCGGCCGGAGCGGTAAAAAT
AAGTGACTAAAGAAGCAGACCTGGGAATCACCTAAC**ATG**TCGAGGAGGAGATTTGATTGCCGAAGTATTTCAGGC
CTACTAACTACAACTCCTCAAATTCCAATAAAAATGGAAAACTTTAATAATTTCTATATACTTACATCTAAAGAG
CTAGGGAGAGGAAAATTTGCTGTGGTTAGACAATGTATATCAAAATCTACTGGCCAAGAATATGCTGCAAAATTT
CTAAAAAAGAGAAGAAGAGGACAGGATTGTCGGGCAGAAATTTTACACGAGATTGCTGTGCTTGAATTGGCAAAG
TCTTGTCCCCGTGTTATTAATCTTCATGAGGTCTATGAAAATACAAGTGAAATCATTTTGATATTGGAATATGCT
GCAGGTGGAGAAATTTTCAGCCTGTGTTTACCTGAGTTGGCTGAAATGGTTTCTGAAAATGATGTTATCAGACTC
ATTAAACAAATACTTGAAGGAGTTTATTATCTACATCAGAATAACATTGTACACCTTGATTTAAAGCCACAGAAT
ATATTACTGAGCAGCATATACCCTCTCGGGGACATTAAAATAGTAGATTTTGGAATGTCTCGAAAAATAGGGCAT
GCGTGTGAACTTCGGGAAATCATGGGAACACCAGAATATTTAGCTCCAGAAATCCTGAACTATGATCCCATTACC
ACAGCAACAGATATGTGGAATATTGGTATAATAGCATATATGTTGTTAACTCACACATCACCATTTGTGGGAGAA
GATAATCAAGAAACATACCTCAATATTTCTCAAGTTAATGTAGATTATTCGGAAGAAACTTTTTCATCAGTTTCA
CAGCTGGCCACAGACTTTATTCAGAGCCTTTTAGTAAAAAATCCAGAGAAAAGACCAACAGCAGAGATATGCCTT
TCTCATTCTTGGCTACAGCAGTGGGACTTTGAAAACTTGTTTCACCCTGAAGAAACTTCCAGTTCCTCTCAAACT
CAGGATCATTCTGTAAGGTCCTCTGAAGACAAGACTTCTAAATCCTCCTGTAATGGAACCTGTGGTGATAGAGAA
GACAAAGAGAATATCCCAGAGGATAGCAGCATGGTTTCCAAAAGATTTCGTTTCGATGACTCATTACCCAATCCC
CATGAACTTGTTTCAGATTTGCTCTGT**TAG**CACTTTTTTCTTTGACTCATTTGGACTGAATTTGAAATTTTATAT
CCACTCCAGTGAGATTATGATTTGTAGCTTCATATATGACATGTTTATATTGTAAATGCACTTTTCCATGGAATA
ATTTAGGGAAGTGTTTTAATGTTAAATTACTAGTTGCTAGCATGTTATGATTTCATATCCTGAGATAGCTCTGCA
GATAAGAAAATATTTAAATATATGACAAAAAGTAAAATTGTACATGTGAAAG

FIGURE 1011

MSRRRFDCRSISGLLTTTPQIPIKMENFNNFYILTSKELGRGKFAVVRQCISKSTGQEYAAKFLKKRRRGQDCRA
EILHEIAVLELAKSCPRVINLHEVYENTSEIILILEYAAGGEIFSLCLPELAEMVSENDVIRLIKQILEGVYYLH
QNNIVHLDLKPQNILLSSIYPLGDIKIVDFGMSRKIGHACELREIMGTPEYLAPEILNYDPITTATDMWNIGIIA
YMLLTHTSPFVGEDNQETYLNISQVNVDYSEETFSSVSQLATDFIQSLLVKNPEKRPTAEICLSHSWLQQWDFEN
LFHPEETSSSSQTQDHSVRSSEDKTSKSSCNGTCGDREDKENIPEDSSMVSKRFRFDDSLPNPHELVSDLLC

FIGURE 1012

CGCCACTTTGCTGGAGCATTCACTAGGCGAGGCGCTCCATCGGACTCACTAGCCGCACTC**ATG**AATCGGCACCAT
CTGCAGGATCACTTTCTGGAAATAGACAAGAAGAACTGCTGTGTGTTCCGAGATGACTTCATTGCCAAGGTGTTG
CCGCCGGTGTTGGGGCTGGAGTTTATCTTTGGGCTTCTGGGCAATGGCCTTGCCCTGTGGATTTTCTGTTTCCAC
CTCAAGTCCTGGAAATCCAGCCGGATTTTCCTGTTCAACCTGGCAGTAGCTGACTTTCTACTGATCATCTGCCTG
CCGTTCGTGATGGACTACTATGTGCGGCGTTCAGACTGGAACTTTGGGGACATCCCTTGCCGGCTGGTGCTCTTC
ATGTTTGCCATGAACCGCCAGGGCAGCATCATCTTCCTCACGGTGGTGGCGGTAGACAGGTATTTCCGGGTGGTC
CATCCCCACCACGCCCTGAACAAGATCTCCAATTGGACAGCAGCCATCATCTCTTGCCTTCTGTGGGGCATCACT
GTTGGCCTAACAGTCCACCTCCTGAAGAAGAAGTTGCTGATCCAGAATGGCCCTGCAAATGTGTGCATCAGCTTC
AGCATCTGCCATACCTTCCGGTGGCACGAAGCTATGTTCCTCCTGGAGTTCCTCCTGCCCCTGGGCATCATCCTG
TTCTGCTCAGCCAGAATTATCTGGAGCCTGCGGCAGAGACAAATGGACCGGCATGCCAAGATCAAGAGAGCCATC
ACCTTCATCATGGTGGTGGCCATCGTCTTTGTCATCTGCTTCCTTCCCAGCGTGGTTGTGCGGATCCGCATCTTC
TGGCTCCTGCACACTTCGGGCACGCAGAATTGTGAAGTGTACCGCTCGGTGGACCTGGCGTTCTTTATCACTCTC
AGCTTCACCTACATGAACAGCATGCTGGACCCCGTGGTGTACTACTTCTCCAGCCCATCCTTTCCCAACTTCTTC
TCCACTTTGATCAACCGCTGCCTCCAGAGGAAGATGACAGGTGAGCCAGATAATAACCGCAGCACGAGCGTCGAG
CTCACAGGGGACCCCAACAAAACCAGAGGCGCTCCAGAGGCGTTAATGGCCAACTCCGGTGAGCCATGGAGCCCC
TCTTATCTGGGCCCAACCTCAAATAACCATTCCAAGAAGGGACATTGTCACCAAGAACCAGCATCTCTGGAGAAA
CAGTTGGGCTGTTGCATCGAG**TAA**TGTCACTGGACTCGGCCTAAGGTTTCCTGGAACTTCCAGATTCAGAGAATC
TGATTTAGGGAAACTGTGGCAGATGAGTGGGAGACTGGTTGCAAGGTGTGACCACAGGAATCCTGGAGGAACAGA
GAGTAAAGCTTCTAGGCATCTGAAACTTGCTTCATCTCTGACGCTCGCAGGACTGAAGATGGGCAAATTGTAGGC
GTTTCTGCTGAGCAGAGTTGGAGCCAGAGATCTACTTGTGACTTGTTGGCCTTCTTCCCACATCTGCCTCAGACT
GGGGGGGGCTCAGCTCCTCGGGTGATATCTAGCCTGCTTGTGAGCTCTAGCAGGGATAAGGAGAGCTGAGATTGG
AGGGAATTGTGTTGCTCCTGGAGGAAGCCCAGGCATCATTAAACAAGCCAGTAGGTCACCTGGCTTCCGTGGACC
AATTCATCTTTCAGACAAGCTTTAGAGAAATGGACTCAGGGAAGAGACTCACATGCTTTGGTTAGTATCTGTGTT
TCCGGTGGGTGTAATAGGGGATTAGCCCCAGAAGGGACTGAGCTAAACAGTGTTATTATGGGAAAGGAAATGGCA
TTGCTGCTTTCAACCAGCGACTAATGCAATCCATTCCTCTCTTGTTTATAGTAATCTAAGGGTTGAGCAGTTAAA
ACGGCTTCAGGATAGAAAGCTGTTTCCCACCTGTTTCGTTTTACCATTAAAAGGGAAACGTGCCTCTGCCCCACG
GGTAGAGGGGGTGCACGTTCCTCCTGGTTCCTTCGCTTGTGTTTCTGTACTTACCAAAAATCTACCACTTCAATA
AATTTTGATAGGAGACAAAAAAAAAA

FIGURE 1013

MNRHHLQDHFLEIDKKNCCVFRDDFIAKVLPPVLGLEFIFGLLGNGLALWIFCFHLKSWKSSRIFLFNLAVADFL
LIICLPFVMDYYVRRSDWNFGDIPCRLVLFMFAMNRQGSIIFLTVVAVDRYFRVVHPHHALNKISNWTAAIISCL
LWGITVGLTVHLLKKKLLIQNGPANVCISFSICHTFRWHEAMFLLEFLLPLGIILFCSARIIWSLRQRQMDRHAK
IKRAITFIMVVAIVFVICFLPSVVVRIRIFWLLHTSGTQNCEVYRSVDLAFFITLSFTYMNSMLDPVVYYFSSPS
FPNFFSTLINRCLQRKMTGEPDNNRSTSVELTGDPNKTRGAPEALMANSGEPWSPSYLGPTSNNHSKKGHCHQEP
ASLEKQLGCCIE

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FIGURE 1014

CAGGGAGTTGAGAAACTGTGGCACAAGGCGAGAGCTGGTTTCCTCTGCCCTGTTAGAGCTGGGGGACTCTTCAGA
GTCAAAGGCCAGAGAGC**ATG**GAGCTGAGTGGAGCCACCATGGCCCGGGGGCTCGCTGTCCTGCTAGTCTTGTTCC
TGCATATCAAGAACCTGCCTGCCCAGGCTGCGGACACATGTCCAGAGGTGAAGGTGGTGGGCCTGGAGGGCTCTG
ACAAGCTCACCATTCTCCGAGGCTGCCCGGGGCTGCCCGGGGCCCCAGGGCCAAAGGGAGAGGCAGGTGTCATTG
GAGAGAGAGGAGAACGCGGTCTCCCTGGAGCCCCTGGAAAGGCAGGACCAGTGGGGCCCAAAGGAGACCGAGGAG
AGAAGGGGATGCGTGGAGAGAAAGGAGACGCTGGGCAGTCTCAGTCGTGTGCGACAGGCCCACGCAACTGCAAGG
ACCTGCTAGACCGGGGGTATTTCCTGAGCGGCTGGCACACCATCTACCTGCCCGACTGCCGGCCCCTGACTGTGC
TCTGTGACATGGACACGGACGGAGGGGGCTGGACCGTTTTCCAGCGGAGGATGGATGGCTCTGTGGACTTCTATC
GGGACTGGGCCGCATACAAGCAGGGCTTCGGCAGTCAGCTGGGGGAGTTCTGGCTGGGGAACGACAACATCCACG
CCCTGACTGCCCAGGGAAGCAGCGAGCTCCGTGTAGACCTGGTGGACTTTGAGGGCAACCACCAGTTTGCTAAGT
ACAAATCATTCAAGGTGGCTGACGAGGCAGAGAAGTACAAGCTGGTACTGGGAGCCTTTGTCGGGGGCAGTGCGG
GTAATTCTCTAACGGGCCACAACAACAACTTCTTCTCCACCAAAGACCAAGACAATGATGTGAGTTCTTCGAATT
GTGCTGAGAAGTTCCAGGGAGCCTGGTGGTACGCCGACTGTCATGCTTCAAACCTCAATGGTCTCTACCTCATGG
GACCCCATGAGAGCTATGCCAATGGTATCAACTGGAGTGCGGCGAAGGGGTACAAATATAGCTACAAGGTGTCAG
AGATGAAGGTGCGGCCCGCC**TAG**ACGGGCCAGGACCCCTCCACATGCACCTGCTAGTGGGGAGGCCACACCCACA
AGCGCTGCGTCGTGGAAGTCACCCCATTTCCCCAGCCAGACACACTCCCATGACGCCCACAGCTGCCCCTTTGCC
CCCAGCTCAGTCAAGCCGCCACATGCCCACAACCTCACCAGAGGGAGAATTATGTTTCTAAATATGTTTACTTTG
GGACAGAAAAAAAAAAA

FIGURE 1015

MELSGATMARGLAVLLVLFLHIKNLPAQAADTCPEVKVVGLEGSDKLTILRGCPGLPGAPGPKGEAGVIGERGER
GLPGAPGKAGPVGPKGDRGEKGMRGEKGDAGQSQSCATGPRNCKDLLDRGYFLSGWHTIYLPDCRPLTVLCDMDT
DGGGWTVFQRRMDGSVDFYRDWAAYKQGFGSQLGEFWLGNDNIHALTAQGSSELRVDLVDFEGNHQFAKYKSFKV
ADEAEKYKLVLGAFVGGSAGNSLTGHNNNFFSTKDQDNDVSSSNCAEKFQGAWWYADCHASNLNGLYLMGPHESY
ANGINWSAAKGYKYSYKVSEMKVRPA

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FIGURE 1016

GCAGAGCCCAGGGAGCTGGAGGTCGGCGCTTCCTCTCGTGCTTGGTCCACTGACGCGCGGCCCCGCCGCGAGGAG
CATCAGATCC**ATG**CTGCTGCTGACTCGGAGCCCCACAGCTTGGCACAGGCTCTCTCAGCTCAAGCCTCCGGTCCT
CCCTGGGACCCTGGGAGGCCAGGCCCTGCATCTGAGGTCCTGGCTTTTGTCAAGGCAGGGCCCTGCAGAGACAGG
TGGGCAGGGCCAGCCCCAGGGCCCTGGGCTTCGAACCCGGCTGCTGATCACAGGCCTGTTCGGGGCTGGACTCGG
TGGGGCCTGGCTGGCCCTGAGGGCTGAGAAGGAGAGGCTGCAGCAGCAAAAGCGAACAGAAGCCCTGCGCCAGGC
AGCTGTGGGCCAGGGCGACTTCCACCTGCTGGATCACAGAGGCCGGGCTCGCTGCAAGGCTGACTTCCGGGGCCA
GTGGGTGCTGATGTACTTTGGCTTCACTCACTGCCCTGACATCTGCCCAGACGAGCTGGAGAAGCTGGTGCAGGT
GGTGCGGCAGCTGGAAGCAGAGCCTGGTTTGCCTCCAGTGCAGCCTGTCTTCATCACTGTGGACCCCGAGCGGGA
CGACGTTGAAGCCATGGCCCGCTACGTCCAGGACTTCCACCCAAGACTGTTGGGTCTGACCGGCTCCACCAAACA
GGTTGCCCAGGCTAGTCACAGTTACCGCGTGTACTACAATGCCGGCCCCAAGGATGAGGACCAGGACTACATCGT
GGACCACTCCATTGCCATCTACCTGCTCAACCCTGACGGCCTCTTCACGGATTACTACGGCCGGAGCAGATCGGC
TGAGCAGATCTCAGACAGTGTGCGGCGGCACATGGCGGCTTTCCGCAGTGTCCTGTCT**TGA**GCCACTGCAGTCTG
GGCCCCATCATTAAACGGGCTGCGTTTAAAA

FIGURE 1017

MLLLTRSPTAWHRLSQLKPPVLPGTLGGQALHLRSWLLSRQGPAETGGQGQPQGPGLRTRLLITGLFGAGLGGAW
LALRAEKERLQQQKRTEALRQAAVGQGDFHLLDHRGRARCKADFRGQWVLMYFGFTHCPDICPDELEKLVQVVRQ
LEAEPGLPPVQPVFITVDPERDDVEAMARYVQDFHPRLLGLTGSTKQVAQASHSYRVYYNAGPKDEDQDYIVDHS
IAIYLLNPDGLFTDYYGRSRSAEQISDSVRRHMAAFRSVLS

FIGURE 1018

TAACTGAGCGAGGAGCAATTGATTAATAGCTCGGCGAGGGGACTCACTGACTGTTATAATAACACTACACCAGCA
ACTCCTGGCTTCCCAGCAGCCGGAACACAGACAGGAGAGAGTCAGTGGCAAATAGACATTTTTCTTATTTCTTAA
AAAACAGCAACTTGTTTGCTACTTTTATTTCTGTTGATTTTTTTTTCTTGGTGTGTGTGGTGGTTGTTTTTAAGT
GTGGAGGGCAAAAGGAGATACCATCCCAGGCTCAGTCCAACCCCTCTCCAAAACGGCTTTTCTGACACTCCAGGT
AGCGAGGGAGTTGGGTCTCCAGGTTGTGCGAGGAGCAA**ATG**ATGACCGCCAAGGCCGTAGACAAAATCCCAGTAA
CTCTCAGTGGTTTTGTGCACCAGCTGTCTGACAACATCTACCCGGTGGAGGACCTCGCCGCCACGTCGGTGACCA
TCTTTCCCAATGCCGAACTGGGAGGCCCCTTTGACCAGATGAACGGAGTGGCCGGAGATGGCATGATCAACATTG
ACATGACTGGAGAGAAGAGGTCGTTGGATCTCCCATATCCCAGCAGCTTTGCTCCCGTCTCTGCACCTAGAAACC
AGACCTTCACTTACATGGGCAAGTTCTCCATTGACCCTCAGTACCCTGGTGCCAGCTGCTACCCAGAAGGCATAA
TCAATATTGTGAGTGCAGGCATCTTGCAAGGGGTCACTTCCCCAGCTTCAACCACAGCCTCATCCAGCGTCACCT
CTGCCTCCCCCAACCCACTGGCCACAGGACCCCTGGGTGTGTGCACCATGTCCCAGACCCAGCCTGACCTGGACC
ACCTGTACTCTCCGCCACCGCCTCCTCCTCCTTATTCTGGCTGTGCAGGAGACCTCTACCAGGACCCTTCTGCGT
TCCTGTCAGCAGCCACCACCTCCACCTCTTCCTCTCTGGCCTACCCACCACCTCCTTCCTATCCATCCCCCAAGC
CAGCCACGGACCCAGGTCTCTTCCCAATGATCCCAGACTATCCTGGATTCTTTCCATCTCAGTGCCAGAGAGACC
TACATGGTACAGCTGGCCCAGACCGTAAGCCCTTTCCCTGCCCACTGGACACCCTGCGGGTGCCCCCTCCACTCA
CTCCACTCTCTACAATCCGTAACTTTACCCTGGGGGGCCCCAGTGCTGGGGTGACCGGACCAGGGGCCAGTGGAG
GCAGCGAGGGACCCCGGCTGCCTGGTAGCAGCTCAGCAGCAGCAGCAGCCGCCGCCGCCGCCGCCTATAACCCAC
ACCACCTGCCACTGCGGCCCATTCTGAGGCCTCGCAAGTACCCCAACAGACCCAGCAAGACGCCGGTGCACGAGA
GGCCCTACCCGTGCCCAGCAGAAGGCTGCGACCGGCGGTTCTCCCGCTCTGACGAGCTGACACGGCACATCCGAA
TCCACACTGGGCATAAGCCCTTCCAGTGTCGGATCTGCATGCGCAACTTCAGCCGCAGTGACCACCTCACCACCC
ATATCCGCACCCACACCGGTGAGAAGCCCTTCGCCTGTGACTACTGTGGCCGAAAGTTTGCCCGGAGTGATGAGA
GGAAGCGCCACACCAAGATCCACCTGAGACAGAAAGAGCGGAAAAGCAGTGCCCCCTCTGCATCGGTGCCAGCCC
CCTCTACAGCCTCCTGCTCTGGGGGCGTGCAGCCTGGGGGTACCCTGTGCAGCAGTAACAGCAGCAGTCTTGGCG
GAGGGCCGCTCGCCCCTTGCTCCTCTCGGACCCGGACACCT**TGA**GATGAGACTCAGGCTGATACACCAGCTCCCA
AAGGTCCCGGAGGCCCTTTGTCCACTGGAGCTGCACAACAAACACTACCACCCTTTCCTGTCCCTCTCTCCCTTT
GTTGGGCAAAGGGCTTTGGTGGAGCTAGCACTGCCCCCTTTCCACCTAGAAGCAGGTTCTTCCTAAAACTTAGCC
CATTCTAGTCTCTCTTAGGTGAGTTGACTATCAACCCAAGGCAAAGGGGAGGCTCAGAAGGAGGTGGTGTGGGGA
TCCCCTGGCCAAGAGGGCTGAGGTCTGACCCTGCTTTAAAGGGTTGTTTGACTAGGTTTTGCTACCCCACTTCCC
CTTATTTTGACCCATCACAGGTTTTTGACCCTGGATGTCAGAGTTGATCTAAGACGTTTTCTACAATAGGTTGGG
AGATGCTGATCCCTTCAAGTGGGGACAGCAAAAAGACAAGCAAAACTGATGTGCACTTTATGGCTTGGGACTGAT
TTGGGGGACATTGTACAGTGAGTGAAGTATAGCCTTTATGCCACACTCTGTGGCCCTAAAATGGTGAATCAGAGC
ATATCTAGTTGTCTCAACCCTTGAAGCAATATGTATTATATACTCAGAGAACAGAAGTGCAATGTGATGGGAGGA
ACGTAGCAATATCTGCTCCTTTTCGAGTTGTTTGAGAAATGTAGGCTATTTTTTCAGTGTATATCCACTCAGATT
TTGTGTATTTTTGATGTACCCACACTGTTCTCTAAATTCTGAATCTTTGGGAAAAAATGTAAAGCATTTATGATC
TCAGAGGTTAACTTATTTAAGGGGGATGTACATATTCTCTGAAACTAGGATGCATGCAATTGTGTTGGAAGTGTC
CTTGGTCGCCTTGTGTGATGTAGACAAATGTTACAAGGCTGCATGTAAATGGGTTGCCTTATTATGGAGAAAAAA
ATCACTCCCTGAGTTTAGTATGGCTGTATATTTATGCCTATTAATATTTGGAATTTTTTTTAGAAAGTATATTTT
TGTATGCTTTGTTTTGTGACTTAAAAGTGTTACCTTTGTAGTCAAATTTCAGATAAGAATGTACATAATGTTACC
GGAGCTGATTTGTTTGGTCATTAGCTCTTAATAGTTGTGAAAAAATAAATCTATTCTAACGCAAAACCACTAACT
GAAGTTCAGATATAATGGATGGTTTGTGACTATAGTGTAAATAAATACTTTTCAACAAT

FIGURE 1019

MMTAKAVDKIPVTLSGFVHQLSDNIYPVEDLAATSVTIFPNAELGGPFDQMNGVAGDGMINIDMTGEKRSLDLPY
PSSFAPVSAPRNQTFTYMGKFSIDPQYPGASCYPEGIINIVSAGILQGVTSPASTTASSSVTSASPNPLATGPLG
VCTMSQTQPDLDHLYSPPPPPPPYSGCAGDLYQDPSAFLSAATTSTSSSLAYPPPPSYPSPKPATDPGLFPMIPD
YPGFFPSQCQRDLHGTAGPDRKPFPCPLDTLRVPPPLTPLSTIRNFTLGGPSAGVTGPGASGGSEGPRLPGSSSA
AAAAAAAAAYNPHHLPLRPILRPRKYPNRPSKTPVHERPYPCPAEGCDRRFSRSDELTRHIRIHTGHKPFQCRIC
MRNFSRSDHLITTHIRTHTGEKPFACDYCGRKFARSDERKRHTKIHLRQKERKSSAPSASVPAPSTASCSGGVQPG
GTLCSSNSSSLGGGPLAPCSSRTRTP

FIGURE 1020

CTACTCGCCGAGTTCCCTGTACGTGCTGTGTCCGATGACCTGCAGCGTGGAAGACAAGAGGTTTGAGC**ATG**GCAG
AAGGAAACACCCTGATATCAGTGGATTATGAAATTTTTGGGAAGGTGCAAGGGGTGTTTTTCCGTAAGCATACTC
AGGCTGAGGGTAAAAAGCTGGGATTGGTAGGCTGGGTCCAGAACACTGACCGGGGCACAGTGCAAGGACAATTGC
AAGGTCCCATCTCCAAGGTGCGTCATATGCAGGAATGGCTTGAAACAAGAGGAAGTCCTAAATCACACATCGACA
AAGCAAACTTCAACAATGAAAAAGTCATCTTGAAGTTGGATTACTCAGACTTCCAAATTGTAAAA**TAA**TGGCCTG
AATTTAAGTTTTCTAAGATAAACTCAGTGGTTTGGTTTTTATTATTAATAGAGATAGAACTATTGTGTGTTAATA
TTAGCATTAGTCAATAAGTTATTTTAATGTCAGATTTTTGAATGTTATTATATATTACCTGTATGATGGAAGGAT
TACCACTGTACACAAATCTAATCAATAAAAACGTTAGAACCTTCTGCTTAGAGTACTT

FIGURE 1021

MAEGNTLISVDYEIFGKVQGVFFRKHTQAEGKKLGLVGWVQNTDRGTVQGQLQGPISKVRHMQEWLETRGSPKSH
IDKANFNNEKVILKLDYSDFQIVK

FIGURE 1022

GACATCGGCTCCAACAGGGGTGTTCCACAGGGTAGCTGGGAGTTGGAAGAGCCAAGAACGCCTCCGAGCTCTGGA
TTTGAGCTTCTCTGCCCATGGGTGAAGCGCCCATGCTCAGCTTGTGAGCTTCTTCCCGGGAGAGCAGCC**ATG**GCA
CTGAGGAATGTGCCCTTTCGCTCAGAGGTCCTGGGCTGGGACCCCGACAGCCTTGCTGACTATTTCAAGAAGCTC
AACTATAAGGACTGTGAGAAGGCAGTGAAGAAGTACCACATCGATGGGGCTCGCTTCTTGAACCTGACAGAAAAT
GACATCCAGAAGTTCCCCAAGCTCCGGGTGCCGATTCTCAGTAAGTTAAGTCAGGAAATCAACAAGAACGAAGAG
AGGAGGAGCATCTTCACACGCAAACCCCAAGTCCCGCGGTTTCCTGAAGAGACAGAAAGCCACGAAGAGGACAAT
GGGGGCTGGTCGTCCTTTGAAGAAGACGATTATGAAAGTCCCAATGATGACCAGGATGGGGAGGATGATGGAGAC
TATGAGTCCCCCAATGAGGAGGAAGAGGCACCCGTGGAAGATGACGCGGATTATGAGCCGCCACCCTCCAATGAC
GAGGAAGCTCTGCAGAACTCCATCCTGCCTGCCAAGCCTTTCCCCAACTCCAACTCCATGTACATCGACCGGCCC
CCCTCTGGGAAAACCCCCCAGCAGCCTCCTGTGCCCCCCCCAGAGACCGATGGCCGCCCTCCCGCCCCCACCAGCC
GGCCGGAATCACTCGCCACTGCCCCCACCCCAGACCAACCACGAAGAACCCAGCAGAAGCAGAAACCACAAAACG
GCAAAGCTCCCTGCTCCTTCAATAGACAGAAGCACGAAACCTCCCCTAGATCGTTCATTAGCTCCGTTTGATAGA
GAACCCTTCACACTAGGAAAGAAACCACCATTTTCTGACAAGCCCTCGATTCCAGCGGGAAGGTCACTCGGGGAG
CATTTACCCAAGATTCAAAAGCCTCCTTTACCACCGACCACGGAAAGACATGAAAGGAGCAGCCCCCTGCCAGGG
AAGAAGCCACCTGTGCCAAAGCATGGATGGGGACCAGACAGAAGAGAGAATGATGAAGATGATGTGCATCAGAGA
CCTTTGCCCCAGCCAGCACTACTTCCTATGAGCTCCAACACTTTCCCTTCAAGATCTACTAAGCCAAGTCCCATG
AACCCTCTCCCATCCTCTCACATGCCTGGAGCATTCTCAGAAAGTAACAGCAGTTTTCCACAGAGTGCCTCCCTG
CCACCATACTTCTCTCAAGGCCCTAGCAACAGACCACCTATCAGAGCCGAAGGCAGAAACTTCCCCTTGCCACTT
CCAAACAAACCTCGGCCCCCATCCCCCGCGGAGGAAGAGAATTCATTAAATGAAGAGTGGTACGTTTCTTATATT
ACCCGACCAGAGGCAGAAGCTGCTCTTAGAAAGATAAACCAGGATGGCACATTTCTGGTCAGAGACAGCTCTAAA
AAAACAACAACCAATCCATATGTCCTCATGGTGTTGTACAAAGATAAAGTTTACAACATCCAGATCCGTTATCAG
AAGGAAAGTCAAGTTTACTTGTTGGGAACTGGACTCCGAGGGAAAGAGGACTTTCTGTCTGTGTCAGATATTATT
GACTACTTCAGGAAAATGCCACTTCTGCTCATTGATGGGAAAAACCGAGGTTCCAGATACCAGTGCACATTAACG
CATGCTGCAGGGTACCCA**TAG**CAAGTTATAGCCGAGCAAATGAACCGTCCTCCTGCCTCTGTTGCCAACACGAGA
TCAATCAGCCTTGGTCAATGGACAAACACTTAGGACTGAACTGAACCCCTCCCCATGAACACAAGGGTTTTATCC
TTTCCTTTAAAAACAGTGTTTGAAATGAAGACTGTCAACTATCCCATAATTTATTTATTCTTCTTCAATGTTTGT
AAAGTGCATGAGTCATGTTCACACTTGAAGTCTAGTAGTGCACTGTAATAATTCATTTTTTAAAAGATTATTTAA
TGCCCATTTCAAAATACAGTAGTTTACACAGCTACAGAAACAATTTGGGGCAAGTTTTAAAACACTGAAACAGTA
ATAGTTATTGGTGTCACATAAAACTGATTTGTTTTTTACAGCCAAACCTCTGTCAGTCAGAGGCATTCATTAGTT
TTATACATGTAATTTGAAAATCACTAAACCTCGTTTTCTCAGCAGCAATAATTTAAGAGGCTTCAAAAATATAAT
TTCACTCTTATTTAGTATTTTTTCCTGGGGGCATTTTTACGTAATTTTTTTATGAAAAGACAAATGCATGTTGAG
ATAACTTCTGGGATTAAAATAGTCTTTTGCTTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1023

MALRNVPFRSEVLGWDPDSLADYFKKLNYKDCEKAVKKYHIDGARFLNLTENDIQKFPKLRVPILSKLSQEINKN
EERRSIFTRKPQVPRFPEETESHEEDNGGWSSFEEDDYESPNDDQDGEDDGDYESPNEEEEAPVEDDADYEPPPS
NDEEALQNSILPAKPFPNSNSMYIDRPPSGKTPQQPPVPPQRPMAALPPPPAGRNHSPLPPPQTNHEEPSRSRNH
KTAKLPAPSIDRSTKPPLDRSLAPFDREPFTLGKKPPFSDKPSIPAGRSLGEHLPKIQKPPLPPTTERHERSSPL
PGKKPPVPKHGWGPDRRENDEDDVHQRPLPQPALLPMSSNTFPSRSTKPSPMNPLPSSHMPGAFSESNSSFPQSA
SLPPYFSQGPSNRPPIRAEGRNFPLPLPNKPRPPSPAEEENSLNEEWYVSYITRPEAEAALRKINQDGTFLVRDS
SKKTTTNPYVLMVLYKDKVYNIQIRYQKESQVYLLGTGLRGKEDFLSVSDIIDYFRKMPLLLLIDGKNRGSRYQCT
LTHAAGYP

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FIGURE 1024

GAAGAGACCATATTTGTTCGCAGAGGAAGCCGTTGCTTTCTGGGATCTGGCTACGGCAGAAAAGACATCGGCTCC
AACAGGGGTGTTCCACAGGGTAGCTGGGAGTTGGAAGAGCCAAGAACGCCTCCGAGCTCTGGATTTGAGCTTCTC
TGCCCATGGGTGAAGCGCCCATGCTCAGCTTGTGAGCTTCTTCCCGGGAGAGCAGCC**ATG**GCACTGAGGAATGTG
CCCTTTCGCTCAGAGGTCCTGGGCTGGGACCCCGACAGCCTTGCTGACTATTTCAAGAAGCTCAACTATAAGGAC
TGTGAGAAGGCAGTGAAGAAGTACCACATCGATGGGGCTCGCTTCTTGAACCTGACAGAAAATGACATCCAGAAG
TTCCCCAAGCTCCGGGTGCCGATTCTCAGTAAGTTAAGTCAGGAAATCAACAAGAACGAAGAGAGGAGGAGCATC
TTCACACGCAAACCCCAAGTCCCGCGGTTTCCTGAAGAGACAGAAAGCCACGAAGAGGACAATGGGGGTTGGTCG
TCCTTTGAAGAAGACGATTATGAAAGTCCCAATGATGACCAGGATGGGGAGGATGATGGAGACTATGAGTCCCCC
AATGAGGAGGAAGAGGCACCCGTGGAAGATGACGCGGATTATGAGCCGCCACCCTCCAATGACGAGGAAGCTCTG
CAGAACTCCATCCTGCCTGCCAAGCCTTTCCCCAACTCCAACTCCATGTACATCGACCGGCCCCCCTCTGGGAAA
ACCCCCCAGCAGCCTCCTGTGCCCCCCCAGAGACCGATGGCCGCCCTCCCGCCCCCACCAGCCGGCCGGAATCAC
TCGCCACTGCCCCCACCCCAGACCAACCACGAAGAACCCAGCAGAAGCAGAAACCACAAAACGGCAAAGCTCCCT
GCTCCTTCAATAGACAGAAGCACGAAACCTCCCCTAGATCGTTCATTAGCTCCGTTTGATAGAGAACCCTTCACA
CTAGGAAAGAAACCACCATTTTCTGACAAGCCCTCGATTCCAGCGGGAAGGTCACTCGGGGAGCATTTACCCAAG
ATTCAAAAGCCTCCTTTACCACCGACCACGGAAAGACATGAAAGGAGCAGCCCCCTGCCAGGGAAGAAGCCACCT
GTGCCAAAGCATGGATGGGGACCAGACAGAAGAGAGAATGATGAAGATGATGTGCATCAGAGACCTTTGCCCCAG
CCAGCACTACTTCCTATGAGCTCCAACACTTTCCCTTCAAGATCTACTAAGCCAAGTCCCATGAACCCTCTCCCA
TCCTCTCACATGCCTGGAGCATTCTCAGAAAGTAACAGCAGTTTTCCACAGAGTGCCTCCCTGCCACCATACTTC
TCTCAAGGCCCTAGCAACAGACCACCTATCAGAGCCGAAGGCAGAAACTTCCCCTTGCCACTTCCAAACAAACCT
CGGCCCCCATCCCCCGCGGAGGAAGAGAATTCATTAAATGAAGAGTGGTACGTTTCTTATATTACCCGACCAGAG
GCAGAAGCTGCTCTTAGAAAGATAAACCAGGATGGCACATTTCTGGTCAGAGACAGCTCTAAAAAAACAACAACC
AATCCATATGTCCTCATGGTGTTGTACAAAGATAAAGTTTACAACATCCAGATCCGTTATCAGAAGGAAAGTCAA
GTTTACTTGTTGGGAACTGGACTCCGAGGGAAAGAGGACTTTCTGTCTGTGTCAGATATTATTGACTACTTCAGG
AAAATGCCACTTCTGCTCATTGATGGGAAAAACCGAGGTTCCAGATACCAGTGCACATTAACGCATGCTGCAGGG
TACCCA**TAG**CAAGTTATAGCCGAGCAAATGAACCGTCCTCCTGCCTCTGTTGCCAACACGAGATCAATCAGCCTT
GGTCAATGGACAAACACTTAGGACTGAACTGAACCCCTCCCCATGAACACAAGGGTTTTATCCTTTCCTTTAAAA
ACAGTGTTTGAAATGAAGACTGTCAACTATCCCC

FIGURE 1025

MALRNVPFRSEVLGWDPDSLADYFKKLNYKDCEKAVKKYHIDGARFLNLTENDIQKFPKLRVPILSKLSQEINKN
EERRSIFTRKPQVPRFPEETESHEEDNGGWSSFEEDDYESPNDDQDGEDDGDYESPNEEEEAPVEDDADYEPPPS
NDEEALQNSILPAKPFPNSNSMYIDRPPSGKTPQQPPVPPQRPMAALPPPPAGRNHSPLPPPQTNHEEPSRSRNH
KTAKLPAPSIDRSTKPPLDRSLAPFDREPFTLGKKPPFSDKPSIPAGRSLGEHLPKIQKPPLPPTTERHERSSPL
PGKKPPVPKHGWGPDRRENDEDDVHQRPLPQPALLPMSSNTFPSRSTKPSPMNPLPSSHMPGAFSESNSSFPQSA
SLPPYFSQGPSNRPPIRAEGRNFPLPLPNKPRPPSPAEEENSLNEEWYVSYITRPEAEAALRKINQDGTFLVRDS
SKKTTTNPYVLMVLYKDKVYNIQIRYQKESQVYLLGTGLRGKEDFLSVSDIIDYFRKMPLLLIDGKNRGSRYQCT
LTHAAGYP

FIGURE 1026A

GGCACGAGCAGAAGCAACAATAATTGTGAAAAATACTTCAGCAGTT**ATG**GACTCATCTGTCATTCAAAGGAAAAA
AGTAGCTGTCATTGGTGGTGGCTTGGTTGGCTCATTACAAGCATGCTTTCTTGCAAAGAGGAATTTCCAGATTGA
TGTATATGAAGCTAGGGAAGATACTCGAGTGGCTACCTTCACACGTGGAAGAAGCATTAACTTAGCCCTTTCTCA
TAGAGGACGACAAGCCTTGAAAGCTGTTGGCCTGGAAGATCAGATTGTATCCCAAGGTATTCCCATGAGAGCAAG
AATGATCCACTCTCTTTCAGGAAAAAAGTCTGCAATTCCCTATGGGACAAAGTCTCAGTATATTCTTTCTGTAAG
CAGAGAAAATCTAAACAAGGATCTATTGACTGCTGCTGAGAAATACCCCAATGTGAAAATGCACTTTAACCACAG
GCTGTTGAAATGTAATCCAGAGGAAGGAATGATCACAGTGCTTGGATCTGACAAAGTTCCCAAAGATGTCACTTG
TGACCTCATTGTAGGATGTGATGGAGCCTATTCAACTGTCAGATCTCACCTGATGAAGAAACCTCGCTTTGATTA
CAGTCAGCAGTACATTCCTCATGGGTACATGGAGTTGACTATTCCACCTAAGAACGGAGATTATGCCATGGAACC
TAATTATCTGCATATTTGGCCTAGAAATACCTTTATGATGATTGCACTTCCTAACATGAACAAATCATTCACATG
TACTTTGTTCATGCCCTTTGAAGAGTTTGAAAAACTTCTAACCAGTAATGATGTGGTAGATTTCTTCCAGAAATA
CTTTCCGGATGCCATCCCTCTAATTGGAGAGAAACTCCTAGTGCAAGATTTCTTCCTGTTGCCTGCCCAGCCCAT
GATATCTGTAAAGTGCTCTTCATTTCACTTTAAATCTCACTGTGTACTGCTGGGAGATGCAGCTCATGCTATAGT
GCCGTTTTTTGGGCAAGGAATGAATGCGGGCTTTGAAGACTGCTTGGTATTTGATGAGTTAATGGATAAATTCAG
TAACGACCTTAGTTTGTGTCTTCCTGTGTTCTCAAGATTGAGAATCCCAGATGATCACGCGATTTCAGACCTATC
CATGTACAATTACATAGAGATGCGAGCACATGTCAACTCAAGCTGGTTCATTTTTCAGAAGAACATGGAGAGATT
TCTTCATGCGATTATGCCATCGACCTTTATCCCTCTCTATACAATGGTCACTTTTTCCAGAATAAGATACCATGA
GGCTGTGCAGCGTTGGCATTGGCAAAAAAAGGTGATAAACAAAGGACTCTTTTTCTTGGGATCACTGATAGCCAT
CAGCAGTACCTACCTACTTATACACTACATGTCACCACGATCTTTCCTCTGCTTGAGAAGACCATGGAACTGGAT
AGCTCACTTCCGGAATACAACATGTTTCCCCGCAAAGGCCGTGGACTCCCTAGAACAAATTTCCAATCTCATTAG
CAGG**TGA**TAGAAAGGTTTTGTGGTAGCAAATGCATGATTTCTCTGTGACCAAAATTAAGCATGAAAAAAATGTTT
CCATTGCCATATTTGATTCACTAGTGGAAGATAGTGTTCTGCTTATAATTAAACTGAATGTAGAGTATCTCTGTA
TGTTAATTGCAATTACTGGTTGGGGGGTGCATTTTAAAAGATGAAACATGCAGCTTCCCTACATTACACACACTC
AGGTTGAGTCATTCTAACTATAAAAGTGCAATGACTAAGATCCTTCACTTCTCTGAAAGTAAGGCCCTAGATGCC
TCAGGGAAGACAGTAATCATGCCTTTTCTTTAAAAGACACAATAGGACTCGCAACAGCATTGACTCAACACCTAG
GACTAAAAATCACAACTTAACTAGCATGTTAACTGCACTTTTCATTACGTGAATGGAACTTACCTAACCACAGGG
CTCAGACTTACTAGATAAAACCAGAAATGGAAATAAGGAATTCAGGGGAGTTCCAGAGACTTACAAAATGAACTC
ATTTTATTTTCCCACCTTCAAATATAAGTATTATCATCTATCTGTTTATCGTCTATCTATCTATCATCTATCTAT
CTATCTATCATCTATCTATCTATCTATCTATCTATCTATCTATCTATCTATCTATCTATCTCTATTTATTTATGT
ATTTAGAGATCAGGTCTCACTCTGTTGACCAGGCTGGAGTGCAGTGGTGAGATCTGGGTTCACTGCAACCTCTGC
CTCCTGGGCTCAAGCAATCCTCCCACTTCAGCCTCCCAAATAGCTGGGGCTACCATGGTATTTTTCAGTAGAGAC
CGGGTCTTGCCATGCTGCCCAGGCCAGTCTCAAACTCCTGGCCTCATGTGATCTGCCCACCTCAGCCTCCCAAAG
TACAGGGATTAGAGTTGTGAGCCACCGCTGCCAGCCCAGAGTTACCCTCTAAAGATAAGAAAAAGGCTATTAATA
TCATACTAAGTGAAGGACAGGAAAGGGTTTTATTCATAAATTAAATGTCTACATGTGCCAGAATGGAAAGGAAAC
AAGGGGAGACAACTTTTATAGAAATACAAAGCCATTACTTTATTCAATTTCAGACCCTCAGAAGCAATTTACTAA
TTTATTCTTCGACTACATACTGCAGCAGAACCAGCAATACACTTGATTTTTAAAAGCACATTTAGTGAAATGTTT
TCTTTGGTTCATCCTTCTTTAACAGGCTGCTGAGTCACTCAGAAATCCTTCAAACATGATTAATTATGAAGATGA
AACACTAGAGTCATATAAGAAATAAAAATTGGGCAATAAAATAAAATGATTCAGTGTTTCTTTTCTATATTGTCA
ATGAAAACCTTGAGTTCTAATAATCCATGTTCAGTTTGTAGGGAAAGAAAAAATAATTTTTCCTTCTACCCACTT
TAGGTTCCTTGGCTGGGGCCCCTATAACAAAAGACAGATTGACAAGAGAAAAACAAACATAAATTTATTAGCGGG
TATATGTAATATATATGTGGGAAATACAGGGGAATGAGCAAATCTCAAAGAGCTGGCGTCTTAGAACTCCCTGGC
TTATATAGCATCGACAAAGAACAGTAAATTTTTAGAGAAACAACAAAACAAAGAAAAAGAGCTTTGAGTCTGTAG
GGGCAGCAATTTGGGGGAAGCAAATATATGGGAGTTTGCCTTGTAGATTCCTCTGGTGGTGGTCTCCAGGCTGAC
AAGGATTCAAAGTTGTCTCTGAAACTCCTCTTTGTCATACTGCACATATAAAACGTCTTTTGTTTCCAACAAGAG
GATTTCTTTTTCATTCTAGAATTATCTCCTTGATAACTTGATCAGATATAGGACATGACACTGAATAGAGTCCAA
CAGTACAAAAAAAATTCAGTATGTTCTAGCTACTTCACACATGTGTACGCGACAGTTATTTTTACAGTAAGGTAT
TTTCGAGAAAAATGCATTACGTGTTTTGGAAAATAGAGTAATTTAAAAAATATATTTGAAATGAAAATCTCCAAC
ACATTAGAAGATGATGATGTTAGATGCCCATCGTGTGCCACAAGTGGTTTTTTCATTATGTAAAGCACCCGTTGA

FIGURE 1026B

ATTAAAAGAATTTGTTTTTGTTCAACCTCTTCCTGAGGCCCAAGAGCATATGGGCAATTCGGATTTCCTGCTGGA
CCACAAGGTTCTGTTGATATTACATAGAAACGGGTATTCCAGACACTTCTTATGATGAAAGTCCAAAAGTGGCAT
CCAATTTAAGGCCCCATCTTTCGTTGCCATTCTTCATTCCTACAAAGGACGAACTTGGATTACATCAACTTTGGA
CCCATTGGTTTTGTCGCTGTCGTCAACTGACAGTGATTCACCACTGGTGATGATAAAAATGATGGAAGAAGAGTT
GAAAGTCACTTTTTTCTTTGGCCTGTCCCCATCTTTCTGTGACATCACAATGGGTCTGATCTGCATTTCACTTCC
AGCTGCTGGTAGGTCTTTAGCAGGCCTCTGGCACCTCAGCAGTCGGAGGCACAGAAGCTGCAAAAGGGATCTTCG
AAACTGGGCAGAGAAAAAATAAAGTGGAATATTAAGTAAAAGTTGGGCACTAATCTGGATTAACATTCGAGGAAA
TCAGTTGAGCTGATTTAAGTTGTTTTTTGTTTGTTAGCAGGTGTGGATGTGGGGTTATGTGGTCATGCTCAGATC
TACCTAAATCACCCCAGAGCTTTATGTCTTTTATTCATTCTAAATCTTATTAACCGGAATATGTAGGACCATTTC
AATACCTTGTAATCCTCCAAGCTTCAATCTGCACACACTTTCTATGAGGGCAGGTACAACTATTAAGAGATTTTG
AACATTAAGTTAGTCCACAAATATTCAGTGGGCATCTACTAGGTGACAGCCACTGTGCTATAATTAGAGACTTTT
TACTATAAGCATCAAAAACAGATAAGGCTCTTCCTGGCAGAGTTTACAGCCTGGTGTACTTGCTAATGTCTCTTT
AATTAGGTGAAGAATTTTTTTTTTCTATCGAAATTACTAATCAGTTGGGGAAAAAAATACTATAGCAGACAGCAC
TAATGTCATCAACAAACATTGTTCTTCTCCGTGTCCTGGGTACAACATCGAATAATATTTCTTGGCCTCCTTTCC
GCTTCTCCTCTCTGCTGTTCCTCTCTACAAGAACCTGGGAGGCCAACGCCTAAAGATCATAATATCACAATGGAA
GGAACCTAGATTCCTAAATGACTGCATAGGACAGATCCCATCTCCTCCACCCAATACATTATTAGACTGAACTGT
GACCTGAAATGAGCAATAAACTCTGTATTAATTCACTGAAATGTTGGGGTTGCTTGTTATAGTAGTCGGTCCATC
ATGACCAGTAAAACATAAATCAAAAGTTAATGTAATTGTTATCCCATTATTTAGAGCGAAATAAATGTTGAATAT
ATGGACTTTCTCAGATTAGGAAATACCAATTAAAAATATAATAAATAGCT

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FIGURE 1027

MDSSVIQRKKVAVIGGGLVGSLQACFLAKRNFQIDVYEAREDTRVATFTRGRSINLALSHRGRQALKAVGLEDQI
VSQGIPMRARMIHSLSGKKSAIPYGTKSQYILSVSRENLNKDLLTAAEKYPNVKMHFNHRLLKCNPEEGMITVLG
SDKVPKDVTCDLIVGCDGAYSTVRSHLMKKPRFDYSQQYIPHGYMELTIPPKNGDYAMEPNYLHIWPRNTFMMIA
LPNMNKSFTCTLFMPFEEFEKLLTSNDVVDFFQKYFPDAIPLIGEKLLVQDFFLLPAQPMISVKCSSFHFKSHCV
LLGDAAHAIVPFFGQGMNAGFEDCLVFDELMDKFSNDLSLCLPVFSRLRIPDDHAISDLSMYNYIEMRAHVNSSW
FIFQKNMERFLHAIMPSTFIPLYTMVTFSRIRYHEAVQRWHWQKKVINKGLFFLGSLIAISSTYLLIHYMSPRSF
LCLRRPWNWIAHFRNTTCFPAKAVDSLEQISNLISR

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FIGURE 1028

GGGGGGTCTGCGTCTTCCCGAGCCAGTGTGCTGAGCTCTCCGCGTCGCCTCTGTCGCCCGCGCCTGGCCTACCGC
GGCACTCCCGGCTGCACGCTCTGCTTGGCCTCGCC**ATG**CCGGTGGACCTCAGCAAGTGGTCCGGGCCCTTGAGCC
TGCAAGAAGTGGACGAGCAGCCGCAGCACCCGCTGCATGTCACCTACGCCGGGGCGGCGGTGGACGAGCTGGGCA
AAGTGCTGACGCCCACCCAGGTTAAGAATAGACCCACCAGCATTTCGTGGGATGGTCTTGATTCAGGGAAGCTCT
ACACCTTGGTCCTGACAGACCCGGATGCTCCCAGCAGGAAGGATCCCAAATACAGAGAATGGCATCATTTCCTGG
TGGTCAACATGAAGGGCAATGACATCAGCAGTGGCACAGTCCTCTCCGATTATGTGGGCTCGGGGCCTCCCAAGG
GCACAGGCCTCCACCGCTATGTCTGGCTGGTTTACGAGCAGGACAGGCCGCTAAAGTGTGACGAGCCCATCCTCA
GCAACCGATCTGGAGACCACCGTGGCAAATTCAAGGTGGCGTCCTTCCGTAAAAAGTATGAGCTCAGGGCCCCGG
TGGCTGGCACGTGTTACCAGGCCGAGTGGGATGACTATGTGCCCAAACTGTACGAGCAGCTGTCTGGGAAG**TAG**G
GGGTTAGCTTGGGGACCTGAACTGTCCTGGAGGCCCCAAGCCATGTTCCCCAGTTCAGTGTTGCATGTATAATAG
ATTTCTCCTCTTCCTGCCCCCCTTGGCATGGGTGAGACCTGACCAGTCAGATGGTAGTTGAGGGTGACTTTTCCT
GCTGCCTGGCCTTTATAATTTTACTCACTCACTCTGATTTATGTTTTGATCAAATTTGAACTTCATTTTGGGGGG
TATTTTGGTACTGTGATGGGGTCATCAAATTATTAATCTGAAAATAGCAACCCAGAATGTAAAAAAGAAAAAACT
GGGGGGAAAAAGACCAGGTCTACAGTGATAGAGCAAAGCATCAAAGAATCTTTAAGGGAGGTTTAAAAAAAAAAA
AAAAAAAAAAGATTGGTTGCCTCTGCCTTTGTGATCCTGAGTCCAGAATGGTACACAATGTGATTTTATGGTGAT
GTCACTCACCTAGACAACCAGAGGCTGGCATTGAGGCTAACCTCCAACACAGTGCATCTCAGATGCCTCAGTAGG
CATCAGTATGTCACTCTGGTCCCTTTAAAGAGCAATCCTGGAAGAAGCAGGAGGGAGGGTGGCTTTGCTGTTGTT
GGGACATGGCAATCTAGACCGGTAGCAGCGCCTCGCTGACAGCTTGGGAGGAAACCTGAGATCTGTGTTTTTTAA
ATTGATCGTTCTTCATGGGGGTAAGAAAAGCTGGTCTGGAGTTGCTGAATGTTGCATTAATTGTGCTGTTTGCTT
GTAGTTGAATAAAAACCCG

FIGURE 1029

MPVDLSKWSGPLSLQEVDEQPQHPLHVTYAGAAVDELGKVLTPTQVKNRPTSISWDGLDSGKLYTLVLTDPDAPS
RKDPKYREWHHFLVVNMKGNDISSGTVLSDYVGSGPPKGTGLHRYVWLVYEQDRPLKCDEPILSNRSGDHRGKFK
VASFRKKYELRAPVAGTCYQAEWDDYVPKLYEQLSGK

FIGURE 1030

GCAGTTCTGGTCCTCCTAGGAGCGGCCGCCTGCGCGGCGCGGCCCCGTGGTCGG**ATG**CTGGGCGGCAGAGAGGCC
GAGGCGCACGCGCGGCCCTACATGGCGTCGGTGCAGCTGAACGGCGCGCACCTGTGCGCAGGCGTCCTGGTGGCG
GAGCGGTGGGTGCTGAGCGCGGCGCACTGCCTGGAGGACGCGGCCGACGGGAAGGTGCAGGTTCTCCTGGGCGCG
CACTCCCTGTCGCAGCCGGAGCCCTCCAAGCGCCTGTACGACGTGCTCCGCGCAGTGCCCCACCCGGACAGCCAG
CCCGACACCATCGACCACGACCTCCTGCTGCTACAGCTGTCGGAGAAGGCCACACTGGGCCCTGCTGTGCGCCCC
CTGCCCTGGCAGCGCGTGGACCGCGACGTGGCACCGGGAACTCTCTGCGACGTGGCCGGCTGGGGCATAGTCAAC
CACGCGGGCCGCCGCCCGGACAGCCTGCAGCACGTGCTCTTGCCAGTGCTGGACCGCGCCACCTGCAACCGGCGC
ACGCACCACGACGGCGCCATCACCGAGCGCTTGATGTGCGCGGAGAGCAATCGCCGGGACAGCTGCAAGGGTGAC
TCCGGGGGCCCGCTGGTGTGCGGGGGCGTGCTCGAGGGCGTGGTCACCTCGGGCTCGCGCGTTTGCGGCAACCGC
AAGAAGCCCGGGATCTACACCCGCGTGGCGAGCTATGCGGCCTGGATCGACAGCGTCCTGGCC**TAG**GGTGCCGGG
GCCTGAAGGTCAGGGTCACCCAAGCAACAAAGTCCCGAGCAATGAAGTCATCCACTCCTGCATCTGGTTGGTCTT
TATTGAGCACCTACTATATGCAGAAGGGGAGGCCGAGGTGGGAGGATCATTGGATCTCAGGAGTTGGAGATCAGC
ATGGGCCACGTAGCGCGACTCCATCTCTACAAATAAATAAAAATTAGCTGGGCAATTGGCGGGCATGGAGGTGGG
TGCTTGTAGTTCCAGCTACTCAGGAGGCTGAGGTGGGAGGATGACTTGAACGCAGGAGGCTGAGGCTGCAGTGAG
TTGTGATTGCACCACTGCCCT

FIGURE 1031

MLGGREAEAHARPYMASVQLNGAHLCAGVLVAERWVLSAAHCLEDAADGKVQVLLGAHSLSQPEPSKRLYDVLRA
VPHPDSQPDTIDHDLLLLQLSEKATLGPAVRPLPWQRVDRDVAPGTLCDVAGWGIVNHAGRRPDSLQHVLLPVLD
RATCNRRTHHDGAITERLMCAESNRRDSCKGDSGGPLVCGGVLEGVVTSGSRVCGNRKKPGIYTRVASYAAWIDS
VLA

FIGURE 1032

CACAAGGCGGTAGCC**ATG**GCGGAGGCGGCGGCTGCAGCGGGTGGGACTGGCTTGGGCGCGGGCGCGAGCTACGGG
TCTGCAGCGGACCGGGACCGGGACCCGGACCCGGACCGCGCCGGGCGGAGGCTGCGGGTTCTCTCTGGCCATCTG
CTGGGCCGGCCCCGGGAGGCTCTGAGTACCAATGAGTGCAAAGCGCGGAGAGCCGCGTCGGCGGCCACGGCAGCG
CCCACGGCCACTCCCGCCGCGCAGGAGTCGGGCACCATCCCAAAGAAGCGGCAAGAAGTTATGAAATGGAATGGA
TGGGGATATAATGATTCTAAATTCATCTTCAATAAGAAGGGCCAAATTGAATTGACTGGGAAAAGGTACCCTCTT
AGTGGCATGGGTTTACCAACATTTAAAGAATGGATCCAAAATACCCTTGGAGTAAATGTGGAGCATAAAACTACC
TCTAAAGCATCCTTAAATCCTAGTGATACACCTCCTTCTGTTGTAAATGAAGATTTTCTTCATGACCTTAAAGAA
ACTAATATTTCATATTCACAAGAGGCAGATGATCGAGTATTTAGAGCTCATGGTCATTGTCTTCATGAGATATTT
TTGCTCAGGGAAGGAATGTTTGAGCGAATTCCTGATATAGTTTTATGGCCAACATGCCATGATGATGTAGTTAAG
ATTGTGAATCTAGCTTGCAAATATAATCTTTGTATCATACCAATTGGTGGAGGAACAAGTGTTTCATATGGCCTG
ATGTGTCCTGCAGATGAGACAAGAACAATTATTTCTTTGGACACTTCACAAATGAATCGAATTCTCTGGGTTGAT
GAGAACAATTTGACAGCTCATGTGGAGGCTGGCATAACAGGACAAGAGTTGGAAAGACAGCTTAAAGAAAGTGGT
TATTGTACAGGTCATGAACCAGATTCCCTGGAGTTCAGTACTGTAGGAGGATGGGTATCTACTCGCGCATCAGGC
ATGAAGAAGAATATCTATGGCAATATCGAGGACCTGGTGGTTCATATAAAAATGGTAACACCTAGAGGTATAATA
GAAAAAAGCTGTCAAGGACCTCGTATGTCAACAGGCCCTGATATCCATCACTTCATCATGGGATCTGAAGGAACT
CTTGGTGTAATAACAGAAGCTACAATAAAAATCAGACCAGTCCCTGAATACCAAAAGTATGGCTCAGTAGCTTTC
CCTAATTTTGAACAAGGAGTAGCCTGTTTAAGAGAAATTGCAAAACAGAGATGTGCTCCGGCATCTATTCGCCTC
ATGGACAACAAGCAGTTTCAGTTTGGTCATGCTCTTAAACCTCAGGTTTCCTCTATCTTTACATCATTTTTGGAC
GGATTAAAAAAGTTTTATATTACAAAGTTTAAAGGATTTGACCCAAATCAGCTAAGTGTAGCCACATTACTGTTT
GAGGGGGATCGTGAGAAGGTTCTTCAACATGAAAAACAAGTGTATGATATTGCTGCAAAATTTGGTGGGTTGGCA
GCTGGAGAAGATAATGGACAGAGAGGTTATTTGCTGACCTATGTTATTGCATACATTCGAGACTTGGCTTTGGAA
TACTATGTATTAGGAGAATCTTTTGAGACTTCTGCTCCTTGGGACAGGGTGGTAGATCTCTGTAGAAATGTAAAA
GAAAGAATAACAAGGGAATGCAAAGAGAAGGGTGTTCAGTTTGCTCCTTTTTCTACATGCAGGGTGACGCAGACT
TACGATGCAGGTGCTTGTATCTACTTCTATTTTGCCTTTAACTACAGGGGAATTAGTGACCCACTGACCGTATTT
GAACAAACTGAGGCAGCTGCTAGAGAAGAAATCCTTGCTAATGGAGGGAGCCTGTCACATCACCATGGAGTGGGC
AAGTTACGGAAGCAATGGCTAAAGGAAAGTATCTCTGATGTCGGCTTTGGGATGCTGAAGTCTGTCAAGGAATAT
GTGGACCCCAATAACATCTTTGGAAACAGAAACCTTTTA**TAA**ATCCATTAGTACCATTACAAAAAAATGTCAATT
TTTTTTTTAAGTTTTCAACTGTGGTTATACTAGTAATCAAATATATCAT

FIGURE 1033

MAEAAAAAGGTGLGAGASYGSAADRDRDPDPDRAGRRLRVLSGHLLGRPREALSTNECKARRAASAATAAPTATP
AAQESGTIPKKRQEVMKWNGWGYNDSKFIFNKKGQIELTGKRYPLSGMGLPTFKEWIQNTLGVNVEHKTTSKASL
NPSDTPPSVVNEDFLHDLKETNISYSQEADDRVFRAHGHCLHEIFLLREGMFERIPDIVLWPTCHDDVVKIVNLA
CKYNLCIIPIGGGTSVSYGLMCPADETRTIISLDTSQMNRILWVDENNLTAHVEAGITGQELERQLKESGYCTGH
EPDSLEFSTVGGWVSTRASGMKKNIYGNIEDLVVHIKMVTPRGIIEKSCQGPRMSTGPDIHHFIMGSEGTLGVIT
EATIKIRPVPEYQKYGSVAFPNFEQGVACLREIAKQRCAPASIRLMDNKQFQFGHALKPQVSSIFTSFLDGLKKF
YITKFKGFDPNQLSVATLLFEGDREKVLQHEKQVYDIAAKFGGLAAGEDNGQRGYLLTYVIAYIRDLALEYYVLG
ESFETSAPWDRVVDLCRNVKERITRECKEKGVQFAPFSTCRVTQTYDAGACIYFYFAFNYRGISDPLTVFEQTEA
AAREEILANGGSLSHHHGVGKLRKQWLKESISDVGFGMLKSVKEYVDPNNIFGNRNLL

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FIGURE 1034

GCCACGTGCTGCTGGGTCTCAGTCCTCCACTTCCCGTGTCCTCTGGAAGTTGTCAGGAGCA**ATG**TTGCGCTTGTA
CGTGTTGGTAATGGGAGTTTCTGCCTTCACCCTTCAGCCTGCGGCACACACAGGGGCTGCCAGAAGCTGCCGGTT
TCGTGGGAGGCATTACAAGCGGGAGTTCAGGCTGGAAGGGGAGCCTGTAGCCCTGAGGTGCCCCCAGGTGCCCTA
CTGGTTGTGGGCCTCTGTCAGCCCCCGCATCAACCTGACATGGCATAAAAATGACTCTGCTAGGACGGTCCCAGG
AGAAGAAGAGACACGGATGTGGGCCCAGGACGGTGCTCTGTGGCTTCTGCCAGCCTTGCAGGAGGACTCTGGCAC
CTACGTCTGCACTACTAGAAATGCTTCTTACTGTGACAAAATGTCCATTGAGCTCAGAGTTTTTGAGAATACAGA
TGCTTTCCTGCCGTTCATCTCATACCCGCAAATTTTAACCTTGTCAACCTCTGGGGTATTAGTATGCCCTGACCT
GAGTGAATTCACCCGTGACAAAACTGACGTGAAGATTCAATGGTACAAGGATTCTCTTCTTTTGGATAAAGACAA
TGAGAAATTTCTAAGTGTGAGGGGGACCACTCACTTACTCGTACACGATGTGGCCCTGGAAGATGCTGGCTATTA
CCGCTGTGTCCTGACATTTGCCCATGAAGGCCAGCAATACAACATCACTAGGAGTATTGAGCTACGCATCAAGAA
AAAAAAAGAAGAGACCATTCCTGTGATCATTTCCCCCCTCAAGACCATATCAGCTTCTCTGGGGTCAAGACTGAC
AATCCCGTGTAAGGTGTTTCTGGGAACCGGCACACCCTTAACCACCATGCTGTGGTGGACGGCCAATGACACCCA
CATAGAGAGCGCCTACCCGGGAGGCCGCGTGACCGAGGGGCCACGCCAGGAATATTCAGAAAATAATGAGAACTA
CATTGAAGTGCCATTGATTTTTGATCCTGTCACAAGAGAGGATTTGCACATGGATTTTAAATGTGTTGTCCATAA
TACCCTGAGTTTTCAGACACTACGCACCACAGTCAAGGAAGCCTCCTCCACGTTCTCCTGGGGCATTGTGCTGGC
CCCACTTTCACTGGCCTTCTTGGTTTTGGGGGGAATATGGATGCACAGACGGTGCAAACACAGAACTGGAAAAGC
AGATGGTCTGACTGTGCTATGGCCTCATCATCAAGACTTTCAATCCTATCCCAAG**TGA**AATAAATGGAATGAAAT
AATTCAAACAC

FIGURE 1035

MLRLYVLVMGVSAFTLQPAAHTGAARSCRFRGRHYKREFRLEGEPVALRCPQVPYWLWASVSPRINLTWHKNDSA
RTVPGEEETRMWAQDGALWLLPALQEDSGTYVCTTRNASYCDKMSIELRVFENTDAFLPFISYPQILTLSTSGVL
VCPDLSEFTRDKTDVKIQWYKDSLLLDKDNEKFLSVRGTTHLLVHDVALEDAGYYRCVLTFAHEGQQYNITRSIE
LRIKKKKEETIPVIISPLKTISASLGSRLTIPCKVFLGTGTPLTTMLWWTANDTHIESAYPGGRVTEGPRQEYSE
NNENYIEVPLIFDPVTREDLHMDFKCVVHNTLSFQTLRTTVKEASSTFSWGIVLAPLSLAFLVLGGIWMHRRCKH
RTGKADGLTVLWPHHQDFQSYPK

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FIGURE 1036

ATTCAGAGGCTGCTGCCTGCTTAGGAGGTTGTAGAAAGCTCTGTAGGTTCTCTCTGTGTGTCCTACAGGAGTCTT
CAGGCCAGCTCCCTGTCGG**ATG**GCTTTTATGAAAAAATATCTCCTCCCCATTCTGGGGCTCTTCATGGCCTACTA
CTACTATTCTGCAAACGAGGAATTCAGACCAGAGATGCTCCAAGGAAAGAAAGTGATTGTCACAGGGGCCAGCAA
AGGGATCGGAAGAGAGATGGCTTATCATCTGGCGAAGATGGGAGCCCATGTGGTGGTGACAGCGAGGTCAAAAGA
AACTCTACAGAAGGTGGTATCCCACTGCCTGGAGCTTGGAGCAGCCTCAGCACACTACATTGCTGGCACCATGGA
AGACATGACCTTCGCAGAGCAATTTGTTGCCCAAGCAGGAAAGCTCATGGGAGGACTAGACATGCTCATTCTCAA
CCACATCACCAACACTTCTTTGAATCTTTTTCATGATGATATTCACCATGTGCGCAAAAGCATGGAAGTCAACTT
CCTCAGTTACGTGGTCCTGACTGTAGCTGCCTTGCCCATGCTGAAGCAGAGCAATGGAAGCATTGTTGTCGTCTC
CTCTCTGGCTGGGAAAGTGGCTTATCCAATGGTTGCTGCCTATTCTGCAAGCAAGTTTGCTTTGGATGGGTTCTT
CTCCTCCATCAGAAAGGAATATTCAGTGTCCAGGGTCAATGTATCAATCACTCTCTGTGTTCTTGGCCTCATAGA
CACAGAAACAGCCATGAAGGCAGTTTCTGGGATAGTCCATATGCAAGCAGCTCCAAAGGAGGAATGTGCCCTGGA
GATCATCAAAGGGGGAGCTCTGCGCCAAGAAGAAGTGTATTATGACAGCTCACTCTGGACCACTCTTCTGATCAG
AAATCCATGCAGGAAGATCCTGGAATTTCTCTACTCAACGAGCTATAATATGGACAGATTCATAAACAAG**TAG**GA
ACTCCCTGAGGGCTGGGCATGCTGAGGGATTTTGGGACTGTTCTGTCTCATGTTTATCTGAGCTCTTATCTATGA
AGACATCTTCCCAGAGTGTCCCCAGAGACATGCAAGTCATGGGTCACACCTGACAAATGGAAGGAGTTCCTCTAA
CATTTGCAAAATGGAAATGTAATAATAATGAATGTCATGCACCGCTGCAGCCAGCAGTTGTAAAATTGTTAGTAA
ACATAGGTATAATTACCAGATAGTTATATTAAATTTATATCTTATATATAATAATATGTGATGATTAATACAATA
TTAATTATAATAAAGGTCACATAAACTTTATAAATTCATAACTGGTAGCTATAACTTGAGCTTATTCAGGATGGT
TCTTTAAACCATAAACTGTACAATG

FIGURE 1037

MAFMKKYLLPILGLFMAYYYYSANEEFRPEMLQGKKVIVTGASKGIGREMAYHLAKMGAHVVVTARSKETLQKVV
SHCLELGAASAHYIAGTMEDMTFAEQFVAQAGKLMGGLDMLILNHITNTSLNLFHDDIHHVRKSMEVNFLSYVVL
TVAALPMLKQSNGSIVVVSSLAGKVAYPMVAAYSASKFALDGFFSSIRKEYSVSRVNVSITLCVLGLIDTETAMK
AVSGIVHMQAAPKEECALEIIKGGALRQEEVYYDSSLWTTLLIRNPCRKILEFLYSTSYNMDRFINK

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FIGURE 1038

AGGCCGCTAGGGTGCGGGGTTGGGGAGGAGGCCGCTAGTCTACGCCTGTGGAGCCGATACTCAGCCCTCTGCGAC
C**ATG**GCTGTGCTGGCGGCACTTCTGCGCAGCGGCGCCCGCAGCCGCAGCCCCCTGCTCCGGAGGCTGGTGCAGGA
AATAAGATATGTGGAACGGAGTTATGTATCAAAACCCACTTTGAAGGAAGTGGTCATAGTAAGTGCTACAAGAAC
ACCCATTGGATCTTTTTTAGGCAGCCTTTCCTTGCTGCCAGCCACTAAGCTTGGTTCCATTGCAATTCAGGGAGC
CATTGAAAAGGCAGGGATTCCAAAAGAAGAAGTGAAAGAAGCATACATGGGTAATGTTCTACAAGGAGGTGAAGG
ACAAGCTCCTACAAGGCAGGCAGTATTGGGTGCAGGCTTACCTATTTCTACTCCATGTACCACCATAAACAAAGT
TTGTGCTTCAGGAATGAAAGCCATCATGATGGCCTCTCAAAGTCTTATGTGTGGACATCAGGATGTGATGGTGGC
AGGTGGGATGGAGAGCATGTCCAATGTTCCATATGTAATGAACAGAGGATCAACACCATATGGTGGGGTAAAGCT
TGAAGATTTGATTGTAAAAGACGGGCTAACTGATGTCTACAATAAAATTCATATGGGCAGCTGTGCTGAGAATAC
AGCAAAGAAGCTGAATATTGCACGAAATGAACAGGACGCTTATGCTATTAATTCTTATACCAGAAGTAAAGCAGC
ATGGGAAGCTGGGAAATTTGGAAATGAAGTTATTCCTGTCACAGTTACAGTAAAAGGTCAACCAGATGTAGTGGT
GAAAGAAGATGAAGAATATAAACGTGTTGATTTTAGCAAAGTTCCAAAGCTGAAGACAGTTTTCCAGAAAGAAAA
TGGCACAGTAACAGCTGCCAATGCCAGTACACTGAATGATGGAGCAGCTGCTCTGGTTCTCATGACGGCAGATGC
AGCGAAGAGGCTCAATGTTACACCACTGGCAAGAATAGTAGCATTTGCTGACGCTGCTGTAGAACCTATTGATTT
TCCAATTGCTCCTGTATATGCTGCATCTATGGTTCTTAAAGATGTGGGATTGAAAAAAGAAGATATTGCAATGTG
GGAAGTAAATGAAGCCTTTAGTCTGGTTGTACTAGCAAACATTAAAATGTTGGAGATTGATCCCCAAAAAGTGAA
TATCAATGGAGGAGCTGTTTCTCTGGGACATCCAATTGGGATGTCTGGAGCCAGGATTGTTGGTCATTTGACTCA
TGCCTTGAAGCAAGGAGAATACGGTCTTGCCAGTATTTGCAATGGAGGAGGAGGTGCTTCTGCCATGCTAATTCA
GAAGCTG**TAG**ACAACCTCTGCTATTTAAGGAGACAACCCTATGTGACCAGAAGGCCTGCTGTAATCAGTGTGACT
ACTGTGGGTCAGCTTATATTCAGATAAGCTGTTTCATTTTTTATTATTTTCTATGTTAACTTTTAAAAATCAAAA
TGATGAAATCCCAAAACA

FIGURE 1039

MAVLAALLRSGARSRSPLLRRLVQEIRYVERSYVSKPTLKEVVIVSATRTPIGSFLGSLSLLPATKLGSIAIQGA
IEKAGIPKEEVKEAYMGNVLQGGEGQAPTRQAVLGAGLPISTPCTTINKVCASGMKAIMMASQSLMCGHQDVMVA
GGMESMSNVPYYVMNRGSTPYGGVKLEDLIVKDGLTDVYNKIHMGSCAENTAKKLNIARNEQDAYAINSYTRSKAA
WEAGKFGNEVIPVTVTVKGQPDVVVKEDEEYKRVDFSKVPKLKTVFQKENGTVTAANASTLNDGAAALVLMTADA
AKRLNVTPLARIVAFADAAVEPIDFPIAPVYAASMVLKDVGLKKEDIAMWEVNEAFSLVVLANIKMLEIDPQKVN
INGGAVSLGHPIGMSGARIVGHLTHALKQGEYGLASICNGGGGASAMLIQKL

FIGURE 1040A

CAGCATCAATAAGGCCATTAATACGCAGGAAGTGGCTGTAAAGGAAAAACACGCCAGAACGTGCATACTGGGCAC
CCACCATGAGAAAGGGGCACAGACCTTCTGGTCTGTTGTCAACCGCCTGCCTCTGTCTAGCAACGCAGTGCTCTG
CTGGAAGTTCTGCCATGTGTTCCACAAACTCCTCCGAGATGGACACCCGAACGTCCTGAAGGACTCTCTGAGATA
CAGAAATGAATTGAGTGAC**ATG**AGCAGGATGTGGGGCCACCTGAGCGAGGGGTATGGCCAGCTGTGCAGCATCTA
CCTGAAACTGCTAAGAACCAAGATGGAGTACCACACCAAAAATCCCAGGTTCCCAGGCAACCTGCAGATGAGTGA
CCGCCAGCTGGACGAGGCTGGAGAAAGTGACGTGAACAACTTTTTCCAGTTAACAGTGGAGATGTTTGACTACCT
GGAGTGTGAACTCAACCTCTTCCAAACAGTATTCAACTCCCTGGACATGTCCCGCTCTGTGTCCGTGACGGCAGC
AGGGCAGTGCCGCCTCGCCCCGCTGATCCAGGTCATCTTGGACTGCAGCCACCTTTATGACTACACTGTCAAGCT
TCTCTTCAAACTCCACTCCTGCCTCCCAGCTGACACCCTGCAAGGCCACCGGGACCGCTTCATGGAGCAGTTTAC
AAAGTTGAAAGATCTGTTCTACCGCTCCAGCAACCTGCAGTACTTCAAGCGGCTCATTCAGATCCCCCAGCTGCC
TGAGAACCCACCCAACTTCCTGCGAGCCTCAGCCCTGTCAGAACATATCAGCCCTGTGGTGGTGATCCCTGCAGA
GGCCTCATCCCCCGACAGCGAGCCAGTCCTAGAGAAGGATGACCTCATGGACATGGATGCCTCTCAGCAGAATTT
ATTTGACAACAAGTTTGATGACATCTTTGGCAGTTCATTCAGCAGTGATCCCTTCAATTTCAACAGTCAAAATGG
TGTGAACAAGGATGAGAAGGACCACTTAATTGAGCGACTATACAGAGAGATCAGTGGATTGAAGGCACAGCTAGA
AAACATGAAGACTGAGAGCCAGCGGGTTGTGCTGCAGCTGAAGGGCCACGTCAGCGAGCTGGAAGCAGATCTGGC
CGAGCAGCAGCACCTGCGGCAGCAGGCGGCCGACGACTGTGAATTCCTGCGGGCAGAACTGGACGAGCTCAGGAG
GCAGCGGGAGGACACCGAGAAGGCTCAGCGGAGCCTGTCTGAGATAGAAAGGAAAGCTCAAGCCAATGAACAGCG
ATATAGCAAGCTAAAGGAGAAGTACAGCGAGCTGGTTCAGAACCACGCTGACCTGCTGCGGAAGAATGCAGAGGT
GACCAAACAGGTGTCCATGGCCAGACAAGCCCAGGTAGATTTGGAACGAGAGAAAAAAGAGCTGGAGGATTCGTT
GGAGCGCATCAGTGACCAGGGCCAGCGGAAGACTCAAGAACAGCTGGAAGTTCTAGAGAGCTTGAAGCAGGAACT
TGCCACAAGCCAACGGGAGCTTCAGGTTCTGCAAGGCAGCCTGGAAACTTCTGCCCAGTCAGAAGCAAACTGGGC
AGCCGAGTTCGCCGAGCTAGAGAAGGAGCGGGACAGCCTGGTGAGTGGCGCAGCTCATAGGGAGGAGGAATTATC
TGCTCTTCGGAAAGAACTGCAGGACACTCAGCTCAAACTGGCCAGCACAGAGGAATCTATGTGCCAGCTTGCCAA
AGACCAACGAAAAATGCTTCTGGTGGGGTCCAGGAAGGCTGCGGAGCAGGTGATACAAGACGCCCTGAACCAGCT
TGAAGAACCTCCTCTCATCAGCTGCGCTGGGTCTGCAGATCACCTCCTCTCCACGGTCACATCCATTTCCAGCTG
CATCGAGCAACTGGAGAAAAGCTGGAGCCAGTATCTGGCCTGCCCAGAAGACATCAGTGGACTTCTCCATTCCAT
AACCCTGCTGGCCCACTTGACCAGCGACGCCATTGCTCATGGTGCCACCACCTGCCTCAGAGCCCCACCTGAGCC
TGCCGACTCACTGACCGAGGCCTGTAAGCAGTATGGCAGGGAAACCCTCGCCTACCTGGCCTCCCTGGAGGAAGA
GGGAAGCCTTGAGAATGCCGACAGCACAGCCATGAGGAACTGCCTGAGCAAGATCAAGGCCATCGGCGAGGAGCT
CCTGCCCAGGGGACTGGACATCAAGCAGGAGGAGCTGGGGGACCTGGTGGACAAGGAGATGGCGGCCACTTCAGC
TGCTATTGAAACTGCCACGGCCAGAATAGAGGAGATGCTCAGCAAATCCCGAGCAGGAGACACAGGAGTCAAATT
GGAGGTGAATGAAAGGATCCTTGGTTGCTGTACCAGCCTCATGCAAGCTATTCAGGTGCTCATCGTGGCCTCTAA
GGACCTCCAGAGAGAGATTGTGGAGAGCGGCAGGGGTACAGCATCCCCTAAAGAGTTTTATGCCAAGAACTCTCG
ATGGACAGAAGGACTTATCTCAGCCTCCAAGGCTGTGGGCTGGGGAGCCACTGTCATGGTGGATGCAGCTGATCT
GGTGGTACAAGGCAGAGGGAAATTTGAGGAGCTAATGGTGTGTTCTCATGAAATTGCTGCTAGCACAGCCCAGCT
TGTGGCTGCATCCAAGGTGAAAGCTGATAAGGACAGCCCCAACCTAGCCCAGCTGCAGCAGGCCTCTCGGGGAGT
GAACCAGGCCACTGCCGGCGTTGTGGCCTCAACCATTTCCGGCAAATCACAGATCGAAGAGACAGACAACATGGA
CTTCTCAAGCATGACGCTGACACAGATCAAACGCCAAGAGATGGATTCTCAGGTTAGGGTGCTAGAGCTAGAAAA
TGAATTGCAGAAGGAGCGTCAAAAACTGGGAGAGCTTCGGAAAAAGCACTACGAGCTTGCTGGTGTTGCTGAGGG
CTGGGAAGAAGGAACAGAGGCATCTCCACCTACACTGCAAGAAGTGGTAACCGAAAAAGAA**TAG**AGCCAAACCAA
CACCCCATATGTCAGTGTAAATCCTTGTTACCTATCTCGTGTGTGTTATTTCCCCAGCCACAGGCCAAATCCTTG
GAGTCCCAGGGGCAGCCACACCACTGCCATTACCCAGTGCCGAGGACATGCATGACACTTCCCAAAGACTCCCTC
CATAGCGACACCCTTTCTGTTTGGACCCATGGTCATCTCTGTTCTTTTCCCGCCTCCCTAGTTAGCATCCAGGCT
GGCCAGTGCTGCCCATGAGCAAGCCTAGGTACGAAGAGGGGTGGTGGGGGGCAGGGCCACTCAACAGAGAGGACC
AACATCCAGTCCTGCTGACTATTTGACCCCCACAACAATGGGTATCCTTAATAGAGGAGCTGCTTGTTGTTTGTT
GACAGCTTGGAAAGGGAAGATCTTATGCCTTTTCTTTTCTGTTTTCTTCTCAGTCTTTTCAGTTTCATCATTTGC
ACAAACTTGTGAGCATCAGAGGGCTGATGGATTCCAAACCAGGACACTACCCTGAGATCTGCACAGTCAGAAGGA
CGGCAGGAGTGTCCTGGCTGTGAATGCCAAAGCCATTCTCCCCCTCTTTGGGCAGTGCCATGGATTTCCACTGCT

FIGURE 1040B

TCTTATGGTGGTTGGTTGGGTTTTTTGGTTTTGTTTTTTTTTTTTAAGTTTCACTCACATAGCCAACTCTCCCAA
AGGGCACACCCCTGGGGCTGAGTCTCCAGGGCCCCCCAACTGTGGTAGCTCCAGCGATGGTGCTGCCCAGGCCTC
TCGGTGCTCCATCTCCGCCTCCACACTGACCAAGTGCTGGCCCACCCAGTCCATGCTCCAGGGTCAGGCGGAGCT
GCTGAGTGACAGCTTTCCTCAAAAAGCAGAAGGAGAGTGAGTGCCTTTCCCTCCTAAAGCTGAATCCCGGCGGAA
AGCCTCTGTCCGCCTTTACAAGGGAGAAGACAACAGAAAGAGGGACAAGAGGGTTCACACAGCCCAGTTCCCGTG
ACGAGGCTCAAAAACTTGATCACATGCTTGAATGGAGCTGGTGAGATCAACAACACTACTTCCCTGCCGGAATGA
ACTGTCCGTGAATGGTCTCTGTCAAGCGGGCCGTCTCCCTTGGCCCAGAGACGGAGTGTGGGAGTGATTCCCAAC
TCCTTTCTGCAGACGTCTGCCTTGGCATCCTCTTGAATAGGAAGATCGTTCCACTTTCTACGCAATTGACAAACC
CGGAAGATCAGATGCAATTGCTCCCATCAGGGAAGAACCCTATACTTGGTTTGCTACCCTTAGTATTTATTACTA
ACCTCCCTTAAGCAGCAACAGCCTACAAAGAGATGCTTGGAGCAATCAGAACTTCAGGTGTGACTCTAGCAAAGC
TCATCTTTCTGCCCGGCTACATCAGCCTTCAAGAATCAGAAGAAAGCCAAGGTGCTGGACTGTTACTGACTTGGA
TCCCAAAGCAAGGAGATCATTTGGAGCTCTTGGGTCAGAGAAAATGAGAAAGGACAGAGCCAGCGGCTCCAACTC
CTTTCAGCCACATGCCCCAGGCTCTCGCTGCCCTGTGGACAGGATGAGGACAGAGGGCACATGAACAGCTTGCCA
GGGATGGGCAGCCCAACAGCACTTTTCCTCTTCTAGATGGACCCCAGCATTTAAGTGACCTTCTGATCTTGGGAA
AACAGCGTCTTCCTTCTTTATCTATAGCAACTCATTGGTGGTAGCCATCAAGCACTTCCCAGGATCTGCTCCAAC
AGAATATTGCTAGGTTTTGCTACATGACGGGTTGTGAGACTTCTGTTTGATCACTGTGAACCAACCCCCATCTCC
CTAGCCCACCCCCCTCCCCAACTCCCTCTCTGTGCATTTTCTAAGTGGGACATTCAAAAAACTCTCTCCCAGGAC
CTCGGATGACCATACTCAGACGTGTGACCTCCATACTGGGTTAAGGAAGTATCAGCACTAGAAATTGGGCAGTCT
TAATGTTGAATGCTGCTTTCTGCTTAGTATTTTTTTGATTCAAGGCTCAGAAGGAATGGTGCGTGGCTTCCCTGT
CCCAGTTGTGGCAACTAAACCAATCGGTGTGTTCTTGATGCGGGTCAACATTTCCAAAAGTGGCTAGTCCTCACT
TCTAGATCTCAGCCATTCTAACTCATATGTTCCCAATTACCAAGGGGTGGCCGGGCACAGTGGCTCACGCCTGTA
ATCCCAGCACTTTGAGAGGCTGAGGTGGTAGGATCACCTGAGGTCAGGAGTTCAAGACCAGCCTGTCCAACATGG
TGAAACCCCCATCTCTACTAAAAATACCAAAAATTAGCCGAGCGTAGTGACGGGTGCCCGTAATCCCAGCTACTC
AGGAGGCTGAGACAGGAGAATCACCTGAACCCCAGAGGCAGAGGTTGCAGTGAGCTGAGATCACGCCATTGTACT
CCAGCCTGGGCAACAAGAGCAAAACTCCGTCTCAAAAAAAAAAAAAAAATTACAAATGGGGCAAACAGTCTAGTGT
AATGGATCAAATTAAGATTCTCTGCCCAGCCGGGCACAGTGGCGCATGCCTGTAATCCCAGAACTTTGGGAGGCC
AAGACGGGATGATTGCTTGAGCTCAGGAGTTTGAGACCAGGCTGGGCATCATAGCAAGACCTCATCTCTACTAAA
ATTCAAAAACAAAATTAGCCGGGCATGATGGTGCATGCCTGTAGTCTCAGCTAGTTGGGGAGCTAAGGTGGGAGA
ATTGCTTGAGCTTGGGAAGTCGAGGCTGCAGTCAGCCCTGATTGTGCCAGTGCACTCCGGCCTGGGTGACAGAGT
GAGACCCGTGCTCAAAAAAAAAAAGATTCTGTGTCAGAGCCCAGCCCAGGAGTTTGAGGCTGCAATGAGCCATGA
TTTCCCACTGCACTCCAGCCTGAGTGACAGAGCGAGACTCCATCTCTTTAAAAACAAACAAAAAATTATCTGAAT
GATCCTGTCTCTAAAAAGAAGCCACAGAAATGTTTAAAAACTTCATCGACTTAGCCTGAGTCATAACGGTTAAGA
AAGCACTTAAACAGAAGCAGAGGCTAATTCAGTGTCACATGAGGAAGTAGCTGTCAGATGTCACATAATTACTTT
CGTAATAGCTCAGATTAGAATGGCTACCCCATTCTCTAGACAAAATCAAATTGTCCTATTGTGACTCTTCTAAAA
ATGAAGATGAAGAGCTATTTAATGACACACCTTGGATTAAAACGGGAATCACATCTTAAAGCTAAAAATGAACCT
GCAAGCCTTCTAAATGAGTCACTGAGCATCACTAGTGACAAGTCTCGGGTGAGCGTAAATGGGTCATGACAAGAT
GGGACAGCAACAAAATCATGGCTTAGGATCGACAAGAAGTTAAAAAACAGCTGCATCTGTTACTTAAGTTTGTAA
GACAGTGCCCTGAGACCTCTAGAGAAAAGATGTTTGTTTACATAAGAGAAAGAAGGCCAGACATGGTGTCTCACA
CGTTTAATCCCAGCACTTTGGGAGGCAGGGGCGGGTGGATCACCTGAGGTCAGGAGTTCAAGACTAGCCTGGCCA
ACATGGTGAAACCCCGTCTCTACTAAAAATACAAAAATTAGCCGGGCATGGTGGCAGGCGCCTATAATCCCAGCT
ACTGGGGAGGCTGAGGCAGGAGAATC

FIGURE 1041

MSRMWGHLSEGYGQLCSIYLKLLRTKMEYHTKNPRFPGNLQMSDRQLDEAGESDVNNFFQLTVEMFDYLECELNL
FQTVFNSLDMSRSVSVTAAGQCRLAPLIQVILDCSHLYDYTVKLLFKLHSCLPADTLQGHRDRFMEQFTKLKDLF
YRSSNLQYFKRLIQIPQLPENPPNFLRASALSEHISPVVVIPAEASSPDSEPVLEKDDLMDMDASQQNLFDNKFD
DIFGSSFSSDPFNFNSQNGVNKDEKDHLIERLYREISGLKAQLENMKTESQRVVLQLKGHVSELEADLAEQQHLR
QQAADDCEFLRAELDELRRQREDTEKAQRSLSEIERKAQANEQRYSKLKEKYSELVQNHADLLRKNAEVTKQVSM
ARQAQVDLEREKKELEDSLERISDQGQRKTQEQLEVLESLKQELATSQRELQVLQGSLETSAQSEANWAAEFAEL
EKERDSLVSGAAHREEELSALRKELQDTQLKLASTEESMCQLAKDQRKMLLVGSRKAAEQVIQDALNQLEEPPLI
SCAGSADHLLSTVTSISSCIEQLEKSWSQYLACPEDISGLLHSITLLAHLTSDAIAHGATTCLRAPPEPADSLTE
ACKQYGRETLAYLASLEEEGSLENADSTAMRNCLSKIKAIGEELLPRGLDIKQEELGDLVDKEMAATSAAIETAT
ARIEEMLSKSRAGDTGVKLEVNERILGCCTSLMQAIQVLIVASKDLQREIVESGRGTASPKEFYAKNSRWTEGLI
SASKAVGWGATVMVDAADLVVQGRGKFEELMVCSHEIAASTAQLVAASKVKADKDSPNLAQLQQASRGVNQATAG
VVASTISGKSQIEETDNMDFSSMTLTQIKRQEMDSQVRVLELENELQKERQKLGELRKKHYELAGVAEGWEEGTE
ASPPTLQEVVTEKE

FIGURE 1042

CGGCGGCGGCGGGCAGCGGACGGGCGGACTGACGGGCGCCTCCACCTTGCTCCCTCCCTGGCTGCCGGCTTCCTT
TTGTCTTTCTGGGCGGCGATGAGCGCAGGGCCGGCGCAGCAGCTGCGGGCGCACGGAGGCCCGCGCTGCTAGTCA
CTCCTCCCGGCCTCGGCGCGCTTGTCCCGGGCAGCGGCCCGGGCCCGCTGCAGCCGCCGCCGGCGCCGAACTTGG
GCTCGGGAAGCCGGCGGACCGCGTCCTGCGCCGGAGCAGGGGCATGGTCTAGTGGCCCAGTCAGGACGCGGAAAC
ACTCCCTGGAGGTTCTGACCCACTCCCTCTCAGCCTCCGCCTGGTCTCTGGTGTAGTCGCCGCCGCCAGCCGCCA
TGGGCAAACAGAACAGCAAGCTGCGGCCCGAGGTGCTGCAGGACCTGCGGGAGAACACGGAGTTCACCGACCACG
AGCTGCAGGAGTGGTACAAGGGCTTCCTCAAGGACTGCCCCACCGGCCACCTGACCGTGGACGAGTTCAAGAAGA
TCTACGCCAACTTCTTCCCCTACGGCGACGCTTCCAAGTTCGCCGAGCACGTCTTCCGCACCTTCGACACCAACG
GCGACGGCACCATCGACTTCCGGGAGTTCATCATTGCGCTGAGCGTGACCTCGCGGGGCAAGCTGGAGCAGAAGC
TCAAGTGGGCCTTCAGCATGTACGACCTGGACGGCAACGGCTACATCAGCCGCAGCGAGATGCTGGAGATCGTGC
AGGCCATCTACAAGATGGTGTCGTCTGTGATGAAGATGCCGGAGGATGAGTCCACCCCGGAGAAGCGCACAGACA
AGATCTTCAGGCAGATGGACACCAACAATGACGGCAAACTGTCCTTGGAAGAATTCATCAGAGGTGCCAAGAGCG
ACCCCTCCATCGTCCGCCTGCTGCAGTGCGACCCCAGCAGTGCCAGTCAGTTCTGAGCGAGCGGCCCCTGGACAG
TTGCAGAGAAACACAGGCTTGTCGTGCCGTTTAAGCTTTGCTTGCAAGAGTGGATGCCCCGCAATCGTTCCTGCT
CTCCCGGGCCCCGGGCCTGGGGCATGCGTTGCACCTGCCCGGCCCGGTGGCTGCGCCTCCCTCCTCCACCTGACC
AACGCGACATTCCTCCCCTCACGCCTGGCCCGGTCCCTTCCAGGGCAACTCCCAGGGATGTGGTGACATGCAGGG
TTCAAGTGTTCTTGGTTCCAGGCACCTCCCGGCTCACGGGGAGCTCAGAGGTCCATGCCGAGGAGACCAGGCAGG
ACCTCCCGAGGCTGCGCCCCGGCCGGCCCATGCGTTTTGTGATCCCAAGTGACTCTGTGGGAAGGGTGGGGACGA
GGCGTCGGGAGGGTATACAGGGAGCCCCTCCCGTGCATGGCTGCCCCCCCGTTCATTTTCTCCACCACAGCCGCT
TGCACGTATAGATACTGTGGTCCCCTTTCTTTTAATATATAAATTATGTATGGTGAAGTGGAGTGTATTGTGTAG
GTCCCGTATTTAATGCCTCTGACTGCCTTTGAAGCGCAGCCCTCTGTGGCCCGCAGCCCCCTGAGCCTGGCTGTT
GTGTGGTATTTATGCTCTCTTTGTCTGCCTGTTTCTAAGGAAATGCATGTGTGCCCTGAGCCGTGATGATCCTCC
CATCCGTGTTGTGAGCACAGGCATTTGTGTCTGGTCTGTCCTCCCTGTTGATTGGTCTGGCATTTCCGGTATTAA
AATGATAAAATAAATGGCATTTTCTGAAAAAAAAAAAAAAAAAA

FIGURE 1043

MGKQNSKLRPEVLQDLRENTEFTDHELQEWYKGFLKDCPTGHLTVDEFKKIYANFFPYGDASKFAEHVFRTFDTN
GDGTIDFREFIIALSVTSRGKLEQKLKWAFSMYDLDGNGYISRSEMLEIVQAIYKMVSSVMKMPEDESTPEKRTD
KIFRQMDTNNDGKLSLEEFIRGAKSDPSIVRLLQCDPSSASQF

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FIGURE 1044

CGCGGCTCAGTAATTGAAGGCCTGAAACGCCCATGTGCCACTGACTAGGAGGCTTCCCTGCTGCGGCACTTCATG
ACCCAGCGGCGCGCGGCCCAGTGAAGCCACCGTGGTGTCCAGC**ATG**GCCGCGCTGCTCCTGGGCGCGGTGCTGCT
GGTGGCCCAGCCCCAGCTAGTGCCTTCCCGCCCCGCCGAGCTAGGCCAGCAGGAGCTTCTGCGGAAAGCGGGGAC
CCTCCAGGATGACGTCCGCGATGGCGTGGCCCCAAACGGCTCTGCCCAGCAGTTGCCGCAGACCATCATCATCGG
CGTGCGCAAGGGCGGCACGCGCGCACTGCTGGAGATGCTCAGCCTGCACCCCGACGTGGCGGCCGCGGAGAACGA
GGTCCACTTCTTCGACTGGGAGGAGCATTACAGCCACGGCTTGGGCTGGTACCTCAGCCAGATGCCCTTCTCCTG
GCCACACCAGCTCACAGTGGAGAAGACCCCCGCGTATTTCACGTCGCCCAAAGTGCCTGAGCGAGTCTACAGCAT
GAACCCGTCCATCCGGCTGCTGCTCATCCTGCGAGACCCGTCGGAGCGCGTGCTATCTGACTACACCCAAGTGTT
CTACAACCACATGCAGAAGCACAAGCCCTACCCGTCCATCGAGGAGTTCCTGGTGCGCGATGGCAGGCTCAATGT
GGACTACAAGGCCCTCAACCGCAGCCTCTACCACGTGCACATGCAGAACTGGCTGCGCTTTTTCCCGCTGCGCCA
CATCCACATTGTGGACGGCGACCGCCTCATCAGGGACCCCTTCCCTGAGATCCAAAAGGTCGAGAGGTTCCTAAA
GCTGTCGCCGCAGATCAATGCTTCGAACTTCTACTTTAACAAAACCAAGGGCTTTTACTGCCTGCGGGACAGCGG
CCGGGACCGCTGCTTACATGAGTCCAAAGGCCGGGCGCACCCCCAAGTCGATCCCAAACTACTCAATAAACTGCA
CGAATATTTTCATGAGCCAAATAAGAAGTTCTTCGAGCTTGTTGGCAGAACATTTGACTGGCAC**TGA**TTTGCAAT
AAGCTAAGCTCAGAAACTTTCCTACTGTAAGTTCTGGTGTACATCTGAGGGGAAAAAGAATTTTAAAAAAGCATT
TAAGGTATAATTTATTTGTAAAATCCATAAAGTACTTCTGTACAGTATTAGATTCACAATTGCCATATATACTAG
TTATATTTTTCTACTTGTTAAATGGAGGGCATTTTGTATTGTTTTTCATGGTTGTTAACATTGTGTAATATGTCT
CTATATGAAGGAACTAAACTATTTCACTGA

FIGURE 1045

MAALLLGAVLLVAQPQLVPSRPAELGQQELLRKAGTLQDDVRDGVAPNGSAQQLPQTIIIGVRKGGTRALLEMLS
LHPDVAAAENEVHFFDWEEHYSHGLGWYLSQMPFSWPHQLTVEKTPAYFTSPKVPERVYSMNPSIRLLLILRDPS
ERVLSDYTQVFYNHMQKHKPYPSIEEFLVRDGRLNVDYKALNRSLYHVHMQNWLRFFPLRHIHIVDGDRLIRDPF
PEIQKVERFLKLSPQINASNFYFNKTKGFYCLRDSGRDRCLHESKGRAHPQVDPKLLNKLHEYFHEPNKKFFELV
GRTFDWH

FIGURE 1046

CTAGATGACTGCCAGAAGCTCATAGAACACGGAGTCAACACTGCAGAGGACTTAGTCCGAGAAGGTGAAATCGCC
ATGCTTGGTGGTGTGGGAGAAGAGAATGGGAAACTGTGGAGCTTTACCAAAAAGGCCTCGCACATTCAGTTGGAC
AGCTTACCAGAAGTACCTTTACTGGTTGATGTGCCTTGTTTATCTGCTCAGTTGGATGACTCAATTCTTAACATA
GTGAAAGACCACATTTTTAAGCATGGAACAGTAGCATCTCGCCCACCAGTACAGATAGAAGAACTAATAGAGAAA
CCTGGAGGCATCATTGTACGATGGTGTAAGGTGGATGATGACTTTACAGCCCAAGATTACAGGCTCCAGTTTCGT
AAATGTACTTCAAATCATTTTGAGGATGTATATGTAGGTTCTGAAACTGAATTCATAGTATTGCACATAGACCCC
AACGTTGATTACCAGTTCAGAGTCTGCGCCCGAGGAG**ATG**GAGCTGGAGCCTGAGCTGCTGTTGCAGGAGGCCCG
CGAGAACGTGGAGGCAGCGCAGAGCTACCGGCGGGAGCTGGGTCACCGGCTTGAGGGGCTGCGTGAGGCGCGGAG
GCAGATCAAAGAAAGTGCATCACAGACAAGGGATGTTCTCAAACAGCATTTTAATGATTTAAAGGGAACCGTTGG
AAAGCTCCTGGATGAGCGATTGGTGACCCTTTTGCAAGAGGTGGACACCATTGAACAGGAGACCATTAAACCACT
AGATGACTGCCAGAAGCTCATAGAACACGGAGTCAACACTGCAGAGGACTTAGTCCGAGAAGGTGAAATCGCCAT
GCTTGGTGGTGTGGGAGAAGAGAATGAGAAACTGTGGAGCTTTACCAAAAAGGCCTCGCACATTCAGTTGGACAG
CTTACCAGAAGTACCTTTACTGGTTGATGTGCCTTGTTTATCTGCTCAGTTGGATGACTCAATTCTTAACATAGT
GAAAGACCACATTTTTAAGCATGGAACAGTAGCATCTCGCCCACCAGTACAGATAGAAGAACTAATAGAGAAACC
TGGAGGCATCATTGTACGATGGTGTAAGGTGGATGATGACTTTACAGCCCAAGATTACAGGCTCCAGTTTCGTAA
ATGTACTTCAAATCATTTTGAGGATGTATATGTAGGTTCTGAAACTGAATTCATAGTATTGCACATAGACCCCAA
CGTTGATTACCAGTTCAGAGTCTGCGCCCGAGGAGATGGCCGACAGGAGTGGAGTCCTTGGAGTGTCCCCCAGAT
AGGTCATTCCACATTGGTGCCTCATGAGTGGACAGCTGGTTTTGAGGGGTACAGTCTGAGCAGTCGAAGAAATAT
AGCACTTCGGAACGATTCTGAATCATCGGGTGTTCTCTACTCCAGAGCTCCGACTTATTTCTGTGGGCAGACATT
AACATTCAGAGTTGAAACTGTGGGACAGCCAGACAGAAGAGATAGCATAGGAGTGTGCGCAGAAAAACAGGATGG
ATATGACTCTCTGCAGCGGGATCAAGCTGTGTGCATTAGTACAAATGGTGCAGTTTTTGTCAATGGAAAAGAAAT
GACAAATCAGTTACCCGCAGTTACTTCTGGGTCCACTGTCACGTTTGACATTGAAGCCGTGACTCTAGGAACCAC
CAGTAATAATGAAGGTGGACACTTCAAGCTTCGAGTAACTATAAGTTCAAATAATAGAGAAGTGGTTTTTGACTG
GTTACTTGATCAGTCTTGTGGTTCTCTTTACTTTGGATGCTCATTTTTCTATCCTGGATGGAAAGTGTTAGTGTT
T**TAG**ATGTTTGGGTGCTTGGCTTTGGTTTTCAGGGTCTAACGTAGCTGTCCTCAGCCCAGCGTAGTTGTAATTGC
TTTAAAAAAAAAAGTTGAATTCATCTCTAACTTAGGCCATTGGAAAGTGTTTACTGGATTCATTTTGTAATATTTT
AGCAAAAAGAGACTTCAATGTTGTGGACAAAATCATACAATTCAGTCAATTTTATTTTTAGCATACTGTTAAATA
TCACATCACAATAAAAATCAAATTGGCATTAAAAGTATAGAAGATATAGGAAGTTCTATACCCTTCCACTGTACT
TCTCAAAGTTGGTTATTAGACCAGGAAAACTTAATGTAATATTATTTTTAAAATCATCTTAAAGGATCCAAGTCC
ATGTAACTCTTTAGAACAAGAGGAATAGGTCAGATAGAAGAAGCTGTGTAATGTATTAATACATCCGTTCATGTG
CTGTCCACATGAATGTGTTGACTGTGCTCTCCATGTTCAGGTATTTGTAAGCAGTGTTGACTTTTATCCCCTCTT
CAGTAATCTTTAAGTCCCCAAAACATTATAATTTTTTCTTTTTTTGTTGAGACGGAGTCTCACTCTTGTCACTCA
GGCTGGAGTGCAGTGGTGTGATCTCAGTTCACTGCAACCTCTGCCTCCCACGTTCAAGCGATCCTCCTGCCTCAG
CCTCCTGAGTAGCTGGGATTACAGGTGTCGGCCACCACACCTGGCTAATTTTTGTATTTTTAGTAGAGACAGGGT
TTCACCATGTTGGCCAGGCTGGTCTTTAACTCCTGACCTCAGGTGTTCCACCCACCTCAGCCTTCCAAAGTGCTA
GGATTACAGGCGTGAGCCACTGCAGTGGGCCAATTTTTGTATTTTTTTAAATGCTTGACCAAGTGTCTAAAATAG
GCAAGTAGTACCTTTTGTTCTTTCATTGCAATTTGATACAGTATAGGCTACAGTATTTTTACAGGGTAAAACTAG
TTATGGCAGTAGTATGCACAGCAGTGTTAGCCATTTCGTATGTATGTAATATGCACGTGTGTATCCAATCTGCCT
GTGACATGCATTTTACTCTTTGCAGAGAATGAGCTGCAGTCCAGTTTAATGTCAGTTTAATAAGTGGTCTCTTTT
TAGCAGAGCAAAAAAATATAGCGTAAATACTTATTTTTTTTAAAAACTTACTTAAATTTGTGTGTAAAATATTTA
TTTGAAGGACTTTAATATGTAAAAATAATTGTCTTCTATGCCACCCTACAGATTCTATTTTAATGTGAATTATTT
TTTTCATTTTTACCAGTAGTAAAAAAGTAGAAAAGCAAGTATGATATTTTTGTAAGATAATTTATTTGGGGATTC
ATGTTCCCCTGTTAGACAATCATGACCTTTTCTACTTGTCTTTTTATATATAAGTAGTAGATTTCCACTTGTTTA
GGGATTAAGAAGATGTTCTAGAATGTAGATACCTTGTCCAGCCATAGGAATCAAAATAAAAAACTAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAA

FIGURE 1047

MELEPELLLQEARENVEAAQSYRRELGHRLEGLREARRQIKESASQTRDVLKQHFNDLKGTVGKLLDERLVTLLQ
EVDTIEQETIKPLDDCQKLIEHGVNTAEDLVREGEIAMLGGVGEENEKLWSFTKKASHIQLDSLPEVPLLVDVPC
LSAQLDDSILNIVKDHIFKHGTVASRPPVQIEELIEKPGGIIVRWCKVDDDFTAQDYRLQFRKCTSNHFEDVYVG
SETEFIVLHIDPNVDYQFRVCARGDGRQEWSPWSVPQIGHSTLVPHEWTAGFEGYSLSSRRNIALRNDSESSGVL
YSRAPTYFCGQTLTFRVETVGQPDRRDSIGVCAEKQDGYDSLQRDQAVCISTNGAVFVNGKEMTNQLPAVTSGST
VTFDIEAVTLGTTSNNEGGHFKLRVTISSNNREVVFDWLLDQSCGSLYFGCSFFYPGWKVLVF

FIGURE 1048

GTCCCCGCAGCGCCGTCGCGCCCTCCTGCCGCAGGCCACCGAGGCCGCCGCCGTCTAGCGCCCCGACCTCGCCAC
C**ATG**AGAGCCCTGCTGGCGCGCCTGCTTCTCTGCGTCCTGGTCGTGAGCGACTCCAAAGGCAGCAATGAACTTCA
TCAAGTTCCATCGAACTGTGACTGTCTAAATGGAGGAACATGTGTGTCCAACAAGTACTTCTCCAACATTCACTG
GTGCAACTGCCCAAAGAAATTCGGAGGGCAGCACTGTGAAATAGATAAGTCAAAAACCTGCTATGAGGGGAATGG
TCACTTTTACCGAGGAAAGGCCAGCACTGACACCATGGGCCGGCCCTGCCTGCCCTGGAACTCTGCCACTGTCCT
TCAGCAAACGTACCATGCCCACAGATCTGATGCTCTTCAGCTGGGCCTGGGGAAACATAATTACTGCAGGAACCC
AGACAACCGGAGGCGACCCTGGTGCTATGTGCAGGTGGGCCTAAAGCCGCTTGTCCAAGAGTGCATGGTGCATGA
CTGCGCAGATGGAAAAAAGCCCTCCTCTCCTCCAGAAGAATTAAAATTTCAGTGTGGCCAAAAGACTCTGAGGCC
CCGCTTTAAGATTATTGGGGGAGAATTCACCACCATCGAGAACCAGCCCTGGTTTGCGGCCATCTACAGGAGGCA
CCGGGGGGGCTCTGTCACCTACGTGTGTGGAGGCAGCCTCATCAGCCCTTGCTGGGTGATCAGCGCCACACACTG
CTTCATTGATTACCCAAAGAAGGAGGACTACATCGTCTACCTGGGTCGCTCAAGGCTTAACTCCAACACGCAAGG
GGAGATGAAGTTTGAGGTGGAAAACCTCATCCTACACAAGGACTACAGCGCTGACACGCTTGCTCACCACAACGA
CATTGCCTTGCTGAAGATCCGTTCCAAGGAGGGCAGGTGTGCGCAGCCATCCCGGACTATACAGACCATCTGCCT
GCCCTCGATGTATAACGATCCCCAGTTTGGCACAAGCTGTGAGATCACTGGCTTTGGAAAAGAGAATTCTACCGA
CTATCTCTATCCGGAGCAGCTGAAAATGACTGTTGTGAAGCTGATTTCCCACCGGGAGTGTCAGCAGCCCCACTA
CTACGGCTCTGAAGTCACCACCAAAATGCTATGTGCTGCTGACCCCCAATGGAAAACAGATTCCTGCCAGGGAGA
CTCAGGGGGACCCCTCGTCTGTTCCCTCCAAGGCCGCATGACTTTGACTGGAATTGTGAGCTGGGGCCGTGGATG
TGCCCTGAAGGACAAGCCAGGCGTCTACACGAGAGTCTCACACTTCTTACCCTGGATCCGCAGTCACACCAAGGA
AGAGAATGGCCTGGCCCTC**TGA**GGGTCCCCAGGGAGGAAACGGGCACCACCCGCTTTCTTGCTGGTTGTCATTTT
TGCAGTAGAGTCATCTCCATCAGCTGTAAGAAGAGACTGGGAAGATAGGCTCTGCACAGATGGATTTGCCTGTGG
CACCACCAGGGTGAACGACAATAGCTTTACCCTCACGGATAGGCCTGGGTGCTGGCTGCCCAGACCCTCTGGCCA
GGATGGAGGGGTGGTCCTGACTCAACATGTTACTGACCAGCAACTTGTCTTTTTCTGGACTGAAGCCTGCAGGAG
TTAAAAAGGGCAGGGCATCTCCTGTGCATGGGCTCGAAGGGAGAGCCAGCTCCCCCGACCGGTGGGCATTTGTGA
GGCCCATGGTTGAGAAATGAATAATTTCCCAATTAGGAAGTGTAAGCAGCTGAGGTCTCTTGAGGGAGCTTAGCC
AATGTGGGAGCAGCGGTTTGGGGAGCAGAGACACTAACGACTTCAGGGCAGGGCTCTGATATTCCATGAATGTAT
CAGGAAATATATATGTGTGTGTATGTTTGCACACTTGTTGTGTGGGCTGTGAGTGTAAGTGTGAGTAAGAGCTGG
TGTCTGATTGTTAAGTCTAAATATTTCCTTAAACTGTGTGGACTGTGATGCCACACAGAGTGGTCTTTCTGGAGA
GGTTATAGGTCACTCCTGGGGCCTCTTGGGTCCCCCACGTGACAGTGCCTGGGAATGTACTTATTCTGCAGCATG
ACCTGTGACCAGCACTGTCTCAGTTTCACTTTCACATAGATGTCCCTTTCTTGGCCAGTTATCCCTTCCTTTTAG
CCTAGTTCATCCAATCCTCACTGGGTGGGGTGAGGACCACTCCTTACACTGAATATTTATATTTCACTATTTTTA
TTTATATTTTTGTAATTTTAAATAAAAGTGATCAATAAAATGTGATTTTTCTGA

FIGURE 1049

MRALLARLLLCVLVVSDSKGSNELHQVPSNCDCLNGGTCVSNKYFSNIHWCNCPKKFGGQHCEIDKSKTCYEGNG
HFYRGKASTDTMGRPCLPWNSATVLQQTYHAHRSDALQLGLGKHNYCRNPDNRRRPWCYVQVGLKPLVQECMVHD
CADGKKPSSPPEELKFQCGQKTLRPRFKIIGGEFTTIENQPWFAAIYRRHRGGSVTYVCGGSLISPCWVISATHC
FIDYPKKEDYIVYLGRSRLNSNTQGEMKFEVENLILHKDYSADTLAHHNDIALLKIRSKEGRCAQPSRTIQTICL
PSMYNDPQFGTSCEITGFGKENSTDYLYPEQLKMTVVKLISHRECQQPHYYGSEVTTKMLCAADPQWKTDSCQGD
SGGPLVCSLQGRMTLTGIVSWGRGCALKDKPGVYTRVSHFLPWIRSHTKEENGLAL

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FIGURE 1050

CGGCTGAGAGGCAGCGAACTCATCTTTGCCAGTACAGGAGCTTGTGCCGTGGCCCACAGCCCACAGCCCACAGCC
ATGGGCTGGGACCTGACGGTGAAGATGCTGGCGGGCAACGAATTCCAGGTGTCCCTGAGCAGCTCCATGTCGGTG
TCAGAGCTGAAGGCGCAGATCACCCAGAAGATTGGCGTGCACGCCTTCCAGCAGCGTCTGGCTGTCCACCCGAGC
GGTGTGGCGCTGCAGGACAGGGTCCCCCTTGCCAGCCAGGGCCTGGGCCCTGGCAGCACGGTCCTGCTGGTGGTG
GACAAATGCGACGAACCTCTGAGCATCCTGGTGAGGAATAACAAGGGCCGCAGCAGCACCTACGAGGTCCGGCTG
ACGCAGACCGTGGCCCACCTGAAGCAGCAAGTGAGCGGGCTGGAGGGTGTGCAGGACGACCTGTTCTGGCTGACC
TTCGAGGGGAAGCCCCTGGAGGACCAGCTCCCGCTGGGGGAGTACGGCCTCAAGCCCCTGAGCACCGTGTTCATG
AATCTGCGCCTGCGGGGAGGCGGCACAGAGCCTGGCGGGCGGAGC**TAA**GGGCCTCCACCAGCATCCGAGCAGGAT
CAAGGGCCGGAAATAAAGGCTGTTGTAAGAGAAT

FIGURE 1051

MGWDLTVKMLAGNEFQVSLSSSMSVSELKAQITQKIGVHAFQQRLAVHPSGVALQDRVPLASQGLGPGSTVLLVV
DKCDEPLSILVRNNKGRSSTYEVRLTQTVAHLKQQVSGLEGVQDDLFWLTFEGKPLEDQLPLGEYGLKPLSTVFM
NLRLRGGGTEPGGRS

FIGURE 1052

TTTAAGGCGCCGGGTTTCCGGGGCTCCTGGCCCCGCTTATTCCGCGGGGGTCGGCGGGGTCGGCCTGGGCGCCCG
CGCCGCCGCTGCGCTTTGTCCGCTGGGCACACTGCTTCTGGGAGGGGCGGGCAGACATGGTGGCGGCCGCCGCCC
CCTCCTCGGCCCTAGC**ATG**CCGCGGCCGCCTCGCGGCTACCCGGCTTGCCGGTCCCGAGCGGCAGCCCCGGGGTG
GCGATGGGGTCGCGCCGAGGCAGCGGAGGTTCTGCGGGCGACTGGAGGTTGGCAGTGGGCGGGAGAAAGAGGAAG
GCAGGCGCGGCTGGGCCTCGGCCTCTGGCGCCGCGGTACCCTTTGTCTCGGCAGCCTGACGGCCCCGCCGGGCTC
TCCGGAGAGGGGAACGGGCGGCGAGGGTGGCGGGTCCTGGGCGCCCTGTGCTGCGGGGCCGAGAGGCGCTCGGGT
CGCGGCGGGACCGGCCGGACCAGACAGGGTTAATGGAAGAGCCTGGCCAGTCCCGCGCGGGGCCCCCGCAGCGAC
AGCCTTGGCCGCGGGGACTGGAGTCCTGAGGGGGAGAAGCCTGCCGTTC**TGA**AGGCTCGGGACTTCTGCCCCAAA
GACTTCGCCGCCGAGAACTGCGGGTGCACTGCCTCAGGGAAGAAGTTGAGAATTTTGCCAGGTCATCTCTGCCAG
GGCACAGTTCATCACTGTGTGTTTAGTGTGTTTCGGTGAAGCTCTCCAAGTGTGTTGAATCAGCGTGCCTAGCCT
CAAGGGTGCATCGTGAAAACTGAAACCAAAGGAATGATACAGGCCTGCTTTGTGTGTGTCTTCCCACTTTAAGCT
TGTTTTCAGTACAAATACTCTTGCTTTAAACCTGATTGGACTGTGGCGAGCGGACATCTGTTCAAAGGAGGGGCC
GAGACCACAGTACTTCTGAAGGGGGCTTGATAATGTGGAAACATTTTAAGTTTTCTCTCCGGACTGTTTTGCTCT
CTCAATTCAGGCAAGTTACTGAAGTACGTTTTTTATCTAGAAAAAGGTTTGATGTAGTCTGTAAATGGTCCTTGT
AAAGTACATTGCCATCTCAGAATTAAAAGATCCACTCTCATTTATTATGCAGAAGTTAGTGGTCATTCTTTCCTG
TAGATAGTTTATCTCATGTAAAGACCCACCCAGCTTGGTTTAAATTTTTTTCTCACTGACGTATAACCATCAGCT
TTGATACTTCCATTTTCAGGCTCAGACTTTGAATTTAAGGAAACTAAAGATGACTTTATTTTCTTTTCTCTTGGT
TTTTTTTTCCAAAAACAAAAAATAAATCCATTACATGTTAACATAGATGATAAGAGTGACATCTTGCATTTTTGC
AAATCTTTTTAATGCCTGGTTTAATAGAAGATTCTCAGATCTACGTCAGACTGTTGTGGTTAGCACACCATGTAA
CCTCTGGAACACTCCACTGTACACTCATACTTTTTT

FIGURE 1053

MPRPPRGYPACRSRAAAPGWRWGRAEAAEVLRATGGWQWAGERGRQARLGLGLWRRGTLCLGSLTAPPGSPERGT
GGEGGGSWAPCAAGPRGARVAAGPAGPDRVNGRAWPVPRGAPAATALAAGTGVLRGRSLPF

FIGURE 1054

CGACGCGGGAGCCGCACGCGCCGGACGAGGCTCGCTGCGCTCCCTGTTGCCCAGCGCGGGCCCGTTGAGGCGGAG
CCCTCAGTTCCCGGCCAGGACACGGTCTGGGCCGCCGAATCTCCGGCCGAAGAGCGGCGGCGGCAGCGGCGGGAA
AAAA**ATG**AAGAATGAAATTGCTGCCGTTGTCTTCTTTTTCACAAGGCTAGTTCGAAAACATGATAAGTTGAAAAA
AGAGGCAGTTGAGAGGTTTGCTGAGAAATTGACCCTAATACTTCAAGAAAAATATAAAAATCACTGGTATCCAGA
AAAACCATCGAAAGGACAGGCCTACAGATGTATTCGTGTCAATAAATTTCAGAGAGTTGATCCTGATGTCCTGAA
AGCCTGTGAAAACAGCTGCATCTTGTATAGTGACCTGGGCTTGCCAAAGGAGCTCACTCTCTGGGTGGACCCATG
TGAGGTGTGCTGTCGTAGAGATGGGGTTTCACCATGTTGGCCAGACTGCTCTCAAACTCCTGACCTCGTGATCCG
CCCGCCTTGGCCTCCCAAAGCGCTGGATTACAGGCGTGAGCCACTGCGCCCGGCCTCCTCCTTTTTGATTATGTA
TGGAGAGAAAAACAATGCATTCATTGTTGCCAGCTTTGAAAATAAAGATGAGAACAAGGATGAGATCTCCAGGAA
AGTTACCAGGGCCCTTGATAAGGTTACCTCTGATTATCATTCAGGATCCTCTTCTTCAGATGAAGAAACAAGTAA
GGAAATGGAAGTGAAACCCAGTTCGGTGACTGCAGCCGCAAGTCCTGTGTACCAGATTTCAGAACTTATATTTCC
ACCTCTTCCAATGTGGCACCCTTTGCCCAGAAAAAAGCCAGGAATGTATCGAGGGAATGGCCATCAGAATCACTA
TCCTCCTCCTGTTCCATTTGGTTATCCAAATCAGGGAAGAAAAAATAAACCATATCGCCCAATTCCAGTGACATG
GGTACCTCCTCCTGGAATGCATTGTGACCGGAATCACTGGATTAATCCTCACATGTTAGCACCTCAC**TAA**CTTCG
TTTTTGATTGTGTTGGTGTCATGTTGAGAAAAAGGTAGAATAAACCTTACTACACATTAAAAGTTAAAAGTTCTT
ACTAATAGTAGTGAAGTTAGATGGGCCAAACCATCAAACTTATTTTTATAGAAGTTATTGAGAATAATCTTTCTT
AAAAAATATATGCACTTTAGATATTGATATAGTTTGAGAAATTTTATTAAAGTTAGTCAAGTGCCTAAGTTTTTA
ATATTGGACTTGAGTATTTATATATTGTGCATCAACTCTGTTGGATACGAGAACCCTGTAGAAGTGGACGATTTG
TTTTAGCCCCTTTGAGAATTTACTTTATGGAGCGTATGTAAGTTATTTATATACAAGGAAATCTATTTTATGTCG
TTGTTTAAGAGAATTGTGTGAAATCATGTAGTTGCAAATAAAAAATAGTTTGAGGCAAAAAAAAAAAAAAAAAA
AAAAAAAAAAA

FIGURE 1055

MKNEIAAVVFFFTRLVRKHDKLKKEAVERFAEKLTLILQEKYKNHWYPEKPSKGQAYRCIRVNKFQRVDPDVLKA
CENSCILYSDLGLPKELTLWVDPCEVCCRRDGVSPCWPDCSQTPDLVIRPPWPPKALDYRREPLRPASSFLIMYG
EKNNAFIVASFENKDENKDEISRKVTRALDKVTSDYHSGSSSSDEETSKEMEVKPSSVTAAASPVYQISELIFPP
LPMWHPLPRKKPGMYRGNGHQNHYPPPVPFGYPNQGRKNKPYRPIPVTWVPPPGMHCDRNHWINPHMLAPH

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FIGURE 1056

AGGTAATGATTAATCTGTCAGGCACAAAAGGGATTGTTTTGGGGATTTCGGGTTCTAAGTCGCAGATTCAAACAA
ATAGCAGCGAACAGGGAATGACAGTTCCACCAGAAGACGATTAAGCCACAGCCTCTAATTGGAACGGCATTTGTA
CAGTCAGAGACTCTTACCAGACATCTCCAGGAATCTGTGAGCCATTGTCAAAACGTCCATTTTCATCTGGCTGTG
AAAGTGAGGACCACAACAGGTAGGTATTGGTAGAAACAGGAGTCCTCAGAGAAGCCCCAAG**ATG**CAGCCTGAGGG
AGCAGAAAAGGGAAAAAGCTTCAAGCAGAGACTGGTCTTGAAGAGCAGCTTAGCGAAAGAAACCCTCTCTGAGTT
CTTGGGCACGTTCATCTTGATTGTCCTTGGATGTGGCTGTGTTGCCCAAGCTATTCTCAGTCGAGGACGTTTTGG
AGGGGTCATCACTATCAATGTTGGATTTTCAATGGCAGTTGCAATGGCCATTTATGTGGCTGGCGGTGTCTCTGG
TGGTCACATCAACCCAGCTGTGTCTTTAGCAATGTGTCTCTTTGGACGGATGAAATGGTTCAAATTGCCATTTTA
TGTGGGAGCCCAGTTCTTGGGAGCCTTTGTGGGGGCTGCAACCGTCTTTGGCATTTACTATGATGGACTTATGTC
CTTTGCTGGTGGAAAACTGCTGATCGTGGGAGAAAATGCAACAGCACACATTTTTGCAACATACCCAGCTCCGTA
TCTATCTCTGGCGAACGCATTTGCAGATCAAGTGGTGGCCACCATGATACTCCTCATAATCGTCTTTGCCATTTT
TGACTCCAGAAACTTGGGAGCCCCCAGAGGCCTAGAGCCCATTGCCATCGGCCTCCTGATTATTGTCATTGCTTC
CTCCCTGGGACTGAACAGTGGCTGTGCCATGAACCCAGCTCGAGACCTGAGTCCCAGACTTTTCACTGCCTTGGC
AGGCTGGGGGTTTGAAGTCTTCAGAGCTGGAAACAACTTCTGGTGGATTCCTGTAGTGGGCCCTTTGGTTGGTGC
TGTCATTGGAGGCCTCATCTATGTTCTTGTCATTGAAATCCACCATCCAGAGCCTGACTCAGTCTTTAAGGCAGA
ACAATCTGAGGACAAACCAGAGAAATATGAACTCAGTGTCATCATG**TAG**TGGCATGCTCAGCTCTGGATTTGCAG
TCAGTTTGGGATTCTCTTCAGAAAGATGGCATCTAAGTGTCTGTGTTCTTGTAAGCCTGAGGTGGAATCCACCCA
GTTTTGTCTGCTAGCCATATGGGACATCTAATTGGAAAAGCATCTGCATAAAAGTTTGGAAACAATGACCACTTC
TCTACCATTGTCCCCCACCCCACCCCCCAGAATAACGCTGACTGTCCCCTGAAACAGCCTTCTCTCCTGCCCTGT
TTATTTCATCCTCGATGGGAATTCTTGCTAGGTAAGCACTAATAACTCGGCATCTTGACGATAGTCCCATTTGGG
TGGTTTCAGCTGCACTATCTGTATGAAATGGTGTCACCAAAACCCTTTTCTTCAGTATCGACAAAGATTACATTC
TGAGTACCAACCAAACCCTAAATTGAAAGACAAAACTATGGTTTCAGTCAACATATTCATGAATTAGGGAGCTAA
TGGGTTAAGCTTCCAGTTCCCGCTATGCTACTGGATTTGTATAAATACTGATATTCTCCAAACCTAGTGGTGTAG
GGAGCAAGAGAATGCAGCTGGAAGGCACAAGGGGAGGACATTGTGGCATTCAGAAACTGCAGGAGACAAGATGAA
TTTGAGAAGCCAAATGGAATTTTTAATGGAAACCATTTATCAGATTAATCTCTTGCTCTCCTGCATTTTAGAGGA
CACCAATTAATTTCCTGGTCTTTAGTATATAATAACCTAAAATACCATTGTAACCTCAGTCATGAAAAATACATC
ACTCTGTCTTTTTAGCTCAAATGTATTTTCCTAATTGCCCACTTGAGAACAGACATTTGACAAGTTATATCAACG
ACTGTGCTTGTCCATTATTTTACACATGCCCTAGAAGCCAAAACTGAAAGCCACTGGATCCTGGTCTAGCTGAAT
CTTCAGAGTGGGAGGTCTCCAAAAAGATATTACCTTATTGGGCTTAACAATTCACAAGGCACTTTCACACCCATT
ATCTAATTTAATCCTCATAATGACTATGTGAGGCAAATGCCACATTGCCCATTTTTCAGATAAAGAAACAAAATC
TTAGGGAAGATAAGTTGAGTTGTCCAAGAGCACACTGAAAGTTGAATGTTATCTAATGCATTCCTCTACCTTTCA
GAAGATCAGTAGCTGGCTGAGAATCTTTGCCAAATCTTCCTTGCTAGCCAGAAGTGGAATTGGCAGCTTCTAGAA
TATGTACACCTCTGGACAAAATGTTCCTCAATCTTAAGATACAAAGACCCTCATTGTCTGGGTCTATTCCCACAC
TTACTGAGTACAGATGAAGGAAAGTGGTAGCAATTTAATCATAACTTTCATTTGCTGAAAAACATTATGAGAAGG
CCTCCCTTCCTAAGCCACCTCTGGTCTTGCTAAGTCTTGATCTTGCTTCCTGCCAGCACCAAACATTACATTCAG
GGGATTTCCTCTGGCTCAGTCTTTTCCCCTTGAAGTTCTCTAATAGATGTTACTTTTGACAAAAGATCGCCTATG
AGTTACAAGCACCAGGGGATGCTCTACATCAAGGGATGCACCTTCAGTCAAACTGTCAAAAAGCCCAGAATTCCC
AAAGGCATTAGGTTTCCCAACTGCTTTGTGCTGATATCAGAACAGCAGAAATTAAATGTGAAATGTTTCTGATGA
CTTATGTTCTACAATCTATGGACATACGGGATTTTTTTTTCTTGCTTTGAAGCTACCTGGATATTTCCTATTTGA
AATAAAATTGTTCGGTCATTGTT

FIGURE 1057

MQPEGAEKGKSFKQRLVLKSSLAKETLSEFLGTFILIVLGCGCVAQAILSRGRFGGVITINVGFSMAVAMAIYVA
GGVSGGHINPAVSLAMCLFGRMKWFKLPFYVGAQFLGAFVGAATVFGIYYDGLMSFAGGKLLIVGENATAHIFAT
YPAPYLSLANAFADQVVATMILLIIVFAIFDSRNLGAPRGLEPIAIGLLIIVIASSLGLNSGCAMNPARDLSPRL
FTALAGWGFEVFRAGNNFWWIPVVGPLVGAVIGGLIYVLVIEIHHPEPDSVFKAEQSEDKPEKYELSVIM

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FIGURE 1058A

GCGGGGAGCCGGCGGTTATCTGGGCGGCGGAGCGCTCACAATGTGGCAGGAGACAGAAAAGATAAGATGCTCCCA
AGTCCCTTGCAGCTCTCTTCAGAAGAAAAATCACTAGTGCTCTGCTCTTGCCATAATACCAAACCTTTTTGACTC
ATGCTTTGGTGCTGCAACACTGGAAGAATTGCACACAGTTTCCAGGAATATCTTTTTTTCATTTGAGTGATTCTT
TGTGGATGAGAAAAGATTTGAGTCTTAATAATTACCTTGTTTTAAAGCTATTTCTTTATAGTCTGAACTGTTTAA
TAAATTGGGCCACTTACCA**ATG**AGCCACACAGCCAGTTCTTGTCAGGAGCTGGTTGAAAACTGTGCTGTGCATGT
AGCAGGAATGGCACAAGAAGATAGCCGTCGTGGTCAAGTGCCATCTTCCTTTTATCATGGTGCCAACCAAGAACT
TGACCTGTCCACCAAAGTGTACAAAAGGGAATCAGGAAGTCCTTATTCTGTGTTAGTGGACACCAAGATGAGCAA
ACCGCATCTCCATGAAACAGAAGAACAGCCATATTTCAGGGAGACAAGAGCAGTGTCTGACGTGCATGCTGTTAA
GGAAGACCGGGAGAATTCTGATGACACAGAGGAGGAAGAGGAAGAAGTCTCTTACAAAAGGGAGCAGATCATAGT
GGAGGTAAACCTTAATAATCAAACATTAAATGTATCTAAAGGGGAAAAGGGTGTCTCTTCTCAGTCCAAAGAGAC
TCCTGTTCTTAAGACAAGCAGTGAGGAGGAAGAGGAAGAGAGTGAGGAAGAGGCCACAGATGACAGCAATGACTA
TGGAGAGAATGAAAAGCAGAAGAAAAAGGAGAAGATAGTAGAGAAAGTCAGCGTTACACAAAGGAGAACCAGGAG
AGCTGCCTCTGTTGCCGCAGCTACCACTTCCCCTACTCCCAGAACTACAAGAGGTCGTAGGAAGAGTGTAGAGCC
ACCTAAGCGTAAGAAGCGGGCCACAAAGGAGCCCAAAGCACCAGTCCAGAAAGCTAAGTGTGAAGAGAAAGAGAC
TCTGACCTGTGAGAAGTGCCCCAGGGTATTTAACACTCGCTGGTACCTGGAGAAGCACATGAACGTTACTCATAG
GCGCATGCAGATTTGTGATAAATGTGGCAAGAAGTTTGTCCTGGAAAGTGAGCTGTCCCTTCACCAGCAAACAGA
CTGTGAAAAAAACATTCAGTGTGTTTCCTGTAACAAATCGTTCAAGAAACTCTGGTCCCTTCATGAACATATCAA
GATCGTCCATGGATATGCAGAAAAGAAATTTTCCTGTGAAATTTGTGAGAAGAAATTCTATACCATGGCTCATGT
GCGGAAACACATGGTTGCACACACAAAAGACATGCCATTTACATGCGAAACCTGTGGAAAATCATTCAAACGCAG
TATGTCACTCAAGGTGCACTCCTTGCAGCATTCTGGAGAGAAGCCCTTTAGATGCGAGAACTGTGACGAAAGGTT
TCAGTACAAGTACCAGCTACGCTCCCACATGAGCATTCATATTGGGCACAAACAGTTCATGTGCCAGTGGTGTGG
CAAGGATTTCAACATGAAGCAGTACTTCGACGAACACATGAAAACACACACTGGAGAGAAACCCTTTATCTGTGA
AATCTGTGGCAAAAGCTTCACCAGCCGCCCCAACATGAAGAGACACCGCAGAACTCACACAGGCGAGAAGCCCTA
TCCATGTGATGTGTGTGGCCAGCGGTTCCGCTTCTCGAACATGCTTAAGGCCCACAAGGAGAAGTGCTTTCGGGT
GACCAGCCCCGTGAATGTGCCACCTGCTGTCCAGATCCCACTTACAACTTCCCCAGCCACCCCAGTTCCTTCTGT
GGTGAACACAGCCACAACCCCAACCCCTCCAATCAATATGAATCCTGTAAGCACTCTTCCCCCTCGGCCCATCCC
CCACCCCTTCTCACACCTGCACATCCACCCACACCCTCACCACCCACACCACCTTCCCATCCCTCCAGTCCCTCA
CCTCCCGCCACCTCCAGCTCTCTTTAAGAGTGAGCCTTTAAATCATAGAGGCCAGAGTGAGGACAACTTTCTGCG
GCACCTGGCAGAGAAGAACAGTTCAGCACAGCATCAT**TAA**CATCCGTCTCCTTAGTGTGTTCTCCAGGAGACACG
TCCCCATGTGTGAGCGTGCACAGAGGGAGTCGGTGAGCATTTCCTTAGTTCTCAGACTCTCCTCCGCCTCTACCA
AGAGCTTCGCCAGTGTCACTGAATCAACAGATCCAAGGGAATGAACAAGAAGACTACCTTGAGCTCACAGAGGGA
CTGTCATCTAAACCAGGGGAACCACTGAACTAAAGCCCAATTTGCTTGCATTTTCTGATGACTTTTATAAGTTTC
AAATACTCAGACTTGTGGAATTTTATAATTTCATATCAGCTGATGAGGTATGCTTGCTTTTATATCCCAGACTTC
TCCTCAAAGAGGGGATAGGCCTGGTTTCCTTTGTACTAATCGGGAAGGCTGTGAGATTAATCCAGAGCATTAATT
GTATCACTGTGTATGGTAAGGAATTCTTTTCAGCTTTTGGTGCCAGCTACAGAGTTGAGCTGGCCATGTTTCACA
GTATATCAAGCATTATAGAGAAAGACAGAAATTTTCTTCTTTGTGTAGCTCTCCTAACGCACTCTTTATTTTACT
ACAGAAATTATTTTAGAGTTTTTGTATAGACTTCTTTGGTAGTCTGTTTCTAAAATGAAATGTATTTCAATAAGC
AGTGTAATTTTTTCAGTGTAGCTGAACCTATGTTGTAAAATAGAAAAAAATTTTTATAATCATCAAAATGTGATT
CTTAAAGATGCATATAACTTCTATAATTCAAAGCTATTCTTACATCCGTACAACTCAAAAGGTGCTTCAGAGACT
AGATGTATCTGAGAGGGTCTCCAGACCAGGTTACTGCAAAAATGAGGTTTTGCTTTCAGGATTTGGCGTAAATAC
TTGGTAGTTTTGACATCTCTGCTTAACACTCAAGAGAGGCTCCCTAATGTGCTCCTGTCCTCCATGTTCTGCTTG
GCTTCGTTAGTGCATTACATGAAATGATTTGCAGGGGATGGGGCCTTTTCCAGGGAAGTCACCTAAAGCTTGCAT
GTTTTGAAAATTTGAATAAGGCTGTTTGCTGACAGGAGGAGGAAGTAGTGGAGATCATTTCATCTCAGTCACGTC
TGTTTCTCACTTCCCTTAGGAATTGTGTTGATGTTTAACTTTTATGGGATGACAAATTGAAATCGCTCATTTTGA
GGTTGCTTTATTTTTCTAGAATTGTTATAAGAAGCTAAAATAGTAAACTTAAAATCACAAACATGACATTGCTGA
TAGTGGCTGAGAAATTCAGATGAGAAGACAAATTGGTTATGAATTTTGAAATATCTATTATATGTAAAATGTGGA
TATGTTCACAACCTTGAGCTATTTTAACACAGTTTAAATATAGTGAGGGAAAACTCCTAAGTTTTACTGCCCTGT
CCTCTGCAAATTATGTAATACCAGCATTCTTAGGCGATAAAGAGAGCAGCACCTCTAGTACCTTTAGGCAGATTA

FIGURE 1058B

CTTTTTCAAGTTTGGGGAACTTCAAAAGACCATAATCAACCAGGAGCTTATTATAGGAAAGGCTGAACAGAAGGG
CTAGTGTATTGATTACACTTAACAGATCATATTTATCCAGACTCAGTATAGCTTAAAATTTTGTATTTCTTTATC
TGAGAGAACTGAGTTCCCAGGCTAAATCACTTACCTCCCACCCCCTCTCCAATTTTTTTTTTAAGAGACAAGGTC
TTGCTATGTTGCCCAGGCTAGAGTGCAGTGGCTATTCACAGGTGCAGTTATAGCACACTACAGCCTCCAACTCTT
GGGTTCAAGCAACCCTGCCTCAGCTAACCAAGTAGCTGGGACTACAGGTGCATGCTACCATGCCCAGTCCATTTT
TTAATCTTGAAATTTCTTCATTTTTCTTTCTTCGGTTTCTTAAAATCTTTGCCTGAATCAGAACGCTGGCTTTTA
TTTATTTTTTTATTTTTAATATTAAATGTGCAGATATGCTTCGAGCACTTTTCTAACTAATGAGCTCTGTGGTAA
GAAAAAATGAACTCTTTCAATTGAGATTAAGTCCATATTTTTCAAACATCACGTTCTCTATTGGCTTTTTGGTTT
AGTGTTTCTAAATTTTCTCCTTCTGATTTTGCCTGTCTTATATAATGAGCATAGGAAAATTTTGGAATGAGGCAG
AAAAGTATATCAAGACATACTTCCTGGTTTTGGATGTAAGTTTTAAAGAATGGTATTTTTAATATTTGTACACAT
TCTTTGAGCACCCAGGTACCCAAGCCAATAAGGAAAGTTAATTCCTTGCATATGACTGTTATATCTTTAGTGGTT
GTCTCCCTCTCCCTCCACAGTCTCCTTGGCATTCCATGACAAGTTTGTCAACCTACACTTTTATATAGACATGTC
ATTATTTCATGGTCAAGCCTGTAGTATTAAAATGATTTTTTTAAAAGATGTAAACTGTGCTTAGTTAATTGGTTA
TATTTTGTTCTGTTTTTTTTTTTTTTTTTTTTTTTTTTTGAGGCAGAGTCTTGTTCTGTTGCCTGGGCTGGAGTG
CAGTGGCGTGATCTTGGCTCACTGCAACCCCCGCCCCCCGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCCGAGT
AGCTGGAATTACAGGCATGCGCCAGCACGCCCGGCTAAGTTTTGTATTTTTGGCAGAGATGGGGTTTCACCATAT
TGGCCAGGCTGGTCTCAAACTCCTGACCTTGTGATCCGCCCACCTCAGCCTCCGAAAGTGCTGGGATTACAGGCG
TGAGCCACCACGTCCAACTGCCTTATTTTGTTCTGAATAAATTTACAGTATTGGGCAGCAATTCTGGATTCTAGA
CTTGAGACCACAGAATCAACCATTTCATGAGGTTGTACTGTAATTATACACTGGAATATTCAGGTAGTCATCTTT
GATTTTTCATTCAAGTAAATATAGCCATAAGAAAATATCTGCTATACAGGAAAACCAGTATTAAGCAAATACCAC
CATCCTTAACAGAAACAAAAATATATATATATATTATTTTTAAAAATTAGCATTGTCATACAGTACAATTCTTAG
TGAAGTGTATTGTGGAACAATTTAGAAACTTCCTTTTTTTCCCCTAGATTAAGGATACTTTCCTTGACTTGAGAC
TTGTGGTCTTCAGGAAAACTACTCAGAATATAATGACTCCTCATCAGTATCATATTGTATATAAATAATGAAATG
CATTAAGAATATTCACAACATTGAACCCAGGAGGCGGAGCTTGCAGTGAGCCGAGATTGCGCCACTGCGCTCCAG
CCTGGGCAACAGAGCGAGACTCCATCTC

FIGURE 1059

MSHTASSCQELVENCAVHVAGMAQEDSRRGQVPSSFYHGANQELDLSTKVYKRESGSPYSVLVDTKMSKPHLHET
EEQPYFRETRAVSDVHAVKEDRENSDDTEEEEEEVSYKREQIIVEVNLNNQTLNVSKGEKGVSSQSKETPVLKTS
SEEEEEESEEEATDDSNDYGENEKQKKKEKIVEKVSVTQRRTRRAASVAAATTSPTPRTTRGRRKSVEPPKRKKR
ATKEPKAPVQKAKCEEKETLTCEKCPRVFNTRWYLEKHMNVTHRRMQICDKCGKKFVLESELSLHQQTDCEKNIQ
CVSCNKSFKKLWSLHEHIKIVHGYAEKKFSCEICEKKFYTMAHVRKHMVAHTKDMPFTCETCGKSFKRSMSLKVH
SLQHSGEKPFRCENCDERFQYKYQLRSHMSIHIGHKQFMCQWCGKDFNMKQYFDEHMKTHTGEKPFICEICGKSF
TSRPNMKRHRRTHTGEKPYPCDVCGQRFRFSNMLKAHKEKCFRVTSPVNVPPAVQIPLTTSPATPVPSVVNTATT
PTPPINMNPVSTLPPRPIPHPFSHLHIHPHPHHPHHLPIPPVPHLPPPPALFKSEPLNHRGQSEDNFLRHLAEKN
SSAQHH

FIGURE 1060A

GCGGGGCACTTTGAAGAATCACGTGTGTTGAGGCCCTCTTAAAGAGATAGGCACCTACTTTTCCCTCCACCCTAA
ACACCGCCCTGAGGGCGGCGGCGACCGTGGTAATTGCAACTGCTCAGGGGCAGGGCTTGCCCCAGCGCCGAGTAG
TGGCAACGGCGTGGTTGCGTCGGGGGTGCCTGGGAGCCTGGAGTCCCGGGGGCCTGAAATCGGCAGCTTCCCGGG
CAGACACTCTCTCCCTCAGGAAGAGGTGCCGCCGAGTCAGCGCGGGGCAGTGTGAGCGCCCCGAGGTGCTTTCTC
AGTTGAGGAGAGGTGGGGTTACAGGGCACAGGTGACAGGGCCGGAGAAAG**ATG**GAGCAGCCCGGGGCGGCGGCGT
CGGGAGCGGGAGGCGGCAGCGAGGAACCCGGTGGGGGCCGGAGCAACAAGCGGAGCGCGGGGAACCGGGCCGCCA
ATGAAGAGGAAACGAAAAACAAACCCAAATTGAACATTCAAATAAAAACTTTGGCAGATGATGTGCGTGACCGAA
TTACAAGTTTTAGAAAATCTACTGTCAAAAAAGAAAAACCTCTTATTCAACATCCTATTGATTCTCAAGTCGCGA
TGAGTGAGTTTCCTGCAGCTCAGCCATTATATGATGAACGATCTTTGAATTTGTCAGAAAAGGAAGTATTGGATC
TCTTTGAAAAAATGATGGAGGACATGAACCTTAACGAAGAGAAAAAAGCTCCTTTACGAAACAAAGACTTTACCA
CCAAACGTGAGATGGTTGTCCAGTATATTTCTGCCACTGCCAAATCTGGTGGGCTGAAAAACAGCAAACATGAAT
GCACCCTGTCTTCACAAGAATATGTTCATGAATTACGATCGGGTATATCAGATGAGAAACTTCTTAATTGCCTAG
AATCCCTCAGGGTTTCTTTAACCAGCAATCCGGTCAGCTGGGTTAACAACTTTGGCCATGAAGGTCTTGGACTCT
TATTGGATGAGCTGGAAAAGCTTCTGGACAAAAAACAGCAAGAAAATATTGACAAGAAGAATCAGTATAAACTTA
TTCAATGCCTCAAAGCATTTATGAATAATAAGTTTGGATTACAAAGGATTCTAGGAGATGAAAGAAGTCTTTTAC
TATTGGCAAGAGCAATTGACCCCAAACAACCCAACATGATGACTGAAATAGTAAAAATACTTTCTGCTATTTGCA
TTGTTGGAGAAGAGAACATTCTAGATAAACTTTTAGGGGCTATAACAACAGCAGCAGAAAGAAATAACAGGGAAC
GATTTTCACCAATTGTGGAAGGTTTAGAAAATCAGGAAGCCTTGCAATTACAGGTGGCCTGCATGCAGTTTATAA
ATGCCCTTGTCACTTCTCCTTATGAGCTTGATTTTCGAATACATTTAAGGAATGAATTCCTCCGTTCAGGACTAA
AAACAATGTTACCAGATCTAAAAGAAAAAGAGAATGATGAGCTTGATATTCAGTTGAAAGTATTTGATGAAAACA
AAGAAGATGACCTAACTGAATTATCACACCGTCTCAATGACATTCGAGCAGAAATGGATGATATGAATGAAGTCT
ACCATCTTCTATATAATATGCTGAAGGACACTGCTGCTGAAAATTACTTCTTATCTATTCTACAACATTTTTTGC
TTATCAGAAATGATTATTATATCAGGCCACAATATTATAAAATAATTGAGGAATGTGTTTCACAGATAGTGCTAC
ACTGCAGTGGTATGGATCCAGACTTCAAATACAGGCAAAGATTAGACATCGATTTAACTCATCTGATAGATTCTT
GTGTGAACAAGGCGAAAGTTGAAGAAAGTGAACAAAAAGCTGCAGAGTTTTCAAAGAAGTTCGATGAAGAATTCA
CAGCTCGACAGGAAGCTCAAGCAGAGCTTCAAAAAAGAGATGAGAAAATCAAAGAACTTGAAGCAGAAATCCAGC
AACTTCGAACCCAGGCACAAGTACTCTCAAGTTCATCAGGAATTCCAGGTCCTCCTGCAGCACCTCCATTGCCAG
GTGTAGGGCCGCCTCCACCACCACCCGCGCCACCTCTACCCGGAGGAGCTCCTCTTCCTCCTCCACCACCTCCTT
TACCTGGAATGATGGGGATACCACCACCACCCCCACCACCACTTTTATTTGGGGGACCTCCTCCACCACCACCCC
TTGGAGGAGTTCCTCCTCCCCCAGGAATATCACTTAATCTACCTTATGGAATGAAGCAGAAAAAAATGTATAAAC
CTGAAGTGTCCATGAAGAGAATCAATTGGTCAAAGATTGAACCCACAGAATTATCTGAGAACTGTTTCTGGTTAA
GAGTCAAAGAAGACAAGTTTGAGAATCCAGATCTCTTTGCCAAATTGGCATTGAATTTTGCTACTCAGATAAAAG
TTCAAAAGAACGCAGAAGCATTAGAAGAAAAGAAGACTGGGCCTACAAAGAAGAAAGTGAAAGAACTGAGAATTT
TGGATCCCAAAACAGCTCAGAATCTGTCCATCTTTCTGGGATCATATCGCATGCCATATGAAGACATAAGAAACG
TTATTCTGGAGGTTAATGAAGACATGCTGAGTGAGGCTTTAATTCAGAACCTTGTGAAACATCTTCCTGAGCAGA
AGATACTCAACGAATTAGCAGAGCTTAAGAATGAATATGATGACCTCTGTGAGCCTGAACAATTTGGAGTTGTGA
TGAGCTCTGTGAAAATGTTACAGCCTCGTCTCAGTAGTATCCTGTTCAAGCTCACATTTGAAGAACACATAAACA
ACATCAAACCAAGCATCATAGCAGTAACTCTTGCCTGTGAAGAACTGAAGAAAAGTGAAAGCTTTAACAGACTTT
TAGAGTTAGTTCTTCTTGTTGGAAACTACATGAACTCAGGCTCAAGAAATGCCCAGTCTTTGGGATTTAAGATCA
ACTTCCTTTGTAAGATCAGAGATACTAAATCAGCGGATCAAAAAACAACCCTTTTGCATTTTATTGCCGACATTT
GTGAGGAAAAATATCGAGATATCCTAAAATTTCCTGAAGAACTGGAACACGTAGAAAGTGCAAGCAAAGTTTCAG
CTCAAATTCTCAAGAGCAACCTTGCATCAATGGAACAACAAATTGTTCATCTGGAACGTGACATCAAGAAATTCC
CCCAAGCAGAAAATCAACACGATAAGTTTGTGGAAAAGATGACCAGCTTTACAAAGACTGCCCGAGAACAGTATG
AAAAACTCTCCACCATGCACAACAACATGATGAAGCTCTATGAGAATCTTGGAGAATACTTCATTTTTGACTCAA
AGACAGTGAGCATAGAAGAGTTCTTTGGTGATCTCAACAACTTCCGAACTTTGTTTTTGGAAGCAGTGAGAGAAA
ACAATAAGAGAAGAGAAATGGAAGAGAAGACCAGGAGGGCAAAACTTGCAAAAGAGAAAGCTGAACAAGAAAAGT
TAGAACGCCAGAAGAAAAAGAAACAACTCATTGATATAAACAAAGAGGGTGATGAGACTGGTGTGATGGATAATC
TTCTAGAAGCCCTACAATCAGGTGCAGCATTCAGAGACCGTCGAAAGCGGATTCCAAGGAATCCAGATAACAGAC

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FIGURE 1060B

GAGTACCTTTGGAAAGGTCACGCTCTCGCCACAATGGAGCTATCTCATCTAAG**TGA**TTCCTGATGCCAAAGAATA
TGAAAATATTTAAGTAAAAACAAAATGATGCATTTTGAGAAGAACAAAGTGTGCACTCAGCGGCTGGAAAGGAAA
TAAGTGCATTTCTGCAAAGATCAAGATAAGCTGGATGAAGTAGTGTGCATTTGTAATACTATTGCAAGACTCCTC
CCACAATTATTCTAATCTGAACACAGTTATCAGGATTACAAAATGTGTTCCATTTTAGTGTAAAGATGTGTATCA
TTTGTAATTGTGTGTGACCTGACTGTGATGATGGAAGTGTAAGAAATTGAAGAGTTCTAAGGCTTTCAAAAACAC
TCAGTCAAAAATTTAAAATCTTAAATGTGTAAGTCACCCCCACCAAAAACAAAAGAGAAGAAAAAGAATAGAAAG
AATTATCCAGTGTCAGCTTCCAATCCCTAGTACATATATAATAGAAAAGGGCCAAGAAAAATATGCATCTTGATT
TGGAGAGAGGCTAATATTATGCACACTGTAAGAGAAGCCATTTTGGAAATTCACGAAAGTACTGCTCCACCCCAG
TTGAGTTATTTAGAATTTTATCTCAAGTGAAAGCTGATGGATTCATCTGCTTTGGCTGAAATTAAACTTATCATT
AGTCTAGCTAGCATTTCAGCATGATATTGCAAGCACTTCTCATTGCTAAAAATAAATAAACCAAAGTTTAACCGA
ATCAGTTAGGGAAAGTGATTTAAACTTTATTTAAAGAGGTATTTTCTAATTATGCACAGATATCTACTTTATACA
AATACTTTATATGGCTATTTTTGAGAAAACCCTCACATTTTAATGTTTATGCTAGGGATGAACCTGGAAAATTCT
ATTACGTTTATTTAGATTTCAAAGGCAAATATTGATTCCTATGCTCTGTGGTTTATTTCTTTTTTCTATTGCTTC
TTTCTCCCTTGAGTCCCTTGAAGGCAGGGAAATAGACTTCTAGAAAACCTGAGAGGAAAAAGAATTCTTTTTACA
GGAGGCAGCAGAAAACTGTCTGAAAGGTCAATTGTTTTATCTCCCTTTCCACTCTCTTTCCAATTTCACTTTGGT
GGTCTGAAGAAGAAAAAGAAATTTTATGTATGTATGTGTAAATATGTGTATATATTTCTATCTCTTGCTACAATA
ATTCCAACTAAGTGAACTTCTTCTCAATTATCATCATACTTACTTACCTTATATTAACAAATTAAGATGATGCTG
CCAAAACAAGTCTAGCAGGGAAAACAGGTTCTACATTTTTCTTAAATAAATTAGGGAGTAAAAGTTATACTTAAC
TTGTCTGTCTATTATTTTAAAATATGCATTGAAATAATGTGGTATAACTTCTCTGGAGTGCAATTTTAAGTCTAA
TTCATGCAGATGATTGATTGTGATTATTGTAAGAAATTTCTTACATGTATATTTCTTATGTTAGAAAATACTGTT
TCTACTCATTCAAAGCACATTGTAGATATTCAGAGAGAAGAACAAATGGCTGGCTTGGCAAATCCCCATCTGAGA
TAAAGTAAACAAGTGACCAGCAGCCCACAGATAATTCCTTTATATAGATGTATAATGATTCAAACTGCTGCCTTT
GCCTCCAGTGCATCCTTACTTAGGTATTATACTTCTTTAAAAAGCTCTGAAGCTGCTACAATAGAAAAATCAAAA
AGGGTAACAGTATCTGAAATTTCACAGTCCTATCCGATCTGAAAACACACATACACAAATGCACACACATGCACA
CACACATTTCAGGGACATAGCAGTAACACTGTTTTTTAACAACAACAAAAGTTTAGGTTCTAATTTATGTAAATA
CCTAGTATGTGTATTTTTGACTTTACAAAGTCTTTCTTTTCTGAAATCTTCGTGGTATGGCTTTTTTAATTCTTT
TGACAGCTTATCAGTCTGTAGGAGAATGATCTTGAAATGTTAACCCTGACTAAAATTTGGGAGCATATGCCTTGC
TATATTATCAAGCTGGTCAAGGTAGAAATACTGATATGTATCATCACCTTTTCCAGATACAAACTTGCCTTATTT
TCTAGTTTGTGAACAAGAACGAATGAAGTACTATTATTGATAACTTACTTATATATTTTTATTTAGAGCAATCCC
ACATGCTTTTCACAAACATTAAAAAAAAAAACCTTTCAGGGTCTTTCATGAAGTTCCAATAGTTGAGTGAGTTAA
AAGGTTTGTTTCCCAGATTTGTAATGGTCCTGCTCTAGCCATTTGCAGTTTTGTTTTAGATGATTGGAAAGTATA
TCACCAAAAAAAGTATATAGTGACATTTTTAGTATGAAACCAAATTACACTAAGGTCTTTTGTTGGCCATATTAC
TGCCACACATGAGAAGCACCATTTATGCAGATTTTCTTCAGAATATTTTTAAAAGGTACAGAATCCTTAAAATAT
TAACAACTAATTGCATCCATTATCTCCTTTGGCTGCTGTAACAAATTACCACCAATAATATGATGGCTTAACACA
ACAGAAACTTATTTGCTTACATTTTTGAAGGGCAGCAAAGCCATGGCTCCCTCCAGAGGCTCTAGAGGAGAATCT
TTCCTTGCCACGTCCACCTTTTGGTGGCTATTGGCATTTTTTGGCTTATGGCCACATTTCTCTTTCTGCTGTGTC
TTCACATCACCCTCCTCTGTATACCTAATCTGCCTCTGCCTCTGTTTAATAAGGATCCTTATGATGACTTTTAGG
GACTACCCAGATTACTCCAGGATAATCTCCTCACCTCATGAGTCTTAACTTAATTACATCTGCAAGGCCCCCTTC
TCCAAATAAGATAAATTCATGGTTTTGGGGATTAGGATGTGGCTATGTCTTTTAGGAAGCCACTCTTAGCCCACC
AGAGTCTGCCCTTTGGCCCAAAATTTATGTCTGTCTCATGTGTAAAAGACATTCATCCCATCCTAACATTACCAA
AAGTCTCAACCCATTATATCAATCCTAAGTCCAAAATTTCATTCAAATATCATCGGTTCAAAAGTTCCAAAGCTT
ATCATTTAGATCATCTAAATCAGGTATGAGTGAAACTCTGGGTATGGTCTTTCCTGAGGCCAAATCCTCTTCCTC
TGAGAACCAGTGAAACAGAAAAGTTAATCTGCTTTCAAATTACAATGGTGGGAACAGGCATAGGATAACAGTTAC
AGACATTTCTGTCTCAAAAAGGAGAGAATGGAAATTGGAATGGAGTCTCCTGTCCCAATCATTTTCAAAATCTAG
CCAGGCAAATTTCTGTTCTATTTCAAGGCCTGGCAGTAATCCTCTTTCTCAGGGCTCCACCCTTTGGGCCTGTAG
CTCTTCTTTCTTGGACTATGGATTGGGCCTCTGCCTCTGTGCCTATGGGTTGCACTTCTTCCTCTGTTCCCACAC
TTGGGCCTCTGCCTCTGTACCTGCAGCTCTGCTCTCGGGATGGTGCTTCCTTTATCTTGAAGGGTGGCACATGTT
TGCAGCTGAGAAGTTTTATCAACGGGTTTCCTACCTGTAGAATTCTGGCAGTCTCACAATCTTCTTTCATTTTTT

FIGURE 1060C

TCTGTCTCTGTCCCTTTTAGGCCCAGTTGGAAGTGTTTCTGATGGTAGAACATTCTCAAAAATCTTGTGGGTCTT
CTACGTATGTCACATTGATTCACACATTCAGAAAAGAGGGTCCTCACAGATTTTTCCTGAACAACCCCATCTCTA
TTCTTGGCTTCTGTTGAAACAGTCAAATAAATCCACAAGTTAATGCCTAACCTCTTCAGCACTAGCCAAAGGTTG
TCAAGACACACCCTTGGGCTTATCTACAGAGCACACTTTTCTAACAGTGAATCTCCTAATTTTAGCATCTTTTTT
TTTTTTTTTACAATCATTCCAGATTGTGAATTCAGGCTCAGAATTACCCAGTCATCAGATACTGATTCCTTTTGT
CCACTTATATAGTTATTTTCTCTTTAAAAAAAAATTTTTTTTAATGTATTAGAGATGAGGTCTCACTCTGTCACC
CAGGCTGCAGTGTAGTGGTGCAAACATAGCTCCCTGTAACCTCAAACTCCCAGGCTCAAGGGATCCTCCTGCATC
AGCCTTCCAAGTAGCTGGGTCTACAGGTGCATACCACCATGCCTGGCTAATTTTTTGCATTTTTTTGTAGAGACT
TGATCTTGCTATGTTGTCCAGGCTGCTCTCGAACTCCTAGCCTCAAGCAATCCACCCATCTTGGCCTCCTAAAGT
GCCGGATTACAGGTGTAAGCCACCATGCCCAGCCTGTTTTGTCAATGTATCTGTTTTCTGTCTTATTTTACTATA
AGCACTAAGAAGAAACTAAGCTATATCTCTAACACTAGACTTGAAAATTTCCTCAGCTAAACATCCAAGTTCATC
ATTTATTCAACTTTTCACACTACTGTAGTAGACAATTTAGATAGATAAACTTTTTGCCACTATATGACAAGGATT
CCCTTTCTTCCATTTTCCAATAAAATCTTCATTTCCTTCTAAACCATCACTAGAAATGCCTTTAACATTCATACT
ACTACCATCTGGTAAAGGCAATCTAGTTTTTTCTATCACATCCACCAAAATTCTTCTAGTCTCTACCCATTATCC
AATTCCAAAGCCTTTTTCACATTTTAAGACATTTGTTACAGAAGTACCCAATCCGTCCCAGTTCCACAATCTGCA
TTAGATTCCCATGGCTGCTGTAACAAATTACCCTCTAGCCCAGTGGCTTAAAACAATAGAAATTTATTATCTTGT
TGTTTTGGAGGCCAAAAGTCCAAAATTGAGGGGTTGGCAGGGCTGAACGTCTTCTGGAGACTCTAAGGGAAACAC
TCTTCCCGTGTCTTCCAGTTTCTTGTGGCTGCCATCATTCCTTGGTTTGTGACTGCATCTCCCTCTCCTCTGTCT
TCACATCACTTCCCCTCTGTATATATAATCTACCTCTGCCTCTCTCTTATAAGGACACTTGTGACGGGACTTAGG
GCCCATCCAGATTACCCATGATAATTCCCTTATTCCAAGATTCTTAATTATATCTGAAAGGACCTTTTTTCCAAA
TAAGGTACTATCACAGGTTCCAGGGAGTAGGATATTGAATATCTTTTTTGGGGAGGGGGCACCATGCAGCTCACT
ACACTATTCATTGCACACAAATGAATTTTTCACTTTTTAAGATGCATTCTTGGTGCTCAAACCAGATCGAAGTTT
GTCTCTAAAAGCTATTGTCTGCACAGGCTGCTGCATGCTCTGTTGTTAAATGGATGGACAGGCTATTCTAAATTT
TGGTTGATACTTTTGCTACTATGGGCAATTAACTTGAAAAAAATAATCGATCCCAACTCTGTGCTCTGATGTACC
TCTTCTGCCCCTTTTATGACACCTTTGACCAAATGCCTTCTATGGTTCACAGTGCAGGCACAAAACTACCTCTGA
TACAGAAGGGTTCTTTACAAGCTTATTTTACATACCGTGAATCCCTCACCTAAAGGGAGAGGTGAAAGCAAAGAC
TGCTTTGAATGGGTATTGAGGGAGATTGTGTCCATACCAAGCCACCCTGAAGAAGTATTTCACTTGCAGTAGAAC
TGTGGATTTGTGCTGTCATTTCACCTTGGAATAAACACCTATCTCTAAGCAGGACCAAGAATGACTTGCAATCTA
TATGTAATGGCTACTTACTTATTCAATAAAGTTAAGATATACGT

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FIGURE 1061

MEQPGAAASGAGGGSEEPGGGRSNKRSAGNRAANEEETKNKPKLNIQIKTLADDVRDRITSFRKSTVKKEKPLIQ
HPIDSQVAMSEFPAAQPLYDERSLNLSEKEVLDLFEKMMEDMNLNEEKKAPLRNKDFTTKREMVVQYISATAKSG
GLKNSKHECTLSSQEYVHELRSGISDEKLLNCLESLRVSLTSNPVSWVNNFGHEGLGLLLDELEKLLDKKQQENI
DKKNQYKLIQCLKAFMNNKFGLQRILGDERSLLLLARAIDPKQPNMMTEIVKILSAICIVGEENILDKLLGAITT
AAERNNRERFSPIVEGLENQEALQLQVACMQFINALVTSPYELDFRIHLRNEFLRSGLKTMLPDLKEKENDELDI
QLKVFDENKEDDLTELSHRLNDIRAEMDDMNEVYHLLYNMLKDTAAENYFLSILQHFLLIRNDYYIRPQYYKIIE
ECVSQIVLHCSGMDPDFKYRQRLDIDLTHLIDSCVNKAKVEESEQKAAEFSKKFDEEFTARQEAQAELQKRDEKI
KELEAEIQQLRTQAQVLSSSSGIPGPPAAPPLPGVGPPPPPPAPPLPGGAPLPPPPPPLPGMMGIPPPPPPPLLF
GGPPPPPPLGGVPPPPGISLNLPYGMKQKKMYKPEVSMKRINWSKIEPTELSENCFWLRVKEDKFENPDLFAKLA
LNFATQIKVQKNAEALEEKKTGPTKKKVKELRILDPKTAQNLSIFLGSYRMPYEDIRNVILEVNEDMLSEALIQN
LVKHLPEQKILNELAELKNEYDDLCEPEQFGVVMSSVKMLQPRLSSILFKLTFEEHINNIKPSIIAVTLACEELK
KSESFNRLLELVLLVGNYMNSGSRNAQSLGFKINFLCKIRDTKSADQKTTLLHFIADICEEKYRDILKFPEELEH
VESASKVSAQILKSNLASMEQQIVHLERDIKKFPQAENQHDKFVEKMTSFTKTAREQYEKLSTMHNNMMKLYENL
GEYFIFDSKTVSIEEFFGDLNNFRTLFLEAVRENNKRREMEEKTRRAKLAKEKAEQEKLERQKKKKQLIDINKEG
DETGVMDNLLEALQSGAAFRDRRKRIPRNPDNRRVPLERSRSRHNGAISSK

FIGURE 1062

GGCACGAGGAGCGTTTCGTTTGGACTTCTCGACTTGAGTGCCCGCCTCCTTCGCCGCCGCCTCTGCAGTCCTCAG
CGCAGTTATGCCCAGTTCTTCCCGCTGTGGGGACACGACCACGGAGGAATCCTTGCTTCAGGGACTCGGGACCCT
GCTGGACCCCTTCCTCGGGTTTAGGGGATGTGGGGACCAGGAGAAAGTCAGGATCCCTAAGAGTCTTCCCTGCCT
GGATGGATGAGTGGCTTCTTCTCCACCTAGATTCTTTCCACAGGAGCCAGCATACTTCCTGAAC**ATG**GAGAGTGT
TGTTCGCCGCTGCCCATTCTTATCCCGAGTCCCCCAGGCCTTTCTGCAGAAAGCAGGCAAATCTCTGTTGTTCTA
TGCCCAAAACTGCCCCAAGATGATGGAAGTTGGGGCCAAGCCAGCCCCTCGGGCATTGTCCACTGCAGCAGTACA
CTACCAACAGATCAAAGAAACCCCTCCGGCCAGTGAGAAAGACAAAACTGCTAAGGCCAAGGTCCAACAGACTCC
TGATGGATCCCAGCAGAGTCCAGATGGCACACAGCTTCCGTCTGGACACCCCTTGCCTGCCACAAGCCAGGGCAC
TGCAAGCAAATGCCCTTTCCTGGCAGCACAGATGAATCAGAGAGGCAGCAGTGTCTTCTGCAAAGCCAGTCTTGA
GCTTCAGGAGGATGTGCAGGAAATGAATGCCGTGAGGAAAGAGGTTGCTGAAACCTCAGCAGGCCCCAGTGTGGT
TAGTGTGAAAACCGATGGAGGGGATCCCAGTGGACTGCTGAAGAACTTCCAGGACATTATGCAAAAGCAAAGACC
AGAAAGAGTGTCTCATCTTCTTCAAGATAACTTGCCAAAATCTGTTTCCACTTTTCAGTATGATCGTTTCTTTGA
GAAAAAAATTGATGAGAAAAAGAATGACCACACCTATCGAGTTTTTAAAACTGTGAACCGGCGAGCACACATCTT
CCCCATGGCAGATGACTATTCAGACTCCCTCATCACCAAAAAGCAAGTGTCAGTCTGGTGCAGTAATGACTACCT
AGGAATGAGTCGCCACCCACGGGTGTGTGGGGCAGTTATGGACACTTTGAAACAACATGGTGCTGGGGCAGGTGG
TACTAGAAATATTTCTGGAACTAGTAAATTCCATGTGGACTTAGAGCGGGAGCTGGCAGACCTCCATGGGAAAGA
TGCCGCACTCTTGTTTTCCTCGTGCTTTGTGGCCAATGACTCAACCCTCTTCACCCTGGCTAAGATGATGCCAGG
CTGTGAGATTTACTCTGATTCTGGGAACCATGCCTCCATGATCCAAGGGATTCGAAACAGCCGAGTGCCAAAGTA
CATCTTCCGCCACAATGATGTCAGCCACCTCAGAGAACTGCTGCAAAGATCTGACCCCTCAGTCCCCAAGATTGT
GGCATTTGAAACTGTCCATTCAATGGATGGGGCGGTGTGCCCACTGGAAGAGCTGTGTGATGTGGCCCATGAGTT
TGGAGCAATCACCTTCGTGGATGAGGTCCACGCAGTGGGGCTTTATGGGGCTCGAGGCGGAGGGATTGGGGATCG
GGATGGAGTCATGCCAAAAATGGACATCATTTCTGGAACACTTGGCAAAGCCTTTGGTTGTGTTGGAGGGTACAT
CGCCAGCACGAGTTCTCTGATTGACACCGTACGGTCCTATGCTGCTGGCTTCATCTTCACCACCTCTCTGCCACC
CATGCTGCTGGCTGGAGCCCTGGAGTCTGTGCGGATCCTGAAGAGCGCTGAGGGACGGGTGCTTCGCCGCCAGCA
CCAGCGCAACGTCAAACTCATGAGACAGATGCTAATGGATGCCGGCCTCCCTGTTGTCCACTGCCCCAGCCACAT
CATCCCTGTGCGGGTTGCAGATGCTGCTAAAAACACAGAAGTCTGTGATGAACTAATGAGCAGACATAACATCTA
CGTGCAAGCAATCAATTACCCTACGGTGCCCCGGGGAGAAGAGCTCCTACGGATTGCCCCCACCCCTCACCACAC
ACCCCAGATGATGAACTACTTCCTTGAGAATCTGCTAGTCACATGGAAGCAAGTGGGGCTGGAACTGAAGCCTCA
TTCCTCAGCTGAGTGCAACTTCTGCAGGAGGCCACTGCATTTTGAAGTGATGAGTGAAAGAGAGAAGTCCTATTT
CTCAGGCTTGAGCAAGTTGGTATCTGCTCAGGCC**TGA**GCATGACCTCAATTATTTCACTTAACCCCAGGCCATTA
TCATATCCAGATGGTCTTCAGAGTTGTCTTTATATGTGAATTAAGTTATATTAAATTTTAATCTATAGTAAAAAC
ATAGTCCTGGAAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1063

MESVVRRCPFLSRVPQAFLQKAGKSLLFYAQNCPKMMEVGAKPAPRALSTAAVHYQQIKETPPASEKDKTAKAKV
QQTPDGSQQSPDGTQLPSGHPLPATSQGTASKCPFLAAQMNQRGSSVFCKASLELQEDVQEMNAVRKEVAETSAG
PSVVSVKTDGGDPSGLLKNFQDIMQKQRPERVSHLLQDNLPKSVSTFQYDRFFEKKIDEKKNDHTYRVFKTVNRR
AHIFPMADDYSDSLITKKQVSVWCSNDYLGMSRHPRVCGAVMDTLKQHGAGAGGTRNISGTSKFHVDLERELADL
HGKDAALLFSSCFVANDSTLFTLAKMMPGCEIYSDSGNHASMIQGIRNSRVPKYIFRHNDVSHLRELLQRSDPSV
PKIVAFETVHSMDGAVCPLEELCDVAHEFGAITFVDEVHAVGLYGARGGGIGDRDGVMPKMDIISGTLGKAFGCV
GGYIASTSSLIDTVRSYAAGFIFTTSLPPMLLAGALESVRILKSAEGRVLRRQHQRNVKLMRQMLMDAGLPVVHC
PSHIIPVRVADAAKNTEVCDELMSRHNIYVQAINYPTVPRGEELLRIAPTPHHTPQMMNYFLENLLVTWKQVGLE
LKPHSSAECNFCRRPLHFEVMSEREKSYFSGLSKLVSAQA

FIGURE 1064

GGCACGAGGGTTGACCCTTGTTGCCAGAGAGGCTCCACCCGCCGGCACCTGCATTGCTAGGCAAGTCGCACGGCC
ATAGCTGTGGACTCTCTTGTGGCTGAGGAAGTATTGCCCCCGTGTTGCTAGGGAGATGGCACCCCCGGCAACCAG
GAGTAGACTGCCCTTGTGTTCCTGACAGCTGCAGTCAGCCTTCCCCCAGGGGCTTGGACTGCGGCTGGGGGAACA
GCCTGTTGATGTAAATGATGAACTACTACTCCCTGCTAGGGTTGTCCCCTAGTCGTCACAAACTGCCATTCTGTT
GTGGGGGTAGTGACACCCCCACGGGAATTTGTTACCACTGCCCTAATAACCGTGCCCTGACCTCCAGCTGCTAGA
GAGAGGATGTCCCCCTAGTAAAGCCAAGCAGGAATTGAAGGTTTTTCTAAATCTGCTCGGTCCTCACTCCTAAAG
GATGGCTCCCCTCCTGTCATCAGAGGCCACCAAGGCTTCATATGGGCCAGTGTTTCCCACTGCTGGGGCTGTCGA
CATGAGTGATGAGGGAGCCACTGTATTGCTAGAGGTGACACTTCTCCAATAATCACTGCGACCAGGAAAAAAGCC
CCTTCCTAAAAGCCTTTCTAAACATCCTAGGCATTGTTGCTAAGGAATGCCTTTTCCTTAGCAACAAAGATCATG
GGGACCCCACTGGCGCCTGGAACATCTCCCTAGCAACCGTGAAGCACCTTGTTATTAGGGATGATAACCACAACT
TCCCTGGCAACTGCAGTGTCCGACAATTTAGAAGGGACCATCCTTGGCGGCTTCTCTGAATATACTGAGTTTGGT
TGCTAAAGGACTCATAGCTTAGCAACCATAGCCCTTCAAGGCTTTTCATGGCTGTGGCGGGCCCCATTAGGTACC
AAAAGAAGAAGAACCCCATTGTCAGTGAACTGTACCACCCAGCCCACCCACCTTCCTACCCTACAGGCACCCTCT
GGGCCACCCTCCCTTGCTGCCCTAGCAAGTCTGACAGCCAGAGGGCCATTGCCTGGCCAGGATCCCTTCCTTAGC
ATCCGGGGCTGGGACACTAGCAGGCGTCGGGAGGGGGCCTGGCTGAGCTGC**ATG**TCTGTCCCCCACCCTCATCCT
CCACCCCCCAGTCCGGAGAAGGCGGCTTCCTTGGAGTATGACTATGAGACCATCCGCAACATCGACTGCTACAGC
ACAGATTTCTGCGTGCGGGTGCGCGATGGCATGCGGTACTGGAACATGACGGTGCAGTGGTGGCTGGCGCAGTAT
ATCTACAAGAGCGCACCTGCCCGTTCCTATGTCCTGCGGAGCGCCTGGACCATGCTGCTGAGCGCCTACTGGCAC
GGCCTCCACCCGGGCTACTACCTGAGCTTCCTGACCATCCCGCTGTGCCTGGCTGCCGAGGGCCGGCTGGAGTCA
GCCCTGCGGGGGCGGCTGAGCCCAGGGGGCCAGAAGGCCTGGGACTGGGTGCACTGGTTCCTGAAGATGCGCGCC
TATGACTACATGTGCATGGGCTTCGTGCTGCTCTCCTTGGCCGACACCCTTCGGTACTGGGCCTCCATCTACTTC
TGTATCCACTTCCTGGCCCTGGCAGCCCTGGGGCTGGGGCTGGCTTTAGGTGGGGGCAGCCCCAGCCGGCGGAAG
GCAGCATCCCAGCCCACCAGCCTTGCCCCGGAGAAGCTCCGGGAGGAG**TAA**GCTGTCACGACGCTCCCTCTGCCA
GCTGGTCCCGGGAATTCTGTGAACCAGGCTGCTGTCTCCTCCCCAGAAAGAGTCCTTACCTTGGAGAGGGTCCTG
GAGAGAATTTCCTCTTCCCCAGCTAAATACCCTGCCTGCAACTGAAGCAGACCCGGGGGTGTCCTCCCTGCCCTC
TGCCCAGAGGCCACCTCCACTCCTACAAAATCAAAGTATTGTCCAGACAAGAGTCACTGGCCCCTGCTCCAGCTT
CTGGGTATCCAGAGAGCACTGCACTTCCCCAAAACGGAAGGGGCCCCTGGGCAGTGGGTTTTGGGCAAATTCCCT
TTCTTTGCATCCACAATGTGGGGTCGGAGCTTGGGGGCAGGTCCTGGGAGTGGGAAGCCTCTTCCTTGTGTCTTT
CGCTCCACTTTTAGCTCATCGCACCAATATTGCAGACTTGGAAGGAAGCATAAGCTTCCCATTTCACAAAGGGGA
AACTGAGGTGCGGGTGCGCGGGCCTGGGGACGGCCGTCCCATGGCTTCCATCTGAGCCACCTCGGGACCCCAGCA
CTCCTGGCGCCCTCTTCTCATCGCTTGGCCTATGACAGGTCACCGTGTGTAAATCTTTCCCAATAAAGTGTTGCA
CAAAGAAAAAAAAAAAAAAAAAAACGGCAGCCCTGGGCGGCTGGGAGCACGGACGGGGCGCCCGCGCAGCTGCCTC
TCGTGCTCACCGCGCTGTGGGCCGCGGCCGTGGGCCTGGAGCTGGCTTACGTGCTGGTGCTCGGTCCCGGGCCGC
CGCCGCTGGGACCCCTGGCCCGGGCCTTGCAGCTGGCGCTGGCCGCCTTCCAGCTGCTCAACCTGCTGGGCAACG
TGGGGCTCTTCCTGCGCTCGGATCCCAGCATCCGTGGCGTGATGCTGGCCGGCCGCGGTCTGGGCCGGGGCTGGG
CTTACTGCTACCAATGCCAAAGCCAGGTGCCGCCACGCAGCGGACACTGCTCTGCCTGCCGCGTCTGCATCCTGC
GTCGGGACCACCACTGCCGCCTGCTGGGCCGCTGCGTGGGCTTCGGCAACTACCGGCCCTTCCTGTGCCTGCTGC
TTCATGCCGCCGGCGTCCTGCTCCACGTCTCTGTGCTGCTGGGCCCTGCACTGTCGGCCCTGCTGCGAGCCCACA
CGCCCCTCCACATGGCTGCCCTCCTCCTGCTTCCCTGGCTCATGTTGCTCACAGGCAGAGTGTCTCTGGCACAGT
TTGCCTTGGCCTTCGTGACGGACACGTGCGTGGCGGGTGCGCTGCTGTGCGGGGCTGGGCTGCTCTTCCATGGGA
TGCTGCTGCTGCGGGGCCAGACCACATGGGAGTGGGCTCGGGGCCAGCACTCCTATGACCTGGGTCCCTGCCACA
ACCTGCAGGCAGCCCTGGGGCCCCGCTGGGCCCTCGTCTGGCTCTGGCCCTTCCTGGCCTCCCCATTGCCTGGGG
ATGGGATCACCTTCCAGACCACAGCAGATGTGGGACACACAGCCTCCTGACTCCAGGAAGAGCCAGAGCTGTGCA
GGGAGGAAGGGGTGAGAGGGGGGCCCCCACACCTAGACTCAGTAAGGAAGTCGGGTTGGACCTTAACATCTGCAT
TGGACAACTCCACCCCTTCCTTGGCCTTGCCCCTGCCCGCCTACACTCCTACGTGTCCAGGGCTTGGGCCGTGAC
TTAGGCAGAGGAGTGCAGAGGAGGGTCTGGCAGGGGCTGCTCAGGCCGCCTAGCTGCCCCTTTGCCAGGTTAATA
AAGCACTGACTTGTTAAAAAAAAAAAAAAAAAAAAA

FIGURE 1065

MSVPHPHPPPPSPEKAASLEYDYETIRNIDCYSTDFCVRVRDGMRYWNMTVQWWLAQYIYKSAPARSYVLRSAWT
MLLSAYWHGLHPGYYLSFLTIPLCLAAEGRLESALRGRLSPGGQKAWDWVHWFLKMRAYDYMCMGFVLLSLADTL
RYWASIYFCIHFLALAALGLGLALGGGSPSRRKAASQPTSLAPEKLREE

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FIGURE 1066

AAAGAACCGCACACCACAGACTCCCTCCAGCTCTTTGTGTGTGGCTCTCTCAGGGTCCAACAAGAGCAAGCTGTG
GGTCTGTGAGTGTTTATGTGTGCTTTTATTCACTTCACACTTATTGAAAAGTGTGTATGTGAGAGGGTGGGGTGT
GTGTGTCAAAGAGAGTGAGGAAGAGAAGGAGAGAGAGATCAATTGATTCTGCAGCCTCAGCTCCAGCATCCCTCA
GTTGGGAGCTTCCAAAGCCGGGTGATCACTTGGGGTGCATAGCTCGGAG**ATG**CAGTCCCCCTGGAAAATCCTTAC
GGTGGCGCCTCTATTCTTGCTCCTGTCTCTTCAGTCCTCGGCCTCTCCAGCCAACGATGACCAGTCCAGGCCCAG
CCTCTCGAATGGGCACACCTGTGTAGGGTGTGTGCTGGTGGTGTCTGTAATAGAACAGCTTGCTCAAGTTCACAA
CTCGACGGTCCAGGCCTCGATGGAGAGACTGTGCAGCTACCTGCCTGAAAAACTGTTCTTGAAAACCACCTGCTA
TTTAGTCATTGACAAGTTTGGATCAGACATCATAAAACTGCTTAGCGCAGATATGAATGCTGATGTGGTATGTCA
CACTCTGGAGTTTTGTAAACAGAACACTGGCCAACCATTGTGTCATCTCTACCCTCTTCCCAAGGAGACATGGAA
ATTTACACTACAGAAGGCAAGACAAATTGTCAAGAAGTCCCCGATTCTGAAATATTCTAGAAGTGGTTCTGACAT
TTGTTCACTCCCGGTTTTGGCCAAGATCTGCCAGAAAATTAAATTAGCTATGGAACAGTCTGTGCCATTCAAAGA
TGTGGATTCAGACAAATACAGCGTTTTCCCAACACTGCGGGGCTATCACTGGCGGGGGAGAGACTGTAATGACAG
CGACGAGTCAGTGTACCCAGGTAGAAGGCCGAACAACTGGGATGTCCATCAGGATTCAAACTGTAATGGCATTTG
GGGTGTCGATCCAAAAGATGGAGTTCCATATGAGAAGAAATTCTGTGAAGGTTCACAGCCCAGGGGAATCATTTT
GCTGGGAGACTCAGCTGGGGCTCATTTTCACATCTCTCCTGAATGGATCACAGCGTCGCAGATGTCTTTGAACTC
TTTCATCAATCTACCAACAGCCCTTACCAACGAGCTTGACTGGCCCCAACTCTCTGGTGCTACAGGATTTCTGGA
CTCCACTGTTGGAATTAAAGAAAAATCTATTTACCTTCGCTTATGGAAAAGAAACCACTGTAATCACAGGGACTA
CCAGAATATTTCAAGAAATGGTGCATCTTCCCGAAACCTGAAGAAATTTATAGAAAGCTTGTCTAGAAACAAGGT
GTTGGACTATCCCGCCATCGTTATATATGCCATGATTGGAAATGATGTCTGCAGTGGGAAGAGTGACCCAGTCCC
AGCCATGACCACTCCTGAGAAACTCTACTCCAACGTCATGCAGACTCTGAAGCATCTAAATTCCCACCTGCCCAA
TGGCAGCCATGTTATTTTGTATGGCTTACCAGATGGAACCTTTCTCTGGGATAATTTGCACAACAGATATCATCC
TCTCGGCCAGCTAAATAAAGACATGACCTATGCGCAGTTGTACTCCTTCCTGAACTGCCTCCAGGTCAGCCCCTG
CCACGGCTGGATGTCTTCCAACAAGACGTTGCGGACTCTCACTTCAGAGAGAGCAGAGCAACTCTCCAACACACT
GAAAAAAATTGCAGCCAGTGAGAAATTTACAAACTTCAATCTTTTCTACATGGATTTTGCCTTCCATGAAATCAT
ACAGGAGTGGCAGAAGAGAGGCGGACAGCCCTGGCAGCTCATCGAGCCCGTGGATGGATTCCACCCCAACGAGGT
GGCTTTGCTGTTGTTGGCGGATCATTTCTGGAAAAAGGTGCAGCTCCAGTGGCCCCAAATCCTGGGAAAGGAGAA
TCCGTTCAACCCCCAGATTAAACAGGTGTTTGGAGACCAAGGCGGGCAC**TGA**GCCTCTCAGGAGCATGCACCCCT
GGGGAGCACAGGGAGGCAGAGGCTTGGGTAAACTCATTCCACAAACCCTATGGGGGCTGCCACGTCACAGGCCCA
AAGGACTCTTCTTCAGCAGCATCTTTGCAAAATGTCTTTCTCTCAATGAAGAGCATATCTGGACGACTGTGCAAT
GCTGTGTGCTCCCGGGGATCAGTAACCCTTCCGCTGTTCCTGAAATAACCTTTCATAAAGTGCTTTGGGTGCCAT
TCCA

FIGURE 1067

MQSPWKILTVAPLFLLLSLQSSASPANDDQSRPSLSNGHTCVGCVLVVSVIEQLAQVHNSTVQASMERLCSYLPE
KLFLKTTCYLVIDKFGSDIIKLLSADMNADVVCHTLEFCKQNTGQPLCHLYPLPKETWKFTLQKARQIVKKSPIL
KYSRSGSDICSLPVLAKICQKIKLAMEQSVPFKDVDSDKYSVFPTLRGYHWRGRDCNDSDESVYPGRRPNNWDVH
QDSNCNGIWGVDPKDGVPYEKKFCEGSQPRGIILLGDSAGAHFHISPEWITASQMSLNSFINLPTALTNELDWPQ
LSGATGFLDSTVGIKEKSIYLRLWKRNHCNHRDYQNISRNGASSRNLKKFIESLSRNKVLDYPAIVIYAMIGNDV
CSGKSDPVPAMTTPEKLYSNVMQTLKHLNSHLPNGSHVILYGLPDGTFLWDNLHNRYHPLGQLNKDMTYAQLYSF
LNCLQVSPCHGWMSSNKTLRTLTSERAEQLSNTLKKIAASEKFTNFNLFYMDFAFHEIIQEWQKRGGQPWQLIEP
VDGFHPNEVALLLLADHFWKKVQLQWPQILGKENPFNPQIKQVFGDQGGH

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FIGURE 1068

ACAGAG**ATG**GCACTGATGCAGGAACTGTATAGCACACCAGCCTCCAGGCTGGACTCCTTCGTGGCTCAGTGGCTG
CAGCCCCACCGGGAGTGGAAGGAAGAGGTGCTAGACGCTGTGCGGACCGTGGAGGAGTTTCTGAGGCAGGAGCAT
TTCCAGGGGAAGCGTGGGCTGGACCAGGATGTGCGGGTGCTGAAGGTAGTCAAGGTGGGCTCCTTCGGGAATGGC
ACGGTTCTCAGGAGCACCAGAGAGGTGGAGCTGGTGGCGTTTCTGAGCTGTTTCCACAGCTTCCAGGAGGCAGCC
AAGCATCACAAAGATGTTCTGAGGCTGATATGGAAAACCATGTGGCAAAGCCAGGACCTGCTGGACCTCGGGCTC
GAGGACCTGAGGATGGAGCAGAGAGTCCCCGATGCTCTTGTCTTCACCATCCAGACCAGGGGGACTGCGGAGCCC
ATCACGGTCACCATTGTGCCTGCCTACAGAGCCCTGGGGCCTTCTCTTCCCAACTCCCAGCCACCCCCTGAGGTC
TATGTGAGCCTGATCAAGGCCTGCGGTGGTCCTGGAAATTTCTGCCCATCCTTCAGCGAGCTGCAGAGAAATTTC
GTGAAACATCGGCCAACTAAGCTGAAGAGCCTCCTGCGCCTGGTGAAACACTGGTACCAGCAGTATGTGAAAGCC
AGGTCCCCCAGAGCCAATCTGCCCCCTCTCTATGCTCTTGAACTTCTAACCATCTATGCCTGGGAAATGGGTACT
GAAGAAGACGAGAATTTCATGTTGGACGAAGGCTTCACCACTGTGATGGACCTGCTCCTGGAGTATGAAGTCATC
TGTATCTACTGGACCAAGTACTACACACTCCACAATGCAATCATTGAGGATTGTGTCAGAAAACAGCTCAAAAAA
GAGAGGCCCATCATCCTGGATCCGGCCGACCCCACCCTCAACGTGGCAGAAGGGTACAGATGGGACATCGTTGCT
CAGAGGGCCTCCCAGTGCCTGAAACAGGACTGTTGCTATGACAACAGGGAGAACCCCATCTCCAGCTGGAACGTG
AAGAGGGCACGAGACATCCACTTGACAGTGGAGCAGAGGGGTTACCCAGATTTCAACCTCATCGTGAACCCTTAT
GAGCCCATAAGGAAGGTTAAAGAGAAAATCCGGAGGACCAGGGGCTACTCTGGCCTGCAGCGTCTGTCCTTCCAG
GTTCCTGGCAGTGAGAGGCAGCTTCTCAGCAGCAGGTGCTCCTTAGCCAAATATGGGATCTTCTCCCACACTCAC
ATCTATCTGCTGGAGACCATCCCCTCCGAGATCCAGGTCTTCGTGAAGAATCCTGATGGTGGGAGCTACGCCTAT
GCCATCAACCCCAACAGCTTCATCCTGGGTCTGAAGCAGCAGATTGAAGACCAGCAGGGGCTTCCTAAAAAGCAG
CAGCAGCTGGAATTCCAAGGCCAAGTCCTGCAGGACTGGTTGGGTCTGGGGATCTATGGCATCCAAGACAGTGAC
ACTCTCATCCTCTCGAAGAAGAAAGGAGAGGCTCTGTTTCCAGCCAGT**TAG**TTTTCTCTGGGAGACTTCTCTGTA
CATTTCTGCCATGTACTCCAGAACTCATCCTGTCAATCACTCTGTCCCATTGTCTACTGGGAAGGTCCCAGGTCT
TCACCAGTTTTACAATGAGTTATCCCAGGCCAGACGTGGTAGCTCACACCTGTAATCCCAGAACTTTGGGAGGCC
GAGGTGGGAGGAGCGCTTGAGCCGAGGAGTTCAAGACCAGCCTGGGTATCATAGGGAGACCCCGTCTCTACAAAA
TAAAAAAATAATTCACTGGG

FIGURE 1069

MALMQELYSTPASRLDSFVAQWLQPHREWKEEVLDAVRTVEEFLRQEHFQGKRGLDQDVRVLKVVKVGSFGNGTV
LRSTREVELVAFLSCFHSFQEAAKHHKDVLRLIWKTMWQSQDLLDLGLEDLRMEQRVPDALVFTIQTRGTAEPIT
VTIVPAYRALGPSLPNSQPPPEVYVSLIKACGGPGNFCPSFSELQRNFVKHRPTKLKSLLRLVKHWYQQYVKARS
PRANLPPLYALELLTIYAWEMGTEEDENFMLDEGFTTVMDLLLEYEVICIYWTKYYTLHNAIIEDCVRKQLKKER
PIILDPADPTLNVAEGYRWDIVAQRASQCLKQDCCYDNRENPISSWNVKRARDIHLTVEQRGYPDFNLIVNPYEP
IRKVKEKIRRTRGYSGLQRLSFQVPGSERQLLSSRCSLAKYGIFSHTHIYLLETIPSEIQVFVKNPDGGSYAYAI
NPNSFILGLKQQIEDQQGLPKKQQQLEFQGQVLQDWLGLGIYGIQDSDTLILSKKKGEALFPAS

FIGURE 1070

AGCCTACGCACGAAAGTGACTAGGGAGGAAGGATATTATAAAGTGATGCAAACAGAAATTCCACCAGCCTCCATG
TATCATCATGTGTCATAACTCAGTCAAGCTCAGTGAGCATTCTCAGCACATTGCCTCAACAGCTTCAAGGTGAGC
CAGCTCAAGACTTTGCTCTCCACCAGGCAGAAG**ATG**ACAGACTGTGAATTTGGATATATTTACAGGCTGGCTCAG
GACTATCTGCAGTGCGTCCTACAGATACCACAACCTGGATCAGGTCCAAGCAAAACGTCCAGAGTGCTACAAAAT
GTTGCGTTCTCAGTCCAAAAAGAAGTGGAAAAGAATCTGAAGTCATGCTTGGACAATGTTAATGTTGTGTCCGTA
GACACTGCCAGAACACTATTCAACCAAGTGATGGAAAAGGAGTTTGAAGACGGCATCATTAACTGGGGAAGAATT
GTAACCATATTTGCATTTGAAGGTATTCTCATCAAGAAACTTCTACGACAGCAAATTGCCCCGGATGTGGATACC
TATAAGGAGATTTCATATTTTGTTGCGGAGTTCATAATGAATAACACAGGAGAATGGATAAGGCAAAACGGAGGC
TGGGAAAATGGCTTTGTAAAGAAGTTTGAACCTAAATCTGGCTGGATGACTTTTCTAGAAGTTACAGGAAAGATC
TGTGAAATGCTATCTCTCCTGAAGCAATACTGT**TGA**CCAGAAAGGACACTCCATATTGTGAAACCGGCCTAATTT
TTCTGACTGATATGGAAACGATTGCCAACACATACTTCTACTTTTAAATAAACAACTTTGATGATGTAACTTGAC
CTTCCAGAGTTATGGAAATTTTGTCCCCATGTAATGAATAAATTGTATGTATTTTTCTCT

FIGURE 1071

MTDCEFGYIYRLAQDYLQCVLQIPQPGSGPSKTSRVLQNVAFSVQKEVEKNLKSCLDNVNVVSVDTARTLFNQVM
EKEFEDGIINWGRIVTIFAFEGILIKKLLRQQIAPDVDTYKEISYFVAEFIMNNTGEWIRQNGGWENGFVKKFEP
KSGWMTFLEVTGKICEMLSLLKQYC

FIGURE 1072

CACAACCTAGTCCAGAGCCTCACAGTCCTACTGAACCTCCTGCATGGGGCAGCAGTATTGTGAAAGTTCCGTCTG
GTATATTTGATGTCAACAGCAGGAAAAGTAGCACTGGTAGTATATCAAATGTGCTGTTTTCTACTCAAGATCCAG
TTGAAGATGCAGTCTTTGGCGAAGCTACTAATCTCAAGAAGAATGGTGATAGAGGAGAAAAAAGACAAAAGCATT
TTCCTGAGAGGAGTTGTAGTTTTAGTTCTGAAAGTCGAGCAGGA**ATG**TTGCTTAAGAAGAGTAGTTTGGATTCGA
ATTCAAGTGAAATGGCTATCATGATGGGAGCAGATGCCAAGATTCTCACAGCAGCATTGACATGTCCTAAGACTT
CTCTACTTCATATTGCAAGAACCCATAGCTTTGAGAATGTTAGCTGTCACCTACCTGATAGTAGGACTTGTATGT
CTGAAAGCACTTGGAATCCTGAGCACAGATCATCTCCGGTGCCAGAGATGCTTGAGGAAAGCCAAGAACTCCTTG
AGCCTGTGGTTGATGACGTACCTAAAACTACTGCAACAGTAGATACATATGAGAGTCTACTAAGTGATAGTAACA
GTAATCAGTCCAGAGACTTGAAAACAGTATCCAAAGATCTGAGAAATAAGAGAAGTAGTTTATATGGTATTGCTA
AGGTGGTTCAGAGGGAAGATGTTGAAACTGGACTAGATCCTTTGTCTCTTTTAGCCACTGAATGTACAGGAGGAA
AAACTCCTGATTCTGAAGATAAGTTGTTTTCTCCAGTTATTGCACGTAATCTGGCTGATGAAATAGAAAGCTATA
TGAACCTAAAAAGTCCCCTAGGTAGTAAATCTTCTAGTATGGAATTACACAGAGAGGAAAACAGAGAGTCTGGCA
TGACTACTGCATTTATTCATGCTCTAGAGAGGAGATCAAGCCTACCTTTAGATCATGGTTCACCAGCACAGGAAA
ATCCTGAAAGTGAAAAGAGCTCACCTGCAGTGTCCAGGTCTAAAACTTTTACTGGGCGTTTCAAGCAGCAAACCC
CCTCTCGAACTCATAAAGAACGTTCAACTTCTTTGTCAGCACTGGTGCGTTCTTCGCCACATGGCTCGTTGGGTT
CTGTAGTAAATTCTTTGTCAGGGCTAAAGCTGGATAATATACTCTCAGGGCCCAAGATAGATGTCCTGAAATCTG
GTATGAAACAAGCAGCGACAGTAGCCAGTAAGATGTGGGTAGCTGTTGCGTCTGCCTACAGCTACTCAGATGATG
AGGAAGAAACTAATAGAGACTACAGCTTCCCAGCTGGCCTAGAAGACCATATTTTGGGGGAGAATATATCGCCTA
ACACAAGTATCTCAGGGTTGGTCCCCAGTGAACTTACCCAGAGCAACACAAGTCTTGGCAGTAGCAGCAGTAGTG
GAGATGTAGGAAAACTGCATTATCCAACAGGTGAAGTTCCATTTCCAAGAGGCATGAAAGGGCAAGACTTTGAAA
AATCAGATCATGGTTCTTCTCAAAATACCAGCATGTCTAGCATCTATCAGAATTGTGCAATGGAGGTTTTGATGT
CCAGTTGTTCACAGTGTAGAGCTTGTGGAGCTTTAGTTTATGATGAAGAAATTATGGCTGGATGGACAGCAGATG
ACTCAAATTTGAATACAGCTTGTCCATTCTGTAAAAGCAACTTCTTGCCTCTTCTCAATATAGAATTCAAAGATT
TGAGAGGTTCTGCAAGCTTTTTCCTGAAACCAAGTACCTCTGGTGACAGTTTACAAAGTGGAAGCATTCCATTGG
CAAATGAATCCTTGGAGCACAAACCTGTATCCAGTTTAGCAGAACCTGACTTGATCAACTTTATGGACTTCCCAA
AACATAACCAGATCATAACTGAAGAAACAGGCTCTGCAGTTGAACCAAGTGATGAAATAAAGAGAGCCAGTGGAG
ATGTCCAAACTATGAAAATTTCATCTGTGCCTAATAGTTTATCAAAGCGAAATGTGTCTTTGACTCGAAGTCACA
GTGTTGGAGGCCCATTGCAGAATATTGACTTTACCCAGCGACCGTTTCATGGCATCTCAACAGTTAGTCTTCCAA
ATAGTCTGCAGGAAGTTGTGGATCCTTTAGGAAAAAGACCCAATCCTCCCCCTGTTTCTGTGCCCTACTTGAGTC
CTCTAGTACTCCGTAAAGAACTTGAATCTTTGCTAGAAAATGAAGGTGATCAGGTGATTCATACATCTTCTTTCA
TCAATCAACATCCAATCATTTTCTGGAACCTCGTTTGGTATTTCAGACGTTTGGACCTTCCTAGTAACTTGCCAG
GACTTATCCTCACATCTGAACATTGTAATGAAGGTGTACAGCTTCCTCTGTCATCTCTGTCCCAGGATAGCAAAC
TTGTGTATATTCAGCTGTTATGGGATAATATCAACCTTCATCAGGAACCAAGAGAACCTCTGTATGTCTCATGGA
GGAATTTTAATTCTGAAAAGAAATCATCTCTCCTGTCAGAGGAACAACAAGAAACAAGCACTTTAGTAGAAACCA
TCAGGCAGAGTATTCAGCACAATAATGTTCTTAAACCCATCAACCTACTTTCACAGCAAATGAAGCCAGGCATGA
AAAGACAAAGAGGCATT**TGA**CAATGAATATGGAATTGCATACAATAGTCTGTCTTCAGAGATTCTTGAAAGGTTG
CAGAAAATTGATGCTCCACCAAGTGCCAGTGTCGAGTGGTGCAGGAAGTGTTTTGGAGCGCCTCTCATTTAAATA
GAGATTCACTAGAATGTTGACACACAAGGCTTGGGGATTAGATTTCATCTGGAAACATTCAAGTTTTTTTTTTCC
AAATCGTAAGAACTGGTGAATACGGAATTGAAGTAACTCTTGGGGACAATATATAATGAATTATGATTCATATTG
CATTACCTTGAAATATGAAGTGCCATTTGAATGTCCCAGGGCTTATTAATATTGAAGATTTTCAACCCCTGAACT
GCTTTTCTGCCTCTGTGGAAAACTACTTTGGGATTCTTCAGTATTTGTAGTAGTTTGATAGAAATAATGAGGAAC
CATATTCATTCTAGGCATTGTTTATATTTGAAGTTACTGAGTTTGAGGAATGGCAAATTAAATTTGCCTAACCCC
CAAAACAAATGAAATATCTCAATTATAAAAGCAACATGGCCGGGCACGGTGGCTCAGGCCTGTAATCCCAGCACT
TTGGGAGGCTGAGCAAGGTGGGTGGATCACTTGAGGCCAGGAGTTCGAGACCAGCCTGGCCAACACGGTGAGACC
CTGTCTTTACTAAAAATACAAAAATTAGCCAGGCGCACCACTGTAGTCCCAGCTACTCAGGCTGAGGCAGGAGAA
TCGCTTGAACTGAGGCAGAGGCTACAGTGAGTGGAGATCACGCCACTGCAACTCCAGCTTGGGTGACAGAGTGAG
ACCGTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1073

MLLKKSSLDSNSSEMAIMMGADAKILTAALTCPKTSLLHIARTHSFENVSCHLPDSRTCMSESTWNPEHRSSPVP
EMLEESQELLEPVVDDVPKTTATVDTYESLLSDSNSNQSRDLKTVSKDLRNKRSSLYGIAKVVQREDVETGLDPL
SLLATECTGGKTPDSEDKLFSPVIARNLADEIESYMNLKSPLGSKSSSMELHREENRESGMTTAFIHALERRSSL
PLDHGSPAQENPESEKSSPAVSRSKTFTGRFKQQTPSRTHKERSTSLSALVRSSPHGSLGSVVNSLSGLKLDNIL
SGPKIDVLKSGMKQAATVASKMWVAVASAYSYSDDEEETNRDYSFPAGLEDHILGENISPNTSISGLVPSELTQS
NTSLGSSSSSGDVGKLHYPTGEVPFPRGMKGQDFEKSDHGSSQNTSMSSIYQNCAMEVLMSSCSQCRACGALVYD
EEIMAGWTADDSNLNTACPFCKSNFLPLLNIEFKDLRGSASFFLKPSTSGDSLQSGSIPLANESLEHKPVSSLAE
PDLINFMDFPKHNQIITEETGSAVEPSDEIKRASGDVQTMKISSVPNSLSKRNVSLTRSHSVGGPLQNIDFTQRP
FHGISTVSLPNSLQEVVDPLGKRPNPPPVSVPYLSPLVLRKELESLLENEGDQVIHTSSFINQHPIIFWNLVWYF
RRLDLPSNLPGLILTSEHCNEGVQLPLSSLSQDSKLVYIQLLWDNINLHQEPREPLYVSWRNFNSEKKSSLLSEE
QQETSTLVETIRQSIQHNNVLKPINLLSQQMKPGMKRQRGI

FIGURE 1074

CCGCC**ATG**GGGTCCCTGTTCCGGAGCGAGACCATGTGCCTGGCGCAGCTCTTCCTGCAGTCGGGCACGGCCTACG
AGTGCCTCAGCGCCCTGGGCGAGAAAGGCCTGGTCCAGTTCCGAGACCTCAACCAGAACGTAAGTTCTTTCCAAA
GAAAATTTGTTGGTGAGGTGAAGAGGTGTGAAGAGCTAGAGCGAATATTGGTGTATTTGGTACAGGAAATTAATA
GAGCTGATATTCCCCTTCCTGAAGGAGAGGCCAGCCCTCCTGCGCCACCCCTGAAACAGGTTCTAGAAATGCAGG
AGCAGTTGCAGAAGCTCGAGGTTGAACTGAGAGAAGTCACTAAGAACAAGGAGAAACTGAGGAAAAACTTGCTGG
AACTGATAGAGTACACTCACATGCTGAGAGTGACAAAGACCTTTGTGAAACGCAACGTTGAGTTTGAACCCACTT
ATGAAGAATTCCCTTCCTTAGAGAGCGATTCTTTGTTGGATTACAGCTGTATGCAGAGGCTGGGAGCAAAACTGG
GATTTGTGTCTGGCCTAATTAACCAAGGAAAAGTGGAAGCATTTGAAAAAATGTTGTGGAGAGTCTGCAAAGGGT
ACACCATCGTGTCCTATGCAGAACTGGATGAATCCCTTGAAGACCCTGAAACAGGGGAAGTCATAAAATGGTATG
TCTTTTTAATATCCTTTTGGGGAGAGCAGATTGGCCACAAGGTTAAGAAGATATGTGATTGCTACCACTGCCACG
TGTACCCCTATCCAAACACAGCCGAGGAGCGGAGGGAGATCCAGGAGGGGCTGAACACCCGCATCCAGGATCTCT
ACACTGTACTGCACAAAACCGAGGACTATTTGAGGCAAGTGCTATGTAAAGCCGCCGAGTCTGTCTACAGCCGTG
TGATCCAGGTGAAGAAAATGAAGGCCATCTATCACATGCTGAACATGTGCAGCTTTGACGTGACCAACAAGTGCC
TCATTGCTGAAGTCTGGTGTCCCGAGGCGGATCTGCAGGACCTGCGCCGGGCACTGGAGGAGGGCTCGAGAGAGA
GTGGTGCTACAATCCCCTCATTCATGAATATAATCCCCACAAAAGAAACACCCCCCACTCGGATCCGCACCAACA
AATTCACCGAGGGATTTCAGAACATCGTGGATGCTTATGGAGTCGGAAGCTACAGAGAAGTCAATCCAGCTCTCT
TTACCATCATCACCTTCCCGTTTTTATTTGCTGTGATGTTTGGAGACTTCGGACATGGCTTTGTGATGTTTTTAT
TTGCCCTCTTGTGGGTGTTAAATGAAAATCATCCCAGACTAAATCAGTCACAAGAGATCATGAGGATGTTTTTTA
ATGGCCGGTACATCCTCCTGCTGATGGGGCTGTTCTCAGTGTACACTGGCCTCATCTACAACGACTGCTTTTCAA
AGTCAGTCAACCTGTTCGGCTCTGGGTGGAACGTGTCGGCCATGTACAGCTCCAGCCACCCACCCGCAGAGCATA
AGAAGATGGTGCTTTGGAACGACAGCGTCGTTAGACACAACAGCATTTTGCAGCTGGATCCAAGCATTCCTGGAG
TGTTCCGAGGCCCTTATCCCCTTGGCATTGATCCTATTTGGAACTTGGCCACAAATCGCCTCACTTTTCTAAACT
CTTTCAAAATGAAAATGTCCGTGATTTTAGGAATCATTCATATGACTTTTGGAGTCATTCTGGGAATATTTAACC
ACTTGCACTTCAGGAAGAAGTTCAACATTTACCTGGTTTCCATCCCGGAACTTCTCTTCATGCTCTGTATCTTTG
GATACCTTATATTTATGATTTTCTACAAGTGGCTGGTTTTTTCAGCAGAAACCTCCAGAGTTGCTCCCAGCATTC
TGATTGAATTTATTAACATGTTTTTATTCCCAGCCAGTAAAACAAGTGGCCTTTACACAGGGCAGGAGTATGTCC
AGAGAGTGCTGCTGGTTGTCACAGCATTGTCTGTCCCTGTCCTCTTCTTGGGAAAGCCACTGTTTTTGTTGTGGC
TTCACAATGGGCGTAGTTGCTTCGGGGTGAACCGGAGTGGCTACACACTTATAAGGAAAGATAGTGAGGAAGAAG
TTTCATTGCTGGGAAGCCAAGATATAGAAGAGGGAAATCACCAGGTGGAAGATGGATGTAGAGAAATGGCGTGTG
AAGAGTTTAATTTTGGAGAAATATTAATGACCCAAGTAATCCATTCCATCGAGTACTGTCTGGGATGCATCTCCA
ACACCGCCTCCTACCTGAGGCTCTGGGCGCTTAGCCTGGCTCACGCACAGTTGTCTGATGTCCTGTGGGCCATGC
TGATGCGCGTGGGCCTCCGCGTTGACACCACCTATGGCGTCTTGCTACTGCTCCCGGTTATCGCGCTCTTTGCAG
TTTTGACCATTTTCATCCTTCTGATCATGGAAGGGCTTTCTGCGTTTCTTCACGCCATACGCCTCCACTGGGTAG
AATTTCAGAACAAATTCTACGTTGGTGCAGGCACCAAATTTGTTCCTTTCTCATTCAGTCTACTTTCATCAAAGT
TCAATAACGACGACAGTGTGGCA**TGA**TCATATTGCTGTAACCAACAAGCTTTCAGATTTATGGAGAATGACCATG
TTATAGACTTTCACTTATGTCAGATTTATGATAGGAAAAATTCCATCTTCATTACTGCCTTATGACATAGCCAAA
TAATTCTGTAAGATATAC

FIGURE 1075

MGSLFRSETMCLAQLFLQSGTAYECLSALGEKGLVQFRDLNQNVSSFQRKFVGEVKRCEELERILVYLVQEINRA
DIPLPEGEASPPAPPLKQVLEMQEQLQKLEVELREVTKNKEKLRKNLLELIEYTHMLRVTKTFVKRNVEFEPTYE
EFPSLESDSLLDYSCMQRLGAKLGFVSGLINQGKVEAFEKMLWRVCKGYTIVSYAELDESLEDPETGEVIKWYVF
LISFWGEQIGHKVKKICDCYHCHVYPYPNTAEERREIQEGLNTRIQDLYTVLHKTEDYLRQVLCKAAESVYSRVI
QVKKMKAIYHMLNMCSFDVTNKCLIAEVWCPEADLQDLRRALEEGSRESGATIPSFMNIIPTKETPPTRIRTNKF
TEGFQNIVDAYGVGSYREVNPALFTIITFPFLFAVMFGDFGHGFVMFLFALLWVLNENHPRLNQSQEIMRMFFNG
RYILLLMGLFSVYTGLIYNDCFSKSVNLFGSGWNVSAMYSSSHPPAEHKKMVLWNDSVVRHNSILQLDPSIPGVF
RGPYPLGIDPIWNLATNRLTFLNSFKMKMSVILGIIHMTFGVILGIFNHLHFRKKFNIYLVSIPELLFMLCIFGY
LIFMIFYKWLVFSAETSRVAPSILIEFINMFLFPASKTSGLYTGQEYVQRVLLVVTALSVPVLFLGKPLFLLWLH
NGRSCFGVNRSGYTLIRKDSEEEVSLLGSQDIEEGNHQVEDGCREMACEEFNFGEILMTQVIHSIEYCLGCISNT
ASYLRLWALSLAHAQLSDVLWAMLMRVGLRVDTTYGVLLLLPVIALFAVLTIFILLIMEGLSAFLHAIRLHWVEF
QNKFYVGAGTKFVPFSFSLLSSKFNNDDSVA

FIGURE 1076

ACCTGGTGCGGGAGGCCCGGGCAGGGAGAAGTGTGCGGGGCCGGGACAAGCCGGCTCCGAGTGCGGGGCGGGAGG
GGCCTGCGCGGCGGCGGGAGCCCAGAGCCGCGCTAAAGCGGGTCAAGCGTCCTCCTTTTCTCCCCGCCCCTTCTC
CTCCTCCTACCTGGGCCTCTGCGTGGAGACGCGCACCTGGCAACCGGAGGCCGCGTCTCCGCCTTCTCTGCTCGC
GCCTGGCGCCCGGAGCCTGCCCGGGACCTCCGCCGGAGCCGCGCTCGCTGCAGGCGGCCTCGAGCGCTCTCTCGT
TGATGCCGTTTTGGAGGTGACCGGCGCGGCGGCCGCTCTATGGTGGGGCCGCGTTAGTGGCTGCGGCTCCGCGGG
ACTCCAGGGCGCGGCTGCGAGGTGGCGGGGCGCCCCGCCTGCAGAACCCTGCTTGCAGCTCAGGTTTCGGGGTGC
TTGAGGAGGCCGCCACGGCAGCGCGGGAGCGGAAG**ATG**TTGGAGCTGAGGCACCGGGGAAGCTGCCCCGGCCCCA
GGGAAGCGGTGTCGCCGCCACACCGCGAGGGAGAGGCGGCCGGCGGCGACCACGAAACCGAGAGCACCAGCGACA
AAGAAACAGATATTGATGACAGATATGGAGATTTGGATTCCAGAACAGATTCTGATATTCCGGAAATTCCACCAT
CCTCAGATAGAACCCCTGAGATTCTCAAAAAAGCTCTATCTGGTTTATCTTCAAGGTGGAAAAACTGGTGGATAC
GTGGAATTCTCACTCTAACTATGATCTCGTTGTTTTTCCTGATCATCTATATGGGATCCTTCATGCTGATGCTTC
TTGTTCTGGGCATCCAAGTGAAATGCTTCCATGAAATTATCACTATAGGTTATAGAGTCTATCATTCTTATGATC
TACCATGGTTTAGAACACTAAGTTGGTACTTTCTATTGTGTGTAAACTACTTTTTCTATGGAGAGACTGTAGCTG
ATTATTTTGCTACATTTGTTCAAAGAGAAGAACAACTTCAGTTCCTCATTCGCTACCATAGATTTATATCATTTG
CCCTCTATCTGGCAGGTTTCTGCATGTTTGTACTGAGTTTGGTGAAGAAACATTATCGTCTGCAGTTTTATATGT
TCGCATGGACTCATGTCACTTTACTGATAACTGTCACTCAGTCACACCTTGTCATCCAAAATCTGTTTGAAGGCA
TGATATGGTTCCTTGTTCCAATATCAAGTGTTATCTGCAATGACATAACTGCTTACCTTTTTGGATTTTTTTTTG
GGAGAACTCCATTAATTAAGTTGTCTCCTAAAAAGACTTGGGAAGGATTCATTGGTGGTTTCTTTTCCACAGTTG
TGTTTGGATTCATTGCTGCCTATGTGTTATCCAAATACCAGTACTTTGTCTGCCCAGTGGAATACCGAAGTGATG
TAAACTCCTTCGTGACAGAATGTGAGCCCTCAGAACTTTTCCAGCTTCAGACTTACTCACTTCCACCCTTTCTAA
AGGCAGTCTTGAGACAGGAAAGAGTGAGCTTGTACCCTTTCCAGATCCACAGCATTGCACTGTCAACCTTTGCAT
CTTTAATTGGCCCATTTGGAGGCTTCTTTGCTAGTGGATTCAAAAGAGCCTTCAAAATCAAGGATTTTGCAAATA
CCATTCCTGGACATGGTGGGATAATGGACAGATTTGATTGTCAGTATTTGATGGCAACTTTTGTACATGTGTACA
TCACAAGTTTTATCCGGGGCCCAAATCCCAGCAAAGTGCTACAGCAGTTGTTGGTGCTTCAACCTGAACAGCAGT
TAAATATATATAAAACCC**TGA**AGACTCATCTCATTGAGAAAGGAATCCTACAACCCACCTTGAAGGTATAACTGG
ATCCAGAGAGGGAAGGACTGACAAGAAGGAATTATTCAGAAAAACACTGACAGATGTTTTATAAATTGTACAGAA
AAATAGTTAAAAATGCAATAGGTTGAAGTTTTGGAGATATGTTTCTCTCTGAAATTACTGTGAATATTTAACAAA
CACTTACTTGATCTATGTTATGAAATAAGTAGCAAATTGCCAGCAAAATGTCTTGTACCTTTTCTAAAGTGTATT
TTCTGATGTGAACTTCCTTCCCCTTACTTGCTAGGTTTCATAATTTAAAAGAGTCAAACACTATAAAATGAGTAA
GTTGACGATGTTTTAAGATTGCACCTGGCAGTGTGCCTTTTTGCACAAATATTTACTTTTGCACTTGGAGCTGCT
TTTAATTTTAGCAAAATGTTTTATGCAAGGCACAATAGGAAGTCAGTTCTCCTGCACTTCCTCCTCATGTAGTCT
GGAGTACTTTCTAAAGGGCTTAGTTGGATTTAAAAAAAAAAAAAAAAAA

FIGURE 1077

MLELRHRGSCPGPREAVSPPHREGEAAGGDHETESTSDKETDIDDRYGDLDSRTDSDIPEIPPSSDRTPEILKKA
LSGLSSRWKNWWIRGILTLTMISLFFLIIYMGSFMLMLLVLGIQVKCFHEIITIGYRVYHSYDLPWFRTLSWYFL
LCVNYFFYGETVADYFATFVQREEQLQFLIRYHRFISFALYLAGFCMFVLSLVKKHYRLQFYMFAWTHVTLLITV
TQSHLVIQNLFEGMIWFLVPISSVICNDITAYLFGFFFGRTPLIKLSPKKTWEGFIGGFFSTVVFGFIAAYVLSK
YQYFVCPVEYRSDVNSFVTECEPSELFQLQTYSLPPFLKAVLRQERVSLYPFQIHSIALSTFASLIGPFGGFFAS
GFKRAFKIKDFANTIPGHGGIMDRFDCQYLMATFVHVYITSFIRGPNPSKVLQQLLVLQPEQQLNIYKP

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FIGURE 1078

CGGGAAACGGCAAACAGCGAGATATCCGAGCGAGAGTCCCGCCCTGCATCAGTTTGCGGAACCGCCTTGGTAGAA
GGAGAGAAGGGGAGTGGAGGAAGCACGGGACTGGAGGGACCAAAGTTCCCCG**ATG**GCGGCCCAGGGGTGCGCGGC
ATCGCGGCTGCTCCAGCTGCTGCTGCAGCTTCTGCTTCTACTGTTGCTGCTGGCGGCGGGCGGGGCGCGCGCGCG
GTGGCGCGCGGAGGGCACCAGCGCACACTTGCGGGACATCTTCCTGGGCCGCTGCGCCGAGTACCGCGCACTGCT
GAGTCCCGAGCAGCGGAACAAGAACTGCACAGCCATCTGGGAAGCCTTTAAAGTGGCGCTGGACAAGGATCCCTG
CTCCGTGCTGCCCTCAGACTATGACCTTTTTATTAACTTGTCCAGGCACTCTATTCCCAGAGATAAGTCCCTGTT
CTGGGAAAATAGCCACCTCCTTGTTAACAGCTTTGCAGACAACACCCGTCGTTTTATGCCCCTGAGCGATGTTCT
GTATGGCAGGGTTGCAGATTTCTTGAGCTGGTGTCGACAGAAAAATGACTCTGGACTCGATTACCAATCCTGCCC
TACATCAGAAGACTGTGAAAATAATCCTGTGGATTCCTTTTGGAAAAGGGCATCCATCCAGTATTCCAAGGATAG
TTCTGGGGTGATCCACGTCATGCTGAATGGTTCAGAGCCAACAGGAGCCTATCCCATCAAAGGTTTTTTTGCAGA
TTATGAAATTCCAAACCTCCAGAAGGAAAAAATTACACGAATCGAGATCTGGGTTATGCATGAAATTGGGGGACC
CAATGTGGAATCCTGCGGGGAAGGCAGCATGAAAGTCCTGGAAAAGAGGCTGAAGGACATGGGGTTCCAGTACAG
CTGTATTAATGATTACCGACCAGTGAAGCTCTTACAGTGCGTGGACCACAGCACCCATCCTGACTGTGCCTTAAA
GTCGGCAGCAGCCGCTACTCAAAGAAAAGCCCCAAGTCTTTATACAGAACAAAGGGCGGGTCTTATCATTCCCCT
CTTTCTGGTGCTGGCTTCCCGGACTCAACTG**TAA**CTGGAAACTGTGTTGCTCTAACCCTCCTCCAGCCCTGCAGC
CTCCCCTTGCAGTCATCATTCGTGTTCTGTGTATACCAAATGATTCTGTTATCTAAAGAAGCTTTTTGCTGGGAA
AACGATGTCCTGAAAATGGTATTTCAATGAGGCATATGTTCAGGATTTCAGAAACAAGAAGTTAGTTCTATTTAG
CAGGTTAAAAAATGCTGCATTAGAATTAAAGCAAGTTATTTTCTTATTTGTATAATGACACAAAGCATTGGGAGT
CAGACTGCTTGTATATTATCAAACATTTTAAGAGAATTCTAATAAAGCTGTATTTTACATC

FIGURE 1079

MAAQGCAASRLLQLLLQLLLLLLLLAAGGARARWRAEGTSAHLRDIFLGRCAEYRALLSPEQRNKNCTAIWEAFK
VALDKDPCSVLPSDYDLFINLSRHSIPRDKSLFWENSHLLVNSFADNTRRFMPLSDVLYGRVADFLSWCRQKNDS
GLDYQSCPTSEDCENNPVDSFWKRASIQYSKDSSGVIHVMLNGSEPTGAYPIKGFFADYEIPNLQKEKITRIEIW
VMHEIGGPNVESCGEGSMKVLEKRLKDMGFQYSCINDYRPVKLLQCVDHSTHPDCALKSAAAATQRKAPSLYTEQ
RAGLIIPLFLVLASRTQL

FIGURE 1080

GTTCCTCCGGGAGCCCAACACCGTTCCCGCGCGGCCACG**ATG**ATCCCTCCGAGCAGCCCCCGCGAGGACGGCGTG
GACGGGCTGCCCAAGGAGGCGGTGGGCGCCGAGCAACCGCCCTCTCCTGCATCCACCAGCAGCCAGGAATCCAAG
CTCCAGAAACTAAAACGATCACTTTCTTTCAAGACCAAGAGTTTACGGAGCAAAAGTGCTGACAACTTCTTCCAG
CGAACCAACAGCGAAGACATGAAACTGCAAGCACACATGGTGGCTGAGATCAGCCCCAGCTCCAGCCCACTCCCT
GCTCCAGGAAGCCTGACGTCCACACCCGCCAGGGCTGGTCTGCATCCAGGTGGCAAGGCTCATGCCTTTCAGGAA
TACATCTTCAAGAAGCCCACTTTCTGTGATGTCTGCAACCACATGATAGTGGGAACAAATGCTAAGCATGGACTG
CGCTGCAAAGCCTGTAAGATGAGCATCCACCACAAGTGCACAGATGGCCTGGCACCCCAGCGGTGCATGGGCAAG
CTGCCAAAGGGGTTTCGGCGTTACTACAGCTCCCCCTTGCTCATTCATGAACAGTTTGGCTGCATTAAAGAAGTT
ATGCCCATTGCCTGTGGCAATAAGGTGGACCCTGTCTACGAGACCCTCCGCTTCGGCACCTCCCTGGCCCAGAGG
ACAAAGAAGGGCAGCTCCGGCAGTGGCTCTGACTCACCTCACAGAACCTCTACTTCAGATCTTGTGGAGGTTCCT
GAGGAAGCCAATGGGCCAGGAGGCGGGTATGACCTAAGGAAACGCAGCAACAGCGTGTTTACATATCCAGAAAAT
GGCACTGATGATTTCAGAGATCCAGCGAAGAACATAAACCACCAGGGATCTCTTTCCAAAGACCCATTACAGATG
AACACCTATGTTGCCTTGTACAAATTTGTACCACAGGAGAATGAAGATTTGGAAATGAGGCCAGGAGACATAATT
ACTCTTTTAGAGGATTCCAATGAAGACTGGTGGAAAGGGAAAATTCAAGACAGAATTGGCTTCTTTCCAGCCAAC
TTTGTTCAGAGACTACAACAAAATGAGAAGATTTTTAGATGTGTTAGAACCTTCATTGGGTGTAAGGAACAGGGG
CAGATAACACTGAAAGAGAATCAGATCTGCGTGAGTTCTGAAGAAGAACAAGATGGTTTTATCAGAGTCCTCAGT
GGAAAAAAGAAAGGCCTCATCCCCCTTGATGTACTAGAAAACATC**TGA**TTGCTGGCTCCTCCTCCGTTTGCAGTA
GGCAAGCTCTGCTGCGATGCCTCTGCCTCATCTCACACTGCGTCAACCCAAAGGAGCTGCCGCACTGACCCAGCC
CCCCAGGAAACAGTGAGACAAGAATCAAGTATCTGAGACTGTGGAGTAATAGCCACAAAACAGAGGGCCCACTGC
ACAGCATATCCAGGCTGCCACAGGTGGGGACGAGGCTGAGAGAGTCAGCAGGCAGAGCCAGATGCCATGCTTGGC
AGCAGCAGTAGGACTATAAACCACAGCTGTCCCCCAGGATCCCACTCCTTTCCTGTCTGTGTGGTGTAAGTTAAC
ACACTGGAGTGTGCTCCAGTTTGCAGGGTAGCCCAGTGCAAGGTTCAGATCCATGTAGCTAAGTATTATCCTGCT
TCCAGACCTATGTCACCAGTACCAATCAGTCAGTGTCATCACATTTCAGGCCCCAAGCAATCTCTGTGCAAAGCA
TCAGAAAGACCTGCTTCCCAGCCCCCAGCATTCCAGTGCTCTCCAGGCTTCCTCTCTTTGTGATTGTGCTGTCCA
GAGTGTCCAGCTTGTTCTTTCTTTCTCTTCAGTCCTCTGAGTACATCTGGTGGTGTGCATTAGATGTGAGGGCTA
TGTTGACATGGCATCACCTCCAAAGACCTGACCTGCCTAAAGACTGATGACAGGCCATCCTTCCTGCTGTTCTAG
GTACTGGCCTGGGTGACAGAGCAGGACATGAGACATAGATACAGTGGGGAGGAGAAGTGGGGAAAGGTGGAGCAG
AGAGTTCTTACTTATTGAAGATTATACAGCCCTTTCGGTTATGAAGTCCCTGCTTGAAGGCAATGGACCTGGGGA
AGAGACTATCACAAAAAGTCTCCATTTTCATTTTACATCCTCTCTATTGGAGGCAGCACTTTTCCCTCATGCTGT
CCTATAGGACTCCACTTTGAAGGTTGTGCCTACGTTGCAGGGAACTAGGAACATGGAGGGGAACCAACAACAGCA
TCTTAGAAGAAATGTAGCCAAATTGGAGTCCATTCTTCTTTAGGGCAGTATATGAAATCCTAGCAGATGTAAAAT
GGAAAAGAATCCTAATGCTTCTTCCTTCAGAAAGTAGAGGAACTAGGGGCCCAATTAGCATCATCTAGGGGAATC
TCTATTACTCTGTACTTATACTAATGTTTACAAGAATGCAATATACTGTGATGCCTTCCTACTCAAGCCTCCTAG
CATTCAAACTTCCATCCTATTAGTCATTAACGTGGTTAAACTTCAATTCACAATCACCTTGGAATCAATGTCAGT
TTGATTTATTTTGTTACAGAGCAATAAAATCATTAGAACAATGGTTTTTAAAAGACTTAAGTGGATGCATCCTAT
GCATGTAAGCATTATTTCCCAAACCAAAGCATCATTCATCTCCATTTATTTCTTTTGTTCCCGCTCAGTGTGAAG
TTGGGAACTGAGAGGGGATGGCTGCTGGTTTCACAGAAGTTTGGATGCCTTACTCTTATCTTAAAGCCAGCATCC
AGAATTTCCTCCCTCTCTGATGCCACATGCAAAACCAGGTGTACGATGTCAAGATGGATTCTTTGAGAGCCAGGG
TAGATCATATGACTGCCTTTCTGTAAAATTGGATGCCTAGTACAAATGCTCTTTGCCTCTAATTCAGTATTCCAT
TTAATAAAAACAATACAGTGGCTGGAAAGGAGCATCAG

FIGURE 1081

MIPPSSPREDGVDGLPKEAVGAEQPPSPASTSSQESKLQKLKRSLSFKTKSLRSKSADNFFQRTNSEDMKLQAHM
VAEISPSSSPLPAPGSLTSTPARAGLHPGGKAHAFQEYIFKKPTFCDVCNHMIVGTNAKHGLRCKACKMSIHHKC
TDGLAPQRCMGKLPKGFRRYYSSPLLIHEQFGCIKEVMPIACGNKVDPVYETLRFGTSLAQRTKKGSSGSGSDSP
HRTSTSDLVEVPEEANGPGGGYDLRKRSNSVFTYPENGTDDFRDPAKNINHQGSLSKDPLQMNTYVALYKFVPQE
NEDLEMRPGDIITLLEDSNEDWWKGKIQDRIGFFPANFVQRLQQNEKIFRCVRTFIGCKEQGQITLKENQICVSS
EEEQDGFIRVLSGKKKGLIPLDVLENI

FIGURE 1082

GAGCGCCGGCGCGGGACCGAGCTGGCGGCGGGCGGCGCGCGCTTCCGAGGCTTCCTGCTGCTTCTGCCCGAGCCC
GCGGCCTCACGCGCGCCCTCTCCCGTGCC**ATG**GCCTGCAGGCAGGAGCCGCAGCCGCAGGGCCCGCCGCCCGCTG
CTGGCGCCGTGGCCTCCTATGACTACCTGGTGATCGGGGGCGGCTCGGGCGGGCTGGCCAGCGCGCGCAGGGCGG
CCGAGCTGGGTGCCAGGGCCGCCGTGGTGGAGAGCCACAAGCTGGGTGGCACTTGCGTGAATGTTGGATGTGTAC
CCAAAAAGGTAATGTGGAACACAGCTGTCCACTCTGAATTCATGCATGATCATGCTGATTATGGCTTTCCAAGTT
GTGAGGGTAAATTCAATTGGCGTGTTATTAAGGAAAAGCGGGATGCCTATGTGAGCCGCCTGAATGCCATCTATC
AAAACAATCTCACCAAGTCCCATATAGAAATCATCCGTGGCCATGCAGCCTTCACGAGTGATCCCAAGCCCACAA
TAGAGGTCAGTGGGAAAAAGTACACCGCCCCACACATCCTGATCGCCACAGGTGGTATGCCCTCCACCCCTCATG
AGAGCCAGATCCCCGGTGCCAGCTTAGGAATAACCAGCGATGGATTTTTTCAGCTGGAAGAATTGCCCGGCCGCA
GCGTCATTGTTGGTGCAGGTTACATTGCTGTGGAGATGGCAGGGATCCTGTCAGCCCTGGGTTCTAAGACATCAC
TGATGATACGGCATGATAAGGTACTTAGAAGTTTTGATTCAATGATCAGCACCAACTGCACGGAGGAGCTGGAGA
ACGCTGGCGTGGAGGTGCTGAAGTTCTCCCAGGTCAAGGAGGTTAAAAAGACTTTGTCGGGCTTGGAAGTCAGCA
TGGTTACTGCAGTTCCCGGTAGGCTACCAGTCATGACCATGATTCCAGATGTTGACTGCCTGCTCTGGGCCATTG
GGCGGGTCCCGAATACCAAGGACCTGAGTTTAAACAAACTGGGGATTCAAACCGATGACAAGGGTCATATCATCG
TAGACGAATTCCAGAATACCAACGTCAAAGGCATCTATGCAGTTGGGGATGTATGTGGAAAAGCTCTTCTTACTC
CAGTTGCAATAGCTGCTGGCCGAAAACTTGCCCATCGACTTTTTGAATATAAGGAAGATTCCAAATTAGATTATA
ACAACATCCCAACTGTGGTCTTCAGCCACCCCCCTATTGGGACAGTGGGACTCACGGAAGATGAAGCCATTCATA
AATATGGAATAGAAAATGTGAAGACCTATTCAACGAGCTTTACCCCGATGTATCACGCAGTTACCAAAAGGAAAA
CAAAATGTGTGATGAAAATGGTCTGTGCTAACAAGGAAGAAAAGGTGGTTGGGATCCATATGCAGGGACTTGGGT
GTGATGAAATGCTGCAGGGTTTTGCTGTTGCAGTGAAGATGGGAGCAACGAAGGCAGACTTTGACAACACAGTCG
CCATTCACCCTACCTCTTCAGAAGAGCTGGTCACACTTCGT**TGA**GAACCAGGAGACACGTGTGGCGGGCAGTGGG
ACCCATAGATCTTCTGAAATGAAACAAATAATCACATTGACTT

FIGURE 1083

MACRQEPQPQGPPPAAGAVASYDYLVIGGGSGGLASARRAAELGARAAVVESHKLGGTCVNVGCVPKKVMWNTAV
HSEFMHDHADYGFPSCEGKFNWRVIKEKRDAYVSRLNAIYQNNLTKSHIEIIRGHAAFTSDPKPTIEVSGKKYTA
PHILIATGGMPSTPHESQIPGASLGITSDGFFQLEELPGRSVIVGAGYIAVEMAGILSALGSKTSLMIRHDKVLR
SFDSMISTNCTEELENAGVEVLKFSQVKEVKKTLSGLEVSMVTAVPGRLPVMTMIPDVDCLLWAIGRVPNTKDLS
LNKLGIQTDDKGHIIVDEFQNTNVKGIYAVGDVCGKALLTPVAIAAGRKLAHRLFEYKEDSKLDYNNIPTVVFSH
PPIGTVGLTEDEAIHKYGIENVKTYSTSFTPMYHAVTKRKTKCVMKMVCANKEEKVVGIHMQGLGCDEMLQGFAV
AVKMGATKADFDNTVAIHPTSSEELVTLR

FIGURE 1084

CAGAAGCAGCAAACCGCCGGCAAGCCCAGCGAGGAGGGCTGCCGGGGTCTGGGCTTGGGAATTGGCTGGCACCCA
GCGGAAAGGGACGTGAGCTGAGCGCGGGGGAGAAGAGTGCGCAGGTCAGAGGGCGGCGCGCAGTCCGCGAGGTCC
CCACGCCGGGCGAT**ATG**GGGTGCCTGCTGTTTCTGCTGCTCTGGGCGCTCCTCCAGGCTTGGGGAAGCGCTGAAG
TCCCGCAAAGGCTTTTCCCCCTCCGCTGCCTCCAGATCTCGTCCTTCGCCAATAGCAGCTGGACGCGCACCGACG
GCTTGGCGTGGCTGGGGGAGCTGCAGACGCACAGCTGGAGCAACGACTCGGACACCGTCCGCTCTCTGAAGCCTT
GGTCCCAGGGCACGTTCAGCGACCAGCAGTGGGAGACGCTGCAGCATATATTTCGGGTTTATCGAAGCAGCTTCA
CCAGGGACGTGAAGGAATTCGCCAAAATGCTACGCTTATCCTATCCCTTGGAGCTCCAGGTGTCCGCTGGCTGTG
AGGTGCACCCTGGGAACGCCTCAAATAACTTCTTCCATGTAGCATTTCAAGGAAAAGATATCCTGAGTTTCCAAG
GAACTTCTTGGGAGCCAACCCAAGAGGCCCCACTTTGGGTAAACTTGGCCATTCAAGTGCTCAACCAGGACAAGT
GGACGAGGGAAACAGTGCAGTGGCTCCTTAATGGCACCTGCCCCCAATTTGTCAGTGGCCTCCTTGAGTCAGGGA
AGTCGGAACTGAAGAAGCAAGTGAAGCCCAAGGCCTGGCTGTCCCGTGGCCCCAGTCCTGGCCCTGGCCGTCTGC
TGCTGGTGTGCCATGTCTCAGGATTCTACCCAAAGCCTGTATGGGTGAAGTGGATGCGGGGTGAGCAGGAGCAGC
AGGGCACTCAGCCAGGGGACATCCTGCCCAATGCTGACGAGACATGGTATCTCCGAGCAACCCTGGATGTGGTGG
CTGGGGAGGCAGCTGGCCTGTCCTGTCGGGTGAAGCACAGCAGTCTAGAGGGCCAGGACATCGTCCTCTACTGGG
GTGGGAGCTACACCTCCATGGGCTTGATTGCCTTGGCAGTCCTGGCGTGCTTGCTGTTCCTCCTCATTGTGGGCT
TTACCTCCCGGTTTAAGAGGCAAACTTCCTATCAGGGCGTCCTG**TGA**CTCGCCTTGCCACATCTGTGTCTCTGGA
ACCCAGGACCTCTGGACCTCAGGTTCCCAAGACTTCAGTCCTGGTCTGCTCAGGAATTGAAGATGTAAGGAATTG
AAGATAGGAGAGATACCTTGAAAAAGTAGAGAACAGTCATGAGGCAGCTTTCATCACACCCTTTTAACATTTATC
TAAAAGAATTTAAATTCTTTTTCAAAAATTACACTACAAGTTTATAAGCCCAAATGGCTCTGTGAAATCAGAAGT
GCAAAGGTGTGCAAACTTGTATCTGAAGACCTACCAGGGACAAGCAGGTAAGAGCTGATGTGAGTGTGTGTGATG
GGATCTGTAAGGAACTGGAACACACATGTCCTATCCAAAGGAATCAGCTGCAGCTGCTTGTTGTCAAGTATAAAG
TCAGGACCTGGCTTGGCTTTAACCGTTTTTCAAGAAAACTGGAAATCTGGATTTTCAGCGAACATGCCTGATTTT
AAAAGGTTGACTCAAGTTTTTACAAAATACTATGTGGGACACCTCAAATACATACCTACTGACTGATGACAAACC
CAGGAGTTTGTGTGTCTTTTATAAAAAGTTTGCCCTGGATGTCATATTGGCAGTTGGAGGACACAGTTTCTATTG
TAAATTTGGATTTACGACTGAAGAAGGACATTTTCTCTTTAAAAGAAAGTTAGGTTATAAGAAACAGAGGCGTCT
CACATTTTTACTTGGTGTAATTAATAAA

FIGURE 1085

MGCLLFLLLWALLQAWGSAEVPQRLFPLRCLQISSFANSSWTRTDGLAWLGELQTHSWSNDSDTVRSLKPWSQGT
FSDQQWETLQHIFRVYRSSFTRDVKEFAKMLRLSYPLELQVSAGCEVHPGNASNNFFHVAFQGKDILSFQGTSWE
PTQEAPLWVNLAIQVLNQDKWTRETVQWLLNGTCPQFVSGLLESGKSELKKQVKPKAWLSRGPSPGPGRLLLVCH
VSGFYPKPVWVKWMRGEQEQQGTQPGDILPNADETWYLRATLDVVAGEAAGLSCRVKHSSLEGQDIVLYWGGSYT
SMGLIALAVLACLLFLLIVGFTSRFKRQTSYQGVL

FIGURE 1086

CTCTCTCTCTATCTCTCTCAGA**ATG**ACAATTCTAGGTACAACTTTTGGCATGGTTTTTTCTTTACTTCAAGTCGT
TTCTGGAGAAAGTGGCTATGCTCAAAATGGAGACTTGGAAGATGCAGAACTGGATGACTACTCATTCTCATGCTA
TAGCCAGTTGGAAGTGAATGGATCGCAGCATTCACTGACCTGTGCTTTTGAGGACCCAGATGTCAACACCACCAA
TCTGGAATTTGAAATATGTGGGGCCCTCGTGGAGGTAAAGTGCCTGAATTTCAGGAAACTACAAGAGATATATTT
CATCGAGACAAAGAAATTCTTACTGATTGGAAAGAGCAATATATGTGTGAAGGTTGGAGAAAAGAGTCTAACCTG
CAAAAAAATAGACCTAACCACTATAGTTAAACCTGAGGCTCCTTTTGACCTGAGTGTCATCTATCGGGAAGGAGC
CAATGACTTTGTGGTGACATTTAATACATCACACTTGCAAAAGAAGTATGTAAAAGTTTTAATGCATGATGTAGC
TTACCGCCAGGAAAAGGATGAAAACAAATGGACGCATGTGAATTTATCCAGCACAAAGCTGACACTCCTGCAGAG
AAAGCTCCAACCGGCAGCAATGTATGAGATTAAAGTTCGATCCATCCCTGATCACTATTTTAAAGGCTTCTGGAG
TGAATGGAGTCCAAGTTATTACTTCAGAACTCCAGAGATCAATAATAGCTCAGGGGAGATGGATCCTATCTTACT
AACCATCAGCATTTTGAGTTTTTTCTCTGTCGCTCTGTTGGTCATCTTGGCCTGTGTGTTATGGAAAAAAAGGAT
TAAGCCTATCGTATGGCCCAGTCTCCCCGATCATAAGAAGACTCTGGAACATCTTTGTAAGAAACCAAGAAAAAA
TTTAAATGTGAGTTTCAATCCTGAAAGTTTCCTGGACTGCCAGATTCATAGGGTGGATGACATTCAAGCTAGAGA
TGAAGTGGAAGGTTTTCTGCAAGATACGTTTCCTCAGCAACTAGAAGAATCTGAGAAGCAGAGGCTTGGAGGGGA
TGTGCAGAGCCCCAACTGCCCATCTGAGGATGTAGTCGTCACTCCAGAAAGCTTTGGAAGAGATTCATCCCTCAC
ATGCCTGGCTGGGAATGTCAGTGCATGTGACGCCCCTATTCTCTCCTCTTCCAGGTCCCTAGACTGCAGGGAGAG
TGGCAAGAATGGGCCTCATGTGTACCAGGACCTCCTGCTTAGCCTTGGGACTACAAACAGCACGCTGCCCCCTCC
ATTTTCTCTCCAATCTGGAATCCTGACATTGAACCCAGTTGCTCAGGGTCAGCCCATTCTTACTTCCCTGGGATC
AAATCAAGAAGAAGCATATGTCACCATGTCCAGCTTCTACCAAAACCAG**TGA**AGTGTAAGAAACCCAGACTGAAC
TTACCGTGAGCGACAAAGATGATTTAAAAGGGAAGTCTAGAGTTCCTAGTCTCCCTCACAGCACAGAGAAGACAA
AATTAGCAAAACCCCACTACACAGTCTGCAAGATTCTGAAACATTGCTTTGACCACTCTTCCTGAGTTCAGTGGC
ACTCAACATGAGTCAAGAGCATCCTGCTTCTACCATGTGGATTTGGTCACAAGGTTTAAGGTGACCCAATGATTC
AGCTATTT

FIGURE 1087

MTILGTTFGMVFSLLQVVSGESGYAQNGDLEDAELDDYSFSCYSQLEVNGSQHSLTCAFEDPDVNTTNLEFEICG
ALVEVKCLNFRKLQEIYFIETKKFLLIGKSNICVKVGEKSLTCKKIDLTTIVKPEAPFDLSVIYREGANDFVVTF
NTSHLQKKYVKVLMHDVAYRQEKDENKWTHVNLSSTKLTLLQRKLQPAAMYEIKVRSIPDHYFKGFWSEWSPSYY
FRTPEINNSSGEMDPILLTISILSFFSVALLVILACVLWKKRIKPIVWPSLPDHKKTLEHLCKKPRKNLNVSFNP
ESFLDCQIHRVDDIQARDEVEGFLQDTFPQQLEESEKQRLGGDVQSPNCPSEDVVVTPESFGRDSSLTCLAGNVS
ACDAPILSSSRSLDCRESGKNGPHVYQDLLLSLGTTNSTLPPPFSLQSGILTLNPVAQGQPILTSLGSNQEEAYV
TMSSFYQNQ

FIGURE 1088A

GATACCCTTTACACTAGATTAGCAGGCAAAACTATGATGGTTTGTGATATCCATGCTTGTAGAAGTAATAAGAAG
AAAGGGAACACAGAAGCTTTATTTTATAGTGGAGTCCTGACTCTAGGCCTTAATAATTGCATGGTTTTGGAGTTT
TCTTGAAGTACAACTAAGGACAGGTCACCACTAGGCACTAACATCGCTGACTTGCATGATTATGGAGATGGTCTA
TCTGATGCTGAAAATGTCTCTAGTTTTTTGACAACGGCTAAATAACC**ATG**GGATCAAGTGGCCTTGGGAAAGCAG
CAACATTAGATGAACTGCTGTGCACTTGCATTGAGATGTTTGATGACAATGGAGAGCTGGATAATAGTTATTTGC
CAAGAATAGTTCTACTGATGCACCGATGGTATTTATCTTCCACTGAATTGGCAGAAAAACTTCTCTGCATGTATC
GAAATGCCACTGGAGAAAGCTGCAATGAATTTCGATTAAAGATCTGCTACTTCATGAGGTACTGGATTCTGAAGT
TTCCTGCAGAGTTTAATTTGGATCTTGGTTTGATTCGTATGACTGAGGAATTTCGGGAAGTAGCTAGTCAACTAG
GATATGAAAAACACGTCAGCCTCATCGACATATCCAGCATTCCTTCCTATGACTGGATGAGAAGAGTCACACAGA
GGAAAAAAGTATCCAAGAAGGGAAAAGCCTGTCTGCTGTTTGACCATCTGGAGCCCATTGAATTGGCTGAGCACC
TCACTTTTCTGGAGCATAAATCTTTTAGAAGGATCTCATTCACTGATTACCAAAGCTATGTCATCCATGGCTGCC
TGGAGAATAATCCAACCTTGGAAAGATCGATTGCTTTATTTAATGGAATCTCTAAGTGGGTCCAGTTGATGGTTC
TTAGCAAACCAACCCCCCAGCAAAGGGCAGAAGTCATCACAAAGTTTATCAATGTTGCAAAGAAGCTCCTTCAGC
TCAAAAATTTTAACACCCTGATGGCAGTGGTGGGAGGCCTCAGTCATAGTTCCATTTCACGCCTCAAAGAGACCC
ATTCTCATCTTTCTTCAGAAGTTACAAAGAACTGGAATGAAATGACAGAGTTGGTCTCCTCCAACGGCAATTACT
GCAATTACCGCAAGGCCTTTGCCGACTGCGATGGCTTCAAAATCCCCATCCTTGGAGTACACTTGAAAGACTTGA
TAGCTGTCCATGTCATTTTCCCAGACTGGACAGAGGAGAACAAAGTGAACATTGTGAAAATGCACCAGCTCTCCG
TTACCCTGAGTGAACTAGTCTCCCTGCAGAATGCCTCTCACCACTTAGAACCCAACATGGATTTGATCAACCTGC
TCACGCTTTCCCTGGACCTCTATCACACTGAAGATGATATTTACAAACTGTCACTGGTGCTGGAGCCTAGAAATT
CTAAATCGCCTACCTCCCCTACGACGCCCAACAAGCCTGTGGTACCCCTGGAGTGGGCATTAGGGGTGATGCCAA
AGCCAGACCCCACGGTCATCAACAAGCACATAAGGAAATTAGTGGAGTCTGTATTTAGAAACTATGATCACGACC
ATGATGGGTACATTTCCCAAGAGGACTTTGAAAGTATAGCTGCCAATTTTCCCTTCTTGGATTCCTTCTGTGTTC
TGGACAAAGATCAGGATGGCCTAATTAGTAAAGATGAAATGATGGCTTACTTCCTGAGAGCTAAATCCCAACTAC
ACTGTAAAATGGGACCAGGATTTATCCATAATTTTCAGGAGATGACCTATCTCAAGCCAACCTTCTGCGAACACT
GTGCGGGATTTCTCTGGGGCATAATCAAGCAAGGATACAAATGCAAAGACTGTGGAGCCAATTGTCACAAACAGT
GCAAAGACCTCCTGGTTCTGGCCTGCAGGAGATTTGCCCGGGCGCCCTCCTTGAGCAGTGGTCATGGGTCACTGC
CTGGAAGCCCCTCGCTGCCCCCAGCGCAGGATGAGGTGTTTGAGTTCCCTGGAGTCACTGCTGGACACAGGGATT
TAGACAGCAGAGCCATCACACTGGTTACAGGCTCTTCTCGCAAGATCTCTGTGAGGCTACAGAGGGCCACCACCA
GCCAGGCCACCCAGACTGAACCTGTCTGGTCAGAGGCTGGCTGGGGGGACTCGGGGTCCCACACCTTCCCTAAAA
TGAAATCCAAGTTCCATGACAAAGCAGCAAAGGACAAAGGCTTTGCCAAATGGGAAAATGAGAAGCCCAGGGTGC
ATGCTGGTGTGGATGTTGTAGACCGGGGCACGGAGTTTGAACTTGACCAGGATGAAGGAGAAGAGACCAGACAGG
ATGGTGAGGATGGC**TGA**CTTCAGGCTGCGGAAACTGAAGGCAATAATGTTGGCTTTTGGAAGGGGCAAGACGAGA
AACTCTGAAGAAAGCTCTGACTCTCAGGAAGTTATCTGGAAAGATACCTGGATGTTTACTGCCTTGGGACACTGT
GGGATCTCCATGTTTGGACTATGGGACAGAGAATTGACCCTAACTAACTATGAACTATTTATTTCCTCCTCCCCT
ACCCCTAGTTAAGTGCCACAAAGACTGTGTTATGTAGTCAGTACTTTTCTCATGTATCTTTCTCTAGACCATTTA
TATACGGGTGAAATGAAAGCTTTTTTGCATGTACTTGATACTCAGTCTGTAAACTCAGACTTTGCTTTTTTTGTG
AGACTATCCTTTCAATATTTTTATAAACTTTTGTGTGTGCTGTGGCAGGGAACAGTTAACAAGGAGTTTATTTAG
AGGGGTTTTTTTCATTTTTTGTTTTTCTTGTTTTGTTTTGTTTTGTTTTGTTCTTCTTGGTGTGCTTTTTGGATG
GGACCAGAACTTAACATTTTCCTGAGGACTAGGAAGCTCATCAGACACTGGAATGCAGTGATTCTTCTAATGATG
GTCAACTGCAAGGAGAAACTGTTTACATCCTTCCCACTACACAGTTGCTATGATATGTAACAAGTCACACATGTA
TATATCACACAAGTCTTACCAATTCTGCGTCACTAGGAAGCTATAGCATGGTCGTGAAAGCTCTCCTAATACTTA
CTTAAATAGCCATGGAAGAAAATTATGCTTGTCCCTTCTGACTGGGTTAAGCCATCTTTCTTAAGATTCCTGAAG
TAGAAATAGCAATTAAGAAATTAATTCAAGTTTTGACGGTTAACATTTAGCAGAAAAACAAACCATTGAATAAGC
TACTAGGTGAAATGCAAAACAACCATCAATTTTTTTAAACTCAATAATTTTGTGAAAAAAAAAACCACCACCAAA
CTTTTGGTTGTAAAAGAGAACCCTTGTTCCCTTCCTAAGAAACTGCCTTCCACAATTAAAGAATACTCATAGAAA
GAAAATAATCATAAATCATATTTGATTAACATTTCATTTAAGCTTTTAAAATATCAATTTTTTAAATAGCTCCCA
TTTACCCAAAATAACTAGTTATGGGTCTATTTCTTCCATGATTAGAGGAGAGAGAACTTGATTCAAGATACTGAA
AAATAGAGCTGGGACTGAGCCTGTGAATGACAGGAATGATCTATTACCAGGTGACTAGTCGGAAACTACACAGAG

FIGURE 1088B

GTGCACTGGTCTGCATTTGGGGGCTAAAGTGTATATATTCCATTTAAAATGGAATTTGTTTGTATTTGGGGCAGT
CTTCAGTAAAGCCTTTCTCCTTTCTTTTCTCCATTGAGGACAGTTCTGCTCAGCAAAATTGTTGAGTACCTGTTC
TGGGCAGGTCCCACGCTATATGCACAAAGTTAAGAAAAACTTGGTCTTAGCCCTTGGGAGCTGACAGCCCATGGG
CATTAAGGCAAAGTAGTTCCAGTGATTTAAAATACGGTTCCAAATACGCTAAAACCAACTTGTGCCAACCAGATT
TACAGATTGGAAATACTGCAGATGATGTGAAGTTATCAGTTGGAGGAGCTGTGATTAAGCTGGATAATAAGAGAA
CGTGCCATCTGTAAAGCACTCAGAAGGCAGCCATCCCTAGATGTTGGTTTCATGTATATTACACTATCTACTACT
ATCCATAAATGCAATGATATGCATGTTAACAACATTAAAAACAGCAAACAGCAATCTAAGTACAGAAAAGCTCTT
TGTGTGTTTAAAAAAATTGAAGAAAATTCAGGAAGAAACGTGTTAATAAACATTGTACTGTTCTTTTGCTTCTCA
AAGG

FIGURE 1089

MGSSGLGKAATLDELLCTCIEMFDDNGELDNSYLPRIVLLMHRWYLSSTELAEKLLCMYRNATGESCNEFRLKIC
YFMRYWILKFPAEFNLDLGLIRMTEEFREVASQLGYEKHVSLIDISSIPSYDWMRRVTQRKKVSKKGKACLLFDH
LEPIELAEHLTFLEHKSFRRISFTDYQSYVIHGCLENNPTLERSIALFNGISKWVQLMVLSKPTPQQRAEVITKF
INVAKKLLQLKNFNTLMAVVGGLSHSSISRLKETHSHLSSEVTKNWNEMTELVSSNGNYCNYRKAFADCDGFKIP
ILGVHLKDLIAVHVIFPDWTEENKVNIVKMHQLSVTLSELVSLQNASHHLEPNMDLINLLTLSLDLYHTEDDIYK
LSLVLEPRNSKSPTSPTTPNKPVVPLEWALGVMPKPDPTVINKHIRKLVESVFRNYDHDHDGYISQEDFESIAAN
FPFLDSFCVLDKDQDGLISKDEMMAYFLRAKSQLHCKMGPGFIHNFQEMTYLKPTFCEHCAGFLWGIIKQGYKCK
DCGANCHKQCKDLLVLACRRFARAPSLSSGHGSLPGSPSLPPAQDEVFEFPGVTAGHRDLDSRAITLVTGSSRKI
SVRLQRATTSQATQTEPVWSEAGWGDSGSHTFPKMKSKFHDKAAKDKGFAKWENEKPRVHAGVDVVDRGTEFELD
QDEGEETRQDGEDG

FIGURE 1090

GCCCAGACCTATGGATTGAAAGCGTGTGCTTTACCCATCTGCTGTCTTGCTCCATCTGAGACCAGAGCCAAGATC
TGCCCAGGACTGGAATGCTTTCCCGAGTGGCTTGAGTTGGAGCCTGGGACTAGGAGCAGCCTTATTGAGGTACAA
TTCATGTGCTTGTGGGTTTGGATGGCACAATCTGTGTCTGGGCTAAGGAAAGCAGACTTGGCACCAACATTAACC
CTGACAGATCCAGGCATCTATTCCAGGAACTGGAAGCCAAGCGCAACAGGTGCTTGGAGGTCATC**ATG**ATCAGCC
CAGACCCCAGGCCCTCCCCTGGCTTGGCCCGGTGGGCTGAGAGCTATGAGGCCAAGTGTGAGCGCAGGCAAGAGA
TCCGTGAAAGCCGCCGCTGCCGTCCCAATGTGACCACTTGCCGCCAGGTGGGGAAGACGCTGAGGATCCAACAGA
GAGAGCAGCTCCAGAGAGCTCGACTGCAGCAGTTCTTCAGGAGGAGGAACCTGGAGCTAGAGGAGAAGGGCAAAG
CGCAGCATCCCCAGGCCAGGGAGCAAGGGCCCTCCAGGCGGCCAGGACAGGTGACAGGCACCAGCTCTGAAGTCT
TTCCAGCCCAGCATCCTCCTCCCTCAGGCATCTGCAGGGATCTGTCTGACCACCTCTCCTCACAGGCTGGGGGCC
TTCCTCCACAGGACACTCCCATCAAGAAGCCACCCAAACACCACCGTGGTACTCAGACAAAGGCAGAAGGACCAA
CAATTAAGAACGATGCCAGTCAGCAAACCAATTACGGAGTTGCAGTTCTGGATAAGGAAATCATCCAGCTTTCTG
ATTACCTCAAAGAGGCCCTACAAAGGGAGCTGGTCCTAAAACAGAAAATGGTGATTCTCCAAGACCTACTGTCCA
CTCTGATTCAGGCCTCTGACAGCTCTTGGAAGGGACAGCTTAATGAAGACAAACTGAAGGGGAAACTGAGATCCT
TAGAAAACCAGCTATACACCTGTACCCAGAAATACTCCCCTTGGGGAATGAAAAAAGTACTACTGGAGATGGAAG
ACCAGAAAAACAGCTATGAGCAGAAGGCCAAGGAGTCACTGCAGAAAGTGCTGGAGGAGAAAATGAATGCAGAGC
AGCAACTACAGAGCACACAGCGATCCCTGGCCCTGGCAGAGCAGAAGTGTGAAGAGTGGAGGAGCCAGTATGAGG
CTCTGAAGGAGGACTGGAGGACCCTTGGGACCCAGCACAGGGAGCTGGAGAGCCAACTCCACGTGCTTCAGTCCA
AACTGCAGGGAGCAGATAGCAGGGACTTACAGATGAACCAGGCCCTGCGATTTTTGGAAAATGAGCACCAGCAAC
TGCAGGCCAAGATTGAATGCCTGCAAGGGGACAGAGACCTGTGCAGCTTGGATACCCAGGACCTACAAGATCAAC
TAAAAAGGTCAGAGGCAGAGAAACTCACCCTGGTGACCAGAGTACAGCAGTTGCAGGGTTTGCTTCAAAATCAAT
CCTTACAGCTTCAAGAACAGGAGAAACTCTTAACAAAGAAAGATCAGGCTTTGCCCGTGTGGAGTCCAAAGTCCT
TCCCTAACGAAGTGGAGCCTGAGGGTACAGGGAAGGAGAAAGACTGGGATCTCAGAGACCAGCTGCAAAAGAAGA
CTTTGCAGCTCCAGGCCAAGGAAAAGGAGTGCAGAGAACTGCATTCAGAATTAGACAACCTCAGTGACGAGTATC
TCTCCTGCCTGCGTAAGCTGCAGCACTGTCGAGAAGAGCTGAACCAGAGCCAGCAGCTGCCTCCCAGAAGGCAAT
GTGGGCGATGGCTCCCAGTGCTGATGGTGGTGATTGCTGCAGCACTGGCAGTGTTCCTGGCCAATAAAGACAACC
TGATGATC**TGA**ATAATTTGTGACAACTGCCTTGGGTGAAAATCAGAAGCAAGCAACTCAGCGAAAAACTCAGAAG
GTTTGGGTACATTACAGCTTGGGTTTTCCAACTGACTTAGGATTTCTGACTTTTTATTAATTTCTTAACCTACTG
TAAATAAACTTCACCTGACCAGATTGTTCCTCA

FIGURE 1091

MISPDPRPSPGLARWAESYEAKCERRQEIRESRRCRPNVTTCRQVGKTLRIQQREQLQRARLQQFFRRRNLELEE
KGKAQHPQAREQGPSRRPGQVTGTSSEVFPAQHPPPSGICRDLSDHLSSQAGGLPPQDTPIKKPPKHHRGTQTKA
EGPTIKNDASQQTNYGVAVLDKEIIQLSDYLKEALQRELVLKQKMVILQDLLSTLIQASDSSWKGQLNEDKLKGK
LRSLENQLYTCTQKYSPWGMKKVLLEMEDQKNSYEQKAKESLQKVLEEKMNAEQQLQSTQRSLALAEQKCEEWRS
QYEALKEDWRTLGTQHRELESQLHVLQSKLQGADSRDLQMNQALRFLENEHQQLQAKIECLQGDRDLCSLDTQDL
QDQLKRSEAEKLTLVTRVQQLQGLLQNQSLQLQEQEKLLTKKDQALPVWSPKSFPNEVEPEGTGKEKDWDLRDQL
QKKTLQLQAKEKECRELHSELDNLSDEYLSCLRKLQHCREELNQSQQLPPRRQCGRWLPVLMVVIAAALAVFLAN
KDNLMI

FIGURE 1092

AGCTGCCCGCGTCGCGTGTGTACCCCCGCGCACTGAAGGAGGTCCACCAGCCCTCACCAGCCCCCGCGGACCGTG
CA**ATG**GCCCAGCGTAAGAATGCCAAGAGCAGCGGCAACAGCAGCAGCAGCGGCTCCGGCAGCGGTAGCACGAGTG
CGGGCAGCAGCAGCCCCGGGGCCCGGAGAGAGACAAAGCATGGAGGACACAAGAATGGGAGGAAAGGCGGACTCT
CAGGAACTTCATTCTTCACGTGGTTTATGGTGATTGCATTGCTGGGCGTCTGGACATCTGTAGCTGTCGTTTGGT
TTGATCTTGTTGACTATGAGGAAGTTCTAGGAAAACTAGGAATCTATGATGCTGATGGTGATGGAGATTTTGATG
TGGATGATGCCAAAGTTTTATTAGGACTTAAAGAGAGATCTACTTCAGAGCCAGCAGTCCCGCCAGAAGAGGCTG
AGCCACACACTGAGCCCGAGGAGCAGGTTCCTGTGGAGGCAGAACCCCAGAATATCGAAGATGAAGCAAAAGAAC
AAATTCAGTCCCTTCTCCATGAAATGGTACACGCAGAACATGTTGAGGGAGAAGACTTGCAACAAGAAGATGGAC
CCACAGGAGAACCACAACAAGAGGATGATGAGTTTCTTATGGCGACTGATGTAGATGATAGATTTGAGACCCTGG
AACCTGAAGTATCTCATGAAGAAACCGAGCATAGTTACCACGTGGAAGAGACAGTTTCACAAGACTGTAATCAGG
ATATGGAAGAGATGATGTCTGAGCAGGAAAATCCAGATTCCAGTGAACCAGTAGTAGAAGATGAAAGATTGCACC
ATGATACAGATGATGTAACATACCAAGTCTATGAGGAACAAGCAGTATATGAACCTCTAGAAAATGAAGGGATAG
AAATCACAGAAGTAACTGCTCCCCCTGAGGATAATCCTGTAGAAGATTCACAGGTAATTGTAGAAGAAGTAAGCA
TTTTTCCTGTGGAAGAACAGCAGGAAGTACCACCAGAAACAAATAGAAAAACAGATGATCCAGAACAAAAAGCAA
AAGTTAAGAAAAAGAAGCCTAAACTTTTAAATAAATTTGATAAGACTATTAAAGCTGAACTTGATGCTGCAGAAA
AACTCCGTAAAAGGGGAAAAATTGAGGAAGCAGTGAATGCATTTAAAGAACTAGTACGCAAATACCCTCAGAGTC
CACGAGCAAGATATGGGAAGGCGCAGTGTGAGGATGATTTGGCTGAGAAGAGGAGAAGTAATGAGGTGCTACGTG
GAGCCATCGAGACCTACCAAGAGGTGGCCAGCCTACCTGATGTCCCTGCAGACCTGCTGAAGCTGAGTTTGAAGC
GTCGCTCAGACAGGCAACAATTTCTAGGTCATATGAGAGGTTCCCTGCTTACCCTGCAGAGATTAGTTCAACTAT
TTCCCAATGATACTTCCTTAAAAAATGACCTTGGCGTGGGATACCTCTTGATAGGAGATAATGACAATGCAAAGA
AAGTTTATGAAGAGGTGCTGAGTGTGACACCTAATGATGGCTTTGCTAAAGTCCATTATGGCTTCATCCTGAAGG
CACAGAACAAAATTGCTGAGAGCATCCCATATTTAAAGGAAGGAATAGAATCCGGAGATCCTGGCACTGATGATG
GGAGATTTTATTTCCACCTGGGGGATGCCATGCAGAGGGTTGGGAACAAAGAGGCATATAAGTGGTATGAGCTTG
GGCACAAGAGAGGACACTTTGCATCTGTCTGGCAACGCTCACTCTACAATGTGAATGGACTGAAAGCACAGCCTT
GGTGGACCCCAAAAGAAACGGGCTACACAGAGTTAGTAAAGTCTTTAGAAAGAAACTGGAAGTTAATCCGAGATG
AAGGCCTTGCAGTGATGGATAAAGCCAAAGGTCTCTTCCTGCCTGAGGATGAAAACCTGAGGGAAAAAGGGGACT
GGAGCCAGTTCACGCTGTGGCAGCAAGGAAGAAGAAATGAAAATGCCTGCAAAGGAGCTCCTAAAACCTGTACCT
TACTAGAAAAGTTCCCCGAGACAACAGGATGCAGAAGAGGACAGATCAAATATTCCATCATGCACCCCGGGACTC
ACGTGTGGCCGCACACAGGGCCCACAAACTGCAGGCTCCGAATGCACCTGGGCTTGGTGATTCCCAAGGAAGGCT
GCAAGATTCGATGTGCCAACGAGACCAAGACCTGGGAGGAAGGCAAGGTGCTCATCTTTGATGACTCCTTTGAGC
ACGAGGTATGGCAGGATGCCTCATCTTTCCGGCTGATATTCATCGTGGATGTGTGGCATCCGGAACTGACACCAC
AGCAGAGACGCAGCCTTCCAGCAATT**TAG**CATGAATTCATGCAAGCTTGGGAAACTCTGGAGAGAGGCTGCCTTT
CTGGTTCCATCTCCTTGGGTGTGAGGATAGAATTTCGAACACCAAGAGTCAA

FIGURE 1093

MAQRKNAKSSGNSSSSGSGSGSTSAGSSSPGARRETKHGGHKNGRKGGLSGTSFFTWFMVIALLGVWTSVAVVWF
DLVDYEEVLGKLGIYDADGDGDFDVDDAKVLLGLKERSTSEPAVPPEEAEPHTEPEEQVPVEAEPQNIEDEAKEQ
IQSLLHEMVHAEHVEGEDLQQEDGPTGEPQQEDDEFLMATDVDDRFETLEPEVSHEETEHSYHVEETVSQDCNQD
MEEMMSEQENPDSSEPVVEDERLHHDTDDVTYQVYEEQAVYEPLENEGIEITEVTAPPEDNPVEDSQVIVEEVSI
FPVEEQQEVPPETNRKTDDPEQKAKVKKKKPKLLNKFDKTIKAELDAAEKLRKRGKIEEAVNAFKELVRKYPQSP
RARYGKAQCEDDLAEKRRSNEVLRGAIETYQEVASLPDVPADLLKLSLKRRSDRQQFLGHMRGSLLTLQRLVQLF
PNDTSLKNDLGVGYLLIGDNDNAKKVYEEVLSVTPNDGFAKVHYGFILKAQNKIAESIPYLKEGIESGDPGTDDG
RFYFHLGDAMQRVGNKEAYKWYELGHKRGHFASVWQRSLYNVNGLKAQPWWTPKETGYTELVKSLERNWKLIRDE
GLAVMDKAKGLFLPEDENLREKGDWSQFTLWQQGRRNENACKGAPKTCTLLEKFPETTGCRRGQIKYSIMHPGTH
VWPHTGPTNCRLRMHLGLVIPKEGCKIRCANETKTWEEGKVLIFDDSFEHEVWQDASSFRLIFIVDVWHPELTPQ
QRRSLPAI

FIGURE 1094

GGGGGCCAAAGGGAAGTGCTGCGAGGTTTACAACCAGCTGCAGTGGTTCGATGGGAAGGATCTTTCTCCAAGTGG
TTCCTCTTGAGGGGAGCATTTCTGCTGGCTCCAGGACTTTGGCCATCTATAAAGCTTGGCA**ATG**AGAAATAAGAA
AATTCTCAAGGAGGACGAGCTCTTGAGTGAGACCCAACAAGCTGCTTTTCACCAAATTGCAATGGAGCCTTTCGA
AATCAATGTTCCAAAGCCCAAGAGGAGAAATGGGGTGAACTTCTCCCTAGCTGTGGTGGTCATCTACCTGATCCT
GCTCACCGCTGGCGCTGGGCTGCTGGTGGTCCAAGTTCTGAATCTGCAGGCGCGGCTCCGGGTCCTGGAGATGTA
TTTCCTCAATGACACTCTGGCGGCTGAGGACAGCCCGTCCTTCTCCTTGCTGCAGTCAGCACACCCTGGAGAACA
CCTGGCTCAGGGTGCATCGAGGCTGCAAGTCCTGCAGGCCCAACTCACCTGGGTCCGCGTCAGCCATGAGCACTT
GCTGCAGCGGGTAGACAACTTCACTCAGAACCCAGGGATGTTCAGAATCAAAGGTGAACAAGGCGCCCCAGGTCT
TCAAGGCCACAAGGGGGCCATGGGCATGCCTGGTGCCCCTGGCCCGCCGGGACCACCTGCTGAGAAGGGAGCCAA
GGGGGCTATGGGACGAGATGGAGCAACAGGCCCCTCGGGACCCCAAGGCCCACCGGGAGTCAAGGGAGAGGCGGG
CCTCCAAGGACCCCAGGGTGCTCCAGGGAAGCAAGGAGCCACTGGCACCCCAGGACCCCAAGGAGAGAAGGGCAG
CAAAGGCGATGGGGGTCTCATTGGCCCAAAAGGGGAAACTGGAACTAAGGGAGAGAAAGGAGACCTGGGTCTCCC
AGGAAGCAAAGGGGACAGGGGCATGAAAGGAGATGCAGGGGTCATGGGGCCTCCTGGAGCCCAGGGGAGTAAAGG
TGACTTCGGGAGGCCAGGCCCACCAGGTTTGGCTGGTTTTCCTGGAGCTAAAGGAGATCAAGGACAACCTGGACT
GCAGGGTGTTCCGGGCCCTCCTGGTGCAGTGGGACACCCAGGTGCCAAGGGTGAGCCTGGCAGTGCTGGCTCCCC
TGGGCGAGCAGGACTTCCAGGGAGCCCCGGGAGTCCAGGAGCCACAGGCCTGAAAGGAAGCAAAGGGGACACAGG
ACTTCAAGGACAGCAAGGAAGAAAAGGAGAATCAGGAGTTCCAGGCCCTGCAGGTGTGAAGGGAGAACAGGGGAG
CCCAGGGCTGGCAGGTCCCAAGGGAGCCCCTGGACAAGCTGGCCAGAAGGGAGACCAGGGAGTGAAAGGATCTTC
TGGGGAGCAAGGAGTAAAGGGAGAAAAAGGTGAAAGAGGTGAAAACTCAGTGTCCGTCAGGATTGTCGGCAGTAG
TAACCGAGGCCGGGCTGAAGTTTACTACAGTGGTACCTGGGGGACAATTTGCGATGACGAGTGGCAAAATTCTGA
TGCCATTGTCTTCTGCCGCATGCTGGGTTACTCCAAAGGAAGGGCCCTGTACAAAGTGGGAGCTGGCACTGGGCA
GATCTGGCTGGATAATGTTCAGTGTCGGGGCACGGAGAGTACCCTGTGGAGCTGCACCAAGAATAGCTGGGGCCA
TCATGACTGCAGCCACGAGGAGGACGCAGGCGTGGAGTGCAGCGTC**TGA**CCCGGAAACCCTTTCACTTCTCTGCT
CCCGAGGTGTCCTCGGGCTCATATGTGGGAAGGCAGAGGATCTCTGAGGAGTTCCCTGGGGACAACTGAGCAGCC
TCTGGAGAGGGGCCATTAATAAAGCTCAACATCAAAAAAAAAAAAAGAAAAAAAAAAAAAAAAA

FIGURE 1095

MRNKKILKEDELLSETQQAAFHQIAMEPFEINVPKPKRRNGVNFSLAVVVIYLILLTAGAGLLVVQVLNLQARLR
VLEMYFLNDTLAAEDSPSFSLLQSAHPGEHLAQGASRLQVLQAQLTWVRVSHEHLLQRVDNFTQNPGMFRIKGEQ
GAPGLQGHKGAMGMPGAPGPPGPPAEKGAKGAMGRDGATGPSGPQGPPGVKGEAGLQGPQGAPGKQGATGTPGPQ
GEKGSKGDGGLIGPKGETGTKGEKGDLGLPGSKGDRGMKGDAGVMGPPGAQGSKGDFGRPGPPGLAGFPGAKGDQ
GQPGLQGVPGPPGAVGHPGAKGEPGSAGSPGRAGLPGSPGSPGATGLKGSKGDTGLQGQQGRKGESGVPGPAGVK
GEQGSPGLAGPKGAPGQAGQKGDQGVKGSSGEQGVKGEKGERGENSVSVRIVGSSNRGRAEVYYSGTWGTICDDE
WQNSDAIVFCRMLGYSKGRALYKVGAGTGQIWLDNVQCRGTESTLWSCTKNSWGHHDCSHEEDAGVECSV

FIGURE 1096A

CTGCAGGAAGGAGAGAGGAAGAGGAGCAGAAGGGGGCAGCAGCGGACGCCGCTAACGGCCTCCCTCGGCGCTGAC
AGGCTGGGCCGGCGCCCGGCTCGCTTGGGTGTTCGCGTCGCCACTTCGGCTTCTCGGCCGGTCGGGCCCCTCGGC
CCGGGCTTGCGGCGCGCGTCGGGGCTGAGGGCTGCTGCGGCGCAGGGAGAGGCCTGGTCCTCGCTGCCGAGGGAT
GTGAGTGGGAGCTGAGCCCACACTGGAGGGCCCCCGAGGGCCCAGCCTGGAGGTCGTTCAGAGCCGTGCCCGCCC
CGGGGCTTCGCAGACCTTGACCCGCCGGGTAGGAGCCGCCCCTGCGGGCTCGAGGGCGCGCTCTGGTCGCCCGAT
CTGTGTAGCCGGTTTCAGAAGCAGGCAACAGGAACAAGATGTGAACTGTTTCTCTTCTGCAGAAAAAGAGGCTCT
TCCTCCTCCTCCCGCGACGGCAAATGTTCTGAAAAAGACTCTGC**ATG**GGAATGGCCTGCCTTACGATGACAGAAA
TGGAGGGAACATCCACCTCTTCTATATATCAGAATGGTGATATTTCTGGAAATGCCAATTCTATGAAGCAAATAG
ATCCAGTTCTTCAGGTGTATCTTTACCATTCCCTTGGGAAATCTGAGGCAGATTATCTGACCTTTCCATCTGGGG
AGTATGTTGCAGAAGAAATCTGTATTGCTGCTTCTAAAGCTTGTGGTATCACACCTGTGTATCATAATATGTTTG
CTTTAATGAGTGAAACAGAAAGGATCTGGTATCCACCCAACCATGTCTTCCATATAGATGAGTCAACCAGGCATA
ATGTACTCTACAGAATAAGATTTTACTTTCCTCGTTGGTATTGCAGTGGCAGCAACAGAGCCTATCGGCATGGAA
TATCTCGAGGTGCTGAAGCTCCTCTTCTTGATGACTTTGTCATGTCTTACCTCTTTGCTCAGTGGCGGCATGATT
TTGTGCACGGATGGATAAAAGTACCTGTGACTCATGAAACACAGGAAGAATGTCTTGGGATGGCAGTGTTAGATA
TGATGAGAATAGCCAAAGAAAACGATCAAACCCCACTGGCCATCTATAACTCTATCAGCTACAAGACATTCTTAC
CAAAATGTATTCGAGCAAAGATCCAAGACTATCATATTTTGACAAGGAAGCGAATAAGGTACAGATTTCGCAGAT
TTATTCAGCAATTCAGCCAATGCAAAGCCACTGCCAGAAACTTGAAACTTAAGTATCTTATAAATCTGGAAACTC
TGCAGTCTGCCTTCTACACAGAGAAATTTGAAGTAAAAGAACCTGGAAGTGGTCCTTCAGGTGAGGAGATTTTTG
CAACCATTATAATAACTGGAAACGGTGGAATTCAGTGGTCAAGAGGGAAACATAAAGAAAGTGAGACACTGACAG
AACAGGATTTACAGTTATATTGCGATTTTCCTAATATTATTGATGTCAGTATTAAGCAAGCAAACCAAGAGGGTT
CAAATGAAAGCCGAGTTGTAACTATCCATAAGCAAGATGGTAAAAATCTGGAAATTGAACTTAGCTCATTAAGGG
AAGCTTTGTCTTTCGTGTCATTAATTGATGGATATTATAGATTAACTGCAGATGCACATCATTACCTCTGTAAAG
AAGTAGCACCTCCAGCCGTGCTTGAAAATATACAAAGCAACTGTCATGGCCCAATTTCGATGGATTTTGCCATTA
GTAAACTGAAGAAAGCAGGTAATCAGACTGGACTGTATGTACTTCGATGCAGTCCTAAGGACTTTAATAAATATT
TTTTGACTTTTGCTGTCGAGCGAGAAAATGTCATTGAATATAAACACTGTTTGATTACAAAAAATGAGAATGAAG
AGTACAACCTCAGTGGGACAAAGAAGAACTTCAGCAGTCTTAAAGATCTTTTGAATTGTTACCAGATGGAAACTG
TTCGCTCAGACAATATAATTTTCCAGTTTACTAAATGCTGTCCCCCAAAGCCAAAAGATAAATCAAACCTTCTAG
TCTTCAGAACGAATGGTGTTTCTGATGTACCAACCTCACCAACATTACAGAGGCCTACTCATATGAACCAAATGG
TGTTTCACAAAATCAGAAATGAAGATTTGATATTTAATGAAAGCCTTGGCCAAGGCACTTTTACAAAGATTTTTA
AAGGCGTACGAAGAGAAGTAGGAGACTACGGTCAACTGCATGAAACAGAAGTTCTTTTAAAAGTTCTGGATAAAG
CACACAGAAACTATTCAGAGTCTTTCTTTGAAGCAGCAAGTATGATGAGCAAGCTTTCTCACAAGCATTTGGTTT
TAAATTATGGAGTATGTGTCTGTGGAGACGAGAATATTCTGGTTCAGGAGTTTGTAAAATTTGGATCACTAGATA
CATATCTGAAAAAGAATAAAAATTGTATAAATATATTATGGAAACTTGAAGTTGCTAAACAGTTGGCATGGGCCA
TGCATTTTCTAGAAGAAAACACCCTTATTCATGGGAATGTATGTGCCAAAAATATTCTGCTTATCAGAGAAGAAG
ACAGGAAGACAGGAAATCCTCCTTTCATCAAACTTAGTGATCCTGGCATTAGTATTACAGTTTTGCCAAAGGACA
TTCTTCAGGAGAGAATACCATGGGTACCACCTGAATGCATTGAAAATCCTAAAAATTTAAATTTGGCAACAGACA
AATGGAGTTTTGGTACCACTTTGTGGGAAATCTGCAGTGGAGGAGATAAACCTCTAAGTGCTCTGGATTCTCAAA
GAAAGCTACAATTTTATGAAGATAGGCATCAGCTTCCTGCACCAAAGTGGGCAGAATTAGCAAACCTTATAAATA
ATTGTATGGATTATGAACCAGATTTCAGGCCTTCTTTCAGAGCCATCATACGAGATCTTAACAGTTTGTTTACTC
CAGATTATGAACTATTAACAGAAAATGACATGTTACCAAATATGAGGATAGGTGCCCTAGGGTTTTCTGGTGCCT
TTGAAGACCGGGATCCTACACAGTTTGAAGAGAGACATTTGAAATTTCTACAGCAACTTGGCAAGGGTAATTTTG
GGAGTGTGGAGATGTGCCGGTATGACCCTCTACAGGACAACACTGGGGAGGTGGTCGCTGTAAAAAAGCTTCAGC
ATAGTACTGAAGAGCACCTAAGAGACTTTGAAAGGGAAATTGAAATCCTGAAATCCCTACAGCATGACAACATTG
TAAAGTACAAGGGAGTGTGCTACAGTGCTGGTCGGCGTAATCTAAAATTAATTATGGAATATTTACCATATGGAA
GTTTACGAGACTATCTTCAAAAACATAAAGAACGGATAGATCACATAAAACTTCTGCAGTACACATCTCAGATAT
GCAAGGGTATGGAGTATCTTGGTACAAAAAGGTATATCCACAGGGATCTGGCAACGAGAAATATATTGGTGGAGA
ACGAGAACAGAGTTAAAATTGGAGATTTTGGGTTAACCAAAGTCTTGCCACAAGACAAAGAATACTATAAAGTAA
AAGAACCTGGTGAAAGTCCCATATTCTGGTATGCTCCAGAATCACTGACAGAGAGCAAGTTTTCTGTGGCCTCAG

FIGURE 1096B

ATGTTTGGAGCTTTGGAGTGGTTCTGTATGAACTTTTCACATACATTGAGAAGAGTAAAAGTCCACCAGCGGAAT
TTATGCGTATGATTGGCAATGACAAACAAGGACAGATGATCGTGTTCCATTTGATAGAACTTTTGAAGAATAATG
GAAGATTACCAAGACCAGATGGATGCCCAGATGAGATCTATATGATCATGACAGAATGCTGGAACAATAATGTAA
ATCAACGCCCCTCCTTTAGGGATCTAGCTCTTCGAGTGGATCAAATAAGGGATAACATGGCTGGA**TGA**AAGAAAT
GACCTTCATTCTGAGACCAAAGTAGATTTACAGAACAAAGTTTTATATTTCACATTGCTGTGGACTATTATTACA
TATATCATTATTATATAAATCATGATGCTAGCCAGCAAAGATGTGAAAATATCTGCTCAAAACTTTCAAAGTTTA
GTAAGTTTTTCTTCATGAGGCCACCAGTAAAAGACATTAATGAGAATTCCTTAGCAAGGATTTTGTAAGAAGTTT
CTTAAACATTGTCTGTTAACATCACTCTTGTCTGGCAAAAGAAAAAAAATAGACTTTTTCAACTCAGCTTTTTGA
GACCTGAAAAAATTATTATGTAAATTTTGCAATGTTAAAGATGCACAGAATATGTATGTATAGTTTTTACCACAG
TGGATGTATAATACCTTGGCATCTTGTGTGATGTTTTACACACATGAGGGCTGGTGTTCATTAATACTGTTTTCT
AATTTTTCCATAGTTAATCTATAATTAATTACTTCACTATACAAACAAATTAAGATGTTCAGATAATTGAATAAG
TACCTTTGTGTCCTTGTTCATTTATATCGCTGGCCAGCATTATAAGCAGGTGTATACTTTTAGCTTGTAGTTCCA
TGTACTGTAAATATTTTTCACATAAAGGGAACAAATGTCTAGTTTTATTTGTATAGGAAATTTCCCTGACCCTAA
ATAATACATTTTGAAATGAAACAAGCTTACAAAGATATAATCTATTTTATTATGGTTTCCCTTGTATCTATTTGT
GGTGAATGTGTTTTTTAAATGGAACTATCTCCAAATTTTTCTAAGACTACTATGAACAGTTTTCTTTTAAAATTT
TGAGATTAAGAATGCCAGGAATATTGTCATCCTTTGAGCTGCTGACTGCCAATAACATTCTTCGATCTCTGGGAT
TTATGCTCATGAACTAAATTTAAGCTTAAGCCATAAAATAGATTAGATTGTTTTTTAAAAATGGATAGCTCATTA
AGAAGTGCAGCAGGTTAAGAATTTTTTCCTAAAGACTGTATATTTGAGGGGTTTCAGAATTTTGCATTGCAGTCA
TAGAAGAGATTTATTTCCTTTTTAGAGGGGAAATGAGGTAAATAAGTAAAAAAGTATGCTTGTTAATTTTATTCA
AGAATGCCAGTAGAAAATTCATAACGTGTATCTTTAAGAAAAATGAGCATACATCTTAAATCTTTTCAATTA

FIGURE 1097

MGMACLTMTEMEGTSTSSIYQNGDISGNANSMKQIDPVLQVYLYHSLGKSEADYLTFPSGEYVAEEICIAASKAC
GITPVYHNMFALMSETERIWYPPNHVFHIDESTRHNVLYRIRFYFPRWYCSGSNRAYRHGISRGAEAPLLDDFVM
SYLFAQWRHDFVHGWIKVPVTHETQEECLGMAVLDMMRIAKENDQTPLAIYNSISYKTFLPKCIRAKIQDYHILT
RKRIRYRFRRFIQQFSQCKATARNLKLKYLINLETLQSAFYTEKFEVKEPGSGPSGEEIFATIIITGNGGIQWSR
GKHKESETLTEQDLQLYCDFPNIIDVSIKQANQEGSNESRVVTIHKQDGKNLEIELSSLREALSFVSLIDGYYRL
TADAHHYLCKEVAPPAVLENIQSNCHGPISMDFAISKLKKAGNQTGLYVLRCSPKDFNKYFLTFAVERENVIEYK
HCLITKNENEEYNLSGTKKNFSSLKDLLNCYQMETVRSDNIIFQFTKCCPPKPKDKSNLLVFRTNGVSDVPTSPT
LQRPTHMNQMVFHKIRNEDLIFNESLGQGTFTKIFKGVRREVGDYGQLHETEVLLKVLDKAHRNYSESFFEAASM
MSKLSHKHLVLNYGVCVCGDENILVQEFVKFGSLDTYLKKNKNCINILWKLEVAKQLAWAMHFLEENTLIHGNVC
AKNILLIREEDRKTGNPPFIKLSDPGISITVLPKDILQERIPWVPPECIENPKNLNLATDKWSFGTTLWEICSGG
DKPLSALDSQRKLQFYEDRHQLPAPKWAELANLINNCMDYEPDFRPSFRAIIRDLNSLFTPDYELLTENDMLPNM
RIGALGFSGAFEDRDPTQFEERHLKFLQQLGKGNFGSVEMCRYDPLQDNTGEVVAVKKLQHSTEEHLRDFEREIE
ILKSLQHDNIVKYKGVCYSAGRRNLKLIMEYLPYGSLRDYLQKHKERIDHIKLLQYTSQICKGMEYLGTKRYIHR
DLATRNILVENENRVKIGDFGLTKVLPQDKEYYKVKEPGESPIFWYAPESLTESKFSVASDVWSFGVVLYELFTY
IEKSKSPPAEFMRMIGNDKQGQMIVFHLIELLKNNGRLPRPDGCPDEIYMIMTECWNNNVNQRPSFRDLALRVDQ
IRDNMAG

FIGURE 1098

ACCACTGCTGGCTTTTTGCTGTAGCTCCACATTCCTGTGCATTGAGGGGTTAACATTAGGCTGGGAAG**ATG**ACAA
AACTTGAAGAGCATCTGGAGGGAATTGTCAATATCTTCCACCAATACTCAGTTCGGAAGGGGCATTTTGACACCC
TCTCTAAGGGTGAGCTGAAGCAGCTGCTTACAAAGGAGCTTGCAAACACCATCAAGAATATCAAAGATAAAGCTG
TCATTGATGAAATATTCCAAGGCCTGGATGCTAATCAAGATGAACAGGTCGACTTTCAAGAATTCATATCCCTGG
TAGCCATTGCGCTGAAGGCTGCCCATTACCACACCCACAAAGAG**TAG**GTAGCTCTCTGAAGGCTTTTTACCCAGC
AATGTCCTCAATGAGGGTCTTTTCTTTCCCTCACCAAAACCCAGCCTTGCCCGTGGGGAGTAAGAGTTAATAAAC
ACACTCACGAAAAGTT

1238/2825

FIGURE 1099

MTKLEEHLEGIVNIFHQYSVRKGHFDTLSKGELKQLLTKELANTIKNIKDKAVIDEIFQGLDANQDEQVDFQEFI
SLVAIALKAAHYHTHKE

FIGURE 1100

AGCGGGAAAAAAAACTTATCTGAGGTTGGAAATAAAGAGAAGGTGACATTGGAGCGGATAGAAAGGAAGAAACGG
CGTGGGATCTGGGAATGAGGCAGTGGGTGGAGAGAGAATGGGGAGACGACAGAGGATGAAGGGCAGCTGAGTGTG
TCTGCGGGAGAAGGACCAAAGCAATCTGGGCGGAGCAGGTGGCAGAGGCAGCCGCGGAGGAGGCCCAGGGAACTG
ACGGGGATGCTCAGCCAGGCCCAGAGGATGCGCCCTGGCAGTCCCGGAAGACACCAGGAAAACAAGCAGGAACCG
TAGCTAGGACTGGGGTGGCCAGGCCCAGGAAATCC**ATG**AAGGGCACAGACAGCGGGTCCTGCTGCCGCCGCCGAT
GCGACTTTGGCTGCTGCTGTCGCGCGTCCCGCCGGGCTCACTACACGCCTTACCGGTCCGGGGACGCGACGCGAA
CCCCTCAGTCCCCACGGCAGACCCCGAGCCGGGAAAGACGGCGCCCGGAGCCAGCCGGGAGCTGGGCAGCAGCGG
CCGAGGAGGAAGAAGCAGCTGCGGCGGCCACACCCTGGATGAGAGATTATTTTGCAGAGGATGATGGGGAGATGG
TACCCAGAACGAGTCACACAGCAGCTTTTCTTAGTGACACTAAAGATCGAGGCCCTCCAGTGCAGTCACAGATCT
GGAGAAGTGGTGAAAAGGTCCCGTTTGTGCAGACATATTCCTTGAGAGCATTTGAGAAACCCCCTCAGGTACAGA
CCCAGGCTCTTCGAGACTTTGAGAAGCACCTCAATGACCTGAAGAAGGAGAACTTCAGCCTCAAGCTGCGCATCT
ACTTCCTGGAGGAGCGCATGCAACAGAAGTATGAGGCCAGCCGGGAGGACATCTACAAGCGGAACACTGAGCTGA
AGGTTGAAGTGGAGAGCTTGAAACGAGAACTCCAGGACAAGAAACAGCATCTGGATAAAACATGGGCTGATGTGG
AGAATCTCAACAGTCAGAATGAAGCTGAGCTCCGACGCCAGTTTGAGGAGCGACAGCAGGAGACGGAGCATGTTT
ATGAGCTCTTGGAGAATAAGATGCAGCTTCTGCAGGAGGAATCCAGGCTAGCAAAGAATGAAGCTGCGCGGATGG
CAGCTCTGGTGGAAGCAGAGAAGGAGTGTAACCTGGAGCTCTCAGAGAAACTGAAGGGAGTCACCAAAAACTGGG
AAGATGTACCAGGAGACCAGGTCAAGCCCGACCAATACACTGAGGCCCTGGCCCAGAGGGACAAG**TAG**GTGCCTT
CGGTGCTCTTTTTGTCGCTTGTCTTTTGCCCATTCTCAAGGCATACAGCAGCTGTCCTGTTCCCTTTCAAGGACT
GACAGTAGGAGCTTCACTATTTCTAAGACTTTATGGGCCCACAACCGAAGACATTCTTTTCAGGGTTGAATTTTC
AGTGGTATCCATTATGAAAACTCACTTCATGGATTCAGTGGGCAAATAGCGGCAAGCAAGAGACATGGATTCACT
TATTCAGCAAACATTTACTGGGCATGCCACATGCCAGATACCGGGCTAAGTATCTGGCATGTGTTACAGAAACAA
AAGACCTAAATCTTGTCACCAAGAAACATGTTACATGATTTTAATAAGTTCCCTGATAGAAGAGCATGGGGTGCT
CTGGGGAAATATTGGAGGGTCATCCATTCCACATTAAAAGAGCAAGTTGCCAAAAAAAAAAAAAAAAA

FIGURE 1101

MKGTDSGSCCRRRCDFGCCCRASRRAHYTPYRSGDATRTPQSPRQTPSRERRRPEPAGSWAAAAEEEEAAAAATP
WMRDYFAEDDGEMVPRTSHTAAFLSDTKDRGPPVQSQIWRSGEKVPFVQTYSLRAFEKPPQVQTQALRDFEKHLN
DLKKENFSLKLRIYFLEERMQQKYEASREDIYKRNTELKVEVESLKRELQDKKQHLDKTWADVENLNSQNEAELR
RQFEERQQETEHVYELLENKMQLLQEESRLAKNEAARMAALVEAEKECNLELSEKLKGVTKNWEDVPGDQVKPDQ
YTEALAQRDK

FIGURE 1102A

GGCAGGGCACACCTGGATTGCATTAGAATGAGACTCACTACCCAGTTCAGGTGTGTTGCGTTGTGGGTCTCCGGC
ACATTTCAGAGGCTGATTAGGACCCTGACCCCACACTGGGGTTTACACCCCTAAAAGCAGGTGTGTCCCGTGGCA
ACTGAGTGGGTGCGTGAAAAGGGGGGATCATCAATTACCAGCTGGAGCAATCGAATCGGTTAAATGTGAATCAAG
TCACAGTGCTTCCTTAACCCAACCTCTCTGTTGGGGTCAGCCACAGCCTAAACCGCCTGCCGTTCAGCCTGAGAG
GCTGCTGCTAGCCTGCTCACGCATGCAGCCCGGGCTGCAGAGGAAGTGTGGGGAGGAAGGAAGTGGGTATAGAAG
GGTGCTGAGATGTGGGTCTTGAAGAGAATAGCCATAACGTCTTTGTCACTAAAATGTTCCCCAGGGGCCTTCGGC
GAGTCTTTTTGTTTGGTTTTTTGTTTTTAATCTGTGGCTCTTGATAATTTATCTAGTGGTTGCCTACACCTGAAA
AACAAGACACAGTGTTTAACTATCAACGAAAGAACTGGACGGCTCCCCGCCGCAGTCCCACTCCCCGAGTTTGTG
GCTGGCATTTGGGCCACGCCGGGCTGGGCGGCTCACAGCGAGGGGCGCGCAGTTTGGGGTCACACAGCTCCGCTT
CTAGGCCCCAACCACCGTTAAAAGGGGAAGCCCGTGCCCCATCAGGTCCGCTCTTGCTGAGCCCAGAGCCATCCC
GCGCTCTGCGGGCTGGGAGGCCCGGGCCAGACGCGAGTCCTGCGCAGCCGAGGTTCCCCAGCGCCCCCTGCAGCC
GCGCGTAGGCAGAGACGGAGCCCGGCCCTGCGCCTCCGCACCACGCCCGGGACCCCACCCAGCGGCCCGTACCCG
GAGAAGCAGCGCGAGCACCCGAAGCTCCCGGCTCGGCGGCAGAAACCGGGAGTGGGGCCGGGCGAGTGCGCGGCA
TCCCAGGCCGGCCCGAACGTCCGCCCGCGGTGGGCCGACTTCCCCTCCTCTTCCCTCTCTCCTTCCTTTAGCCCG
CTGGCGCCGGACACGCTGCGCCTCATCTCTTGGGGCGTTCTTCCCCGTTGGCCAACCGTCGCATCCCGTGCAACT
TTGGGGTAGTGGCCGCTTAGTGTTGA**ATG**TTCCCCACCGAGAGCGCATGGCTTGGGAAGCGAGGCGCGAACCCGG
GCCCCGAAGCCGCCGTCCGGGAGACGGTGATGCTGTTGCTGTGCCTGGGGGGTCCCGACCGGCCGCCCCTACAACG
TGGACACTGAGAGCGCGCTGCTTTACCAGGGCCCCCACAACACGCTGTTCGGCTACTCGGTCGTGCTGCACAGCC
ACGGGGCGAACCGATGGCTCCTAGTGGGTGCGCCCACTGCCAACTGGCTCGCCAACGCTTCAGTGATCAATCCCG
GGGCGATTTACAGATGCAGGATCGGAAAGAATCCCGGCCAGACGTGCGAACAGCTCCAGCTGGGTAGCCCTAATG
GAGAACCTTGTGGAAAGACTTGTTTGGAAGAGAGAGACAATCAGTGGTTGGGGGTCACACTTTCCAGACAGCCAG
GAGAAAATGGATCCATCGTGACTTGTGGGCATAGATGGAAAAATATATTTTACATAAAGAATGAAAATAAGCTCC
CCACTGGTGGTTGCTATGGAGTGCCCCCTGATTTACGAACAGAACTGAGTAAAAGAATAGCTCCGTGTTATCAAG
ATTATGTGAAAAAATTTGGAGAAAATTTTGCATCATGTCAAGCTGGAATATCCAGTTTTTACACAAAGGATTTAA
TTGTGATGGGGGCCCCAGGATCATCTTACTGGACTGGCTCTCTTTTTGTCTACAATATAACTACAAATAAATACA
AGGCTTTTTTAGACAAACAAAATCAAGTAAAATTTGGAAGTTATTTAGGATATTCAGTCGGAGCTGGTCATTTTC
GGAGCCAGCATACTACCGAAGTAGTCGGAGGAGCTCCTCAACATGAGCAGATTGGTAAGGCATATATATTCAGCA
TTGATGAAAAAGAACTAAATATCTTACATGAAATGAAAGGTAAAAAGCTTGGATCGTACTTTGGAGCTTCTGTCT
GTGCTGTGGACCTCAATGCAGATGGCTTCTCAGATCTGCTCGTGGGAGCACCCATGCAGAGCACCATCAGAGAGG
AAGGAAGAGTGTTTGTGTACATCAACTCTGGCTCGGGAGCAGTAATGAATGCAATGGAAACAAACCTCGTTGGAA
GTGACAAATATGCTGCAAGATTTGGGGAATCTATAGTTAATCTTGGCGACATTGACAATGATGGCTTTGAAGATG
TTGCTATCGGAGCTCCACAAGAAGATGACTTGCAAGGTGCTATTTATATTTACAATGGCCGTGCAGATGGGATCT
CGTCAACCTTCTCACAGAGAATTGAAGGACTTCAGATCAGCAAATCGTTAAGTATGTTTGGACAGTCTATATCAG
GACAAATTGATGCAGATAATAATGGCTATGTAGATGTAGCAGTTGGTGCTTTTCGGTCTGATTCTGCTGTCTTGC
TAAGGACAAGACCTGTAGTAATTGTTGACGCTTCTTTAAGCCACCCTGAGTCAGTAAATAGAACGAAATTTGACT
GTGTTGAAAATGGATGGCCTTCTGTGTGCATAGATCTAACACTTTGTTTCTCATATAAGGGCAAGGAAGTTCCAG
GTTACATTGTTTTGTTTTATAACATGAGTTTGGATGTGAACAGAAAGGCAGAGTCTCCACCAAGATTCTATTTCT
CTTCTAATGGAACTTCTGACGTGATTACAGGAAGCATACAGGTGTCCAGCAGAGAAGCTAACTGTAGAACACATC
AAGCATTTATGCGGAAAGATGTGCGGGACATCCTCACCCCAATTCAGATTGAAGCTGCTTACCACCTTGGTCCTC
ATGTCATCAGTAAACGAAGTACAGAGGAATTCCCACCACTTCAGCCAATTCTTCAGCAGAAGAAAGAAAAAGACA
TAATGAAAAAAACAATAAACTTTGCAAGGTTTTGTGCCCATGAAAATTGTTCTGCTGATTTACAGGTTTCTGCAA
AGATTGGGTTTTTGAAGCCCCATGAAAATAAAACATATCTTGCTGTTGGGAGTATGAAGACATTGATGTTGAATG
TGTCCTTGTTTAATGCTGGAGATGATGCATATGAAACGACTCTACATGTCAAACTACCCGTGGGTCTTTATTTCA
TTAAGATTTTAGAGCTGGAAGAGAAGCAAATAAACTGTGAAGTCACAGATAACTCTGGCGTGGTACAACTTGACT
GCAGTATTGGCTATATATATGTAGATCATCTCTCAAGGATAGATATTAGCTTTCTCCTGGATGTGAGCTCACTCA
GCAGAGCGGAAGAGGACCTCAGTATCACAGTGCATGCTACCTGTGAAAATGAAGAGGAAATGGACAATCTAAAGC
ACAGCAGAGTGACTGTAGCAATACCTTTAAAATATGAGGTTAAGCTGACTGTTCATGGGTTTGTAAACCCAACTT
CATTTGTGTATGGATCAAATGATGAAAATGAGCCTGAAACGTGCATGGTGGAGAAAATGAACTTAACTTTCCATG

FIGURE 1102B

TTATCAACACTGGCAATAGTATGGCTCCCAATGTTAGTGTGGAAATAATGGTACCAAATTCTTTTAGCCCCCAAA
CTGATAAGCTGTTCAACATTTTGGATGTCCAGACTACTACTGGAGAATGCCACTTTGAAAATTATCAAAGAGTGT
GTGCATTAGAGCAGCAAAAGAGTGCAATGCAGACCTTGAAAGGCATAGTCCGGTTCTTGTCCAAGACTGATAAGA
GGCTATTGTACTGCATAAAAGCTGATCCACATTGTTTAAATTTCTTGTGTAATTTTGGGAAAATGGAAAGTGGAA
AAGAAGCCAGTGTTCATATCCAACTGGAAGGCCGGCCATCCATTTTAGAAATGGATGAGACTTCAGCACTCAAGT
TTGAAATAAGAGCAACAGGTTTTCCAGAGCCAAATCCAAGAGTAATTGAACTAAACAAGGATGAGAATGTTGCGC
ATGTTCTACTGGAAGGACTACATCATCAAAGACCCAAACGTTATTTCACCATAGTGATTATTTCAAGTAGCTTGC
TACTTGGACTTATTGTACTTCTGTTGATCTCATATGTTATGTGGAAGGCTGGCTTCTTTAAAAGACAATACAAAT
CTATCCTACAAGAAGAAAACAGAAGAGACAGTTGGAGTTATATCAACAGTAAAAGCAATGATGAT**TAA**GGACTTC
TTTCAAATTGAGAGAATGGAAAACAGACTCAGGTTGTAGTAAAGAAATTTAAAAGACACTGTTTACAAGAAAAAA
TGAATTTTGTTTGGACTTCTTTTACTCATGATCTTGTGACATATTATGTCTTCATGCAAGGGGAAAATCTCAGCA
ATGATTACTCTTTGAGATAGAAGAACTGCAAAGGTAATAATACAGCCAAAGATAATCTCTCAGCTTTTAAATGGG
TAGAGAAACACTAAAGCATTCAATTTATTCAAGAAAAGTAAGCCCTTGAAGATATCTTGAAATGAAAGTATAACT
GAGTTAAATTATACTGGAGAAGTCTTAGACTTGAAATACTACTTACCATATGTGCTTGCCTCAGTAAAATGAACC
CCACTGGGTGGGCAGAGGTTCATTTCAAATACATCTTTGATACTTGTTCAAAATATGTTCTTTAAAAATATAATT
TTTTAGAGAGCTGTTCCCAAATTTTCTAACGAGTGGACCATTATCACTTTAAAGCCCTTTATTTATAATACATTT
CCTACGGGCTGTGTTCCAACAACCATTTTTTTTCAGCAGACTATGAATATTATAGTATTATAGGCCAAACTGGCA
AACTTCAGACTGAACATGTACACTGGTTTGAGCTTAGTGAAATGACTTCCGGAATCT

FIGURE 1103

MFPTESAWLGKRGANPGPEAAVRETVMLLLCLGVPTGRPYNVDTESALLYQGPHNTLFGYSVVLHSHGANRWLLV
GAPTANWLANASVINPGAIYRCRIGKNPGQTCEQLQLGSPNGEPCGKTCLEERDNQWLGVTLSRQPGENGSIVTC
GHRWKNIFYIKNENKLPTGGCYGVPPDLRTELSKRIAPCYQDYVKKFGENFASCQAGISSFYTKDLIVMGAPGSS
YWTGSLFVYNITTNKYKAFLDKQNQVKFGSYLGYSVGAGHFRSQHTTEVVGGAPQHEQIGKAYIFSIDEKELNIL
HEMKGKKLGSYFGASVCAVDLNADGFSDLLVGAPMQSTIREEGRVFVYINSGSGAVMNAMETNLVGSDKYAARFG
ESIVNLGDIDNDGFEDVAIGAPQEDDLQGAIYIYNGRADGISSTFSQRIEGLQISKSLSMFGQSISGQIDADNNG
YVDVAVGAFRSDSAVLLRTRPVVIVDASLSHPESVNRTKFDCVENGWPSVCIDLTLCFSYKGKEVPGYIVLFYNM
SLDVNRKAESPPRFYFSSNGTSDVITGSIQVSSREANCRTHQAFMRKDVRDILTPIQIEAAYHLGPHVISKRSTE
EFPPLQPILQQKKEKDIMKKTINFARFCAHENCSADLQVSAKIGFLKPHENKTYLAVGSMKTLMLNVSLFNAGDD
AYETTLHVKLPVGLYFIKILELEEKQINCEVTDNSGVVQLDCSIGYIYVDHLSRIDISFLLDVSSLSRAEEDLSI
TVHATCENEEEMDNLKHSRVTVAIPLKYEVKLTVHGFVNPTSFVYGSNDENEPETCMVEKMNLTFHVINTGNSMA
PNVSVEIMVPNSFSPQTDKLFNILDVQTTTGECHFENYQRVCALEQQKSAMQTLKGIVRFLSKTDKRLLYCIKAD
PHCLNFLCNFGKMESGKEASVHIQLEGRPSILEMDETSALKFEIRATGFPEPNPRVIELNKDENVAHVLLEGLHH
QRPKRYFTIVIISSSLLLGLIVLLLISYVMWKAGFFKRQYKSILQEENRRDSWSYINSKSNDD

FIGURE 1104A

GGAGGCTGCATCCGACTCGGTCACAAGGAAAATGGATTCAGTTTGCATCTCTCCCTCCTTTAAACAGCTTCTCCG
GGTCTCAGCATGGGCTTCCAGGGCAGCGATTGAGGAGACCTTACCAAGGAGCACCACACAGTAGATGCTGAGACA
TCGTACTCCAGGATAAGAAACAGTAACATGGCAGCACCTGCTTGAAAGAAATTAAAAACCAACAGACTCCATTTA
GAAAGGAACA**ATG**TCCAAGAAAGGGCGAAATAAGGGCGAGAAGCCCGAGGCACTCATTGTTGCCCTTCAAGCTGC
CAATGAAGACCTCAGGACCAAGCTCACAGACATTCAGATAGAGCTGCATCAAGAGAAGTCCAAGGTATCAAAGCT
TGAAAGAGAGAAGACTCAAGAAGCGAAGAGGATTCGTGAGCTGGAGCAGCGCAAGCACACGGTGCTGGTGACAGA
ACTCAAAGCCAAGCTCCATGAGGAGAAGATGAAGGAGCTGCAGGCTGTGAGGGAGAACCTTATCAAGCAGCACGA
GCAGGAAATGTCAAGGACGGTGAAGGTACGTGATGGAGAGATCCAGAGGCTCAAGTCTGCTCTCTGTGCTCTCCG
CGACGGCAGCAGTGACAAAGTAAGGACAGCGCTCACCATTGAGGCCCGGGAGGAGGCCCGGAAACTGTTTGACAC
AGAGCGCCTTAAGCTCTTACAGGAAATTGCGGACCTGAAAACGGCCAAGAAGCAGGTGGACGAGGCTCTGAGCAA
TATGATCCAAGCAGATAAAATCAAGGCTGGGGACCTTCGGAGTGAGCATCAGTCCCACCAAGAAGCCATCTCGAA
GATCAAGTGGGAGTCGGAGCGGGATATTCGGAGGCTGATGGATGAAATCAAAGCCAAGGACAGGATCATCTTTTC
CCTGGAAAAGGAACTGGAGACCCAGACAGGCTATGTACAGAAACTCCAACTTCAGAAGGAGGCTTTGGACGAACA
ACTCTTTCTGGTCAAGGAGGCTGAGTGCAACATGAGCAGCCCAAAACGAGAAATTCCAGGAAGGGCAGGTGATGG
TTCCGAACACTGCAGCAGTCCTGATTTGCGAAGAAATCAAAAGAGAATAGCTGAATTGAATGCCACTATAAGAAA
ATTAGAAGACAGGAATACCTTGCTTGGAGATGAACGAAATGAACTGTTAAAACGTGTGCGGGAAACCGAAAAGCA
ATGTAAACCTCTCCTGGAAAGGAACAAGTGCCTCGCCAAGAGAAACGATGAACTGATGGTGTCCTTGCAGCGCAT
GGAAGAAAAACTAAAAGCCGTTACCAAGGAAAATTCAGAAATGAGAGAAAAAATAACATCCCATCCACCCCTGAA
GAAATTAAAATCTCTGAATGACCTCGACCAAGCTAATGAAGAACAAGAAACAGAGTTTCTAAAACTTCAGGTCAT
TGAGCAACAGAACATTATTGATGAGCTCACAAGGGACCGAGAAAAGCTCATCCGTAGAAGAAAGCATAGAAGAAG
TTCCAAGCCAATTAAGAGGCCTGTTTTGGACCCGTTTATTGGCTATGATGAGGACTCTATGGATTCAGAGACATC
ATCCATGGCCTCATTTAGAACAGACAGAACACCAGCTACTCCTGATGATGACTTGGATGAAAGTTTAGCAGCTGA
AGAATCTGAACTAAGATTTCGACAATTAACAAAAGAATATCAGGCCCTCCAAAGAGCATATGCCCTCCTACAGGA
GCAGACGGGAGGCATCATCGACGCTGAACGAGAAGCCAAGGCTCAAGAACAGCTCCAAGCAGAGGTGCTAAGGTA
TAAAGCCAAAATTGAAGACCTGGAAGCGACTCTGGCTCAGAAAGGGCAGATAGAAAAACAGGAGGCAGAAAATCA
CCGGTTACAACAAGAACTACAGGACGCCAGAGACCAGAATGAGCTGCTGGAGTTTCGAAACCTAGAGCTAGAAGA
GAGAGAGAGACGATCCCCTCCATTTAATCTCCAAATTCACCCATTCTCAGATGGTGTGAGTGCTCTACAGATCTA
CTGTATGAAAGAAGGTGTTAAGGATGTGAACATCCCTGATCTCATAAAGCAGCTTGATATCTTGGGTGATAATGG
GAATTTAAGAAATGAAGAACAAGTGGCCATAATTCAGGCCAGCACTGTGCTGTCCCTGGCAGAGAAGTGGATCCA
GCAGATTGAAGGAGCTGAGGCTGCCCTACACCAGAAAATGATGGAATTGGAAAGTGACATGGAACAGTTCTGCAA
AATAAAAGGCTATCTGGAGGAAGAACTAGACTACAGAAAACAAGCTCTTGACCAAGCATATATGAGAATCCAGGA
ACTAGAAGCTACTTTGTACAATGCTCTACAGCAAGAAACTGTTATCAAGTTTGGTGAATTATTAAGTGAAAAACA
GCAAGAGGAGCTGAGGACGGCAGTAGAAAAGTTACGGCGGCAAATGCTGAGGAAGAGCAGAGAGTATGACTGTCA
GATTCTTCAGGAGAGAATGGAGCTCTTACAGCAAGCCCATCAGAGAATTCGTGACTTAGAAGATAAAACAGACAT
CCAGAAAAGACAAATAAAAGACTTAGAAGAAAAGTTTCTGTTTCTATTCTTGTTCTTCTCTCTTGCCTTTATTCT
ATGGCCT**TGA**TGTCAAGGTGCCTCTTAAAGAGTAACCGAAAACATGGATAAGATCCCAGGAAGACAAGTGCTTCT
AAACCTTCAAAGATGGCAAAATTGTTTACACCAGTGAGAGGGAGATCAAAAGCTAAGAACTACCCTGTAGCCAGG
ACTACAACTGTGTATTTTAAAGCCATTATTCAAGGTTTCTTACTTGACAGTTCCTACACAACCCTGTTGAAAATC
TACAATATATGCTGCATTTAATGAAACATGTATATGTCAAATCAGAAGAGAAGAACTATAAACATATATTGTGTA
AAGAAAAAGTTCAGCAATGGAACTAGTTTCTGCAGATCAAGCAAAGATGTGTCTTGGGCATGGAACCAAAGTTAC
AATGAAATATTCAACCCCTGCTGTGCAGGGGGGTCATTTTAATGTAACACCACACCCCATGGAAACACTAGTCCT
GATAATAAACATCATTTTAAAAGATCAAAACAAACAAACAAAAAAAACAAGGGTGGGTGGGGAGTGAAGCACGAG
GAATACCTATGAAGAGCTATTTACAATAAAATGTTTCATTTGAAAAGTCTGGTTTCTTACTACAGGGATTTGCTT
TTCTGTCTTTATGATTGTTTTAAACTCAGGAACAGAGACATCCGCATCGTAAATGGGAAGAAAAACACTCTCTGT
TTTGTTTTTCTGCAAAAGGTGGAGCTTGTGGAATTCATTCCACAGACGACAGATGAGAAGTGGATCACAGTGACC
ATAACAAAACTGGTAACGAAGTCAAAGGACCCGAGCGAATGTGACATGTGAAATAAAAGCAGATTCGATGCTTCC
TTGTCCTACTCTCACATCTGCATTCCTCTATCAACAATGGACTGATCTCATTCATATTGAAAACTAAGAAGATGA
TACTGTAAATCACATGCTCCCTGACTTAGTTCTGTTTAGAACGCCAACATCTATAGGGAACATGGGCCAGAGAGC

FIGURE 1104B

ATCTCTGAATCTTTCATTTCCAAAATACTGTTTTTCAAATGGCTGCTTAAAATTGCCTGCAAATGAATATGCTAT
ATGATTTGGGCAAAAACACAGCAGAATCAATGAGTAAATTTCTACCAAGAGTCGGGTTTGCCACAGAGATGTGAA
TATTAAACTAAACTATTATTTTTTAAAGAATCCTCACATGCCTAGAGCATTCTGACCTCTTCTTGTTTAGAGTGA
TAACATTTTTTCCCAGACAGATGACAGCAACAAGATAGCTCTACTTTTTTATATGGAAATAACATTATGTTACTG
ACAAGGTCATTTTCTACCAGAGACAATTAGAGGACTGGTACTTTTCCTAAGTTGTGTATTACTGAGTCTTGGAGT
CATCTCTGAGAGCAAATGTATGTTCCTGAAAAGCTAATTTTACACCTCATTTACTGTAGATAACAGAACAACCTC
AATTTTTCAAATTTTTGAAGTTTTATTTATGGGGCTAGAATTCCCATGCATAGAGAATATGTGTAGGGAGCCAGA
AATTCTTTCTATGAAATGCTATACAAATCTTTCCATATGTGGGTTCACTATCATCCTTCAGTTTTAGCACTGGCA
TTTGCAAAGCCAGAACAATAACTGAAGAATGTACAATAAAAACTAGAATGCTGGGGTCCCACTTTTTGTTCTTAC
ATTTACTGCTGACCCAGGTATCTTTGGCCCAGTCACTTAACCTCTCTGTGCCTCAGTTTCCTCATCTGCAAAATG
GGGTTAAAATGCTTTTTCATAAAGTTTTATTTGCAATTTTAGAACAAGAGGTGCTTAAAGTAGCACAATGTGCTT
TGTAATTATTACAAGTGCTGTATTATTTGACTTTCTTGTGTTGTTGACAAAAAGATTCCCTCATGTAATAAAATA
GTGCTTCAGTTTGGTTAAATTTAAGCACTATAGCACTGAAGCTTGCTTATCAAGCTACTTGGGACATTATTAGCA
ATAAAAATTGAGAGATTCAAAACCAGGATCTTTAATAATCTATAGGAAATAGATCATCTCATGCTATTGAACAAG
ATAGAAGAGTGTGTCATTTCTATGATAAGCATCTCCCAGCTCTCTTGATTGCATATGCATGCCATCATACAGAAC
CCCACTTTTACCACAGGAGAGCCAGTCATTAAACAAAGGCTTGGAGCAAACTGACAGTATCACATAATTAGCTTG
ATTATCTTTTATTCTGGAGGAAAGTCAGGTGGTATGCCCTACTGGGAAGATACAAAACAGACTATCCTGCTGTAT
TCTTTTTTTTTTTTTTTTGAGATGGAGTCTTGCTCTGTTGCCCATGCTGGAGTGCATTGGCACAATCTCGGCTCA
TGGCAAGCTCCGCCTCCTGGATTCAAGTGATTCTCCTGCCTCAACCTCCCTAGTAGCTGGGATTACAGGTGCACA
CCACCACACCTGGCTAATTTTTGTATTTTTAGTAGAGACAGGGTTTCACTATGCTGGTCAGGCTGGTCTCGAACT
CCTGACCTCAAGTGATCTGCCTGCCTCAGCCTCCCAAAGTGCTAGGATTACAGGTGTAAGCCACTGTGCCCGGCC
TCCTGCTGGATTCTTTATTCAACTAGGTAGGTTCCAGATTAAATATGAGCCATATGCTCATTAGGCAAGAAATGT
GAAAGAGGGTGCCTCTACAGTGTTGGTGACCCAACACTAGCCAACTTGAGTCAGAAAATATGGAAGAAGATAAAT
TACTCTCACATATCTAAGACTTTTCCATTTTTCTTCACTTTCTGTTGCAGGGCCCATATGAGTAAATCTATATTC
CGTCTGCTCCAACACACACCTTCCTTCTCTTAATTTTGCTTTCCCACCCACCAAGAAATTTGTAAGTCAAAATTT
ATTTCCATGAGTAACTATTTCTAAATGATTGGAAATTTTTGAAAAAGTGGTATGGTTTATATACCTAATCTGCTT
ATCTGCTATAAGTCATATGAGAACAACAGCTAGGATGATTGTCCAAGCAGCTTTAGATGTGTTTAGGGCCAGGCA
AAAGGTTTGCTTGTTTTTTCTTTTTGCTTAAGATCTGGGAGATTAGCAAATTTCTCAAGACTATAGACTGAACTG
TAATTTTTACCAACTCTTGCTCATGAGCCTCAAAATGAATATATCCTTGAATAAAGTATAAATATTTCAATAGAT
ACATCTCTCTATTATCCATTTTCACAATTATAAAAGCATCAGCAAAATTGTGGATATGTGTTCCAGTCACTCATG
GATCCATGGAAATGGACCGTGTTTAAATGAATGCTTCCCTTGGATGGGATGTTCAGCAATAGC

FIGURE 1105

MSKKGRNKGEKPEALIVALQAANEDLRTKLTDIQIELHQEKSKVSKLEREKTQEAKRIRELEQRKHTVLVTELKA
KLHEEKMKELQAVRENLIKQHEQEMSRTVKVRDGEIQRLKSALCALRDGSSDKVRTALTIEAREEARKLFDTERL
KLLQEIADLKTAKKQVDEALSNMIQADKIKAGDLRSEHQSHQEAISKIKWESERDIRRLMDEIKAKDRIIFSLEK
ELETQTGYVQKLQLQKEALDEQLFLVKEAECNMSSPKREIPGRAGDGSEHCSSPDLRRNQKRIAELNATIRKLED
RNTLLGDERNELLKRVRETEKQCKPLLERNKCLAKRNDELMVSLQRMEEKLKAVTKENSEMREKITSHPPLKKLK
SLNDLDQANEEQETEFLKLQVIEQQNIIDELTRDREKLIRRRKHRRSSKPIKRPVLDPFIGYDEDSMDSETSSMA
SFRTDRTPATPDDDLDESLAAEESELRFRQLTKEYQALQRAYALLQEQTGGIIDAEREAKAQEQLQAEVLRYKAK
IEDLEATLAQKGQIEKQEAENHRLQQELQDARDQNELLEFRNLELEERERRSPPFNLQIHPFSDGVSALQIYCMK
EGVKDVNIPDLIKQLDILGDNGNLRNEEQVAIIQASTVLSLAEKWIQQIEGAEAALHQKMMELESDMEQFCKIKG
YLEEELDYRKQALDQAYMRIQELEATLYNALQQETVIKFGELLSEKQQEELRTAVEKLRRQMLRKSREYDCQILQ
ERMELLQQAHQRIRDLEDKTDIQKRQIKDLEEKFLFLFLFFSLAFILWP

FIGURE 1106

GGGCAATTTGTTAGTTATCCGCCGCCACCAAGACGCGGCACGGCGCCTGGACCGGAGGGGCCCCGCGCGGGCGCG
AACTTTGGGCTCGGGCGAGTGGGTGGTGCTCCGCCCAGCCCGAGACGGGCGGGCGCGCGGGCCAATGGGTGCCGC
CTCTTGGCCGCGGGGGGCCCCGACCCGTGGGTCCCGGCCACCAGCGCCCCAGCCCCGAGGCTCAGAAGCGGCAGG
CGGAGGCGCGGTCCGGGCGCTATGGCCATGCCCGGCGGGTCTCACGCGGCTGCCCCTCGCCCGGCGCGCCTTCGG
TAGGGGGCGCCCGGGGCCCAGCTGGCCCGGCC**ATG**CTGCTGGAGACACAGGACGCGCTGTACGTGGCGCTGGAGC
TGGTCATCGCCGCGCTTTCGGTGGCGGGCAACGTGCTGGTGTGCGCCGCGGTGGGCACGGCGAACACTCTGCAGA
CGCCCACCAACTACTTCCTGGTGTCCCTGGCTGCGGCCGACGTGGCCGTGGGGCTCTTCGCCATCCCCTTTGCCA
TCACCATCAGCCTGGGCTTCTGCACTGACTTCTACGGCTGCCTCTTCCTCGCCTGCTTCGTGCTGGTGCTCACGC
AGAGCTCCATCTTCAGCCTTCTGGCCGTGGCAGTCGACAGATACCTGGCCATCTGTGTCCCGCTCAGGTATAAAA
GTTTGGTCACGGGGACCCGAGCAAGAGGGGTCATTGCTGTCCTCTGGGTCCTTGCCTTTGGCATCGGATTGACTC
CATTCCTGGGGTGGAACAGTAAAGACAGTGCCACCAACAACTGCACAGAACCCTGGGATGGAACCACGAATGAAA
GCTGCTGCCTTGTGAAGTGTCTCTTTGAGAATGTGGTCCCCATGAGCTACATGGTATATTTCAATTTCTTTGGGT
GTGTTCTGCCCCCACTGCTTATAATGCTGGTGATCTACATTAAGATCTTCCTGGTGGCCTGCAGGCAGCTTCAGC
GCACTGAGCTGATGGACCACTCGAGGACCACCCTCCAGCGGGAGATCCATGCAGCCAAGTCACTGGCCATGATTG
TGGGGATTTTTGCCCTGTGCTGGTTACCTGTGCATGCTGTTAACTGTGTCACTCTTTTCCAGCCAGCTCAGGGTA
AAAATAAGCCCAAGTGGGCAATGAATATGGCCATTCTTCTGTCACATGCCAATTCAGTTGTCAATCCCATTGTCT
ATGCTTACCGGAACCGAGACTTCCGCTACACTTTTCACAAAATTATCTCCAGGTATCTTCTCTGCCAAGCAGATG
TCAAGAGTGGGAATGGTCAGGCTGGGGTACAGCCTGCTCTCGGTGTGGGCCTA**TGA**TCTAGGCTCTCGCCTCTTC
CAGGAGAAGATACAAATCCACAAGAAACAAAGAGGACACGGCTGGTTTTCATTGTGAAAGATAGCTACACCTCAC
AAGGAAATGGACTGCCTCTCTTGAGCACTTCCCTGGAGCTACCACGTATCTAGCTAATATGTATGTGTCAGTAGT
AGGCTCCAAGGATTGACAAATATATTTATGATCTATTCAGCTGCTTTTACTGTGTGGATTATGCCAACAGCTTGA
ATGGATTCTAACAGACTCTTTTGTTTTTAAAAGTCTGCCTTGTTTATGGTGGAAAATTACTGAAACTATTTTACT
GTGAAACAGTGTGAACTATTATAATGCAAATACTTTTTAACTTAGAGGCAATGGAAAAATAAAAGTTGACTGTAC
TAAAAATG

FIGURE 1107

MLLETQDALYVALELVIAALSVAGNVLVCAAVGTANTLQTPTNYFLVSLAAADVAVGLFAIPFAITISLGFCTDF
YGCLFLACFVLVLTQSSIFSLLAVAVDRYLAICVPLRYKSLVTGTRARGVIAVLWVLAFGIGLTPFLGWNSKDSA
TNNCTEPWDGTTNESCCLVKCLFENVVPMSYMVYFNFFGCVLPPLLIMLVIYIKIFLVACRQLQRTELMDHSRTT
LQREIHAAKSLAMIVGIFALCWLPVHAVNCVTLFQPAQGKNKPKWAMNMAILLSHANSVVNPIVYAYRNRDFRYT
FHKIISRYLLCQADVKSGNGQAGVQPALGVGL

FIGURE 1108

ACTCGTCTCTGGTAAAGTCTGAGCAGGACAGGGTGGCTGACTGGCAGATCCAGAGGTTCCCTTGGCAGTCCACGC
CAGGCCTTCACC**ATG**GATCAGTTCCCTGAATCAGTGACAGAAAACTTTGAGTACGATGATTTGGCTGAGGCCTGT
TATATTGGGGACATCGTGGTCTTTGGGACTGTGTTCCTGTCCATATTCTACTCCGTCATCTTTGCCATTGGCCTG
GTGGGAAATTTGTTGGTAGTGTTTGCCCTCACCAACAGCAAGAAGCCCAAGAGTGTCACCGACATTTACCTCCTG
AACCTGGCCTTGTCTGATCTGCTGTTTGTAGCCACTTTGCCCTTCTGGACTCACTATTTGATAAATGAAAAGGGC
CTCCACAATGCCATGTGCAAATTCACTACCGCCTTCTTCTTCATCGGCTTTTTTGGAAGCATATTCTTCATCACC
GTCATCAGCATTGATAGGTACCTGGCCATCGTCCTGGCCGCCAACTCCATGAACAACCGGACCGTGCAGCATGGC
GTCACCATCAGCCTAGGCGTCTGGGCAGCAGCCATTTTGGTGGCAGCACCCCAGTTCATGTTCACAAAGCAGAAA
GAAAATGAATGCCTTGGTGACTACCCCGAGGTCCTCCAGGAAATCTGGCCCGTGCTCCGCAATGTGGAAACAAAT
TTTCTTGGCTTCCTACTCCCCCTGCTCATTATGAGTTATTGCTACTTCAGAATCATCCAGACGCTGTTTTCCTGC
AAGAACCACAAGAAAGCCAAAGCCATTAAACTGATCCTTCTGGTGGTCATCGTGTTTTTCCTCTTCTGGACACCC
TACAACGTTATGATTTTCCTGGAGACGCTTAAGCTCTATGACTTCTTTCCCAGTTGTGACATGAGGAAGGATCTG
AGGCTGGCCCTCAGTGTGACTGAGACGGTTGCATTTAGCCATTGTTGCCTGAATCCTCTCATCTATGCATTTGCT
GGGGAGAAGTTCAGAAGATACCTTTACCACCTGTATGGGAAATGCCTGGCTGTCCTGTGTGGGCGCTCAGTCCAC
GTTGATTTCTCCTCATCTGAATCACAAAGGAGCAGGCATGGAAGTGTTCTGAGCAGCAATTTTACTTACCACACG
AGTGATGGAGATGCATTGCTCCTTCTC**TGA**AGGGAATCCCAAAGCCTTGTGTCTACAGAGAACCTGGAGTTCCTG
AACCTGATGCTGACTAGTGAGGAAAGATTTTTGTTGTTATTTCTTACAGGCACAAAATGATGGACCCAATGCACA
CAAAACAACCCTAGAGTGTTGTTGAGAATTGTGCTCAAAATTTGAAGAATGAACAAATTGAACTCTTTGAATGAC
AAAGAGTAGACATTTCTCTTACTGCAAATGTCATCAGAACTTTTTGGTTTGCAGATGACAAAAATTCAACTCAGA
CTAGTTTAGTTAAATGAGGGTGGTGAATATTGTTCATATTGTGGCACAAGCAAAAGGGTGTCTGAGCCCTCAAAG
TGAGGGGAAACCAGGGCCTGAGCCAAGCTAGAATTCCCTCTCTCTGACTCTCAAATCTTTTAGTCATTATAGATC
CCCCAGACTTTACATGACACAGCTTTATCACCAGAGAGGGACTGACACCCATGTTTCTCTGGCCCCAAGGGAAAA
TTCCCAGGGAAGTGCTCTGATAGGCCAAGTTTGTATCAGGTGCCCATCCCTGGAAGGTGCTGTTATCCATGGGGA
AGGGATATATAAGATGGAAGCTTCCAGTCCAATCTCATGGAGAAGCAGAAATACATATTTCCAAGAAGTTGGATG
GGTGGGTACTATTCTGATTACACAAAACAAATGCCACACATCACCCTTACCATGTGCCTGATCCAGCCTCTCCCC
TGATTACACCAGCCTCGTCTTCATTAAGCCCTCTTCCATCATGTCCCCAAACCTGCAAGGGCTCCCCACTGCCTA
CTGCATCGAGTCAAAACTCAAATGCTTGGCTTCTCATACGTCCACCATGGGGTCCTACCAATAGATTCCCCATTG
CCTCCTCCTTCCCAAAGGACTCCACCCATCCTATCAGCCTGTCTCTTCCATATGACCTCATGCATCTCCACCTGC
TCCCAGGCCAGTAAGGGAAATAGAAAAACCCTGCCCCCAAATAAGAAGGGATGGATTCCAACCCCAACTCCAGTA
GCTTGGGACAAATCAAGCTTCAGTTTCCTGGTCTGTAGAAGAGGGATAAGGTACCTTTCACATAGAGATCATCCT
TTCCAGCATGAGGAACTAGCCACCAACTCTTGCAGGTCTCAACCCTTTTGTCTGCCTCTTAGACTTCTGCTTTCC
ACACCTGCACTGCTGTGCTGTGCCCAAGTTGTGGTGCTGACAAAGCTTGGAAGAGCCTGCAGGTGCCTTGGCCGC
GTGCATAGCCCAGACACAGAAGAGGCTGGTTCTTACGATGGCACCCAGTGAGCACTCCCAAGTCTACAGAGTGAT
AGCCTTCCGTAACCCAACTCTCCTGGACTGCCTTGAATATCCCCTCCCAGTCACCTTGTGCAAGCCCCTGCCCAT
CTGGGAAAATACCCCATCATTCATGCTACTGCCAACCTGGGGAGCCAGGGCTATGGGAGCAGCTTTTTTTCCCC
CCTAGAAACGTTTGGAACAATGTAAAACTTTAAAGCTCGAAAACAATTGTAATAATGCTAAAGAAAAAGTCATCC
AATCTAACCACATCAATATTGTCATTCCTGTATTCACCCGTCCAGACCTTGTTCACACTCTCACATGTTTAGAGT
TGCAATCGTAATGTACAGATGGTTTTATAATCTGATTTGTTTTCCTCTTAACGTTAGACCACAAATAGTGCTCGC
TTTCTATGTAGTTTGGTAATTATCATTTTAGAAGACTCTACCAGACTGTGTATTCATTGAAGTCAGATGTGGTAA
CTGTTAAATTGCTGTGTATCTGATAGCTCTTTGGCAGTCTATATGTTTGTATAATGAATGAGAGAATAAGTCATG
TTCCTTCAAGATCATGTACCCCAATTTACTTGCCATTACTCAATTGATAAACATTTAACTTGTTTCCAATGTTTA
GCAAATACATATTTTATAGAACTTC

FIGURE 1109

MDQFPESVTENFEYDDLAEACYIGDIVVFGTVFLSIFYSVIFAIGLVGNLLVVFALTNSKKPKSVTDIYLLNLAL
SDLLFVATLPFWTHYLINEKGLHNAMCKFTTAFFFIGFFGSIFFITVISIDRYLAIVLAANSMNNRTVQHGVTIS
LGVWAAAILVAAPQFMFTKQKENECLGDYPEVLQEIWPVLRNVETNFLGFLLPLLIMSYCYFRIIQTLFSCKNHK
KAKAIKLILLVVIVFFLFWTPYNVMIFLETLKLYDFFPSCDMRKDLRLALSVTETVAFSHCCLNPLIYAFAGEKF
RRYLYHLYGKCLAVLCGRSVHVDFSSSESQRSRHGSVLSSNFTYHTSDGDALLLL

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FIGURE 1110

GGTGTTGTTCCGGACACATAGAAAGATAACGACGGGAAGAGCGGGGCCCGCTTTGGGGTCCAGGCAGGTTTTGGG
GCCTCCTGTCTGGTGGGAGGAGGCCGCAGCGCAGCACCCTGCTCGTCACTTGGG**ATG**GAGACCGGCTTTCCCGCA
ATCATGTACCCTGGATCTTTTATTGGGGGCTGGGGAGAAGAGTATCTCAGCTGGGAAGGACCGGGGCTCCCAGAT
TTCGTCTTCCAGCAGCAGCCCGTGGAGTCTGAAGCAATGCACTGCAGCAACCCCAAGAGTGGAGTTGTGCTGGCT
ACAGTGGCCCGAGGTCCCGATGCTTGTCAGATACTCACCAGAGCCCCGCTGGGCCAGGATCCCCCGCAGAGGACA
GTGCTAGGGCTGCTAACTGCAAATGGGCAGTACAGGAGGACCTGTGGCCAGGGGATCACAAGAATCAGGTGTTAT
TCTGGATCAGAAAATGCCTTCCCTCCAGCTGGAAAGAAAGCACTCCCTGACTGTGGGGTCCAAGAGCCCCCCAAG
CAAGGGTTTGACATCTACATGGATGAACTAGAGCAGGGGGACAGAGACAGCTGCTCGGTCAGAGAGGGGATGGCA
TTTGAGGATGTGTATGAAGTAGACACCGGCACACTCAAGTCAGACCTGCACTTCCTGCTGGATTTCAACACAGTT
TCCCCTATGCTGGTAGATTCATCTCTCCTCTCCCAGTCTGAAGATATATCCAGTCTTGGCACAGATGTGATAAAT
GTGACTGAATATGCTGAAGAAATTTATCAGTACCTTAGGGAAGCTGAAATAAGGCACAGACCCAAAGCACACTAC
ATGAAGAAGCAGCCAGACATCACGGAAGGCATGCGCACGATTCTGGTGGACTGGCTGGTGGAGGTTGGGGAAGAA
TATAAACTTCGAGCAGAGACCCTGTATCTGGCTGTCAACTTCCTGGACAGGTTCCTTTCATGTATGTCTGTTCTG
AGAGGGAAACTGCAGCTCGTAGGAACAGCAGCTATGCTTTTGGCTTCGAAATATGAAGAGATATATCCTCCTGAA
GTAGACGAGTTTGTCTATATCACCGATGATACATACACAAAACGACAACTGTTAAAAATGGAACACTTGCTTCTG
AAAGTTCTAGCTTTTGATCTGACAGTACCAACCACCAACCAGTTTCTCCTTCAGTACTTGAGGCGACAAGGAGTG
TGCGTCAGGACTGAGAACCTGGCTAAGTACGTAGCAGAGCTGAGTCTACTTGAAGCAGATCCATTCTTGAAATAT
CTTCCTTCACTGATAGCTGCAGCAGCTTTTTGCCTGGCAAACTATACTGTGAACAAGCACTTTTGGCCAGAAACC
CTTGCTGCATTTACAGGGTATTCATTAAGTGAAATTGTGCCTTGCCTGAGTGAGCTTCATAAAGCGTACCTTGAT
ATACCCCATCGACCTCAGCAAGCAATTAGGGAGAAGTACAAGGCTTCAAAGTACCTGTGTGTGTCCCTCATGGAG
CCACCTGCAGTTCTTCTTCTACAA**TAA**GTTTCTGAATGGAAGCACTTCCAGAACTTCACCTCCATATCAGAAGTG
CCAATAATCGTCATAGGCTTCTGCACGTTGGATCAACTAATGTTGTTTACAATATAGATGACATTTTAAAAATGT
AAATGAATTTAGTTTCCCTTAGACTTTAGTAGTTTGTAATATAGTCCAACATTTTTTAAACAATAAACTGCTTGT
CTTATGACAAAAAAAAAA

FIGURE 1111

METGFPAIMYPGSFIGGWGEEYLSWEGPGLPDFVFQQQPVESEAMHCSNPKSGVVLATVARGPDACQILTRAPLG
QDPPQRTVLGLLTANGQYRRTCGQGITRIRCYSGSENAFPPAGKKALPDCGVQEPPKQGFDIYMDELEQGDRDSC
SVREGMAFEDVYEVDTGTLKSDLHFLLDFNTVSPMLVDSSLLSQSEDISSLGTDVINVTEYAEEIYQYLREAEIR
HRPKAHYMKKQPDITEGMRTILVDWLVEVGEEYKLRAETLYLAVNFLDRFLSCMSVLRGKLQLVGTAAMLLASKY
EEIYPPEVDEFVYITDDTYTKRQLLKMEHLLLKVLAFDLTVPTTNQFLLQYLRRQGVCVRTENLAKYVAELSLLE
ADPFLKYLPSLIAAAAFCLANYTVNKHFWPETLAAFTGYSLSEIVPCLSELHKAYLDIPHRPQQAIREKYKASKY
LCVSLMEPPAVLLLQ

FIGURE 1112A

GAATTCCGAAAGCAAGGAG**ATG**GCCACCAAGGAGAAGCTGCAGTGTCTGAAAGATTTCCACAAGGACATGGTGAA
GCCCTCACCAGGGAAGAGCCCAGGCACGCGGCCTGAGGACGAGGCTGAGGGAAAACCTCCGCAGAGGGAGAAGTG
GTCTAGCAAGATCGACTTTGTGCTCTCTGTGGCTGGCGGCTTCGTGGGCTTGGGCAACGTCTGGCGCTTCCCGTA
CCTCTGCTACAAGAATGGTGGAGGTGCGTTTCTCATACCGTATTTTATTTTCCTGTTTGGGAGCGGCCTGCCTGT
GTTTTTCTTGGAGATCATCATAGGCCAGTACACCTCTGAAGGGGGCATCACCTGCTGGGAAAAGATCTGCCCCTT
GTTCTCTGGTATCGGCTATGCCTCCGTTGTAATTGTGTCCCTCCTGAATGTCTACTACATCGTCATCCTGGCCTG
GGCCACATACTACCTGTTCCAGTCCTTCCAGAAGGAGCTGCCCTGGGCACACTGCAACCACAGCTGGAACACACC
TCACTGCATGGAGGACACCATGCGCAAGAACAAGAGTGTCTGGATCACCATCAGCTCCACCAACTTCACCTCCCC
TGTCATCGAGTTCTGGGAGCGCAACGTGCTGAGCTTGTCCCCTGGAATCGACCACCCAGGCTCTCTGAAATGGGA
CCTCGCTCTCTGCCTTCTTTTAGTCTGGCTAGTGTGTTTCTTCTGCATCTGCAAGGGCGTCAGGTCCACTGGGAA
GGTCGTCTACTTCACAGCCACTTTTCCATTCGCCATGCTCCTGGTGCTGCTGGTCCGAGGGCTGACGCTGCCGGG
CGCGGGCCGAGGCATCAAGTTCTATCTGTATCCTGACATCACCCGCCTTGAGGACCCACAGGTGTGGATTGACGC
TGGGACTCAGATATTCTTCTCTTATGCCATCTGCCTGGGGGCTATGACCTCGCTGGGGAGCTACAACAAGTACAA
GTATAACTCGTACAGGGACTGTATGCTGCTGGGATGCCTGAACAGTGGTACCAGTTTTGTGTCTGGCTTCGCAAT
TTTTTCCATCCTGGGCTTCATGGCACAAGAGCAAGGGGTGGACATTGCTGATGTGGCTGAGTCAGGTCCTGGCCT
GGCCTTCATTGCCTACCCAAAAGCTGTGACAATGATGCCGCTGCCCACATTTTGGTCCATTCTTTTTTTTATTAT
GCTTCTCTTGCTTGGACTGGATAGCCAGTTTGTTGAAGTTGAAGGACAGATCACATCCTTGGTTGATCTTTACCC
ATCCTTCCTAAGGAAGGGTTATCGTCGGGAAATCTTCATCGCCTTCGTGTGTAGCATCAGCTACCTGCTGGGGCT
GACGATGGTGACGGAGGGTGGCATGTATGTGTTTCAGCTCTTTGACTACTATGCAGCTAGCGGTGTATGCCTTTT
GTGGGTTGCATTCTTTGAATGTTTTGTTATTGCCTGGATATATGGAGGTGATAACCTTTATGATGGTATTGAGGA
CATGATTGGCTATCGGCCCGGGCCCTGGATGAAGTACAGCTGGGTGATCACTCCAGTTCTCTGTGTTGGATGTTT
CATCTTCTCGCTCGTCAAGTACGTACCCCTGACCTACAACAAAACATACGTGTCCCCAACTTGGGCCATTGGGCT
GGGCTGGAGCCTGGCCCTTTCCTCCATGCTCTGCGTTCCCTTGGTCATCGTCATCCGCCTCTGCCAGACTGAGGG
GCCGTTCCTTGTGAGAGTCAAGTACCTGCTGACCCCAAGGGAACCCAACCGCTGGGCTGTGGAGCGCGAGGGAGC
CACACCTTACAACTCTCGCACCGTCATGAACGGCGCTCTCGTGAAACCGACCCACATCATTGTGGAGACCATGAT
G**TGA**GCTCTCTCGGGTCGACGGGGCCGGCGGCTTTCCTGCTGTTTACTAACATTAGATTCACATAGGACCAGGTT
TACAGAGCTTTATATTTGCACTAGGATTTTTTTTTTTTTGTAATTGTCACAGAAAATGTAATTGTGGGTATGTGT
GCGTGCGTGTGTGTGTGTGTGTGTGTATCGTGTGTGTGTGTTTTGTTTTGATTTGGGGGATATTTTGTACAAA
AAGAAAACCCACGGGAAGATGTCCGTGGAGAGGCAGAGCTTTCATACTGAATTAGATGTATTTTATGGGAATTTG
GTAAATTTTTCTTTGTATTTTTTTTTTTTACATATAAGTATATATACACTTAGAGATTGTCATATACTTTTACCAC
TTGAATTGATCTTCTTGCCAGCAATAGATCTCATTTTCAAAAGCAATTCTTCGGTGCTGTGTAGCTGGCAGAAAG
TTCTGTCCAGTAAACGCAGGATGGAATTTTCCTGGGACTCTACACCCATCTTAAGGTGGTATACCTTCCAAATCC
TGGTTCAGATGGAAGAAATAGCAGGAGAGAGGACCCATTAGCTGGCAGACCCAGGGGAAGAAAGGAGGGCTGTGA
GGAGATACCTCATTAAACTTGGCTTAGTGAAGAAGAGAGATGCCAAAGGAATGAACCAACCCTTCACATAAAGGA
GACTGGCTGAAGCTGAATGAGGAGGCCCTATAGCAGAAGTCTGATTCTAAGAGCAGTAGAAACTTGTACCAGAAG
CAAAATCCCACTTTTAATTTTGAGATGGTGAGTGGATAGTCAGTAGACCGTCAGAACCACTGGCCAGAGAGGGAG
CTGCTAGAGATCCAAGAAGGCTGGCAGGAATGAGGCTCACAACTCAGCCTCGCAAGAGGTGGCAGAGGCACAGGA
GGCCACAGTCCTTCCTGGGGCATTCCAGGCAGAGAAGGAGCAGAGGCTCTCCCGGCAGGAGCTGGGGTCTCAGGG
CTCAGATGAGTCTGTTGCATTTGAATGGGGTCATAGCAGGTTCTGGTCATTCCCCAAGCAACATCTCAGCATCTC
TTAAAGTTGCCTGCAGGAATGAAGCATGACATACCTGTTGAGGGACTAGGGGAGTGGTGGGGAGGTGAGTGGACC
AAAGGATATAGGCCCCAGGCATGCAGATGGGCCCGGTGTCGGGGAGGGGTGCTTTCTTTCCTCATCTCCCCACTC
CCCACTCTCAGCCTGGGAGACTCCTGCCAAGCCCTCATTAAAGATGCCACCCTGGGCTGCCCTGGCACCTAGCAA
GGCACACCAAGAACAGCTTTTGAGTCGTATCCTCCACTGGGGAAGTGCTCCCAGTTCAGAACAAGGGCAGCCCGT
GGTGCTGACCTAGGATATAACAAAGCTCTTCACTTCAAAACCCCTGCAATAGCTGGGTTTACAGACATTTACCAC
CTGGGGACCCAAAAGAGAAGGCCTAGGAGAGTTTTCTAGAAGGTTGGGATTGTCAGGGTCCTGGCCCCCCAGAAC
TGGCTTGATCAAGGGCCTTATGTGGAGCAGAGGTTGTCTCTGAACCAGGAGAGAAGGTACTATACCTTTCAAATC
CCCAGGGCAGACACACCCCCACCCAGCCCCTATTTGGACCTAAACTGTGCCATTTGAACAGTCACTTCCAAGCTC
AGTCTAAATGAAACCGAAACGTGACCACGCACAAAGGCAGTCACTGCTCGAGGGGTGCAGACCGCAGAATTTTCA

FIGURE 1112B

CAGCAGGGGCTCTTGGAACTCTGGAAACCCCCTTCTTAAATTTGGGAGGAGGAGTATGCCTTTGGTGTCCCCCTC
CCAAGGGCAATTCTGAACCCCATCTTTGGCAGGCATACATATTTCACTGTTTCCAAAGCTATCTACTCTGCCAAA
CAACACCCAGTCCTATTCCAAACTCTCAACGATTCTATCTTGTTCCTGTTTTTCTATGTATTTATGGTTGCCGTT
TGTGTCTGATTTGATTTTACTGTTTTTTCCCTGATTTTATGGAGTAGCATTGTGACCTGTTTTCCTTTGTCTTAT
ATAACTTTAGTAAACTAACCACTGTCAATGATTGAGGGCAGGTGGCACGTGGGGAAGAGGGCGGAATTC

FIGURE 1113

MATKEKLQCLKDFHKDMVKPSPGKSPGTRPEDEAEGKPPQREKWSSKIDFVLSVAGGFVGLGNVWRFPYLCYKNG
GGAFLIPYFIFLFGSGLPVFFLEIIIGQYTSEGGITCWEKICPLFSGIGYASVVIVSLLNVYYIVILAWATYYLF
QSFQKELPWAHCNHSWNTPHCMEDTMRKNKSVWITISSTNFTSPVIEFWERNVLSLSPGIDHPGSLKWDLALCLL
LVWLVCFFCICKGVRSTGKVVYFTATFPFAMLLVLLVRGLTLPGAGRGIKFYLYPDITRLEDPQVWIDAGTQIFF
SYAICLGAMTSLGSYNKYKYNSYRDCMLLGCLNSGTSFVSGFAIFSILGFMAQEQGVDIADVAESGPGLAFIAYP
KAVTMMPLPTFWSILFFIMLLLLGLDSQFVEVEGQITSLVDLYPSFLRKGYRREIFIAFVCSISYLLGLTMVTEG
GMYVFQLFDYYAASGVCLLWVAFFECFVIAWIYGGDNLYDGIEDMIGYRPGPWMKYSWVITPVLCVGCFIFSLVK
YVPLTYNKTYVSPTWAIGLGWSLALSSMLCVPLVIVIRLCQTEGPFLVRVKYLLTPREPNRWAVEREGATPYNSR
TVMNGALVKPTHIIVETMM

FIGURE 1114

AAACCTTGGCCATGGTCACTTCCTCTTTTCCAATCTCTGTGGCAGTTTTTGCCCTAATAACCCTGCAGGTTGGTA
CTCAGGACAGTTTTATAGCTGCAGTGTATGAACATGCTGTCATTTTGCCAAATAAAACAGAAACACCAGTTTCTC
AGGAGGATGCCTTGAATCTCATGAACGAGAATATAGACATTCTGGAGACAGCGATCAAGCAGGCAGCTGAGCAGG
GTGCTCGAATCATTGTGACTCCAGAAGATGCACTTTATGGATGGAAATTTACCAGGGAAACTGTTTTCCCTTATC
TGGAGGATATCCCAGACCCTCAGGTGAACTGGATTCCGTGTCAAGACCCCCACAGATTTGGTCACACACCAGTAC
AAGCAAGACTCAGCTGCCTGGCCAAGGACAACTCTATCTATGTCTTGGCAAATTTGGGGGACAAAAAGCCATGTA
ATTCCCGTGACTCCACATGTCCTCCTAATGGCTACTTTCAATACAATACCAATGTGGTGTATAATACAGAAGGAA
AACTCGTGGCACGTTACCATAAGTACCACCTGTACTCTGAGCCTCAGTTTAATGTCCCTGAAAAGCCGGAGTTGG
TGACTTTCAACACCGCATTTGGAAGGTTTGGCATTTTCACGTGCTTTGATATATTCTTCTATGATCCTGGTGTTA
CCCTGGTGAAAGATTTCCATGTGGACACCATACTGTTTCCCACAGCTTGGATGAACGTTTTGCCCCTTTTGACAG
CTATTGAATTCCATTCAGCTTGGGCAATGGGAATGGGAGTTAATCTTCTTGTGGCCAACACACATCATGTCAGCC
TAAATATGACAGGAAGTGGTATTTATGCACCAAATGGTCCCAAAGTGTATCATTATGACATGAAGACAGAGTTGG
GAAAACTTCTCCTTTCAGAGGTGGATTCACATCCCCTATCCTCGCTTGCCTACCCAACAGCTGTTAATTGGAATG
CCTACGCCACCACCATCAAACCATTTCCAGTACAGAAAAACACTTTCAGGGGATTTATTTCCAGGGATGGGTTCA
ACTTCACAGAACTTTTTGAAAATGCAGGAAACCTTACAGTCTGTCAAAAGGAGCTTTGCTGTCATTTAAGCTACA
GAATGTTACAAAAAGAAGAGAATGAAGTATACGTTCTAGGAGCTTTTACAGGATTACATGGCCGAAGGAGAAGAG
AGTACTGGCAGGTCTGCACAATGCTGAAGTGCAAAACTACTAATTTGACAACTTGTGGACGGCCAGTAGAAACTG
CTTCTACAAGATTTGAAATGTTCTCCCTCAGTGGCACATTTGGAACAGAGTATGTTTTTCCTGAAGTGCTACTTA
CCGAAATTCATCTGTCACCTGGAAAATTTGAGGTGCTGAAAGATGGGCGTTTGGTAAACAAGAATGGATCATCTG
GGCCTATACTAACAGTGTCACTCTTTGGGAGGTGGTACACAAAGGACTCACTTTACAGCTCATGTGGGACCAGCA
ATTCAGCAATAACTTACCTGCTAATATTCATATTATTAATGATCATAGCTTTGCAAAATATTGTAATGTTATAGG
GCGTCTCTTTATCACTCAGCTTCTGCATCATATGCTTGGCTGAATGTGTTTATCGGCTTCCCAAGTTTACTAAGA
AACTTTGAAGGGCTATTTCAGTAGTATAGACCAGTGAGTCCTAAATATTTTTTCTCATCAATAATTATTTTTTAA
GTATTATGATAATGTTGTCCATTTTTTTGGCTACTCTGAAATGTTGCAGTGTGGAACAATGGAAAGAGCCTGGGT
GTTTGGGTCAGATAAATGAAGATCAAACTCCAGCTCCAGCCTCATTTGCTTGAGACTTTGTGTGTATGGGGGACT
TGTATGTATGGGAGTGAGGAGTTTCAGGGCCATTGCAAACATAGCTGTGCCCTTGAAGAGAATAGTAATGATGGG
AATTTAGAGGTTTATGACTGAATTCCCTTTGACATTAAAGACTATTTGAATTCAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAA

FIGURE 1115

MVTSSFPISVAVFALITLQVGTQDSFIAAVYEHAVILPNKTETPVSQEDALNLMNENIDILETAIKQAAEQGARI
IVTPEDALYGWKFTRETVFPYLEDIPDPQVNWIPCQDPHRFGHTPVQARLSCLAKDNSIYVLANLGDKKPCNSRD
STCPPNGYFQYNTNVVYNTEGKLVARYHKYHLYSEPQFNVPEKPELVTFNTAFGRFGIFTCFDIFFYDPGVTLVK
DFHVDTILFPTAWMNVLPLLTAIEFHSAWAMGMGVNLLVANTHHVSLNMTGSGIYAPNGPKVYHYDMKTELGKLL
LSEVDSHPLSSLAYPTAVNWNAYATTIKPFPVQKNTFRGFISRDGFNFTELFENAGNLTVCQKELCCHLSYRMLQ
KEENEVYVLGAFTGLHGRRRREYWQVCTMLKCKTTNLTTCGRPVETASTRFEMFSLSGTFGTEYVFPEVLLTEIH
LSPGKFEVLKDGRLVNKNGSSGPILTVSLFGRWYTKDSLYSSCGTSNSAITYLLIFILLMIIALQNIVML

FIGURE 1116A

GAATTCCGGGCAGCATCATCAAGGCACATAGATTCTCTCTTTGAACAATGCAGCTGCTGCAGGGGATGGGGAAGG
GATGGCACTGGCAATTCAAGACTGCCTTTCCTACTTCTTCAGTGCCTCTTTCACCAATATGAAGTTAAAACCAGG
ATCCTTCAAACCAAAAATGTGGTGGAAGAAAGAAAACCGTGTCTTTCAGCAGC**ATG**CCATCGGAAAAGAAAATTA
GCAGTGCAAATGACTGCATCAGCTTCATGCAAGCTGGCTGTGAGTTGAAGAAAGTCCGGCCAAATTCTCGCATTT
ACAACCGTTTTTTCACTCTGGACACAGACCTTCAAGCTCTTCGCTGGGAACCTTCAAAGAAAGACCTCGAGAAAG
CCAAGCTTGATATTTCTGCCATAAAAGAGATCAGACTGGGGAAAAACACGGAAACATTTACAAACAATGGCCTTG
CTGACCAGATCTGTGAGGACTGTGCCTTTTCCATACTCCACGGGGAAAACTATGAGTCTCTGGACCTAGTTGCCA
ATTCAGCAGATGTGGCAAACATCTGGGTGTCTGGGTTACGGTACCTGGTTTCTCGAAGTAAGCAGCCTCTTGATT
TTATGGAGGGCAACCAGAACACACCACGGTTCATGTGGTTGAAAACAGTGTTTGAAGCAGCAGATGTTGATGGGA
ATGGGATTATGTTGGAAGACACCTCTGTAGAGTTAATAAAACAACTCAACCCTACTCTGAAGGAAGCCAAGATCA
GGTTAAAGTTTAAAGAAATCCAGAAGAGCAAGGAAAAACTAACCACCCGCGTGACCGAAGAGGAATTTTGTGAAG
CTTTTTGTGAACTTTGCACCAGGCCAGAAGTGTATTTCTTACTTGTACAGATATCTAAAAACAAAGAATATTTGG
ATGCCAATGATCTCATGCTCTTTTTAGAAGCTGAGCAAGGAGTCACCCATATCACCGAGGATATATGCTTAGACA
TCATAAGGAGATACGAACTTTCTGAAGAGGGACGTCAAAAAGGGTTTCTTGCAATTGATGGCTTTACCCAGTATT
TATTGTCATCAGAATGTGACATTTTTGATCCTGAGCAAAAGAAGGTTGCCCAAGATATGACCCAGCCATTATCTC
ACTACTATATCAATGCCTCTCATAACACCTATCTAATAGAAGACCAGTTCAGGGGGCCAGCTGACATCAATGGGT
ACATTAGAGCTTTGAAAATGGGCTGTCGAAGCGTTGAACTCGATGTAAGTGATGGTTCAGATAATGAACCAATCC
TTTGTAATCGAAATAACATGACAACCCATGTTTCCTTTCGAAGTGTCATAGAGGTAATAAATAAATTTGCCTTTG
TTGCTTCTGAATACCCACTCATTCTTTGCTTGGGAAATCACTGCTCCTTGCCGCAGCAGAAGGTAATGGCTCAAC
AGATGAAAAAGGTCTTTGGCAATAAACTCTATACTGAAGCACCTTTGCCCTCAGAATCCTACCTCCCATCACCAG
AAAAATTAAAAAGAATGATCATTGTGAAAGGAAAGAAGTTGCCTTCTGATCCAGATGTGTTAGAAGGAGAAGTAA
CAGATGAAGATGAAGAAGCTCAAATGTCTCGAAGGATGTCGGTAGATTACAATGGTGAGCAGAAGCAAATCCGAC
TCTGTAGGGAGCTCTCTGATTTGGTGTCTATTTGTAAATCTGTTCAATACAGGGATTTTGAACTATCTATGAAAA
GCCAAAACTATTGGGAAATGTGTTCATTTAGTGAAACAGAGGCCAGCCGCATTGCAAATGAGTACCCAGAGGATT
TTGTTAATTATAATAAGAAGTTCTTATCAAGAATCTATCCAAGTGCCATGAGGATCGATTCCAGTAACTTGAATC
CACAGGACTTTTGGAATTGTGGCTGTCAGATTGTAGCAATGAATTTTCAGACTCCGGGTCCAATGATGGACCTTC
ACACGGGCTGGTTTCTTCAAAACGGGGGATGTGGTTATGTTCTAAGGCCGTCTATAATGCGAGATGAAGTTTCTT
ACTTCAGCGCAAATACAAAGGGCATTCTACCTGGGGTGTCTCCTCTAGCTCTTCATATCAAGATCATCAGTGGTC
AGAATTTCCCAAAGCCCAAGGGAGCTTGTGCCAAAGGGGATGTCATAGATCCCTATGTTTGTATAGAGATACACG
GAATTCCAGCGGATTGTTCGGAACAAAGAACTAAAACTGTACAGCAAAACAGTGATAATCCTATTTTTGATGAAA
CTTTTGAGTTCCAAGTAAACCTACCTGAGCTGGCCATGATCCGTTTTGTTGTTCTGGATGATGACTACATTGGGG
ATGAGTTTATAGGGCAATATACGATACCATTTGAATGTTTGCAGCCTGGATATCGGCATGTTCCCCTGCGTTCTT
TTGTGGGTGACATCATGGAGCACGTAACCCTTTTTGTCCACATAGCAATAACTAATCGAAGTGGAGGAGGAAAGG
CACAGAAGCGCAGTCTTTCAGTGAGAATGGGGAAGAAAGTTCGGGAATATACCATGCTCAGGAATATCGGTCTTA
AAACCATTGATGACATCTTTAAAATAGCGGTTCATCCATTACGAGAAGCCATAGATATGAGAGAAAATATGCAGA
ATGCAATCGTGTCTATTAAGGAACTATGTGGACTCCCTCCAATTGCCAGTCTGAAGCAGTGCCTGTTAACTCTGT
CATCTCGGCTCATCACCAGTGACAATACTCCTTCAGTCTCACTTGTGATGAAAGACAGCTTTCCTTACCTGGAGC
CTCTGGGTGCAATTCCAGATGTGCAGAAAAAGATGCTGACTGCTTATGATCTGATGATTCAAGAGAGCCGGTTTC
TCATAGAAATGGCGGACACAGTCCAGGAAAAGATTGTACAGTGTCAGAAAGCAGGGATGGAGTTCCATGAAGAAC
TTCATAATTTGGGGGCAAAAGAAGGCTTGAAGGGAAGAAAACTCAACAAAGCAACTGAGAGCTTTGCTTGGAACA
TTACAGTATTGAAGGGCCAAGGAGATCTGTTGAAGAATGCCAAGAATGAAGCTATAGAAAACATGAAGCAGATCC
AGCTGGCATGCCTGTCCTGTGGACTGAGTAAAGCCCCCAGCAGCAGTGCTGAGGCCAAGAGCAAGCGCAGCCTGG
AAGCCATAGAGGAGAAGGAAAGTAGTGAGGAGAATGGGAAGCTG**TGA**CTCTGGGCATTATCGACACGTTCACCCA
TCTTATCAAGGACTCTGGTTTCTCATTCTTGTTTTCTTTCTTTAAATGTTTTATAAGTTCACAAAATGGTGCCCT
ATATGGGGTATTGGACATAGATATTTTCACAATGTCAGTATTTCAGTGTAGTTAATTTATCTAAATTAAAGCCTT
TAGTATCAGTGTTTTAAATTCTGAGACATGTGTCAACACCCCTGTGTGGATGCCTGTGGAAGAGTGTGTGTGTGT
GTGTGTGTGTGTGTGTGTGTGTGTGTGGCAGAGAGAGAGAAAGAGAGAGAGAGAAATTCTGTTAAAATCTATTCT
GTGTTGCATTATTCATTTAGTGAGTTATTCCTTGATCATTTTGGGACAATTGTTTTAATCTGAAATTCTAAAGAG

FIGURE 1116B

CACTTACTGTAACCTGTTGCTGTGTTTAATTTGACTTCTCTGCCTTTGACATTTAATTTAGTGATCTTAGCATAG
CTTATTATTGAAGGAAGCCAAATTTATCAAAGCATACATGTTTTGGTAGATTAAATATAGATTAGAAAAATTCCT
AAGAATCAGAGTAGAAATAAAAGTGAATGAAAGATTAAACAGATGATGAGAATTTCTAAAAAGATTAGCAAGGTC
ATTTCTTCAGTCAGAAAACTTTAAAAAATATTTATTAAATAAAATCAATTTTTAGGAAGTTTTCTGTAGTCATTT
ACTAAACATATGATTTCACTAGAAAAGCTGATCATAAGTGAATTTATACCTACCTGTGTGGCTACTCTGAAACAC
ACTGAAAGCTCTGTTGCAATTAGGATTTGATGTGACATAATATTGTTGTATAATTTCGAGATTTGTAGGAAGGTC
TCATTCTTCCAAGCTGAGAGTCTAGCACTCATTTTCTATAACAGATATGGCAGCTTAGAGGTGTTGGCTTTGTTT
GGATGTAATTTTAGGGGTACTAAAATTTAAAATTTAAAGATAATTGTTCAACAATATCATATCATCACATTGAGC
TGATATAAATTCTGTGGGTCCGATAATATCTTTGTGATAATTTAAGAGCTAACCAGTTACCACACATCTATGATA
TAACCCTAACACACACAGAAAGCATACATGCAAAAAGAAATGACTAATTAGGGTACATTTATAATTGCATCTAGG
TAATTTTTACCCTAATGTCTTCATAAAGTACTTGAGTGTAATGTTTGTTACCTCCAACAGAACTAAATGTTCTAT
GGTTATGAAAGAATATATTTATTTAAAGCATTGCTTTTATTTTGAAAAGCTTCTTAATTAATTTGATTAACAAAT
ATGCTAATTTGGGGAAACCTAGAGAAGATAATTGTTGAAATTTTGCAAATATAAACATCTCCTAT

FIGURE 1117

MPSEKKISSANDCISFMQAGCELKKVRPNSRIYNRFFTLDTDLQALRWEPSKKDLEKAKLDISAIKEIRLGKNTE
TFTNNGLADQICEDCAFSILHGENYESLDLVANSADVANIWVSGLRYLVSRSKQPLDFMEGNQNTPRFMWLKTVF
EAADVDGNGIMLEDTSVELIKQLNPTLKEAKIRLKFKEIQKSKEKLTTRVTEEEFCEAFCELCTRPEVYFLLVQI
SKNKEYLDANDLMLFLEAEQGVTHITEDICLDIIRRYELSEEGRQKGFLAIDGFTQYLLSSECDIFDPEQKKVAQ
DMTQPLSHYYINASHNTYLIEDQFRGPADINGYIRALKMGCRSVELDVSDGSDNEPILCNRNNMTTHVSFRSVIE
VINKFAFVASEYPLILCLGNHCSLPQQKVMAQQMKKVFGNKLYTEAPLPSESYLPSPEKLKRMIIVKGKKLPSDP
DVLEGEVTDEDEEAQMSRRMSVDYNGEQKQIRLCRELSDLVSICKSVQYRDFELSMKSQNYWEMCSFSETEASRI
ANEYPEDFVNYNKKFLSRIYPSAMRIDSSNLNPQDFWNCGCQIVAMNFQTPGPMMDLHTGWFLQNGGCGYVLRPS
IMRDEVSYFSANTKGILPGVSPLALHIKIISGQNFPKPKGACAKGDVIDPYVCIEIHGIPADCSEQRTKTVQQNS
DNPIFDETFEFQVNLPELAMIRFVVLDDDYIGDEFIGQYTIPFECLQPGYRHVPLRSFVGDIMEHVTLFVHIAIT
NRSGGGKAQKRSLSVRMGKKVREYTMLRNIGLKTIDDIFKIAVHPLREAIDMRENMQNAIVSIKELCGLPPIASL
KQCLLTLSSRLITSDNTPSVSLVMKDSFPYLEPLGAIPDVQKKMLTAYDLMIQESRFLIEMADTVQEKIVQCQKA
GMEFHEELHNLGAKEGLKGRKLNKATESFAWNITVLKGQGDLLKNAKNEAIENMKQIQLACLSCGLSKAPSSSAE
AKSKRSLEAIEEKESSEENGKL

FIGURE 1118

GGCGGTCCCCTGTTCTCCCCGCTCAGGTGCGGCGCTGTGGCAGGAAGCCACCCCCTCGGTCGGCCGGTGCGCGGG
GCTGTTGCGCCATCCGCTCCGGCTTTCGTAACCGCACCCTGGGACGGCCCAGAGACGCTCCAGCGCGAGTTCCTC
AAATGTTTTCCTGCGTTGCCAGGACCGTCCGCCGCTCTGAGTCATGTGCGAGTGGGAAGTCGCACTGACACTGAG
CCGGGCCAGAGGGAGAGGAGCCGAGCGCGGCGCGGGGCCGAGGGACTCGCAGTGTGTGTAGAGAGCCGGGCTCCT
GCGGATGGGGGCTGCCCCCGGGGCCTGAGCCCGCCTGCCCGCCCACCGCCCCGCCCCGCCCCTGCCACCCCTGCC
GCCCGGTTCCCATTAGCCTGTCCGCCTCTGCGGGACCATGGAGTGGTAGCCGAGGAGGAAGC**ATG**CTGGCCGTCG
GCTGCGCGCTGCTGGCTGCCCTGCTGGCCGCGCCGGGAGCGGCGCTGGCCCCAAGGCGCTGCCCTGCGCAGGAGG
TGGCAAGAGGCGTGCTGACCAGTCTGCCAGGAGACAGCGTGACTCTGACCTGCCCGGGGGTAGAGCCGGAAGACA
ATGCCACTGTTCACTGGGTGCTCAGGAAGCCGGCTGCAGGCTCCCACCCCAGCAGATGGGCTGGCATGGGAAGGA
GGCTGCTGCTGAGGTCGGTGCAGCTCCACGACTCTGGAAACTATTCATGCTACCGGGCCGGCCGCCCAGCTGGGA
CTGTGCACTTGCTGGTGGATGTTCCCCCCGAGGAGCCCCAGCTCTCCTGCTTCCGGAAGAGCCCCCTCAGCAATG
TTGTTTGTGAGTGGGGTCCTCGGAGCACCCCATCCCTGACGACAAAGGCTGTGCTCTTGGTGAGGAAGTTTCAGA
ACAGTCCGGCCGAAGACTTCCAGGAGCCGTGCCAGTATTCCCAGGAGTCCCAGAAGTTCTCCTGCCAGTTAGCAG
TCCCGGAGGGAGACAGCTCTTTCTACATAGTGTCCATGTGCGTCGCCAGTAGTGTCGGGAGCAAGTTCAGCAAAA
CTCAAACCTTTCAGGGTTGTGGAATCTTGCAGCCTGATCCGCCTGCCAACATCACAGTCACTGCCGTGGCCAGAA
ACCCCCGCTGGCTCAGTGTCACCTGGCAAGACCCCCACTCCTGGAACTCATCTTTCTACAGACTACGGTTTGAGC
TCAGATATCGGGCTGAACGGTCAAAGACATTCACAACATGGATGGTCAAGGACCTCCAGCATCACTGTGTCATCC
ACGACGCCTGGAGCGGCCTGAGGCACGTGGTGCAGCTTCGTGCCCAGGAGGAGTTCGGGCAAGGCGAGTGGAGCG
AGTGGAGCCCGGAGGCCATGGGCACGCCTTGGACAGAATCCAGGAGTCCTCCAGCTGAGAACGAGGTGTCCACCC
CCATGCAGGCACTTACTACTAATAAAGACGATGATAATATTCTCTTCAGAGATTCTGCAAATGCGACAAGCCTCC
CAGTGCAAGATTCTTCTTCAGTACCACTGCCCACATTCCTGGTTGCTGGAGGGAGCCTGGCCTTCGGAACGCTCC
TCTGCATTGCCATTGTTCTGAGGTTCAAGAAGACGTGGAAGCTGCGGGCTCTGAAGGAAGGCAAGACAAGCATGC
ATCCGCCGTACTCTTTGGGGCAGCTGGTCCCGGAGAGGCCTCGACCCACCCCAGTGCTTGTTCCTCTCATCTCCC
CACCGGTGTCCCCCAGCAGCCTGGGGTCTGACAATACCTCGAGCCACAACCGACCAGATGCCAGGGACCCACGGA
GCCCTTATGACATCAGCAATACAGACTACTTCTTCCCCAGA**TAG**CTGGCTGGGTGGCACCAGCAGCCTGGACCCT
GTGGATGACAAAACACAAACGGGCTCAGCAAAAGATGCTTCTCACTGCCATGCCAGCTTATCTCAGGGGTGTGCG
GCCTTTGGCTTCACGGAAGAGCCTTGCGGAAGGTTCTACGCCAGGGGAAAATCAGCCTGCTCCAGCTGTTCAGCT
GGTTGAGGTTTCAAACCTCCCTTTCCAAATGCCCAGCTTAAAGGGGTTAGAGTGAACTTGGGCCACTGTGAAGAG
AACCATATCAAGACTCTTTGGACACTCACACGGACACTCAAAAGCTGGGCAGGTTGGTGGGGGCCTCGGTGTGGA
GAAGCGGCTGGCAGCCCACCCCTCAACACCTCTGCACAAGCTGCACCCTCAGGCAGGTGGGATGGATTTCCAGCC
AAAGCCTCCTCCAGCCGCCATGCTCCTGGCCCACTGCATCGTTTCATCTTCCAACTCAAACTCTTAAAACCCAAG
TGCCCTTAGCAAATTCTGTTTTTCTAGGCCTGGGGACGGCTTTTACTTAAACGCCAAGGCCTGGGGGAAGAAGCT
CTCTCCTCCCTTTCTTCCCTACAGTTCAAAAACAGCTGAGGGTGAGTGGGTGAATAATACAGTATGTCAGGGCCT
GGTCGTTTTCAACAGAATTATAATTAGTTCCTCATTAGCAGTTTTGCCTAAATGTGAATGATGATCCTAGGCATT
TGCTGAATACAGAGGCAACTGCATTGGCTTTGGGTTGCAGGACCTCAGGTGAGAAGCAGAGGAAGGAGAGGAGAG
GGGCACAGGGTCTCTACCATCCCCTGTAGAGTGGGAGCTGAGTGGGGGATCACAGCCTCTGAAAACCAATGTTCT
CTCTTCTCCACCTCCCACAAAGGAGAGCTAGCAGCAGGGAGGGCTTCTGCCATTTCTGAGATCAAAACGGTTTTA
CTGCAGCTTTGTTTGTTGTCAGCTGAACCTGGGTAACTAGGGAAGATAATATTAAGGAAGACAATGTGAAAAGAA
AAATGAGCCTGGCAAGAATGCGTTTAAACTTGGTTTTTAAAAAACTGCTGACTGTTTTCTCTTGAGAGGGTGGAA
TATCCAATATTCGCTGTGTCAGCATAGAAGTAACTTACTTAGGTGTGGGGGAAGCACCATAACTTTGTTTAGCCC
AAAACCAAGTCAAGTGAAAAAGGAGGAAGAGAAAAAATATTTTCCTGCCAGGCATGGAGGCCCACGCACTTCGGG
AGGTCGAGGCAGGAGGATCACTTGAGTCCAGAAGTTTGAGATCAGCCTGGGCAATGTGATAAAACCCCATCTCTA
CAAAAAGCATAAAAATTAGCCAAGTGTGGTAGAGTGTGCCTGAAGTCCCAGATACTTGGGGGGCTGAGGTGGGAG
GATCTCTTGAGCCTGGGAGGTCAAGGCTGCAGTGAGCCGAGATTGCACCACTGCACTCCAGCCTGGGGTGACAGA
GCAAGTGAGACCCTGTCTC

FIGURE 1119

MLAVGCALLAALLAAPGAALAPRRCPAQEVARGVLTSLPGDSVTLTCPGVEPEDNATVHWVLRKPAAGSHPSRWA
GMGRRLLLRSVQLHDSGNYSCYRAGRPAGTVHLLVDVPPEEPQLSCFRKSPLSNVVCEWGPRSTPSLTTKAVLLV
RKFQNSPAEDFQEPCQYSQESQKFSCQLAVPEGDSSFYIVSMCVASSVGSKFSKTQTFQGCGILQPDPPANITVT
AVARNPRWLSVTWQDPHSWNSSFYRLRFELRYRAERSKTFTTWMVKDLQHHCVIHDAWSGLRHVVQLRAQEEFGQ
GEWSEWSPEAMGTPWTESRSPPAENEVSTPMQALTTNKDDDNILFRDSANATSLPVQDSSSVPLPTFLVAGGSLA
FGTLLCIAIVLRFKKTWKLRALKEGKTSMHPPYSLGQLVPERPRPTPVLVPLISPPVSPSSLGSDNTSSHNRPDA
RDPRSPYDISNTDYFFPR

FIGURE 1120

CCACGCGTCCGTGCTTTTCCACAGAAGGTTAGACCCTGAAAGAG**ATG**GCTCAGCACCACCTATGGATCTTGCTCC
TTTGCCTGCAAACCTGGCCGGAAGCAGCTGGAAAAGACTCAGAAATCTTCACAGTGAATGGGATTCTGGGAGAGT
CAGTCACTTTCCCTGTAAATATCCAAGAACCACGGCAAGTTAAAATCATTGCTTGGACTTCTAAAACATCTGTTG
CTTATGTAACACCAGGAGACTCAGAAACAGCACCCGTAGTTACTGTGACCCACAGAAATTATTATGAACGGATAC
ATGCCTTAGGTCCGAACTACAATCTGGTCATTAGCGATCTGAGGATGGAAGACGCAGGAGACTACAAAGCAGACA
TAAATACACAGGCTGATCCCTACACCACCACCAAGCGCTACAACCTGCAAATCTATCGTCGGCTTGGGAAACCAA
AAATTACACAGAGTTTAATGGCATCTGTGAACAGCACCTGTAATGTCACACTGACATGCTCTGTAGAGAAAGAAG
AAAAGAATGTGACATACAATTGGAGTCCCCTGGGAGAAGAGGGTAATGTCCTTCAAATCTTCCAGACTCCTGAGG
ACCAAGAGCTGACTTACACGTGTACAGCCCAGAACCCTGTCAGCAACAATTCTGACTCCATCTCTGCCCGGCAGC
TCTGTGCAGACATCGCAATGGGCTTCCGTACTCACCACACCGGGTTGCTGAGCGTGCTGGCTATGTTCTTTCTGC
TTGTTCTCATTCTGTCTTCAGTGTTTTTGTTCCGTTTGTTCAAGAGAAGACAAGATGCTGCCTCAAAGAAAACCA
TATACACATATATCATGGCTTCAAGGAACACCCAGCCAGCAGAGTCCAGAATCTATGATGAAATCCTGCAGTCCA
AGGTGCTTCCCTCCAAGGAAGAGCCAGTGAACACAGTTTATTCCGAAGTGCAGTTTGCTGATAAGATGGGGAAAG
CCAGCACACAGGACAGTAAACCTCCTGGGACTTCAAGCTATGAAATTGTGATC**TAG**GCTGCTGGGCTGAATTCTC
CCTCTGGAAACTGAGTTACAACCACCAATACTGGCAGGTTCCCTGGATCCAGATCTTCTCTGCCCAACTCTTACT
GGGAGATTGCAAACTGCCACATCTCAGCCTGTAAGCAAAGCAGGAAACCTTCTGCTGGGCATAGCTTGTGCCTAA
ATGGACAAATGGATGCATACCCTTCCTGAAATGACTCCCTTCTGAATGAATGACAAAGCAGGTTACCTAGTATAG
TTTTCCCAAACTTCTTCCCATCATAGCACATGTAGAAAATAATATTTTTATGGCACACTGGGATAAACAAGCAAG
ATTGCTCACTTCTGGAAGCTGCATATGACTAGAGGCCTCTTGTGACTGGAGGTAACAACCCTGCCCAGTAACTGT
GGGAGAAGGGGATCAATATTTTGCACACCTGTAATAGGCCATGGCACACCAGCCAAGATGCTCTGCTCACAGTCA
GTATGTGTGAAGATCCCTGGTGCGTGGCCTTCACCACGCATCTTGAGCAAATTAGGAAAATGTACCCTTCGCTTG
AGGCAGATGCAGCCCTTCCCCCGAGTGCATGGCTTGGAGAGCAGAATGTGGGCTGCATATAAGCACACTCATCCC
TTTGTCTGGGAATCTTTGTGCAGGGCATAACAGGCTTAGTAAGTCCAAACACAGATGACAGTGCTGTGTGGGTCT
CTGTCAGAGTTGTGGCTCTCAGCCATGTAGACACACTCTCCAAATGGAGTGTTGGAAAATGTTCTTTCTGCAGGG
TCTAGAGACTGCTGGGACACTTTTCTTGGAGTGCTACTTCAGAAGCCTTATAGGATTTTCTTTCTGGCCAAGATT
TCCTTCTGTATCACTCCAAGCAGCCTCAGCAGAAGAAGCAGCCATGCCCAGTATTCCCACTCTCCAAAAGGAACT
GACCAGCTTATATTTCTCACACTTCTGGGGAACTGGGTATAATCCAACCATCAAAATAGAAGACCTTGCAAGAAG
CAGAGTCATTCTCCAGAAGGAACTTGGGAGATGATGGTGCAGATGATGAAACTGGGTTCATCCCAGTTCCAAAGA
CTCAGAGAACTAGAGTTTAAGCTGAGGCAGAGTGCCGCCACCCTGGCATGCCCCACAAACAGATCACCAGCCAGC
TTACACAGGCATTAACTCTCCTCAATGAGGAAGAATCATTCACAACTGAGCAAGACATTCATATGATCATTTAAG
GAAGTGTTTCCCTTATGTGTTAGCAAGTATAATCGGCTAACTCCTAAATCCCAATGAATAGTCCTAGGCTGGACA
GCAATGGGCTGCAATTAGGCAGATAAAGACATCAGTCCCAGTAAATGAATCCATAGACTCATCTAGCACCAACTA
CCATTAGCACTATGTTAGGAGCTGCAAGGCCCCAAAGTAGAAGATGTGCATAATGTCTGCTCTTGTGTAGCTCAG
GAGACAATTCCAGCACAGACACTACAGTTAACGCTGAACTGCAGCTGCAAGTAATAGCATGAACAGTCAGAAAAA
TACCTTATGAGGGGGCAGGGCTGAAGCTGGGCCTTGAAGGATGGATGAAATTTGGATAGAGAATGAGGAAGACAG
AGGGCCTCCAAGTGAGAGAAGCATGAAAAATGAGCAGGGGCCTGGATCAGTGGGGTGTATTCAGAGCACCTCTCC
AGATGCACCATGCATGCTCACAGTCCCTTGCCTATGTGTGGCAGAGTGTCCCAGCCAGATGTGTGCCCCCACCCC
ATGTCCATTTACATGTCCTTCAATGCCCACCTCAAAAGGTACCTCTTCTGTAAAGCTTTCCCTGGTATCAGGAAT
CAAAATTAATCAGGGATCTTTTCACACTGCTGTTTTTTCCTCTTTGGTCCTTCTATCACTAAAACTCATCTCATT
CAGCCTTACAGCATAACTAATTATTTGTTTTCCTCACTACATTGTACATGTGGGAATTACAGATAAACGGAAGCC
GGCTGGGGTGGTGGCTCACGCCTGTAACCCCAACACTTTGGGAGGCCAAGGCAGGCGGATCACCTGAGGTCAGGA
GTTCGAGATTAGTCTGGCCAACATGGTGAAACCCCATCTCTACTAAAAATACGAAATTAGCCAGGTGTGGTGGCA
CACATCTGTAGTCCCAGCTACTCTGGAGGCTGAGACAGGAGAATCGCTTGAACCCAGGAAGTGGAGGTTGCAGTG
AGCTGAGATCACACCACTGCACTCCAGCCTGGGAGAGAGAGAGTGAGTCTCCATCTCAAAAAAAAAAAAAAAAA

FIGURE 1121

MAQHHLWILLLCLQTWPEAAGKDSEIFTVNGILGESVTFPVNIQEPRQVKIIAWTSKTSVAYVTPGDSETAPVVT
VTHRNYYERIHALGPNYNLVISDLRMEDAGDYKADINTQADPYTTTKRYNLQIYRRLGKPKITQSLMASVNSTCN
VTLTCSVEKEEKNVTYNWSPLGEEGNVLQIFQTPEDQELTYTCTAQNPVSNNSDSISARQLCADIAMGFRTHHTG
LLSVLAMFFLLVLILSSVFLFRLFKRRQDAASKKTIYTYIMASRNTQPAESRIYDEILQSKVLPSKEEPVNTVYS
EVQFADKMGKASTQDSKPPGTSSYEIVI

FIGURE 1122

TGTCCGGCGCCCCCCGGGAGGGAACTGGGTGGCCGCACCCTCCCGGCTGCGGTGGCTGTCGCCCCCCACCCTGCA
GCCAGGACTCGATGGAGAATCCATTCCAATATATGGCCATGTGGCTCTTTGGAGCAATGTTCCATCATGTTCCAT
GCTGCTGCTGACGTCACATGGAGCACAGAAATCAATGTTAGCAGATAGCCAGCCCATACAAGATCGTATTGTATT
GTAGGAGGCATCGTGGATGGATGGCTGCTGGAAACCCCTTGCCATAGCCAGCTCTTCTTCAATACTTAAGGATTT
ACCGTGGCTTTGAGTA**ATG**AGAATTTCGAAACCACATTTGAGAAGTATTTCCATCCAGTGCTACTTGTGTTTACT
TCTAAACAGTCATTTTCTAACTGAAGCTGGCATTCATGTCTTCATTTTGGGCTGTTTCAGTGCAGGGCTTCCTAA
AACAGAAGCCAACTGGGTGAATGTAATAAGTGATTTGAAAAAAATTGAAGATCTTATTCAATCTATGCATATTGA
TGCTACTTTATATACGGAAAGTGATGTTCACCCCAGTTGCAAAGTAACAGCAATGAAGTGCTTTCTCTTGGAGTT
ACAAGTTATTTCACTTGAGTCCGGAGATGCAAGTATTCATGATACAGTAGAAAATCTGATCATCCTAGCAAACAA
CAGTTTGTCTTCTAATGGGAATGTAACAGAATCTGGATGCAAAGAATGTGAGGAACTGGAGGAAAAAAATATTAA
AGAATTTTTGCAGAGTTTTGTACATATTGTCCAAATGTTCATCAACACTTCT**TGA**TTGCAATTGATTCTTTTTAA
AGTGTTTCTGTTATTAACAAACATCACTCTGCTGCTTAGACATAACAAAACACTCGGCATTTAAAATGTGCTGTC
AAAACAAGTTTTTCTGTCAAGAAGATGATCAGACCTTGGATCAGATGAACTCTTAGAAATGAAGGCAGAAAAATG
TCATTGAGTAATATAGTGACTATGAACTTCTCTCAGACTTACTTTACTCATTTTTTTAATTTATTATTGAAATTG
TACATATTTGTGGAATAATGTAAAATGTTGAATAAAAATATGTACAAGTGTTGTTTTTTAAGTTGCACTGATATT
TTACCTCTTATTGCAAAATAGCATTTGTTTAAGGGTGATAGTCAAATTATGTATTGGTGGGGCTGGGTACCAATG
CT

FIGURE 1123

MRISKPHLRSISIQCYLCLLLNSHFLTEAGIHVFILGCFSAGLPKTEANWVNVISDLKKIEDLIQSMHIDATLYT
ESDVHPSCKVTAMKCFLLELQVISLESGDASIHDTVENLIILANNSLSSNGNVTESGCKECEELEEKNIKEFLQS
FVHIVQMFINTS

FIGURE 1124

GGAGAAGGCGAGCGCGGCAGTCGCGCCGGCGCTGGGCGAGGAAGCGGAGCCGGGCCGCCTCCGGAAAATGGCTCC
AAAGGTTAAATGAAGCAGGAAAAATACATAGATGCAGCCTTGCAGCCTCTCCAGATGTTTGGGGATAATATTCCA
GATAGAAATATTGATCCCTTGGATTAGGTAACTAGTCATA**ATG**AAGAAAATTAGTCTTAAAACCTTACGGAAATC
TTTTAACTTGAATAAAAGTAAAGAAGAAACTGATTTCATGGTAGTACAACAACCATCGCTAGCCAGTGACTTTGG
AAAAGATGATTCCTTATTTGGTAGCTGCTATGGTAAAGATATGGCCAGCTGCGATATCAACGGTGAAGATGAAAA
AGGCGGAAAAAACAGATCAAAAAGCGAGAGCCTGATGGGTACGCTAAAAAGGCGGCTTTCTGCAAAACAGAAGTC
AAAAGGCAAGGCGGGCACACCCTCTGGGAGCTCTGCCGACGAGGACACCTTCTCCTCCTCCTCAGCACCCATAGT
CTTTAAAGACGTGAGAGCTCAGAGGCCGATAAGGTCCACGTCGCTCCGCAGCCATCACTACAGTCCCGCGCCGTG
GCCTCTGCGGCCCACAAACTCCGAGGAGACCTGCATCAAGATGGAGGTGAGAGTCAAGGCCTTGGTTCACTCTTC
CAGCCCGAGTCCAGCCCTGAATGGCGTCCGGAAGGATTTCCACGACCTCCAGTCTGAGACCACGTGCCAGGAGCA
AGCCAATTCACTGAAGAGCTCGGCTTCTCATAATGGAGACCTGCATCTTCACCTGGATGAACATGTGCCTGTCGT
TATTGGACTTATGCCTCAGGACTACATTCAGTATACTGTGCCTTTAGATGAGGGGATGTATCCTTTGGAAGGATC
ACGGAGCTATTGTCTGGACAGCTCTTCTCCCATGGAAGTCTCTGCGGTTCCTCCTCAAGTGGGAGGGCGCGCTTT
CCCCGAGGATGAGAGTCAGGTAGACCAGGACCTAGTTGTCGCCCCAGAGATCTTCGTGGATCAGTCCGTGAATGG
CTTGTTGATTGGCACCACGGGAGTCATGTTGCAGAGCCCGAGAGCGGGTCACGATGATGTCCCTCCACTCTCACC
ATTGCTACCTCCAATGCAGAATAATCAAATCCAAAGGAACTTCAGTGGACTCACTGGCACAGAAGCCCACGTGGC
TGAAAGTATGCGCTGTCATTTGAATTTTGATCCGAACTCTGCTCCTGGGGGTTGCAAGAGTTTATGACTCAGTGCA
AAGTAGTGGTCCCATGGTTGTGACAAGCCTTACAGAGGAGCTGAAAAAACTTGCAAAGCAAGGATGGTACTGGGG
ACCAATCACACGTTGGGAGGCAGAAGGGAAGCTAGCAAACGTGCCAGATGGTTCTTTTCTTGTTCGGGACAGTTC
TGACGACCGTTACCTTTTAAGCTTGAGCTTTCGCTCCCATGGTAAAACACTTCACACTAGAATTGAGCACTCAAA
TGGTAGGTTTAGCTTTTATGAACAGCCAGATGTGGAAGGACATACGTCCATAGTTGATCTAATTGAGCATTCAAT
CAGGGACTCTGAAAATGGAGCTTTTTGTTATTCAAGGTCTCGGCTGCCTGGATCTGCAACTTACCCCGTCAGACT
GACCAACCCAGTGTCCCGGTTCATGCAGGTGCGCTCGTTGCAGTACCTGTGTCGTTTTGTTATACGTCAGTATAC
CAGAATAGACTTAATTCAGAAACTGCCTTTGCCAAACAAAATGAAGGATTATTTACAGGAGAAGCACTAC**TGA**AA
GATTGAGAACCCTGCATCTTGCACTTTGGGAATAAGAACAAGAGATTGAAATACAGTTTACAAACTTTCATTGCC
ATCAAAATCTTTTGCTGCCATAACTATTTCAGTTTTATGTGTAAAAGAGTCATCAGTTTGTTTAGGGGTGGGGAA
GTGTCAGCAAGGTGTCTTGGGTTTATTTTGGTTCTTTAAAAAAGGGAAGTCTTGAGGTTTTAGAGGTGTGAATTA
TGTTTCATCAATGTGCAGAATAATCACAATGTGAATTATCAAATTCTCCTCAATGCCCCCCCCGCCCAGTCCTTT
GCTGCTATCCACTGTGATTTTTATGCATTAAAAGCACATTTCATGTGTATTCAACCCTAAGTAAAGTTGAATGAA
ACTTAACAGAATGGAAATTGCTATGTCTTTTTAAATGGTCCATTTTCAAAAGACAGTGTTGAATAAACATACCTG
TGTGATAAAACACAGAATTTACATATACACTGAAGATGAGTTTTTAATCTCTTACTTTAAAAAGATTTATTTAGA
ATCGTGAATTGACATAATCTTGGGTAATGGAACGGAGATCTGCAACATATCTTTTAACAACACTTTTTTCTAAAT
TATTTCTAAGGTTGTGCTAATTCTTTTGGTTGTGAAAAGTTGAATTTTTCTGTTGCCTTCGTTTTCATCTTCTAG
TTTGTCTATTTTAATAAATGGCCTTACATTAAAAAATTGTAAAGAAATGTATACCACCAATTTAGAAATTGTTGC
CTTTTCTGTAATTAAACTCGGGTACAAATTGGCATAACATGAAAACCTATGGAACTAGAATTATTATTAAAGAAA
TATTAGATGAAAAAAAAAAAAAAAA

FIGURE 1125

MKKISLKTLRKSFNLNKSKEETDFMVVQQPSLASDFGKDDSLFGSCYGKDMASCDINGEDEKGGKNRSKSESLMG
TLKRRLSAKQKSKGKAGTPSGSSADEDTFSSSSAPIVFKDVRAQRPIRSTSLRSHHYSPAPWPLRPTNSEETCIK
MEVRVKALVHSSSPSPALNGVRKDFHDLQSETTCQEQANSLKSSASHNGDLHLHLDEHVPVVIGLMPQDYIQYTV
PLDEGMYPLEGSRSYCLDSSSPMEVSAVPPQVGGRAFPEDESQVDQDLVVAPEIFVDQSVNGLLIGTTGVMLQSP
RAGHDDVPPLSPLLPPMQNNQIQRNFSGLTGTEAHVAESMRCHLNFDPNSAPGVARVYDSVQSSGPMVVTSLTEE
LKKLAKQGWYWGPITRWEAEGKLANVPDGSFLVRDSSDDRYLLSLSFRSHGKTLHTRIEHSNGRFSFYEQPDVEG
HTSIVDLIEHSIRDSENGAFCYSRSRLPGSATYPVRLTNPVSRFMQVRSLQYLCRFVIRQYTRIDLIQKLPLPNK
MKDYLQEKHY

FIGURE 1126

GTACCGGTTCGGAATTCCCGGGTCGACCCACGCGTCCGGAAGGCTACAGAGAGAGCCAGGTTTTGGTGCCATGCA
CACAGGGAAACTTAGAGTTCAGAGAGGGGGTGTGATTTGCCTGACCTCACACAGCAAGTTAGAGACCCAGCTCCA
CGACTCATTGTCTTGCTGCCCAGAGCTGCTGGCTCCCCTGTTTACTCTGAGCTGATCGATCACCTTAGCACACAG
CTGGCTAGGAGAGAACCATGCAGTCACTTCGGCCACACCTGCCCGTTGACCCTTGCTACCTCGGCAGGCTTTGAT
CCCTTCTGACCTGGAGGCCAGAGGCTAGGCTGAGGTCACTCAGCAGACATCAAGGACCTGGGCAGATGGGCCGGC
TGGGATGGTGGCGAGCTGTACAGATAAAAAGGGACATGAAAATGAAAAGCCCGAGCCTGAGTTTTCATCACGGTT
CCACTCCTGAGTGGTCTTGGGTGAATCACTTCATCTGCCAAGGCCTGGATTTCCTCATCTGCAAACTCAGAAAAC
TAAGGCTTTGGCCCTCGTCATCCTGCCCACCCAGCGGGGCTTCCCAACCCACCACACAGCC**ATG**GACGGGAAGGT
GGCAGTGCAAGAGCGTGGGCCTCCTGCGGTCTCCTGGGTCCCCGAGGAGGGAGAGAAGTTGGACCAGGAAGACGA
GGACCAGGTGAAGGATCGGGGCCAATGGACCAACAAGATGGAGTTTGTGCTGTCAGTGGCCGGGGAGATCATTGG
GCTGGGCAATGTCTGGAGGTTTCCCTATCTCTGCTACAAAAACGGAGGTGGAGCCTTCTTCATCCCCTACTTCAT
CTTCTTCTTTGTCTGCGGCATCCCGGTGTTCTTCCTGGAGGTGGCGTTGGGCCAATACACCAGCCAAGGGAGTGT
CACAGCCTGGAGGAAGATCTGCCCCCTCTTCCAGGGCATTGGTCTGGCATCTGTGGTCATCGAGTCATATTTGAA
TGTCTACTACATCATCATCCTTGCCTGGGCTCTCTTCTACCTGTTCAGCTCCTTCACTTCTGAGCTGCCCTGGAC
GACCTGCAACAACTTTTGGAACACAGAGCATTGCACGGACTTTCTGAACCACTCAGGAGCCGGCACAGTGACCCC
ATTTGAGAATTTTACCTCACCTGTCATGGAATTCTGGGAGAGACGAGTTCTGGGCATCACCTCGGGCATCCATGA
CCTGGGCTCCCTGCGCTGGGAGCTGGCCCTGTGCCTCCTGCTCGCCTGGGTCATCTGCTATTTCTGCATCTGGAA
GGGGGTCAAGTCCACAGGCAAGGTGGTTTATTTCACAGCCACGTTTCCGTACCTGATGCTTGTCATTTTGCTGAT
CAGAGGTGTCACCCTTCCCGGAGCCTACCAGGGCATCATCTACTACTTGAAGCCAGATTTGTTCCGCCTCAAGGA
CCCTCAGGTGTGGATGGATGCGGGCACCCAGATCTTCTTCTCCTTTGCCATCTGCCAGGGGTGCCTGACAGCCCT
GGGCAGCTACAACAAGTATCACAACAACTGCTACAAGGACTGCATCGCCCTCTGCTTCCTGAACAGTGCCACCAG
CTTTGTGGCTGGGTTTGTTGTCTTCTCCATCCTGGGCTTCATGTCCCAAGAGCAAGGGGTGCCCATTTCTGAAGT
GGCCGAGTCAGGTCCTGGGCTGGCCTTCATCGCCTTCCCCAAGGCTGTGACTATGATGCCCTTATCCCAGCTGTG
GTCCTGCCTGTTCTTTATCATGCTCATATTCCTAGGGCTGGACAGCCAGTTTGTCTGTGTGGAGTGCCTGGTGAC
AGCCTCCATAGACATGTTCCCCAGGCAGCTCCGGAAGAGCGGGCGGCGCGAGCTCCTCATCCTCACCATCGCCGT
CATGTGCTACCTGATAGGGCTTTTCCTGGTCACCGAGGGCGGGATGTACATCTTCCAGCTGTTTGACTACTATGC
TTCCAGTGGCATATGCCTGCTGTTCCTGTCATTGTTTGAAGTGGTCTGCATAAGCTGGGTGTATGGGGCGGACCG
TTTCTATGACAACATTGAGGACATGATTGGCTACCGGCCATGGCCCCTGGTGAAGATCTCCTGGCTCTTCCTGAC
CCCTGGACTTTGCCTGGCCACTTTCCTCTTCTCCTTGAGCAAGTACACCCCCCTCAAGTACAACAACGTCTATGT
GTACCCGCCCTGGGGATACTCCATTGGCTGGTTCCTGGCTCTGTCCTCCATGGTCTGTGTCCCACTCTTCGTCGT
CATCACCCTCCTGAAGACTCGGGGTCCTTTCAGGAAGCGTCTGCGTCACGTCATCACCCCTGACTCCAGTCTGCC
ACAGCCCAAGCAACATCCCTGCTTGGATGGCAGTGCTGGCCGGAACTTTGGGCCCTCCCCAACAAGGGAAGGACT
GATAGCCGGGGAGAAGGAGACCCATTTG**TAG**GGTGTGGCCAGAGCGAGGCGGCTCCTAAGCCGGGAACCTAGGTC
AGGGCCACCCTCCATTCTCAGCGGACAGCCTCTGCCTCTGTCTCCTGCCACAATCCTGCTGGGAACTCTGGAGAG
CCACAGGCACCCCCAGCTGGAGGCCAGACTCCTCTCTTGTGCTAGCTGGAGCAGCTCCTTCCCCTTTGCTGATAA
CACCACCACTGGGACGTGCCATGTTGGGACGCCACTCCCTGTGGAAGGCACCATCGTTTTTATAAAGGGGGGTCT
TTTTGGAGGCCGCCATCTGATTGCAACACCTCGAGTTATGAGGATTCCACTGTGGGGATGCCTCTTGTTAGAGCG
TACTGCATTTGTACACGGGGAGAGGAGCTATAATTGGAACGCACACTGCCGTCCAATGTGGAGAGCCTGATGGGA
CAATACCCTGTTGGAAGTGACAACTGAACACACTGTGTTGGATCGGAGGTTCCGTTAGGGGATCCTTCCTTAGGC
TTAACGACAGAGGCAAGCCTTTGCATGCCGTCAGTCTGGAGTTTCCTCCGAGTCTCTCATGGCATCTCCAGCTCC
TGCCCTAGTTCCGCACTGTTCTTGCAGTGTTTCATCAACTCCTGGAGCATTGGAATGGAAGGGGCTTGGGAGATG
ATTCCTAGACTTCACAAACACTCGGCATGCCTCCCTGCACTGTCCGTTCCTCTGCCCAAGGCCGATATTGCTAAC
TGATCACAGATTCTTTCCCACCTCACAATCCTCCGAATGTGCTCCAGGCGACACCATTTGCCATCCTGCTTCTAA
CGCAAACCCCTGACTTCATGGATGAGGAACCTGGAGACCAAAGAGACAAAGGGACTTTTTCAAGTTCACATGGGG
ACCCCCTTCTTGGGGGCCAGAGATATGACTAAAACCTTATCTCCTTGTGCTCAGGCCAGTGTCTTCCCATTAACC
CCCTGCCTTAGTTAACAAGTGTGTATGGATTGCCA

FIGURE 1127

MDGKVAVQERGPPAVSWVPEEGEKLDQEDEDQVKDRGQWTNKMEFVLSVAGEIIGLGNVWRFPYLCYKNGGGAFF
IPYFIFFFVCGIPVFFLEVALGQYTSQGSVTAWRKICPLFQGIGLASVVIESYLNVYYIIILAWALFYLFSSFTS
ELPWTTCNNFWNTEHCTDFLNHSGAGTVTPFENFTSPVMEFWERRVLGITSGIHDLGSLRWELALCLLLAWVICY
FCIWKGVKSTGKVVYFTATFPYLMLVILLIRGVTLPGAYQGIIYYLKPDLFRLKDPQVWMDAGTQIFFSFAICQG
CLTALGSYNKYHNNCYKDCIALCFLNSATSFVAGFVVFSILGFMSQEQGVPISEVAESGPGLAFIAFPKAVTMMP
LSQLWSCLFFIMLIFLGLDSQFVCVECLVTASIDMFPRQLRKSGRRELLILTIAVMCYLIGLFLVTEGGMYIFQL
FDYYASSGICLLFLSLFEVVCISWVYGADRFYDNIEDMIGYRPWPLVKISWLFLTPGLCLATFLFSLSKYTPLKY
NNVYVYPPWGYSIGWFLALSSMVCVPLFVVITLLKTRGPFRKRLRHVITPDSSLPQPKQHPCLDGSAGRNFGPSP
TREGLIAGEKETHL

FIGURE 1128

CTTTTTAAGCTCCCCTGAGCCGGTGCTGCGCTCCTCTAATTGGGACTCCGAGCCGGGGCTATTTCTGGCGCTGGC
GCGGCTCCAAGAAGGCATCCGCATTTGCTACCAGCGGCGGCCGCGGCGGAGCCAGGCCGGTCCTCAGCGCCCAGC
ACCGCCGCTCCCGGCAACCCGGAGCGCGCACCGCAGGCCGGCGGCCGAGCTCGCGCATCCCAGCCATCACTCTTC
CACCTGCTCCTTAGAGAAGGGAAG**ATG**AGTGAGTCGAGCTCGAAGTCCAGCCAGCCCTTGGCCTCCAAGCAGGAA
AAGGACGGCACTGAGAAGCGGGGCCGGGGCAGGCCGCGCAAGCAGCCTCCGAAGGAGCCCAGCGAAGTGCCAACA
CCTAAGAGACCTCGGGGCCGACCAAAGGGAAGCAAAAACAAGGGTGCTGCCAAGACCCGGAAAACCACCACAACT
CCAGGAAGGAAACCAAGGGGCAGACCCAAAAAACTGGAGAAGGAGGAAGAGGAGGGCATCTCGCAGGAGTCCTCG
GAGGAGGAGCAG**TGA**CCCATGCGTGCCGCCTGCTCCTCACTGGAGGAGCAGCTTCCTTCTGGGACTGGACAGCTT
TGCTCCGCTCCCACCGCCCCCGCCCCTTCCCCAGGCCCACCATCACCACCGCCTCTGGCCGCCACCCCCATCTTC
CACCTGTGCCCTCACCACCACACTACACAGCACACCAGCCGCTGCAGGGCTCCCATGGGCTGAGTGGGGAGCAGT
TTTCCCCTGGCCTCAGTTCCCAGCTCCCCCCGCCCACCCACGCATACACACATGCCCTCCTGGACAAGGCTAACA
TCCCACTTAGCCGCACCCTGCACCTGCTGCGTCCCCACTCCCTTGGTGGTGGGGACATTGCTCTCTGGGCTTTTG
GTTTGGGGGCGCCCTCTCTGCTCCTTCACTGTTCCCTCTGGCTTCCCATAGTGGGGCCTGGGAGGGTTCCCCTGG
CCTTAAAAGGGGCCCAAGCCCCATCTCATCCTGGCACGCCCTACTCCACTGCCCTGGCAGCAGCAGGTGTGGCCA
ATGGAGGGGGGTGCTGGCCCCCAGGATTCCCCCAGCCAAACTGTCTTTGTCACCACGTGGGGCTCACTTTTCATC
CTTCCCCAACTTCCCTAGTCCCCGTACTAGGTTGGACAGCCCCCTTCGGCTACAGGAAGGCAGGAGGGGTGAGTC
CCCTACTCCCTCTTCACTGTGGCCACAGCCCCCTTGCCCTCCGCCTGGGATCTGAGTACATATTGTGGTGATGGA
GATGCAGTCACTTATTGTCCAGGTGAGGCCCAAGAGCCCTGTGGCCGCCACCTGAGGTGGGCTGGGGCTGCTCCC
CTAACCCTACTTTGCTTCCGCCACTCAGCCATTTCCCCCTCCTCAGATGGGGCACCAATAACAAGGAGCTCACCC
TGCCCGCTCCCAACCCCCCTCCTGCTCCTCCCTGCCCCCCAAGGTTCTGGTTCCATTTTTCCTCTGTTCACAAAC
TACCTCTGGACAGTTGTGTTGTTTTTTGTTCAATGTTCCATTCTTCGACATCCGTCATTGCTGCTGCTACCAGCG
CCAAATGTTCATCCTCATTGCCTCCTGTTCTGCCCACGATCCCCTCCCCCAAGATACTCTTTGTGGGGAAGAGGG
GCTGGGGCATGGCAGGCTGGGTGACCGACTACCCCAGTCCCAGGGAAGGTGGGGCCCTGCCCCTAGGATGCTGCA
GCAGAGTGAGCAAGGGGGCCCGAATCGACCATAAAGGGTGTAGGGGCCACCTCCTCCCCCTGTTCTGTTGGGGAG
GGGTAGCCATGATTTGTCCCAGCCTGGGGCTCCCTCTCTGGTTTCCTATTTGCAGTTACTTGAATAAAAAAAATA
TCCTTTTCTGGA

FIGURE 1129

MSESSSKSSQPLASKQEKDGTEKRGRGRPRKQPPKEPSEVPTPKRPRGRPKGSKNKGAAKTRKTTTTPGRKPRGR
PKKLEKEEEEGISQESSEEEQ

FIGURE 1130

GCATTTCTTCCTTCTGCGTATGGGACAGGACCCTTTCTGGAATGGGGGTCTTATGACCTACAATCAAACAAGAAC
ATGGACTTCCCGTGCCTCTGGCTAGGGCTGTTGCTGCCTTTGGTAGCTGCGCTGGATTTCAACTACCACCGCCAG
GAAGGGATGGAAGCGTTTTTGAAGACTGTTGCCCAAAACTACAGTTCTGTCACTCACTTACACAGTATTGGGAAA
TCTGTGAAAGGTAGAAACCTGTGGGTTCTTGTTGTGGGGCGGTTTCCAAAGGAACACAGAATTGGGATTCCAGAG
TTCAAATACGTGGCAAATATGCATGGAGATGAGACTGTTGGGCGGGAGCTGCTGCTCCATCTGATTGACTATCTC
GTAACCAGTGATGGCAAAGACCCTGAAATCACAAATCTGATCAATAGTACCCGGATACACATCATGCCTTCCATG
AACCCAGATGGATTTGAAGCCGTCAAAAAGCCTGACTGTTACTACAGCATCGGAAGGGAAAATTATAACCAGTAT
GACTTGAATCGAAATTTCCCCGATGCTTTTGAATATAATAATGTCTCAAGGCAGCCTGAAACTGTGGCAGTCATG
AAGTGGCTGAAAACAGAGACGTTTGTCCTCTCTGCAAACCTCCATGGTGGTGCCCTCGTGGCCAGTTACCCATTT
GATAATGGTGTTCAAGCAACTGGGGCATTATACTCCCGAAGCTTAACGCCTGATGATGATGTTTTTCAATATCTT
GCACATACCTATGCTTCAAGAAATCCCAACATGAAGAAAGGAGACGAGTGTAAAAACAAAATGAACTTTCCTAAT
GGTGTTACAAATGGATACTCTTGGTATCCACTCCAAGGTGGAATGCAAGATTACAACTACATCTGGGCCCAGTGT
TTTGAAATTACGTTGGAGCTGTCATGCTGTAAATATCCTCGTGAGGAGAAGCTTCCATCCTTTTGGAATAATAAC
AAAGCCTCATTAATTGAATATATAAAGCAGGTGCACCTAGGTGTAAAGGGTCAAGTTTTTGATCAGAATGGAAAT
CCATTACCCAATGTAATTGTGGAAGTCCAAGACAGAAAACATATCTGCCCCTATAGAACCAACAAATATGGAGAG
TATTATCTCCTTCTCTTGCCTGGGTCTTATATTATAAATGTTACAGTCCCTGGACATGATCCACACATCACAAAG
GTGATTATTCCGGAGAAATCCCAGAACTTCAGTGCTCTTAAAAAGGATATTCTACTTCCATTCCAAGGGCAATTG
GATTCTATCCCAGTATCAAATCCTTCATGCCCAATGATTCCTCTATACAGAAATTTGCCAGACCACTCAGCTGCA
ACAAAGCCTAGTTTGTTCTTATTTTTAGTGAGTCTTTTGCACATATTCTTCAAA**TAA**AGTAAAATGTGAAACTCA
ACCCACATCACCACCTGGAATCAGGGATTGCTCACTCCAGGTTACTGCAACCCTAACTCACTCTAGTGGGACCTT
GACTGGAGAAACTCCACGATCTTCCTGAAGAAGAGAAATGGATGTTTCCAAATTCCACAATAAGCAATATGTGGT
GATAATGAAAAGAATGATTCAGTCTTGACGGTGAATGGAAGACACTTACCTAACAAGTACTGCTCATTTACACTC
AAATTAATCTTGAAGTAGTCTTAAAATGTGTAAGAAGTTAAAACTTGAGAAGCAAAAAATGCCTGCAAAAAGAAG
ATCATTTTGTATACAGAGAACCGGATGAATATAAGCAATGAAGATGAACATTTATTGATCTTCTACATACAAGAC
TTCACCATAAGGCCAGGAGCAGTGCTCACGCCTTGTAATCCCAGCACTTTGGGAGGCCAAGGTGGGCGGATCACC
TTGAGGTCAGGAGTTCAAGACCAGCCTGACCAACATGGTGAAACCCTGTCTCTACTAAATATTAGCGGGGTGTGG
TGGCGGGCACCTGTAGTCGCAGCCTTTCGGGAGGCTGAGACAGGAGAATCGCTTGAACCCTAGAGGCGGAGTTTG
CAGTGAGCCGAGATAGTGCCATTGTACTCCAGCTTGGGCAACAGAGTAAGACTCTGTCTC

FIGURE 1131

MDFPCLWLGLLLPLVAALDFNYHRQEGMEAFLKTVAQNYSSVTHLHSIGKSVKGRNLWVLVVGRFPKEHRIGIPE
FKYVANMHGDETVGRELLLHLIDYLVTSDGKDPEITNLINSTRIHIMPSMNPDGFEAVKKPDCYYSIGRENYNQY
DLNRNFPDAFEYNNVSRQPETVAVMKWLKTETFVLSANLHGGALVASYPFDNGVQATGALYSRSLTPDDDVFQYL
AHTYASRNPNMKKGDECKNKMNFPNGVTNGYSWYPLQGGMQDYNYIWAQCFEITLELSCCKYPREEKLPSFWNNN
KASLIEYIKQVHLGVKGQVFDQNGNPLPNVIVEVQDRKHICPYRTNKYGEYYLLLLPGSYIINVTVPGHDPHITK
VIIPEKSQNFSALKKDILLPFQGQLDSIPVSNPSCPMIPLYRNLPDHSAATKPSLFLFLVSLLHIFFK

FIGURE 1132

GCTGCCCCTGAACCCCAGAACAACCAGCTGGATCAGTTCTCACAGGAGCTACAGGCCGGAGACTGGGAAAC**ATG**G
TTCCAAAACTGTTCACTTCCCAAATTTGTCTGCTTCTTCTGTTGGGGCTTCTGGCTGTGGAGGGCTCACTCCATG
TCAAACCTCCACAGTTTACCTGGGCTCAATGGTTTGAAACCCAGCACATCAATATGACCTCCCAGCAATGCACCA
ATGCAATGCAGGTCATTAACAATTATCAACGGCGATGCAAAAACCAAAATACTTTCCTTCTTACAACTTTTGCTA
ACGTAGTTAATGTTTGTGGTAACCCAAATATGACCTGTCCTAGTAACAAAACTCGCAAAAATTGTCACCACAGTG
GAAGCCAGGTGCCTTTAATCCACTGTAACCTCACAACTCCAAGTCCACAGAATATTTCAAACTGCAGGTATGCGC
AGACACCAGCAAACATGTTCTATATAGTTGCATGTGACAACAGAGATCAACGACGAGACCCTCCACAGTATCCGG
TGGTTCCAGTTCACCTGGATAGAATCATC**TAA**GCTCCTGTATCAGCACTCCTCATCATCACTCATCTGCCAAGCT
CCTCAATCATAGCCAAGATCCCATCTCTCCATATACTTTGGGTATCAGCATCTGTCCTCATCAGTCTCCATACCC
CTTCAGCTTTCCTGAGCTGAAGTGCCTTGTGAACCCTGCAATAAACTGCTTTGCAAATTC

FIGURE 1133

MVPKLFTSQICLLLLLGLLAVEGSLHVKPPQFTWAQWFETQHINMTSQQCTNAMQVINNYQRRCKNQNTFLLTTF
ANVVNVCGNPNMTCPSNKTRKNCHHSGSQVPLIHCNLTTPSPQNISNCRYAQTPANMFYIVACDNRDQRRDPPQY
PVVPVHLDRII

FIGURE 1134

CATGGATTTCGACATTGCTGGACCTGCCACAGGCTGGGCTCTTGTGCTAGAAATGACTTGCTAGCTAGACATCAT
GGTTCAGGATCTGAGTCAGAGGTTTAACCATTTATAAGCTTTTTTCTTATGAAAAATTGGCACTAATTATAATGT
CTAACTGTCAGAGTTGTTGCAGGCTTTACAGGAGACGCGGGCTGTGAAGATGCTTTGTAAATTGTGAAGCGTTAT
TAAAGAACACATCTTTTTTTTTAGGAAACCACGGTGCAAATTTAATTGCCGGGGAAGATAACGGGCCTTGGTGCC
CTCCAAGCGTCAGCTGAGTTTCCAAGAAGCCGGGCAGCGGGCGCCCGCGGGTTCGTCTCTGGCTCCTCCTCCGCC
ACAGCAGCCGGGGGCCCGGGTCGGAGGCGGCGGGGGCCGAGCGCCCGGCCTCGCAAGCCCACGGCCCGCTGGGGG
TGCCGTCCCGCGCCGGGGCGGAGCAGGCCCCGGCAGCCCAGTTCCTCATTCTATCAGCGGTACAAGGGGCTGGTG
GCGCCACAGGCGCTGGGACCGCGGGCGGACAAGG**ATG**GGTCCGCGCGGCGCGGCGAGCTTGCCCCGAGGCCCCGG
ACCTCGGCGGCTGCTCCTCCCCGTCGTCCTCCCGCTGCTGCTGCTGCTGTTGTTGGCGCCGCCGGGCTCGGGCGC
CGGGGCCAGCCGGCCGCCCCACCTGGTCTTCTTGCTGGCAGACGACCTAGGCTGGAACGACGTCGGCTTCCACGG
CTCCCGCATCCGCACGCCGCACCTGGACGCGCTGGCGGCCGGCGGGGTGCTCCTGGACAACTACTACACGCAGCC
GCTGTGCACGCCGTCGCGGAGCCAGCTGCTCACTGGCCGCTACCAGATCCGTACAGGTTTACAGCACCAAATAAT
CTGGCCCTGTCAGCCCAGCTGTGTTCCTCTGGATGAAAAACTCCTGCCCCAGCTCCTAAAAGAAGCAGGTTATAC
TACCCATATGGTCGGAAAATGGCACCTGGGAATGTACCGGAAAGAATGCCTTCCAACCCGCCGAGGATTTGATAC
CTACTTTGGATATCTCCTGGGTAGTGAAGATTATTATTCCCATGAACGCTGTACATTAATTGACGCTCTGAATGT
CACACGATGTGCTCTTGATTTTCGAGATGGCGAAGAAGTTGCAACAGGATATAAAAATATGTATTCAACAAACAT
ATTCACCAAAAGGGCTATAGCCCTCATAACTAACCATCCACCAGAGAAGCCTCTGTTTCTCTACCTTGCTCTCCA
GTCTGTGCATGAGCCCCTTCAGGTCCCTGAGGAATACTTGAAGCCATATGACTTTATCCAAGACAAGAACAGGCA
TCACTATGCAGGAATGGTGTCCCTTATGGATGAAGCAGTAGGAAATGTCACTGCAGCTTTAAAAAGCAGTGGGCT
CTGGAACAACACGGTGTTCATCTTTTCTACAGATAACGGAGGGCAGACTTTGGCAGGGGGTAATAACTGGCCCCT
TCGAGGAAGAAAATGGAGCCTGTGGGAAGGAGGCGTCCGAGGGGTGGGCTTTGTGGCAAGCCCCTTGCTGAAGCA
GAAGGGCGTGAAGAACCGGGAGCTCATCCACATCTCTGACTGGCTGCCAACACTCGTGAAGCTGGCCAGGGGACA
CACCAATGGCACAAAGCCTCTGGATGGCTTCGACATGTGGAAAACCATCAGTGAAGGAAGCCCATCCCCCAGAAT
TGAGCTGCTGCATAATATTGACCCGAACTTCGTGGACTCTTCACCGTGTCCCAGGAACAGCATGGCTCCAGCAAA
GGATGACTCTTCTCTTCCAGAATATTCAGCCTTTAACACATCTGTCCATGCTGCAATTAGACATGGAAATTGGAA
ACTCCTCACGGGCTACCCAGGCTGTGGTTACTGGTTCCCTCCACCGTCTCAATACAATGTTTCTGAGATACCCTC
ATCAGACCCACCAACCAAGACCCTCTGGCTCTTTGATATTGATCGGGACCCTGAAGAAAGACATGACCTGTCCAG
AGAATATCCTCACATCGTCACAAAGCTCCTGTCCCGCCTACAGTTCTACCATAAACACTCAGTCCCCGTGTACTT
CCCTGCACAGGACCCCCGCTGTGATCCCAAGGCCACTGGGGTGTGGGGCCCTTGGATG**TAG**GATTTCAGGGAGGC
TAGAAAACCTTTCAATTGGAAGTTGGACCTCAGGCCTTTTCTCACGACTCTTGTCTCATTTGTTATCCCAACCTG
GGTTCACTTGGCCCTTCTCTTGCTCTTAAACCACACCGAGGTGTCTAATTTCAACCCCTAATGCATTTAAGAAGC
TGATAAAATCTGCAACACTCCTGCTGTTGGCTGGAGCATGTGTCTAGAGGTGGGGGTGGCTGGGTTTATCCCCCT
TTCCTAAGCCTTGGGACAGCTGGGAACTTAACTTGAAATAGGAAGTTCTCACTGAATCCTGGAGGCTGGAACAGC
TGGCTCTTTTAGACTCACAAGTCAGACGTTCGATTCCCCTCTGCCAATAGCCAGTTTTATTGGAGTGAATCACAT
TTCTTACGCAAATGAAGGGAGCAGACAGTGATTAATGGTTCTGTTGGCAAGGCTTCTCCCTGTCGGTGAAGGATC
ATGTTCAGGCACTCCAAGTGAACCACCCCTCTTGGTTCACCCCTTACTCACTTATCTCATCACAGAGCATAAGGC
CCATTTTGTTGTTCAGGTCAACAGCAAAATGCCTGCACCATGACTGTGGCTTTTAAAATAAAGAAATGTGTTTTT
ATCG

FIGURE 1135

MGPRGAASLPRGPGPRRLLLPVVLPLLLLLLLAPPGSGAGASRPPHLVFLLADDLGWNDVGFHGSRIRTPHLDAL
AAGGVLLDNYYTQPLCTPSRSQLLTGRYQIRTGLQHQIIWPCQPSCVPLDEKLLPQLLKEAGYTTHMVGKWHLGM
YRKECLPTRRGFDTYFGYLLGSEDYYSHERCTLIDALNVTRCALDFRDGEEVATGYKNMYSTNIFTKRAIALITN
HPPEKPLFLYLALQSVHEPLQVPEEYLKPYDFIQDKNRHHYAGMVSLMDEAVGNVTAALKSSGLWNNTVFIFSTD
NGGQTLAGGNNWPLRGRKWSLWEGGVRGVGFVASPLLKQKGVKNRELIHISDWLPTLVKLARGHTNGTKPLDGFD
MWKTISEGSPSPRIELLHNIDPNFVDSSPCPRNSMAPAKDDSSLPEYSAFNTSVHAAIRHGNWKLLTGYPGCGYW
FPPPSQYNVSEIPSSDPPTKTLWLFDIDRDPEERHDLSREYPHIVTKLLSRLQFYHKHSVPVYFPAQDPRCDPKA
TGVWGPWM

FIGURE 1136

GCAGGCCTTGCCCGGACCAGCCCCTCCTCCACTCTCCTCTCCCCTGTGAGCTCCACCTGCCCCAGTTCTCCTGGC
TTTAACCCCTCCTTGGCCAAGGCCAGGGTTGCCTGCGGGAGCCAGGCGTCCGCTCTCCACACCTTTCACAGATCC
TACCCAGGCCACCACCCCGAACCCCTCCGACCCTGCGTTCCATCCCACCATCAACCTCCACGTGAATCTGCACCT
CTGCCCCAGCCCCAGCCCTCAGAGCAACCTCAGCCCAGCCCAGCCCAGCTCCAGCTCCAGCTCCAGCCCGGGCCC
CATCATGGCCAAGGACTTTCAAGATATCCAGCAGCTGAGCTCGGAGGAAAATGACCATCCTTTCCATCAAGGTGA
GGGGCCAGGCACTCGCAGGCTGAATCCCAGGAGAGGAAATCCATTTTTGAAAGGGCCACCTCCTGCCCAGCCCCT
GGCACAGCGTCTCTGCTCCATGGTCTGCTTCAGTCTGCTTGCCCTGAGCTTCAACATCCTGCTGCTGGTGGTCAT
CTGTGTGACTGGGTCCCAAAGTGAGGGTCACAGAGGTGCACAGCTGCAAGCCGAGCTGCGGAGCCTGAAGGAAGC
TTTCAGCAACTTCTCCTCGAGCACCCTGACGGAGGTCCAGGCAATCAGCACCCACGGAGGCAGCGTGGGTGACAA
GATCACATCCCTAGGAGCCAAGCTGGAGAAACAGCAGCAGGACCTGAAAGCAGATCACGATGCCCTGCTCTTCCA
TCTGAAGCACTTCCCCGTGGACCTGCGCTTCGTGGCCTGCCAGATGGAGCTCCTCCACAGCAACGGCTCCCAAAG
GACCTGCTGCCCCGTCAACTGGGTGGAGCACCAAGGCAGCTGCTACTGGTTCTCTCACTCCGGGAAGGCCTGGGC
TGAGGCGGAGAAGTACTGCCAGCTGGAGAACGCACACCTGGTGGTCATCAACTCCTGGGAGGAGCAGAAATTCAT
TGTACAACACACGAACCCCTTCAATACCTGGATAGGTCTCACGGACAGTGATGGCTCTTGGAAATGGGTGGATGG
CACAGACTATAGGCACAACTACAAGAACTGGGCTGTCACTCAGCCAGATAATTGGCACGGGCACGAGCTGGGTGG
AAGTGAAGACTGTGTTGAAGTCCAGCCGGATGGCCGCTGGAACGATGACTTCTGCCTGCAGGTGTACCGCTGGGT
GTGTGAGAAAAGGCGGAATGCCACCGGCGAGGTGGCCTGACCCCAGCACACCTCTGGCTAACCCATACCCCACAC
CTGCCCAGCTCTGGCTTCTCTGTTGAGGATTTTGAGGAAAGGAAGAAACACTGAGACAGGGGTATGGGGAAGAGC
TGAGCAAAGAGAGAAAGGAGGTAGTTTAAGAGTCCCTGACCCTGGAGGACTGAGATCCCACCTCCTTCTGTAATT
CATTGTAATTATTATAATCGTCAGCCTCTTCAATGGCGTAGGAAAGAAGAAACAAATGCTTGAATCTC

FIGURE 1137

MAKDFQDIQQLSSEENDHPFHQGPPPAQPLAQRLCSMVCFSLLALSFNILLLVVICVTGSQSEGHRGAQLQAELR
SLKEAFSNFSSSTLTEVQAISTHGGSVGDKITSLGAKLEKQQQDLKADHDALLFHLKHFPVDLRFVACQMELLHS
NGSQRTCCPVNWVEHQGSCYWFSHSGKAWAEAEKYCQLENAHLVVINSWEEQKFIVQHTNPFNTWIGLTDSDGSW
KWVDGTDYRHNYKNWAVTQPDNWHGHELGGSEDCVEVQPDGRWNDDFCLQVYRWVCEKRRNATGEVA

FIGURE 1138

GAGAAATTGGAGAAGATAAAACTGGACACTGGGGAGACCACAACTTC**ATG**CTGCGTGGGATCTCCCAGCTACCTG
CAGTGGCCACCATGTCTTGGGTCCTGCTGCCTGTACTTTGGCTCATTGTTCAAACTCAAGCAATAGCCATAAAGC
AAACACCTGAATTAACGCTCCATGAAATAGTTTGTCCTAAAAAACTTCACATTTTACACAAAAGAGAGATCAAGA
ACAACCAGACAGAAAAGCATGGCAAAGAGGAAAGGTATGAACCTGAAGTTCAATATCAGATGATCTTAAATGGAG
AAGAAATCATTCTCTCCCTACAAAAAACCAAGCACCTCCTGGGGCCAGACTACACTGAAACATTGTACTCACCCA
GAGGAGAGGAAATTACCACGAAACCTGAGAACATGGAACACTGTTACTATAAAGGAAACATCCTAAATGAAAAGA
ATTCTGTTGCCAGCATCAGTACTTGTGACGGGTTGAGAGGATACTTCACACATCATCACCAAAGATACCAGATAA
AACCTCTGAAAAGCACAGACGAGAAAGAACATGCCGTCTTTACATCTAACCAGGAGGAACAAGACCCAGCTAACC
ACACATGTGGTGTGAAGAGCACTGACGGGAAACAAGGCCCAATTCGAATCTCTAGATCACTCAAAAGCCCAGAGA
AAGAAGACTTTCTTCGGGCACAGAAATACATTGATCTCTATTTGGTGCTGGATAATGCCTTTTATAAGAACTATA
ATGAGAATCTAACTCTGATAAGAAGCTTTGTGTTTGATGTGATGAACCTACTCAATGTGATATATAACACCATAG
ATGTTCAAGTGGCCTTGGTAGGTATGGAAATCTGGTCTGATGGGGATAAGATAAAGGTGGTGCCCAGCGCAAGCA
CCACGTTTGACAACTTCCTGAGATGGCACAGTTCTAACCTGGGGAAAAAGATCCACGACCATGCTCAGCTTCTCA
GCGGGATTAGCTTCAACAATCGACGTGTGGGACTGGCAGCTTCAAATTCCTTGTGTTCCCCATCTTCGGTTGCTG
TTATTGAGGCTAAAAAAAAAGAATAATGTGGCTCTTGTAGGAGTGATGTCACATGAGCTGGGCCATGTCCTTGGTA
TGCCTGATGTTCCATTCAACACCAAGTGTCCCTCTGGCAGTTGTGTGATGAATCAGTATCTGAGTTCAAAATTCC
CAAAGGATTTCAGTACATCTTGCCGTGCACATTTTGAAAGATACCTTTTATCTCAGAAACCAAAGTGCCTGCTGC
AAGCACCTATTCCTACAAATATAATGACAACACCAGTGTGTGGGAACCACCTTCTAGAAGTGGGAGAAGACTGTG
ATTGTGGCTCTCCTAAGGAGTGTACCAATCTCTGCTGTGAAGCCCTAACGTGTAAACTGAAGCCTGGAACTGATT
GCGGAGGAGATGCTCCAAACCATACCACAGAG**TGA**ATCCAAAAGTCTGCTTCACTGAGATGCTACCTTGCCAGGA
CAAGAACCAAGAACTCTAACTGTCCCAGGAATCTTGTGAATTTTCACCCATAATGGTCTTTCACTTGTCATTCTA
CTTTCTATATTGTTATCAGTCCAGGAAACAGGTAAACAGATGTAATTAGAGACATTGGCTCTTTGTTTAGGCCTA
ATCTTTCTTTTTACTTTTTTTTTTCTTTTTTCTTTTTTTTTAAAGATCATGAATTTGTGACTTAGTTCTGCCCTT
TGGAGAACAAAAGAAAGCAGTCTTCCATCAAATCACCTTAAAATGCACGGCTAAACTATTCAGAGTTAACACTCC
AGAATTGTTAAATTACAAGTACTATGCTTTAATGCTTCTTTCATCTTACTAGTATGGCCTATAAAAAAAATAATA
CCACTTGATGGGTGAAGGCTTTGGCAATAGAAAGAAGAATAGAATTCAGGTTTTATGTTATTCCTCTGTGTTCAC
TTCGCCTTGCTCTTGAAAGTGCAGTATTTTTCTACATCATGTCGAGAATGATTCAATGTAAATATTTTTCATTTT
ATCATGTATATCCTATACACACATCTCCTTCATCATCATATATGAAGTTTATTTTGAGAAGTCTACATTGCTTAC
ATTTTAATTGAGCCAGCAAAGAAGGCTTAATGATTTATTGAACCATAATGTCAATAAAAACACAACTTTTGAGGC

FIGURE 1139

MLRGISQLPAVATMSWVLLPVLWLIVQTQAIAIKQTPELTLHEIVCPKKLHILHKREIKNNQTEKHGKEERYEPE
VQYQMILNGEEIILSLQKTKHLLGPDYTETLYSPRGEEITTKPENMEHCYYKGNILNEKNSVASISTCDGLRGYF
THHHQRYQIKPLKSTDEKEHAVFTSNQEEQDPANHTCGVKSTDGKQGPIRISRSLKSPEKEDFLRAQKYIDLYLV
LDNAFYKNYNENLTLIRSFVFDVMNLLNVIYNTIDVQVALVGMEIWSDGDKIKVVPSASTTFDNFLRWHSSNLGK
KIHDHAQLLSGISFNNRRVGLAASNSLCSPSSVAVIEAKKKNNVALVGVMSHELGHVLGMPDVPFNTKCPSGSCV
MNQYLSSKFPKDFSTSCRAHFERYLLSQKPKCLLQAPIPTNIMTTPVCGNHLLEVGEDCDCGSPKECTNLCCEAL
TCKLKPGTDCGGDAPNHTTE

FIGURE 1140A

CTTTTTGTAGGGAGAAGGGCAGGATGTTTTTAACTGAATGTGACCTCAGGGGAATACTAGAGAAAATAATAAAAT
TTCTGAATGGGGCAGCGTGGAGAAATCCTAAGAGAAATAGCATAAGAGCATTTTGGAACACATCCAGGAAAAGAT
AACTTTCGACACACCTGTAGACGTTCGCCAGGTAAAGGAGTGATGGAAACTCTCCAGTTCAGATCCAGTAGCTTT
TAGGGAAGGAACTACAGTTGCTGACTTAAGTTGAAGAAGCATCTATTTAATGTCTGGTCAAATCCTACAAGAAAC
ACAGAAATCTATGATTAAAAAGCTGAGCACTTTGATATACTGCAAAGGGTAGAGAAGGCAGGACGGTAGAAATTT
TCTGCAAGAAAGAATGAATTTCAGGATTTATCACTAAATAAGACAAAGTCATTTATTTAGTCCCCCTGACACAGC
AGGGCAAACTGAGTTGACATACAAGTTACCTGGAGAAAAAGAGAGCAATTCCAGGACTTCCTCTTCAGCCTAAAA
GAAGGTACCAGATCTGTGCACTGGGGCGATGTGGAAGAGACCTGCTTATTGCCCCTGATGTAAGCTCCAGTAAGA
AAAGACGTCAAGTACAAGTACTAGGAAATCACTTTATACATCTGTTTATAGGAATGACCTCAGGACTTTGTGTTC
ATGTTATAG**ATG**GATGCAGAGGCTGAAGATAAAACGCTGCGTACTCGCTCTAAAGGAACCGAGGTGCCAATGGAT
TCACTAATCCAGGAGCTCAGTGTTGCCTATGATTGCTCCATGGCAAAGAAGAGAACAGCTGAAGATCAGGCTTTG
GGGGTTCCAGTCAACAAAAGGAAATCCCTGCTAATGAAGCCCCGACACTACAGCCCAAAAGCAGACTGCCAAGAA
GACCGCAGTGACAGGACAGAGGACGATGGCCCCTTGGAAACACATGGTCACTCTACCGCAGAGGAAATCATGATA
AAACCTATGGATGAAAGTCTTCTTTCAACTGCACAAGAAAACTCCAGTAGGAAGGAAGACAGATACTCTTGTTAT
CAAGAGCTCATGGTCAAGTCTTTAATGCACTTGGGGAAATTTGAAAAAAATGTATCTGTTCAGACTGTAAGTGAA
AATTTAAATGACAGTGGCATCCAGTCTTTAAAAGCAGAGAGCGATGAAGCAGACGAGTGCTTTCTGATTCATTCT
GATGATGGAAGAGACAAGATTGATGATTCTCAGCCACCCTTCTGCTCCTCTGATGACAATGAAAGTAACTCTGAA
AGTGCAGAAAATGGCTGGGACAGTGGCTCCAACTTCTCAGAAGAAACCAAACCACCTAGAGTCCCAAAGTATGTT
TTAACAGATCATAAAAAAGACCTATTGGAAGTTCCTGAAATAAAAACTGAAGGTGACAAATTTATCCCTTGTGAG
AACAGGTGTGATTCTGAAACAGAAAGGAAAGACCCGCAGAATGCTCTCGCAGAACCCCTGGATGGCAATGCCCAG
CCCTCATTCCCTGACGTTGAGGAGGAAGATAGCGAGAGCCTGGCAGTAATGACGGAAGAGGGTAGTGACCTGGAA
AAGGCCAAGGGGAATTTAAGTTTGCTGGAGCAGGCAATTGCTCTGCAGGCTGAGCGAGGTTGTGTTTTCCATAAC
ACCTACAAAGAGCTGGATAGGTTCCTGCTGGAGCACCTAGCAGGGGAAAGGAGGCAAACCAAAGTTATCGACATG
GGTGGAAGACAAATCTTTAACAATAAACATTCACCAAGGCCTGAAAAGAGGGAGACCAAGTGCCCGATCCCTGGA
TGTGATGGCACGGGACACGTGACAGGGCTCTACCCGCACCACCGCAGCCTTTCGGGGTGCCCCCACAAAGTGCGG
GTTCCCCTGGAAATTCTTGCCATGCATGAAAATGTGCTCAAGTGTCCCACGCCGGGATGCACAGGAAGGGGTCAT
GTGAACAGCAACCGCAACACCCACAGGAGTCTTTCTGGTTGTCCAATTGCTGCAGCTGAAAAATTGGCAATGTCC
CAGGATAAAAATCAGCTTGATTCTCCCCAAACTGGGCAGTGTCCTGACCAGGCCCACAGGACAAGTTTGGTGAAG
CAAATTGAATTCAATTTCCCGTCACAAGCCATCACCTCTCCCAGAGCCACAGTGTCAAAAGAACAAGAGAAGTTT
GGAAAAGTACCATTTGATTATGCCAGTTTTGATGCCCAAGTTTTCGGTAAACGCCCTCTCATACAAACAGTGCAA
GGACGAAAAACACCACCATTTCCTGAATCAAAGCATTTTCCAAATCCAGTGAAATTTCCTAATCGACTGCCTAGT
GCAGGCGCCCACACCCAGAGCCCTGGCCGTGCCAGCTCTTATAGCTACGGTCAATGTAGTGAAGACACCCACATA
GCAGCAGCTGCTGCCATCCTGAACCTTTCCACCCGCTGCAGGGAAGCCACAGACATCCTCTCCAACAAGCCACAG
AGTCTGCATGCCAAGGGAGCCGAAATAGAAGTGGATGAAAATGGCACATTGGACTTAAGCATGAAAAAAAATCGA
ATCCTGGACAAGTCTGCACCCCTAACTTCCTCTAACACTTCTATTCCAACTCCTTCCTCTTCCCCATTCAAAACA
AGCAGCATTCTGGTCAATGCAGCATTCTATCAGGCTCTTTGTGACCAAGAGGGCTGGGACACTCCTATCAACTAT
AGCAAAACTCACGGGAAGACAGAGGAGGAGAAAGAGAAAGACCCAGTGAGCTCTCTAGAAAATTTAGAGGAAAAA
AAGTTTCCTGGAGAGGCCTCTATACCAAGCCCTAAACCCAAGCTTCATGCAAGAGATCTCAAAAAGGAACTAATC
ACCTGTCCAACACCAGGATGTGATGGAAGTGGCCACGTGACAGGAAACTATGCATCTCATCGCAGTGTTTCTGGA
TGTCCTTTAGCAGATAAGACTCTAAAATCCCTCATGGCTGCCAACTCTCAGGAGCTTAAGTGTCCAACCCCAGGC
TGCGATGGCTCGGGGCACGTGACTGGAAACTATGCTTCCCACAGAAGCTTGTCCGGATGCCCTCGTGCAAGGAAA
GGTGGTGTCAAAATGACCCCTACCAAGGAAGAAAAAGAAGACCCTGAACTGAAATGTCCTGTGATAGGGTGTGAT
GGCCAAGGTCACATATCAGGTAAATACACATCACACCGCACAGCTTCTGGCTGTCCTCTGGCTGCCAAGAGACAG
AAGGAGAATCCTCTCAATGGAGCCTCCCTCTCCTGGAAACTGAACAAACAAGAGCTACCACATTGTCCCTTGCCA
GGCTGCAATGGGCTGGGCCATGTAAATAATGTTTTTGTCACCCACCGAAGCTTATCTGGATGTCCTCTCAATGCA
CAAGTTATCAAAAAGGGCAAGGTTTCTGAAGAACTCATGACCATCAAGCTCAAAGCAACTGGGGGAATAGAGAGT
GATGAAGAAATTAGGCATTTGGATGAAGAAATAAAGGAACTGAATGAATCCAACCTTAAAATTGAAGCAGATATG
ATGAAACTTCAGACCCAGATCACATCTATGGAGAGCAACTTAAAGACGATAGAGGAGGAGAACAAACTCATAGAA

FIGURE 1140B

CAGAACAATGAAAGTCTGCTGAAAGAGCTGGCAGGTCTAAGCCAAGCTCTCATTTCAAGCCTTGCTGACATCCAG
CTTCCACAGATGGGACCTATCAGTGAGCAGAATTTTGAAGCATATGTAAATACACTCACAGATATGTACAGCAAT
CTGGAACGGGACTATTCCCCGGAATGCAAAGCTCTACTGGAAAGTATCAAACAGGCAGTGAAGGGTATCCATGTG
TAGGATCACAGCGCTGCCGGGCAACAGAAGTTACCAACAGCAGTAAACTCCAGATGGATCTGTTAGAGGTTCATG
TACTGCTAAGGCGTGGAGGTTGCCGTACTGCATTTACAATTTGCAACATTGCACTAATTTTATTTTCCCCAGCTG
ATATAAAAAGGAAAGAAAAACTATGATAGACTTCTTGGATTAAAAGCAATGCAGTCAATTATTAGATCTTATTTA
TTTTCATATGTTTTTCTTTTATTTCTTCATTGTACTCTTCTTTTGTAAAGTATATGTAAAATAAATGTGACATTT
TTATAATTTATTTATTACTAATCAAAGAGTTTTTTATCTTTTAACTGCATTTTGAAGTCTGCCGTATTTTTACAA
GTGTGTTTATTAATTTATTTTCCAATAGGATTTAAATAGAAATGCTATTCTCAAGTCATCTTTCTTGCTGGGTTT
TAATGAGGAAACAGGAAAGGGTGAAGGAAATCCTTGTCTAAGGACTGCACTATAGTTGAGTTTGATTTTTATTGC
ACACTTCTTCCCCCACCTTTCACTGATTTTTGTATTTATAAATGAATTTGCGGTAAGGTGAGCTGCACGGAAGGA
ATAAGAAGACAAATGGCGCCCACTAGTGGGGAATCCGCACTCACAAAAGCACAGGATGCTGGAAAACAGCCTGCT
CAGAATTTGTTAGCAATAATTAAATATAGCAATCAGCAAAGTATTCGACTTGGCTGGACGGTTTTCGTTAATATG
AATTATTTATTTGAAATGTTTTAAAGAAACATAAGCCTTTTTAGTGATGCAGATTTGTCTGTTTGTTTTTCAAGT
CATATCAGATCGTTGGCAACTCGTATCCCAAGATGAAAAATAAGACTTGGTGTGACCAGCCAGGCTTTCCTGCCA
TATGTTGGTACAATATACAAGTGACAATATTGGTGTAGATTTGTACTTAGCAAATACAAACACATCCAAATGAAA
AATTTTGTAGATACCATATCCCCTGAAATAGCATTTATCTTACTGGGTTGACTGGAAAGGAATGGAAAATATAGT
AACACATGAAAAAATGCTACTCCAATCTGAATGATTACTTCAAACACTGGCACCTTGGGTCTCACCCACCATAGG
AAACAAGACAACATTCAATTTGATAGAAATCTTGCCACAAAACTTCAAATGCTACAAAATATACACACACACTCA
CACACACAGGCATACTCACACACAGACACACACACACACACACACACAGACTCATCCACACTTCAAATTGAGCCC
ACAATCTTGAATTTCTGAACGGATCAGAGTTTCATAGTTTCTATAGTAAAGGCAATGTCTATTTCAGGGATTGTA
AAGTAGTTAAGCATTGTTTCAAAAGTTTTTTTATATTTATTTTTTTTAAGGAAAAGGTATAGACAACCAGCTAAA
CTGCCTTTTTGGTGTGCACACACATTTCATGTGCAGACGTGCCTCTGTGTAAATGTACACATGAACTTCATGTGG
GCTTAATTTTCTGTGCTATAAACAAAAGTGTTTATTTTTTATTAACCTCATGGATATTTAGATGGAAAGTGATGG
CATTCACAGGCTTGATGTATTCCACTGTTATTACTGTTACCTGCACAAATGAAAAACAATACTCAACAGTAATTC
CACTCCCATGAAACTTTGGTCATTGTTATGCATTAAGTGGGGCTTATCTTTGGTTTGGAGTTCATTTGAACTCTT
GAACCTTAGTTTAGTGAAGATGAACTGTCTGTTCTTAGGTAGAAACGGTGTTTATTTAAAAATCAGTTTTAAAAA
ATGAGCTACCATATGTGCTGTCTATTATAAATGGGACACCAAACAAAATTTTCTATTACAGTTGTGTACTTGCAA
ACATTTTGCTATACAGTACTTCATAGATGCATACAAATGAGCTCACTTATTACAAAGACAAACGTTTAATTTGCT
AAATATTTTAACAAGTTTGTTATATATTTTATTTAATTTAAAAGAAATCTCTTACCAACCTACATATTTATTACT
ATAATTTGCTATGACTTCAGGTTAATTTATTTGTGTTTGCATAGTTTGAGCAGGATGTTTTGTGAAGTATGTTTG
TATTTATTTGCCTACTTTGTACTTGATGTGTTTTGTAATGTGCACTGAATTTGTTTTCTTTTCAACTATGTTAAT
GATCAATACTGTAAATTGGGTCTTTTGTAAACAAAAAGGCAATGATGTATGCATTTTTTTTAATTTGAGGTAGTT
TGTTTGTATACTGTTTCTCCAAACACTTAATATTTCTTACATCAAAGCAACAAAATTGTGTTCAGTGCTGTACAT
TTGGTGTATGGTAGGAAATAAAAATTGATAACG

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FIGURE 1141

MDAEAEDKTLRTRSKGTEVPMDSLIQELSVAYDCSMAKKRTAEDQALGVPVNKRKSLLMKPRHYSPKADCQEDRS
DRTEDDGPLETHGHSTAEEIMIKPMDESLLSTAQENSSRKEDRYSCYQELMVKSLMHLGKFEKNVSVQTVSENLN
DSGIQSLKAESDEADECFLIHSDDGRDKIDDSQPPFCSSDDNESNSESAENGWDSGSNFSEETKPPRVPKYVLTD
HKKDLLEVPEIKTEGDKFIPCENRCDSETERKDPQNALAEPLDGNAQPSFPDVEEEDSESLAVMTEEGSDLEKAK
GNLSLLEQAIALQAERGCVFHNTYKELDRFLLEHLAGERRQTKVIDMGGRQIFNNKHSPRPEKRETKCPIPGCDG
TGHVTGLYPHHRSLSGCPHKVRVPLEILAMHENVLKCPTPGCTGRGHVNSNRNTHRSLSGCPIAAAEKLAMSQDK
NQLDSPQTGQCPDQAHRTSLVKQIEFNFPSQAITSPRATVSKEQEKFGKVPFDYASFDAQVFGKRPLIQTVQGRK
TPPFPESKHFPNPVKFPNRLPSAGAHTQSPGRASSYSYGQCSEDTHIAAAAAILNLSTRCREATDILSNKPQSLH
AKGAEIEVDENGTLDLSMKKNRILDKSAPLTSSNTSIPTPSSSPFKTSSILVNAAFYQALCDQEGWDTPINYSKT
HGKTEEEKEKDPVSSLENLEEKKFPGEASIPSPKPKLHARDLKKELITCPTPGCDGSGHVTGNYASHRSVSGCPL
ADKTLKSLMAANSQELKCPTPGCDGSGHVTGNYASHRSLSGCPRARKGGVKMTPTKEEKEDPELKCPVIGCDGQG
HISGKYTSHRTASGCPLAAKRQKENPLNGASLSWKLNKQELPHCPLPGCNGLGHVNNVFVTHRSLSGCPLNAQVI
KKGKVSEELMTIKLKATGGIESDEEIRHLDEEIKELNESNLKIEADMMKLQTQITSMESNLKTIEEENKLIEQNN
ESLLKELAGLSQALISSLADIQLPQMGPISEQNFEAYVNTLTDMYSNLERDYSPECKALLESIKQAVKGIHV

FIGURE 1142

GCACTGCCTCTGGCACCTGGGGCAGCCGCGCCCGCGGAGTTTTCCGCCCGGCGCTGACGGCTGCTGCGCCCGCGG
CTCCCCAGTGCCCCGAGTGCCCCGCGGGCCCCGCGAGCGGGAGTGGGACCCAGCCCCTAGGCAGAACCCAGGCGC
CGCGCCCGGGACGCCCGCGGAGAGAGCCACTCCCGCCCACGTCCCATTTCGCCCCTCGCGTCCGGAGTCCCCGTG
GCCAGATCTAACC**ATG**AGCTACCCTGGCTATCCCCCGCCCCCAGGTGGCTACCCACCAGCTGCACCAGGTGGTGG
TCCCTGGGGAGGTGCTGCCTACCCTCCTCCGCCCAGCATGCCCCCCATCGGGCTGGATAACGTGGCCACCTATGC
GGGGCAGTTCAACCAGGACTATCTCTCGGGAATGGCGGCCAACATGTCTGGGACATTTGGAGGAGCCAACATGCC
CAACCTGTACCCTGGGGCCCCTGGGGCTGGCTACCCACCAGTGCCCCCTGGCGGCTTTGGGCAGCCCCCCTCTGC
CCAGCAGCCTGTTCCTCCCTATGGGATGTATCCACCCCCAGGAGGAAACCCACCCTCCAGGATGCCCTCATATCC
GCCATACCCAGGGGCCCCTGTGCCGGGCCAGCCCATGCCACCCCCCGGACAGCAGCCCCCAGGGGCCTACCCTGG
GCAGCCACCAGTGACCTACCCTGGTCAGCCTCCAGTGCCACTCCCTGGGCAGCAGCAGCCAGTGCCGAGCTACCC
AGGATACCCGGGGTCTGGGACTGTCACCCCCGCTGTGCCCCCAACCCAGTTTGGAAGCCGAGGCACCATCACTGA
TGCTCCCGGCTTTGACCCCCTGCGAGATGCCGAGGTCCTGCGGAAGGCCATGAAAGGCTTCGGGACGGATGAGCA
GGCCATCATTGACTGCCTGGGGAGTCGCTCCAACAAGCAGCGGCAGCAGATCCTACTTTCCTTCAAGACGGCTTA
CGGCAAGGATTTGATCAAAGATCTGAAATCTGAACTGTCAGGAAACTTTGAGAAGACAATCTTGGCTCTGATGAA
GACCCCAGTCCTCTTTGACATTTATGAGATAAAGGAAGCCATCAAGGGGGTTGGCACTGATGAAGCCTGCCTGAT
TGAGATCCTCGCTTCCCGCAGCAATGAGCACATCCGAGAATTAAACAGAGCCTACAAAGCAGAATTCAAAAAGAC
CCTGGAAGAGGCCATTCGAAGCGACACATCAGGGCACTTCCAGCGGCTCCTCATCTCTCTCTCTCAGGGAAACCG
TGATGAAAGCACAAACGTGGACATGTCACTCGCCCAGAGAGATGCCCAGGAGCTGTATGCGGCCGGGGAGAACCG
CCTGGGAACAGACGAGTCCAAGTTCAATGCGGTTCTGTGCTCCCGGAGCCGGGCCCACCTGGTAGCAGTTTTCAA
TGAGTACCAGAGAATGACAGGCCGGGACATTGAGAAGAGCATCTGCCGGGAGATGTCCGGGGACCTGGAGGAGGG
CATGCTGGCCGTGGTGAAATGTCTCAAGAATACCCCAGCCTTCTTTGCGGAGAGGCTCAACAAGGCCATGAGGGG
GGCAGGAACAAAGGACCGGACCCTGATTCGCATCATGGTGTCTCGCAGCGAGACCGACCTCCTGGACATCAGATC
AGAGTATAAGCGGATGTACGGCAAGTCGCTGTACCACGACATCTCGGGAGATACTTCAGGGGATTACCGGAAGAT
TCTGCTGAAGATCTGTGGTGGCAATGAC**TGA**ACAGTGACTGGTGGCTCACTTCTGCCCACCTGCCGGCAACACCA
GTGCCAGGAAAAGGCCAAAAGAATGTCTGTTTCTAACAAATCCACAAATAGCCCCGAGATTCACCGTCCTAGAGC
TTAGGCCTGTCTTCCACCCCTCCTGACCCGTATAGTGTGCCACAGGACCTGGGTCGGTCTAGAACTCTCTCAGGA
TGCCTTTTCTACCCCATCCCTCACAGCCTCTTGCTGCTAAAATAGATGTTTCATTTTTCTGACTCATGCAATCAT
TCCCCTTTGCCTGTGGCTAAGACTTGGCTTCATTTCGTCATGTAATTGTATATTTTTATTTGGAGGCATATTTTC
TTTTCTTACAGTCATTGCCAGACAGAGGCATACAAGTCTGTTTGCTGCATACACATTTCTGGTGAGGGCGACTGG
GTGGGTGAAGCACCGTGTCCTCGCTGAGGAGAGAAAGGGAGGCGTGCCTGAGAAGGTAGCCTGTGCATCTGGTGA
GTGTGTCACGAGCTTTGTTACTGCCAAACTCACTCCTTTTTAGAAAAAACAAAAAAAAAGGGCCAGAAAGTCATT
CCTTCCATCTTCCTTGCAGAAACCACGAGAACAAAGCCAGTTCCCTGTCAGTGACAGGGCTTCTTGTAATTTGTG
GTATGTGCCTTAAACCTGAATGTCTGTAGCCAAAACTTGTTTCCACATTAAGAGTCAGCCAGCTCTGGAATGGTC
TGGAAATGTCA

FIGURE 1143

MSYPGYPPPPGGYPPAAPGGGPWGGAAYPPPPSMPPIGLDNVATYAGQFNQDYLSGMAANMSGTFGGANMPNLYP
GAPGAGYPPVPPGGFGQPPSAQQPVPPYGMYPPPGGNPPSRMPSYPPYPGAPVPGQPMPPPGQQPPGAYPGQPPV
TYPGQPPVPLPGQQQPVPSYPGYPGSGTVTPAVPPTQFGSRGTITDAPGFDPLRDAEVLRKAMKGFGTDEQAIID
CLGSRSNKQRQQILLSFKTAYGKDLIKDLKSELSGNFEKTILALMKTPVLFDIYEIKEAIKGVGTDEACLIEILA
SRSNEHIRELNRAYKAEFKKTLEEAIRSDTSGHFQRLLISLSQGNRDESTNVDMSLAQRDAQELYAAGENRLGTD
ESKFNAVLCSRSRAHLVAVFNEYQRMTGRDIEKSICREMSGDLEEGMLAVVKCLKNTPAFFAERLNKAMRGAGTK
DRTLIRIMVSRSETDLLDIRSEYKRMYGKSLYHDISGDTSGDYRKILLKICGGND

FIGURE 1144

GCTGGTCGGAGGCTCGCAGTGCTGTCGGCGAGAAGCAGTCGGGTTTGGAGCGCTTGGGTCGCGTTGGTGCGCGGT
GGAACGCGCCCAGGGACCCCAGTTCCCGCGAGCAGCTCCGCGCCGCGCCTGAGAGACTAAGCTGAAACTGCTGCT
CAGCTCCCAAG**ATG**GTGCCACCCAAATTGCATGTGCTTTTCTGCCTCTGCGGCTGCCTGGCTGTGGTTTATCCTT
TTGACTGGCAATACATAAATCCTGTTGCCCATATGAAATCATCAGCATGGGTCAACAAAATACAAGTACTGATGG
CTGCTGCAAGCTTTGGCCAAACTAAAATCCCCCGGGGAAATGGGCCTTATTCCGTTGGTTGTACAGACTTAATGT
TTGATCACACTAATAAGGGCACCTTCTTGCGTTTATATTATCCATCCCAAGATAATGATCGCCTTGACACCCTTT
GGATCCCAAATAAAGAATATTTTTGGGGTCTTAGCAAATTTCTTGGAACACACTGGCTTATGGGCAACATTTTGA
GGTTACTCTTTGGTTCAATGACAACTCCTGCAAACTGGAATTCCCCTCTGAGGCCTGGTGAAAAATATCCACTTG
TTGTTTTTTCTCATGGTCTTGGGGCATTCAGGACACTTTATTCTGCTATTGGCATTGACCTGGCATCTCATGGGT
TTATAGTTGCTGCTGTAGAACACAGAGATAGATCTGCATCTGCAACTTACTATTTCAAGGACCAATCTGCTGCAG
AAATAGGGGACAAGTCTTGGCTCTACCTTAGAACCCTGAAACAAGAGGAGGAGACACATATACGAAATGAGCAGG
TACGGCAAAGAGCAAAAGAATGTTCCCAAGCTCTCAGTCTGATTCTTGACATTGATCATGGAAAGCCAGTGAAGA
ATGCATTAGATTTAAAGTTTGATATGGAACAACTGAAGGACTCTATTGATAGGGAAAAAATAGCAGTAATTGGAC
ATTCTTTTGGTGGAGCAACGGTTATTCAGACTCTTAGTGAAGATCAGAGATTCAGATGTGGTATTGCCCTGGATG
CATGGATGTTTCCACTGGGTGATGAAGTATATTCCAGAATTCCTCAGCCCCTCTTTTTTATCAACTCTGAATATT
TCCAATATCCTGCTAATATCATAAAAATGAAAAAATGCTACTCACCTGATAAAGAAAGAAAGATGATTACAATCA
GGGGTTCAGTCCACCAGAATTTTGCTGACTTCACTTTTGCAACTGGCAAAATAATTGGACACATGCTCAAATTAA
AGGGAGACATAGATTCAAATGTAGCTATTGATCTTAGCAACAAAGCTTCATTAGCATTCTTACAAAAGCATTTAG
GACTTCATAAAGATTTTGATCAGTGGGACTGCTTGATTGAAGGAGATGATGAGAATCTTATTCCAGGGACCAACA
TTAACACAACCAATCAACACATCATGTTACAGAACTCTTCAGGAATAGAGAAATACAAT**TAG**GATTAAAATAGGT
TTTTT

FIGURE 1145

MVPPKLHVLFCLCGCLAVVYPFDWQYINPVAHMKSSAWVNKIQVLMAAASFGQTKIPRGNGPYSVGCTDLMFDHT
NKGTFLRLYYPSQDNDRLDTLWIPNKEYFWGLSKFLGTHWLMGNILRLLFGSMTTPANWNSPLRPGEKYPLVVFS
HGLGAFRTLYSAIGIDLASHGFIVAAVEHRDRSASATYYFKDQSAAEIGDKSWLYLRTLKQEEETHIRNEQVRQR
AKECSQALSLILDIDHGKPVKNALDLKFDMEQLKDSIDREKIAVIGHSFGGATVIQTLSEDQRFRCGIALDAWMF
PLGDEVYSRIPQPLFFINSEYFQYPANIIKMKKCYSPDKERKMITIRGSVHQNFADFTFATGKIIGHMLKLKGDI
DSNVAIDLSNKASLAFLQKHLGLHKDFDQWDCLIEGDDENLIPGTNINTTNQHIMLQNSSGIEKYN

FIGURE 1146

GAATTCGGCACGAGGGAGTTTGACCAGAG**ATG**CAAGGGGTGAAGGAGCGCTTCCTACCGTTAGGGAACTCTGGGG
ACAGAGCGCCCCGGCCGCCTGATGGCCGAGGCAGGGTGCGACCCAGGACCCAGGACGGCGTCGGGAACCATACCA
TGGCCCGGATCCCCAAGACCCTAAAGTTCGTCGTCGTCATCGTCGCGGTCCTGCTGCCAGTCCTAGCTTACTCTG
CCACCACTGCCCGGCAGGAGGAAGTTCCCCAGCAGACAGTGGCCCCACAGCAACAGAGGCACAGCTTCAAGGGGG
AGGAGTGTCCAGCAGGATCTCATAGATCAGAACATACTGGAGCCTGTAACCCGTGCACAGAGGGTGTGGATTACA
CCAACGCTTCCAACAATGAACCTTCTTGCTTCCCATGTACAGTTTGTAAATCAGATCAAAAACATAAAAGTTCCT
GCACCATGACCAGAGACACAGTGTGTCAGTGTAAAGAAGGCACCTTCCGGAATGAAAACTCCCCAGAGATGTGCC
GGAAGTGTAGCAGGTGCCCTAGTGGGGAAGTCCAAGTCAGTAATTGTACGTCCTGGGATGATATCCAGTGTGTTG
AAGAATTTGGTGCCAATGCCACTGTGGAAACCCCAGCTGCTGAAGAGACAATGAACACCAGCCCGGGGACTCCTG
CCCCAGCTGCTGAAGAGACAATGAACACCAGCCCAGGGACTCCTGCCCCAGCTGCTGAAGAGACAATGACCACCA
GCCCGGGGACTCCTGCCCCAGCTGCTGAAGAGACAATGACCACCAGCCCGGGGACTCCTGCCCCAGCTGCTGAAG
AGACAATGACCACCAGCCCGGGGACTCCTGCCTCTTCTCATTACCTCTCATGCACCATCGTAGGGATCATAGTTC
TAATTGTGCTTCTGATTGTGTTTGTT**TGA**AAGACTTCACTGTGGAAGAAATTCCTTCCTTACCTGAAAGGTTCAG
GTAGGCGCTGGCTGAGGGCGGGGGGCGCTGGACACTCTCTGCCCTGCCTCCCTCTGCTGTGTTCCCACAGACAGA
AACGCCTGCCCCTGCCCCAAGTCCTGGTGTCTCCAGCCTGGCTCTATCTTCCTCCTTGTGATCGTCCCATCCCCA
CATCCCGTGCACCCCCCAGGACCCTGGTCTCATCAGTCCCTCTCCTGGAGCTGGGGGTCCACACATCTCCCAGCC
AAGTCCAAGAGGGCAGGGCCAGTTCCTCCCATCTTCAGGCCCAGCCAGGCAGGGGGCAGTCGGCTCCTCAACTGG
GTGACAAGGGTGAGGATGAGAAGTGGTCACGGGATTTATTCAGCCTTGGTCAGAGCAGAAAAAAAAAAAAAAAAA
AAAGATCTTTAATTA

FIGURE 1147

MQGVKERFLPLGNSGDRAPRPPDGRGRVRPRTQDGVGNHTMARIPKTLKFVVVIVAVLLPVLAYSATTARQEEVP
QQTVAPQQQRHSFKGEECPAGSHRSEHTGACNPCTEGVDYTNASNNEPSCFPCTVCKSDQKHKSSCTMTRDTVCQ
CKEGTFRNENSPEMCRKCSRCPSGEVQVSNCTSWDDIQCVEEFGANATVETPAAEETMNTSPGTPAPAAEETMNT
SPGTPAPAAEETMTTSPGTPAPAAEETMTTSPGTPAPAAEETMTTSPGTPASSHYLSCTIVGIIVLIVLLIVFV

FIGURE 1148A

CTTTCCCACAACCACAGAGGGAGTTAGGGATCAAACTAACCACTAGAACTATTTTCCTGACAGAATCTTTGCCTT
GCATGTTTCAGGCCCACCTGGCTCCTTTCACCTTTCTTACACAGGTGACATTCCCAGAACCTGGAGGCCAGGCTA
TGACACAGAGTCAATCAATAACCAGGGAGATCTGTGATATAGCCCAGTAGGTGGGGCCTTGCTGCCATCTGCCAT
ATGACCCTTCCAGTCCCAGGCTTCTGAAGAGACGTGGTAAGTGCGGTGCAGTTTTCAACTGACCTCTGGACGCAG
AACTTCAGCCATGAAGGTAACAGGCATCTTTCTTCTCAGTGCCTTGGCCCTGTTGAGTCTATCTGGTAAGTGTTG
CATATTTTTCAAATTTAAATAAAACTGTTTTGACCTGTTGCTTTGTGAAGCACATTATCTTCTAGACTTTTGATG
TAGTCTAGTCTTCGAGAGATGTTTTGGACCTAATGAGATGAAATAAAATCAACAGGTAAGAATTATTTTTTAAGA
GGAATTTTTAACCTACTATAAGGAAAACAATTCTACTAGTAAGAAATTCCCAGAAATAAAATGGTTTTCCTCTAT
TGATGTGGCTGACCCTTTGTTGGGATATGGTAGAGAAAAAAGGGTAAAAATATTTTAACTTTAAGTATACTTCTC
ATTCTGTAAATGTGTAAGGCCAAATTACAAATTTTAAATTCTCATGGGATTGCATAAAATAGATAAATGGCTTCC
AGTTATTCAGTATAAAAGGCATAATTTGACTGATTAAAAATTTATTTTTTTATTGTATAGGTTTCAGTGTACTTG
AATCATGTATAGTTTGTCAGATTTATCCCTGAATAGCTAATATATGTGATATAAAGGGAATTTTTTATTTTCAAT
TCCTGGTATTTCTTATTAGTATCTGGAAATACAAAAATTGCATTTTGTGTATTTACATTACACATTTTGAATGTT
TTGAAAGAAAATATTCTGCTTGAATAGATGGTGCACATATACCTCCAACTGCATCTTGACAATGTTGACAGACAA
CTCTGAACCCGCAGAGCCAAGATCAGTTTCCTTTTTATCACTGGAAATGGTTAACATTTTCAACTTCACCTCTCA
TGTAGTGAAGGATCCTGTGGAGAGCCAAATCAGCACTTTGCTAAGAAGAGGAAGAATATTGTTTGTTTTATTTGC
TGAATATTTATGGCAACAGTCAGTGTTCCCTTTCCCCCTCCTCATGCATGTTAATTAATACAAATAGATGCCTGT
GATGAGCACCTGCTCTTCAGTTTTTAGACTCAACTAGATTCTAAAAGCCAGTGGGCCCCCAACAACATCAAGTTC
TGACTATCCCGGGGGAAATTCTCCAAGCTCATAGATGCCTCACTAATTTTCATTACATTTAGATACAAAGAACTA
CCTCTTTGCTCAGATCACCTCAAAGATTGATGATATTAAAATTAATTTTCAGGAATGTTTCCTTATTTGATTGCT
ATCATATTAGTTCCCTTTCCCTTCCATGAACTTATCCACAGTTATCATTTCCTATATGTTGTCAGCAAAACCTCT
GCTATTTTCTGGGGGAATAGAGATTAGCTATTTTGACTACCTGTAAATTCAACAAATGTGAGTTAGACCCATAGT
CCATATGATGCAATTGTTGGAAATAGCTCTTTGGGAACTGATAGTGAGTTGGCAAAAGAACTCTATTTTTTCAAC
AATACTTACAAAAGGGAATTTAAATGTAATTGAAAAAGCTAACTTTGCATCAGAAGACCTGGTTACTGCTTATGA
TAACTGTTTCACAGCTAGTTATAAAAACTCTCCATACTTTCATCTGTAAACTGAGATAAAAATTATACTTCACTA
ATTGTGAGATTAAAGATCTAGTAACTGGTTTTGAGAATGTTTGTGAGTATTCAAAAGATAATTTGCTCAGTGCCT
GATTCATTTCCAGCAGTAAGTGCATAATTTCTGTTTTCAAGGAAATAGATCAACTTCCTAAAACATCAAATCGAG
ATACTTTGGTCATAATCAAAGTTTTACTCAAACTTTTTAAGGTTTTGCCAAGGAAGGGGTACAGGAAAATCAGTC
AGATACTTTTGGAAGATTAGAGAAATCAGAAAGGGTGGGGAATGAAAGAGCCTAGTAAAGAAGTCACAGTCTGCA
ATGAAAGCAGAGAATTCTGATGAAGAATAGATCTGACTTCTTTCATTTAGGACCCAACTACCATATCTGATTTAT
TTCTAGGTAACACTGGAGCTGACTCCCTGGGAAGAGAGGTAAAGAGATATTTGTAATTTCTTATTTCTCAGACTG
GAACAGTTTGATCCAACAAAAATGCAGCCTTGCTGTCACCTTTCAGTTTAGCCTGAAGTTAAGAGGAGTATGAAT
GCTAGGGAGGGTTAACGTGAGAAATGCAAATGGTAGTAGTAGTTCCAACCCACAGGCGTATATTGAAGGACAATT
TCACTGATGTATAAGCAAGTTCCATATAGTCCTACAGTGCTTGCTGTGAAGGGGTTTTTATATAGACTAGTGATA
GCTGTAGACAAGTATTTGGGGGTGGAAGCCTTCTCAACTTCACTCCAAGTAGCCCTTCCTCCTTACAGCCAGTTTG
ACCATGTTGGCATGCAGCTCTCCCAATCACCAAGGTGTGGCTCTAATTTATAATGAATGACAGAAAATAATAAAC
TAGGTTCTCCTTCTAGAAAAATATTCTAACTCTAACCTTTTCATATTTTTTTGTTTAAGAGGTAATTTCAGTAAA
TTTGGAGACCAGAGGAAGAAGTGTCCCTGTTCTCAGTACATTTATATCTAGTCAGAGACAGCTGATAGACCAAAA
GTTCATGAATGAATGCAATATTACATTTGTGATAAGTGTTATGAAAAAGTTCTGCTGCCGTTAGGAACTTAGCCT
AGTTAGAAAAATCAGGGAGGGTGCTCCGAAGTAACTGAGGGGTTATTTTGAGCCAAAAAAAAAAATGAGTGTTAG
TAAAACAAAACTGGTGGGGAGATGTAGTAGAATAAAGTACTTAAGAGCTAAAGCTCAGGAACTCTGACTAGGTTT
GAATTCTGAATTTAGGAATTCCTTAGCTGGGTGGCCTTGGCTAATTTTATTGCTTTGTGCCTCATTATCTTCACC
TGAAGAAGAATATAATACTTAGTTCACAGGATAGTTAGGAGGTTTAAACAGAATAATATATAAAAAGCACTAGAA
CAATGTCTAGGACAATGACAATCATTTGATGATTATAAACTCTTACTGGAGTAGAATGCAAAGACTTCCAACACC
CGACAATGCCTAGTGCCTTTAAGTGCCTAATAGAAGACCAGTGTGTGTGGACTACAGTGTACAAGGAAGAACGTG
CCCCAAGATGTGGCCAACCTGAGAGATGCCAGCACCCGCAGTAATTGCAAACTTGAACATTATCTCACCCATCCA
TGTAAATCTCACAACAACACTATGAGATAGGTGGGAAATGGTAATATCATCACTGTTTTGCAGATGAACTGACTG
AGTTTCAGAAGGGCCATAGGACTTACTAATGTCACACAGCTTAGAAATAGCAGAGGCATGACTTAAAACAAGGTT

FIGURE 1148B

TTCTGTCTCCAGATAGTAGGTTATTTCTCTTACAACACACAGTATCATTCTCCCAATCACAGTTATTCCCCAGAG
AAATAAAACCATTTCAGAGATTTTGCTATGAACTCAAGAATGGAGAATAATGGGAAATGATTCTGTTTAATTCCA
TTTTTAGGCCAAATGTTACAATGAACTTAATGGATGCACCAAGATATATGACCCTGTCTGTGGGACTGATGGAAA
TACTTATCCCAATGAATGCGTGTTATGTTTTGAAAATCGGTGAGTACAAACTTGAGTTTCTTTTAAACTATATAT
TTTAAGTTAGTTATCTTCAAGTGTACTGATAATATGAATCTCACCCCGAGAAAAGCAAACTATTTACTTTTTCCA
AAAACAGTTATCTCTTTCTTATTCTCCCTTTTATATATTTAGCATTAAATATTATTTTTTAGAAGTCACTTGTAT
GATAAAAGCCTATATTTTTTACAGCAAAATAGTCGATAGCTTGGATTTTTATAAAGTACACACAAAATACCTTTA
ATTAAAAAAATTATTAGTGGTTGCAATGATTGTGTTTTTTAAAGCCCTCAGTTATGCAAATATAAATTGTATAGA
TTATATAACCAAAAATATATTTTTACTTATGGATATGAAGCCAGTTTCAGTAAAGCTTCATTTCCTCAGTGACCA
TAAGTGGTGATGTGATACAGAGAAATAGATTCAACACAGATTTCCTATCTCACTCAGCAACTGAAACCTTAGCAT
GTCTCAAGCATCATGCTAATATTCCCTGTCTTACTTGTGCTTATGACTAAGAAAACATCATGAGCATGTATAGGA
TGGCTTCTTATAACTTGGGGCAAATGCCAGAAGATGAGGTGTAAATAAAGTGCAACAGGAGTGAAGCAGAGATAC
ATATTTTTTATTAAAAGGGGCCAAGAAAGGATCCATGAAAAGAATAGAATGCCCAACCGGGTGCAGTGGCTCACT
CCTGAATCCCAGCACTTTGGGAGGCCGATGCAGGTGGATCACCTGAGACCGCCTGGCCAACATGGTGAAACCCCA
TGGTGGCGGGCGCCTATAATACCAGCTACTCAGGAGGCTGAGGCAGAAGAATCGCTTCAATCTGGGAGGCAGAGG
TTGCAGTGAGCTGAGATTGTGCCACTGCACTCCAACCTGGGTGACAAGAGTGAGACTCCATCTTAAAAAAAAGGA
AAAAAAAAGAATAGAATGCCATTTAAATAGAGTTCTGAATTTTGGCAATATCAAAAGAGCATGCCAGGTTAAATA
AAGGTGTGGAATGAACAAAGCAAATAAAAGGGATTCCACGAGTGACTTTAGTTTTTCTGAGATTGACTTGATATT
AAAGACTTTGACTCAGGCTCAAATGACTGTGTAAATTTCCATTATATTCTACTGCATAAATTCCCTTTTCTGTAA
TGCAAACCTTCTTCTTGGGCTGTTTTAAACCATTTTGGAAAATTCTCAGAGTTTAGCAAGTATTGTGGAAATAGG
ACCTCTGGATGAGAGGTCTAATATCCTGAAGTTTTAGACCCAAAACATTAGGTATTCTACTTTGTAATAAATCTG
TTTCCATAATTAAGACTTGTAAAAAGAATTTGAAGCCACCTGTTAGTTTTCTCATGACCCATGTTCTTGACATTA
AGCTCAAACATCATATTTCCATCCAATGGGAGGAGAAAGCAAGAGAACAACAGCTTTGAGACTTGGGAAATTTCC
AGTGCCGCTCAACATTTACAGTGAAACATTAGAAAAATATTAGTAGAGGGCTGGAACACCCTATCTGCTTAGCCT
CTGAAACCTCCGAGTTTCTGCTTATTCTTTCTATTTGTTCAAAACTATGTAAATATGGGAGGCACATTTGTATGC
TAGAAAACATGACCTCTCTTCCTATATTTCTCAGATAAGAAAATTTAGGTCTAGAGACAAAATGTTGCTTTCTCA
AATACAACATATTTCCTAATGTATGACATTGCCTTTTTCACTGTTGATTAAAAGTCCCAAACTTATTACCTAGTA
ACTAAAGCCAGACGCTGACCCTAGTTTGAGACAAGTAGATAATACCAAACAAGGGCTTGCAAATCAGTCTTTTTG
GTGATTATGTGCTTGGCAAATATATTCAATAAACACTTTTTCTATTCCTTCTACGTCTTCATAGGGAATCTGTAC
CGGCAAATTCTTTTCCATAAACCTGCATCTCCAATAGAACCTTCTATAATGATGGAAATGTTCTATGTTTATGCT
GTCTAATACATAGCCACTAGCCACAAAACAGTAGCCTTAATGTGGCTAACACTAACTTAAATGTGGCTAGTAAAA
CTGATCAGCTGAATATTTAATATTATCTAAACTAATTTACATTTACATAGCTATATGTGGATAGTGAATATATGA
AACTAGAGTGAACAGCATAGCAACTCTTGTTTATTCTGTTTAGGTGTGTGTGCTTATGTATGCTAACTGATTTGG
AAATCAGTATTAATGAGCAGTTAATGATTGTGGGACAAGAAAGCATTAAAAAATCTTAAAGAGTTTGGCTGGGCA
TGGTGGCTCATGCCTGTAATCCCAGCACTTTGGAAGTCCCAGGCAGGTGGATCACTTTTGTTAGGAGTTTGAGAC
CAGCCTGGCCAACATGGTAAAACCCCGTCTCTACTAAAAATACAAATATTAGCCAGGCATGGTGGCATTCACCTG
TAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCACTTGAACCCGGGAGGTGGAGGCTGCAGTGAGCCAAGG
TCACACCACTGCACTCCAGCCTGGGCAACAGAGTGAGACTCTGTCTTAAAAAAAGAAAAAAAAGAAAAAAAGAAA
AGAAAAAAAAAAAGAAAAAAAAGTATATGGAAGTCAGATGTCCTTCAGTAATAGAGAAGTAGAAGAATTTTTGTAA
GCCCGTACATTCAAAGAAAAAATGGTTAGAAAAATTAAAGACCTGGAAACAGTCTTCTAGGGAACAATTATAAAA
TTTAGAGATATTTAGTTTAGGGAAGAGAAAACTAGTTTGGTAATGGTAGTGTGGGGCGAACAGAGAGGTTTTATC
TGGAGGGGAGGATGTTTAGAACTGGCAGGAATCATGTGGAATAAATATGTGATTTACTTTTGTGAGACCTCACAG
ATACGAATCCCCAGAGCTCTAAGATGAAAGGTCAATCAATTAGAAGGTCCAACAATAGCTCAGGCATCAGCTGAG
ATGGAAACCTGGTGGCGAAGGCAGAGGCATCAGGAGCAAAAGATGCAACAATAGTTTTGAGTTTAATTTCAGGGG
TTCACTGTAACACCCCACGAGATCTGTAAAAACTGTAAGGACAGATATTTTTCCTTTCTGTTGTATCCTTAGTGA
TTCAACAGTAATCAATAAATATTTGATGAATTAATGACTAAGTGAATGTATAAATGAATGAAAGACAGAGAAAAG
ATTATAAATCTCAAACCTCTCCAACTTTAAATGAAGCTGTTATTTTTCCCCCTGTTTTTCTCCCATAGTCACTTT
TCATCAGTGAAGTTTAAGCTGATATATTTTTTTTAATCTCTACTGCAGGAAACGCCAGACTTCTATCCTCATTCA

FIGURE 1148C

AAAATCTGGGCCTTGCTGAGAACCAAGGTTTTGAAATCCCATCAGGTCACCGCGAGGCCTGACTGGCCTTATTGT
TGAATAAATGTATCTGAATATCCCCTGTTGTTTCCATTTGCTTTTTCCTCAAAGGTATGTTTGATTATACCAGGG
TCAGGGGACTTTGGTAAGAC

FIGURE 1149

AGCAAAATCAAGCAGTTGGTTAGCGAAGGGATTCGGTGCAGATGGATGGACCGTCTGGGCTGCGGAGTCCACGGG
CCTGAAACGCGGTCGCTCCTGACCCGTCCTCCGCAACCCTCGTCCCACCAGGCCGCGGTCCCCGGAGCAGGCCGG
CGGGTGGCAGGAAGACACCAGGCTGCAGGGGGCTGGAGAAGCAACACCCCTCTCCCTCCCCGCCAGAGAACTGGA
GCGCGGGGACCTCGGTTGCGGATGCTGGCGGCGAGCCGGGTTGCTAGGCGACATCGAGAGAGGAAGAGGAGAAAG
TCTTCATGGGGTGCTAGAGCATCTTAAATGTCCCTCTC**ATG**CAGGGACATTTCCCTGCTGAACGAAGAGAAGGCA
GACCTCGGCGAGGGACCCGTGGTCAGCAGCAGCTTCTGGTGAGCCCCCGCTTCCTCCGAGCCTGGCACCCCCCTC
CCGTCTCAGCCAGGATGCCAACGAGGCGCTGGGCCCCGGGCACCCAGTGTATCACCAAATGCGAGCACACCCGCC
CCAAGCCAGGGGAGCTGGCCTTCCGCAAGGGCGACGTGGTCACCATCCTGGAGGCCTGCGAGAACAAGAGCTGGT
ACCGCGTCAAGCACCACACCAGTGGACAGGAGGGGCTGCTGGCAGCTGGGGCGCTGCGGGAGCGGGAGGCCCTCT
CCGCAGACCCCAAGCTCAGCCTCATGCCGTGGTTCCACGGGAAGATCTCGGGCCAGGAGGCTGTCCAGCAGCTGC
AGCCTCCCGAGGATGGGCTGTTCCTGGTGCGGGAGTCCGCGCGCCACCCCGGCGACTACGTCCTGTGCGTGAGCT
TTGGCCGCGACGTCATCCACTACCGCGTGCTGCACCGCGACGGCCACCTCACAATCGATGAGGCCGTGTTCTTCT
GCAACCTCATGGACATGGTGGAGCATTACAGCAAGGACAAGGGCGCTATCTGCACCAAGCTGGTGAGACCAAAGC
GGAAACACGGGACCAAGTCGGCCGAGGAGGAGCTGGCCAGGGCGGGCTGGTTACTGAACCTGCAGCATTTGACAT
TGGGAGCACAGATCGGAGAGGGAGAGTTTGGAGCTGTCCTGCAGGGTGAGTACCTGGGGCAAAAGGTGGCCGTGA
AGAATATCAAGTGTGATGTGACAGCCCAGGCCTTCCTGGACGAGACGGCCGTCATGACGAAGATGCAACACGAGA
ACCTGGTGCGTCTCCTGGGCGTGATCCTGCACCAGGGGCTGTACATTGTCATGGAGCACGTGAGCAAGGGCAACC
TGGTGAACTTTCTGCGGACCCGGGGTCGAGCCCTCGTGAACACCGCTCAGCTCCTGCAGTTTTCTCTGCACGTGG
CCGAGGGCATGGAGTACCTGGAGAGCAAGAAGCTTGTGCACCGCGACCTGGCCGCCCGCAACATCCTGGTCTCAG
AGGACCTGGTGGCCAAGGTCAGCGACTTTGGCCTGGCCAAAGCCGAGCGGAAGGGGCTAGACTCAAGCCGGCTGC
CCGTCAAGTGGACGGCGCCCGAGGCTCTCAAACACGGGAAGTTCACCAGCAAGTCGGATGTCTGGAGTTTTGGGG
TGCTGCTCTGGGAGGTCTTCTCATATGGACGGGCTCCGTACCCTAAAATGTCACTGAAAGAGGTGTCGGAGGCCG
TGGAGAAGGGGTACCGCATGGAACCCCCCGAGGGCTGTCCAGGCCCCGTGCACGTCCTCATGAGCAGCTGCTGGG
AGGCAGAGCCCGCCCGCCGGCCACCCTTCCGCAAACTGGCCGAGAAGCTGGCCCGGGAGCTACGCAGTGCAGGTG
CCCCAGCCTCCGTCTCAGGGCAGGACGCCGACGGCTCCACCTCGCCCCGAAGCCAGGAGCCC**TGA**CCCCACCCGG
TGGGGCCCTTGGCCCCAGAGGACCGAGAGAGTGGAGAGTGCGGCGTGGGGGCACTGACCAGGCCCAAGGAGGGTC
CAGGCGGGCAAGTCATCCTCCTGGTGCCCACAGCAGGGGCTGGCCCACGTAGGGGGCTCTGGGCGGCCCGTGGAC
ACCCCAGACCTGCGAAGGATGATCGCCCGATAAAGACGGATTCTAAGGACTCTAAAAAAAAAAAAAAAAAAAAAA
AAAA

FIGURE 1150

MQGHFPAERREGRPRRGTRGQQQLLVSPRFLRAWHPPPVSARMPTRRWAPGTQCITKCEHTRPKPGELAFRKGDV
VTILEACENKSWYRVKHHTSGQEGLLAAGALREREALSADPKLSLMPWFHGKISGQEAVQQLQPPEDGLFLVRES
ARHPGDYVLCVSFGRDVIHYRVLHRDGHLTIDEAVFFCNLMDMVEHYSKDKGAICTKLVRPKRKHGTKSAEEELA
RAGWLLNLQHLTLGAQIGEGEFGAVLQGEYLGQKVAVKNIKCDVTAQAFLDETAVMTKMQHENLVRLLGVILHQG
LYIVMEHVSKGNLVNFLRTRGRALVNTAQLLQFSLHVAEGMEYLESKKLVHRDLAARNILVSEDLVAKVSDFGLA
KAERKGLDSSRLPVKWTAPEALKHGKFTSKSDVWSFGVLLWEVFSYGRAPYPKMSLKEVSEAVEKGYRMEPPEGC
PGPVHVLMSSCWEAEPARRPPFRKLAEKLARELRSAGAPASVSGQDADGSTSPRSQEP

FIGURE 1151

GAGCACCGCACACTCACTTCACCCTGGTTCAACACCCCCACGAGGTTGACCCCGTCATTATGTTAGAGATTATGC
ATTTTCCACATAGGGAAACTGAGGCTCAGGGGTGTTAAGTGACTCACCCAAGGTCACACGGCTAGGAAGTTGCTG
CACGCTCCTATGCTCCATTTCCTCTGGGAGCCTATCAACCCAGATAAAGCGGGACCTCCTCTCTGGTAGAGGTGC
AGGGGGCAGTACTCAAC**ATG**ATCACAGAGGGAGCGCAGGCCCCTCGATTGTTGCTGCCGCCGCTGCTCCTGCTGC
TCACCCTGCCAGCCACAGGCTCAGACCCCGTGCTCTGCTTCACCCAGTATGAAGAATCCTCCGGCAAGTGCAAGG
GCCTCCTGGGGGGTGGTGTCAGCGTGGAAGACTGCTGTCTCAACACTGCCTTTGCCTACCAGAAACGTAGTGGTG
GGCTCTGTCAGCCTTGCAGGTCCCCACGATGGTCCCTGTGGTCCACATGGGCCCCCTGTTCGGTGACGTGCTCTG
AGGGCTCCCAGCTGCGGTACCGGCGCTGTGTGGGCTGGAATGGGCAGTGCTCTGGAAAGGTGGCACCTGGGACCC
TGGAGTGGCAGCTCCAGGCCTGTGAGGACCAGCAGTGCTGTCCTGAGATGGGCGGCTGGTCTGGCTGGGGGCCCT
GGGAGCCTTGCTCTGTCACCTGCTCCAAAGGGACCCGGACCCGCAGGCGAGCCTGTAATCACCCTGCTCCCAAGT
GTGGGGGCCACTGCCCAGGACAGGCACAGGAATCAGAGGCCTGTGACACCCAGCAGGTCTGCCCCACACACGGGG
CCTGGGCCACCTGGGGCCCCTGGACCCCCTGCTCAGCCTCCTGCCACGGTGGACCCCACGAACCTAAGGAGACAC
GAAGCCGCAAGTGTTCTGCACCTGAGCCCTCCCAGAAACCTCCTGGGAAGCCCTGCCCGGGGCTAGCCTACGAGC
AGCGGAGGTGCACCGGCCTGCCACCCTGCCCAGTGGCTGGGGGCTGGGGGCCTTGGGGCCCTGTGAGCCCCTGCC
CTGTGACCTGTGGCCTGGGCCAGACCATGGAACAACGGACGTGCAATCACCCTGTGCCCCAGCATGGGGGCCCCT
TCTGTGCTGGCGATGCCACCCGGACCCACATCTGCAACACAGCTGTGCCCTGCCCTGTGGATGGGGAGTGGGACT
CGTGGGGGGAGTGGAGCCCCTGTATCCGACGGAACATGAAGTCCATCAGCTGTCAAGAAATCCCGGGCCAGCAGT
CACGCGGGAGGACCTGCAGGGGCCGCAAGTTTGACGGACATCGATGTGCCGGGCAACAGCAGGATATCCGGCACT
GCTACAGCATCCAGCACTGCCCCTTGAAAGGATCATGGTCAGAGTGGAGTACCTGGGGGCTGTGCATGCCCCCCT
GTGGACCTAATCCTACCCGTGCCCGCCAGCGCCTCTGCACACCCTTGCTCCCCAAGTACCCGCCCACCGTTTCCA
TGGTCGAAGGTCAGGGCGAGAAGAACGTGACCTTCTGGGGGAGACCGCTGCCACGGTGTGAGGAGCTACAAGGGC
AGAAGCTGGTGGTGGAGGAGAAACGACCATGTCTACACGTGCCTGCTTGCAAAGACCCTGAGGAAGAGGAACTC**T**
AACACTTCTCTCCTCCACTCTGAGCCCCCTGACCTTCCAAACCTCAATAAA

FIGURE 1152

MITEGAQAPRLLLPPLLLLLTLPATGSDPVLCFTQYEESSGKCKGLLGGGVSVEDCCLNTAFAYQKRSGGLCQPC
RSPRWSLWSTWAPCSVTCSEGSQLRYRRCVGWNGQCSGKVAPGTLEWQLQACEDQQCCPEMGGWSGWGPWEPCSV
TCSKGTRTRRRACNHPAPKCGGHCPGQAQESEACDTQQVCPTHGAWATWGPWTPCSASCHGGPHEPKETRSRKCS
APEPSQKPPGKPCPGLAYEQRRCTGLPPCPVAGGWGPWGPVSPCPVTCGLGQTMEQRTCNHPVPQHGGPFCAGDA
TRTHICNTAVPCPVDGEWDSWGEWSPCIRRNMKSISCQEIPGQQSRGRTCRGRKFDGHRCAGQQQDIRHCYSIQH
CPLKGSWSEWSTWGLCMPPCGPNPTRARQRLCTPLLPKYPPTVSMVEGQGEKNVTFWGRPLPRCEELQGQKLVVE
EKRPCLHVPACKDPEEEEL

FIGURE 1153

TTCCTTTCAAATACACACCCCAACCCGCCCCGGCATACACAGAA**ATG**GGGACTGCGAGCAGAAGCAACATCGCTC
GCCATCTGCAAACCAATCTCATTCTATTTTGTGTCGGTGCTGTGGGCGCCTGTACTCTCTCTGTCACACAACCGT
GGTACCTAGAAGTGGACTACACTCATGAGGCCGTCACCATAAAGTGTACCTTCTCCGCAACCGGATGCCCTTCTG
AGCAACCAACATGCCTGTGGTTTCGCTACGGTGCTCACCAGCCTGAGAACCTGTGCTTGGACGGGTGCAAAAGTG
AGGCAGACAAGTTCACAGTGAGGGAGGCCCTCAAAGAAAACCAAGTTTCCCTCACTGTAAACAGAGTGACTTCAA
ATGACAGTGCAATTTACATCTGTGGAATAGCATTCCCCAGTGTGCCGGAAGCGAGAGCTAAACAGACAGGAGGAG
GGACCACACTGGTGGTAAGAGAAATTAAGCTGCTCAGCAAGGAACTGCGGAGCTTCCTGACAGCTCTTGTATCAC
TGCTCTCTGTCTATGTGACCGGTGTGTGCGTGGCCTTCATACTCCTCTCCAAATCAAAATCCAACCCTCTAAGAA
AGAAAGAAATAAAAGAAGACTCACAAAAGAAGAAGAGTGCTCGGCGTATTTTTCAGGAAATTGCTCAAGAACTAT
ACCATAAGAGACATGTGGAAACAAATCAGCAATCTGAGAAAGATAACAACACTTATGAAAACAGAAGAGTACTTT
CCAACTATGAAAGGCCA**TAG**AAACGTTTTAATTTTCAATGAAGTCACTGAAAATCCAACTCCAGGAGCTATGGCA
GTGTTAATGAACATATATCATCAGGTCTTAAAAAAAAAAATAAAGGTAAACTGAAAAGACAACTGGCTACAAAGAA
GGATGTCAGAATGTAAGGAAACTATAACTAATAGTCATTACCAAAATACTAAAACCCAACAAAATGCAACTGAAA
AATACCTTCCAAATTTGCCAAGAAAAAAAATTCTATTYYAAACT

FIGURE 1154

MGTASRSNIARHLQTNLILFCVGAVGACTLSVTQPWYLEVDYTHEAVTIKCTFSATGCPSEQPTCLWFRYGAHQP
ENLCLDGCKSEADKFTVREALKENQVSLTVNRVTSNDSAIYICGIAFPSVPEARAKQTGGGTTLVVREIKLLSKE
LRSFLTALVSLLSVYVTGVCVAFILLSKSKSNPLRKKEIKEDSQKKKSARRIFQEIAQELYHKRHVETNQQSEKD
NNTYENRRVLSNYERP

FIGURE 1155

GTTAGAGAACGTCGCGGAGGAGGTAAGCGTCGCTTGGCGCCTGGCCGCCGCGGGCAGGATACACCGTGGGCCTGA
GGCGCGAGCCCGGCGGCGTGCGGCCCTCTCTCCGCGCGGAGCCGAGCCGGAACTGCGGCAGTCTCTCCCTGCCAG
GCTCTTCATCCAAGGTTTCTGTGGATCCCTTCTGAAGTTCTATCTGAAAATTGCGCTTAAGTGAATTTTCTGTTA
GAAGAACTTGGTTGCTACTTTCTTGTCAAG**ATG**ATTGCAACACCTTTGAAACATTCAAGAATTTACTTACCTCCA
GAGGCATCTTCTCAAAGGAGAAATCTACCCATGGATGCAATCTTTTTTGACAGCATTCCTTCAGGCACACTTACT
CCTGTAAAAGATTTGGTGAAATATCAGAACTCCTCCTTAAAATTGAATGACCATAAAAAGAATCAGTTCCTAAAA
ATGACAACTTTTAACAATAAAAATATATTTCAATCAACTATGCTAACAGAGGCTACTACCTCTAACAGTTCTCTT
GATATCAGTGCTATAAAGCCCAACAAGGATGGATTAAAAAATAAAGCAAACTATGAATCACCAGGAAAAATATTT
CTAAGAATGAAAGAAAAAGTACTGCGTGACAAGCAAGAACAGCCATCAAGAAACAGTAGTTTGTTGGAACCACAG
AAAAGTGGAAATAATGAAACCTTCACTCCTAACAGAGTTGAAAAAAAAAAATTGCAGCATACCTACCTATGTGAAG
AAAAGGAAAACAACAAATCATTCCAGTCAGATGACAGTTCAC**TAA**GAGCCTCAGTCCAAGGAGTTCCTCTAGAAT
CATCAAATAATGATATTTTCCTCCCGGTCAAACAAAAGATTCAGTGCCAGCAGGAAAAGAAAGCACCACTGCACA
ATTTAACTTACGAACTTCCAACTCTGAACCAAGAACAGGAAAATTTTTTGGCTGTAGAAGCCCGAAACAAGACAT
TAACTAGAGCTCAGTTGGCTAAACAAATTTTTCACTCAAAGGAGAGTATAGTTGCAACCACTAAATCCAAAAAGG
ACACGTTTGTTTTAGAAAGCGTTGATTCTGCTGATGAACAATTTCAAAATACTAATGCTGAGACTCTCAGTACTA
ATTGTATTCCTATTAAAAATGGCAGCCTGTTAATGGTTTCTGATAGTGAGAGGACAACAGAAGGGACTTCGCAAC
AGAAAGTTAAGGAAGGAAATGGAAAAACAGTGCCTGGAGAGACAGGTCTTCCAGGTTCCATGAAAGATACATGTA
AAATTGTACTTGCAACACCAAGACTTCATATAACAATACCTCGGAGGTCAAAAAGAAATATTTCAAAGCTTTCTC
CTCCAAGAATATTTCAAACTGTTACAAATGGACTTAAAAAAAATCAGGTAGTTCAGCTACAGGAATGGATGATTT
AAAGCATCAATAATAATACTGCTATATGTGTAGAAGGAAAATTGATAGACGTCACTAACATATATTGGCACAGTA
ATGTAATTATAGAGCGGATTGAGCACAACAAACTTAGGACTATATCAGGCAACGTTTATATATTAAAAGGCATGA
TAGACCAAATTTCCATGAAAGAAGCAGGATATCCAAATTATCTCATAAGGAAATTTATGTTTGGATTTCCAGAAA
ATTGGAAAGAGCACATTGATAACTTTCTGGAACAATTAAGAGATGGGGTTTCGTCATGTTGGCCAGACTGGTCTC
GAACTCCTGGCTACAAGTGATCCGCCTGTCTCAGCCTCCCAAAGTGTTGGGATTACAGGCATGAGCCACTGTGCC
TGGCCTGAGGGCTGGTGAAAAGAACAGGGAAAAGACCAAACAAAAACAGAAAACTGGAAGATCTGTCCGTGACAT
AAGGAAATCAATGAAAAATGATGCACGAGAAAACCAAACAGATACTGCTCAAAGAGCCACCACCACTTACGATTT
TGATTGTGATAATTTGGAACTGAAGAGTAATAAGCACAGTGAGTCACCAGGAGCTACAGAATTAAACATGTGCCA
CAGTAATTGCCAAAATAAACCAACATTAAGGTTCCCAGATGACCAAGTAAATAATACTATTCAAAATGGAGGAGG
AGATGACTTATCTAATCAGGAATTAATTGG

FIGURE 1156

MIATPLKHSRIYLPPEASSQRRNLPMDAIFFDSIPSGTLTPVKDLVKYQNSSLKLNDHKKNQFLKMTTFNNKNIF
QSTMLTEATTSNSSLDISAIKPNKDGLKNKANYESPGKIFLRMKEKVLRDKQEQPSRNSSLLEPQKSGNNETFTP
NRVEKKNCSIPTYVKKRKTTNHSSQMTVH

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FIGURE 1157

TCAGCCAATTAGAGCTCCAGTTGTCACTCCTACCCACACTGGGCCTGGGGGTGAAGGGAAGTGTTTATTAGGGGT
ACATGTGAAGCCGTCCAGAAGTGTCAGAGTCTTTGTAGCTTTGAAAGTCACCTAGGTTATTTGGGCATGCTCTCC
TGAGTCCTCTGCTAGTTAAGCTCTCTGAAAAGAAGGTGGCAGACCCGGTTTGCTGATCGCCCCAGGGATCAGGAG
GCTGATCCCAAAGTTGTCAG**ATG**GAGAGTAAATACAAGGAGATACTCTTGCTAACAGGCCTGGATAACATCACTG
ATGAGGAACTGGATAGGTTTAAGTTCTTTCTTTCAGACGAGTTTAATATTGCCACAGGCAAACTACATACTGCAA
ACAGAATACAAGTAGCTACCTTGATGATTCAAAATGCTGGGGCGGTGTCTGCAGTGATGAAGACCATTCGTATTT
TTCAGAAGTTGAATTATATGCTTTTGGCAAAACGTCTTCAGGAGGAGAAGGAGAAAGTTGATAAGCAATACAAAT
CGGTAACAAAACCAAAGCCACTAAGTCAAGCTGAAATGAGTCCTGCTGCATCTGCAGCCATCAGAAATGATGTCG
CAAAGCAACGTGCTGCACCAAAAGTCTCTCCTCATGTTAAGCCTGAACAGAAACAGATGGTGGCCCAGCAGGAAT
CTATCAGAGAAGGGTTTCAGAAGCGCTGTTTGCCAGTTATGGTACTGAAAGCAAAGAAGCCCTTCACGTTTGAGA
CCCAAGAAGGCAAGCAGGAGATGTTTCATGCTACAGTGGCTACAGAAAAGGAATTCTTCTTTGTAAAAGTTTTTA
ATACACTGCTGAAAGATAAATTCATTCCAAAGAGAATAATTATAATAGCAAGATATTATCGGCACAGTGGTTTCT
TAGAGGTAAATAGCGCCTCACGTGTGTTAGATGCTGAATCTGACCAAAAGGTTAATGTCCCGCTGAACATTATCA
GAAAAGCTGGTGAAACCCCGAAGATCAACACGCTTCAAACTCAGCCCCTTGGAACAATTGTGAATGGTTTGTTTG
TAGTCCAGAAGGTAACAGAAAAGAAGAAAAACATATTATTTGACCTAAGTGACAACACTGGGAAAATGGAAGTAC
TGGGGGTTAGAAACGAGGACACAATGAAATGTAAGGAAGGAGATAAGGTTCGACTTACATTCTTCACACTGTCAA
AAAATGGAGAAAAACTACAGCTGACATCTGGAGTTCATAGCACCATAAAGGTTATTAAGGCCAAAAAAAAAACA**T**
AGAGAAGTAAAAAGGACCAATTCAAGCCAACTGGTCTAAGCAGCATTTAATTGAAGAATATGTGATACAGCCTCT
TCAATCAGATTGTAAGTTACCTGAAAGCTGCAGTTCACAGGCTCCTCTCTCCACCAAATTAGGATAGAATAATTG
CTGGATAAACAAATTCAGAATATCAACAGATGATCACAATAAACATCTGTTTCTCATTCC

FIGURE 1158

MESKYKEILLLTGLDNITDEELDRFKFFLSDEFNIATGKLHTANRIQVATLMIQNAGAVSAVMKTIRIFQKLNYM
LLAKRLQEEKEKVDKQYKSVTKPKPLSQAEMSPAASAAIRNDVAKQRAAPKVSPHVKPEQKQMVAQQESIREGFQ
KRCLPVMVLKAKKPFTFETQEGKQEMFHATVATEKEFFFVKVFNTLLKDKFIPKRIIIIARYYRHSGFLEVNSAS
RVLDAESDQKVNVPLNIIRKAGETPKINTLQTQPLGTIVNGLFVVQKVTEKKKNILFDLSDNTGKMEVLGVRNED
TMKCKEGDKVRLTFFTLSKNGEKLQLTSGVHSTIKVIKAKKKT

FIGURE 1159

GAAAAGGTGGACAAGTCCTATTTTCAAGAGAAG**ATG**ACTTTTAACAGTTTTGAAGGATCTAAAACTTGTGTACCT
GCAGACATCAATAAGGAAGAAGAATTTGTAGAAGAGTTTAATAGATTAAAAACTTTTGCTAATTTTCCAAGTGGT
AGTCCTGTTTCAGCATCAACACTGGCACGAGCAGGGTTTCTTTATACTGGTGAAGGAGATACCGTGCGGTGCTTT
AGTTGTCATGCAGCTGTAGATAGATGGCAATATGGAGACTCAGCAGTTGGAAGACACAGGAAAGTATCCCCAAAT
TGCAGATTTATCAACGGCTTTTATCTTGAAAATAGTGCCACGCAGTCTACAAATTCTGGTATCCAGAATGGTCAG
TACAAAGTTGAAAACTATCTGGGAAGCAGAGATCATTTTGCCTTAGACAGGCCATCTGAGACACATGCAGACTAT
CTTTTGAGAACTGGGCAGGTTGTAGATATATCAGACACCATATACCCGAGGAACCCTGCCATGTATTGTGAAGAA
GCTAGATTAAAGTCCTTTCAGAACTGGCCAGACTATGCTCACCTAACCCCAAGAGAGTTAGCAAGTGCTGGACTC
TACTACACAGGTATTGGTGACCAAGTGCAGTGCTTTTGTTGTGGTGGAAAACTGAAAAATTGGGAACCTTGTGAT
CGTGCCTGGTCAGAACACAGGCGACACTTTCCTAATTGCTTCTTTGTTTTGGGCCGGAATCTTAATATTCGAAGT
GAATCTGATGCTGTGAGTTCTGATAGGAATTTCCCAAATTCAACAAATCTTCCAAGAAATCCATCCATGGCAGAT
TATGAAGCACGGATCTTTACTTTTGGGACATGGATATACTCAGTTAACAAGGAGCAGCTTGCAAGAGCTGGATTT
TATGCTTTAGGTGAAGGTGATAAAGTAAAGTGCTTTCACTGTGGAGGAGGGCTAACTGATTGGAAGCCCAGTGAA
GACCCTTGGGAACAACATGCTAAATGGTATCCAGGGTGCAAATATCTGTTAGAACAGAAGGGACAAGAATATATA
AACAATATTCATTTAACTCATTCACTTGAGGAGTGTCTGGTAAGAACTACTGAGAAAACACCATCACTAACTAGA
AGAATTGATGATACCATCTTCCAAAATCCTATGGTACAAGAAGCTATACGAATGGGGTTCAGTTTCAAGGACATT
AAGAAAATAATGGAGGAAAAAATTCAGATATCTGGGAGCAACTATAAATCACTTGAGGTTCTGGTTGCAGATCTA
GTGAATGCTCAGAAAGACAGTATGCAAGATGAGTCAAGTCAGACTTCATTACAGAAAGAGATTAGTACTGAAGAG
CAGCTAAGGCGCCTGCAAGAGGAGAAGCTTTGCAAAATCTGTATGGATAGAAATATTGCTATCGTTTTTGTTCCT
TGTGGACATCTAGTCACTTGTAAACAATGTGCTGAAGCAGTTGACAAGTGTCCCATGTGCTACACAGTCATTACT
TTCAAGCAAAAAATTTTTATGTCT**TAA**TCTAACTCTATAGTAGGCATGTTATGTTGTTCTTATTACCCTGATTGA
ATGTGTGATGTGAACTGACTTTAAGTAATCAGGATTGAATTCCATTAGCATTTGCTACCAAGTAGGAAAAAAAAT
GTACATGGCAGTGTTTTAGTTGGCAATATAATCTTTGAATTTCTTGATTTTTCAGGGTATTAGCTGTATTATCCA
TTTTTTTTACTGTTATTTAATTGAAACCATAGACTAAGAATAAGAAGCATCATACTATAACTGAACACAATGTGT
ATTCATAGTATACTGATTTAATTTCTAAGTGTAAGTGAATTAATCATCTGGATTTTTTATTCTTTTCAGATAGGC
TTAACAAATGGAGCTTTCTGTATATAAATGTGGAGATTAGAGTTAATCTCCCCAATCACATAATTTGTTTTGTGT
GAAAAAGGAATAAATTGTTCCATGCTGGTGGAAAGATAGAGATTGTTTTTAGAGGTTGGTTGTTGTGTTTTAGGA
TTCTGTCCATTTTCTTGTAAAGGGATAAACACGGACGTGTGCGAAATATGTTTGTAAAGTGATTTGCCATTGTTG
AAAGCGTATTTAATGATAGAATACTATCGAGCCAACATGTACTGACATGGAAAGATGTCAGAGATATGTTAAGTG
TAAAATGCAAGTGGCGGGACACTATGTATAGTCTGAGCCAGATCAAAGTATGTATGTTGTTAATATGCATAGAAC
GAGAGATTTGGAAAGATATACACCAAACTGTTAAATGTGGTTTCTCTTCGGGGAGGGGGGGATTGGGGGAGGGGC
CCCAGAGGGGTTTTAGAGGGGCCTTTTCACTTTCGACTTTTTTCATTTTGTTCTGTTCGGATTTTTTATAAGTAT
GTAGACCCCGAAGGGTTTTATGGGAACTAACATCAGTAACCTAACCCCCGTGACTATCCTGTGCTCTTCCTAGGG
AGCTGTGTTGTTTCCCACCCACCACCCTTCCCTCTGAACAAATGCCTGAGTGCTGGGGCACTTTG

FIGURE 1160

MTFNSFEGSKTCVPADINKEEEFVEEFNRLKTFANFPSGSPVSASTLARAGFLYTGEGDTVRCFSCHAAVDRWQY
GDSAVGRHRKVSPNCRFINGFYLENSATQSTNSGIQNGQYKVENYLGSRDHFALDRPSETHADYLLRTGQVVDIS
DTIYPRNPAMYCEEARLKSFQNWPDYAHLTPRELASAGLYYTGIGDQVQCFCCGGKLKNWEPCDRAWSEHRRHFP
NCFFVLGRNLNIRSESDAVSSDRNFPNSTNLPRNPSMADYEARIFTFGTWIYSVNKEQLARAGFYALGEGDKVKC
FHCGGGLTDWKPSEDPWEQHAKWYPGCKYLLEQKGQEYINNIHLTHSLEECLVRTTEKTPSLTRRIDDTIFQNPM
VQEAIRMGFSFKDIKKIMEEKIQISGSNYKSLEVLVADLVNAQKDSMQDESSQTSLQKEISTEEQLRRLQEEKLC
KICMDRNIAIVFVPCGHLVTCKQCAEAVDKCPMCYTVITFKQKIFMS

FIGURE 1161

GGCGGCGGCGACGCTGCCTCCTCACCGGCGCAGGCTAGGAGGGGGCGGCCTGAGTGCCGTAGCCGAGCCGGGGCT
GGAGCGCGCGGTCTGACCTACGAGAAAC**ATG**GCAACCAGCGCCGTCCCCAGTGACAACCTCCCCACATACAAGCT
GGTGGTGGTGGGGGATGGGGGTGTGGGCAAAAGTGCCCTCACCATCCAGTTTTTCCAGAAGATCTTTGTGCCTGA
CTATGACCCCACCATTGAAGACTCCTACCTGAAACATACGGAGATTGACAATCAATGGGCCATCTTGGACGTTCT
GGACACAGCTGGGCAGGAGGAATTCAGCGCCATGCGGGAGCAATACATGCGCACGGGGGATGGCTTCCTCATCGT
CTACTCCGTCACTGACAAGGCCAGCTTTGAGCACGTGGACCGCTTCCACCAGCTTATCCTGCGCGTCAAAGACAG
GGAGTCATTCCCGATGATCCTCGTGGCCAACAAGGTCGATTTGATGCACTTGAGGAAGATCACCAGGGAGCAAGG
AAAAGAAATGGCGACCAAACACAATATTCCGTACATAGAAACCAGTGCCAAGGACCCACCTCTCAATGTCGACAA
AGCCTTCCATGACCTCGTTAGAGTAATTAGGCAACAGATTCCGGAAAAAAGCCAGAAGAAGAAGAAGAAAACCAA
ATGGCGGGGAGACCGGGCCACAGGCACCCACAAACTGCAATGTGTGATCTTG**TGA**CAGGCCTGAAGGCCTCGGGC
ACAGTGACGGTGGCCTGGCCAGCCCTCGGGACCCCTCCCCACCTAACTGCACTGAAACCATTTCTAACCACAACC
CTTGGCCCAAGGACTTGGTACAGGAAGGGAGAAGGGCAGGTGGGCAGGGAGCAAGACAGGGTCTGGCTTTTGCCA
AGAGGAACGGGGCTTTTTCCACCTTCTTCAAAAGAGACAAGGGAAGGCCACCTGTTAAAGCAGGAAGCAGCATCA
AGTTGCCCCTTGGGCCCCCCCATGTTGTTTGGATTTCAAACCGGGTTTCCTTCCCCCTTCTTTTCGGGTTGGGTG
TTGTTGGTTATTTGGTTAACTACATATGGTT

FIGURE 1162

MATSAVPSDNLPTYKLVVVGDGGVGKSALTIQFFQKIFVPDYDPTIEDSYLKHTEIDNQWAILDVLDTAGQEEFS
AMREQYMRTGDGFLIVYSVTDKASFEHVDRFHQLILRVKDRESFPMILVANKVDLMHLRKITREQGKEMATKHNI
PYIETSAKDPPLNVDKAFHDLVRVIRQQIPEKSQKKKKKTKWRGDRATGTHKLQCVIL

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FIGURE 1163

GGTCGACGACGTGGCAGCCGGGATGCACTAGGCAAAGCCAGCTGGGCTCCTGAGTCCGGTGGGTACTTGGAGAAC
TTACTACGTCTAGCTGGAGGATTGTAAATGTACCAATCAGCATGCTGTGTCTAGCTCAAGAACTCAAGCTCCATG
AGGAGATGTTTCATTGTCGAGAGCAGTCATGATGGCCTGCACTCCACACAATGCAACAGAGTGAAAGAGCAGGTT
CTGCTTCTTTGGTGTAGTCCTGAAGCTTCCTAAGAAACTTCACATCAGGTG**ATG**GATAGGAGCAACCCTGTAAAA
CCAGCCTTAGACTATTTTTTAAACAGGCTGGTGAATTACCAGATCTCCGTCAAGTGCAGTAACCAGTTCAAGTTG
GAAGTGTGTCTTTTGAATGCAGAAAACAAAGTCGTGGACAACCAGGCTGGGACCCAGGGCCAGCTGAAGGTGCTG
GGTGCCAACCTCTGGTGGCCGTACCTGATGCACGAACACCCCGCCTACCTCTACTCGTGGGAGGATGGTGATTGC
TCACACCAAAGCCTTGGACCCCTCCCAGCCTGTGACCTTTGTGACCAACTCCACCTACGCAGCAGACAAGGGGGC
TCTGTATGTGGATGTGATCCGTGTGAACAGCTACTACTCTTGGTATCGCAACTACGGGCACCTGGAGTTGATTCA
GCTGCAGCTGGCCGCCCAGTT**TGA**GAATTGGTGTAAGACATCACAATCCCATTATTCAGAGCGCGTATGGAGTGG
AAACGCTTGTAGGGTTTCACCAGTCTTTCCCAGGGAACTCCGATGAAGTGTTCCAACAAAATGAGCGAGTGAACC
AAGAAGAGGATGACATTAGATCCAGGAGATACAACAGAGGAGATAATCTCCAGGATGCCTGTGAAGAAAGATCCC
TGGATCCCAGGATGATTATAGGACAAGTTGTTCATAATCCAGCAGGCCAGAAGACTTCCAGGGAAACTCATTCAA
GGAGGTGAAAATGATGGATGACTCCTCCAAGATGAAAATGGACCAGCCGCAGTGCTCACGCCTGTAATACCAGCA
CTTTGGGAGGCTGAGGCAGGCGGATCACTTGAGGTCAGGAGTTTGAAACTAGCCTGGCCAACGTGGCAAAACTCC
ATCTCTATTAAAAATACAAAAATTAGCCAGGCATAGTGGTGCATGCCTGTAGTCCCAGCTACTTGGGATGCCGAG
GCAGGAAGAATTGCTTGAACCTGGGAGGCAGAGTCTGCAGTGAGCCGAGATCATGCCACTGCACTCCAGCCTGGG
TGACAGAGCCACTCCGTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1164

MDRSNPVKPALDYFLNRLVNYQISVKCSNQFKLEVCLLNAENKVVDNQAGTQGQLKVLGANLWWPYLMHEHPAYL
YSWEDGDCSHQSLGPLPACDLCDQLHLRSRQGGSVCGCDPCEQLLLLVSQLRAPGVDSAAAGRPV

FIGURE 1165

ACAGACAGAAACGAGGGAAGAGAGAGAAATTGGGGACCCTGAAGAAAGGGGGCCAGCAGCAGGTAGGTGCCATCA
GGGACAAGAACAGCACCTCCCAGGGTGGGAGACCCCAGGCCTTTCTGGCAGCAGGTCTGGATGGAAAGTGGACAG
GAGGCTCACCCGTCTGCATCCCCTGCTCCTGCCCCTGCTCGGCTACAAAAACCAAAGGGACAGCAGCTGACCACA
CCCCGGTAGCCACTCCTGCATAAAGCTCTCCCCTCCTGTGACCAGCTGAGGACCTCAGGCTGCAGCGGAGCC**ATG**

CCCAGATACACGGTGCACGTACGTGGGGAATGGCTGGCAGTGCCCTGCCAGGACGCGCAGCTCACTGTGGGCTGG
CTGGGCCGGGAGGCCGTGAGGCGCTATATCAAGAATAAGCCCGACAATGGTGGCTTCACCTCCGTGGATGACGCG
CACTTCCTTGTGCGCCGGTGCAAGGGCCTGGGCCTGCTGGACAACGAGGACCGGCTCGAGGTGGCCCTAGAGAAC
AACGAGTTCGTGGAAGTGGTTATAGAGGGTGATGCCATGTCTCCTGACTTCATTCCATCTCAACCAGAAGGAGTT
TATCTATACAGCAAGTACCGGGAGCCTGAAAAGTACATCGAGTTAGATGGAGACCGTCTGACCACGGAGGATCTG
GTCAACTTGGGAAAGGGACGCTACAAAATAAAGCTCACCCCAACAGCTGAGAAGAGGGTGCAGAAATCCAGGGAG
GTCATAGATAGCATCATAAAAGAGAAAACAGTTGTTTACGGTATTACTACAGGTTTTGGGAAATTTGCCAGAACT
GTAATTCCTATCAATAAGCTACAGGAGCTTCAGGTCAACTTAGTACGCTCACATTCTTCAGGTGTTGGGAAACCA
CTAAGTCCTGAGAGGTGTCGGATGCTCTTGGCTTTAAGGATCAATGTCTTAGCCAAAGGATACAGTGGCATTTCC
CTGGAGACCCTCAAACAAGTCATAGAAATGTTTAATGCCTCCTGCCTGCCCTATGTCCCAGAGAAAGGAACCGTT
GGTGCCAGTGGAGACCTTGCCCCACTCTCTCATCTTGCTCTTGGGCTAGTTGGAGAAGGGAAGATGTGGTCTCCG
AAGAGTGGCTGGGCTGATGCTAAATACGTGCTAGAAGCCCATGGATTGAAACCAGTTATTTTAAAACCAAAAGAG
GGCCTGGCACTCATCAATGGGACGCAGATGATCACATCCCTGGGCTGTGAAGCTGTAGAGCGAGCCAGTGCTATT
GCACGGCAGGCTGACATTGTGGCAGCCCTGACCCTTGAGGTGCTGAAGGGCACCACCAAAGCCTTTGACACTGAC
ATTCATGCTCTTCGACCTCACCGTGGGCAAATTGAAGTTGCTTTTCGGTTTCGGTCACTCTTGGACTCAGATCAC
CACCCATCAGAAATAGCAGAGAGTCACAGGTTCTGTGATCGCGTCCAGGATGCATACACCTTGCGCTGCTGTCCA
CAGGTCCATGGTGTGGTGAATGATACAATAGCATTTGTGAAGAACATCATTACCACAGAACTGAACAGCGCAACA
GATAATCCTATGGTCTTTGCCAATAGGGGAGAGACAGTTTCTGGAGGAAACTTCCATGGTGAATACCCAGCCAAA
GCCCTAGACTACTTGGCCATTGGCATCCATGAACTTGCTGCAATCAGTGAGAGAAGAATCGAGCGGCTCTGCAAT
CCCTCCCTCAGTGAGCTGCCTGCCTTCCTGGTGGCTGAAGGTGGTCTGAACTCTGGGTTCATGATAGCTCACTGC
ACGGCAGCAGCCCTTGTTTCTGAGAACAAGGCTCTGTGCCATCCCTCGTCTGTTGACTCCCTCTCCACCAGCGCA
GCCACGGAGGACCACGTCTCCATGGGAGGATGGGCAGCAAGGAAAGCCCTCAGGGTCATCGAGCATGTGGAGCAA
GTGCTGGCCATCGAGCTCCTTGCAGCCTGCCAGGGCATAGAGTTTCTACGTCCCCTGAAAACAACCACTCCGCTG
GAGAAGGTCTATGACCTGGTGCGCTCTGTTGTAAGGCCCTGGATAAAAGATCGCTTCATGGCCCCGGACATCGAG
GCAGCCCACAGGCTGCTCCTGGAGCAGAAGGTTTGGGAAGTAGCTGCTCCATACATTGAAAAATACAGAATGGAG
CATATTCCAGAATCAAGACCTCTTTCTCCAACAGCCTTTTCACTGCAATTTCTGCACAAGAAATCCACCAAAATC
CCGGAGTCTGAGGACCTT**TAA**TGGGCTTTGTCATGAAGTAGCAGATGAGAGGGCAGTCAGTTTAGCACAAAGCAA
TACTAGGCTGAAGGAGAGACCTGAGAACTTTCCTAGGTAGATCAATCCATTGTATCATTCAGTTCTTCTAAAGCC
TACGTTGGTTAGGCTGATGGCAGTATTATAGTTGCTAAATTCAGCACTGTGTTCCTGTTGTCGTGGTTCAAGACC
CACCAGGTATTTTCAGATTATAAAACTTTTCTTTCTTTCTTAACAGTTTCAACAGGCCACTCACTCTTAAGGGTG
AGAAGAATAACCACAATTGTATGTGCCTGTTTTTTACTCTTAGCATTAGATGAATTCAAATTTGGAAACAGATTG
ATAGCAATTTTTTCTAAAAACATTAGACTTTTGTTAACCTTTTTTTTTTTTTTTAAATTTGCTTCAACAAGCTCT
CCACCAGTTGACTTTCTTTGGCTAATTTTACTTTGCATGATATGCCTTAATATGCCTTCATAAATAACCATTTTA
AGTCATAATTTGTCCTTAAGCTGCTTTTTTCTTCTATTAATTGGATCATAGTAAAGAGTAGTCAATAGGGTCTTC
AGCTATTAATTGTAGAGGTGATTAAAACCAACAAGGAGTTTCATGTGCAAAGGAGATAAGGAATGAATATAAAGA
TTGCTATTTGGGTGGCTCTTATTAAACTGTGTATTTTGTACTTATCACTACACGTATCCCCCAAATGCTTACATG
GGAGTTTGAGGTTAGTATTTTCACTTCCTTGGTGTTAGTACTCTATTCACATTCTTATTGTAACCTTCCTCATTT
CACAGATAAGGAATCTTTGGGGATTAACCAACCTCCTTTCTGTAATGGTAATCATTAAAATAAG

FIGURE 1166

MPRYTVHVRGEWLAVPCQDAQLTVGWLGREAVRRYIKNKPDNGGFTSVDDAHFLVRRCKGLGLLDNEDRLEVALE
NNEFVEVVIEGDAMSPDFIPSQPEGVYLYSKYREPEKYIELDGDRLTTEDLVNLGKGRYKIKLTPTAEKRVQKSR
EVIDSIIKEKTVVYGITTGFGKFARTVIPINKLQELQVNLVRSHSSGVGKPLSPERCRMLLALRINVLAKGYSGI
SLETLKQVIEMFNASCLPYVPEKGTVGASGDLAPLSHLALGLVGEGKMWSPKSGWADAKYVLEAHGLKPVILKPK
EGLALINGTQMITSLGCEAVERASAIARQADIVAALTLEVLKGTTKAFDTDIHALRPHRGQIEVAFRFRSLLDSD
HHPSEIAESHRFCDRVQDAYTLRCCPQVHGVVNDTIAFVKNIITTELNSATDNPMVFANRGETVSGGNFHGEYPA
KALDYLAIGIHELAAISERRIERLCNPSLSELPAFLVAEGGLNSGFMIAHCTAAALVSENKALCHPSSVDSLSTS
AATEDHVSMGGWAARKALRVIEHVEQVLAIELLAACQGIEFLRPLKTTTPLEKVYDLVRSVVRPWIKDRFMAPDI
EAAHRLLLEQKVWEVAAPYIEKYRMEHIPESRPLSPTAFSLQFLHKKSTKIPESEDL

FIGURE 1167

GGAGGAGGAAGCAAGCGAGGGGGCTGGTTCCTGAGCTTCGCAATTCCTGTGTCGCCTTCTGGGCTCCCAGCCTGC
CGGGTCGCATGATCCCTCCGGCCGGAGCTGGTTTTTTTGCCAGCCACCGCGAGGCCGGCTGAGTTACCGGCATCC
CCGCAGCCACCTCCTCTCCCGACCTGTGATACAAAAGATCTTCCGGGGGCTGCACCTGCCTGCCTTTGCCTAAGG
CGGATTTGAATCTCTTTCTCTCCCTTCAGAATCTTATCTTGGCTTTGGATCTTAGAAGAGAATCACTAACCAGAG
ACGAGACTCAGTGAGTGAGCAGGTGTTTTGGACAATGGACTGGTTGAGCCCATCCCTATTATAAAA**ATG**TCTCAG
AGCAACCGGGAGCTGGTGGTTGACTTTCTCTCCTACAAGCTTTCCCAGAAAGGATACAGCTGGAGTCAGTTTAGT
GATGTGGAAGAGAACAGGACTGAGGCCCCAGAAGGGACTGAATCGGAGATGGAGACCCCCAGTGCCATCAATGGC
AACCCATCCTGGCACCTGGCAGACAGCCCCGCGGTGAATGGAGCCACTGGCCACAGCAGCAGTTTGGATGCCCGG
GAGGTGATCCCCATGGCAGCAGTAAAGCAAGCGCTGAGGGAGGCAGGCGACGAGTTTGAACTGCGGTACCGGCGG
GCATTCAGTGACCTGACATCCCAGCTCCACATCACCCCAGGGACAGCATATCAGAGCTTTGAACAGGATACTTTT
GTGGAACTCTATGGGAACAATGCAGCAGCCGAGAGCCGAAAGGGCCAGGAACGCTTCAACCGCTGGTTCCTGACG
GGCATGACTGTGGCCGGCGTGGTTCTGCTGGGCTCACTCTTCAGTCGGAAATGACCAGACACTGACCATCCACTC
TACCCTCCCACCCCCTTCTCTGCTCCACCACATCCTCCGTCCAGCCGCCATTGCCACCAGGAGAACCACTACATG
CAGCCCATGCCCACCTGCCCATCACAGGGTTGGGCCCAGATCTGGTCCCTTGCAGCTAGTTTTCTAGAATTTATC
ACACTTCTGTGAGACCCCCACACCTCAGTTCCCTTGGCCTCAGAATTCACAAAATTTCCACAAAATCTGTCCAAA
GGAGGCTGGCAGGTATGGAAGGGTTTGTGGCTGGGGGCAGGAGGGCCCTACCTGATTGGTGCAACCCTTACCCCT
TAGCCTCCCTGAAAATGTTTTTCTGCCAGGGAGCTTGAAAGTTTTCAGAACCTCTTCCCCAGAAAGGAGACTAGA
TTGCCTTTGTTTTGATGTTTGTGGCCTCAGAATTGATCATTTTCCCCCCACTCTCCCCACACTAACCTGGGTTCC
CTTTCCTTCCATCCCTACCCCCTAAGAGCCATTTAGGGGCCACTTTTGACTAGGGATTCAGGCTGCTTGGGATAA
AGATGCAAGGACCAGGACTCCCTCCTCACCTCTGGACTGGCTAGAGTCCTCACTCCCAGTCCAAATGTCCTCCAG
AAGCCTCTGGCTAGAGGCCAGCCCCACCCAGGAGGGAGGGGGCTATAGCTACAGGAAGCACCCCATGCCAAAGCT
AGGGTGGCCCTTGCAGTTCAGCACCACCCTAGTCCCTTCCCCTCCCTGGCTCCCATGACCATACTGAGGGACCAA
CTGGGCCCAAGACAGATGCCCCAGAGCTGTTTATGGCCTCAGCTGCCTCACTTCCTACAAGAGCAGCCTGTGGCA
TCTTTGCCTTGGGCTGCTCCTCATGGTGGGTTCAGGGGACTCAGCCCTGAGGTGAAAGGGAGCTATCAGGAACAG
CTATGGGAGCCCCAGGGTCTTCCCTACCTCAGGCAGGAAGGGCAGGAAGGAGAGCCTGCTGCATGGGGTGGGGTA
GGGCTGACTAGAAGGGCCAGTCCTGCCTGGCCAGGCAGATCTGTGCCCCATGCCTGTCCAGCCTGGGCAGCCAGG
CTGCCAAGGCCAGAGTGGCCTGGCCAGGAGCTCTTCAGGCCTCCCTCTCTCTTCTGCTCCACCCTTGGCCTGTCT
CATCCCCAGGGGTCCCAGCCACCCCGGGCTCTCTGCTGTACATATTTGAGACTAGTTTTTATTCCTTGTGAAGAT
GATATACTATTTTTGTTAAGCGTGTCTGTATTTATGTGTGAGGAGCTGCTGGCTTGCAGTGCGCGTGCACGTGGA
GAGCTGGTGCCCGGAGATTGGACGGCCTGATGCTCCCTCCCCTGCCCTGGTCCAGGGAAGCTGGCCGAGGGTCCT
GGCTCCTGAGGGGCATCTGCCCCTCCCCCAACCCCCACCCCACACTTGTTCCAGCTCTTTGAAATAGTCTGTGTG
AAGGTGAAAGTGCAGTTCAGTAATAAACTGTGTTTACTCAGTGAAAAAAAAAAAAAAAAAA

FIGURE 1168

MSQSNRELVVDFLSYKLSQKGYSWSQFSDVEENRTEAPEGTESEMETPSAINGNPSWHLADSPAVNGATGHSSSL
DAREVIPMAAVKQALREAGDEFELRYRRAFSDLTSQLHITPGTAYQSFEQVVNELFRDGVNWGRIVAFFSFGGAL
CVESVDKEMQVLVSRIAAWMATYLNDHLEPWIQENGGWDTFVELYGNNAAAESRKGQERFNRWFLTGMTVAGVVL
LGSLFSRK

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FIGURE 1169

CGCAAGAATGCATACAAACTCCAGGGCTGCTCTCTCCTGGAGAGGGAGGGAGGGGATTTAAAAACCTGCAGCAAC
ATGGGGGAGGAGGCTGTTTGTCCTTCTCTCTCTGGGGAAGTAACTCGCTCAAACTGCCTTCCTTGCTGAGCTGCT
TCGCGTAGCTTTGAGGAAGGTCTAGTGAAATTGGTCTTTCCATTACATCTGGATGTACTACCAGAGAGTTCTGCT
GCTGTTGTTTTTTTTAGCTTTTCTTTCTTTGAGTCTTTAAAGGGCAATTGTCGACACTCTGCAAACATACCGATT
TGTTGTCTGCCCACTTTGGAGTCTTCAATCTGGGCAGTAACTATTTACCCTTTTTCCTGCTAGCCTGTCCCCCTC
TCTGGATTGAAGTCACCTGCTAAGACAATGGACTACCGACCAGACTCCCGGAAATC**ATG**TTGGTAGGATCCCAGT
CTTTTTCGCCTGGAGGGCCCAATGGGATCATTAGAAGCCAGTCCTTTGCGGGTTTCAGCGGCCTCCAGGAAAGGC
GATCCAGGTGTAACTCCTTCATTGAAAATTCCTCCGCTCTCAAGAAGCCTCAGGCCAAACTGAAGAAAATGCACA
ATTTAGGCCACAAAAACAACAATCCCCCCAAAGAGCCTCAGCCTAAAAGGGTGGAAGAAGTCTACAGGGCCTTGA
AAAATGGACTTGATGAATATCTGGAGGTTCACCAGACGGAGCTGGACAAGTTGACAGCTCAGTTAAAAGATATGA
AAAGAAACTCTCGCCTGGGTGTACTGTATGACCTAGACAAGCAAATTAAAACAATTGAAAGATACATGAGACGCC
TGGAGTTTCATATAAGTAAGGTAGATGAACTCTATGAAGCTTATTGTATCCAGCGACGCCTCCAGGATGGTGCCA
GCAAAATGAAGCAAGCCTTCGCAACATCCCCTGCCAGCAAAGCTGCCCGGGAGAGTCTGACAGAGATCAATCGGA
GCTTCAAGGAGTACACAGAGAATATGTGCACCATTGAAGTGGAGCTAGAGAATCTGCTGGGAGAATTCTCCATCA
AGATGAAAGGTCTGGCTGGCTTTGCACGCCTCTGTCCTGGAGATCAATATGAAATTTTCATGAAGTATGGCCGGC
AGCGGTGGAAACTGAAAGGCAAAATAGAAGTAAATGGCAAGCAGAGCTGGGATGGAGAAGAAACAGTTTTTCTGC
CCCTGATAGTTGGGTTCATCTCCATCAAGGTCACGGAGCTCAAAGGGCTAGCAACTCACATCCTGGTAGGTAGCG
TGACCTGTGAGACCAAAGAGCTGTTTGCAGCCCGACCTCAGGTAGTGGCTGTCGACATCAATGACCTTGGTACCA
TCAAACTGAACCTGGAAATCACCTGGTATCCATTTGACGTGGAGGACATGACCGCATCCTCAGGCGCTGGGAACA
AGGCAGCAGCCCTTCAGAGGAGAATGTCCATGTACAGCCAGGGTACCCCGGAAACGCCCACCTTCAAAGACCACT
CCTTCTTTTCAAATCTACCTGATGACATCTTTGAAAATGGAAAGGCAGCCGAGGAGAAAATGCCACTGTCGCTCA
GCTTCAGTGACCTGCCCAACGGGGACTGCGCCCTCACCTCCCACTCAACAGGCTCCCCTTCCAACTCAACAAATC
CAGAAATTACCATCACCCCTGCGGAGTTTAACCTCAGCAGCTTGGCCTCCCAGAATGAGGGTATGGATGACACCA
GCTCAGCATCTTCCAGGAACTCCCTGGGAGAAGGCCAAGAGCCAAAGTCACACCTGAAGGAGGAAGACCCAGAGG
AGCCCAGAAAACCTGCCTCGGCCCCATCTGAGGCTTGCCGCCGACAGTCCTCAGGTGCTGGGGCTGAGCACCTGT
TCCTTGAGAATGATGTTGCAGAAGCACTTCTGCAAGAGTCTGAGGAGGCCTCTGAGCTCAAGCCTGTGGAACTGG
ACACTTCGGAAGGAAACATCACAAAGCAGCTGGTCAAGAGGCTCACATCTGCAGAGGTGCCAATGGCCACAGACA
GGCTGCTCTCTGAGGGTTCTGTTGGTGGAGAATCTGAAGGCTGCAGATCCTTTCTAGATGGAAGCTTAGAGGATG
CTTTTAATGGGCTTTTACTTGCATTAGAACCACATAAAGAGCAGTATAAAGAGTTTCAGGATCTGAACCAAGAAG
TCATGAATTTGGATGATATTCTAAAAAAG**TAG**AGAAGATCCTCTAATGGATCCCAGTGTGCCCATCCCTCAACCT
CCTCAGTGATCAACTCATGGCCAATCTTGTTTCCTATTCTTCAACCTGCTGACTTCCCTCTGGATTCTTCTGCAA
CCAGTCCCAGATATTGTGCCATTTTATCCATGGTTGTACTTCTTTTTTGGATATAAAGATTTTTAAATGCATTTT
TTAAATGCTAACAAAAAATAAAAACTTGAAACAAAAAAAAAAAAAAAAAAA

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FIGURE 1170

MLVGSQSFSPGGPNGIIRSQSFAGFSGLQERRSRCNSFIENSSALKKPQAKLKKMHNLGHKNNNPPKEPQPKRVE
EVYRALKNGLDEYLEVHQTELDKLTAQLKDMKRNSRLGVLYDLDKQIKTIERYMRRLEFHISKVDELYEAYCIQR
RLQDGASKMKQAFATSPASKAARESLTEINRSFKEYTENMCTIEVELENLLGEFSIKMKGLAGFARLCPGDQYEI
FMKYGRQRWKLKGKIEVNGKQSWDGEETVFLPLIVGFISIKVTELKGLATHILVGSVTCETKELFAARPQVVAVD
INDLGTIKLNLEITWYPFDVEDMTASSGAGNKAAALQRRMSMYSQGTPETPTFKDHSFFSNLPDDIFENGKAAEE
KMPLSLSFSDLPNGDCALTSHSTGSPSNSTNPEITITPAEFNLSSLASQNEGMDDTSSASSRNSLGEGQEPKSHL
KEEDPEEPRKPASAPSEACRRQSSGAGAEHLFLENDVAEALLQESEEASELKPVELDTSEGNITKQLVKRLTSAE
VPMATDRLLSEGSVGGESEGCRSFLDGSLEDAFNGLLLALEPHKEQYKEFQDLNQEVMNLDDILKK

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FIGURE 1171A

ATACGGGAGAACTAAGGCTGAAACCTCGGAGGAACAACCACTTTTGAAGTGACTTCGCGGCGTGCGTTGGGTGCG
GACTAGGTGGCCCCGGCGGGAGTGTGCTGGAGCCTGAAGTCCACGCGCGCGGCTGAGAACCGCCGGGACCGCACG
TGGGCGCCGCGCGCTTCCCCCGCTTCCCAGGTGGGCGCCGGCCGCCAGGCCACCTCACGTCCGGCCCCGGGG**ATG**

CGCGTCCTCCTCGCCGCGCTGGGACTGCTGTTCCTGGGGGCGCTACGAGCCTTCCCACAGGATCGACCCTTCGAG
GACACCTGTCATGGAAACCCCAGCCACTACTATGACAAGGCTGTCAGGAGGTGCTGTTACCGCTGCCCCATGGGG
CTGTTCCCGACACAGCAGTGCCCACAGAGGCCTACTGACTGCAGGAAGCAGTGTGAGCCTGACTACTACCTGGAT
GAGGCCGACCGCTGTACAGCCTGCGTGACTTGTTCTCGAGATGACCTCGTGGAGAAGACGCCGTGTGCATGGAAC
TCCTCCCGTGTCTGCGAATGTCGACCCGGCATGTTCTGTTCCACGTCTGCCGTCAACTCCTGTGCCCGCTGCTTC
TTCCATTCTGTCTGTCCGGCAGGGATGATTGTCAAGTTCCCAGGCACGGCGCAGAAGAACACGGTCTGTGAGCCG
GCTTCCCCAGGGGTCAGCCCTGCCTGTGCCAGCCCAGAGAACTGCAAGGAACCCTCCAGTGGCACCATCCCCCAG
GCCAAGCCCACCCCGGTGTCCCCAGCAACCTCCAGTGCCAGCACCATGCCTGTAAGAGGGGGCACCCGCCTCGCC
CAGGAAGCTGCTTCTAAACTGACGAGGGCTCCCGACTCTCCCTCCTCTGTGGGAAGGCCTAGTTCAGATCCAGGT
CTGTCCCCAACACAGCCATGCCCAGAGGGGTCTGGTGATTGCAGAAAGCAGTGTGAGCCCGACTACTACCTGGAC
GAGGCCGGCCGCTGCACAGCCTGCGTGAGCTGTTCTCGAGATGACCTTGTGGAGAAGACGCCATGTGCATGGAAC
TCCTCCCGCACCTGCGAATGTCGACCTGGCATGATCTGTGCCACATCAGCCACCAACTCCTGTGCCCGCTGTGTC
CCCTACCCAATCTGTGCAGCAGAGACGGTCACCAAGCCCCAGGATATGGCTGAGAAGGACACCACCTTTGAGGCG
CCACCCCTGGGGACCCAGCCGGACTGCAACCCCACCCCAGAGAATGGCGAGGCGCCTGCCAGCACCAGCCCCACT
CAGAGCTTGCTGGTGGACTCCCAGGCCAGTAAGACGCTGCCCATCCCAACCAGCGCTCCCGTCGCTCTCTCCTCC
ACGGGGAAGCCCGTTCTGGATGCAGGGCCAGTGCTCTTCTGGGTGATCCTGGTGTTGGTTGTGGTGGTCGGCTCC
AGCGCCTTCCTCCTGTGCCACCGGAGGGCCTGCAGGAAGCGAATTCGGCAGAAGCTCCACCTGTGCTACCCGGTC
CAGACCTCCCAGCCCAAGCTAGAGCTTGTGGATTCCAGACCCAGGAGGAGCTCAACGCAGCTGAGGAGTGGTGCG
TCGGTGACAGAACCCGTCGCGGAAGAGCGAGGGTTAATGAGCCAGCCACTGATGGAGACCTGCCACAGCGTGGGG
GCAGCCTACCTGGAGAGCCTGCCGCTGCAGGATGCCAGCCCGGCCGGGGGCCCCTCGTCCCCCAGGGACCTTCCT
GAGCCCCGGGTGTCCACGGAGCACACCAATAACAAGATTGAGAAAATCTACATCATGAAGGCTGACACCGTGATC
GTGGGGACCGTGAAGGCTGAGCTGCCGGAGGGCCGGGGCCTGGCGGGGCCAGCAGAGCCCGAGTTGGAGGAGGAG
CTGGAGGCGGACCATACCCCCCACTACCCCGAGCAGGAGACAGAACCGCCTCTGGGCAGCTGCAGCGATGTCATG
CTCTCAGTGGAAGAGGAAGGGAAAGAAGACCCCTTGCCCACAGCTGCCTCTGGAAAG**TGA**GGCCTGGGCTGGGCT
GGGGCTAGGAGGGCAGCAGGGTGGCCTCTGGGAGGCCAGGATGGCACTGTTGGCACCGAGGTTGGGGGCAGAGGC
CCATCTGGCCTGAACTGAGGCTCCAGCATCTAGTGGTGGACCGGCCGGTCACTGCAGGGGTCTGGTGGTCTCTGC
TTGCATCCCCAACTTAGCTGTCCCCTGACCCAGAGCCTAGGGGATCCGGGGCTTGTACAGAAGAGACAGTCCAAG
GGGACTGGATCCCAGCAGTGATGTTGGTTGAGGCAGCAAACAGATGGCAGGATGGGCACTGCCGAGAACAGCATT
GGTCCCAGAGCCCTGGGCATCAGACCTTAACCACCAGGCCCACAGCCCAGCGAGGGAGAGGTCGTGAGGCCAGCT
CCCGGGGCCCCTGTAACCCTACTCTCCTCTCTCCCTGGACCTCAGAGGTGACACCCATTGGGCCCTTCCGGCATG
CCCCCAGTTACTGTAAATGTGGCCCCCAGTGGGCATGGAGCCAGTGCCTGTGGTTGTTTCTCCAGAGTCAAAAGG
GAAGTCGAGGGATGGGGCGTCGTCAGCTGGCACTGTCTCTGCTGCAGCGGCCACACTGTACTCTGCACTGGTGTG
AGGGCCCCTGCCTGGACTGTGGGACCCTCCTGGTGCTGCCCACCTTCCCTGTCCTGTAGCCCCCTCGGTGGGCCC
AGGGCCTAGGGGCCCAGGATCAAGTCACTCATCTCAGAATGTCCCCACCAATCCCCGCCACAGCAGGCGCCTCGG
GTCCCAGATGTCTGCAGCCCTCAGCAGCTGCAGACCGCCCCTCACCAACCCAGAGAACCTGCTTTACTTTGCCCA
GGGACTTCCTCCCCATGTGAACATGGGGAACTTCGGGCCCTGCCTGGAGTCCTTGACCGCTCTCTGTGGGCCCCA
CCCACTCTGTCCTGGGAAATGAAGAAGCATCTTCCTTAGGTCTGCCCTGCTTGCAAATCCACTAGCACCGACCCC
ACCACCTGGTTCCGGCTCTGCACGCTTTGGGGTGTGGATGTCGAGAGGCACCACGGCCTCACCCAGGCATCTGCT
TTACTCTGGACCATAGGAAACAAGACCGTTTGGAGGTTTCATCAGGATTTTGGGTTTTTCACATTTCACGCTAAG
GAGTAGTGGCCCTGACTTCCGGTCGGCTGGCCAGCTGACTCCCTAGGGCCTTCAGACGTGTATGCAAATGAGTGA
TGGATAAGGATGAGTCTTGGAGTTGCGGGCAGCCTGGAGACTCGTGGACTTACCGCCTGGAGGCAGGCCCGGGAA
GGCTGCTGTTTACTCATCGGGCAGCCACGTGCTCTCTGGAGGAAGTGATAGTTTCTGAAACCGCTCAGATGTTTT
GGGGAAAGTTGGAGAAGCCGTGGCCTTGCGAGAGGTGGTTACACCAGAACCTGGACATTGGCCAGAAGAAGCTTA
AGTGGGCAGACACTGTTTGCCCAGTGTTTGTGCAAGGATGGAGTGGGTGTCTCTGCATCACCCACAGCCGCAGCT
GTAAGGCACGCTGGAAGGCACACGCCTGCCAGGCAGGGCAGTCTGGCGCCCATGATGGGAGGGATTGACATGTTT

FIGURE 1171B

CAACAAAATAATGCACTTCCTTAAAAAAAA

FIGURE 1172

MRVLLAALGLLFLGALRAFPQDRPFEDTCHGNPSHYYDKAVRRCCYRCPMGLFPTQQCPQRPTDCRKQCEPDYYL
DEADRCTACVTCSRDDLVEKTPCAWNSSRVCECRPGMFCSTSAVNSCARCFFHSVCPAGMIVKFPGTAQKNTVCE
PASPGVSPACASPENCKEPSSGTIPQAKPTPVSPATSSASTMPVRGGTRLAQEAASKLTRAPDSPSSVGRPSSDP
GLSPTQPCPEGSGDCRKQCEPDYYLDEAGRCTACVSCSRDDLVEKTPCAWNSSRTCECRPGMICATSATNSCARC
VPYPICAAETVTKPQDMAEKDTTFEAPPLGTQPDCNPTPENGEAPASTSPTQSLLVDSQASKTLPIPTSAPVALS
STGKPVLDAGPVLFWVILVLVVVVGSSAFLLCHRRACRKRIRQKLHLCYPVQTSQPKLELVDSRPRRSSTQLRSG
ASVTEPVAEERGLMSQPLMETCHSVGAAYLESLPLQDASPAGGPSSPRDLPEPRVSTEHTNNKIEKIYIMKADTV
IVGTVKAELPEGRGLAGPAEPELEEELEADHTPHYPEQETEPPLGSCSDVMLSVEEEGKEDPLPTAASGK

FIGURE 1173

CCAGTCTGCGGACCGTTCGGAGCAACGTGGCGGCCCTTGCCCGCCAGCAATGCCTAGGAGCAGCCAAGCAGGGAC
CCGTCGGAAACCCTTCATCCAGCCTTTCTCTGGCGC**ATG**GAGAACCTGGGGGTCGGCGAAGGGGCAGAGGCTTGC
AGCAGGTTGAGTCGCTCTCGCGGCCGCCACAGCATGACCAGAGCCCCGAAGCACCTGTGGCGGCAACCCCGGCGC
CCCATCCGCATCCAACAGCGCTTCTATTCGGATCCGGACAAGTCCGCGGGCTGCCGCGAGAGGGACCTGAGCCCG
CGGCCGGAGCTCAGGAAGTCGCGGCTCTCCTGGCCCGTTTCCTCCTGCAGGCGCTTTGACCTGGAAAATGGGCTC
TCGTGTGGGAGGAGGGCCCTGGACCCTCAGTCCAGCCCTGGCCTGGGCCGGATTATGCAGGCTCCAGTCCCGCAC
AGCCAGCGGCGCGAGTCCTTCCTGTACCGCTCAGATAGCGACTATGAACTCTCGCCCAAGGCCATGTCTCGGAAC
TCCTCTGTGGCCAGCGACCTACATGGAGAGGACATGATTGTGACGCCCTTTGCCCAGGTCCTGGCCAGTCTGCGG
ACCGTTCGGAGCAACGTGGCGGCCCTTGCCCGCCAGCAATGCCTAGGAGCAGCCAAGCAGGGACCCGTCGGAAAC
CCTTCATCCAGCAATCAGCTCCCTCCTGCAGAGGACACGGGGCAGAAGCTGGCATTGGAGACGCTAGACGAGCTG
GACTGGTGCCTGGATCAGTTGGAGACGCTGCAGACCCGGCACTCGGTGGGGGAGATGGCCTCCAACAAGTTCAAG
CGGATCCTGAACCGGGAGTTGACCCACCTGTCCGAAACCAGCCGCTCCGGGAACCAGGTGTCCGAGTACATCTCC
CGGACCTTCCTGGACCAGCAGACCGAGGTGGAGCTGCCCAAGGTGACCGCTGAGGAGGCCCCACAGCCCATGTCC
CGGATCAGTGGCCTACATGGGCTCTGCCACAGTGCCAGCCTCTCCTCAGCCACTGTCCCACGCTTTGGGGTCCAG
ACTGACCAGGAGGAGCAACTGGCCAAGGAGCTAGAAGACACCAACAAGTGGGGACTTGATGTGTTCAAGGTGGCG
GACGTAAGTGGGAACCGGCCCCTCACAGCTATCATATTCAGCATTTTTCAGGAGCGGGACCTGCTGAAGACATTC
CAGATCCCAGCAGACACACTGGCCACCTACCTGCTGATGCTGGAGGGTCACTACCACGCCAATGTGGCCTACCAC
AACAGCCTACATGCCGCCGACGTGGCCCAGTCCACGCATGTGCTGCTGGCTACGCCCGCCCTCGAGGCTGTGTTC
ACAGACTTGGAAATCCTGGCTGCCCTCTTTGCAAGCGCCATCCACGACGTGGACCATCCTGGGGTCTCCAACCAG
TTTCTGATTAACACCAACTCAGACGTGGCGCTTATGTACAACGACGCCTCGGTGCTGGAGAACCATCACCTGGCT
GTGGGCTTCAAGCTGCTGCAGGCAGAGAACTGCGATATCTTCCAGAACCTCAGCGCCAAGCAGCGACTGAGTCTG
CGCAGGATGGTCATTGACATGGTGCTGGCCACAGACATGTCCAAACACATGAACCTCCTGGCCGACCTCAAGACC
ATGGTGGAGACCAAGAAGGTGACAAGCCTCGGTGTCCTCCTCCTGGACAACTATTCCGACCGAATCCAGGTCTTG
CAGAACCTGGTGCACTGTGCTGATCTGAGCAACCCCACCAAGCCGCTGCCCCTGTACCGCCAGTGGACGGACCGC
ATCATGGCCGAGTTCTTCCAGCAGGGAGACCGCGAGCGTGAGTCGGGCCTGGACATCAGTCCCATGTGTGACAAG
CATACGGCCTCAGTGGAGAAGTCCCAGGTGGGTTTCATTGACTACATTGCTCACCCACTGTGGGAGACTTGGGCT
GACCTGGTCCACCCAGATGCACAGGACCTGCTGGACACGCTGGAGGACAATCGAGAGTGGTACCAGAGCAAGATC
CCCCGAAGTCCCTCAGACCTCACCAACCCCGAGCGGGACGGGCCTGACAGATTCCAGTTTGAACTGACTCTGGAG
GAGGCAGAGGAAGAGGATGAGGAGGAAGAAGAGGAGGGGGAAGAGACAGCTTTAGCCAAAGAGGCCTTGGAGTTG
CCTGACACTGAACTCCTGTCCCCTGAAGCCGGCCCAGACCCTGGGGACTTACCCCTCGACAACCAGAGGACT**TAG**

GGCCAGCCCTGCGTGAACTGCAGGGGCAATGGATGGTAAAGCCCTTTGGCTCTTGGCAGGCAGACTTTCCAGGAA
GAGGCTCCATGTGGCTCCTGCTTCACTTTCCCACCCATTTAGGGAGACAATCAAGCTCTTAGTTATAGGTGGCTC
CCAGGGTCTAATTGGAGGCACCTGGCTGGGGTCCACTCTGACCCTAGACTTGCCTAAAAGAGCTCTCTAAGGGGC
AGCCTCTTACGATGCCCTGGTGTCTTTCTCCTGGGCTTCTATCCCTGTGAGGAGAGGTGCTGTCTGCTGGAGCCT
CTAGTCCACCCTCTCCAGTGGTCACTCTTGAGTCACATCTGTCACTTAATTATTTCCTTCTTTATCAAATATTTA
TTGCTCATCTACTTCGGGCCAGCTTTCTGCCTCTGTAGTAGCCCTGCACAAAGGGTGGGGAGTCAGGAGACCATC
CCAAAGGCATCTCCCTGTCTTCCTCTACCAAGCGGCTCTCTGCAAGAGCATGGAAATGTGAGTGGGGAAAATTTT
CAGCACCAAAGCTTCACTCATACCCAGTTTTGTTTCTGAAACTACGGTAGGGGGCAGGAAGAGGAGCAGAAAAGA
AGGGCTGGGCAAGGCATAGTGGCTTATGCCTGTAATCCCGGTACTTTGGGAGGCTGAGGTGGGAGGACTGCTTAA
GCTCAGGAGTTTGAGACCAGCCTGGGCAACATAGCAAGACCCCCACCATCTCTGAAAAAAAAAAATTAGCCAGGCA
TGGTGGTGTGCACCTGAGAATCCCAGCTACTCAGAAGGTTGAGACAAAGGGGATCGCTTGAGCCCAGGAGTTGGA
GGCTGAAGAGAGCTATGACTGCATCACTGCACTCCAGCCTGGGCAACACAGCAAGATCCTGTCTAAAAATAAAAA
GAAAAGAGAAGGAAAGGAAAGAGACGGGGCTCTGAGGCCGAGCACAGTGGCCCATGCCTATAATCCCAGCACTTT
GGGAGGCTGAGGCAGGTGGATCACCTGAGGTTAGGAGTTCGAGACCAGCCTGGCCAACATGGTGAAACCCCATCT
CTACTAAAAATACAAAAATTGGCTGGGCATGGTGGCGGGTGCCTGTAATCCCAGCTACTGGGGAGGCTGAGGCAG
GAGAATCACTTGAATTCAGGAGGTGGAGGTTGCAGTGAGCCGACATCATGCCACTGCACTCCAGCCTGGGGCTGA
CAGAGCAAGACACTGTCTCAAAAAAGAAAAAAAAAAAAAAAAAA

FIGURE 1174

MENLGVGEGAEACSRLSRSRGRHSMTRAPKHLWRQPRRPIRIQQRFYSDPDKSAGCRERDLSPRPELRKSRLSWP
VSSCRRFDLENGLSCGRRALDPQSSPGLGRIMQAPVPHSQRRESFLYRSDSDYELSPKAMSRNSSVASDLHGEDM
IVTPFAQVLASLRTVRSNVAALARQQCLGAAKQGPVGNPSSSNQLPPAEDTGQKLALETLDELDWCLDQLETLQT
RHSVGEMASNKFKRILNRELTHLSETSRSGNQVSEYISRTFLDQQTEVELPKVTAEEAPQPMSRISGLHGLCHSA
SLSSATVPRFGVQTDQEEQLAKELEDTNKWGLDVFKVADVSGNRPLTAIIFSIFQERDLLKTFQIPADTLATYLL
MLEGHYHANVAYHNSLHAADVAQSTHVLLATPALEAVFTDLEILAALFASAIHDVDHPGVSNQFLINTNSDVALM
YNDASVLENHHLAVGFKLLQAENCDIFQNLSAKQRLSLRRMVIDMVLATDMSKHMNLLADLKTMVETKKVTSLGV
LLLDNYSDRIQVLQNLVHCADLSNPTKPLPLYRQWTDRIMAEFFQQGDRERESGLDISPMCDKHTASVEKSQVGF
IDYIAHPLWETWADLVHPDAQDLLDTLEDNREWYQSKIPRSPSDLTNPERDGPDRFQFELTLEEAEEEDEEEEEE
GEETALAKEALELPDTELLSPEAGPDPGDLPLDNQRT

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FIGURE 1175

CTCTGTCCTGCCAGCACCGAGGGCTCATCCATCCACAGAGCAGTGCAGTGGGAGGAGACGCC**ATG**ACCTCCATCC
TCACGGTCCTGATCTGTCTCGGGCTGAGCCTGGACCCCAGGACCCACGTGCAGGCAGGGCCCCTCCCCAAGCCCA
CCCTCTGGGCTGAGCCAGGCTCTGTGATCACCCAAGGGAGTCCTGTGACCCTCAGGTGTCAGGGGAGCCTGGAGA
CGCAGGAGTACCATCTATATAGAGAAAAGAAAACAGCACTCTGGATTACACGGATCCCACAGGAGCTTGTGAAGA
AGGGCCAGTTCCCCATCCTATCCATCACCTGGGAACATGCAGGGCGGTATTGCTGTATCTATGGCAGCCACACTG
CAGGCCTCTCAGAGAGCAGTGACCCCCTGGAGCTGGTGGTGACAGGAGCCTACAGCAAACCCACCCTCTCAGCTC
TGCCCAGCCCTGTGGTGACCTCAGGAGGGAATGTGACCATCCAGTGTGACTCACAGGTGGCATTTGATGGCTTCA
TTCTGTGTAAGGAAGGAGAAGATGAACACCCACAATGCCTGAACTCCCATTCCCATGCCCGTGGGTCATCCCGGG
CCATCTTCTCCGTGGGCCCCGTGAGCCCAAGTCGCAGGTGGTCGTACAGGTGCTATGGTTATGACTCGCGCGCTC
CCTATGTGTGGTCTCTACCCAGTGATCTCCTGGGGCTCCTGGTCCCAGGTGTTTCTAAGAAGCCATCACTCTCAG
TGCAGCCGGGTCCTGTCGTGGCCCCTGGGGAGAAGCTGACCTTCCAGTGTGGCTCTGATGCCGGCTACGACAGAT
TTGTTCTGTACAAGGAGTGGGGACGTGACTTCCTCCAGCGCCCTGGCCGGCAGCCCCAGGCTGGGCTCTCCCAGG
CCAACTTCACCCTGGGCCCTGTGAGCCGCTCCTACGGGGGCCAGTACACATGCTCCGGTGCATACAACCTCTCCT
CCGAGTGGTCGGCCCCCAGCGACCCCCTGGACATCCTGATCACAGGACAGATCCGTGCCAGACCCTTCCTCTCCG
TGCGGCCGGGCCCCACAGTGGCCTCAGGAGAGAACGTGACCCTGCTGTGTCAGTCACAGGGAGGGATGCACACTT
TCCTTTTGACCAAGGAGGGGGCAGCTGATTCCCCGCTGCGTCTAAAATCAAAGCGCCAATCTCATAAGTACCAGG
CTGAATTCCCCATGAGTCCTGTGACCTCGGCCCACGCGGGGACCTACAGGTGCTACGGCTCACTCAGCTCCAACC
CCTACCTGCTGACTCACCCCAGTGACCCCCTGGAGCTCGTGGTCTCAGGAGCAGCTGAGACCCTCAGCCCACCAC
AAAACAAGTCCGACTCCAAGGCTGGTGAG**TGA**GGAGATGCTTGCCGTGATGACGCTGGGCACAGAGGGTCAGGTC
CTGTCAAGAGGAGCTGGGTGTCCTGGGTGGACATTTGAAGAATTATATTCATTCCAACTTGAAGAATTATTCAAC
ACCTTTAACAATGTATATGTGAAGTACTTTATTCTTTCATATTTTAAAAATAAAAGATAATTATCCATGAA

FIGURE 1176

MTSILTVLICLGLSLDPRTHVQAGPLPKPTLWAEPGSVITQGSPVTLRCQGSLETQEYHLYREKKTALWITRIPQ
ELVKKGQFPILSITWEHAGRYCCIYGSHTAGLSESSDPLELVVTGAYSKPTLSALPSPVVTSGGNVTIQCDSQVA
FDGFILCKEGEDEHPQCLNSHSHARGSSRAIFSVGPVSPSRRWSYRCYGYDSRAPYVWSLPSDLLGLLVPGVSKK
PSLSVQPGPVVAPGEKLTFQCGSDAGYDRFVLYKEWGRDFLQRPGRQPQAGLSQANFTLGPVSRSYGGQYTCSGA
YNLSSEWSAPSDPLDILITGQIRARPFLSVRPGPTVASGENVTLLCQSQGGMHTFLLTKEGAADSPLRLKSKRQS
HKYQAEFPMSPVTSAHAGTYRCYGSLSSNPYLLTHPSDPLELVVSGAAETLSPPQNKSDSKAGE

FIGURE 1177

ATGTGGTGGAGAGTTCTCAGCTTGCTGGCATGGTTCCCCTTGCAAGAGGCCTCTCTGACTAACCACACAGAAACC
ATCACCGTGGAGGAAGGCCAGACGCTCACTCTAAAGTGTGTCACTTCTCTGAGGAAGAACTCCTCCCTCCAGTGG
CTGACCCCCTCAGGGTTCACCATTTTTTTAAATGAGTATCCTGCTTTAAAAAATTCCAAATACCAGCTTCTTCAT
CACTCGGCCAATCAGCTCTCCATCACTGTGCCTAACGTAACCCTGCAAGATGAAGGCGTGTACAAGTGCTTACAT
TACAGCGACTCTGTAAGCACAAAGGAAGTGAAAGTGATTGTGCTGGCAACTCCTTTCAAGCCAATCCTGGAAGCT
TCAGTTATCAGAAAGCAAAATGGAGAAGAACATGTTGTACTCATGTGCTCCACCATGAGAAGCAAGCCCCCTCCG
CAGATAACCTGGCTACTTGGGAATAGCATGGAAGTGTCCGGTGGAACGCTCCATGAATTTGAAACTGATGGGAAG
AAATGTAATACTACCAGCACTCTCATAATCCACACTTATGGCAAAAATTCAACGGTGGACTGCATTATCCGACAC
AGAGGCCTGCAAGGGAGAAAACTAGTAGCACCCTTCCGGTTTGAAGATTTGGTTACTGATGAAGAGACAGCTTCA
GATGCTCTGGAGAGAAACTCTCTATCCTCTCAAGACCCACAGCAGCCCACCAGTACTGTCTCAGTAACGGAAGAT
TCTAGTACATCGGAGATTGACAAGGAAGAGAAAGAACAAACCACTCAAGATCCTGACTTGACCACCGAAGCAAAT
CCTCAGTATTTAGGACTGGCAAGAAAGAAAAGTGGCATCCTGCTGCTCACGCTGGTGTCCTTCCTCATTTTCATA
CTCTTCATCATAGTCCAGCTCTTCATCATGAAGCTGAGGAAAGCACATGTGATATGGAAGAGAGAAAACGAAGTT
TCAGAACACACACTAGAAAGTTACAGATCAAGGTCAAATAATGAAGAAACATCATCTGAAGAGAAAAATGGCCAA
TCTTCCCACCCTATGCGTTGCATGAACTACATCACAAAGTTGTACTCAGAAGCAAAAACAAAGAGGAAGGAAAAT
GTACAACATTCAAAATTAGAAGAAAAGCACATCCAAGTACCAGAGAGTATTGTGTAGTGCTCTCTGCAATGGAAC
ATGTGATTTCAGGGTTGCCGCAGTGTCACCTCAGTGGACCAGCCTGGGGGAAGGAGCTTAATTGCTGAGACATTA
ATAATGACCTCTTAGTGCAATGCAAGATGGTGTCCTCGGATAATGATCTGCCCCGGAGCTAGGGCAGCAACATGA
GGACCAAACCATGCACATAAAGCTTGTAGTTTAAAAAAGAAAAGCAAAAAAATAATTATGCCTGACACTACTTCA
GAGCAGGAGGATTCTACGAAGCCTTGGGGATCAGGGTCAGTGTGAGCAGCTAACATCCTACCTCAAATGGAACAG
GATTTTTTGATGCTTTGCTCTAATGGAACTGTTTTAAAAATTTTTTTTTCTTTTTAATATTTTCTTCTGGTCACA
AAATAAAGAAATTTGGGATGCAAAGTACCTAAAGATCTCTGATCCTAAGAAGTTACTTCTGGCCAGGCGCGGTGG
CTCATGCCTGTAATCCTAGCACTTTGGGAGGCTGAGGTAGGCAGATCACTTGAGGTCAGGAGTTGGAGACCAGCC
TGGCCAACATAGTGAAACCCCGTCTCTACTAAAAATGCAAAAATTAGCCAGGCGTAGTGGTGCGCACCTGTAGTC
TCAGATACTTGGGAGGCTGAGGGTGGAGAATCGCTTGAACCTGGGAGGTGGAGATTGCAGTGAGTCAAGATCTCA
CCACTGAACTCCAGCCTGGGCGACAGAGGGAGACTCTGTCTCAAAAAAAAAGAAGTTACTTCCAAGACAGACTTT
TAACATGTAACCAGCACAAAGCAATGTCAGGGAGGAGTGATACATGACAATAAATGAGTCAGATGAGCAAGAAGG
CCCCAGAACCCATGCCCCAAGGCACAAAGAGGAGCTCAGGGTAGGCCCAAAGATTCGAATTCCTTAGATTACTAA
ATCACATGAGCGGACCTTGTCTGTCAGATAAGATTTTTACCTGGAAATTCCATGACCAATACATGTGCAAAAGAA
AATGATGGGTTGAATTTACTGATTATTGACCTAATGGATGGCTTTTTAAAATGTTTTAATAAAAAGCAGAATAGA
TGTTTGTTTTTCTAGTGGTTATACCAAGCTATACTTCCTGTTTTCACGTGTGAAAGTAACATGGGACATGCCTTT
CTTTTCCGATCAGTTTATTTAAGCTATACAGCAAACTTTGGCATTTATGTGGAGCATTTCTCATTGTTGGAATCT
GAATAAACCAATTACAAAATAAAAA

FIGURE 1178

MWWRVLSLLAWFPLQEASLTNHTETITVEEGQTLTLKCVTSLRKNSSLQWLTPSGFTIFLNEYPALKNSKYQLLH
HSANQLSITVPNVTLQDEGVYKCLHYSDSVSTKEVKVIVLATPFKPILEASVIRKQNGEEHVVLMCSTMRSKPPP
QITWLLGNSMEVSGGTLHEFETDGKKCNTTSTLIIHTYGKNSTVDCIIRHRGLQGRKLVAPFRFEDLVTDEETAS
DALERNSLSSQDPQQPTSTVSVTEDSSTSEIDKEEKEQTTQDPDLTTEANPQYLGLARKKSGILLLTLVSFLIFI
LFIIVQLFIMKLRKAHVIWKRENEVSEHTLESYRSRSNNEETSSEEKNGQSSHPMRCMNYITKLYSEAKTKRKEN
VQHSKLEEKHIQVPESIV

FIGURE 1179

GTTCAGCGCCGGCGCCGGTGTGCGAGCCGCGGCAGAGTGAGGCAGGCAACCCGAGGTGCGGAGCGACCTGCGGAG
GCTGAGCCCCGCTTTCTCCCAGGGTTTCTTATCAGCCAGCCGCCGCTGTCCCCGGGGGAGTAGGAGGCTCCTGAC
AGGCCGCGGCTGTCTGTGTGTCCTTCTGAGTGTCAGAGGAACGGCCAGACCCCGCGGGCCGGAGCAGAACGCGGC
CAGGGCAGAAAGCGGCGGCAGGAGAAGCAGGCAGGGGGCCGGAGGACGCAGACCGAGACCCGAGGCGGAGGCGGA
CCGCGAGCCGGCC**ATG**TCGGTGGTGGGGTTGGACGTGGGCTCGCAGAGCTGCTACATCGCGGTAGCCCGGGCCGG
GGGCATCGAGACCATCGCCAATGAGTTCAGCGACCGGTGCACCCCGTCAGTCATATCATTTGGATCAAAAAATAG
AACAATCGGAGTTGCAGCCAAAAATCAGCAAATCACTCATGCAAACAATACGGTGTCTAACTTCAAAAGATTTCA
TGGCCGAGCATTCAACGACCCCTTCATTCAAAAGGAGAAGGAAAACTTGAGTTACGATTTGGTTCCATTGAAAAA
TGGTGGAGTTGGAATAAAGGTAATGTACATGGGTGAAGAACATCTATTTAGTGTGGAGCAGATAACAGCCATGTT
GTTGACTAAGCTGAAGGAAACTGCTGAAAACAGCCTCAAGAAACCAGTAACAGATTGTGTTATTTCAGTCCCCTC
CTTCTTTACAGATGCTGAGAGGCGATCTGTGTTAGATGCTGCACAGATTGTTGGCCTAAACTGTTTAAGACTTAT
GAATGACATGACAGCTGTTGCTTTGAATTACGGAATTTATAAGCAGGATCTCCCAAGCCTGGATGAGAAACCTCG
GATAGTGGTTTTTGTTGATATGGGACATTCAGCTTTTCAAGTGTCTGCTTGTGCTTTTAACAAGGGAAAATTGAA
GGTACTGGGAACAGCTTTTGATCCTTTCTTAGGAGGAAAAAACTTCGATGAAAAGTTAGTGGAACATTTCTGTGC
AGAATTTAAAACTAAGTACAAGTTGGATGCAAAATCCAAAATACGAGCACTCCTACGTCTGTATCAGGAATGTGA
AAAACTGAAAAAGCTAATGAGCTCTAACAGCACAGACCTTCCACTGAATATCGAATGCTTTATGAATGATAAAGA
TGTTTCCGGAAAGATGAACAGGTCACAATTTGAAGAACTCTGTGCTGAACTTCTGCAAAAGATAGAAGTACCCCT
TTATTCACTGTTGGAACAAACTCATCTCAAAGTAGAAGATGTGAGTGCAGTTGAGATTGTTGGAGGCGCTACACG
AATTCCAGCTGTGAAGGAAAGAATTGCCAAATTCTTTGGAAAAGATATTAGCACAACACTCAATGCAGATGAAGC
AGTAGCCAGAGGATGTGCATTACAGTGTGCAATACTTTCCCCGGCATTTAAAGTTAGAGAATTTTCCGTCACAGA
TGCAGTTCCTTTTCCAATATCTCTGATCTGGAACCATGATTCAGAAGATACTGAAGGTGTTCATGAAGTCTTTAG
TCGAAACCATGCTGCTCCTTTCTCCAAAGTTCTCACCTTTCTGAGAAGGGGGCCTTTTGAGCTAGAAGCTTTCTA
TTCTGATCCCCAAGGAGTTCCATATCCAGAAGCAAAAATAGGCCGCTTTGTAGTTCAGAATGTTTCTGCACAGAA
AGATGGAGAAAAATCTAGAGTAAAAGTCAAAGTGCGAGTCAACACCCATGGCATTTTCACCATCTCTACGGCATC
TATGGTGGAGAAAGTCCCAACTGAGGAGAATGAAATGTCTTCTGAAGCTGACATGGAGTGTCTGAATCAGAGACC
ACCAGAAAACCCAGACACTGATGCAAATGAAAAAAAAGTTGACCAGCCTCCAGAAGCTAAAAAGCCCAAAATAAA
GGTGGTGAATGTTGAGCTGCCTATTGAAGCCAACTTGGTCTGGCAGTTAGGGAAAGACCTTCTTAACATGTATAT
TGAGACAGAGGGTAAGATGATAATGCAAGATAAATTGGAAAAAGAAAGGAATGATGCTAAAAATGCAGTTGAGGA
ATATGTGTATGAGTTCAGAGACAAGCTGTGTGGACCATATGAAAAATTTATATGTGAGCAGGATCATCAAAATTT
TTTGAGACTCCTCACAGAAACTGAAGACTGGCTGTATGAAGAAGGAGAGGACCAAGCTAAACAAGCATATGTTGA
CAAGTTGGAAGAATTAATGAAAATTGGCACTCCAGTTAAAGTTCGGTTTCAGGAAGCTGAAGAACGGCCAAAAAT
GTTTGAAGAACTAGGACAGAGGCTGCAGCATTATGCCAAGATAGCAGCTGACTTCAGAAATAAGGATGAGAAATA
CAACCATATTGATGAGTCTGAAATGAAAAAAGTGGAGAAGTCTGTTAATGAAGTGATGGAATGGATGAATAATGT
CATGAATGCTCAGGCTAAAAAGAGTCTTGATCAGGATCCAGTTGTACGTGCTCAGGAAATTAAAACAAAAATCAA
GGAATTGAACAACACATGTGAACCCGTTGTAACACAACCGAAACCAAAAATTGAATCACCCAAACTGGAAAGAAC
TCCAAATGGCCCAAATATTGATAAAAAGGAAGAAGATTTAGAAGACAAAAACAATTTTGGTGCTGAACCTCCACA
TCAGAATGGTGAATGTTACCCTAATGAGAAAAATTCTGTTAATATGGACTTGGAC**TAG**ATAACCTTAAATTGGCC
TATTCCTTCAATTAATAAAATATTTTTGCCATAGTATGTGACTCTACATAACATACTGAAACTATTTATATTTTC
TTTTTTAAGGATATTTAGAAATTTTGTGTATTATATGGAAAAAGAAAAAAAGCTTAAGTCTGTAGTCTTTATGAT
CCTAAAAGGGAAAATTGCCTTGGTAACTTTCAGATTCCTGTGGAATTGTGAATTCATACTAAGCTTTCTGTGCAG
TCTCACCATTTGCATCACTGAGGATGAAACTGACTTTTGTCTTTTGGAGAAAAAAAAACTGTACTGTTGTTCAAGA
GGGCTGTGATTAAAATCTTTAAGCATTTGTTCCTGCCAAGGTAGTTTTCTTGCATTTTGCTCTCCATTCAGCATG
TGTGTGGGTGTGGATGTTTATAAACAAGACTAAGTCTGACTTCATAAGGGCTTTCTAAAACCATTTCTGTCCAAG
AGAAAATGACTTTTTGCTTTGATATTAAAAATTCAATGAGTAAAACAAAAGCTAGTCAAATGTGTTAGCAGCATG
CAGAACAAAAACTTTAAACTTTCTCTCTCACTATACAGTATATTGTCAATGTGAAAGTGTGGAATGGAAGAAATG
TCGATCCTGTTGTAACTGATTGTGAACACTTTTATGAGCTTTAAAATAAAGTTCATCTTATGGTGTCATTTCT

FIGURE 1180

MSVVGLDVGSQSCYIAVARAGGIETIANEFSDRCTPSVISFGSKNRTIGVAAKNQQITHANNTVSNFKRFHGRAF
NDPFIQKEKENLSYDLVPLKNGGVGIKVMYMGEEHLFSVEQITAMLLTKLKETAENSLKKPVTDCVISVPSFFTD
AERRSVLDAAQIVGLNCLRLMNDMTAVALNYGIYKQDLPSLDEKPRIVVFVDMGHSAFQVSACAFNKGKLKVLGT
AFDPFLGGKNFDEKLVEHFCAEFKTKYKLDAKSKIRALLRLYQECEKLKKLMSSNSTDLPLNIECFMNDKDVSGK
MNRSQFEELCAELLQKIEVPLYSLLEQTHLKVEDVSAVEIVGGATRIPAVKERIAKFFGKDISTTLNADEAVARG
CALQCAILSPAFKVREFSVTDAVPFPISLIWNHDSEDTEGVHEVFSRNHAAPFSKVLTFLRRGPFELEAFYSDPQ
GVPYPEAKIGRFVVQNVSAQKDGEKSRVKVKVRVNTHGIFTISTASMVEKVPTEENEMSSEADMECLNQRPPENP
DTDANEKKVDQPPEAKKPKIKVVNVELPIEANLVWQLGKDLLNMYIETEGKMIMQDKLEKERNDAKNAVEEYVYE
FRDKLCGPYEKFICEQDHQNFLRLLTETEDWLYEEGEDQAKQAYVDKLEELMKIGTPVKVRFQEAEERPKMFEEL
GQRLQHYAKIAADFRNKDEKYNHIDESEMKKVEKSVNEVMEWMNNVMNAQAKKSLDQDPVVRAQEIKTKIKELNN
TCEPVVTQPKPKIESPKLERTPNGPNIDKKEEDLEDKNNFGAEPPHQNGECYPNEKNSVNMDLD

FIGURE 1181A

CTTCAGATAGATTATATCTGGAGTGAAGGATCCTGCCACCTACGTATCTGGCATAGTATTCTGTGTAGTGGGATG
AGCAGAGAACAAAAACAAAATAATCCAGTGAGAAAAGCCCGTAAATAAACCTTCAGACCAGAGATCTATTCTCCA
GCTTATTTTAAGCTCAACTTAAAAAGAAGAACTGTTCTCTGATTCTTTTCGCCTTCAATACACTTAATGATTTAA
CTCCACCCTCCTTCAAAAGAAACAGCATTTCCTACTTTTATACTGTCTATATGATTGATTTGCACAGCTCATCTG
GCCAGAAGAGCTGAGACATCCGTTCCCCTACAAGAAACTCTCCCCGGGTGGAACAAG**ATG**GATTATCAAGTGTCA
AGTCCAATCTATGACATCAATTATTATACATCGGAGCCCTGCCAAAAAATCAATGTGAAGCAAATCGCAGCCCGC
CTCCTGCCTCCGCTCTACTCACTGGTGTTCATCTTTGGTTTTGTGGGCAACATGCTGGTCATCCTCATCCTGATA
AACTGCAAAAGGCTGAAGAGCATGACTGACATCTACCTGCTCAACCTGGCCATCTCTGACCTGTTTTTCCTTCTT
ACTGTCCCCTTCTGGGCTCACTATGCTGCCGCCCAGTGGGACTTTGGAAATACAATGTGTCAACTCTTGACAGGG
CTCTATTTTATAGGCTTCTTCTCTGGAATCTTCTTCATCATCCTCCTGACAATCGATAGGTACCTGGCTGTCGTC
CATGCTGTGTTTGCTTTAAAAGCCAGGACGGTCACCTTTGGGGTGGTGACAAGTGTGATCACTTGGGTGGTGGCT
GTGTTTGCGTCTCTCCCAGGAATCATCTTTACCAGATCTCAAAAAGAAGGTCTTCATTACACCTGCAGCTCTCAT
TTTCCATACAGTCAGTATCAATTCTGGAAGAATTTCCAGACATTAAAGATAGTCATCTTGGGGCTGGTCCTGCCG
CTGCTTGTCATGGTCATCTGCTACTCGGGAATCCTAAAAACTCTGCTTCGGTGTCGAAATGAGAAGAAGAGGCAC
AGGGCTGTGAGGCTTATCTTCACCATCATGATTGTTTATTTTCTCTTCTGGGCTCCCTACAACATTGTCCTTCTC
CTGAACACCTTCCAGGAATTCTTTGGCCTGAATAATTGCAGTAGCTCTAACAGGTTGGACCAAGCTATGCAGGTG
ACAGAGACTCTTGGGATGACGCACTGCTGCATCAACCCCATCATCTATGCCTTTGTCGGGGAGAAGTTCAGAAAC
TACCTCTTAGTCTTCTTCCAAAAGCACATTGCCAAACGCTTCTGCAAATGCTGTTCTATTTTCCAGCAAGAGGCT
CCCGAGCGAGCAAGCTCAGTTTACACCCGATCCACTGGGGAGCAGGAAATATCTGTGGGCTTG**TGA**CACGGACTC
AAGTGGGCTGGTGACCCAGTCAGAGTTGTGCACATGGCTTAGTTTTCATACACAGCCTGGGCTGGGGGTGGGGTG
GGAGAGGTCTTTTTTAAAAGGAAGTTACTGTTATAGAGGGTCTAAGATTCATCCATTTATTTGGCATCTGTTTAA
AGTAGATTAGATCTTTTAAGCCCATCAATTATAGAAAGCCAAATCAAAATATGTTGATGAAAAATAGCAACCTTT
TTATCTCCCCTTCACATGCATCAAGTTATTGACAAACTCTCCCTTCACTCCGAAAGTTCCTTATGTATATTTAAA
AGAAAGCCTCAGAGAATTGCTGATTCTTGAGTTTAGTGATCTGAACAGAAATACCAAAATTATTTCAGAAATGTA
CAACTTTTTACCTAGTACAAGGCAACATATAGGTTGTAAATGTGTTTAAAACAGGTCTTTGTCTTGCTATGGGGA
GAAAAGACATGAATATGATTAGTAAAGAAATGACACTTTTCATGTGTGATTTCCCCTCCAAGGTATGGTTAATAA
GTTTCACTGACTTAGAACCAGGCGAGAGACTTGTGGCCTGGGAGAGCTGGGGAAGCTTCTTAAATGAGAAGGAAT
TTGAGTTGGATCATCTATTGCTGGCAAAGACAGAAGCCTCACTGCAAGCACTGCATGGGCAAGCTTGGCTGTAGA
AGGAGACAGAGCTGGTTGGGAAGACATGGGGAGGAAGGACAAGGCTAGATCATGAAGAACCTTGACGGCATTGCT
CCGTCTAAGTCATGAGCTGAGCAGGGAGATCCTGGTTGGTGTTGCAGAAGGTTTACTCTGTGGCCAAAGGAGGGT
CAGGAAGGATGAGCATTTAGGGCAAGGAGACCACCAACAGCCCTCAGGTCAGGGTGAGGATGGCCTCTGCTAAGC
TCAAGGCGTGAGGATGGGAAGGAGGGAGGTATTCGTAAGGATGGGAAGGAGGGAGGTATTCGTGCAGCATATGAG
GATGCAGAGTCAGCAGAACTGGGGTGGATTTGGTTTGGAAGTGAGGGTCAGAGAGGAGTCAGAGAGAATCCCTAG
TCTTCAAGCAGATTGGAGAAACCCTTGAAAAGACATCAAGCACAGAAGGAGGAGGAGGAGGTTTAGGTCAAGAAG
AAGATGGATTGGTGTAAAAGGATGGGTCTGGTTTGCAGAGCTTGAACACAGTCTCACCCAGACTCCAGGCTGTCT
TTCACTGAATGCTTCTGACTTCATAGATTTCCTTCCCATCCCAGCTGAAATACTGAGGGGTCTCCAGGAGGAGAC
TAGATTTATGAATACACGAGGTATGAGGTCTAGGAACATACTTCAGCTCACACATGAGATCTAGGTGAGGATTGA
TTACCTAGTAGTCATTTCATGGGTTGTTGGGAGGATTCTATGAGGCAACCACAGGCAGCATTTAGCACATACTAC
ACATTCAATAAGCATCAAACTCTTAGTTACTCATTCAGGGATAGCACTGAGCAAAGCATTGAGCAAAGGGGTCCC
ATATAGGTGAGGGAAGCCTGAAAAACTAAGATGCTGCCTGCCCAGTGCACACAAGTGTAGGTATCATTTTCTGCA
TTTAACCGTCAATAGGCAAAGGGGGGAAGGGACATATTCATTTGGAAATAAGCTGCCTTGAGCCTTAAAACCCAC
AAAAGTACAATTTACCAGCCTCCGTATTTCAGACTGAATGGGGGTGGGGGGGGCGCCTTAGGTACTTATTCCAGA
TGCCTTCTCCAGACAAACCAGAAGCAACAGAAAAAATCGTCTCTCCCTCCCTTTGAAATGAATATACCCCTTAGT
GTTTGGGTATATTCATTTCAAAGGGAGAGAGAGAGGTTTTTTTCTGTTCTTTCTCATATGATTGTGCACATACTT
GAGACTGTTTTGAATTTGGGGGATGGCTAAAACCATCATAGTACAGGTAAGGTGAGGGAATAGTAAGTGGTGAGA
ACTACTCAGGGAATGAAGGTGTCAGAATAATAAGAGGTGCTACTGACTTTCTCAGCCTCTGAATATGAACGGTGA
GCATTGTGGCTGTCAGCAGGAAGCAACGAAGGGAAATGTCTTTCCTTTTGCTCTTAAGTTGTGGAGAGTGCAACA
GTAGCATAGGACCCTACCCTCTGGGCCAAGTCAAAGACATTCTGACATCTTAGTATTTGCATATTCTTATGTATG

FIGURE 1181B

TGAAAGTTACAAATTGCTTGAAAGAAAATATGCATCTAATAAAAAACACCTTCTA

FIGURE 1182

MDYQVSSPIYDINYYTSEPCQKINVKQIAARLLPPLYSLVFIFGFVGNMLVILILINCKRLKSMTDIYLLNLAIS
DLFFLLTVPFWAHYAAAQWDFGNTMCQLLTGLYFIGFFSGIFFIILLTIDRYLAVVHAVFALKARTVTFGVVTSV
ITWVVAVFASLPGIIFTRSQKEGLHYTCSSHFPYSQYQFWKNFQTLKIVILGLVLPLLVMVICYSGILKTLLRCR
NEKKRHRAVRLIFTIMIVYFLFWAPYNIVLLLNTFQEFFGLNNCSSSNRLDQAMQVTETLGMTHCCINPIIYAFV
GEKFRNYLLVFFQKHIAKRFCKCCSIFQQEAPERASSVYTRSTGEQEISVGL

FIGURE 1183

CATTCAGAGACAGAAGGTGGATAGACAAATCTCCACCTTCAGACTGGTAGGCTCCTCCAGAAGCCATCAGACAGG
AAGATGTGAAAATCCCCAGCACTCATCCCAGAATCACTAAGTGGCACCTGTCCTGGGCCAAAGTCCCAGGACAGA
CCTCATTGTTCCTCTGTGGGAATACCTCCCCAGGAGGGCATCCTGGATTTCCCCCTTGCAACCCAGGTCAGAAGT
TTCATCGTCAAGGTTGTTTCATCTTTTTTTTCCTGTCTAACAGCTCTGACTACCACCCAACCTTGAGGCACAGTG
AAGACATCGGTGGCCACTCCAATAACAGCAGGTCACAGCTGCTCTTCTGGAGGTGTCCTACAGGTGAAAAGCCCA
GCGACCCAGTCAGGATTTAAGTTTACCTCAAAA**ATG**GAAGATTTTAACATGGAGAGTGACAGCTTTGAAGATTTC
TGGAAAGGTGAAGATCTTAGTAATTACAGTTACAGCTCTACCCTGCCCCCTTTTCTACTAGATGCCGCCCCATGT
GAACCAGAATCCCTGGAAATCAACAAGTATTTTGTGGTCATTATCTATGCCCTGGTATTCCTGCTGAGCCTGCTG
GGAAACTCCCTCGTGATGCTGGTCATCTTATACAGCAGGGTCGGCCGCTCCGTCACTGATGTCTACCTGCTGAAC
CTAGCCTTGGCCGACCTACTCTTTGCCCTGACCTTGCCCATCTGGGCCGCCTCCAAGGTGAATGGCTGGATTTTT
GGCACATTCCTGTGCAAGGTGGTCTCACTCCTGAAGGAAGTCAACTTCTATAGTGGCATCCTGCTACTGGCCTGC
ATCAGTGTGGACCGTTACCTGGCCATTGTCCATGCCACACGCACACTGACCCAGAAGCGCTACTTGGTCAAATTC
ATATGTCTCAGCATCTGGGGTCTGTCCTTGCTCCTGGCCCTGCCTGTCTTACTTTTCCGAAGGACCGTCTACTCA
TCCAATGTTAGCCCAGCCTGCTATGAGGACATGGGCAACAATACAGCAAACTGGCGGATGCTGTTACGGATCCTG
CCCCAGTCCTTTGGCTTCATCGTGCCACTGCTGATCATGCTGTTCTGCTACGGATTCACCCTGCGTACGCTGTTT
AAGGCCCACATGGGGCAGAAGCACCGGGCCATGCGGGTCATCTTTGCTGTCGTCCTCATCTTCCTGCTCTGCTGG
CTGCCCTACAACCTGGTCCTGCTGGCAGACACCCTCATGAGGACCCAGGTGATCCAGGAGACCTGTGAGCGCCGC
AATCACATCGACCGGGCTCTGGATGCCACCGAGATTCTGGGCATCCTTCACAGCTGCCTCAACCCCCTCATCTAC
GCCTTCATTGGCCAGAAGTTTCGCCATGGACTCCTCAAGATTCTAGCTATACATGGCTTGATCAGCAAGGACTCC
CTGCCCAAAGACAGCAGGCCTTCCTTTGTTGGCTCTTCTTCAGGGCACACTTCCACTACTCTC**TAA**GACCTCCTG
CCTAAGTGCAGCCCGTGGGGTTCCTCCCTTCTCTTCACAGTCACATTCCAAGCCTCATGTCCACTGGTTCTTCTT
GGTCTCAGTGTCAATGCAGCCCCCATTGTGGTCACAGGAAGTAGAGGAGGCCACGTTCTTACTAGTTTCCCTTGC
ATGGTTTAGAAAGCTTGCCCTGGTGCCTCACCCCTTGCCATAATTACTATGTCATTTGCTGGAGCTCTGCCCATC
CTGCCCCTGAGCCCATGGCACTCTATGTTCTAAGAAGTGAAAATCTACACTCCAGTGAGACAGCTCTGCATACTC
ATTAGGATGGCTAGTATCAAAAGAAAGAAAATCAGGCTGGCCAACGGGGTGAAACCTGTCTCTACTAAAAATACA
AAAAAAAAAAAAAATTAGCCGGGCGTGGTGGTGAGTGCCTGTAATCACAGCTACTTGGGAGGCTGAGATGGGAGA
ATCACTTGAACCCGGGAGCAGAGGTTGCAGTGAGCCGAGATTGTGCCCCTGCCATCCAGCCTGAGCGACAGTGAG
ACTCTGTCTCAGTCCATGAAGATGTAGAGGAGAAACTGGAACTCTCGAGCGTTGCTGGGGGGGATTGTAAAATGG
TGTGACCACTGCAGAAGACAGTATGGCAGCTTTCCTCAAAACTTCAGACATAGAATTAACACATGATCCTGCAAT
TCCACTTATAGGAATTGACCCACAAGAAATGAAAGCAGGGACTTGAACCCATATTTGTACACCAATATTCATAGC
AGCTTATTCACAAGACCCAAAAGGCAGAAGCAACCCAAATGTTCATCAATGAATGAATGAATGGCTAAGCAAAAT
GTGATATGTACCTAACGAAGTATCCTTCAGCCTGAAAGAGGAATGAAGTACTCATACATGTTACAACACGGACGA
ACCTTGAAAACTTTATGCTAAGTGAAATAAGCCAGACATCAACAGATAAATAGTTTATGATTCCACCTACATGAG
GTACTGAGAGTGAACAAATTTACAGAGACAGAAAGCAGAACAGTGATTACCAGGGACTGAGGGGAGGGGAGCATG
GGAAGTGACGGTTTAATGGGCACAGGGTTTATGTTTAGGATGTTGAAAAAGTTCTGCAGATAAACAGTAGTGATA
GTTGTACCGCAATGTGACTTAATGCCACTAAATTGACACTTAAAAATGGTTTAAATGGTCAATTTTGTTATGTAT
ATTTTATATCAATTTAAAAAAAAACCTGAGCCCCAAAAGGTATTTTAATCACCAAGGCTGATTAAACCAAGGCTA
GAACCACCTGCCTATATTTTTTGTTAAATGATTTCATTCAATATCTTTTTTTTAATAAACCATTTTTACTTGGGT
GTTTAT

FIGURE 1184

MEDFNMESDSFEDFWKGEDLSNYSYSSTLPPFLLDAAPCEPESLEINKYFVVIIYALVFLLSLLGNSLVMLVILY
SRVGRSVTDVYLLNLALADLLFALTLPIWAASKVNGWIFGTFLCKVVSLLKEVNFYSGILLLACISVDRYLAIVH
ATRTLTQKRYLVKFICLSIWGLSLLLALPVLLFRRTVYSSNVSPACYEDMGNNTANWRMLLRILPQSFGFIVPLL
IMLFCYGFTLRTLFKAHMGQKHRAMRVIFAVVLIFLLCWLPYNLVLLADTLMRTQVIQETCERRNHIDRALDATE
ILGILHSCLNPLIYAFIGQKFRHGLLKILAIHGLISKDSLPKDSRPSFVGSSSGHTSTTL

FIGURE 1185

ACAAAGCAGTGCAGGCAGCCCGCCTGGCTTTCTCTCTTGGTTCAGTGTGGAGAAGG**ATG**GATGCTTCAGAAAGGG
GACGTCTGTTGGATAAGCTTGCAGACTTGGTGGAACGGGACAGGGCAGTTCTTGCAACCATGGAATCCCTAAATG
GTGGCAAACCATTCCTGCAAGCTTTTTATGTGGATTTGCAGGGCGTCATCAAAACCTTTCGATATTACGCAGGCT
GGGCTGATAAAATTCATGGGATGACCATTCCTGTAGATGGAGACTATTTTACCTTTACAAGACATGAACCCATTG
GAGTGTGTGGACAGATCATCCCATGGAACTTCCCCCTGCTGATGTTTGCCTGGAAAATAGCTCCAGCTTTGTGCT
GTGGCAATACAGTAGTTATTAAGCCAGCAGAGCAAACACCACTCAGTGCACTCTACATGGGAGCCCTCATCAAGG
AGGCTGGCTTTCCTCCCGGGGTCATCAATATTTTGCCAGGATATGGGCCAACGGCTGGGGCAGCAATAGCTTCTC
ACATTGGCATAGACAAGATTGCATTCACAGGGTCTACTGAGGTTGGAAAGCTTATCCAAGAAGCAGCTGGAAGAA
GTAATTTGAAGAGAGTAACTCTGGAACTTGGAGGCAAAAGTCCTAATATTATTTTTGCTGATGCTGACTTGGACT
ATGCTGTGGAGCAGGCCCACCAGGGTGTGTTCTTCAATCAAGGTCAGTGCTGCACTGCAGGCTCTCGCATCTTCG
TGGAGGAGTCCATCTATGAGGAGTTTGTGAGAAGAAGCGTGGAGCGGGCCAAGAGGCGCATAGTGGGGAGTCCCT
TTGACCCCACCACTGAGCAGGGTCCCCAGATTGATAAGAAACAGTACAACAAGATCTTGGAACTCATCCAGAGTG
GTGTGGCTGAGGGCGCCAAGCTGGAATGTGGAGGCAAAGGACTGGGCCGAAAGGGGTTTTTCATTGAGCCCACAG
TGTTTTCCAACGTCACTGATGATATGCGGATTGCCAAGGAGGAGATCTTTGGCCCTGTTCAGGAAATTTTGAGAT
TTAAGACGATGGATGAAGTTATCGAAAGAGCCAATAACTCAGACTTTGGACTCGTAGCAGCTGTCTTTACTAATG
ACATCAACAAGGCCCTCACAGTGTCTTCTGCAATGCAAGCTGGGACTGTTTGGATCAATTGTTACAATGCCTTAA
ATGCCCAGAGCCCCTTTGGGGGATTCAAGATGTCTGGAAATGGGAGAGAAATGGGAGAATTTGGCTTGCGGGAGT
ACTCAGAAGTTAAGACGGTGACAGTAAAGATCCCCCAGAAGAACTCC**TAA**GAAGGCCAAGAAGGAGGATGAAGCC
CAGCCTGCACGTCTGTCCCTCTCTGCTTTCTCTGTAGGGCCCAGCTCTCAGGAATACAAAGTTGAGCCACGGTCC
TTACTTAAAGATTGAAAAGATAACATGTAGGCCAGGCAGGTCACTGCACAACTAAAGCAAACCAGCTGGGTACAG
TTTCTTGGCACTCTGTAAGGGGCCACCTTAATCATACCAAATATTGGGGAAAGTGGGATAAAGGGAGGAGGAGGA
GCTAGCAGACACATCCAGTATCTCCTTCTGGAGCACAGGATGAAATAAGGGAGCTGTATTATTTCATGTCTTTGT
CACAAAGAACTTTCCTCTCAAGGAAAGGTGACCTTTCTCCTGTCTTCATTTTCCTCCTTCCAGGCCCTCCTCGCT
CACCCACCCCTCCCTCTCTTCCAAGGAGATGTCAGCTGAGCTCATTCTGGGGCAGATGTTTGGGCCGGGAACAAT
TTTTCAAGGTTGTAAAGCCAAATTATCATTTCATGTTATCCATTTCTTCAAAGCAAAACATGAAATGGTTTTAGC
TAGAGTCAGACCAGAATGAAAATGCCAGGAGCTGGTACACTACAGATGTAGTAAGAACCTGGGATATTCCTGACC
CAATCTGGTTTTCTTTTACCCATAAATAACATGAATGAAAAAAGATTGGGACAATAGAGACTGGAAGTCATCATG
TGCAGTTCACCGCTTCTGAGCTTGCTGCAGTTTTGGGGTGTGTGTGTATTAGATTCCTTCTCAGTTATTCTGGAA
TAAGGCAAGGAGTGGGTTGTTTTTCATAGCTAGATAAGATCTTTTCCAAAGTTTTTCTTAGAACCAACCAAAAAA
CAATCCGAGTAGGCCCAAGAATTTGATAATGCTGGATGCCTTGCAGACATCATTCAGTTTCTAATATTGGGCAAC
AATTATTATTAAATGAATTATTTCTGTAGTTGGAATCTGTACCTTCTGAACCTCTACACCAATAACTGCTGCAGG
TGTGATTTTGGTCTGTCACACTGTACATCTATCATAATGTGCCCTGTATCTATTGGCAGTGACCTTGGAAAATCT
GGCCAAGCCTAGGGGTTTCCTTTTCCATTTGCCAAGTTCCATTGTGCCAGGACTGCCGTGCTCCACTGAGCTCCT
CTGTCACACCCCATTCTTGCCCCTCACTGGGCAGGCCATGGCCTACAGCTTGCAGGGAGTAAAGCAGGCCCGCCT
CCCTTTCTTCCCATCCACATACTCCTCTTCTGCTTTCCAGTGACTCCACCAGTTTGATGTGGGAAGTGTTAGCTT
CCTTTCCTTCTTCCATCCCTTCTTCCATCTTTCCAGCTGTCAAATCCAATCCAGTCTCTAACCTAAATGCAGATC
ATTTATTTAAAAGTACCAAACATAACCCAGAGTATGTGGAATATGGGCAACATATATATAGCCTTCTGTATTTAA
CGATCTTCTGCTTCTTAACCGTACCAGTTTTCTATTTATAACTCTTATCTATCCATGATGTTTTAAAGTCTCCAC
TTGCTGTTATTTACAAACGACAGTGCATTCAGCAGCCCAGTGCCGTGAGCCCTGACAGATGCCGTATTTCTGAGT
GCTTCCATGTGAATGCTGCCCTCCTGTAGCATGTGTCCAAGTGGACATAGCCACTAACCAACTAGTTACCTTTGG
ACTGCAACAAAAAATGTGAAAATGAAGATTTATTTCTTTTAATTTACTTAAAAAGAAACCTCTGTGCTAGCAATA
AAGCATTTATATTGTGC

FIGURE 1186

MDASERGRLLDKLADLVERDRAVLATMESLNGGKPFLQAFYVDLQGVIKTFRYYAGWADKIHGMTIPVDGDYFTF
TRHEPIGVCGQIIPWNFPLLMFAWKIAPALCCGNTVVIKPAEQTPLSALYMGALIKEAGFPPGVINILPGYGPTA
GAAIASHIGIDKIAFTGSTEVGKLIQEAAGRSNLKRVTLELGGKSPNIIFADADLDYAVEQAHQGVFFNQGQCCT
AGSRIFVEESIYEEFVRRSVERAKRRIVGSPFDPTTEQGPQIDKKQYNKILELIQSGVAEGAKLECGGKGLGRKG
FFIEPTVFSNVTDDMRIAKEEIFGPVQEILRFKTMDEVIERANNSDFGLVAAVFTNDINKALTVSSAMQAGTVWI
NCYNALNAQSPFGGFKMSGNGREMGEFGLREYSEVKTVTVKIPQKNS

FIGURE 1187

GGAAACTTCTGCCTCAGGTGGGGAGAGGAGTCCATAGATCAGGGAAACTTATGTCTTGGTGAAATGGAAGACCAT
GTTTCTAAACACCTGTCGCCAGGTTACTTGAATTTCCACTAGAGGAGCAGAA**ATG**CCACCAATGCCAAGTGCCCC
ACCTGTGCATCCACCTCCAGATGGAGGATGGGGTTGGATTGTGGTTGGAGCAGCTTTTATCTCCATTGGATTTTC
CTATGCATTCCCCAAAGCTGTCACCGTATTCTTCAAAGAAATTCAGCAAATATTCCACACTACCTACAGTGAAAT
AGCATGGATTTCATCCATTATGCTGGCTGTTATGTACGCAGGAGGTCCTGTAAGTAGTGTTTTGGTGAATAAATA
CGGCAGCCGGCCGGTGGTGATAGCAGGAGGCTTATTATGCTGTCTTGGAATGGTGTTGGCCTCCTTTAGTAGCAG
CGTGGTACAGCTGTACCTCACTATGGGATTCATTACAGGTTTAGGTTTAGCCTTCAACCTGCAACCCGCCTTAAC
CATAATTGGCAAATACTTCTATAGGAAGCGACCCATGGCAAATGGATTGGCCATGGCAGGAAGTCCTGTTTTCTT
AAGTTCATTGGCTCCTTTCAATCAGTACCTTTTTAATACTTTTGGCTGGAAAGGAAGCTTCCTGATTTTGGGAAG
TCTACTTTTGAATGCCTGTGTGGCTGGTTCCCTCATGAGACCCCTTGGACCCAATCAAACCACTTCTAAGTCTAA
AAATAAGACTGGCAAAACAGAAGATGATTCAAGCCCAAAGAAAATCAAAACGAAGAAATCAACTTGGGAAAAAGT
TAATAAGTATTTAGATTTCTCCCTTTTTAAGCATAGAGGATTTCTGATATATCTGTCTGGAAATGTCATTATGTT
CCTAGGTTTTTTTGCCCCCATTATATTCTTGGCTCCATATGCTAAAGACCAAGGAATTGATGAGTACTCGGCAGC
TTTTCTGCTATCTGTTATGGCTTTCGTTGATATGTTTGCTAGGCCTTCTGTAGGATTAATTGCAAACTCCAAATA
TATTCGACCTCGAATTCAGTACTTCTTCAGTTTTGCAATCATGTTCAATGGAGTGTGTCACCTCTTGTGCCCACT
GGCACAGGACTACACAAGCCTGGTATTATATGCTGTATTTTTTGGCCTTGGATTTGGGAGTGTTAGCAGTGTTCT
CTTTGAAACTCTCATGGACCTCGTGGGTGCACCAAGATTTTCCAGTGCCGTCGGACTTGTCACAATTGTGGAGTG
TGGCCCAGTTCTTCTTGGCCCTCCTCTTGCAGGTAAATTGGTGGATTTAACTGGAGAATATAAATACATGTACAT
GTCCTGTGGGGCTATTGTGGTAGCAGCAAGCGTGTGGCTGCTCATTGGCAATGCTATCAACTATAGATTGCTTGC
AAAGGAAAGGAAGGAGGAAAATGCAAGGCAGAAGTCCAGAGAATCTGAACCCTTGAGCAAATCTAAACATTCGGA
AGATGTTAACGTCAAAGTTTCAAATGCACAGAGTGTAACCTCAGAAAGAGAAACTAACATT**TAA**CAAGAATCACA
TCTCTGATTTCAGTGTTTATGACTTTATCTAGGAGTTTGTTTTTCATTTTGTTTTTTTAAAGTATTAGAAAAGGT
TTTAGCTGAAATGAGGAGTCACAATTDAAGGATGGAGGTGATATTTTCCTCAATGGCAAATTTTAAATTAGTTTT
TAAAAACTTACTTATTTGGGTAGTTAAATTTTGAGATTATGCATAGAAAGAATCCATGCTATAGGTTTATTTCCA
TACCTGACTCTGGGTGTGGTGGTTAAAATACTAATTTTAAAGTCTTCCAGTGACTTTCGGTCTTGGTTATATGGA
GAATTCTGAATCCCAAACCCCTGGTTTAAGTAGGTAGAAGGAGGATGCCTAATCCTACAAAGTGACCCTTTATAC
ATTTCATTTTTTATTTGATATTAAAGTATGAGATAGAGTTGAGAGACAATTAATTATCCCCTCTTACACACAAAC
ACACATACTCCCACATACTTACCCACATGTACACAGAGTATCTGGAGAATAAAACCCAAATTCAAAAAAAAAAAA
AAAA

FIGURE 1188

MPPMPSAPPVHPPPDGGWGWIVVGAAFISIGFSYAFPKAVTVFFKEIQQIFHTTYSEIAWISSIMLAVMYAGGPV
SSVLVNKYGSRPVVIAGGLLCCLGMVLASFSSSVVQLYLTMGFITGLGLAFNLQPALTIIGKYFYRKRPMANGLA
MAGSPVFLSSLAPFNQYLFNTFGWKGSFLILGSLLLNACVAGSLMRPLGPNQTTSKSKNKTGKTEDDSSPKKIKT
KKSTWEKVNKYLDFSLFKHRGFLIYLSGNVIMFLGFFAPIIFLAPYAKDQGIDEYSAAFLLSVMAFVDMFARPSV
GLIANSKYIRPRIQYFFSFAIMFNGVCHLLCPLAQDYTSLVLYAVFFGLGFGSVSSVLFETLMDLVGAPRFSSAV
GLVTIVECGPVLLGPPLAGKLVDLTGEYKYMYMSCGAIVVAASVWLLIGNAINYRLLAKERKEENARQKSRESEP
LSKSKHSEDVNVKVSNAQSVTSERETNI

FIGURE 1189

GGGCTCGAACGCGCAGCGCACGGGAACCGGTCCCGCTGCTTGGGTCAGGTTCGCCGGTCGCGGGAGCCCCGCCGT
GCAGTCGGAGGAACACGTGGCCATCAGTAATC**ATG**AGCAACCCATTCGCACACCTTGCTGAGCCATTGGATCCTG
TACAACCAGGAAAGAAATTCTTCAATTTGAATAAATTGGAGGATTCAAGATATGGGCGCTTACCATTTTCGATCA
GAGTTCTTCTGGAAGCAGCCATTCGGAATTGTGATGAGTTTTTGGTGAAGAAACAGGATATTGAAAATATTCTAC
ATTGGAATGTCACTCAGCACAAGAACATAGAAGTGCCATTTAAGCCTGCTCGTGTCATCCTGCAGGACTTTACGG
GTGTGCCCGCTGTGGTTGACTTTGCTGCAATGCGTGATGCTGTGAAAAAGTTAGGAGGAGATCCAGAGAAAATAA
ACCCTGTCTGCCCTGCTGATCTTGTAATAGATCATTCCATCCAGGTTGATTTCAACAGAAGGGCAGACAGTTTAC
AGAAGAATCAAGACCTGGAATTTGAAAGAAATAGAGAGCGATTTGAATTTTTAAAGTGGGGTTCCCAGGCTTTTC
ACAACATGCGGATTATTCCCCCTGGCTCAGGAATCATCCACCAGGTGAATTTGGAATATTTGGCAAGAGTGGTAT
TTGATCAGGATGGATATTATTACCCAGACAGCCTCGTGGGCACAGACTCGCACACTACCATGATTGATGGCTTGG
GCATTCTTGGTTGGGGTGTCGGTGGTATTGAAGCAGAAGCTGTCATGCTGGGTCAGCCAATCAGTATGGTGCTTC
CTCAGGTGATTGGCTACAGGCTGATGGGGAAGCCCCACCCTCTGGTAACATCCACTGACATCGTGCTCACCATTA
CCAAGCACCTCCGCCAGGTTGGGGTAGTGGGCAAATTTGTCGAGTTCTTCGGGCCTGGAGTAGCCCAGTTGTCCA
TTGCTGACCGAGCTACGATTGCTAACATGTGTCCAGAGTACGGAGCAACTGCTGCCTTTTTCCCAGTTGATGAAG
TTAGTATCACGTACCTGGTGCAAACAGGTCGTGATGAAGAAAAATTAAAGTATATTAAAAAATATCTTCAGGCTG
TAGGAATGTTTCGAGATTTCAATGACCCTTCTCAAGACCCAGACTTCACCCAGGTTGTGGAATTAGATTTGAAAA
CAGTAGTGCCTTGCTGTAGTGGACCCAAAAGGCCTCAGGACAAAGTTGCTGTGTCCGACATGAAAAAGGACTTTG
AGAGCTGCCTTGGAGCCAAGCAAGGATTTAAAGGATTCCAAGTTGCTCCTGAACATCATAATGACCATAAGACCT
TTATCTATGATAACACTGAATTCACCCTTGCTCATGGTTCTGTGGTCATTGCTGCCATTACTAGCTGCACAAACA
CCAGTAATCCGTCTGTGATGTTAGGGGCAGGATTGTTAGCAAAGAAAGCTGTGGATGCTGGCCTGAACGTGATGC
CTTACATCAAAACTAGCCTGTCTCCTGGGAGTGGCGTGGTCACCTACTACCTACAAGAAAGCGGAGTCATGCCTT
ATCTGTCTCAGCTTGGGTTTGACGTGGTGGGCTATGGCTGCATGACCTGCATTGGCAACAGTGGGCCTTTACCTG
AACCTGTGGTAGAAGCCATCACACAGGGAGACCTTGTAGCTGTTGGAGTACTATCTGGAAACAGGAATTTTGAAG
GTCGAGTTCACCCCAACACCCGGGCCAACTATTTAGCCTCTCCCCCCTTAGTAATAGCATATGCAATTGCTGGAA
CCATCAGAATCGACTTTGAGAAAGAGCCATTGGGAGTAAATGCAAAGGGACAGCAGGTATTTCTGAAAGATATCT
GGCCGACTAGAGACGAGATCCAGGCAGTGGAGCGTCAGTATGTCATCCCGGGGATGTTTAAGGAAGTCTATCAGA
AAATAGAGACTGTGAATGAAAGCTGGAATGCCTTAGCAACCCCATCAGATAAGCTGTTTTTCTGGAATTCCAAAT
CTACGTATATCAAATCACCACCATTCTTTGAAAACCTGACTTTGGATCTTCAGCCCCCTAAATCTATAGTGGATG
CCTATGTGCTGCTAAATTTGGGAGATTCGGTAACAACTGACCACATCTCCCCAGCTGGAAATATTGCAAGAAACA
GTCCTGCTGCTCGCTACTTAACTAACAGAGGCCTAACTCCACGAGAATTCAACTCCTATGGCTCCCGCCGAGGTA
ATGACGCCGTCATGGCACGGGGAACATTTGCCAACATTCGCTTGTTAAACAGATTTTTGAACAAGCAGGCACCAC
AGACTATCCATCTGCCTTCTGGGGAAATCCTTGATGTGTTTGATGCTGCTGAGCGGTACCAGCAGGCAGGCCTTC
CCCTGATCGTTCTGGCTGGCAAAGAGTACGGTGCAGGCAGCTCCCGAGACTGGGCAGCTAAGGGCCCTTTCCTGC
TGGGAATCAAAGCCGTCCTGGCCGAGAGCTACGAGCGCATTCACCGCAGTAACCTGGTTGGGATGGGTGTGATCC
CACTTGAATATCTCCCTGGTGAGAATGCAGATGCCCTGGGGCTCACAGGGCAAGAACGATACACTATCATTATTC
CAGAAAACCTCAAACCACAAATGAAAGTCCAGGTCAAGCTGGATACTGGCAAGACCTTCCAGGCTGTCATGAGGT
TTGACACTGATGTGGAGCTCACTTATTTCCTCAACGGGGGCATCCTCAACTACATGATCCGCAAGATGGCCAAG**T**
AGGAGACGTGCACTTGGTCGTGCGCCCAGGGAGGAAGCCGCACCACCAGCCAGCGCAGGCCCTGGTGGAGAGGCC
TCCCTGGCTGCCTCTGGGAGGGGTGCTGCCTTGTAGATGGAGCAAGTGAGCACTGAGGGTCTGGTGCCAATCCTG
TAGGCACAAAACCAGAAGTTTCTACATTCTCTATTTTTGTTAATCATCTTCTCTTTTTCCAGAATTTGGAAGCTA
GAATGGTGGGAATGTCAGTAGTGCCAGAAAGAGAGAACCAAGCTTGTCTTTAAAGTTACTGATCACAGGACGTTG
CTTTTTCACTGTTTCCTATTAATCTTCAGCTGAACACAAGCAAACCTTCTCAGGAGGTGTCTCCTACCCTCTTAT
TGTTCCTCTTACGCTCTGCTCAATGAAACCTTCCTCTTGAGGGTCATTTTCCTTTCTGTATTAATTATACCAGTG
TTAAGTGACATAGATAAGAACTTTGCACACTTCAAATCAGAGCAGTGATTCTCTCTTCTCTCCCCTTTTCCTTCA
GAGTGAATCATCCAGACTCCTCATGGATAGGTCGGGTGTTAAAGTTGTTTTGATTATGTACCTTTTGATAGATCC
ACATAAAAAGAAATGTGAAGTTTTCTTTTACTATCTTTTCATTTATCAAGCAGAGACCTTTGTTGGGAGGCGGTT
TGGGAGAACACATTTCTAATTTGAATGAAATGAAATCTATTTTCAGTG

FIGURE 1190

MSNPFAHLAEPLDPVQPGKKFFNLNKLEDSRYGRLPFSIRVLLEAAIRNCDEFLVKKQDIENILHWNVTQHKNIE
VPFKPARVILQDFTGVPAVVDFAAMRDAVKKLGGDPEKINPVCPADLVIDHSIQVDFNRRADSLQKNQDLEFERN
RERFEFLKWGSQAFHNMRIIPPGSGIIHQVNLEYLARVVFDQDGYYYPDSLVGTDSHTTMIDGLGILGWGVGGIE
AEAVMLGQPISMVLPQVIGYRLMGKPHPLVTSTDIVLTITKHLRQVGVVGKFVEFFGPGVAQLSIADRATIANMC
PEYGATAAFFPVDEVSITYLVQTGRDEEKLKYIKKYLQAVGMFRDFNDPSQDPDFTQVVELDLKTVVPCCSGPKR
PQDKVAVSDMKKDFESCLGAKQGFKGFQVAPEHHNDHKTFIYDNTEFTLAHGSVVIAAITSCTNTSNPSVMLGAG
LLAKKAVDAGLNVMPYIKTSLSPGSGVVTYYLQESGVMPYLSQLGFDVVGYGCMTCIGNSGPLPEPVVEAITQGD
LVAVGVLSGNRNFEGRVHPNTRANYLASPPLVIAYAIAGTIRIDFEKEPLGVNAKGQQVFLKDIWPTRDEIQAVE
RQYVIPGMFKEVYQKIETVNESWNALATPSDKLFFWNSKSTYIKSPPFFENLTLDLQPPKSIVDAYVLLNLGDSV
TTDHISPAGNIARNSPAARYLTNRGLTPREFNSYGSRRGNDAVMARGTFANIRLLNRFLNKQAPQTIHLPSGEIL
DVFDAAERYQQAGLPLIVLAGKEYGAGSSRDWAAKGPFLLGIKAVLAESYERIHRSNLVGMGVIPLEYLPGENAD
ALGLTGQERYTIIIPENLKPQMKVQVKLDTGKTFQAVMRFDTDVELTYFLNGGILNYMIRKMAK

FIGURE 1191A

GTAGATGAGGAAACTGAAGTTGAGGAATAGTGAAGAGTTTGTCCAATGTCATAGCCCCGTAATCAACGGGACAAA
AATTTTCTTGCTGATGGGTCAAGATGGCATCGTGAAGTGGTTGTTCACCGTAAACTGTAATACAATCCTGTTTAT
GGATTTGTTTGCATATTTTTCCCCCCATAGGGAAACCTTTTTTCCATGGCTCAGGACACACTCCTGGATCGAGCC
AACAGGAGAACTTTCTGGTAAGCATTTGGCTAACTTTTTTTTTTTGAGATGGAGTCTTGCTGTGTCGCCTAGGC
TGGAGTGCAGTGGCGTGATCTTGGCTCACTGCAGCCTCCACCTCCCGGGTTCAATCAATTCTCCTACCTCAACTT
CCTGAGTAGCTGGGATTACAGGCGCCCGCCACCACACCCGGCTCATTTTTGTACTTTTAGTAGAGACACAGTTTT
GCCATGTTGGCCAGGCTGGTCTTGAATTCCTCAGCTCAGGTGATATGCCTGCCTTGGCCTCTCAAAGTGCTGGGA
TTACAGGCGTGAGCCACTGTGCCCGGCCTTGGCTAACTTTTCAAAATTAAAGATTTTGACTTGTTACAGTCATGT
GACATTTTTTTCTTTCTGTTTGGTGAGTTTTTGATAATTTATATCTCTCAAAGTGGAGACTTTAAAAAAGACTCA
TCTGTGTGCCGTGTTCACTGCCTGGTATCTTAGTGTGGACCGAAGCCTAAGGACCCTGAAAACAGCTGCAGATGA
AG**ATG**GCAAGCACCCGCTGCAAGCTGGCCAGGTACCTGGAGGACCTGGAGGATGTGGACTTGAAGAAATTTAAGA
TGCACTTAGAGGACTATCCTCCCCAGAAGGGCTGCATCCCCCTCCCGAGGGGTCAGACAGAGAAGGCAGACCATG
TGGATCTAGCCACGCTAATGATCGACTTCAATGGGGAGGAGAAGGCGTGGGCCATGGCCGTGTGGATCTTCGCTG
CGATCAACAGGAGAGACCTTTATGAGAAAGCAAAAAGAGATGAGCCGAAGTGGGGTTCAGATAATGCACGTGTTT
CGAATCCCACTGTGATATGCCAGGAAGACAGCATTGAAGAGGAGTGGATGGGTTTACTGGAGTACCTTTCGAGAA
TCTCTATTTGTAAAATGAAGAAAGATTACCGTAAGAAGTACAGAAAGTACGTGAGAAGCAGATTCCAGTGCATTG
AAGACAGGAATGCCCGTCTGGGTGAGAGTGTGAGCCTCAACAAACGCTACACACGACTGCGTCTCATCAAGGAGC
ACCGGAGCCAGCAGGAGAGGGAGCAGGAGCTTCTGGCCATCGGCAAGACCAAGACGTGTGAGAGCCCCGTGAGTC
CCATTAAGATGGAGTTGCTGTTTGACCCCGATGATGAGCATTCTGAGCCTGTGCACACCGTGGTGTTCCAGGGGG
CGGCAGGGATTGGGAAAACAATCCTGGCCAGGAAGATGATGTTGGACTGGGCGTCGGGGACACTCTACCAAGACA
GGTTTGACTATCTGTTCTATATCCACTGTCGGGAGGTGAGCCTTGTGACACAGAGGAGCCTGGGGGACCTGATCA
TGAGCTGCTGCCCCGACCCAAACCCACCCATCCACAAGATCGTGAGAAAACCCTCCAGAATCCTCTTCCTCATGG
ACGGCTTCGATGAGCTGCAAGGTGCCTTTGACGAGCACATAGGACCGCTCTGCACTGACTGGCAGAAGGCCGAGC
GGGGAGACATTCTCCTGAGCAGCCTCATCAGAAAGAAGCTGCTTCCCGAGGCCTCTCTGCTCATCACCACGAGAC
CTGTGGCCCTGGAGAAACTGCAGCACTTGCTGGACCATCCTCGGCATGTGGAGATCCTGGGTTTCTCCGAGGCCA
AAAGGAAAGAGTACTTCTTCAAGTACTTCTCTGATGAGGCCCAAGCCAGGGCAGCCTTCAGTCTGATTCAGGAGA
ACGAGGTCCTCTTCACCATGTGCTTCATCCCCCTGGTCTGCTGGATCGTGTGCACTGGACTGAAACAGCAGATGG
AGAGTGGCAAGAGCCTTGCCCAGACATCCAAGACCACCACCGCGGTGTACGTCTTCTTCCTTTCCAGTTTGCTGC
AGCCCCGGGGAGGGAGCCAGGAGCACGGCCTCTGCGCCCACCTCTGGGGGCTCTGCTCTTTGGCTGCAGATGGAA
TCTGGAACCAGAAAATCCTGTTTGAGGAGTCCGACCTCAGGAATCATGGACTGCAGAAGGCGGATGTGTCTGCTT
TCCTGAGGATGAACCTGTTCCAAAAGGAAGTGGACTGCGAGAAGTTCTACAGCTTCATCCACATGACTTTCCAGG
AGTTCTTTGCCGCCATGTACTACCTGCTGGAAGAGGAAAAGGAAGGAAGGACGAACGTTCCAGGGAGTCGTTTGA
AGCTTCCCAGCCGAGACGTGACAGTCCTTCTGGAAAACTATGGCAAATTCGAAAAGGGGTATTTGATTTTTGTTG
TACGTTTCCTCTTTGGCCTGGTAAACCAGGAGAGGACCTCCTACTTGGAGAAGAAATTAAGTTGCAAGATCTCTC
AGCAAATCAGGCTGGAGCTGCTGAAATGGATTGAAGTGAAAGCCAAAGCTAAAAAGCTGCAGATCCAGCCCAGCC
AGCTGGAATTGTTCTACTGTTTGTACGAGATGCAGGAGGAGGACTTCGTGCAAAGGGCCATGGACTATTTCCCCA
AGATTGAGATCAATCTCTCCACCAGAATGGACCACATGGTTTCTTCCTTTTGCATTGAGAACTGTCATCGGGTGG
AGTCACTGTCCCTGGGGTTTCTCCATAACATGCCCAAGGAGGAAGAGGAGGAGGAAAAGGAAGGCCGACACCTTG
ATATGGTGCAGTGTGTCCTCCCAAGCTCCTCTCATGCTGCCTGTTCTCATGGATTGGTGAACAGCCACCTCACTT
CCAGTTTTTGCCGGGGCCTCTTTTCAGTTCTGAGCACCAGCCAGAGTCTAACTGAATTGGACCTCAGTGACAATT
CTCTGGGGGACCCAGGGATGAGAGTGTTGTGTGAAACGCTCCAGCATCCTGGCTGTAACATTCGGAGATTGTGGT
TGGGGCGCTGTGGCCTCTCGCATGAGTGCTGCTTCGACATCTCCTTGGTCCTCAGCAGCAACCAGAAGCTGGTGG
AGCTGGACCTGAGTGACAACGCCCTCGGTGACTTCGGAATCAGACTTCTGTGTGTGGGACTGAAGCACCTGTTGT
GCAATCTGAAGAAGCTCTGGTTGGTCAGCTGCTGCCTCACATCAGCATGTTGTCAGGATCTTGCATCAGTATTGA
GCACCAGCCATTCCCTGACCAGACTCTATGTGGGGGAGAATGCCTTGGGAGACTCAGGAGTCGCAATTTTATGTG
AAAAAGCCAAGAATCCACAGTGTAACCTGCAGAAACTGGGGTTGGTGAATTCTGGCCTTACGTCAGTCTGTTGTT
CAGCTTTGTCCTCGGTACTCAGCACTAATCAGAATCTCACGCACCTTTACCTGCGAGGCAACACTCTCGGAGACA
AGGGGATCAAACTACTCTGTGAGGGACTCTTGCACCCCGACTGCAAGCTTCAGGTGTTGGAATTAGACAACTGCA

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FIGURE 1191B

ACCTCACGTCACACTGCTGCTGGGATCTTTCCACACTTCTGACCTCCAGCCAGAGCCTGCGAAAGCTGAGCCTGG
GCAACAATGACCTGGGCGACCTGGGGGTCATGATGTTCTGTGAAGTGCTGAAACAGCAGAGCTGCCTCCTGCAGA
ACCTGGGGTTGTCTGAAATGTATTTCAATTATGAGACAAAAAGTGCGTTAGAAACACTTCAAGAAGAAAAGCCTG
AGCTGACCGTCGTCTTTGAGCCTTCTTGG**TAG**GAGTGGAAACGGGGCTGCCAGACGCCAGTGTTCTCCGGTCCCT
CCAGCTGGGGGCCCTCAGGTGGAGAGAGCTGCGATCCATCCAGGCCAAGACCACAGCTCTGTGATCCTTCCGGTG
GAGTGTCGGAGAAGAGAGCTTGCCGACGATGCCTTCCTGTGCAGAGCTTGGGCATCTCCTTTACGCCAGGGTGAG
GAAGACACCAGGACAATGACAGCATCGGGTGTTGTTGTCATCACAGCGCCTCAGTTAGAGGATGTTCCTCTTGGT
GACCTCATGTAATTAGCTCATTCAATAAAGCACTTTCTTTATTTT

FIGURE 1192

MASTRCKLARYLEDLEDVDLKKFKMHLEDYPPQKGCIPLPRGQTEKADHVDLATLMIDFNGEEKAWAMAVWIFAA
INRRDLYEKAKRDEPKWGSDNARVSNPTVICQEDSIEEEWMGLLEYLSRISICKMKKDYRKKYRKYVRSRFQCIE
DRNARLGESVSLNKRYTRLRLIKEHRSQQEREQELLAIGKTKTCESPVSPIKMELLFDPDDEHSEPVHTVVFQGA
AGIGKTILARKMMLDWASGTLYQDRFDYLFYIHCREVSLVTQRSLGDLIMSCCPDPNPPIHKIVRKPSRILFLMD
GFDELQGAFDEHIGPLCTDWQKAERGDILLSSLIRKKLLPEASLLITTRPVALEKLQHLLDHPRHVEILGFSEAK
RKEYFFKYFSDEAQARAAFSLIQENEVLFTMCFIPLVCWIVCTGLKQQMESGKSLAQTSKTTTAVYVFFLSSLLQ
PRGGSQEHGLCAHLWGLCSLAADGIWNQKILFEESDLRNHGLQKADVSAFLRMNLFQKEVDCEKFYSFIHMTFQE
FFAAMYYLLEEEKEGRTNVPGSRLKLPSRDVTVLLENYGKFEKGYLIFVVRFLFGLVNQERTSYLEKKLSCKISQ
QIRLELLKWIEVKAKAKKLQIQPSQLELFYCLYEMQEEDFVQRAMDYFPKIEINLSTRMDHMVSSFCIENCHRVE
SLSLGFLHNMPKEEEEEEKEGRHLDMVQCVLPSSSHAACSHGLVNSHLTSSFCRGLFSVLSTSQSLTELDLSDNS
LGDPGMRVLCETLQHPGCNIRRLWLGRCGLSHECCFDISLVLSSNQKLVELDLSDNALGDFGIRLLCVGLKHLLC
NLKKLWLVSCCLTSACCQDLASVLSTSHSLTRLYVGENALGDSGVAILCEKAKNPQCNLQKLGLVNSGLTSVCCS
ALSSVLSTNQNLTHLYLRGNTLGDKGIKLLCEGLLHPDCKLQVLELDNCNLTSHCCWDLSTLLTSSQSLRKLSLG
NNDLGDLGVMMFCEVLKQQSCLLQNLGLSEMYFNYETKSALETLQEEKPELTVVFEPSW

FIGURE 1193A

CCTGGGTCCTCTCGGCGCCAGAGCCGCTCTCCGCATCCCAGGACAGCGGTGCGGCCCTCGGCCGGGGCGCCCACT
CCGCAGCAGCCAGCGAGCCAGCTGCCCCGT**ATG**ACCGCGCCGGGCGCCGCCGGGCGCTGCCCTCCCACGACATGG
CTGGGCTCCCTGCTGTTGTTGGTCTGTCTCCTGGCGAGCAGGAGTATCACCGAGGAGGTGTCGGAGTACTGTAGC
CACATGATTGGGAGTGGACACCTGCAGTCTCTGCAGCGGCTGATTGACAGTCAGATGGAGACCTCGTGCCAAATT
ACATTTGAGTTTGTAGACCAGGAACAGTTGAAAGATCCAGTGTGCTACCTTAAGAAGGCATTTCTCCTGGTACAA
GACATAATGGAGGACACCATGCGCTTCAGAGATAACACCGCCAATCCCATCGCCATTGTGCAGCTGCAGGAACTC
TCTTTGAGGCTGAAGAGCTGCTTCACCAAGGATTATGAAGAGCATGACAAGGCCTGCGTCCGAACTTTCTATGAG
ACACCTCTCCAGTTGCTGGAGAAGGTCAAGAATGTCTTTAATGAAACAAAGAATCTCCTTGACAAGGACTGGAAT
ATTTTCAGCAAGAACTGCAACAACAGCTTTGCTGAATGCTCCAGCCAAGATGTGGTGACCAAGCCTGATTGCAAC
TGCCTGTACCCCAAAGCCATCCCTAGCAGTGACCCGGCCTCTGTCTCCCCTCATCAGCCCCTCGCCCCCTCCATG
GCCCCTGTGGCTGGCTTGACCTGGGAGGACTCTGAGGGAACTGAGGGCAGCTCCCTCTTGCCTGGTGAGCAGCCC
CTGCACACAGTGGATCCAGGCAGTGCCAAGCAGCGGCCACCCAGGAGCACCTGCCAGAGCTTTGAGCCGCCAGAG
ACCCCAGTTGTCAAGGACAGCACCATCGGTGGCTCACCACAGCCTCGCCCCTCTGTCGGGGCCTTCAACCCCGGG
ATGGAGGATATTCTTGACTCTGCAATGGGCACTAATTGGGTCCCAGAAGAAGCCTCTGGAGAGGCCAGTGAGATT
CCCGTACCCCAAGGGACAGAGCTTTCCCCCTCCAGGCCAGGAGGGGGCAGCATGCAGACAGAGCCCGCCAGACCC
AGCAACTTCCTCTCAGCATCTTCTCCACTCCCTGCATCAGCAAAGGGCCAACAGCCGGCAGATGTAACTGCTACA
GCCTTGCCCAGGGTGGGCCCCGTGATGCCCACTGGCCAGGACTGGAATCACACCCCCCAGAAGACAGACCATCCA
TCTGCCCTGCTCAGAGACCCCCCGGAGCCAGGCTCTCCCAGGATCTCATCACTGCGCCCCCAGGCCCTCAGCAAC
CCCTCCACCCTCTCTGCTCAGCCACAGCTTTCCAGAAGCCACTCCTCGGGCAGCGTGCTGCCCCTTGGGGAGCTG
GAGGGCAGGAGGAGCACCAGGGATCGGACGAGCCCCGCAGAGCCAGAAGCAGCACCAGCAAGTGAAGGGGCAGCC
AGGCCCCTGCCCCGTTTTAACTCCGTTCCTTTGACTGACACAGGCCATGAGAGGCAGTCCGAGGGATCCTCCAGC
CCGCAGCTCCAGGAGTCTGTCTTCCACCTGCTGGTGCCCAGTGTCATCCTGGTCTTGCTGGCTGTCGGAGGCCTC
TTGTTCTACAGGTGGAGGCGGCGGAGCCATCAAGAGCCTCAGAGAGCGGATTCTCCCTTGGAGCAACCAGAGGGC
AGCCCCCTGACTCAGGATGACAGACAGGTGGAACTGCCAGTG**TAG**AGGGAATTCTAAGCTGGACGCACAGAACAG
TCTCTTCGTGGGAGGAGACATTATGGGGCGTCCACCACCACCCCTCCCTGGCCATCCTCCTGGAATGTGGTCTGC
CCTCCACCAGAGCTCCTGCCTGCCAGGACTGGACCAGAGCAGCCAGGCTGGGGCCCCTCTGTCTCAACCCGCAGA
CCCTTGACTGAATGAGAGAGGCCAGAGGATGCTCCCCATGCTGCCACTATTTATTGTGAGCCCTGGAGGCTCCCA
TGTGCTTGAGGAAGGCTGGTGAGCCCGGCTCAGGACCCTCTTCCCTCAGGGGCTGCAGCCTCCTCTCACTCCCTT
CCATGCCGGAACCCAGGCCAGGGACCCACCGGCCTGTGGTTTGTGGGAAAGCAGGGTGCACGCTGAGGAGTGAAA
CAACCCTGCACCCAGAGGGCCTGCCTGGTGCCAAGGTATCCCAGCCTGGACAGGCATGGACCTGTCTCCAGACAG
AGGAGCCTGAAGTTCGTGGGGCGGGACAGCCTCGGCCTGATTTCCCGTAAAGGTGTGCAGCCTGAGAGACGGGAA
GAGGAGGCCTCTGCACCTGCTGGTCTGCACTGACAGCCTGAAGGGTCTACACCCTCGGCTCACCTAAGTCCCTGT
GCTGGTTGCCAGGCCCAGAGGGGAGGCCAGCCCTGCCCTCAGGACCTGCCTGACCTGCCAGTGATGCCAAGAGGG
GGATCAAGCACTGGCCTCTGCCCCTCCTCCTTCCAGCACCTGCCAGAGCTTCTCCAGCAGGCCAAGCAGAGGCTC
CCCTCATGAAGGAAGCCATTGCACTGTGAACACTGTACCTGCCTGCTGAACAGCCTCCCCCCGTCCATCCATGAG
CCAGCATCCGTCCGTCCTCCACTCTCCAGCCTCTCCCCAGCCTCCTGCACTGAGCTGGCCTCACCAGTCGACTGA
GGGAGCCCCTCAGCCCTGACCTTCTCCTGACCTGGCCTTTGACTCCCCGGAGTGGAGTGGGGTGGGAGAACCTCC
TGGGCCGCCAGCCAGAGCCGCTCTTTAGGCTGTGTTCTTCGCCCAGGTTTCTGCATCTTCCACTTTGACATTCCC
AAGAGGGAAGGGACTAGTGGGAGAGAGCAAGGGAGGGGAGGGCACAGACAGAGAGCCTACAGGGCGAGCTCTGAC
TGAAGATGGGCCTTTGAAATATAGGTATGCACCTGAGGTTGGGGGAGGGTCTGCACTCCCAAACCCCAGCGCAGT
GTCCTTTCCCTGCTGCCGACAGGAACCTGGGGCTGAGCAGGTTATCCCTGTCAGGAGCCCTGGACTGGGCTGCAT
CTCAGCCCCACCTGCATGGTATCCAGCTCCCATCCACTTCTCACCCTTCTTTCCTCCTGACCTTGGTCAGCAGTG
ATGACCTCCAACTCTCACCCACCCCCTCTACCATCACCTCTAACCAGGCAAGCCAGGGTGGGAGAGCAATCAGGA
GAGCCAGGCCTCAGCTTCCAATGCCTGGAGGGCCTCCACTTTGTGGCCAGCCTGTGGTGCTGGCTCTGAGGCCTA
GGCAACGAGCGACAGGGCTGCCAGTTGCCCCTGGGTTCCTTTGTGCTGCTGTGTGCCTCCTCTCCTGCCGCCCTT
TGTCCTCCGCTAAGAGACCCTGCCCTACCTGGCCGCTGGGCCCCGTGACTTTCCCTTCCTGCCCAGGAAAGTGAG
GGTCGGCTGGCCCCACCTTCCCTGTCCTGATGCCGACAGCTTAGGGAAGGGCACTGAACTTGCATATGGGGCTTA
GCCTTCTAGTCACAGCCTCTATATTTGATGCTAGAAAACACATATTTTTAAATGGAAGAAAAATAAAAAGGCATT

FIGURE 1193B

CCCCCTTCATCCCCCTACCTTAAACATATAATATTTTAAAGGTCAAAAAAGCAATCCAACCCACTGCAGAAGCTC
TTTTTGAGCACTTGGTGGCATCAGAGCAGGAGGAGCCCCAGAGCCACCTCTGGTGTCCCCCAGGCTACCTGCTCA
GGAACCCCTTCTGTTCTCTGAGAACTCAACAGAGGACATTGGCTCACGCACTGTGAGATTTTGTTTTTATACTTG
CAACTGGTGAATTATTTTTTATAAAGTCATTTAAATATCTATTTAAAAGATAGGAAGCTGCTTATATATTTAATA
ATAAAAGAAGTGCACAAGCTGCCGTTGACGTAGCTCGAG

FIGURE 1194

MTAPGAAGRCPPTTWLGSLLLLVCLLASRSITEEVSEYCSHMIGSGHLQSLQRLIDSQMETSCQITFEFVDQEQL
KDPVCYLKKAFLLVQDIMEDTMRFRDNTANPIAIVQLQELSLRLKSCFTKDYEEHDKACVRTFYETPLQLLEKVK
NVFNETKNLLDKDWNIFSKNCNNSFAECSSQDVVTKPDCNCLYPKAIPSSDPASVSPHQPLAPSMAPVAGLTWED
SEGTEGSSLLPGEQPLHTVDPGSAKQRPPRSTCQSFEPPETPVVKDSTIGGSPQPRPSVGAFNPGMEDILDSAMG
TNWVPEEASGEASEIPVPQGTELSPSRPGGGSMQTEPARPSNFLSASSPLPASAKGQQPADVTATALPRVGPVMP
TGQDWNHTPQKTDHPSALLRDPPEPGSPRISSLRPQALSNPSTLSAQPQLSRSHSSGSVLPLGELEGRRSTRDRT
SPAEPEAAPASEGAARPLPRFNSVPLTDTGHERQSEGSSSPQLQESVFHLLVPSVILVLLAVGGLLFYRWRRRSH
QEPQRADSPLEQPEGSPLTQDDRQVELPV

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FIGURE 1195

CTAAAGTTTTTTTCTTTGAATGACAGAACTACAGCATA**ATG**CGTGGCTTCAACCTGCTCCTCTTCTGGGGATGTT
GTGTTATGCACAGCTGGGAAGGGCACATAAGACCCACACGGAAACCAAACACAAAGGGTAATAACTGTAGAGACA
GTACCTTGTGCCCAGCTTATGCCACCTGCACCAATACGGTGGACAGTTACTATTGCACTTGCAAACAAGGCTTCC
TGTCCAGCAATGGGCAAAATCACTTCAAGGATCCAGGAGTGCGATGCAAAGATATTGATGAATGTTCTCAAAGCC
CCCAGCCCTGTGGTCCTAACTCATCCTGCAAAAACCTGTCAGGGAGGTACAAGTGCAGCTGTTTAGATGGTTTCT
CTTCTCCCACTGGAAATGACTGGGTCCCAGGAAAGCCGGGCAATTTCTCCTGTACTGATATCAATGAGTGCCTCA
CCAGCAGGGTCTGCCCTGAGCATTCTGACTGTGTCAACTCCATGGGAAGCTACAGTTGCAGCTGTCAAGTTGGAT
TCATCTCTAGAAACTCCACCTGTGAAGACGTGAATGAATGTGCAGATCCAAGAGCTTGCCCAGAGCATGCAACTT
GTAATAACACTGTTGGAAACTACTCTTGTTTCTGCAACCCAGGATTTGAATCCAGCAGTGGCCACTTGAGTTGCC
AGGGTCTCAAAGCATCGTGTGAAGATATTGATGAATGCACTGAAATGTGCCCCATCAATTCAACATGCACCAACA
CTCCTGGGAGCTACTTTTGCACCTGCCACCCTGGCTTTGCACCAAGCAGTGGACAGTTGAATTTCACAGACCAAG
GAGTGGAATGTAGAGATATTGATGAGTGCCGCCAAGATCCATCAACCTGTGGTCCTAATTCTATCTGCACCAATG
CCCTGGGCTCCTACAGCTGTGGCTGCATTGTAGGCTTTCATCCCAATCCAGAAGGCTCCCAGAAAGATGGCAACT
TCAGCTGCCAAAGGGTTCTCTTCAAATGTAAGGAAGATGTGATACCCGATAATAAGCAGATCCAGCAATGCCAAG
AGGGAACCGCAGTGAAACCTGCATATGTCTCCTTTTGTGCACAAATAAATAACATCTTCAGCGTTCTGGACAAAG
TGTGTGAAAATAAAACGACCGTAGTTTCTCTGAAGAATACAACTGAGAGCTTTGTCCCTGTGCTTAAACAAATAT
CCATGTGGACTAAATTCACCAAGGAAGAGACGTCCTCCCTGGCCACAGTCTTCCTGGAGAGTGTGGAAAGCATGA
CACTGGCATCTTTTTGGAAACCCTCAGCAAATGTCACTCCGGCTGTTCGGGCGGAATACTTAGACATTGAGAGCA
AAGTTATCAACAAAGAATGCAGTGAAGAGAATGTGACGTTGGACTTGGTAGCCAAGGGGGATAAGATGAAGATCG
GGTGTTCCACAATTGAGGAATCTGAATCCACAGAGACCACTGGTGTGGCTTTTGTCTCCTTTGTGGGCATGGAAT
CGGTTTTAAATGAGCGCTTCTTCCAAGACCACCAGGCTCCCTTGACCACCTCTGAGATCAAGCTGAAGATGAATT
CTCGAGTCGTTGGGGGCATAATGACTGGAGAGAAGAAAGACGGCTTCTCAGATCCAATCATCTACACTCTGGAGA
ACGTTCAGCCAAAGCAGAAGTTTGAGAGGCCCATCTGTGTTTCCTGGAGCACTGATGTGAAGGGTGGAAGATGGA
CATCCTTTGGCTGTGTGATCCTGGAAGCTTCTGAGACATATACCATCTGCAGCTGTAATCAGATGGCAAATCTTG
CCGTTATCATGGCGTCTGGGGAGCTCACGATGGACTTTTCCTTGTACATCATTAGCCATGTAGGCATTATCATCT
CCTTGGTGTGCCTCGTCTTGGCCATCGCCACCTTTCTGCTGTGTCGCTCCATCCGAAATCACAACACCTACCTCC
ACCTGCACCTCTGCGTGTGTCTCCTCTTGGCGAAGACTCTCTTCCTCGCCGGTATACACAAGACTGACAACAAGA
CGGGCTGCGCCATCATCGCGGGCTTCCTGCACTACCTTTTCCTTGCCTGCTTCTTCTGGATGCTGGTGGAGGCTG
TGATACTGTTCTTGATGGTCAGAAACCTGAAGGTGGTGAATTACTTCAGCTCTCGCAACATCAAGATGCTGCACA
TCTGTGCCTTTGGTTATGGGCTGCCGATGCTGGTGGTGGTGATCTCTGCCAGTGTGCAGCCACAGGGCTATGGAA
TGCATAATCGCTGCTGGCTGAATACAGAGACAGGGTTCATCTGGAGTTTCTTGGGGCCAGTTTGCACAGTTATAG
TGATCAACTCCCTTCTCCTGACCTGGACCTTGTGGATCCTGAGGCAGAGGCTTTCCAGTGTTAATGCCGAAGTCT
CAACGCTAAAAGACACCAGGTTACTGACCTTCAAGGCCTTTGCCCAGCTCTTCATCCTGGGCTGCTCCTGGGTGC
TGGGCATTTTTCAGATTGGACCTGTGGCAGGTGTCATGGCTTACCTGTTCACCATCATCAACAGCCTGCAGGGGG
CCTTCATCTTCCTCATCCACTGTCTGCTCAACGGCCAGGTACGAGAAGAATACAAGAGGTGGATCACTGGGAAGA
CGAAGCCCAGCTCCCAGTCCCAGACCTCAAGGATCTTGCTGTCCTCCATGCCATCCGCTTCCAAGACGGGT**TAA**A
GCCTTTCTTGCTTTCAAATATGCTATGGAGCCACAGTTGAGGACAGTAGTTTCCTGCAGGAGCCTACCCTGAAAT
CTCTTCTCAGCTTAACATGGAAATGAGGATCCCACCAGCCCCAGAACCCTCTGGGGAAGAATGTTGGGGGCCGTC
TTCCTGTGGTTGTATGCACTGATGAGAAATCAGACGTTTCTGCTCCAAACGACCATTTTATCTTCGTGCTCTGCA
ACTTCTTCAATTCCAGAGTTTCTGAGAACAGACCCAAATTCAATGGCATGACCAAGAACACCTGGCTACCATTTT
GTTTTCTCCTGCCCTTGTTGGTGCATGGTTCTAAGCGTGCCCCTCCAGCGCCTATCATACGCCTGACACAGAGAA
CCTCTCAATAAATGATTTGTCGCCTGTCTGACTGATTTACCCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1196

MRGFNLLLFWGCCVMHSWEGHIRPTRKPNTKGNNCRDSTLCPAYATCTNTVDSYYCTCKQGFLSSNGQNHFKDPG
VRCKDIDECSQSPQPCGPNSSCKNLSGRYKCSCLDGFSSPTGNDWVPGKPGNFSCTDINECLTSRVCPEHSDCVN
SMGSYSCSCQVGFISRNSTCEDVNECADPRACPEHATCNNTVGNYSCFCNPGFESSSGHLSCQGLKASCEDIDEC
TEMCPINSTCTNTPGSYFCTCHPGFAPSSGQLNFTDQGVECRDIDECRQDPSTCGPNSICTNALGSYSCGCIVGF
HPNPEGSQKDGNFSCQRVLFKCKEDVIPDNKQIQQCQEGTAVKPAYVSFCAQINNIFSVLDKVCENKTTVVSLKN
TTESFVPVLKQISMWTKFTKEETSSLATVFLESVESMTLASFWKPSANVTPAVRAEYLDIESKVINKECSEENVT
LDLVAKGDKMKIGCSTIEESESTETTGVAFVSFVGMESVLNERFFQDHQAPLTTSEIKLKMNSRVVGGIMTGEKK
DGFSDPIIYTLENVQPKQKFERPICVSWSTDVKGGRWTSFGCVILEASETYTICSCNQMANLAVIMASGELTMDF
SLYIISHVGIIISLVCLVLAIATFLLCRSIRNHNTYLHLHLCVCLLLAKTLFLAGIHKTDNKTGCAIIAGFLHYL
FLACFFWMLVEAVILFLMVRNLKVVNYFSSRNIKMLHICAFGYGLPMLVVVISASVQPQGYGMHNRCWLNTETGF
IWSFLGPVCTVIVINSLLLTWTLWILRQRLSSVNAEVSTLKDTRLLTFKAFAQLFILGCSWVLGIFQIGPVAGVM
AYLFTIINSLQGAFIFLIHCLLNGQVREEYKRWITGKTKPSSQSQTSRILLSSMPSASKTG

FIGURE 1197A

CATGGCGGCGACTGCGGCAAAGCGAGAGCCTCGGAGACGCCGCTGCCGCCAGCACAGCCGGAGATCTGAGCCGAC
ACTGGGGGCAGTCCGCGAGCCCCGCACTCTCTCGATGAGTCGGAGAAGTCCCGTTGTATCAGAGTAAGATGGACG
GTAGCTTTGATTGTGATTGTGGTGAGCTGGAGCCACCTGATCACTAACAAAAGACATCTTCTGTTAACCAACAGC
CGCCAGGCTTCCTGTTGAAATAAATATATAGCAACAAAGGAAAAAAAGAAGCAAAACGGAAATAGTGCTTACCAG
CACCTTAGAATGATGCTGCTCAGGACCAGTCCAACACTGAATGTATCTGCACTGTGAGGAGAATGTTCATAGAAG
CCTGTTGTGTGCATATTTATTCACTTTTTGTTAAATGTTAAATCGTTTAGCACGGTAATCTGAGTGCACAGTATG
TCATTTCATTCCGTTTGAGTTTCTTGTTTTCGTTAAATGTCTGCAGAGTTGCTGCCCCTTTCTTGAACTATGAGT
ACTGCAATCTTTTTAATTCTCAATATGAATAGAGCTTTTTGAGCTTTAAATCTAAGGGGAACTCGACAGGCCTGT
TTGGCATATGCAATGAACATCAAGAAACCATCTTGCTGTGGAAGCATAATTATTTTTCTTCTCCCTTTTTGAAAG
ATCTTTCCTTTTGATGCCAGTTTTCTTCCTTGTTTACACAAGTTCAATTTGAAAGGAAAAGGCAATAGTAAGGGT
TTCAAA**ATG**GCAGAGAAATTTGAAAGTCTCATGAACATTCATGGTTTTGATCTGGGTTCTAGGTATATGGACTTA
AAACCATTGGGTTGTGGAGGCAATGGCTTGGTTTTTTCTGCTGTAGACAATGACTGTGACAAAAGAGTAGCCATC
AAGAAAATTGTCCTTACTGATCCCCAGAGTGTCAAACATGCTCTACGTGAAATCAAAATTATTAGAAGACTTGAC
CATGATAACATTGTGAAAGTGTTTGAGATTCTTGGTCCCAGTGGAAGCCAATTAACAGACGATGTGGGCTCTCTT
ACGGAACTGAACAGTGTTTACATTGTTCAGGAGTACATGGAGACAGACTTGGCTAATGTGCTGGAGCAGGGCCCT
TTACTGGAAGAGCATGCCAGGCTTTTCATGTATCAGCTGCTACGGGGGCTCAAGTATATTCACTCTGCAAATGTA
CTGCACAGAGATCTCAAACCAGCTAATCTTTTCATTAATACGGAAGACTTGGTGCTGAAGATAGGTGACTTTGGT
CTTGCACGGATCATGGATCCTCATTATTCCCATAAGGGTCATCTTTCTGAAGGATTGGTTACTAAATGGTACAGA
TCTCCACGTCTTTTACTTTCTCCTAATAATTATACTAAAGCCATTGACATGTGGGCTGCAGGCTGCATCTTTGCT
GAAATGCTGACTGGTAAAACCCTTTTTGCAGGTGCACATGAACTTGAACAGATGCAGCTGATTTTAGAATCTATT
CCTGTTGTACATGAGGAAGATCGTCAGGAGCTTCTCAGCGTAATTCCAGTTTACATTAGAAATGACATGACTGAG
CCACACAAACCTTTAACTCAGCTGCTTCCAGGAATTAGTCGAGAAGCACTGGATTTCCTGGAACAAATTTTGACA
TTTAGCCCCATGGATCGGTTAACAGCAGAAGAAGCACTCTCCCATCCTTACATGAGCATATATTCTTTTCCAATG
GATGAGCCAATTTCAAGCCATCCTTTTCATATTGAAGATGAAGTTGATGATATTTTGCTTATGGATGAAACTCAC
AGTCACATTTATAACTGGGAAAGGTATCATGATTGTCAGTTTTCAGAGCATGATTGGCCTGTACATAACAACTTT
GATATTGATGAAGTTCAGCTTGATCCAAGAGCTCTGTCCGATGTCACTGATGAAGAAGAAGTACAAGTTGATCCC
CGAAAATATTTGGATGGAGATCGGGAAAAGTATCTGGAGGATCCTGCTTTTGATACCAATTACTCTACTGAGCCT
TGTTGGCAATACTCAGATCATCATGAAAACAAATATTGTGATCTGGAGTGTAGCCATACTTGTAACTACAAAACG
AGGTCATCATCATATTTAGATAACTTAGTTTGGAGAGAGAGTGAAGTTAACCATTACTATGAACCCAAGCTTATT
ATAGATCTTTCCAATTGGAAAGAACAAAGCAAAGAAAAATCTGATAAGAAAGGCAAATCAAAATGTGAAAGGAAT
GGATTGGTTAAAGCCCAGATAGCGCTAGAGGAAGCATCACAGCAACTGGCTGGAAAAGAAAGGGAAAAGAATCAG
GGATTTGATTTTGATTCCTTTATTGCAGGAACTATTCAGCTTAGTTCCCAGCATGAGCCTACTGATGTTGTTGAT
AAATTAAATGACTTGAATAGCTCAGTGTCCCAACTAGAATTGAAAAGTTTGATATCAAAGTCAGTAAGCCAAGAA
AAACAGGAAAAAGGAATGGCAAATCTGGCTCAATTAGAAGCCTTGTACCAGTCTTCTTGGGACAGCCAGTTTGTG
AGTGGTGGGGAGGACTGTTTTTTCATAAATCAGTTTTGTGAGGTAAGGAAGGATGAACAAGTTGAGAAGGAAAAC
ACTTACACTAGTTACTTGGACAAGTTCTTTAGCAGGAAAGAAGATACTGAAATGCTAGAAACTGAGCCAGTAGAG
GATGGGAAGCTTGGGGAGAGAGGACATGAGGAAGGATTTCTGAACAACAGTGGGGAGTTCCTCTTTAACAAGCAG
CTCGAGTCCATAGGCATCCCACAGTTTCACAGTCCAGTTGGGTCACCACTTAAGTCAATACAGGCCACATTAACA
CCTTCTGCTATGAAATCTTCCCCTCAAATTCCTCATCAAACATACAGCAGCATTCTGAAACATCTGAAC**TAA**AAC
ACTCAGCAGACATTTATCTTTGTATTCTTCATGAAATGTGTTTTGTCTTTTTTTATTACTAGTGTTTAAGTCATT
TTTTACTTGAATCAGATGGTGTCATTTAGTAAGGATTTTATGAGTTCTTGTTTTTTAAAATCCAGACTTTCTTTT
TCTACATGTGAGATAGTTTTCATTTTAACTGGCATGTCATTTGCACACAAAAATAAAGACTAGAGCAAAATAATG
CAACGCAGGAGGAGAAAAGAAATGCACTAAGACAAGAACATTCTCTCATAGAACATTGATCTGTTTTACAGGAAA
CAAACCTTGCCTTGAAATTTACACAGTGAGACTGTACATAATTGCATGAAAATAGCTATTTTTTTCCTAAGACAT
TTTTCATTCATGAATATTTTCAAGTTTTTCATACTGTACACATTTCTTAAAACACATGATACCAGCAGCAACTGA
AAATGAATGCCGAATTTGGTACACATGTGTTATCTACCTCAAGGTAACAAGAGTATGTGGCAAAACATATACCAC
CCATAGTGCTTCACAAAATGCACTTCTATTTAGCCAGCGTTTATTGTAGTAAACTATTCTTAATAAAACTCACTC
ACTGTTTATAAATGTTCTGGTATGCATTCTTTATAGTGAAGTGTTAATACATCACATCTTATTTATTTTAGCAAA

FIGURE 1197B

TCAGTATATTTTCTGTATTTAATTATAAAAAATTAACTTAGTTTTTAAAATTTATTTGCAAATATACTTTTTCCA
TTTGGCACTATGGTTTGTTGCCTACCTAGCTGCATCTATAATGTCAGCTTATCCTAAGGCTGTCCACGTACTTAA
TTTACTTAAGTGTTCATTTTAAGTAACGTGCTCACTGTGTATAGGAATTTGTATTTTGGAGGTGCTTGATCTATC
TACAAAGAAAAATTAATTAGGAATTACTTTATTATAAAATGCTCCTAGAAGTCTTAATTGTGTTTATTTTTTAAA
AAAACAAATGTTAGACTTGTGTGCATGGAAGTAATTAAGGTACATCATTATTGTAGTTTGAAAGTTGTACATGAT
AAGACATTTTGTTTTTACTGTATGTTTTTACTGAATGATCTATTCCCCATCCCAAGGCAAGCATGAATAAAATTA
GGTTAAACGTAGCATGTGGCATCGCAGTCTCTTAGAATTTGTTTCATCTATTTTATTTTATTGAATACTGTCTGT
ATCTTTGGTTATCCTGTTTGAAGAAAAAGGACAAATAAAACATGGCCAGCAAATACAAAAAAAAAAAA

FIGURE 1198

MAEKFESLMNIHGFDLGSRYMDLKPLGCGGNGLVFSAVDNDCDKRVAIKKIVLTDPQSVKHALREIKIIRRLDHD
NIVKVFEILGPSGSQLTDDVGSLTELNSVYIVQEYMETDLANVLEQGPLLEEHARLFMYQLLRGLKYIHSANVLH
RDLKPANLFINTEDLVLKIGDFGLARIMDPHYSHKGHLSEGLVTKWYRSPRLLLSPNNYTKAIDMWAAGCIFAEM
LTGKTLFAGAHELEQMQLILESIPVVHEEDRQELLSVIPVYIRNDMTEPHKPLTQLLPGISREALDFLEQILTFS
PMDRLTAEEALSHPYMSIYSFPMDEPISSHPFHIEDEVDDILLMDETHSHIYNWERYHDCQFSEHDWPVHNNFDI
DEVQLDPRALSDVTDEEEVQVDPRKYLDGDREKYLEDPAFDTNYSTEPCWQYSDHHENKYCDLECSHTCNYKTRS
SSYLDNLVWRESEVNHYYEPKLIIDLSNWKEQSKEKSDKKGKSKCERNGLVKAQIALEEASQQLAGKEREKNQGF
DFDSFIAGTIQLSSQHEPTDVVDKLNDLNSSVSQLELKSLISKSVSQEKQEKGMANLAQLEALYQSSWDSQFVSG
GEDCFFINQFCEVRKDEQVEKENTYTSYLDKFFSRKEDTEMLETEPVEDGKLGERGHEEGFLNNSGEFLFNKQLE
SIGIPQFHSPVGSPLKSIQATLTPSAMKSSPQIPHQTYSSILKHLN

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FIGURE 1199

GCATTCCCCACACAACACCCACACTCAGCCACTGCGGGCGAGGAGGGCACGAGGCCAGGTTCCCAAGAGCTCAGG
TTTGTCCTGGAACCCAGATGGACTGTGGCCGGGCAAGTGGATCACAGGCCTGGCCAGCCTAGGAGTTGCCACATG
TGAGGGGCCGAGGGGCTCAAGGAGGGGAACATCGGGGAGAGGAGCCTACTGGGTGGAGGCTGGGGGTCCCAGCAG
GAAATGGTGAGACAAAGGGCGCTGGCTGGCAGGAAGACAGCACAGGAAGGTCCTAGAGGTTCCTCAGTGCAGCTG
GACTCTCCTGGAGACCTTCACACACCCTGACATCTGGGCCCCGTTCCACGAGGGTGCTTTCACTGGTCTGCACCA
TGGCCCAGGCCCTGGGATTTTGAACAGCTCCGCAGGTGAATGAAAGGAAC**ATG**GAGCTGATCCAGGACATCTCTC
GCCCGCCACTGGAGTACGTGAAGGGGGTCCCGCTCATCAAGTACTTTGCAGAGGCACTGGGGCCCCTGCAGAGCT
TCCAGGCCCGGCCTGATGACCTGCTCATCAGCACCTACCCCAAGTCCGGCACCACCTGGGTGAGCCAGATTCTGG
ACATGATCTACCAGGGCGGTGACCTGGAAAAGTGTCACCGAGCTCCCATCTTCATGCGGGTGCCCTTCCTTGAGT
TCAAAGTCCCAGGGATTCCCTCAGGGATGGAGACTCTGAAAAACACACCAGCCCCACGACTCCTGAAGACACACC
TGCCCCTGGCTCTGCTCCCCCAGACTCTGTTGGATCAGAAGGTCAAGGTGGTCTATGTTGCCCGCAACGCAAAGG
ATGTGGCGGTTTCCTACTACCACTTCTACCACATGGCCAAAGTGTACCCTCACCCTGGGACCTGGGAAAGCTTCC
TGGAGAAGTTCATGGCTGGAGAAGTGTCCTATGGGTCCTGGTACCAGCACGTGCAAGAGTGGTGGGAGCTGAGCC
GCACCCACCCTGTTCTCTACCTCTTCTATGAAGACATGAAGGAGAACCCCAAAAGGGAGATTCAAAAGATCCTGG
AGTTTGTGGGGCGCTCCCTGCCAGAGGAGACTGTGGACCTCATGGTTGAGCACACGTCGTTCAAGGAGATGAAGA
AGAACCCTATGACCAACTACACCACCGTCCGCCGGGAGTTCATGGACCACAGCATCTCCCCCTTCATGAGGAAAG
GCATGGCTGGGGACTGGAAGACCACCTTCACCGTGGCGCAGAATGAGCGCTTCGATGCGGACTATGCGGAGAAGA
TGGCAGGCTGCAGCCTCAGCTTCCGCTCTGAGCTG**TGA**GAGGGGTTCCTGGAGTCACTGCAGAGGGAGTGTGCGA
ATCAAGCCTGACCAAGAGGCTCCAGAATAAAGTATGATTTGTGTTC

FIGURE 1200

MELIQDISRPPLEYVKGVPLIKYFAEALGPLQSFQARPDDLLISTYPKSGTTWVSQILDMIYQGGDLEKCHRAPI
FMRVPFLEFKVPGIPSGMETLKNTPAPRLLKTHLPLALLPQTLLDQKVKVVYVARNAKDVAVSYYHFYHMAKVYP
HPGTWESFLEKFMAGEVSYGSWYQHVQEWWELSRTHPVLYLFYEDMKENPKREIQKILEFVGRSLPEETVDLMVE
HTSFKEMKKNPMTNYTTVRREFMDHSISPFMRKGMAGDWKTTFTVAQNERFDADYAEKMAGCSLSFRSEL

FIGURE 1201

GGGATACCTTGTTTATAGTACCTTCTCTTTGCCAGTCCATCTTCAAATTGGAATTATAGAAAGTAGAGGGAGGGA
TAGTCTACCGTCTCTCACTGGATTGGTGCCACCTAAAACATTGTT**ATG**CTGGAAATGCTAGAATATAATCACTAT
CAGGTGCAGACCCACCTCGAAAACCCCACCAAGTACCACATACAGCAAGCCCAACGGCAGCAGGTAAAGCAGTAC
CTTTCTACCACTTTAGCAAATAAACATGCCAACCAAGTCCTGAGCTTGCCATGTCCAAACCAGCCTGGCGATCAT
GTCATGCCACCGGTGCCGGGGAGCAGCGCACCCAACAGCCCCATGGCTATGCTTACGCTTAACTCCAACTGTGAA
AAAGAGGGATTTTATAAGTTTGAAGAGCAAAACAGGGCAGAGAGCGAGTGCCCAGGCATGAACACACATTCACGA
GCGTCCTGTATGCAGATGGATGATGTAATCGATGACATCATTAGCCTAGAATCAAGTTATAATGAGGAAATCTTG
GGCTTGATGGATCCTGCTTTGCAAATGGCAAATACGTTGCCTGTCTCGGGAAACTTGATTGATCTTTATGGAAAC
CAAGGTCTGCCCCCACCAGGCCTCACCATCAGCAACTCCTGTCCAGCCAACCTTCCCAACATAAAAAGGGAGCTC
ACAGCGTGTATTTTTCCCACAGAGTCTGAAGCAAGAGCACTGGCCAAAGAGAGGCAGAAAAAGGACAATCACAAC
CTGATTGAACGAAGAAGAAGATTTAACATAAATGACCGCATTAAAGAACTAGGTACTTTGATTCCCAAGTCAAAT
GATCCAGACATGCGCTGGAACAAGGGAACCATCTTAAAAGCATCCGTGGACTATATCCGAAAGTTGCAACGAGAA
CAGCAACGCGCAAAAGAACTTGAAAACCGACAGAAGAAACTGGAGCACGCCAACCGGCATTTGTTGCTCAGAATA
CAGGAACTTGAAATGCAGGCTCGAGCTCATGGACTTTCCCTTATTCCATCCACGGGTCTCTGCTCTCCAGATTTG
GTGAATCGGATCATCAAGCAAGAACCCGTTCTTGAGAACTGCAGCCAAGACCTCCTTCAGCATCATGCAGACCTA
ACCTGTACAACAACTCTCGATCTCACGGATGGCACCATCACCTTCAACAACAACCTCGGAACTGGGACTGAGGCC
AACCAAGCCTATAGTGTCCCCACAAAAATGGGATCCAAACTGGAAGACATCCTGATGGACGACACCCTTTCTCCC
GTCGGTGTCACTGATCCACTCCTTTCCTCAGTGTCCCCCGGAGCTTCCAAAACAAGCAGCCGGAGGAGCAGTATG
AGCATGGAAGAGACGGAGCACACTTGT**TAG**CGAATCCTCCCTGCACTGCATTCGCACAAACTGCTTCCTTTCTTG
ATTCGTAGATTTAATAACTTACCTGAAGGGGTTTTCTTGATAATTTTCCTTTAATATGAAATTTTTTTTCATGCT
TTATCAATAGCCCAGGATATATTTTATTTTTAGAATTTTGTGAAACAGACTTGTATATTCTATTTTACAACTACA
AATGCCTCCAAAGTATTGTACAAATAAGTGTGCAGTATCTGTGAACTGAATTCACCACAGACTTTAGCTTTCTGA
GCAAGAGGATTTTGCGTCAGAGAAATGTCTGTCCATTTTTATTCAGGGGAAACTTGATTTGAGATTTTTATGCCT
GTGACTTCCTTGGAAATCAAATGTAAAGTTTAATTGAAAGAATGTAAAGCAACCCCCCAAAAA

FIGURE 1202

MLEMLEYNHYQVQTHLENPTKYHIQQAQRQQVKQYLSTTLANKHANQVLSLPCPNQPGDHVMPPVPGSSAPNSPM
AMLTLNSNCEKEGFYKFEEQNRAESECPGMNTHSRASCMQMDDVIDDIISLESSYNEEILGLMDPALQMANTLPV
SGNLIDLYGNQGLPPPGLTISNSCPANLPNIKRELTACIFPTESEARALAKERQKKDNHNLIERRRRFNINDRIK
ELGTLIPKSNDPDMRWNKGTILKASVDYIRKLQREQQRAKELENRQKKLEHANRHLLLRIQELEMQARAHGLSLI
PSTGLCSPDLVNRIIKQEPVLENCSQDLLQHHADLTCTTTLDLTDGTITFNNNLGTGTEANQAYSVPTKMGSKLE
DILMDDTLSPVGVTDPLLSSVSPGASKTSSRRSSMSMEETEHTC

FIGURE 1203A

GGCGGCTCGGGACGGAGGACGCGCTAGTGTGAGTGCGGGCTTCTAGAACTACACCGACCCTCGTGTCCTCCCTTC
ATCCTGCGGGGCTGGCTGGAGCGGCCGCTCCGGTGCTGTCCAGCAGCCATAGGGAGCCGCACGGGGAGCGGGAAA
GCGGTCGCGGCCCCAGGCGGGGCGGCCGGGATGGAGCGGGGCCGCGAGCCTGTGGGGAAGGGGCTGTGGCGGCGC
CTCGAGCGGCTGCAGGTTCTTCTGTGTGGCAGTTCAGA**ATG**ATGGATCAAGCTAGATCAGCATTCTCTAACTTGT
TTGGTGGAGAACCATTGTCATATACCCGGTTCAGCCTGGCTCGGCAAGTAGATGGCGATAACAGTCATGTGGAGA
TGAAACTTGCTGTAGATGAAGAAGAAAATGCTGACAATAACACAAAGGCCAATGTCACAAAACCAAAAAGGTGTA
GTGGAAGTATCTGCTATGGGACTATTGCTGTGATCGTCTTTTTCTTGATTGGATTTATGATTGGCTACTTGGGCT
ATTGTAAAGGGGTAGAACCAAAAACTGAGTGTGAGAGACTGGCAGGAACCGAGTCTCCAGTGAGGGAGGAGCCAG
GAGAGGACTTCCCTGCAGCACGTCGCTTATATTGGGATGACCTGAAGAGAAAGTTGTCGGAGAAACTGGACAGCA
CAGACTTCACCAGCACCATCAAGCTGCTGAATGAAAATTCATATGTCCCTCGTGAGGCTGGATCTCAAAAAGATG
AAAATCTTGCGTTGTATGTTGAAAATCAATTTCGTGAATTTAAACTCAGCAAAGTCTGGCGTGATCAACATTTTG
TTAAGATTCAGGTCAAAGACAGCGCTCAAAACTCGGTGATCATAGTTGATAAGAACGGTAGACTTGTTTACCTGG
TGGAGAATCCTGGGGGTTATGTGGCGTATAGTAAGGCTGCAACAGTTACTGGTAAACTGGTCCATGCTAATTTTG
GTACTAAAAAAGATTTTGAGGATTTATACACTCCTGTGAATGGATCTATAGTGATTGTCAGAGCAGGGAAAATCA
CCTTTGCAGAAAAGGTTGCAAATGCTGAAAGCTTAAATGCAATTGGTGTGTTGATATACATGGACCAGACTAAAT
TTCCCATTGTTAACGCAGAACTTTCATTCTTTGGACATGCTCATCTGGGGACAGGTGACCCTTACACACCTGGAT
TCCCTTCCTTCAATCACACTCAGTTTCCACCATCTCGGTCATCAGGATTGCCTAATATACCTGTCCAGACAATCT
CCAGAGCTGCTGCAGAAAAGCTGTTTGGGAATATGGAAGGAGACTGTCCCTCTGACTGGAAAACAGACTCTACAT
GTAGGATGGTAACCTCAGAAAGCAAGAATGTGAAGCTCACTGTGAGCAATGTGCTGAAAGAGATAAAAATTCTTA
ACATCTTTGGAGTTATTAAAGGCTTTGTAGAACCAGATCACTATGTTGTAGTTGGGGCCCAGAGAGATGCATGGG
GCCCTGGAGCTGCAAAATCCGGTGTAGGCACAGCTCTCCTATTGAAACTTGCCCAGATGTTCTCAGATATGGTCT
TAAAAGATGGGTTTCAGCCCAGCAGAAGCATTATCTTTGCCAGTTGGAGTGCTGGAGACTTTGGATCGGTTGGTG
CCACTGAATGGCTAGAGGGATACCTTTCGTCCCTGCATTTAAAGGCTTTCACTTATATTAATCTGGATAAAGCGG
TTCTTGGTACCAGCAACTTCAAGGTTTCTGCCAGCCCACTGTTGTATACGCTTATTGAGAAAACAATGCAAAATG
TGAAGCATCCGGTTACTGGGCAATTTCTATATCAGGACAGCAACTGGGCCAGCAAAGTTGAGAAACTCACTTTAG
ACAATGCTGCTTTCCCTTTCCTTGCATATTCTGGAATCCCAGCAGTTTCTTTCTGTTTTTGCGAGGACACAGATT
ATCCTTATTTGGGTACCACCATGGACACCTATAAGGAACTGATTGAGAGGATTCCTGAGTTGAACAAAGTGGCAC
GAGCAGCTGCAGAGGTCGCTGGTCAGTTCGTGATTAAACTAACCCATGATGTTGAATTGAACCTGGACTATGAGA
GGTACAACAGCCAACTGCTTTCATTTGTGAGGGATCTGAACCAATACAGAGCAGACATAAAGGAAATGGGCCTGA
GTTTACAGTGGCTGTATTCTGCTCGTGGAGACTTCTTCCGTGCTACTTCCAGACTAACAACAGATTTCGGGAATG
CTGAGAAAACAGACAGATTTGTCATGAAGAAACTCAATGATCGTGTCATGAGAGTGGAGTATCACTTCCTCTCTC
CCTACGTATCTCCAAAAGAGTCTCCTTTCCGACATGTCTTCTGGGGCTCCGGCTCTCACACGCTGCCAGCTTTAC
TGGAGAACTTGAAACTGCGTAAACAAAATAACGGTGCTTTTAATGAAACGCTGTTCAGAAACCAGTTGGCTCTAG
CTACTTGGACTATTCAGGGAGCTGCAAATGCCCTCTCTGGTGACGTTTGGGACATTGACAATGAGTTT**TAA**ATGT
GATACCCATAGCTTCCATGAGAACAGCAGGGTAGTCTGGTTTCTAGACTTGTGCTGATCGTGCTAAATTTTCAGT
AGGGCTACAAAACCTGATGTTAAAATTCCATCCCATCATCTTGGTACTACTAGATGTCTTTAGGCAGCAGCTTTT
AATACAGGGTAGATAACCTGTACTTCAAGTTAAAGTGAATAACCACTTAAAAAATGTCCATGATGGAATATTCCC
CTATCTCTAGAATTTTAAGTGCTTTGTAATGGGAACTGCCTCTTTCCTGTTGTTGTTAATGAAAATGTCAGAAAC
CAGTTATGTGAATGATCTCTCTGAATCCTAAGGGCTGGTCTCTGCTGAAGGTTGTAAGTGGTTCGCTTACTTTGA
GTGATCCTCCAACTTCATTTGATGCTAAATAGGAGATACCAGGTTGAAAGACCTCTCCAAATGAGATCTAAGCCT
TTCCATAAGGAATGTAGCAGGTTTCCTCATTCCTGAAAGAAACAGTTAACTTTCAGAAGAGATGGGCTTGTTTTC
TTGCCAATGAGGTCTGAAATGGAGGTCCTTCTGCTGGATAAAATGAGGTTCAACTGTTGATTGCAGGAATAAGGC
CTTAATATGTTAACCTCAGTGTCATTTATGAAAAGAGGGGACCAGAAGCCAAAGACTTAGTATATTTTCTTTTCC
TCTGTCCCTTCCCCCATAAGCCTCCATTTAGTTCTTTGTTATTTTTGTTTCTTCCAAAGCACATTGAAAGAGAAC
CAGTTTCAGGTGTTTAGTTGCAGACTCAGTTTGTCAGACTTTAAAGAATAATATGCTGCCAAATTTTGGCCAAAG
TGTTAATCTTAGGGGAGAGCTTTCTGTCCTTTTGGCACTGAGATATTTATTGTTTATTTATCAGTGACAGAGTTC
ACTATAAATGGTGTTTTTTTAATAGAATATAATTATCGGAAGCAGTGCCTTCCATAATTATGACAGTTATACTGT
CGGTTTTTTTTAAATAAAAGCAGCATCTGCTAATAAAACCCAACAGATACTGGAAGTTTTGCATTTATGGTCAAC

FIGURE 1203B

ACTTAAGGGTTTTAGAAAACAGCCGTCAGCCAAATGTAATTGAATAAAGTTGAAGCTAAGATTTAGAGATGAATT
AAATTTAATTAGGGGTTGCTAAGAAGCGAGCACTGACCAGATAAGAATGCTGGTTTTCCTAAATGCAGTGAATTG
TGACCAAGTTATAAATCAATGTCACTTAAAGGCTGTGGTAGTACTCCTGCAAAATTTTATAGCTCAGTTTATCCA
AGGTGTAACTCTAATTCCCATTTGCAAAATTTCCAGTACCTTTGTCACAATCCTAACACATTATCGGGAGCAGTG
TCTTCCATAATGTATAAAGAACAAGGTAGTTTTTACCTACCACAGTGTCTGTATCGGAGACAGTGATCTCCATAT
GTTACACTAAGGGTGTAAGTAATTATCGGGAACAGTGTTTCCCATAATTTTCTTCATGCAATGACATCTTCAAAG
CTTGAAGATCGTTAGTATCTAACATGTATCCCAACTCCTATAATTCCCTATCTTTTAGTTTTAGTTGCAGAAACA
TTTTGTGGTCATTAAGCATTGGGTGGGTAAATTCAACCACTGTAAAATGAAATTACTACAAAATTTGAAATTTAG
CTTGGGTTTTTGTTACCTTTATGGTTTCTCCAGGTCCTCTACTTAATGAGATAGCAGCATACATTTATAATGTTT
GCTATTGACAAGTCATTTTAATTTATCACATTATTTGCATGTTACCTCCTATAAACTTAGTGCGGACAAGTTTTA
ATCCAGAATTGACCTTTTGACTTAAAGCAGAGGGACTTTGTATAGAAGGTTTGGGGGGCTGTGGGGAAGGAGAGTC
CCCTGAAGGTCTGACACGTCTGCCTACCCATTCGTGGTGATCAATTAAATGTAGGTATGAATAAGTTCGAAGCTC
CGTGAGTGAACCATCATATAAACGTGTAGTACAGCTGTTTGTCATAGGGCAGTTGGAAACGGCCTCCTAGGGAAA
AGTTCATAGGGTCTCTTCAGGTTCTTAGTGTCACTTACCTAGATTTACAGCCTCACTTGAATGTGTCACTACTCA
CAGTCTCTTTAATCTTCAGTTTTATCTTTAATCTCCTCTTTTATCTTGGACTGACATTTAGCGTAGCTAAGTGAA
AAGGTCATAGCTGAGATTCCTGGTTCGGGTGTTACGCACACGTACTTAAATGAAAGCATGTGGCATGTTCATCGT
ATAACACAATATGAATACAGGGCATGCATTTTGCAGCAGTGAGTCTCTTCAGAAAACCCTTTTCTACAGTTAGGG
TTGAGTTACTTCCTATCAAGCCAGTACGTGCTAACAGGCTCAATATTCCTGAATGAAATATCAGACTAGTGACAA
GCTCCTGGTCTTGAGATGTCTTCTCGTTAAGGAGTAGGGCCTTTTGGAGGTAAAGGTATA

FIGURE 1204

MMDQARSAFSNLFGGEPLSYTRFSLARQVDGDNSHVEMKLAVDEEENADNNTKANVTKPKRCSGSICYGTIAVIV
FFLIGFMIGYLGYCKGVEPKTECERLAGTESPVREEPGEDFPAARRLYWDDLKRKLSEKLDSTDFTSTIKLLNEN
SYVPREAGSQKDENLALYVENQFREFKLSKVWRDQHFVKIQVKDSAQNSVIIVDKNGRLVYLVENPGGYVAYSKA
ATVTGKLVHANFGTKKDFEDLYTPVNGSIVIVRAGKITFAEKVANAESLNAIGVLIYMDQTKFPIVNAELSFFGH
AHLGTGDPYTPGFPSFNHTQFPPSRSSGLPNIPVQTISRAAAEKLFGNMEGDCPSDWKTDSTCRMVTSESKNVKL
TVSNVLKEIKILNIFGVIKGFVEPDHYVVVGAQRDAWGPGAAKSGVGTALLLKLAQMFSDMVLKDGFQPSRSIIF
ASWSAGDFGSVGATEWLEGYLSSLHLKAFTYINLDKAVLGTSNFKVSASPLLYTLIEKTMQNVKHPVTGQFLYQD
SNWASKVEKLTLDNAAFPFLAYSGIPAVSFCFCEDTDYPYLGTTMDTYKELIERIPELNKVARAAAEVAGQFVIK
LTHDVELNLDYERYNSQLLSFVRDLNQYRADIKEMGLSLQWLYSARGDFFRATSRLTTDFGNAEKTDRFVMKKLN
DRVMRVEYHFLSPYVSPKESPFRHVFWGSGSHTLPALLENLKLRKQNNGAFNETLFRNQLALATWTIQGAANALS
GDVWDIDNEF

FIGURE 1205

TTGAACTCCTGGAGCCCGTCACCCAGGAAACCGGCCGCAATCGCCGGCCGACCTGAAGCTGGTTTC**ATG**GCAGCC
TCAAAGAAGGCAGTTTTGGGGCCATTGGTGGGGGCGGTGGACCAGGGCACCAGTTCGACGCGCTTTTTGGTTTTC
AATTCAAAAACAGCTGAACTACTTAGTCATCATCAAGTAGAAATAAAACAAGAGTTCCCAAGAGAAGGATGGGTG
GAACAGGACCCTAAGGAAATTCTACATTCTGTCTATGAGTGTATAGAGAAAACATGTGAGAAACTTGGACAGCTC
AATATTGATATTTCCAACATAAAAGCTATTGGTGTCAGCAACCAGAGGGAAACCACTGTAGTCTGGGACAAGATA
ACTGGAGAGCCTCTCTACAATGCTGTGGTGTGGCTTGATCTAAGAACCCAGTCTACCGTTGAGAGTCTTAGTAAA
AGAATTCCAGGAAATAATAACTTTGTCAAGTCCAAGACAGGCCTTCCACTTAGCACTTACTTCAGTGCAGTGAAA
CTTCGTTGGCTCCTTGACAATGTGAGAAAAGTTCAAAAGGCCGTTGAAGAAAAACGAGCTCTTTTTGGGACTATT
GATTCATGGCTTATTTGGAGTTTGACAGGAGGAGTCAATGGAGGTGTCCACTGTACAGATGTAACAAATGCAAGT
AGGACTATGCTTTTCAACATTCATTCTTTGGAATGGGATAAACAACTCTGCGAATTTTTTGGAATTCCAATGGAA
ATTCTTCCAAATGTCCGGAGTTCTTCTGAGATCTATGGCCTAATGAAAGCTGGGGCCTTGGAAGGTGTGCCAATA
TCTGGGTGTTTAGGGGACCAGTCTGCTGCATTGGTGGGACAAATGTGCTTCCAGATTGGACAAGCCAAAAATACG
TATGGAACAGGATGTTTCTTACTATGTAATACAGGCCATAAGTGTGTATTTTCTGATCATGGCCTTCTCACCACA
GTGGCTTACAAACTTGGCAGAGACAAACCAGTATATTATGCTTTGGAAGGTTCTGTAGCTATAGCTGGTGCTGTT
ATTCGCTGGCTAAGAGACAATCTTGGAATTATAAAGACCTCAGAAGAAATTGAAAAACTTGCTAAAGAAGTAGGT
ACTTCTTATGGCTGCTACTTCGTCCCAGCATTTTCGGGGTTATATGCACCTTATTGGGAGCCCAGCGCAAGAGGG
ATAATCTGTGGACTCACTCAGTTCACCAATAAATGCCATATTGCTTTTGCTGCATTAGAAGCTGTTTGTTTCCAA
ACTCGAGAGATTTTGGATGCCATGAATCGAGACTGTGGAATTCCACTCAGTCATTTGCAGGTAGATGGAGGAATG
ACCAGCAACAAAATTCTTATGCAGCTACAAGCAGACATTCTGTATATACCAGTAGTGAAGCCCTCAATGCCCGAA
ACCACTGCACTGGGTGCGGCTATGGCGGCAGGGGCTGCAGAAGGAGTCGGCGTATGGAGTCTCGAACCCGAGGAT
TTGTCTGCCGTCACGATGGAGCGGTTTGAACCTCAGATTAATGCGGAGGAAAGTGAAATTCGTTATTCTACATGG
AAGAAAGCTGTGATGAAGTCAATGGGTTGGGTTACAACTCAATCTCCAGAAAGTGGTATTCCA**TAA**AACCTACCA
ACTCATGGATTCCCAAGATGTGAGCTTTTTACATAATGAAAGAACCCAGCAATTCTGTCTCTTAATGCAATGACA
CTATTCATAGACTTTGATTTTATTTATAAGCCACTTGCTGCATGACCCTCCAAGTAGACCTGTGGCTTAAAATAA
AGAAAATGCAGCAAAAAGAATGCTATAGAAATATTTGGTGGTTTTTTTTTTTTTAAACATCCACAGTTAAGGTTG
GGCCAGCTACCTTTGGGGGTGACCCCCCCCATTGCCATAACATCCTGCTCCATTCCCTCTAAGATGTAGGAAGAA
TTCGGATCCTTACCATTGGAATCTTCCATCGAACATACTCAAACACTTTTGGGCCAGGATTTGAGTCTCTGCATG
ACATATACTTGATTAAAAGGTTATTACTAACCTGTTAAAAATC

FIGURE 1206

MAASKKAVLGPLVGAVDQGTSSTRFLVFNSKTAELLSHHQVEIKQEFPREGWVEQDPKEILHSVYECIEKTCEKL
GQLNIDISNIKAIGVSNQRETTVVWDKITGEPLYNAVVWLDLRTQSTVESLSKRIPGNNNFVKSKTGLPLSTYFS
AVKLRWLLDNVRKVQKAVEEKRALFGTIDSWLIWSLTGGVNGGVHCTDVTNASRTMLFNIHSLEWDKQLCEFFGI
PMEILPNVRSSSEIYGLMKAGALEGVPISGCLGDQSAALVGQMCFQIGQAKNTYGTGCFLLCNTGHKCVFSDHGL
LTTVAYKLGRDKPVYYALEGSVAIAGAVIRWLRDNLGIIKTSEEIEKLAKEVGTSYGCYFVPAFSGLYAPYWEPS
ARGIICGLTQFTNKCHIAFAALEAVCFQTREILDAMNRDCGIPLSHLQVDGGMTSNKILMQLQADILYIPVVKPS
MPETTALGAAMAAGAAEGVGVWSLEPEDLSAVTMERFEPQINAEESEIRYSTWKKAVMKSMGWVTTQSPESGIP

FIGURE 1207

CACAGCCGGCCGACACCACACCAGCCGGGGAGCCGCCGCCGCCGCCACCTCTGAGCAGCCGGCTGGGAGCGA
GAGCCGACAGCTAGTCTGCAAGCCACCGCTGTCGCC**ATG**GGGAGCCGCGTCTCGCGGGAAGACTTCGAGTGGGTC
TACACCGACCAGCCGCACGCCGACCGGCGCCGGGAGATCCTGGCAAAGTATCCAGAGATAAAGTCCTTGATGAAA
CCTGATCCCAATTTGATATGGATTATAATTATGATGGTTCTCACCCAGTTGGGTGCATTTTACATAGTAAAAGAC
TTGGACTGGAAATGGGTCATATTTGGGGCCTATGCGTTTGGCAGTTGCATTAACCACTCAATGACTCTGGCTATT
CATGAGATTGCCCACAATGCTGCCTTTGGCAACTGCAAAGCAATGTGGAATCGCTGGTTTGGAATGTTTGCTAAT
CTTCCTATTGGGATTCCATATTCAATTTCCTTTAAGAGGTATCACATGGATCATCATCGGTACCTTGGAGCTGAT
GGCGTCGATGTAGATATTCCTACCGATTTTGAGGGCTGGTTCTTCTGTACCGCTTTCAGAAAGTTTATATGGGTT
ATTCTTCAGCCTCTCTTTTATGCCTTTCGACCTCTGTTCATCAACCCCAAACCAATTACGTATCTGGAAGTTATC
AATACCGTGGCACAGGTCACTTTTGACATTTTAATTTATTACTTTTTGGGAATTAAATCCTTAGTCTACATGTTG
GCAGCATCTTTACTTGGCCTGGGTTTGCACCCAATTTCTGGACATTTTATAGCTGAGCATTACATGTTCTTAAAG
GGTCATGAAACTTACTCATATTATGGGCCTCTGAATTTACTTACCTTCAATGTGGGTTATCATAATGAACATCAT
GATTTCCCCAACATTCCTGGAAAAAGTCTTCCACTGGTGAGGAAAATAGCAGCTGAATACTATGACAACCTCCCT
CACTACAATTCCTGGATAAAAGTACTGTATGATTTTGTGATGGATGATACAATAAGTCCCTACTCAAGAATGAAG
AGGCACCAAAAAGGAGAGATGGTGCTGGAG**TAA**ATATCATTAGTGCCAAAGGGATTCTTCTCCAAAACTTTAGAT
GATAAAATGGAATTTTTGCATTATTAAACTTGAGACCAGTGATGCTCAGAAGCTCCCCTGGCACAATTTCAGAGT
AAGAGCTCGGTGATACCAAGAAGTGAATCTGGCTTTTAAACAGTCAGCCTGACTCTGTACTGCTCAGTTTCACTC
ACAGGAAACTTGTGACTTGTGTATTATCGTCATTGAGGATGTTTCACTCATGTCTGTCATTTTATAAGCATATCA
TTTAAAAAGCTTCTAAAAAGCTATTTCGCCAGGCACGGTGGCTCATGCCTATAATCCCAGCACTTTGGGAGGCCA
AGGTGGGTGGATCACCTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACACGGTGAAACCCCATCTCTACTAAAA
ATGCAAAAATTAGCCGGGCGTGGCGGCACATGCCTGTAATCCCAGCTACATGGGAGGCTGAGGTGGGAGAATTGC
TTGAACCCAGGAGGCGGAGGCAGAGGCTGCAGTGACCCAAGATTGTGCCACTGCACTCCACCCTGGGCAACAGAG
CAAGACCCCATCTCAAAAATAAATAAATATATATAAAAAATAAAAAGCTATTTCTAGTTTATTTCACTATAAAGT
TTTGCTTTATTAAAAAGCTAATAAACAGCTATTAATCACAGTGTATTAGTATTTGTTACATTTTTGTATTTCACT
ATCTTTATACTATATAATATGGTAACTTGGGTACCGGGGGAACTTTAAAATTTCATCTCAAAAATAATTTTTAAA
AAGCCTGAGGTATGATATAGCATAAAAGATTGAGATGAAAATATATTTCCCTGTAAGCTGAATTACTCATTTAAA
AATTTTAACTTCTATATGGGACCCGAATTAGACACTGCTGAATCCTGTACAGCCTTACTCATAAATAAAGTACTT
ACTGAATTTCCACCATTCAAAAAAAAAAAAAAA

FIGURE 1208

MGSRVSREDFEWVYTDQPHADRRREILAKYPEIKSLMKPDPNLIWIIIMMVLTQLGAFYIVKDLDWKWVIFGAYA
FGSCINHSMTLAIHEIAHNAAFGNCKAMWNRWFGMFANLPIGIPYSISFKRYHMDHHRYLGADGVDVDIPTDFEG
WFFCTAFRKFIWVILQPLFYAFRPLFINPKPITYLEVINTVAQVTFDILIYYFLGIKSLVYMLAASLLGLGLHPI
SGHFIAEHYMFLKGHETYSYYGPLNLLTFNVGYHNEHHDFPNIPGKSLPLVRKIAAEYYDNLPHYNSWIKVLYDF
VMDDTISPYSRMKRHQKGEMVLE

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FIGURE 1209

CTCCTCTAGGCCGCCGGCCGCGAAGCGCTGAGTCACGGTGAGGCGACTGGACCCACACTCTCTTAACCTGCCCTC
CCTGCACTCGCTCCCGGCGGCTCTTCGCGTCACCCCCGCCGCTAAGGCTCCAGGTGCCGCTACCGCAGCGTGAGT
ACCTGGGGCTCCTGCAGGGGTCCACTAGCCCTCCATCCTCTACAGCTCAGCATCAGAACACTCTCTTTTTAGACT
CCGATATGGGTCCTCCAAGAAAGTTACTCTCTCAGTGCTCAGCCGGGAGCAGTCGGAAGGGGTTGGAGCGAGGG
TCCGGAGAAGCATTGGCAGACCCGAGTTAAAAAATCTGGATCCGTTTTTACTGTTTGATGAATTTAAAGGAGGTA
GACCAGGAGGATTTCCTGATCATCCACATCGAGGTTTTGAAACAGTATCCTACCTCCTGGAAGGGGGCAGCATGG
CCCATGAAGACTTCTGTGGACACACTGGTAAAATGAACCCAGGAGATTTGCAGTGGATGACTGCGGGCCGGGGCA
TTCTGCACGCTGAGATGCCTTGCTCAGAGGAGCCAGCCCATGGCCTACAACTGTGGGTTAATTTGAGGAGCTCAG
AGAAGATGGTGGAGCCTCAGTACCAGGAACTGAAAAGTGAAGAAATCCCTAAACCCAGTAAGGATGGTGTGACAG
TTGCTGTCATTTCTGGAGAAGCCCTGGGAATAAAGTCCAAGGTTTACACTCGCACACCAACCTTATATTTGGACT
TCAAATTGGACCCAGGAGCCAAACATTCCCAACCTATCCCTAAAGGGTGGACAAGCTTCATTTACACGATATCTG
GAGATGTGTATATTGGGCCCGATGATGCACAACAAAAAATAGAACCTCATCACACAGCAGTGCTTGGAGAAGGTG
ACAGTGTCCAGGTGGAGAACAAGGATCCCAAGAGAAGCCACTTTGTCTTAATTGCTGGGGAGCCATTAAGAGAAC
CAGTTATCCAACATGGTCCATTTGTGATGAACACCAATGAAGAGATTTCTCAAGCTATTCTTGATTTCAGAAACG
CAAAAAATGGGTTTGAAAGGGCCAAAACCTGGAAATCAAAGATTGGGAACTAGTGGAAAGCGGAAGAGCAGGTCT
TGATGTGTCCTAGAATTTTGCCATTTCTGAGATTGAGCCATTGAAGGCATTCCATTTCTAAAGCTTATTTAGCCG
GTGCTTCTAAAGAATTCCACACTAACGTGATAACATGGTTTTTGTAACAATAAATGTAGGATATTTCCTGGCACA
TGCAAATAAACCTAATCATTGTTTCTTTAAAAAAAAAAAAAAA

FIGURE 1210

MGSSKKVTLSVLSREQSEGVGARVRRSIGRPELKNLDPFLLFDEFKGGRPGGFPDHPHRGFETVSYLLEGGSMAH
EDFCGHTGKMNPGDLQWMTAGRGILHAEMPCSEEPAHGLQLWVNLRSSEKMVEPQYQELKSEEIPKPSKDGVTVA
VISGEALGIKSKVYTRTPTLYLDFKLDPGAKHSQPIPKGWTSFIYTISGDVYIGPDDAQQKIEPHHTAVLGEGDS
VQVENKDPKRSHFVLIAGEPLREPVIQHGPFVMNTNEEISQAILDFRNAKNGFERAKTWKSKIGN

FIGURE 1211

AATTCCGGAATTCCCCGGCCTGGCCAGGGCGGAGCGGCGCCCAGTAGGGACCCATTCATTGTGCCGGCGCCTCAC
TGGGCACGGGGCCCAAGCTGACGGCGTGCACGGGAGCCTGCGGAGCCTGGGTGGGAAGAACAGGCCCCTGGAGGG
CACTTGACCTTAAGCCTCTTTTCCTCCGCAGAGAGGAAGCGGGAGAGGAGCCCACGTCGCCTGTCACCCAATATC
TCCAGCCGCGCAGTCCCGAAGAGTGTAAG**ATG**TTCGCCTGCGCCAAGCTCGCCTGCACCCCCTCTCTGATCCGAG
CTGGATCCAGAGTTGCATACAGACCAATTTCTGCATCAGTGTTATCTCGACCAGAGGCTAGTAGGACTGGAGAGG
GCTCTACGGTATTTAATGGGGCCCAGAATGGTGTGTCTCAGCTAATCCAAAGGGAGTTTCAGACCAGTGCAATCA
GCAGAGACATTGATACTGCTGCCAAATTTATTGGTGCAGGTGCTGCAACAGTAGGAGTGGCTGGTTCTGGTGCTG
GTATTGGAACAGTCTTTGGCAGCCTTATCATTGGTTATGCCAGAAACCCTTCGCTGAAGCAGCAGCTGTTCTCAT
ATGCTATCCTGGGATTTGCCTTGTCTGAAGCTATGGGTCTCTTTTGTTTGATGGTTGCTTTCTTGATTTTGTTTG
CCATG**TAA**CAAATTACTGCTTGACATGTTGGCATTCATATTAATTACGGATGTAATTCTGTGTATCTTACTGTGA
CTCCGAAAACTGTAGTATTGGTGTCATGGGAATGTACGTTATTTCCAAAGTCATTTCATTAAAGATGAAAACTTT
A

FIGURE 1212

MFACAKLACTPSLIRAGSRVAYRPISASVLSRPEASRTGEGSTVFNGAQNGVSQLIQREFQTSAISRDIDTAAKF
IGAGAATVGVAGSGAGIGTVFGSLIIGYARNPSLKQQLFSYAILGFALSEAMGLFCLMVAFLILFAM

FIGURE 1213

ATGGTCAGAAAGCCTGTTGTGTCCACCATCTCCAAAGGAGGTTACCTGCAGGGAAATGTTAACGGGAGGCTGCCT
TCCCTGGGCAACAAGGAGCCACCTGGGCAGGAGAAAGTGCAGCTGAAGAGGAAAGTCACTTTACTGAGGGGAGTC
TCCATTATCATTGGCACCATCATTGGAGCAGGAATCTTCATCTCTCCTAAGGGCGTGCTCCAGAACACGGGCAGC
GTGGGCATGTCTCTGACCATCTGGACGGTGTGTGGGGTCCTGTCACTATTTGGAGCTTTGTCTTATGCTGAATTG
GGAACAACTATAAAGAAATCTGGAGGTCATTACACATATATTTTGGAAGTCTTTGGTCCATTACCAGCTTTTGTA
CGAGTCTGGGTGGAACTCCTCATAATACGCCCTGCAGCTACTGCTGTGATATCCCTGGCATTTGGACGCTACATT
CTGGAACCATTTTTTATTCAATGTGAAATCCCTGAACTTGCGATCAAGCTCATTACAGCTGTGGGCATAACTGTA
GTGATGGTCCTAAATAGCATGAGTGTCAGCTGGAGCGCCCGGATCCAGATTTTCTTAACCTTTTGCAAGCTCACA
GCAATTCTGATAATTATAGTCCCTGGAGTTATGCAGCTAATTAAAGGTCAAACGCAGAACTTTAAAGACGCGTTT
TCAGGAAGAGATTCAAGTATTACGCGGTTGCCACTGGCTTTTTATTATGGAATGTATGCATATGCTGGCTGGTTT
TACCTCAACTTTGTTACTGAAGAAGTAGAAAACCCTGAAAAAACCATTCCCCTTGCAATATGTATATCCATGGCC
ATTGTCACCATTGGCTATGTGCTGACAAATGTGGCCTACTTTACGACCATTAATGCTGAGGAGCTGCTGCTTTCA
AATGCAGTGGCAGTGACCTTTTCTGAGCGGCTACTGGGAAATTTCTCATTAGCAGTTCCGATCTTTGTTGCCCTC
TCCTGCTTTGGCTCCATGAACGGTGGTGTGTTTGCTGTCTCCAGGTTATTCTATGTTGCGTCTCGAGAGGGTCAC
CTTCCAGAAATCCTCTCCATGATTCATGTCCGCAAGCACACTCCTCTACCAGCTGTTATTGTTTTGCACCCTTTG
ACAATGATAATGCTCTTCTCTGGAGACCTCGACAGTCTTTTGAATTTCCTCAGTTTTGCCAGGTGGCTTTTTATT
GGGCTGGCAGTTGCTGGGCTGATTTATCTTCGATACAAATGCCCAGATATGCATCGTCCTTTCAAGGTGCCACTG
TTCATCCCAGCTTTGTTTTCCTTCACATGCCTCTTCATGGTTGCCCTTTCCCTCTATTCGGACCCATTTAGTACA
GGGATTGGCTTCGTCATCACTCTGACTGGAGTCCCTGCGTATTATCTCTTTATTATATGGGACAAGAAACCCAGG
TGGTTTAGAATAATGTCAGAGAAAATAACCAGAACATTACAAATAATACTGGAAGTTGTACCAGAAGAAGATAAG
TTATGAACTAATGGACTTGAGATCTTGGCAATCTGCCCAAGGGGAGACACAAAATAGGGATTTTTACTTCATTTT
CTGAAAGTCTAGAGAATTACAACTTTGGTGATAAACAAAAGGAGTCAGTTATTTTTATTCATATATTTTAGCATA
TTCGAACTAATTTCTAAGAAATTTAGTTATAACTCTATGTAGTTATAGAAAGTGAATATGCAGTTATTCTATGAG
TCGCACAATTCTTGAGTCTCTGATACCTACCTATTGGGGTTAGGAGAAAAGACTAGACAATTACTATGTGGTCAT
TCTCTACAACATATGTTAGCACGGCAAAGAACCTTCAAATTGAAGACTGAGATTTTTCTGTATATATGGGTTTTG
TAAAGATGGTTTTACACACTACAGATGTCTATACTGTGAAAAGTGTTTTCAATTCTGAAAAAAAGCATACATCAT
GATTATGGCAAAGAGGAGAGAAAGAAATTTATTTTACATTGACATTGCATTGCTTCCCCTTAGATACCAATTTAG
ATAACAAACACTCATGCTTTAATGGATTATACCCAGAGCACTTTGAACAAAGGTCAGTGGGGATTGTTGAATACA
TTAAAGAAGAGTTTCTAGGGGCTACTGTTTATGAGACACATCCAGGAGTTATGTTTAAGTAAAAATCCTTGAGAA
TTTATTATGTCAGATGTTTTTTCATTCATTATCAGGAAGTTTTAGTTATCTGTCATTTTTTTTTTTCACATCAGT
TTGATCAGGAAAGTGTATAACACATCTTAGAGCAAGAGTTAGTTTGGTATTAAATCCTCATTAGAACAACCACCT
GTTTCACTAATAACTTACCCCTGATGAGTCTATCTAAACATATGCATTTTAAGCCTTCAAATTACATTATCAACA
TGAGAGAAATAACCAACAAAGAAGATGTTCAAAATAATAGTCCCATATCTGTAATCATATCTACATGCAATGTTA
GTAATTCTGAAGTTTTTTAAATTTATGGCTATTTTTACACGATGATGAATTTTGACAGTTTGTGCATTTTCTTTA
TACATTTTATATTCTTCTGTTAAAATATCTCTTCAGATGAAACTGTCCAGATTAATTAGGAAAAGGCATATATTA
ACATAAAAATTGCAAAAGAAATGTCGCTGTAAATAAGATTTACAACTGATGTTTCTAGAAAATTTCCACTTCTAT
ATCTAGGCTTTGTCAGTAATTTCCACACCTTAATTATCATTCAACTTGCAAAAGAGACAACTGATAAGAAGAAAA
TTGAAATGAGAATCTGTGGATAAGTGTTTGTGTTCAGAAGATGTTGTTTTGCCAGTATTAGAAAATACTGTGAGC
CGGGCATGGTGGCTTACATCTGTAATCCCAGCACTTTGGGAGGCTGAGGGGGTGGATCACCTGAGGTCGGGAGTT
CTAGACCAGCCTGACCAACATGGAGAAACCCCATCTCTACTAAAAATACAAAATTAGCTGGGCATGGTGGCACAT
GCTGGTAATCTCAGCTATTGAGGAGGCTGAGGCAGGAGAATTGCTTGAACCCGGGAGGCGGAGGTTGCAGTGAGC
CAAGATTGCACCACTGTACTCCAGCCTGGGTGACAAAGTCAGACTCCATCTCCAAAAAAAAAAAAAAAA

FIGURE 1214

MVRKPVVSTISKGGYLQGNVNGRLPSLGNKEPPGQEKVQLKRKVTLLRGVSIIIGTIIGAGIFISPKGVLQNTGS
VGMSLTIWTVCGVLSLFGALSYAELGTTIKKSGGHYTYILEVFGPLPAFVRVWVELLIIRPAATAVISLAFGRYI
LEPFFIQCEIPELAIKLITAVGITVVMVLNSMSVSWSARIQIFLTFCKLTAILIIIVPGVMQLIKGQTQNFKDAF
SGRDSSITRLPLAFYYGMYAYAGWFYLNFVTEEVENPEKTIPLAICISMAIVTIGYVLTNVAYFTTINAEELLLS
NAVAVTFSERLLGNFSLAVPIFVALSCFGSMNGGVFAVSRLFYVASREGHLPEILSMIHVRKHTPLPAVIVLHPL
TMIMLFSGDLDSLLNFLSFARWLFIGLAVAGLIYLRYKCPDMHRPFKVPLFIPALFSFTCLFMVALSLYSDPFST
GIGFVITLTGVPAYYLFIIWDKKPRWFRIMSEKITRTLQIILEVVPEEDKL

FIGURE 1215

ACTTTCCTGCCCCTTCCCCGGCCAAGCCCAACTCCGGATCTCGCTCTCCACCGGATCTCACCCGCCACACCCGGA
CAGGCGGCTGGAGGAGGCGGGCGTCTAAAATTCTGGGAAGCAGAACCTGGCCGGAGCCACTAGACAGAGCCGGGC
CTAGCCCAGAGAC**ATG**GAGAGTTGCTACAACCCAGGTCTGGATGGTATTATTGAATATGATGATTTCAAATTGAA
CTCCTCCATTGTGGAACCCAAGGAGCCAGCCCCAGAAACAGCTGATGGCCCCTACCTGGTGATCGTGGAACAGCC
TAAGCAGAGAGGCTTCCGATTTCGATATGGCTGTGAAGGCCCCTCCCATGGAGGACTGCCCGGTGCCTCCAGTGA
GAAGGGCCGAAAGACCTATCCCACTGTCAAGATCTGTAACTACGAGGGACCAGCCAAGATCGAGGTGGACCTGGT
AACACACAGTGACCCACCTCGTGCTCATGCCCACAGTCTGGTGGGCAAGCAATGCTCGGAGCTGGGGATCTGCGC
CGTTTCTGTGGGGCCCAAGGACATGACTGCCCAATTTAACAACCTGGGTGTCCTGCATGTGACTAAGAAGAACAT
GATGGGGACTATGATACAAAAACTTCAGAGGCAGCGGCTCCGCTCTAGGCCCCAGGGCCTTACGGAGGCCGAGCA
GCGGGAGCTGGAGCAAGAGGCCAAAGAACTGAAGAAGGTGATGGATCTGAGTATAGTGCGGCTGCGCTTCTCTGC
CTTCCTTAGAGCCAGTGATGGCTCCTTCTCCCTGCCCCTGAAGCCAGTCACCTCCCAGCCCATCCATGATAGCAA
ATCTCCGGGGGCATCAAACCTGAAGATTTCTCGAATGGACAAGACAGCAGGCTCTGTGCGGGGTGGAGATGAAGT
TTATCTGCTTTGTGACAAGGTGCAGAAAGATGACATTGAGGTTCGGTTCTATGAGGATGATGAGAATGGATGGCA
GGCCTTTGGGGACTTCTCTCCCACAGATGTGCATAAACAGTATGCCATTGTGTTCCGGACACCCCCCTATCACAA
GATGAAGATTGAGCGGCCTGTAACAGTGTTTCTGCAACTGAAACGCAAGCGAGGAGGGGACGTGTCTGATTCCAA
ACAGTTCACCTATTACCCTCTGGTGGAAGACAAGGAAGAGGTGCAGCGGAAGCGGAGGAAGGCCTTGCCCACCTT
CTCCCAGCCCTTCGGGGGTGGCTCCCACATGGGTGGAGGCTCTGGGGGTGCAGCCGGGGGCTACGGAGGAGCTGG
AGGAGGTGGCAGCCTCGGTTTCTTCCCCTCCTCCCTGGCCTACAGCCCCTACCAGTCCGGCGCGGGCCCCATGCG
GTGCTACCCGGGAGGCGGGGGCGGGGCGCAGATGGCCGCCACGGTGCCCAGCAGGGACTCCGGGGAGGAAGCCGC
GGAGCCGAGCGCCCCCTCCAGGACCCCCCAGTGCGAGCCGCAGGCCCCGGAGATGCTGCAGCGAGCTCGAGAGTA
CAACGCGCGCCTGTTCGGCCTGGCGCACGCAGCCCCGAGCCCTACTCGACTACTGCGTCACCGCGGACGCCGCGC
GCTGCTGGCGGGACAGCGCCACCTGCTGACGGCGCAGGACGAGAACGGAGACACACCACTGCACCTAGCCATCAT
CCACGGGCAGACCAGTGTCATTGAGCAGATAGTCTATGTCATCCACCACGCCCAGGACCTCGGCGTTGTCAACCT
CACCAACCACCTGCACCAGACGCCCCTGCACCTGGCGGTGATCACGGGGCAGACGAGTGTGGTGAGCTTTCTGCT
GCGGGTAGGTGCAGACCCAGCTCTGCTGGATCGGCATGGAGACTCAGCCATGCATCTGGCGCTGCGGGCAGGCGC
TGGTGCTCCTGAGCTGCTGCGTGCACTGCTTCAGAGTGGAGCTCCTGCTGTGCCCCAGCTGTTGCATATGCCTGA
CTTTGAGGGACTGTATCCAGTACACCTGGCGGTCCGAGCCCGAAGCCCTGAGTGCCTGGATCTGCTGGTGGACAG
TGGGGCTGAAGTGGAGGCCACAGAGCGGCAGGGGGGACGAACAGCCTTGCATCTAGCCACAGAGATGGAGGAGCT
GGGGTTGGTCACCCATCTGGTCACCAAGCTCCGGGCCAACGTGAACGCTCGCACCTTTGCGGGAAACACACCCCT
GCACCTGGCAGCTGGACTGGGGTACCCGACCCTCACCCGCCTCCTTCTGAAGGCTGGTGCTGACATCCATGCTGA
AAACGAGGAGCCCCTGTGCCCACTGCCTTCACCCCCTACCTCTGATAGCGACTCGGACTCTGAAGGGCCTGAGAA
GGACACCCGAAGCAGCTTCCGGGGCCACACGCCTCTTGACCTCACTTGCAGCACCTTGGTGAAGACCTTGCTGCT
AAATGCTGCTCAGAACACCATGGAGCCACCCCTGACCCCGCCCAGCCCAGCAGGGCCGGGACTGTCACTTGGTGA
TACAGCTCTGCAGAACCTGGAGCAGCTGCTAGACGGGCCAGAAGCCCAGGGCAGCTGGGCAGAGCTGGCAGAGCG
TCTGGGGCTGCGCAGCCTGGTAGACACGTACCGACAGACAACCTCACCCAGTGGCAGCCTCCTGCGCAGCTACGA
GCTGGCTGGCGGGGACCTGGCAGGTCTACTGGAGGCCCTGTCTGACATGGGCCTAGAGGAGGGAGTGAGGCTGCT
GAGGGGTCCAGAAACCCGAGACAAGCTGCCCAGCACAGAGGTGAAGGAAGACAGTGCGTACGGGAGCCAGTCAGT
GGAGCAGGAGGCAGAGAAGCTGGGCCCACCCCCTGAGCCACCAGGAGGGCTCTCGCACGGGCACCCCCAGCCTCA
GGTGACTGACCTGCTGCCTGCCCCCAGCCCCCTTCCCGGACCCCCTGTACAGCGTCCCCACCTATTTCAAATCTT
ATTTAACACCCCACACCCACCCCTCAGTTGGGACAAA**TAA**AGGATTCTCATGGGAAGGGGAGGACCCCGAATTCC
T

FIGURE 1216

MESCYNPGLDGIIEYDDFKLNSSIVEPKEPAPETADGPYLVIVEQPKQRGFRFRYGCEGPSHGGLPGASSEKGRK
TYPTVKICNYEGPAKIEVDLVTHSDPPRAHAHSLVGKQCSELGICAVSVGPKDMTAQFNNLGVLHVTKKNMMGTM
IQKLQRQRLRSRPQGLTEAEQRELEQEAKELKKVMDLSIVRLRFSAFLRASDGSFSLPLKPVTSQPIHDSKSPGA
SNLKISRMDKTAGSVRGGDEVYLLCDKVQKDDIEVRFYEDDENGWQAFGDFSPTDVHKQYAIVFRTPPYHKMKIE
RPVTVFLQLKRKRGGDVSDSKQFTYYPLVEDKEEVQRKRRKALPTFSQPFGGGSHMGGGSGGAAGGYGGAGGGGS
LGFFPSSLAYSPYQSGAGPMRCYPGGGGGAQMAATVPSRDSGEEAAEPSAPSRTPQCEPQAPEMLQRAREYNARL
FGLAHAAPSPTRLLRHRGRRALLAGQRHLLTAQDENGDTPLHLAIIHGQTSVIEQIVYVIHHAQDLGVVNLTNHL
HQTPLHLAVITGQTSVVSFLLRVGADPALLDRHGDSAMHLALRAGAGAPELLRALLQSGAPAVPQLLHMPDFEGL
YPVHLAVRARSPECLDLLVDSGAEVEATERQGGRTALHLATEMEELGLVTHLVTKLRANVNARTFAGNTPLHLAA
GLGYPTLTRLLLKAGADIHAENEEPLCPLPSPPTSDSDSDSEGPEKDTRSSFRGHTPLDLTCSTLVKTLLLNAAQ
NTMEPPLTPPSPAGPGLSLGDTALQNLEQLLDGPEAQGSWAELAERLGLRSLVDTYRQTTSPSGSLLRSYELAGG
DLAGLLEALSDMGLEEGVRLLRGPETRDKLPSTEVKEDSAYGSQSVEQEAEKLGPPPEPPGGLSHGHPQPQVTDL
LPAPSPLPGPPVQRPHLFQILFNTPHPPLSWDK

FIGURE 1217

GACCACGCGTATCGATGTCGACCCACAGGATTGTCACAGAGGGCAGGGTGGTGACTGAGGACCAGCTCCTCATGC
TTGAGGCTGTGGTGATGCACCTCGGGATCCGCTCTGCCCGCTGTGTCCTGGGC**ATG**GAGGGTCAGCAGGTCATCC
TGCACCTGCCCCTATCCCAGAAGGGGCCCTTCTGGACATGGGAGCCTAGTGCCCCTCGAACTCTGCTCCAGGTCC
TACAGGATCCAGCCCTGAAAGACCTCGTCCTCACCTGCCCCACCCTGCCCTGGCATTCCCTGATCCTGCGGCCCC
AGTATGAGATCCAAGCCATCATGCACATGCGCAGGACCATTGTCAAGATCCCTTCTACCCTGGAGGTCGACGTGG
AGGACGTCACCGCCTCCTCCCGGCACGTCCACTTTATCAAACCGCTGCTGCTGAGCGAGGTCCTGGCCTGGGAAG
GCCCTTTCCCCCTGTCCATGGAGATCCTGGAGGTTCCTGAGGGCCGCCCCATCTTCCTCAGCCCGTGGGTGGGCT
CCTTGCAAAAAGGCCAGAGGCTTTGCGTCTATGGCCTAGCCTCACCACCCTGGCGGGTCCTGGCCTCAAGCAAGG
GCCGCAAGGTGCCCAGGCACTTCCTGGTGTCAGGGGGCTACCAAGGCAAGCTGCGGCGGCGGCCAAGGGAGTTCC
CCACGGCCTATGACCTCCTAGGTGCTTTCCAGCCAGGCCGGCCACTCCGGGTGGTGGCCACAAAGGACTGTGAGG
GCGAGAGGGAGGAGAATCCCGAGTTCACGTCCCTGGCTGTGGGTGACCGGCTGGAGGTGCTGGGGCCTGGCCAGG
CCCATGGGGCCCAGGGCAGTGACGTGGATGTCTTGGTTTGTCAGCGGCTGAGTGACCAGGCTGGGGAAGATGAGG
AGGAAGAGTGCAAAGAGGAGGCAGAGACCCAGAGCGGGTCCTGCTGCCCTTCCACTTCCCTGGCAGTTTCGTGGA
GGAGA**TGA**GTGACAGCCGGCGCTACAGCCTGGCAGATCTGACTGCCCAGTTTTCAATGCCTTGTGAGGTCAAGGT
GGTGGCCAAGGACACCAGCCACCCCAATGACCCTCAGAACCTCCTTCCTGGGCCTGCGGCTGGAGGAGAAGATCA
CAGAGCCATTCTTGGTGGTGAGCCTGGACTCTGAGCTGGGATGTGCTTTGAGATCCCTCCCCGGAGGCTGGACCT
GACTGTCGTGGAGGCCAAGGGGCAGCCAGACTTGCCAGAGGGGTCTCTCCCCATAGCCACAGTGGAGGAAGCTGG
AACAGACACCTTTTATTATTGTCTTCGGAAGTTACCAGCCTGTGAGATCCAAGCCCCCCCACCCAGGCCCCCTAA
AAATCAGGGCCTCAGCAAGCAGAGGAGACACAGCAGTGAGGGAGGCGTCAAGTCTTCTCAAGTCTTAGGATTGCA
GCAACACGTTCGGCTGCCCAAACCCAAGGCGAAGACCTTGCCAGAGTTCATCAAGGATGGCTCCAGTACGTACAG
CAAGATTCCTGCCCACAGGAAGGGCCACAGGCCCGCTAAGCCCCAAAGGCAGGATCTAGATGATGATGAACATGA
TTATGAAGAAATACTTGAGCAATTTCAGAAAACCATCTAAGTGCTGGAGGAACCACGCTTCCTAACTGCTGCTTC
TCAGGGAATCCGACACCAGCCAACCATTTTAAGCCTCTAAAAGACCTCGGGCAAGTCTCACAGAAACTGAGCTGC
AGACGGGGAGTAGCTTTGTGGAAACTGATTTGATGGACACTGCACCAGCTTCCTTCAGGTTCTAGATTCTTGCTA
CTTAGGGCGGGCTGGTTTGGACCTAACATCTCGCACGTGACTCCCTCAGCCTCAGAGCCTTGGGATGCAGAGCAG
CTGGCAGGGTTCCTCTCAATCCTGCAACCCCAGCTGTCCCACCGGTGGATGCAGAGGGGAATCCGAGGCCATCAA
CCTTGGTGACAGCAGCGCAGTGCCAATGCTGATCACACTGCATGGGAGATTTTGTTAACGTCTGCCACCCCCACT
CTCACCCCCAAGCTCTAAGCCCCCGGGAGGCCTGGACTGTCTTCCTCATCTCTGTAGCACCAAGCCTGATAGATC
TGTATATGGTAAACAGGGGTTTAACCACATGTGGTTAACATGGATTAATGTGGGAATTTGGCTTCAAGAACACAA
CCTTAGGACCTTGGGCCCCAAAAGCTGGTGGTGAAATGAGAGGAGCCAATTTAAGAAGACCCTTATGGAGACCTG
AGGCTGCAGAAACTGGTAGGTTTCATCAGGTGGTTAAAGTCGTCAAAGTTGTAAGTGACTAACCAAGATTATTTC
ATTTTAAAACCACAGAATAAAAATGACACCTGAGCTTCTCC

FIGURE 1218

MEGQQVILHLPLSQKGPFWTWEPSAPRTLLQVLQDPALKDLVLTCPTLPWHSLILRPQYEIQAIMHMRRTIVKIP
STLEVDVEDVTASSRHVHFIKPLLLSEVLAWEGPFPLSMEILEVPEGRPIFLSPWVGSLQKGQRLCVYGLASPPW
RVLASSKGRKVPRHFLVSGGYQGKLRRRPREFPTAYDLLGAFQPGRPLRVVATKDCEGEREENPEFTSLAVGDRL
EVLGPGQAHGAQGSDVDVLVCQRLSDQAGEDEEEECKEEAETQSGSCCPSTSLAVSWRR

FIGURE 1219

CTAGCTCTGTGGGAAGGTTTTGGGCTCTCTGGCTCGGATTTTGCAATTTCTCCCTGGGGACTGCCGTGGAGCCGC
ATCCACTGTGGATTATAATTGCAACATGACGCTGGAAGAGCTCGTGGCGTGCGACAACGCGGCGCAGAAGATGCA
GACGGTGACCGCCGCGGTGGAGGAGCTTTTGGTGGCCGCTCAGCGCCAGGATCGCCTCACAGTGGGGGTGTACGA
GTCGGCCAAGTTGATGAATGTGGACCCAGACAGCGTGGTCCTCTGCCTCTTGGCCATTGACGAGGAGGAGGAGGA
TGACATCGCCCTGCAAATCCACTTCACGCTCATCCAGTCCTTCTGCTGTGACAACGACATCAACATCGTGCGGGT
GTCGGGCAATGCGCGCCTGGCGCAGCTCCTGGGAGAGCCGGCCGAGACCCAGGGCACCACCGAGGCCCGAGACCT
CCACTGTCTTCCCTTCCTACAGAACCCTCACACGGACGCCTGGAAGAGCCACGGCTTGGTGGAGGTGGCCAGCTA
CTGCGAAGAAAGCCGGGGCAACAACCAGTGGGTCCCCTACATCTCTCTTCAGGAACGCTGAGGCCCTTCCCAGCA
GCAGAATCTGTTGAGTTGCTGCCAACAAACAAAAAATACAATAAATATTTGAACCCCCTCCCCCCCAGCACAACC
CCCCCAAAACAACCCAACCCACGAGGACCATCGGGGGCAGGTCGTTGGAGACTGAAGAGAAAGAGAGAGAGGAGA
AGGGAGTGAGGGGCCGCTGCCGCCTTCCCCATCACGGAGGGTCCAGACTGTCCACTCGGGGGTGGAGTGAGACTG
ACTGCAAGCCCCACCCTCCTTGAGACTGGAGCTGAGCGTCTGCATACGAGAGACTTGGTTGAAACTTGGTTGGTC
CTTGTCTGCACCCTCGACAAGACCACACTTTGGGACTTGGGAGCTGGGGCTGAAGTTGCTCTGTACCCATGAACT
CCCAGTTTGCGAATTAATAAGAGACAATCTATTTTGTTACTTGCACTTGTTATTCGAACCACTGAGAGCGAGATG
GGAAGCATAGATATCTATATTTTTATTTCTACTATGAGGGCCTTGTAATAAATTTCTAAAGCCTCAAAAAA

FIGURE 1220

MTLEELVACDNAAQKMQTVTAAVEELLVAAQRQDRLTVGVYESAKLMNVDPDSVVLCLLAIDEEEEDDIALQIHF
TLIQSFCCDNDINIVRVSGNARLAQLLGEPAETQGTTEARDLHCLPFLQNPHTDAWKSHGLVEVASYCEESRGNN
QWVPYISLQER

FIGURE 1221

AGCATTTCAGGCCCCGGACAGGAGGCAGTGCCGCTTCGGCCGAAGGCCGAGCCGCCCGAGGGCTCTGGGATGGTG
TGGGACCGGCAAACCAAG**ATG**GAGTATGAGTGGAAACCTGACGAGCAAGGGCTTCAGCAAATCCTGCAGCTGTTG
AAGGAGTCCCAGTCCCCAGACACCACCATCCAGAGAACCGTGCAACAAAAACTGGAACAACTTAATCAGTATCCA
GACTTTAACAACTACTTGATTTTTGTTCTTACAAAATTAAAATCTGAAGATGAACCCACAAGATCATTGAGTGGT
CTTATCTTGAAGAATAATGTGAAAGCACACTTTCAGAACTTCCCAAATGGTGTAACAGACTTTATTAAAAGTGAA
TGTTTAAATAATATTGGTGACTCCTCTCCTCTGATTAGAGCCACTGTTGGTATTTTGATCACAACTATAGCCTCC
AAGGGAGAATTGCAGAATTGGCCTGACCTCTTACCAAAACTCTGTAGCCTGTTGGATTCTGAAGATTATAATACC
TGTGAGGGAGCATTTGGTGCCCTTCAGAAGATTTGTGAAGATTCTGCTGAGATTTTAGACAGTGATGTTTTAGAT
CGTCCTCTCAACATCATGATTCCCAAATTTTTACAGTTCTTCAAGCATAGTAGTCCAAAAATAAGGTCTCACGCT
GTTGCATGTGTCAATCAGTTTATCATCAGTAGGACTCAAGCTCTAATGTTGCACATTGATTCTTTTACTGAGAAT
CTCTTTGCATTAGCTGGTGATGAAGAACCAGAGGTACGGAAAAATGTGTGCCGAGCACTTGTGATGTTGCTCGAA
GTTCGAATGGATCGCCTGCTTCCTCACATGCATAATATAGTTGAGTACATGCTACAGAGGACTCAAGATCAAGAT
GAAAATGTGGCTTTAGAAGCCTGTGAATTTTGGCTAACTTTAGCTGAACAGCCAATATGCAAAGATGTACTCGTA
AGGCATCTTCCTAAGTTGATTCCTGTGTTAGTGAATGGCATGAAGTACTCAGACATAGATATTATCCTACTTAAG
GGTGATGTTGAAGAAGACGAAACGATTCCTGATAGTGAACAGGATATACGGCCACGTTTTCACCGATCGAGGACG
GTGGCTCAGCAGCATGATGAAGATGGAATTGAAGAGGAAGACGATGATGATGATGAAATTGATGATGATGATACA
ATTTCAGACTGGAATCTAAGAAAATGTTCTGCTGCTGCCCTGGATGTTCTTGCAAATGTGTATCGTGATGAACTG
CTGCCACATATTTTGCCCCTTTTGAAAGAATTACTTTTTCATCATGAATGGGTTGTTAAAGAATCAGGCATTTTG
GTTTTAGGAGCAATTGCTGAAGGTTGCATGCAGGGCATGATTCCATACTTGCCTGAGCTTATTCCTCACCTTATT
CAGTGCCTCTCTGATAAAAAGGCTCTTGTGCGTTCCATAACATGCTGGACTCTTAGCCGCTATGCACACTGGGTG
GTCAGCCAGCCGCCAGACACGTACCTGAAGCCATTAATGACAGAATTGCTAAAGCGCATCCTGGACAGCAACAAG
AGAGTACAAGAAGCTGCCTGCAGTGCCTTTGCTACCCTAGAAGAGGAGGCTTGTACAGAACTTGTTCCTTACCTT
GCTTATATACTTGATACCCTGGTCTTTGCATTTAGTAAATACCAGCATAAGAACCTGCTCATTCTTTACGATGCC
ATAGGAACATTAGCAGATTCAGTAGGACATCATTTAAACAAACCAGAATATATTCAGATGCTAATGCCTCCACTG
ATCCAGAAATGGAACATGTTAAAGGATGAAGATAAAGATCTCTTCCCTTTACTTGAGTGCCTATCTTCAGTTGCC
ACAGCACTGCAGTCTGGATTCCTTCCGTACTGTGAACCTGTGTATCAGCGTTGTGTAAACCTAGTACAGAAGACT
CTTGCACAAGCCATGCTAAACAATGCTCAACCAGATCAATATGAAGCTCCAGATAAAGATTTTATGATAGTGGCT
CTTGATTTACTGAGTGGCCTGGCTGAAGGACTTGGAGGCAACATTGAACAGCTGGTAGCCCGAAGTAACATCCTG
ACACTAATGTATCAGTGCATGCAGGATAAAATGCCAGAAGTTCGACAGAGTTCTTTTGCCCTGTTAGGTGACCTC
ACAAAAGCTTGCTTTCAGCATGTTAAGCCTTGTATAGCTGATTTCATGCCAATATTGGGAACCAACCTAAATCCA
GAATTCATTTCAGTCTGCAACAATGCCACATGGGCAATTGGAGAAATCTCCATTCAAATGGGTATAGAGATGCAG
CCTTATATTCCTATGGTGTTGCACCAGCTTGTAGAAATCATTAACAGACCCAACACACCAAAGACGTTGTTAGAG
AATACAGCAATAACAATTGGTCGTCTTGGTTACGTTTGTCCTCAAGAGGTGGCCCCCATGCTACAGCAGTTTATA
AGACCCTGGTGCACCTCTCTGAGAAACATAAGAGACAATGAGGAAAAGGATTCAGCATTCCGTGGAATTTGTACC
ATGATCAGTGTGAATCCCAGTGGCGTAATCCAAGATTTTATATTTTTTTGTGATGCCGTTGCATCATGGATTAAC
CCAAAAGATGATCTCAGAGACATGTTCTGTAAGATCCTTCATGGATTTAAAAATCAAGTTGGCGATGAAAATTGG
AGGCGTTTCTCTGACCAGTTTCCTCTTCCCTTAAAAGAGCGTCTTGCAGCTTTTTATGGTGTT**TAA**TCTAATACA
CTTAAGCTGCAGTCCCAAAATTAGGGGTCCTTCAGTCTTGGAGACTATAAGGGAGCCTCTGCACCCAGGGAAAAT
GTTACCCTTTACAGGGGGGAAGGGTAAACCAGTAGGGAATACAGTACAATCCCAACCCTACTGGGAGGGGCGGGA
GGGAGGTGTTGCCGTCACTGTATTAAGTCGATGTTGGGAAACGTTTTAACATCTGGAGCCTTTGTGGGTGGAAAT
ATGTCTCCAGTTACAACTCCGCAGTGGATGTGAAGAAGCAAAAAAAAAAAAAAA

FIGURE 1222

MEYEWKPDEQGLQQILQLLKESQSPDTTIQRTVQQKLEQLNQYPDFNNYLIFVLTKLKSEDEPTRSLSGLILKNN
VKAHFQNFPNGVTDFIKSECLNNIGDSSPLIRATVGILITTIASKGELQNWPDLLPKLCSLLDSEDYNTCEGAFG
ALQKICEDSAEILDSDVLDRPLNIMIPKFLQFFKHSSPKIRSHAVACVNQFIISRTQALMLHIDSFTENLFALAG
DEEPEVRKNVCRALVMLLEVRMDRLLPHMHNIVEYMLQRTQDQDENVALEACEFWLTLAEQPICKDVLVRHLPKL
IPVLVNGMKYSDIDIILLKGDVEEDETIPDSEQDIRPRFHRSRTVAQQHDEDGIEEEDDDDDEIDDDDTISDWNL
RKCSAAALDVLANVYRDELLPHILPLLKELLFHHEWVVKESGILVLGAIAEGCMQGMIPYLPELIPHLIQCLSDK
KALVRSITCWTLSRYAHWVVSQPPDTYLKPLMTELLKRILDSNKRVQEAACSAFATLEEEACTELVPYLAYILDT
LVFAFSKYQHKNLLILYDAIGTLADSVGHHLNKPEYIQMLMPPLIQKWNMLKDEDKDLFPLLECLSSVATALQSG
FLPYCEPVYQRCVNLVQKTLAQAMLNNAQPDQYEAPDKDFMIVALDLLSGLAEGLGGNIEQLVARSNILTLMYQC
MQDKMPEVRQSSFALLGDLTKACFQHVKPCIADFMPILGTNLNPEFISVCNNATWAIGEISIQMGIEMQPYIPMV
LHQLVEIINRPNTPKTLLENTAITIGRLGYVCPQEVAPMLQQFIRPWCTSLRNIRDNEEKDSAFRGICTMISVNP
SGVIQDFIFFCDAVASWINPKDDLRDMFCKILHGFKNQVGDENWRRFSDQFPLPLKERLAAFYGV

FIGURE 1223

GCTCACTGCCACACGCAGCTCAGCCTGGGCGGCACAGCCAGATGCGAGATGCGTCTCTGCTGATCTGAGTCTGCC
TGCAGCATGGACCTGGGTCTTCCCTGAAGCATCTCCAGGGCTGGAGGGACGACTGCCATGCACCGAGGGCTCATC
CATCCGCAGAGCAGGGCAGTGGGAGGAGACGCC**ATG**ACCCCCATCGTCACAGTCCTGATCTGTCTCGGGCTGAGT
CTGGGCCCCAGGACCCACGTGCAGACAGGGACCATCCCCAAGCCCACCCTGTGGGCTGAGCCAGACTCTGTGATC
ACCCAGGGGAGTCCCGTCACCCTCAGTTGTCAGGGGAGCCTTGAAGCCCAGGAGTACCGTCTATATAGGGAGAAA
AAATCAGCATCTTGGATTACACGGATACGACCAGAGCTTGTGAAGAACGGCCAGTTCCACATCCCATCCATCACC
TGGGAACACACAGGGCGATATGGCTGTCAGTATTACAGCCGCGCTCGGTGGTCTGAGCTCAGTGACCCCCTGGTG
CTGGTGATGACAGGAGCCTACCCAAAACCCACCCTCTCAGCCCAGCCCAGCCCTGTGGTGACCTCAGGAGGAAGG
GTGACCCTCCAGTGTGAGTCACAGGTGGCATTTGGCGGCTTCATTCTGTGTAAGGAAGGAGAAGATGAACACCCA
CAATGCCTGAACTCCCAGCCCCATGCCCGTGGGTCGTCCCGCGCCATCTTCTCCGTGGGCCCCGTGAGCCCGAAT
CGCAGGTGGTCGCACAGGTGCTATGGTTATGACTTGAACTCTCCCTATGTGTGGTCTTCACCCAGTGATCTCCTG
GAGCTCCTGGTCCCAGGTGTTTCTAAGAAGCCATCACTCTCAGTGCAGCCGGGTCCTGTCGTGGCCCCTGGGGAA
AGCCTGACCCTCCAGTGTGTCTCTGATGTCGGCTATGACAGATTTGTTCTGTACAAGGAGGGGGAACGTGACCTT
CGCCAGCTCCCTGGCCGGCAGCCCCAGGCTGGGCTCTCCCAGGCCAACTTCACCCTGGGCCCTGTGAGCCGCTCC
TACGGGGGCCAGTACAGATGCTACGGTGCATACAACCTCTCCTCCGAGTGGTCGGCCCCCAGCGACCCCCTGGAC
ATCCTGATCACAGGACAGATCCATGGCACACCCTTCATCTCAGTGCAGCCAGGCCCCACAGTGGCCTCAGGAGAG
AACGTGACCCTGCTGTGTCAGTCATGGCGGCAGTTCCACACTTTCCTTCTGACCAAGGCGGGAGCAGCTGATGCC
CCACTCCGTCTAAGATCAATACACGAATATCCTAAGTACCAGGCTGAATTCCCCATGAGTCCTGTGACCTCAGCC
CACGCGGGGACCTACAGGTGCTACGGCTCACTCAACTCCGACCCCTACCTGCTGTCTCACCCCAGTGAGCCCCTG
GAGCTCGTGGTCTCAGGACCCTCCATGGGTTCCAGCCCCCCACCCACCGGTCCCATCTCCACACCTGCAGGCCCT
GAGGACCAGCCCCTCACCCCCACTGGGTCGGATCCCCAAAGTGGTCTGGGAAGGCACCTGGGGGTTGTGATCGGC
ATCTTGGTGGCCGTCGTCCTACTGCTCCTCCTCCTCCTCCTCCTCTTCCTCATCCTCCGACATCGACGTCAGGGC
AAACACTGGACATCGACCCAGAGAAAGGCTGATTTCCAACATCCTGCAGGGGCTGTGGGGCCAGAGCCCACAGAC
AGAGGCCTGCAGTGGAGGTCCAGCCCAGCTGCCGACGCCCAGGAAGAAAACCTCTATGCTGCCGTGAAGGACACA
CAGCCTGAAGATGGGGTGGAGATGGACACTCGGGCTGCTGCATCTGAAGCCCCCCAGGATGTGACCTACGCCCAG
CTGCACAGCTTGACCCTCAGACGGAAGGCAACTGAGCCTCCTCCATCCCAGGAAAGGGAACCTCCAGCTGAGCCC
AGCATCTACGCCACCCTGGCCATCCAC**TAG**CCCGGAGGGTACGCAGACTCCACACTCAGTAGAAGGAGACTCAGG
ACTGCTGAAGGCACGGGAGCTGCCCCCAGTGGACACCAATGAACCCCAGTCAGCCTGGACCCCTAACAAAGACCA
TGAGGAGATGCTGGGAACTTTGGGACTCACTTGATTCTGCAGTCGAAATAACTAATATCCCTACATTTTTTAATT
AAAGCAACAGACTTCTCAATAAAAGCAGGTCGTCTCGTTCCAATCT

FIGURE 1224

MTPIVTVLICLGLSLGPRTHVQTGTIPKPTLWAEPDSVITQGSPVTLSCQGSLEAQEYRLYREKKSASWITRIRP
ELVKNGQFHIPSITWEHTGRYGCQYYSRARWSELSDPLVLVMTGAYPKPTLSAQPSPVVTSGGRVTLQCESQVAF
GGFILCKEGEDEHPQCLNSQPHARGSSRAIFSVGPVSPNRRWSHRCYGYDLNSPYVWSSPSDLLELLVPGVSKKP
SLSVQPGPVVAPGESLTLQCVSDVGYDRFVLYKEGERDLRQLPGRQPQAGLSQANFTLGPVSRSYGGQYRCYGAY
NLSSEWSAPSDPLDILITGQIHGTPFISVQPGPTVASGENVTLLCQSWRQFHTFLLTKAGAADAPLRLRSIHEYP
KYQAEFPMSPVTSAHAGTYRCYGSLNSDPYLLSHPSEPLELVVSGPSMGSSPPPTGPISTPAGPEDQPLTPTGSD
PQSGLGRHLGVVIGILVAVVLLLLLLLLLFLILRHRRQGKHWTSTQRKADFQHPAGAVGPEPTDRGLQWRSSPAA
DAQEENLYAAVKDTQPEDGVEMDTRAAASEAPQDVTYAQLHSLTLRRKATEPPPSQEREPPAEPSIYATLAIH

FIGURE 1225

GAATTCCCGTGATAGACAGACTGTCCACCATCTGAACCTTCATTCACCACCATTCGATAACCCTTCTTCCGAGCC
TCTCCTCTGGTCGCGCGGGGAGGAGAGGCGAG**ATG**GCAGATGAGATTGCCAAGGCTCAGGTCGCTCGGCCTGGTG
GCGACACGATCTTTGGGAAGATCATCCGCAAGGAAATACCAGCCAAAATCATTTTTGAGGATGACCGGTGCCTTG
CTTTCCATGACATTTCCCCTCAAGCACCAACACATTTTCTGGTGATACCCAAGAAACATATATCCCAGATTTCTG
TGGCAGAAGATGATGATGAAAGTCTTCTTGGACACTTAATGATTGTTGGCAAGAAATGTGCTGCTGATCTGGGCC
TGAATAAGGGTTATCGAATGGTGGTGAATGAAGGTTCAGATGGTGGACAGTCTGTCTATCACGTTCATCTCCATG
TTCTTGGAGGTCGGCAAATGCATTGGCCTCCTGGT**TAA**GCACGTTTTGGGGATAATTTTCTCTTCTTTAGCATGA
TAAGTTAGGCAATTTCCAGTATGTTAAGTAACACACTTATTTTTCCTGTGTATGGAGAGATTCAAGAAATAATTT
TAAACCCGCTACATAATAAAAGACATTGTTGCATGGAATTC

FIGURE 1226

MADEIAKAQVARPGGDTIFGKIIRKEIPAKIIFEDDRCLAFHDISPQAPTHFLVIPKKHISQISVAEDDDESLLG
HLMIVGKKCAADLGLNKGYRMVVNEGSDGGQSVYHVHLHVLGGRQMHWPPG

FIGURE 1227

GTTTTTTTCCCTTCTGAGCA**ATG**GAGCTTACCATCTTTATCCTGAGACTGGCCATTTACATCCTGACATTTCCCT
TGTACCTGCTGAACTTTCTGGGCTTGTGGAGCTGGATATGCAAAAAATGGTTCCCCTACTTCTTGGTGAGGTTCA
CTGTGATATACAACGAACAGATGGCAAGCAAGAAGCGGGAGCTCTTCAGTAACCTGCAGGAGTTTGCGGGCCCCT
CCGGGAAACTCTCCCTGCTGGAAGTGGGCTGTGGCACGGGGGCCAACTTCAAGTTCTACCCACCTGGGTGCAGGG
TGACCTGTATTGACCCCAACCCCAACTTTGAGAAGTTTTTGATCAAGAGCATTGCAGAGAACCGACACCTGCAGT
TTGAGCGCTTTGTGGTAGCTGCCGGGGAGAACATGCACCAGGTGGCTGATGGCTCTGTGGATGTGGTGGTCTGCA
CCCTGGTGCTGTGCTCTGTGAAGAACCAGGAGCGGATTCTCCGCGAGGTGTGCAGAGTGCTGAGACCGGGAGGGG
CTTTCTATTTCATGGAGCATGTGGCAGCTGAGTGTTCGACTTGGAATTACTTCTGGCAACAAGTCCTGGATCCTG
CCTGGCACCTTCTGTTTGATGGGTGCAACCTGACCAGAGAGAGCTGGAAGGCCCTGGAGCGGGCCAGCTTCTCTA
AGCTGAAGCTGCAGCACATCCAGGCCCCACTGTCCTGGGAGTTGGTGCGCCCTCATATCTATGGATATGCTGTGA
AA**TAG**TGTGAGCTGGCAGTTAAGAGCTGAATGGCTCAAAGAATTTAAAGCTTCAGTTTTACATTTAAAATGCTAA
GTGGGAGAAGAGAAACCTTTTTTTTGGGGGGCGGTTTTTTTGGTTTGTTGTTGGTTTTTTTTTTTTTTTGGCAA
GACTCCGTCTCAAAAAAAAAAAAAAAAAAAAAAAGAAGTAGAGACAGGGAGACAGGGTCTCACTGTGTTGCCTAG
GCCGGTCTTGAACTCCTGGGCTCAAGTGATTCTCCCACCTTGACCTCCTAAATTGTTGGGATTACAGGTGTGAGA
CAGTGCACCTGGCCGAAATAGCTCAAGTTTCTGAAAAACAAATCTGAATCTATTTGTTATTCTTAGCGTCACTGG
TCTGGCTTTCAGAATTAACATACAAGGTTGCCACACCTAGTTCTGCCCAGCTTTATGTCTTTTATTCCAGTATTC
CACCAAAGTTTGTTTTCCTGCATTCCAGTTCTCAAGTCTTAAGATAAAGATTGTACTTGACAGTTTAGTATATCC
ATAAAACTATTTGAGGTGGTTAAGGTTCTTGGGTTCATTTTCCTTAATACTTTGCTGAATATTGTAGATTGTAGG
CAATGAAAAAGTCTACTAAATTAGGAAAACCTTGAATAATTAGGTATCCTAGGTAAGAGCCCCTAAACATCAAGC
AATCTGTGAGTCTGTAAAGAAATAAATATTTTTTGGATTATTCTTATCTAATTCCACCCCTGTTGGAAGATGATT
TCTTTGTTCTTTGCAACTATGGAAGCTGTGAAAATCATCACAAGTGCCTCTGAAAGCGAGTGTTAGGTTGGTTAG
AGGGTTTAATATTTTCTGCAATGGTTTGTAGGAATTTTAATAAATGTAGTATATTTTCTGAGATGATTTTGTAAA
AGTACTATTTTAAATATCAAATCAACCAATAAATTCACATTTGTGTTAGGAACAG

FIGURE 1228

MELTIFILRLAIYILTFPLYLLNFLGLWSWICKKWFPYFLVRFTVIYNEQMASKKRELFSNLQEFAGPSGKLSLL
EVGCGTGANFKFYPPGCRVTCIDPNPNFEKFLIKSIAENRHLQFERFVVAAGENMHQVADGSVDVVVCTLVLCSV
KNQERILREVCRVLRPGGAFYFMEHVAAECSTWNYFWQQVLDPAWHLLFDGCNLTRESWKALERASFSKLKLQHI
QAPLSWELVRPHIYGYAVK

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FIGURE 1229

GGGCGGCGGTCGGCAGCAAGGCGGCGGTGCGCCGCCGCAGCTGCAGTGAC**ATG**TCCAGCATGAATCCCGAATATG
ATTATTTATTCAAGTTACTTCTGATTGGCGACTCAGGGGTTGGAAAGTCTTGCCTTCTTCTTAGGTTTGCAGATG
ATACATATACAGAAAGCTACATCAGCACAATTGGTGTGGATTTCAAAATAAGAACTATAGAGTTAGACGGGAAAA
CAATCAAGCTTCAAATATGGGACACAGCAGGCCAGGAAAGATTTCGAACAATCACCTCCAGTTATTACAGAGGAG
CCCATGGCATCATAGTTGTGTATGATGTGACAGATCAGGAGTCCTTCAATAATGTTAAACAGTGGCTGCAGGAAA
TAGATCGTTATGCCAGTGAAAATGTCAACAAATTGTTGGTAGGGAACAAATGTGATCTGACCACAAAGAAAGTAG
TAGACTACACAACAGCGAAGGAATTTGCTGATTCCCTTGGAATTCCGTTTTTGGAAACCAGTGCTAAGAATGCAA
CGAACGTAGAACAGTCTTTCATGACGATGGCAGCTGAGATTAAAAAGCGAATGGGTCCCGGAGCAACAGCTGGTG
GTGCTGAGAAGTCCAATGTTAAAATTCAGAGCACTCCAGTCAAGCAGTCAGGTGGAGGTTGCTGC**TAA**ATTTGCC
TCCATCCTTTTCTCACAGCAATGAATTTGCAATCTGAACCCAAGTGAA

FIGURE 1230

MSSMNPEYDYLFKLLLIGDSGVGKSCLLLRFADDTYTESYISTIGVDFKIRTIELDGKTIKLQIWDTAGQERFRT
ITSSYYRGAHGIIVVYDVTDQESFNNVKQWLQEIDRYASENVNKLLVGNKCDLTTKKVVDYTTAKEFADSLGIPF
LETSAKNATNVEQSFMTMAAEIKKRMGPGATAGGAEKSNVKIQSTPVKQSGGGCC

FIGURE 1231

CTGCAGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGCGCAGCACGGCTCAGACCGAGGCGCACAGGCTCGCAG
CTCCGGGCGCCTAGCGCCCGGTCCCCGCCGCGACGCGCCACCGTCCCTGCCGGCGCCTCCGCGCCTTCGAAATGA
GGGTCCTGGGTGGGCGCTGCGGGGCGCCGCTGGCGTGTCTCCTCCTAGTGCTTCCCGTCTCAGAGGCAAACCTTC
TGTCAAAGCAACAGGCTTCACAAGTCCTGGTTAGGAAGCGTCGTGCAAATTCTTTACTTGAAGAAACCAAACAGG
GTAATCTTGAAAGAGAATGCATCGAAGAACTGTGCAATAAAGAAGAAGCCAGGGAGGTCTTTGAAAATGACCCGG
AAACGGATTATTTTTATCCAAAATACTTAGTTTGTCTTCGCTCTTTTCAAACTGGGTTATTCACTGCTGCACGTC
AGTCAACTAATGCTTATCCTGACCTAAGAAGCTGTGTCAATGCCATTCCAGACCAGTGTAGTCCTCTGCCATGCA
ATGAAGATGGATATATGAGCTGCAAAGATGGAAAAGCTTCTTTTACTTGCACTTGTAAACCAGGTTGGCAAGGAG
AAAAGTGTGAATTTGACATAAATGAATGCAAAGATCCCTCAAATATAAATGGAGGTTGCAGTCAAATTTGTGATA
ATACACCTGGAAGTTACCACTGTTCCTGTAAAAATGGTTTTGTTATGCTTTCAAATAAGAAAGATTGTAAAGATG
TGGATGAATGCTCTTTGAAGCCAAGCATTTGTGGCACAGCTGTGTGCAAGAACATCCCAGGAGATTTTGAATGTG
AATGCCCCGAAGGCTACAGATATAATCTCAAATCAAAGTCTTGTGAAGATATAGATGAATGCTCTGAGAACATGT
GTGCTCAGCTTTGTGTCAATTACCCTGGAGGTTACACTTGCTATTGTGATGGGAAGAAAGGATTCAAACTTGCCC
AAGATCAGAAGAGTTGTGAGGTTGTTTCAGTGTGCCTTCCCTTGAACCTTGACACAAAGTATGAATTACTTTACT
TGGCGGAGCAGTTTGCAGGGGTTGTTTTATATTTAAAATTTCGTTTGCCAGAAATCAGCAGATTTTCAGCAGAAT
TTGATTTCCGGACATATGATTCAGAAGGCGTGATACTGTACGCAGAATCTATCGATCACTCAGCGTGGCTCCTGA
TTGCACTTCGTGGTGGAAAGATTGAAGTTCAGCTTAAGAATGAACATACATCCAAAATCACAACTGGAGGTGATG
TTATTAATAATGGTCTATGGAATATGGTGTCTGTGGAAGAATTAGAACATAGTATTAGCATTAAAATAGCTAAAG
AAGCTGTGATGGATATAAATAAACCTGGACCCCTTTTTAAGCCGGAAAATGGATTGCTGGAAACCAAAGTATACT
TTGCAGGATTCCCTCGGAAAGTGGAAAGTGAACTCATTAAACCGATTAACCCTCGTCTAGATGGATGTATACGAA
GCTGGAATTTGATGAAGCAAGGAGCTTCTGGAATAAAGGAAATTATTCAAGAAAAACAAAATAAGCATTGCCTGG
TTACTGTGGAGAAGGGCTCCTACTATCCTGGTTCTGGAATTGCTCAATTTCACATAGATTATAATAATGTATCCA
GTGCTGAGGGTTGGCATGTAAATGTGACCTTGAATATTCGTCCATCCACGGGCACTGGTGTTATGCTTGCCTTGG
TTTCTGGTAACAACACAGTGCCCTTTGCTGTGTCCTTGGTGGACTCCACCTCTGAAAAATCACAGGATATTCTGT
TATCTGTTGAAAATACTGTAATATATCGGATACAGGCCCTAAGTCTATGTTCCGATCAACAATCTCATCTGGAAT
TTAGAGTCAACAGAAACAATCTGGAGTTGTCGACACCACTTAAAATAGAAACCATCTCCCATGAAGACCTTCAAA
GACAACTTGCCGTCTTGGACAAAGCAATGAAAGCAAAAGTGGCCACATACCTGGGTGGCCTTCCAGATGTTCCAT
TCAGTGCCACACCAGTGAATGCCTTTTATAATGGCTGCATGGAAGTGAATATTAATGGTGTACAGTTGGATCTGG
ATGAAGCCATTTCTAAACATAATGATATTAGAGCTCACTCATGTCCATCAGTTTGGAAAAAGACAAAGAATTCTTA
AAGGCATCTTTTCTCTGCTTATAATACCTTTTCCTTGTGTGTAATTATACTTATGTTTCAATAACAGCTGAAGGG
TTTTATTTACAATGTGCAGTCTTTGATTATTTTGTGGTCCTTTCCTGGGATTTTTAAAAGGTCCTTTGTCAAGGA
AAAAAATTCTGTTGTGATATAAATCACAGTAAAGAAATTCTTACTTCTCTTGCTATCTAAGAATAGTGAAAAATA
ACAATTTTAAATTTGAATTTTTTTCCTACAAATGACAGTTTCAATTTTTGTTTGTAAAACTAAATTTTAATTTTA
TCATCATGAACTAGTGTCTAAATACCTATGTTTTTTTCAGAAAGCAAGGAAGTAAACTCAAACAAAAGTGCGTGT
AATTAAATACTATTAATCATAGGCAGATACTATTTTGTTTATGTTTTTGTTTTTTTCCTGATGAAGGCAGAAGAG
ATGGTGGTCTATTAAATATGAATTGAATGGAGGGTCCTAATGCCTTATTTCAAAACAATTCCTCAGGGGGACCAG
CTTTGGCTTCATCTTTCTCTTGTGTGGCTTCACATTTAAACCAGTATCTTTATTGAATTAGAAAACAAGTGGGAC
ATATTTTCCTGAGAGCAGCACAGGAATCTTCTTCTTGGCAGCTGCAGTCTGTCAGGATGAGATATCAGATTAGGT
TGGATAGGTGGGGAAATCTGAAGTGGGTACATTTTTTAAATTTTGCTGTGTGGGTCACACAAGGTCTACATTACA
AAAGACAGAATTCAGGGATGGAAAGGAGAATGAACAAATGTGGGAGTTCATAGTTTTCCTTGAATCCAACTTTTA
ATTACCAGAGTAAGTTGCCAAAATGTGATTGTTGAAGTACAAAAGGAACTATGAAAACCAGAACAAATTTTAACA
AAAGGACAACCACAGAGGGATATAGTGAATATCGTATCATTGTAATCAAAGAAGTAAGGAGGTAAGATTGCCACG
TGCCTGCTGGTACTGTGATGCATTTCAAGTGGCAGTTTTATCACGTTTGAATCTACCATTCATAGCCAGATGTGT
ATCAGATGTTTCACTGACAGTTTTTAACAATAAATTCTTTTCACTGTATTTTATATCACTTATAATAAATCGGTG
TATAATTTT

FIGURE 1232

MRVLGGRCGAPLACLLLVLPVSEANLLSKQQASQVLVRKRRANSLLEETKQGNLERECIEELCNKEEAREVFEND
PETDYFYPKYLVCLRSFQTGLFTAARQSTNAYPDLRSCVNAIPDQCSPLPCNEDGYMSCKDGKASFTCTCKPGWQ
GEKCEFDINECKDPSNINGGCSQICDNTPGSYHCSCKNGFVMLSNKKDCKDVDECSLKPSICGTAVCKNIPGDFE
CECPEGYRYNLKSKSCEDIDECSENMCAQLCVNYPGGYTCYCDGKKGFKLAQDQKSCEVVSVCLPLNLDTKYELL
YLAEQFAGVVLYLKFRLPEISRFSAEFDFRTYDSEGVILYAESIDHSAWLLIALRGGKIEVQLKNEHTSKITTGG
DVINNGLWNMVSVEELEHSISIKIAKEAVMDINKPGPLFKPENGLLETKVYFAGFPRKVESELIKPINPRLDGCI
RSWNLMKQGASGIKEIIQEKQNKHCLVTVEKGSYYPGSGIAQFHIDYNNVSSAEGWHVNVTLNIRPSTGTGVMLA
LVSGNNTVPFAVSLVDSTSEKSQDILLSVENTVIYRIQALSLCSDQQSHLEFRVNRNNLELSTPLKIETISHEDL
QRQLAVLDKAMKAKVATYLGGLPDVPFSATPVNAFYNGCMEVNINGVQLDLDEAISKHNDIRAHSCPSVWKKTKN
S

FIGURE 1233

GGCACGAGGGCAGTGGAGGCTGAGGCT**ATG**ATGGCGGCCATGGCGACGGCTCGAGTGCGGATGGGGCCGCGGTGC
GCCCAGGCGCTCTGGCGCATGCCGTGGCTGCCGGTGTTTTTGTCGTTGGCGGCGGCGGCGGCGGCGGCAGCGGCG
GAGCAGCAGGTCCCGCTGGTGCTGTGGTCGAGTGACCGGGACTTGTGGGCTCCTGCGGCCGACACTCATGAAGGC
CACATCACCAGCGACTTGCAGCTCTCTACCTACTTAGATCCCGCCCTGGAGCTGGGTCCCAGGAATGTGCTGCTG
TTCCTGCAGGACAAGCTGAGCATTGAGGATTTCACAGCATATGGCGGTGTGTTTGGAAACAAGCAGGACAGCGCC
TTTTCTAACCTAGAGAATGCCCTGGACCTGGCCCCCTCCTCACTGGTGCTTCCTGCCGTCGACTGGTATGCAGTC
AGCACTCTGACCACTTACCTGCAGGAGAAGCTCGGGGCCAGCCCCTTGCATGTGGACCTGGCCACCCTGCGGGAG
CTGAAGCTCAATGCCAGCCTCCCTGCTCTGCTGCTCATTCGCCTGCCCTACACAGCCAGCTCTGGTCTGATGGCA
CCCAGGGAAGTCCTCACAGGCAACGATGAGGTCATCGGGCAGGTCCTGAGCACACTCAAGTCCGAAGATGTCCCA
TACACAGCGGCCCTCACAGCGGTCCGCCCTTCCAGGGTGGCCCGTGATGTAGCCGTGGTGGCCGGAGGGCTAGGT
CGCCAGCTGCTACAAAAACAGCCAGTATCACCTGTGATCCATCCTCCTGTGAGTTACAATGACACCGCTCCCCGG
ATCCTGTTCTGGGCCCAAAACTTCTCTGTGGCGTACAAGGACCAGTGGGAGGACCTGACTCCCCTCACCTTTGGG
GTGCAGGAACTCAACCTGACTGGCTCCTTCTGGAATGACTCCTTTGCCAGGCTCTCACTGACCTATGAACGACTC
TTTGGTACCACAGTGACATTCAAGTTCATTCTGGCCAACCGCCTCTACCCAGTGTCTGCCCGGCACTGGTTTACC
ATGGAGCGCCTCGAAGTCCACAGCAATGGCTCCGTCGCCTACTTCAATGCTTCCCAGGTCACAGGGCCCAGCATC
TACTCCTTCCACTGCGAGTATGTCAGCAGCCTGAGCAAGAAGGGTAGTCTCCTCGTGGCCCGCACGCAGCCCTCT
CCCTGGCAGATGATGCTTCAGGACTTCCAGATCCAGGCTTTCAACGTAATGGGGGAGCAGTTCTCCTACGCCAGC
GACTGTGCCAGCTTCTTCTCCCCCGGCATCTGGATGGGGCTGCTCACCTCCCTGTTCATGCTCTTCATCTTCACC
TATGGCCTGCACATGATCCTCAGCCTCAAGACCATGGATCGCTTTGATGACCACAAGGGCCCCACTATTTCTTTG
ACCCAGATTGTG**TGA**CCCTGTGCCAGTGGGGGGGTTGAGGGTGGGACGGTGTCCGTGTTGTTGCTTTCCCACCCT
GCAGCGCACTGGACTGAAGAGCTTCCCTCTTCCTACTGCAGCATGAACTGCAAGCTCCCCTCAGCCCATCTTGCT
CCCTCTTCAGCCCGCTGAGGAGCTTTCTTGGGCTGCCCCCATCTCTCCCAACAAGGTGTACATATTCTGCGTAGA
TGCTAGACCAACCAGCTTCCCAGGGTTCGTCGCTGTGAGGCGTAAGGGACATGAATTCTAGGGTCTCCTTTCTCC
TTATTTATTCTTGTGGCTACATCATCCCTGGCTGTGGATAGTGCTTTTGTGTAGCAAATGCTCCCTCCTTAAGGT
TATAGGGCTCCCTGAGTTTGGGAGTGTGGAAGTACTACTTAACTGTCTGTCCTGCTTGGCTGTCGTTATCGTTTT
CTGGTGATGTTGTGCTAACAATAAGCAGTACACGGGTTTATTTCTGTGGCCTGAGAAGGAAGGGACCTCCACGAC
AGGTGGGCTGGGTGCGATCGCCGGCTGTTTGGCATGTTCCCACCGGGAGTGCCGGGCAGGAGCATGGGGTGCTTG
GTTGTTTCCTTCCTAATAAAATAAACGCGGGTCGCCATG

FIGURE 1234

MMAAMATARVRMGPRCAQALWRMPWLPVFLSLAAAAAAAAAAEQQVPLVLWSSDRDLWAPAADTHEGHITSDLQLS
TYLDPALELGPRNVLLFLQDKLSIEDFTAYGGVFGNKQDSAFSNLENALDLAPSSLVLPAVDWYAVSTLTTYLQE
KLGASPLHVDLATLRELKLNASLPALLLIRLPYTASSGLMAPREVLTGNDEVIGQVLSTLKSEDVPYTAALTAVR
PSRVARDVAVVAGGLGRQLLQKQPVSPVIHPPVSYNDTAPRILFWAQNFSVAYKDQWEDLTPLTFGVQELNLTGS
FWNDSFARLSLTYERLFGTTVTFKFILANRLYPVSARHWFTMERLEVHSNGSVAYFNASQVTGPSIYSFHCEYVS
SLSKKGSLLVARTQPSPWQMMLQDFQIQAFNVMGEQFSYASDCASFFSPGIWMGLLTSLFMLFIFTYGLHMILSL
KTMDRFDDHKGPTISLTQIV

FIGURE 1235

ATGGCAGAGCAGTCGGACGAGGCCGTGAAGTACTACACCCTAGAGGAGATTCAGAAGCACAACCACAGCAAGAGC
ACCTGGCTGATCCTGCACCACAAGGTGTACGATTTGACCAAATTTCTGGAAGAGCATCCTGGTGGGGAAGAAGTT
TTAAGGGAACAAGCTGGAGGTGACGCTACTGAGAACTTTGAGGATGTCGGGCACTCTACAGATGCCAGGGAAATG
TCCAAAACATTCATCATTGGGGAGCTCCATCCAGATGACAGACCAAAGTTAAACAAGCCTCCAGAACCT**TAA**AGG
CGGTGTTTCAAGGAAACTCTTATCACTACTATTGATTCTAGTTCCAGTTGGTGGACCAACTGGGTGATCCCTGCC
ATCTCTGCAGTGGCCGTCGCCTTGATGTATCGCCTATACATGGCAGAGGACTGAACACCTCCTCAGAAGTCAGCG
CAGGAAGAGCCTGCTTTGGACACGGGAGAAAAGAAGCCATTGCTAACTACTTCAACTGACAGAAACCTTCACTTG
AAAACAATGATTTTAATATATCTCTTTCTTTTTCTTCCGACATTAGAAACAAAACAAAAAGAACTGTCCTTTCTG
CGCTCAAATTTTTCGAGTGTGCCTTTTTATTCATCTACTTTATTTTGATGTTTCCTTAATGTGTAATTTACTTAT
TATAAGCATGATCTTTTAAAAATATATTTGGCTTTTAAAGT

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FIGURE 1236

MAEQSDEAVKYYTLEEIQKHNHSKSTWLILHHKVYDLTKFLEEHPGGEEVLREQAGGDATENFEDVGHSTDAREM
SKTFIIGELHPDDRPKLNKPPEP

FIGURE 1237

CACAGCCGGGTCGCAGGCACCTCCCCXGCCAGCTCTCCCGCATTCTGCACAGCTTCCCGACGCGTCTGCTGAGCC
CC**ATG**GCCCACGCCACGCTCTCCGCCGCCCCCAGCAATCCCCGGCTCCTGCGGGTGGCGCTGCTGCTCCTGCTCC
TGGTGGGCAGCCGGCGCGCAGCAGGAGCGTCCGTGGTCACTGAACTGCGCTGCCAGTGCTTGCAGACACTGCAGG
GAATTCACCTCAAGAACATCCAAAGTGTGAATGTAAGGTCCCCCGGACCCCACTGCGCCCAAACCGAAGTCATAG
CCACACTCAAGAATGGGAAGAAAGCTTGTCTCAACCCCGCATCCCCCATGGTTCAGAAAATCATCGAAAAGATAC
TGAACAAGGGGAGCACCAAC**TGA**CAGGAGAGAAGTAAGAAGCTTATCAGCGTATCATTGACACTTCCTGCAGGGT
GGTCCCTGCCCTTACCAGAGCTGAAAATGAAAAAGAGAACAGCAGCTTTCTAGGGACAGCTGGAAAGGGACTTAA
TGTGTTTGACTATTTCTTACGAGGGTTCTACTTATTTATGTATTTATTTTTGAAAGCTTGTATTTTAATATTTTA
CATGCTGTTATTTAAAGATGTGAGTGTGTTTCATCAAACATAGCTCAGTCCTGATTATTTAATTGGAATATGATG
GGTTTTAAATGTGTCATTAAACTAATATTTAGTGGGAGACCATAATGTGTCAGCCACCTTGATAAATGACAGGGT
GGGGAACTGGAGGGTXGGGGGATTGAAATGCAAGCAATTAGTGGATCACTGTTAGGGTAAGGGAATGTATGTACA
CATCTATTTTTTATACTTTTTTTTTTAAAAAAGAATGTCAGTTGTTATTTATTCAAATTATCTCACATTATGTGT
TCAACATTTTTATGCTGAAGTTTCCCTTAGACATTTTATGTCTTGCTTGTAGGGCATAATGCCTTGTTTAATGTC
CATTCTGCAGCGTTTCTCTTTCCCTTGGAAAAGAGAATTTATCATTACTGTTACATTTGTACAAATGACATGATA
ATAAAAGTTTTATG

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FIGURE 1238

MAHATLSAAPSNPRLLRVALLLLLLVGSRRAAGASVVTELRCQCLQTLQGIHLKNIQSVNVRSPGPHCAQTEVIA
TLKNGKKACLNPASPMVQKIIEKILNKGSTN

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FIGURE 1239

ATACAGGACAGAGC**ATG**GCTCGCCTACAGACTGCACTCCTGGTTGTCCTCGTCCTCCTTGCTGTGGCGCTTCAAG
CAACTGAGGCAGGCCCCTACGGCGCCAACATGGAAGACAGCGTCTGCTGCCGTGATTACGTCCGTTACCGTCTGC
CCCTGCGCGTGGTGAAACACTTCTACTGGACCTCAGACTCCTGCCCGAGGCCTGGCGTGGTGTTGCTAACCTTCA
GGGATAAGGAGATCTGTGCCGATCCCAGAGTGCCCTGGGTGAAGATGATTCTCAATAAGCTGAGCCAA**TGA**AGAG
CCTACTCTGATGACCGTGGCCTTGGCTCCTCCAGGAAGGCTCAGGAGCCCTACCTCCCTGCCATTATAGCTGCTC
CCCGCCAGAAGCCTGTGCCAACTCTCTGCATTCCCTGATCTCCATCCCTGTGGCTGTCACCCTTGGTCACCTCCG
TGCTGTCACTGCCATCTCCCCCCTGACCCCTCTAACCCATCCTCTGCCTCCCTCCCTGCAGTCAGAGGGTCCTGT
TCCCATCAGCGATTCCCCTGCTTAAACCCTTCCATGACTCCCCACTGCCCTAAGCTGAGGTCAGTCTCCCAAGCC
TGGCATGTGGCCCTCTGGATCTGGGTTCCATCTCTGTCTCCAGCCTGCCCACTTCCCTTCATGAATGTTGGGTTC
TAGCTCCCTGTTCTCCAAACCCATACTACACATCCCACTTCTGGGTCTTTGCCTGGGATGTTGCTGACACTCAGA
AAGTCCCACCACCTGCACATGTGTAGCCCCACCAGCCCTCCAAGGCATTGCTCGCCCAAGCAGCTGGTAATTCCA
TTTCATGTATTAGATGTCCCCTGGCCCTCTGTCCCCTCTTAATAACCCTAGTCACAGTCTCCGCAGATTCTTGGG
ATTTGGGGGTTTTCTCCCCCACCTCTCCACTA

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FIGURE 1240

MARLQTALLVVLVLLAVALQATEAGPYGANMEDSVCCRDYVRYRLPLRVVKHFYWTSDSCPRPGVVLLTFRDKEI
CADPRVPWVKMILNKLSQ

FIGURE 1241

TTAGCAATAAGGCTGGAGAAGGAAAAGCCGGCGCGCCCGCGGCCCGCGCGATTTCCCGCCGAGCCCGCGTCCCCG
GCGGCGGGCGGGCTCCGGGGGCGCCCGGGCCGCGGCGGCGCGGCGGCGCGAGCTGCGCCTCCGGGCCGGTGAATC
ATCCCGGCAGACACCAAGAGCCGCGGCAGCAGAGAGGAGCGCTGAAACATGGCTGAAGCGGCCACGGGCTTTCTG
GAGCAGCTCAAGTCCTGCATAGTTTGGTCTTGGACGTATCTGTGGACCGTGTGGTTCTTCATCGTGCTATTCCTG
GTCTACATCCTGCGGGTGCCTTTGAAAATCAACGACAACTTGAGCACAGTGAGCATGTTTTTGAACACATTAACA
CCGAAGTTCTACGTGGCCCTAACAGGCACTTCCTCACTAATATCAGGGCTTATTTTGATATTTGAATGGTGGTAT
TTTCGCAAATACGGAACTTCATTCATTGAACAAGTCTCAGTAAGCCACTTGCGCCCCCTTCTGGGAGGGGTTGAC
AACAACTCTTCCAACAATTCTAATTCCAGTAACGGGGACTCAGATTCCAATAGGCAAAGTGTCTCAGAATGCAAA
GTATGGCGAAATCCACTAAATTTATTTAGGGGTGCTGAATACAATCGGTATACTTGGGTGACAGGACGAGAGCCT
CTTACTTACTATGACATGAATCTCTCTGCCCAAGACCACCAGACATTCTTTACTTGTGACTCGGACCATCTGCGT
CCCGCAGATGCAATAATGCAGAAAGCCTGGAGAGAGAGAAACCCCCAAGCTAGGATTTCTGCAGCTCATGAAGCC
TTGGAGATAAATGAGTGTGCAACTGCTTATATTCTCTTGGCTGAAGAGGAAGCAACAACCATTGCTGAAGCAGAA
AAATTATTTAAGCAGGCCCTGAAGGCTGGAGATGGCTGTTACCGACGCTCTCAGCAGCTACAACATCATGGATCC
CAGTATGAAGCCCAACATAGACGAGACACCAATGTCTTGGTGTACATCAAAAGAAGGCTAGCAATGTGTGCCAGA
AGACTCGGGAGGACCAGGGAAGCAGTGAAAATGATGAGAGATTTAATGAAGGAGTTCCCCCTTCTGAGTATGTTC
AATATCCATGAAAACCTTTTAGAAGCCCTTCTGGAACTACAAGCATATGCTGATGTTCAGGCAGTCTTAGCAAAG
TATGATGATATAAGCTTACCAAAGTCAGCAACAATATGCTACACAGCTGCTTTGCTCAAAGCAAGAGCTGTCTCT
GACAAATTCTCTCCTGAGGCTGCATCTCGGCGGGGGCTGAGCACAGCAGAGATGAATGCAGTAGAGGCCATTCAT
AGAGCTGTGGAATTCAATCCTCATGTGCCAAAATACCTACTAGAAATGAAAAGCTTAATCCTACCCCCAGAACAT
ATCCTGAAGAGAGGAGACAGTGAAGCAATAGCATATGCATTCTTTCATCTTGCACACTGGAAGAGAGTGGAAGGG
GCTTTGAATCTTTTGCATTGTACGTGGGAAGGCACTTTTCGGATGATCCCTTATCCCTTGGAAAAGGGGCACCTA
TTTTATCCTTACCCAATCTGTACAGAAACAGCAGACCGAGAGCTGCTTCCATCTTTCCATGAAGTCTCAGTTTAC
CCAAAGAAGGAGCTTCCCTTCTTTATTCTCTTTACTGCTGGATTATGTTCCTTCACAGCCATGCTGGCCCTCCTG
ACACATCAGTTCCCGGAACTTATGGGGGTCTTCGCAAAAGCTTTCCTCAGCACTTTGTTTGCCCCCTTAAACTTT
GTCATGGAGAAAGTGGAGAGCATCCTCCCATCCAGTCTGTGGCACCAGCTAACACGGATCTGAGAGAAGCCCTGT
CCTCCACTCACCTCACCCGCCGCTGCCACCATCTCCTCTGTGCCAACTCCTTGTGGACCGCAAGAAAGCATGACT
TTGAAAAAGGGAAGCCATTCCGAGATTTTAAAATGTTCATGGACTATTCCATATTAAAAGCTGTTTTTGTTGTTG
TACAAAAAAAAAAAAAAAAAA

FIGURE 1242

MACRWSTKESPRWRSALLLLFLAGVYGNGALAEHSENVHISGVSTACGETPEQIRAPSGIITSPGWPSEYPAKIN
CSWFIRANPGEIITISFQDFDIQGSRRCNLDWLTIETYKNIESYRACGSTIPPPYISSQDHIWIRFHSDDNISRK
GFRLAYFSGKSEEPNCACDQFRCGNGKCIPEAWKCNNMDECGDSSDEEICAKEANPPTAAAFQPCAYNQFQCLSR
FTKVYTCLPESLKCDGNIDCLDLGDEIDCDVPTCGQWLKYFYGTFNSPNYPDFYPPGSNCTWLIDTGDHRKVILR
FTDFKLDGTGYGDYVKIYDGLEENPHKLLRVLTAFDSHAPLTVVSSSGQIRVHFCADKVNAARGFNATYQVDGFC
LPWEIPCGGNWGCYTEQQRCDGYWHCPNGRDETNCTMCQKEEFPCSRNGVCYPRSDRCNYQNHCPNGSDEKNCFF
CQPGNFHCKNNRCVFESWVCDSQDDCGDGSDEENCPVIVPTRVITAAVIGSLICGLLLVIALGCTCKLYSLRMFE
RRSFETQLSRVEAELLRREAPPSYGQLIAQGLIPPVEDFPVCSPNQASVLENLRLAVRSQLGFTSVRLPMAGRSS
NIWNRIFNFARSRHSGSLALVSADGDEVVPSQSTSREPERNHTHRSLFSVESDDTDTENERRDMAGASGGVAAPL
PQKVPPTTAVEATVGACASSSTQSTRGGHADNGRDVTSVEPPSVSPARHQLTSALSRMTQGLRWVRFTLGRSSSL
SQNQSPLRQLDNGVSGREDDDDVEMLIPISDGSSDFDVNDCSRPLLDLASDQGQGLRQPYNATNPGVRPSNRDGP
CERCGIVHTAQIPDTCLEVTLKNETSDDEALLLC

FIGURE 1243

CTCACTGCCACACGCAGCTCAACCTGAGCTACACAGCCAGATGCGAGATGCTTCTCTGCTGATCTGAGTCTGCCT
GCAGCATGGACCTTGGTCTTCCCTGAAGCATCTCCAGGGCTGGAGGGACGACTGCCATGCACCGAGGGCTCATCC
ATCCGCAGAGCAGGGCAGTGGGAGGAGACGCTATGACCCCCATCGTCACAGTCCTGATCTGTCTCAGGCTGAGTC
TGGGCCCCCGGACCCACGTGCAGGCAGGGACCCTCCCCAAGCCCACACTCTGGGCTGAGCCAGGCTCTGTGATCA
CCCAGGGGAGTCCCGTGACCCTCTGGTGTCAGGGGATCCTGGAGACCCAGGAGTACCGTCTGTATAGAGAAAAGA
AAACAGCACCCTGGATTACACGGATCCCACAGGAGATTGTGAAGAAGGGCCAGTTCCCCATCCCATCCATCACCT
GGGAACACACAGGGCGGTATCGCTGTTTCTACGGTAGCCACACTGCAGGCTGGTCAGAGCCCAGTGACCCCCTGG
AGCTGGTGGTGACAGGAGCCTACATCAAACCCACCCTCTCAGCTCTACCCAGCCCTGTGGTGACCTCAGGAGGGA
ACGTGACCCTCCATTGTGTCTCACAGGTGGCATTTGGCAGCTTCATTCTGTGTAAGGAAGGAGAAGATGAACACC
CACAATGCCTGAACTCACAGCCCCGTACCCATGGGTGGTCCCGGGCCATCTTCTCTGTGGGCCCCGTGAGCCCGA
GTCGCAGGTGGTCGTACAGGTGCTATGCTTATGACTCGAACTCTCCCCATGTGTGGTCTCTACCCAGTGATCTCC
TGGAGCTCCTGGTCCTAGGTGTTTCTAAGAAGCCATCACTCTCAGTGCAGCCAGGTCCTATAGTGGCCCCTGGGG
AGAGCCTGACCCTCCAGTGTGTTTCTGATGTCAGCTACGACAGATTTGTTCTGTATAAGGAGGGAGAACGTGACT
TCCTCCAGCTCCCTGGCCCACAGCCCCAGGCTGGGCTCTCCCAGGCCAACTTCACCCTGGGCCCTGTGAGCCGCT
CCTACGGGGGCCAGTACAGATGCTCCGGTGCATACAACCTCTCCTCCGAGTGGTCGGCCCCCAGCGACCCCCTGG
ACATCCTGATCGCAGGACAGTTCCGTGGCAGACCCTTCATCTCGGTGCATCCGGGCCCCACGGTGGCCTCAGGAG
AGAACGTGACCCTGCTGTGTCAGTCATGGGGGCCGTTCCACACTTTCCTTCTGACCAAGGCGGGAGCAGCTGATG
CCCCCCTCCGTCTCAGATCAATACACGAATATCCTAAGTACCAGGCTGAATTCCCTATGAGTCCTGTGACCTCAG
CCCACTCGGGGACCTACAGGTGCTACGGCTCACTCAGCTCCAACCCCTACCTGCTGTCTCACCCCAGTGACTCCC
TGGAGCTCATGGTCTCAGGAGCAGCTGAGACCCTCAGCCCACCACAAAACAAGTCCGATTCCAAGGCTGGAGCAG
CTAACACCCTCAGCCCATCACAAAACAAGACTGCCTCACACCCCCAGGATTACACAGTGGAGAATCTCATCCGCA
TGGGCATAGCTGGCTTGGTCCTGGTGGTCCTCGGGATTCTGCTATTTGAGGCTCAGCACAGCCAGAGAAGCCTCTGA
GATGCAGCCGGGAGGTGAACAGCAGAGAGAAGAATGTACCCTTCAGAGTGGTGGAGCCTTGGGAACAGATCTG
ATGATGCCAGGAGGTTCCGGGAGACAATTTAGGGCTGATGTTATCTGGACTGTCTGCCAATCATTTTTAGAGGGA
GGAATCAGTGTTGGATTGCAGAGACATTTTCTGGAGTGATCCATGAAGGACCATTAACATGTGATACCTTTCCTC
TCTATTAATGTTGACTTCCCTTGGTTGGATCCTCT

FIGURE 1244

MTPIVTVLICLRLSLGPRTHVQAGTLPKPTLWAEPGSVITQGSPVTLWCQGILETQEYRLYREKKTAPWITRIPQ
EIVKKGQFPIPSITWEHTGRYRCFYGSHTAGWSEPSDPLELVVTGAYIKPTLSALPSPVVTSGGNVTLHCVSQVA
FGSFILCKEGEDEHPQCLNSQPRTHGWSRAIFSVGPVSPSRRWSYRCYAYDSNSPHVWSLPSDLLELLVLGVSKK
PSLSVQPGPIVAPGESLTLQCVSDVSYDRFVLYKEGERDFLQLPGPQPQAGLSQANFTLGPVSRSYGGQYRCSGA
YNLSSEWSAPSDPLDILIAGQFRGRPFISVHPGPTVASGENVTLLCQSWGPFHTFLLTKAGAADAPLRLRSIHEY
PKYQAEFPMSPVTSAHSGTYRCYGSLSSNPYLLSHPSDSLELMVSGAAETLSPPQNKSDSKAGAANTLSPSQNKT
ASHPQDYTVENLIRMGIAGLVLVVLGILLFEAQHSQRSL

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FIGURE 1245

GAGGTTGAAGGACCCAGGCGTGTCAGCCCTGCTCCAGAGACCTTGGGC**ATG**GAGGAGAGTGTCGTACGGCCCTCA
GTGTTTGTGGTGGATGGACAGACCGACATCCCATTCACGAGGCTGGGACGAAGCCACCGGAGACAGTCGTGCAGT
GTGGCCCGGGTGGGTCTGGGTCTCTTGCTGTTGCTGATGGGGGCTGGGCTGGCCGTCCAAGGCTGGTTCCTCCTG
CAGCTGCACTGGCGTCTAGGAGAGATGGTCACCCGCCTGCCTGACGGACCTGCAGGCTCCTGGGAGCAGCTGATA
CAAGAGCGAAGGTCTCACGAGGTCAACCCAGCAGCGCATCTCACAGGGGCCAACTCCAGCTTGACCGGCAGCGGG
GGGCCGCTGTTATGGGAGACTCAGCTGGGCCTGGCCTTCCTGAGGGGCCTCAGCTACCACGATGGGGCCCTTGTG
GTCACCAAAGCTGGCTACTACTACATCTACTCCAAGGTGCAGCTGGGCGGTGTGGGCTGCCCGCTGGGCCTGGCC
AGCACCATCACCCACGGCCTCTACAAGCGCACACCCCGCTACCCCGAGGAGCTGGAGCTGTTGGTCAGCCAGCAG
TCACCCTGCGGACGGGCCACCAGCAGCTCCCGGGTCTGGTGGGACAGCAGCTTCCTGGGTGGTGTGGTACACCTG
GAGGCTGGGGAGGAGGTGGTCGTCCGTGTGCTGGATGAACGCCTGGTTCGACTGCGTGATGGTACCCGGTCTTAC
TTCGGGGCTTTCATGGTG**TGA**AGGAAGGAGCGTGGTGCATTGGACATGGGTCTGACACGTGGAGAACTCAGAGGG
TGCCTCAGGGGAAAGAAAACTCACGAAGCAGAGGCTGGGCGTGGTGGCTCTCGCCTGTAATCCCAGCACTTTGGG
AGGCCAAGGCAGGCGGATCACCTGAGGTCAGGAGTTCGAGACCAGCCTGGCTAACATGGCAAAACCCCATCTCTA
CTAAAAATACAAAAATTAGCCGGACGTGGTGGTGCCTGCCTGTAATCCAGCTACTCAGGAGGCTGAGGCAGGATA
ATTTTGCTTAAACCCGGGAGGCGGAGGTTGCAGTGAGCCGAGATCACACCACTGCACTCCAACCTGGGAAACGCA
GTGAGACTGTGCCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1246

MEESVVRPSVFVVDGQTDIPFTRLGRSHRRQSCSVARVGLGLLLLLMGAGLAVQGWFLLQLHWRLGEMVTRLPDG
PAGSWEQLIQERRSHEVNPAAHLTGANSSLTGSGGPLLWETQLGLAFLRGLSYHDGALVVTKAGYYYIYSKVQLG
GVGCPLGLASTITHGLYKRTPRYPEELELLVSQQSPCGRATSSSRVWWDSSFLGGVVHLEAGEEVVVRVLDERLV
RLRDGTRSYFGAFMV

FIGURE 1247

TTTTTTTTTCCAGCCAAGCAGCAGCTTTATTAGTGGTGCTGGGTTCTTCCCATACCCTACAGCGTGCTCGGAAGC
ATTCCGCGCCGGGCCTGCCAGACACCTGCGCCCTTCTGCAGCCGCCCGCCGCATCCGCCGCCGCAGCCCCCAGCA
TGTCGGGCCCAGACGTCGAGACGCCGTCCGCCATCCAGATCTGCCGGATCATGCGGCCAGATGATGCCAACGTGG
CCGGCAATGTCCACGGGGGGACCATCCTGAAGATGATCGAGGAGGCAGGCGCCATCATCAGCACCCGGCATTGCA
ACAGCCAGAACGGGGAGCGCTGTGTGGCAGCCCTGGCTCGTGTCGAGCGCACCGACTTCCTGTCTCCCATGTGCA
TCGGTGAGGTGGCGCATGTCAGCGCGGAGATCACCTACACCTCCAAGCACTCTGTGGAGGTGCAGGTCAACGTGA
TGTCCGAAAACATCCTCACAGGTGCCAAAAAGCTGACCAATAAGGCCACCCTGTGGTATGTGCCCCTGTCGCTGA
AGAATGTGGACAAGGTCCTCGAGGTGCCTCCTGTTGTGTATTCCCGGCAGGAGCAGGAGGAGGAGGGCCGGAAGC
GGTATGAAGCCCAGAAGCTGGAGCGCATGGAGACCAAGTGGAGGAACGGGGACATCGTCCAGCCAGTCCTCAACC
CAGAGCCGAACACTGTCAGCTACAGCCAGTCCAGCTTGATCCACCTGGTGGGGCCTTCAGACTGCACCCTGCACG
GCTTTGTGCACGGAGGTGTGACCATGAAGCTCATGGATGAGGTCGCCGGGATCGTGGCTGCACGCCACTGCAAGA
CCAACATCGTCACAGCTTCCGTGGACGCCATTAATTTTCATGACAAGATCAGAAAAGGCTGCGTCATCACCATCT
CGGGACGCATGACCTTCACGAGCAATAAGTCCATGGAGATCGAGGTGTTGGTGGACGCCGACCCTGTTGTGGACA
GCTCTCAGAAGCGCTACCGGGCCGCCAGTGCCTTCTTCACCTACGTGTCGCTGAGCCAGGAAGGCAGGTCGCTGC
CTGTGCCCCAGCTGGTGCCCGAGACCGAGGACGAGAAGAAGCGCTTTGAGGAAGGCAAAGGGCGGTACCTGCAGA
TGAAGGCGACGATCAGGGCCACGCGGACGCTCAGCCCTAGACTCCCTCCTCCTGCCACTGGTGCCTCGAGTAGCC
ATGGCAACGGGCCCAGTGTCCAGTCACTTAGAAGTTCCCCCCTTGGCCAAAAACCCAATTCACATTGAGAGCTGG
TGTTGTCTGAAGTTTTCGTATCACAGTGTTAACCTGTACTCTCTCCTGCAAACCTACACACCAAAGCTTTATTTA
TATCATTCCAGTATCAATGCTACACAGTGTTGTCCCGAGCGCCGGGAGGCGTTGGGCAGAAACCCTCGGGAATGC
TTCCGAGCACGCTGTAGGGTATGGGAAGAACCCAGCACCACTAATAAAGCTGCTGCTTGGCTGGAAA

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FIGURE 1248

MSGPDVETPSAIQICRIMRPDDANVAGNVHGGTILKMIEEAGAIISTRHCNSQNGERCVAALARVERTDFLSPMC
IGEVAHVSAEITYTSKHSVEVQVNVMSENILTGAKKLTNKATLWYVPLSLKNVDKVLEVPPVVYSRQEQEEEGRK
RYEAQKLERMETKWRNGDIVQPVLNPEPNTVSYSQSSLIHLVGPSDCTLHGFVHGGVTMKLMDEVAGIVAARHCK
TNIVTASVDAINFHDKIRKGCVITISGRMTFTSNKSMEIEVLVDADPVVDSSQKRYRAASAFFTYVSLSQEGRSL
PVPQLVPETEDEKKRFEEGKGRYLQMKATIRATRTLSPRLPPPATGASSSHGNGPSVQSLRSSPLGQKPNSH

FIGURE 1249A

GGAGGGCCTCGGCTTTCCAGGGACAGAGGCCCAACTCCAGGACGCCCCAGCTGGCCCAGCCCCTCCTCTTTCCCT
CAAGGCTGCAGGAGGTCGGGAAAGGCAGTCCTGGTAGAGGCCTGTCCTGGGCTCCAGGTTGGCCCCTGAGGGTGG
CCCTCCTC**ATG**CCGGCTTCAAGACTGAGGGACAGGGCAGCCAGTTCAGCCTCGGGATCCACCTGTGGCTCCATGT
CCCAGACGCACCCTGTGCTGGAGAGCGGCCTCCTGGCATCTGCCGGCTGCTCCGCACCCCGGGGTCCCAGGAAGG
GCGGCCCAGCCCCAGTGGACAGGAAAGCTAAGGCCTCAGCGATGCCGGACTCCCCAGCGGAGGTGAAGACGCAGC
CCCGGTCCACACCCCCCAGCATGCCGCCCCCACCGCCTGCCGCATCCCAGGGGGCCACACGCCCCCCCTCCTTCA
CGCCACACACACATCGAGAGGACGGGCCTGCGACGCTGCCCCACGGCCGTTTTCATGGCTGCTTAAAATGGTCTA
TGGTCTGTCTCTTGATGAACGGCAGCAGCCACTCACCAACAGCCATCAATGGTGCACCGTGCACACCCAACGGCT
TCAGCAATGGCCCGGCCACCTCGTCCACAGCCTCCTTGTCCACACAGCACCTGCCCCCAGCCTGCGGGGCCCGGC
AGCTCAGCAAGCTCAAGCGCTTCCTCACCACACTGCAGCAGTTTGGCAGCGACATCTCCCCAGAGATTGGGGAGC
GCGTGCGCACACTGGTGCTGGGCCTGGTGAACTCGACATTGACGATCGAGGAGTTTCATTCCAAGCTTCAGGAGG
CCACCAACTTCCCTCTGCGGCCGTTTGTCATTCCCTTCCTGAAGGCAAACCTGCCCTTGCTGCAGCGGGAGCTCC
TGCACTGTGCACGCCTGGCCAAGCAGACGCCCGCCCAGTACTTGGCCCAGCATGAGCAGCTCCTGCTGGACGCCA
GCGCCTCCTCCCCCATCGACTCCTCAGAGCTGCTACTGGAAGTCAACGAGAACGGCAAGAGGAGGACGCCCGACA
GGACCAAAGAGAACGGGTCAGAACGCGACCCGCTGCACCCCGAGCACCTCAGCAAACGGCCATGCACCCTGAACC
CTGCCCAGCGCTACAGCCCCAGCAACGGGCCACCGCAGCCCACACCGCCGCCGCACTACCGCCTGGAGGACATAG
CCATGGCCCACCACTTCCGAGATGCCTACCGCCACCCAGACCCCCGGGAGCTACGAGAGCGCCATCGGCCGCTTG
TGGTGCCTGGGTCCCGGCAGGAAGAAGTGATCGACCACAAGCTCACAGAGCGTGAGTGGGCAGAAGAGTGGAAGC
ACCTCAACAACCTCCTGAACTGCATCATGGACATGGTGGAGAAGACGCGGCGCTCGCTCACGGTGCTGCGCAGGT
GCCAGGAGGCCGACCGCGAGGAGCTCAACCACTGGGCGCGGCGCTACAGCGACGCCGAGGACACAAAGAAGGGCC
CCGCTCCCGCCGCGGCCCGGCCCCGCAGCAGCTCCGCCGGTCCCGAAGGGCCTCAGCTAGACGTGCCTCGCGAGT
TCCTGCCGAGGACCCTCACCGGCTACGTGCCTGAGGACATCTGGAGGAAGGCTGAAGAGGCCGTGAATGAGGTGA
AGCGGCAGGCCATGTCGGAGCTGCAGAAAGCCGTGTCGGACGCGGAGCGCAAAGCGCACGAGCTCATCACCACGG
AGCGTGCCAAGATGGAGCGGGCCCTGGCCGAGGCGAAGCGGCAGGCCTCCGAGGACGCCCTGACGGTCATCAACC
AGCAGGAGGACTCCAGCGAGAGCTGCTGGAACTGCGGGCGGAAAGCCAGTGAGACGTGCAGCGGCTGCAACGCGG
CACGCTACTGCGGGTCCTTCTGCCAGCATCGGGACTGGGAGAAGCATCACCACGTGTGTGGCCAGAGCCTGCAGG
GCCCCACAGCCGTGGTGGCCGACCCGGTGCCTGGACCGCCCGAAGCCGCCCACAGCCTGGGCCCCTCCCTGCCTG
TGGGTGCTGCCAGCCCCAGCGAAGCCGGCTCTGCGGGGCCTTCTCGCCCCGGCTCCCCCAGCCCACCTGGCCCAC
TGGACACCGTGCCCCGC**TGA**CCCCACTGGCCCCTGGCCTGCCGGACACAGCACCGTGCCAACCCCACCCAGCTCC
AGGCCCACCGGATGCTGTGCCTGGCCTCCGATGCCTGGCCTGCCAGACACTGCGCCCCGCCTGACCTGKGGGAGC
CGACCAATTAGTCACTGCTGCTACTGCCCCTCTCCGAAAGAAGACACAGAACCAACAAAACCGCATTCAGTGCAC
CTGCCTCAGCTACCTAATGATTCCGCGCGGAGACCTCCTGACAACGTCTCTTCAAGCATCCTCAGAAGCCTCGAC
TGAGCTTTAGACAGCAGAGCAGATGCCGCAGGCGCGGCGGCTCTGCCCACCTCTCTTTTCCTCTCTGTCTGTCTC
TCCCCCTCTGTCTTCTCTATCCTCTCTCTCTCTATGACTATCACACACTTTCTCTTCAATGAAAAAATCGAATTG
GTGGCTTATATTTTCAGCAAAGAATTTTGGGGGGTTTTGTGTGTTGGCAAAAGAGCTACTCAGAAATGGACAAAG
AAAACGGGGGGGTTCTCCCCCTCCTGATTAAAAAGGGAGAAAGAAAACTGCGATTTTATAGCTGGAGATCTGAAC
CCAGCTGTGCCCCTCCCCCAGGGGCGTGAGGCTGATCAGCGAAGACGGGAGGAAAGATTTCGATTTCTGACTCAA
GATGCATTTTTGGTTTCAGATTTTTTTTTCCTGTAATGTTAAACTCTTTGGCTTTAAGTAAAAATCCAAAAAGTT
TTTTTAAAAAAGCAAAGGAAGCATACTTGTGAACTACCTTGCTAGCTAGCCAGCCAAGGATACCGGACACACCTC
TGCTCCAAAGGAAATCCAAAAAAGCAAACACAAGAAATCAAAATCCAAAATTTGTTTGTCACTGCCAAAGTATTT
TTTTCACTGTTTCACTTGCTCTTGGGTTTGTTTGGATGTGGGTCTTTTTCTCTTCTGTTCTGATTTTGTTTGTGG
GTGTCGGGATATTTGGGTGCAGAGGGTTTGTGCCCAGTTAGAAGCGACTTTTGTTCTCTTCTGCGTAGGCGTTGG
TGCGTCCGCCGCGTGTGCGTGGTCCGTGTGCCGTTGCTCCGGCCTGCGTCTCCATATGTGTAGGAAAGGACACGC
CGTCTGTCCTCACGCCCCCTGTGACTTTTCATATTTCCGTTTTCCACTTGTGGAAAAAAAGTGCTAAAGTTTTCT
TCCCAGAGAGAGCATAATTCCGAAACAAAACTGTGACAATCTTTTGGGTTGATTCTCGACTGCTTTTCGAGCATG
CGGAGCCAGCAGGCCTCCCTGAAACACTGCTTCTCGGCCAGCCCGTCCTCCTCTACCTCTCTCCTCTCCGCGCCC
TCCGACCTCTCTCGGCCCCCTCACCCCAGCTCCGACCTCTCTCAGCCCCATCGCCCCAACTCCAACCTCTCGGCC
CCATCGCCCCACCGCAGCTACTCCCCTTTCTTCCAAACTTTTGCAGAAAAAACAAAAAAACTACAAACAAAAGCA

FIGURE 1249B

GCCCTCTGCCTCCTCCCCAGGGAAGACCCTGACCGTGTACATAGCCCTGGTGCTCCTGCCCAGCCACCCCTCAGA
TGCGTTCGCCTCTGGCCCTGGGGTGTGTCTCGGTGACGTTTTCTATCAGACGTGCTCCCTCCCATCCTCCAGCCC
TGCCCACCCTCCCTCCACTCCTCTCAACTGCCTCAGCGATTTCAAGAAGGAAATAAAGGGATAAAGAAATTCATG
CTTGCACCGAGTACAAGGACAGACAGCAGGCACGGCCCGCAGCCTGGCATCTGTGCGTGTGGCGTGGCCCGTGGC
TTGGCATCTGTGTGCGTGGTGTGGCCCGTGGCCTGGCATCTGTGTGCGTGGCGTGGCCCGTGGCCTGGCATCTGT
GTGTGTGGCGTGGCCCGTGGCCTGGCATCTGTGTGCGTGGCGTGGCCCGTGGCCTGGCATCTGTGTGCGTGGCTA
TCAGGAGTTCTAGGAACTCAGTGCAATACGGGAGTGACCCAGCTACTGAACCAGCCACGAACAGCCCGCCAGAGG
CCTGAAGCTGAGCGTGTACGTTAATGTGAATGTATATAGTCTTTGCAGAGGTCCAAATGATATTCATGATGGTAA
TAAACGAGATGTTTGCCAAAT

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FIGURE 1250

MPASRLRDRAASSASGSTCGSMSQTHPVLESGLLASAGCSAPRGPRKGGPAPVDRKAKASAMPDSPAEVKTQPRS
TPPSMPPPPPAASQGATRPPSFTPHTHREDGPATLPHGRFHGCLKWSMVCLLMNGSSHSPTAINGAPCTPNGFSN
GPATSSTASLSTQHLPPACGARQLSKLKRFLTTLQQFGSDISPEIGERVRTLVLGLVNSTLTIEEFHSKLQEATN
FPLRPFVIPFLKANLPLLQRELLHCARLAKQTPAQYLAQHEQLLLDASASSPIDSSELLLEVNENGKRRTPDRTK
ENGSERDPLHPEHLSKRPCTLNPAQRYSPSNGPPQPTPPPHYRLEDIAMAHHFRDAYRHPDPRELRERHRPLVVP
GSRQEEVIDHKLTEREWAEEWKHLNNLLNCIMDMVEKTRRSLTVLRRCQEADREELNHWARRYSDAEDTKKGPAP
AAARPRSSSAGPEGPQLDVPREFLPRTLTGYVPEDIWRKAEEAVNEVKRQAMSELQKAVSDAERKAHELITTERA
KMERALAEAKRQASEDALTVINQQEDSSESCWNCGRKASETCSGCNAARYCGSFCQHRDWEKHHHVCGQSLQGPT
AVVADPVPGPPEAAHSLGPSLPVGAASPSEAGSAGPSRPGSPSPPGPLDTVPR

FIGURE 1251A

GAGAGACACGAATATGTTTCAGCCGCAACAGGCTGCGTTTCAGCCGGAAGAGTGAAAGGGCACCTTGAAAACGCA
AGTTTATGAATATGTTTCTGTACTTTCAGACCATCATCAAAGAGGGGATGCTGACCAAACAGAACAATTCATTCC
AGCGATCAAAAAGGAGATACTTTAAGCTTCGAGGGCGAACGCTTTACTATGCCAAAACGGCAAAGTCAATCATAT
TTGATGAGGTGGATCTGACAGATGCCAGCGTAGCTGAATCCAGTACCAAAAACGTCAACAACAGTTTTACGGTCA
TAACTCCATGCAGGAAGCTCATCTTGTGTGCTGATAACAGAAAAGAAATGGAAGATTGGATTGCAGCATTAAAGA
CTGTGCAGAACAGGGAGCACTTTGAGCCCACCCAGTACAGCATGGACCACTTCTCAGGGATGCACAATTGGTACG
CCTGTTCCCACGCGAGGCCGACCTACTGCAATGTGTGCCGTGAGGCTCTGTCTGGGGTCACGTCGCACGGGCTGT
CCTGCGAGGTGTGCAAATTTAAGGCCCACAAGCGCTGTGCTGTGCGTGCAACCAATAACTGCAAGTGGACCACAC
TGGCCTCGATCGGGAAGGACATCATTGAAGATGCAGATGGGATTGCAATGCCCCACCAGTGGTTGGAAGGAAACC
TACCTGTGAGCGCCAAGTGCACTGTGTGCGACAAGACCTGTGGCAGTGTGCTGCGCCTGCAGGACTGGCGCTGCC
TCTGGTGCAAGGCCATGGTTCACACATCGTGTAAAGAATCCTTGCTGACCAAGTGCCCACTTGGCCTGTGCAAAG
TGTCAGTCATCCCACCCACGGCTCTCAACAGCATCGACTCCGATGGGTTCTGGAAGGCCAGCTGTCCTCCTTCTT
GCACAAGCCCACTGTTGGTCTTCGTCAATTCAAAAAGTGGGGACAACCAGGGTGTGAAGTTCCTCAGAAGATTCA
AACAGCTACTAAACCCCGCCCAGGTCTTCGACCTCATGAACGGAGGCCCACACCTCGGCTTACGGTTATTCCAGA
AGTTTGACACATTCCGGATTCTGGTTTGTGGCGGGGATGGAAGTGTTGGCTGGGTCCTCTCCGAAATCGACAGCC
TCAACCTTCATAAACAGTGTCAGCTGGGAGTGCTGCCGCTCGGCACAGGGAACGACTTGGCCCGAGTACTGGGCT
GGGGCTCAGCCTGCGATGACGACACCCAGCTCCCCCAGATCTTGGAGAAGTTGGAGAGAGCCAGCACCAAGATGC
TGGACAGGTGGAGCGTCATGGCATACGAGGCCAAGCTCCCCCGGCAGGCCTCCTCCTCTACCGTCACCGAAGACT
TCAGCGAGGATTCCGAGGTACAGCAGATTCTCTTCTATGAAGACTCGGTTGCAGCCCACCTTTCTAAAATCCTCA
CCTCGGACCAGCACTCGGTGGTCATCTCCTCGGCCAAAGTGCTCTGTGAGACGCCGAAGGACTTCGTGGCACGGG
TGGGGAAGGCCTATGAGAAGACGACCGAGAGCTCGGAGGAGTCAGAGGTCATGGCCAAGAAGTGCTCTGTCCTGA
AAGAGAAGCTGGATTCCCTTCTCAAGACCTTGGACGATGAGTCCCAGGCCTCGTCCTCTCTGCCCAACCCGCCCC
CCACCATTGCCGAGGAGGCTGAAGATGGAGATGGGTCGGGCAGCATCTGCGGTTCCACCGGAGACCGCTTGGTGG
CATCAGCTTGCCCGGCCCGGCCGCAGATATTCCGGCCTCGAGAACAGCTCATGCTGAGAGCCAACAGCCTGAAGA
AAGCAATTCGTCAGATCATAGAACACACAGAAAAAGCTGTCGATGAGCAGAATGCCCAGACCCAGGAGCAGGAGG
GCTTCGTCCTGGGCCTCTCTGAGTCAGAGGAGAAGATGGACCACAGAGTGTGCCCACCACTGTCCCACAGCGAGA
GCTTCGGGGTCCCCAAGGGGAGGAGCCAGCGCAAAGTGTCGAAATCTCCGTGTGAAAAGCTGATCAGCAAAGGGA
GTCTGTCCCTAGGCAGTTCTGCTTCCCTTCCGCCCCAGCCGGGAAGCCGGGACGGCCTGCCTGCGCTCAACACCA
AGATCCTGTACCCAAATGTCCGGGCTGGAATGTCTGGTTCCTTACCCGGTGGCTCAGTCATCAGTCGCCTGTTAA
TTAATGCTGATCCCTTCAACTCTGAACCAGAAACCCTAGAGTATTACACGGAGAAATGTGTCATGAACAACTATT
TTGGCATTGGCCTGGATGCGAAGATATCCCTGGACTTTAACAACAAGCGCGATGAGCACCCAGAGAAGTGCAGGA
GCCGAACCAAGAACATGATGTGGTATGGAGTTCTTGGAACCAAAGAGTTGCTGCACAGAACCTACAAGAACCTGG
AGCAAAAGGTCTTGCTGGAGTGTGACGGCGACCCATCCCACTCCCCAGTCCTTCAGGGAATTGCTGTCCTTAACA
TTCCCAGCTATGCCGGAGGAACCAACTTCTGGGGGGGGTACCAAGGAAGATGATACTTTCGCAGCTCCATCATTCG
ATGACAAGATTCTGGAGGTGGTCGCCGTGTTCGGCAGCATGCAGATGGCCGTCTCTCGAGTCATCAGGCTACAGC
ATCATCGGATCGCCCAGTGTCGCACGGTGAAGATCTCCATCCTTGGGGATGAGGGCGTGCCTGTGCAGGTGGACG
GAGAGGCCTGGGTCCAGCCGCCAGGGTACATTCGGATTGTCCACAAGAACCGGGCACAGACACTGACCAGAGACA
GGGCATTTGAGAGCACCCTGAAGTCCTGGGAAGACAAGCAGAAGTGCGAGGTGCCCCGCCCTCCATCCTGTTCCC
TGCACCCGGAGATGCTGTCCGAGGAGGAGGCCACCCAGATGGACCAGTTTGGGCAGGCAGCAGGGGTCCTCATTC
ACAGTATCCGAGAAATAGCTCAGTCTCACCGGGACATGGAGCAGGAACTGGCCCACGCCGTCAATGCCAGCTCCA
AGTCCATGGACCGTGTGTATGGCAAGCCCAGAACCACAGAGGGGCTCAACTGCAGCTTCGTCCTGGAAATGGTGA
ATAACTTCAGAGCTCTGCGCAGTGAGACGGAGCTGCTGTCTGGGAAGATGGCCCTGCAGCTGGATCCGCCTCAGA
AGGAGCAGCTGGGGAGTGCTCTTGCCGAGATGGACCGACAGCTCAGGAGGCTGGCAGACACCCCGTGGCTCTGCC
AGTCCGCAGAGCCCGGCGACGAAGAGAGTGTGATGCTGGATCTTGCCAAGCGCAGTCGCAGTGGTAAATTCCGCC
TCGTGACCAAGTTTAAAAAGGAGAAAAACAACAAGAACAAAGAAGCTCACAGTAGCCTGGGAGCCCCGGTTCACC
TCTGGGGGACAGAGGAGGTTGCTGCCTGGCTGGAGCACCTCAGTCTCTGTGAGTATAAGGACATCTTCACACGGC
ACGACATCCGGGGCTCTGAGCTCCTGCACCTGGAGCGGAGGGACCTCAAGGACCTGGGCGTGACCAAGGTGGGCC
ACATGAAGAGGATCCTGTGTGGCATCAAGGAGCTGAGCCGCAGCGCCCCCGCCGTCGAGGCCTAGCCTCTGTCCT

FIGURE 1251B

CTCAGCCTGTGGCCTCCACATCCCCGCCGCCGAGGCCTAGCCTCCGCCCTCTCAGCCTGTGGCCTCTGCGCCTCC
TGCCACTGAGGCCCTGGGCAGATGCTGCAGCCCGCCCCCTTCTCATGGTGCTACTTCCTCTGTCAGCTACAGAAA
GCCTCCGTGACACCGTCCACCAGAGCTCTGGGGTCTCGAACATAACAACACAGCTACCTTTGAAACAACACTTTC
TCCAGCTCAGAGTCACCTGGGGCACATGTGTCACGGCCACTCAGCTCTCGCCCGCCTGTGCTGTGGGCCAGGGAA
TCCAGCGGCGTCTGGCCTCCTGGGCACTGCTTGCCTGGCCTCGTGCTTGGATTGTCCCGGGGGCTCCTCTCCGTG
TGTCCTTCTGTGGCCGCACCGTGTGGCTCCGCTCCTGGCCCCCAGCCAGTTCTCAGAAACGTGGCTGGGGCCCAG
CACAGCAGCCTGCAAGGGCCCCTGTTTGTTGATGCAGCTTTTGTTGAACAAAAATCGTGCTCTTTCCTGGTTTGA
AAGTAGCATGGATGTTTCCAGTCTTGTTGATTGTAATTTGACGTGAAGAGAAAAAAACATTCCTCCTGCGTGAGC
CAAGGCAGCGGGTGCTTGTTCCCAGGCGGGAGCCCTCCCTGGGTGTCACAGGTCCTGTGCTCCTCCCTCCTCCAT
CCTCTCTCCTCCCGCTCCTCCCTCCCCCCACTGTGGGCTGGGGACGCCTGCCTTCTGTCTCCGGACGCTCTAGGC
GAGTTCAGCTTGGGGTGTGAGTGAGACAGCTTGCCAGCTGCATCCCTGCAGACAGAGGATGTGTGTCCACATGAG
TGTTTCTGTGTGGGAAATGCTTCCTGGCTCTGGGAAACTTTTTCTGCCCATTCTGTGGTTCCCAGGGAGCGTGGC
CCTGGTGCAGGGGTGGTTTGACCTCTTCAGCCCGTCCGGTGGCCTGGACGGAGGCTCTCTGAGTGTCTGCCCCTG
CGATGGCTTCTTGTCGCCTGCTGCTGGGGCTGATGTCGCTGGAGGTGCTGGCAGGGACTCTGATTTGGTGGTCCG
CGCTGCCCCTGCCCTGCCTCTGTCCTGGCTCTGAACTAGTAGATGATGGTGCCAGAGGGCAGGGAGCTCGCCTGG
GGAGAGGGCTGTGCCCCGTAGGGACAGTGCCCAGGTGAAGGATGCCCCTGGTCCTCCAGGGCACTGACTTTGCCC
TTTTTTCCCGTTGATAGTCATGGCTCAGAGGTGCTTGTAAATGTCTTGGGAAGAGGTTTCTGTAACCCCTGCCCT
GGTGTGAGGAGGAAATGGCTCTGGCCTGGCTGCCTGGCGTGGCTTCTCTTTGGCTCCCAAAGAGAAGGACAGTGT
TGGGAGTATCTGCCGTGGCTTCTCTTTGGCTCCCAAAGAGAAGGACAGTGTTGGGAGTATCTGCCGGCGCTGTCC
AGGTCCTTTAGTCAGCGTCACTCCATCTGATGTGCAGAAGCTGGGCTGCACCTGCGGGGGTGGGCATAGACCGGG
CTGGGTCTGCAGCAGCCCCTGGTCCTGAGCAGGCGGCAGTGAACAGCACTGGCCCACCTCCCACTCACAGCCCCT
CTGTCCCCTCTGCAGTGCACCCAGGTGGCCCCTCTGCGTGCCTTTGGGTGCTCCCCTCTCGTGGTCGTTCTGGCC
CGAGGCCCTTAGAGTATGGAGGCTGAGCCAGGCCTTGGGTTTCCCCAGCACAGCCTCCTGTCGCTGCATGCACGT
GTTGGGATTTTTGGATGAAGACTCTCCCACGCTCTGTTGGTGGACTTAGCTGCCTCACTGGAGATTGTGGGTGGA
AGGTGGTTGTATGTTACCTTTACCACCTCTCATTGTTTTCCCCAGAACATTGTAGATGGGGGTTGGCAGAGGGAG
AAATATGCCAGCCACGGCAGTCGCTTGGTTTCCCAGGTGGAATGGGCTAACACAGGAGATGATGGGAACCTGTCC
CGCAGTCCCTGCATGACCATTGGCCCTGCTGGCCTGGCGATGTGGGCATCCTGGGGTTCTTAGGGTCCCAGAACA
AGCCCCAGGCAAGCTGGAACTTGGGTGGGGAGGGGACATGAGGAGGATAAACAGCTGACTGTGGCTTCAAGGACA
TCAGGGCCACCCCAAGTCCTCAGTGTCCTACTCCTGGCAAGATTGGGTTTGGATCAAAAGTGTTTAAAATTAATA
TGTTGTCAGTGATTAGAACAACACTGTTTACATAAAAACCATTTTTCTAATTCTAACAAGTTAGAATGTGAGGAA
GGAATGAACATGAGTGTTTAGGAACCTGCCCTTTGGTGCTGGGCTGGCGTCCCGCACTGGGGTGTCCTCGCTGTC
TGGGGGCTGCTCTGCTTCCCCGGCCCAGGTCCCCTTGTGGTGTTGCCAGACGGGCCTCATGGTCTGCTGTGCAGA
GAGAGGCAGGAAGGATCCCTGAAGAGTCTTGGAGAAAAGGTTCTGTGCCCTCAGGTGGGGCTTACCCCCTCGTAT
TTATAATCTTAATTTATATAGTGACCACCGTGGAAACAAACGCCTCTTGTATTGTCATGTACATAGTCCATACCT
GAGTGCTGTACATAAGTTGTTCTGTGTATAAATAAAACAAGCCTGTTTTTGATCTTC

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FIGURE 1252

MNMFLYFQTIIKEGMLTKQNNSFQRSKRRYFKLRGRTLYYAKTAKSIIFDEVDLTDASVAESSTKNVNNSFTVIT
PCRKLILCADNRKEMEDWIAALKTVQNREHFEPTQYSMDHFSGMHNWYACSHARPTYCNVCREALSGVTSHGLSC
EVCKFKAHKRCAVRATNNCKWTTLASIGKDIIEDADGIAMPHQWLEGNLPVSAKCTVCDKTCGSVLRLQDWRCLW
CKAMVHTSCKESLLTKCPLGLCKVSVIPPTALNSIDSDGFWKASCPPSCTSPLLVFVNSKSGDNQGVKFLRRFKQ
LLNPAQVFDLMNGGPHLGLRLFQKFDTFRILVCGGDGSVGWVLSEIDSLNLHKQCQLGVLPLGTGNDLARVLGWG
SACDDDTQLPQILEKLERASTKMLDRWSVMAYEAKLPRQASSSTVTEDFSEDSEVQQILFYEDSVAAHLSKILTS
DQHSVVISSAKVLCETPKDFVARVGKAYEKTTESSEESEVMAKKCSVLKEKLDSLLKTLDDESQASSSLPNPPPT
IAEEAEDGDGSGSICGSTGDRLVASACPARPQIFRPREQLMLRANSLKKAIRQIIEHTEKAVDEQNAQTQEQEGF
VLGLSESEEKMDHRVCPPLSHSESFGVPKGRSQRKVSKSPCEKLISKGSLSLGSSASLPPQPGSRDGLPALNTKI
LYPNVRAGMSGSLPGGSVISRLLINADPFNSEPETLEYYTEKCVMNNYFGIGLDAKISLDFNNKRDEHPEKCRSR
TKNMMWYGVLGTKELLHRTYKNLEQKVLLECDGDPSHSPVLQGIAVLNIPSYAGGTNFWGGTKEDDTFAAPSFDD
KILEVVAVFGSMQMAVSRVIRLQHHRIAQCRTVKISILGDEGVPVQVDGEAWVQPPGYIRIVHKNRAQTLTRDRA
FESTLKSWEDKQKCEVPRPPSCSLHPEMLSEEEATQMDQFGQAAGVLIHSIREIAQSHRDMEQELAHAVNASSKS
MDRVYGKPRTTEGLNCSFVLEMVNNFRALRSETELLSGKMALQLDPPQKEQLGSALAEMDRQLRRLADTPWLCQS
AEPGDEESVMLDLAKRSRSGKFRLVTKFKKEKNNKNKEAHSSLGAPVHLWGTEEVAAWLEHLSLCEYKDIFTRHD
IRGSELLHLERRDLKDLGVTKVGHMKRILCGIKELSRSAPAVEA

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FIGURE 1253

CGTGCACCCTGAGCCGGAGCTGCCCAGTCGCCGCGGGACCGGGGCCGCTGGGGTCTGGACGGGGGTCGCC**ATG**AT
CCGCTTTATCCTCATCCAGAACCGGGCAGGCAAGACGCGCCTGGCCAAGTGGTACATGCAGTTTGATGATGATGA
GAAACAGAAGCTGATCGAGGAGGTGCATGCCGTGGTCACCGTCCGAGACGCCAAACACACCAACTTTGTGGAGGT
CTTAAACGAATATTTCCACAATGTCTGTGAACTGGACCTGGTGTTCAACTTCTACAAGGTTTACACGGTCGTGGA
CGAGATGTTCCTGGCTGGCGAAATCCGAGAGACCAGCCAGACGAAGGTGCTGAAACAGCTGCTGATGCTACAGTC
CCTGGAG**TGA**GGGCAGGCGAGCACCCCACCCCGGCCCCGGCCCCTCCTGGAATCGCCTGCTCGCTTCCCCTTCCC
AGGCCCGTGGCCAACCCAGCAGTCCTTCCCTCAACTGCCTAGGAGGAAGGGACCCAGCTGGGTCTGGGCCACAAG
GGAGGAGACTTCACCCCACTTCCTCTGGGCCCTGGCTGTGGGCAGAGGCCACCGTGTGTGTCCCGAGTAACCGTG
CCGTTGTCGTGTGATTCCATAAGCGTCTGTGCGTGGAGTCCCCAATAAACCTGTGGTCCTGCCTGGC

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FIGURE 1254

MIRFILIQNRAGKTRLAKWYMQFDDDEKQKLIEEVHAVVTVRDAKHTNFVEVLNEYFHNVCELDLVFNFYKVYTV
VDEMFLAGEIRETSQTKVLKQLLMLQSLE

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FIGURE 1255

AGCAGAGGGGCTGAGACCAAACCAGAAACCTCCAATTCTCATGTGGAAGCCCATGCCCTCACCCTCCAAC**ATG**AA
AGCCTCTGCAGCACTTCTGTGTCTGCTGCTCACAGCAGCTGCTTTCAGCCCCCAGGGGCTTGCTCAGCCAGTTGG
GATTAATACTTCAACTACCTGCTGCTACAGATTTATCAATAAGAAAATCCCTAAGCAGAGGCTGGAGAGCTACAG
AAGGACCACCAGTAGCCACTGTCCCCGGGAAGCTGTAATCTTCAAGACCAAACTGGACAAGGAGATCTGTGCTGA
CCCCACACAGAAGTGGGTCCAGGACTTTATGAAGCACCTGGACAAGAAAACCCAAACTCCAAAGCTT**TGA**ACATT
CATGACTGAACTAAAAACAAGCCATGACTTGAGAAACAAATAATTTGTATACCCTGTCCTTTCTCAGAGTGGTTC
TGAGATTATTTTAATCTAATTCTAAGGAATATGAGCTTTATGTAATAATGTGAATCATGGTTTTTCTTAGTAGAT
TTTAAAAGTTATTAATATTTTAATTTAATCTTCCATGGATTTTGGTGGGTTTTGAACATAAAGCCTTGGATGTAT
ATGTCATCTCAGTGCTGTAAAAACTGTGGGATGCTCCTCCCTTCTCTACCTCATGGGGGTATTGTATAAGTCCTT
GCAAGAATCAGTGCAAAGATTTGCTTTAATTGTTAAGATATGATGTCCCTATGGAAGCATATTGTTATTATATAA
TTACATATTTGCATATGTATGACTCCCAAATTTTCACATAAAATAGATTTTTGTAAAAAA

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FIGURE 1256

MKASAALLCLLLTAAAFSPQGLAQPVGINTSTTCCYRFINKKIPKQRLESYRRTTSSHCPREAVIFKTKLDKEIC
ADPTQKWVQDFMKHLDKKTQTPKL

FIGURE 1257

GGGGGAGCC**ATG**AGGCGCCAGCCTGCGAAGGTGGCGGCGCTGCTGCTCGGGCTGCTCTTGGAGTGCACAGAAGCC
AAAAAGCATTGCTGGTATTTCGAAGGACTCTATCCAACCTATTATATATGCCGCTCCTACGAGGACTGCTGTGGC
TCCAGGTGCTGTGTGCGGGCCCTCTCCATACAGAGGCTGTGGTACTTCTGGTTCCTTCTGATGATGGGCGTGCTT
TTCTGCTGCGGAGCCGGCTTCTTCATCCGGAGGCGCATGTACCCCCCGCCGCTGATCGAGGAGCCAGCCTTCAAT
GTGTCCTACACCAGGCAGCCCCCAAATCCCGGCCCAGGAGCCCAGCAGCCGGGGCCGCCCTATTACACTGACCCA
GGAGGACCGGGGATGAACCCTGTCGGGAATTCCACGGCAATGGCTTTCCAGGTCCCACCCAACTCACCCCAGGGG
AGTGTGGCCTGCCCGCCCCCTCCAGCCTACTGCAACACGCCTCCGCCCCCGTACGAACAGGTAGTGAAGGCCAAG
TAGTGGGGTGCCCACGTGCAAGAGGAGAGACAGGAGAGGGCCTTTCCCTGGCCTTTCTGTCTTCGTTGATGTTCA
CTTCCAGGAACGGTCTCGTGGGCTGCTAAGGGCAGTTCCTCTGATATCCTCACAGCAAGCACAGCTCTCTTTCAG
GCTTTCCATGGAGTACAATATATGAACTCACACTTTGTCTCCTCTGTTGCTTCTGTTTCTGACGCAGTCTGTGCT
CTCACATGGTAGTGTGGTGACAGTCCCCGAGGGCTGACGTCCTTACGGTGGCGTGACCAGATCTACAGGAGAGAG
ACTGAGAGGAAGAAGGCAGTGCTGGAGGTGCAGGTGGCATGTAGAGGGGCCAGGCCGAGCATCCCAGGCAAGCAT
CCTTCTGCCCGGGTATTAATAGGAAGCCCCATGCCGGGCGGCTCAGCCGATGAAGCAGCAGCCGACTGAGCTGAG
CCCAGCAGGTCATCTGCTCCAGCCTGTCCTCTCGTCAGCCTTCCTCTTCCAGAAGCTGTTGGAGAGACATTCAGG
AGAGAGCAAGCCCCTTGTCATGTTTCTGTCTCTGTTCATATCCTAAAGATAGACTTCTCCTGCACCGCCAGGGAA
GGATAGCACGTGCAGCTCTCACCGCAGGATGGGGCCTAGAATCAGGCTTGCCTTGGAGGCCTGACAGTGATCTGA
CATCCACTAAGCAAATTTATTTAAATTCATGGGAAATCACTTCCTGCCCCAAACTGAGACATTGCATTTTGTGAG
CTCTTGGTCTGATTTGGAGAAAGGACTGTTACCCATTTTTTTGGTGTGTTTATGGAAGTGCATGTAGAGCGTCCT
GCCCTTTGAAATCAGACTGGGTGTGTGTCTTCCCTGGACATCACTGCCTCTCCAGGGCATTCTCAGGCCCGGGGG
TCTCCTTCCCTCAGGCAGCTCCAGTGGTGGGTTCTGAAGGGTGCTTTCAAAACGGGGCACATCTGGCCGGGAAGT
CACATGGACTCTTCCAGGGAGAGAGACCAGCTGAGGCGTCTCTCTCTGAGGTTGTGTTGGGTCTAAGCGGGTGTG
TGCTGGGCTCCAAGGAGGAGGAGCTTGCTGGGAAAAGACAGGAGAAGTACTGACTCAACTGCACTGACCATGTTG
TCATAATTAGAATAAAGAAGAAGTGGTCGGAAATGCACATTCCTGGATAGGAATCACAGCTCACCCCAGGATCTC
ACAGGTAGTCTCCTGAGTAGTTGACGGCTAGCGGGGAGCTAGTTCCGCCGCATAGTTATAGTGTTGATGTGTGAA
CGCTGACCTGTCCTGTGTGCTAAGAGCTATGCAGCTTAGCTGAGGCGCCTAGATTACTAGATGTGCTGTATCACG
GGGAATGAGGTGGGGGTGCTTATTTTTTAATGAACTAATCAGAGCCTCTTGAGAAATTGTTACTCATTGAACTGG
AGCATCAAGACATCTCATGGAAGTGGATACGGAGTGATTTGGTGTCCATGCTTTTCACTCTGAGGACATTTAATC
GGAGAACCTCCTGGGGAATTTTGTGGGAGACACTTGGGAACAAAACAGACACCCTGGGAATGCAGTTGCAAGCAC
AGATGCTGCCACCAGTGTCTCTGACCACCCTGGTGTGACTGCTGACTGCCAGCGTGGTACCTCCCATGCTGCAGG
CCTCCATCTAAATGAGACAACAAAGCACAATGTTCACTGTTTACAACCAAGACAACTGCGTGGGTCCAAACACTC
CTCTTCCTCCAGGTCATTTGTTTTGCATTTTTAATGTCTTTATTTTTTGTAATGAAAAAGCACACTAAGCTGCCC
CTGGAATCGGGTGCAGCTGAATAGGCACCCAAAAGTCCGTGACTAAATTCCGTTTGTCTTTTTGATAGCAAATTA
TGTTAAGAGACAGTGATGGCTAGGGCTCAACAATTTTGTATTCCCATGTTTGTGTGAGACAGAGTTTGTTTTCCC
TTGAACTTGGTTAGAATTGTGCTACTGTGAACGCTGATCCTGCATATGGAAGTCCCACTTTGGTGACATTTCCTG
GCCATTCTTGTTTCCATTGTGTGGATGGTGGGTTGTGCCCACTTCCTGGAGTGAGACAGCTCCTGGTGTGTAGAA
TTCCCGGAGCGTCCGTGGTTCAGAGTAAACTTGAAGCAGATCTGTGCATGCTTTTCCTCTGCAGCAATTGGCTCG
TTTCTCTTTTTTGTTCTCTTTTGATAGGATCCTGTTTCCTATGTGTGCAAAATAAAAATAAATTTGGGCAAAAAA
AAAAAAAAAAAAA

FIGURE 1258

MRRQPAKVAALLLGLLLECTEAKKHCWYFEGLYPTYYICRSYEDCCGSRCCVRALSIQRLWYFWFLLMMGVLFCC
GAGFFIRRRMYPPPLIEEPAFNVSYTRQPPNPGPGAQQPGPPYYTDPGGPGMNPVGNSTAMAFQVPPNSPQGSVA
CPPPPAYCNTPPPPYEQVVKAK

FIGURE 1259

CCAACTTATTTAAAACAAAACAATTTTGTAGGTATTATTATACCCATTTCACAGATGATGATAAATGAGACCAAT
AGAAGTTAAATAACTTGCCAAAGGCCACACAGCTGGTGAGTGATGGAGAACGAATTAAAACTCAAGTGAGCATAA
TTCTAAAAGCCATCTTCTCGTTAGTGTTTCTCACTATCCAGGTCTGCCTTTGCCTTATTTAACTGAAGTTAAGCC
ATCCTTACCTGTGATCACCTAGCCTCTCAGTTTGGGGGGATCATTACAGCGGGTTTTTAACTCCCAATGTTCTGG
TCCAGTTTGCTTTACATGTTCTTATTTATACATTGTCAAGGATGACCTCAGGACAGTACAGCAAGGACACAGTGG
CACTTCACATTTTGTTCCCACGAAATGACTGGGGCATAATCTCAGATCATCTTCCTTTAGAATGTGGAAACATCA
GCAGAAGAATATTAGTCTTTATACAAGTCAAATCCAAAATGACACATGTGAAAACTAATAGAGCTGACTTTCAGC
CATGATAGCTTTGGCACACCTCACATCCCTTTGTTCAACCTCTCTTCCCTCAACGGAGAGCTGCATTCCTGGGAA
TTTCTGTTGTGCACTTTTCCCACTTGCCCTGCTGTCATTTAAAGGTGAACATTCTAGTTTTGCTAAGAAAACCCT
TTCCTTCATTTGGA**ATG**AACAGCAATTTTATTACTTTTGACCTTAAAATGAGTTTGCTGCCTTCAAATCTTTTCA
GCGCCTTCATCACGCTCTGCTTCGGGGCGATCTTCTTCCTGCCAGACTCCTCCAAGCTGCTCAGCGGGGTCCTGT
TCCACTCCAGCCCCGCCTTGCAGCCGGCCGCCGACCACAAGCCCGGGCCCGGGGCGCGCGCCGAGGACGCGGCCG
AGGGGCGAGCCCGGCGCCGCGAGGAGGGGGCACCCGGGGACCCGGAGGCCGCCCTGGAGGACAACTTGGCCAGGA
TCCGCGAAAACCACGAGCGGGCTCTCAGGGAAGCCAAGGAGACCCTGCAGAAGCTGCCCGAGGAGATCCAAAGAG
ACATCCTACTGGAGAAGAAGAAGGTGGCCCAGGACCAGCTGCGTGACAAGGCGCCGTTCAGAGGCCTGCCCCCGG
TGGACTTCGTGCCCCCAATCGGGGTGGAGAGCCGGGAGCCCGCCGACGCCGCCATCCGCGAGAAAAGGGCAAAGA
TCAAAGAGATGATGAAACATGCTTGGAATAATTATAAAGGTTATGCCTGGGGATTAAATGAACTCAAACCTATAT
CAAAAGGAGGCCATTCAAGCAGTTTGTTTGGTAACATCAAAGGAGCAACTATAGTAGATGCCCTGGATACACTTT
TTATTATGGAAATGAAACATGAATTTGAAGAAGCAAAATCATGGGTTGAAGAAAATTTAGATTTTAATGTGAATG
CTGAAATTTCTGTCTTTGAAGTAAATATACGCTTTGTTGGTGGACTACTCTCAGCCTACTATCTGTCTGGAGAAG
AGATTTTTCGAAAGAAAGCAGTGGAACTTGGGGTAAAATTGCTACCTGCATTTCATACTCCCTCTGGAATACCTT
GGGCATTGCTGAATATGAAAAGTGGTATTGGAAGGAACTGGCCCTGGGCCTCTGGAGGCAGCAGTATTCTGGCAG
AATTTGGAACCCTGCATTTGGAGTTTATGCACTTGAGCCACTTATCAGGAAACCCCATCTTTGCTGAAAAGGTAA
TGAATATTCGAACAGTACTGAACAAACTGGAAAAACCACAAGGCCTTTATCCTAACTATCTGAATCCCAGTAGTG
GACAGTGGGGTCAACATCATGTATCAGTTGGAGGACTTGGAGACAGCTTCTATGAGTATTTGCTGAAGGCCTGGT
TAATGTCTGACAAGACAGATCTGGAAGCTAAGAAGATGTATTTTGATGCTGTTCAGGCTATCGAGACTCATTTGA
TCCGCAAGTCTAGCAGCGGACTAACTTATATCGCAGAGTGGAAAAGGGGCCTCCTGGAGCACAAGATGGGCCACC
TGACCTGCTTCGCGGGGGGCATGTTCGCACTCGGGGCTGATGCAGCTCCCGAAGGCATGGCCCAACACTACCTTG
AACTCGGGGCTGAAATTGCCCGTACTTGTCATGAATCATATAATCGAACATTTATGAAACTGGGACCAGAAGCTT
TCAGATTTGATGGTGGTGTTGAAGCCATCGCTACAAGACAAAATGAAAAATACTACATCTTACGGCCAGAAGTTA
TGGAGACTTACATGTATATGTGGAGACTGACTCATGATCCAAAGTACAGGAAATGGGCCTGGGAAGCCGTAGAGG
CCTTGGAAAACCATTGCAGAGTGAATGGAGGCTATTCAGGCCTAAGGGATGTTTACCTTCTTCATGAGAGTTATG
ATGATGTGCAGCAGAGTTTCTTCCTGGCAGAGACATTGAAATATTTGTACCTAATATTTTCTGACGACGATCTTC
TTCCACTGGAGCATTGGATCTTCAATAGCGAGGCACATCTTCTCCCTATCCTCCCTAAAGATAAAAAGGAAGTTG
AAATCAGAGAGGAA**TAA**AAAAGACATTTATATTTTATTCTGCTCCATTCCCTTCACTGTATACCTTAATAATTCC
TTTTCTGGTAATCAGGCACATGATGAACTTTGATTAGTAGGTCTGTGATTAAGTTCTTAAATTGTTTTGCAGTCT
TTTATGTTTATTATCATAGGTATAGGTGGACCTAAATTCCTTATCATATCTTTATTAATTCAGCCAGTGTATCCA
CCAGTTTTTTGTTTATGTTTTTAAGTAACCTATTATCTCTGGATTTCATGAAGGTGTAATATCGTTTTTGTTAAA
CTGAATAGAATTGTATAGCGATGACCTCTTAATTATAATTTGATTTGACTGCAAAACTTTTTCCTCCTCTAAGAG
GAGATGATGTCTGCTTTAAGCTGTAATGTTTTGCCATGTTGCAAAAAGCCATAATAATAAGTATAAAAAAGCTTT
TTCCTTTACAATTTCATGTTAATCTGGTTTGTCTGTCCACCAGAGACAGATCTTCTGTGACAGCCTCCTTATGCA
GGTCTATCATTATTTGATAGAATGTCTTCTAAAATACTTCACTCACATTGTAATTCAAATTAGAAAGTCATTCCA
AAAGGTCATGTCATGTTGACCTCATTTCATCGGAACTGCAGTATATTTTTGTTGGTTAATTATATTAGTGTTTTC
TATTTTGAAAAAAAAAAAAAAAAAA

FIGURE 1260

MNSNFITFDLKMSLLPSNLFSAFITLCFGAIFFLPDSSKLLSGVLFHSSPALQPAADHKPGPGARAEDAAEGRAR
RREEGAPGDPEAALEDNLARIRENHERALREAKETLQKLPEEIQRDILLEKKKVAQDQLRDKAPFRGLPPVDFVP
PIGVESREPADAAIREKRAKIKEMMKHAWNNYKGYAWGLNELKPISKGGHSSSLFGNIKGATIVDALDTLFIMEM
KHEFEEAKSWVEENLDFNVNAEISVFEVNIRFVGGLLSAYYLSGEEIFRKKAVELGVKLLPAFHTPSGIPWALLN
MKSGIGRNWPWASGGSSILAEFGTLHLEFMHLSHLSGNPIFAEKVMNIRTVLNKLEKPQGLYPNYLNPSSGQWGQ
HHVSVGGLGDSFYEYLLKAWLMSDKTDLEAKKMYFDAVQAIETHLIRKSSSGLTYIAEWKRGLLEHKMGHLTCFA
GGMFALGADAAPEGMAQHYLELGAEIARTCHESYNRTFMKLGPEAFRFDGGVEAIATRQNEKYYILRPEVMETYM
YMWRLTHDPKYRKWAWEAVEALENHCRVNGGYSGLRDVYLLHESYDDVQQSFFLAETLKYLYLIFSDDDLLPLEH
WIFNSEAHLLPILPKDKKEVEIREE

FIGURE 1261A

GGGCGCAGAGGAGGAAAGGGAGCAGGCGCAGGGGGACTGGAAAGGCAGCATGCGCTCGCCAGGAGCAACCTCGGC
GCCCAGGGTCTGAGGCTGCAGCCCCAGTTCGCCATTGTGAGCCGCCGCCGGGGGAGTCCGCTAGCGCAGCCGTGC
CCCCGAGTCCCCGTCCGCGCAGCG**ATG**GGGCACCTGCCCACGGGGATACACGGCGCCCGCCGCCTCCTGCCTCTG
CTCTGGCTCTTTGTGCTGTTCAAGAATGCTACAGCTTTCCATGTAACTGTCCAAGATGATAATAACATCGTTGTC
TCATTAGAAGCTTCAGACGTCATCAGTCCAGCATCTGTGTATGTTGTGAAGATAACTGGTGAATCCAAAAATTAT
TTCTTCGAATTTGAGGAATTCAACAGCACTTTGCCTCCTCCTGTTATTTTCAAGGCCAGTTATCATGGCCTTTAT
TATATAATCACTCTGGTAGTGGTAAATGGAAATGTGGTGACCAAGCCATCCAGATCAATCACTGTGTTAACAAAA
CCTCTACCTGTAACCAGTGTTTCCATATATGACTATAAACCTTCTCCTGAAACAGGAGTCCTGTTTGAAATACAT
TATCCAGAAAAATATAACGTTTTCACAAGAGTGAACATTAGCTACTGGGAAGGTAAAGACTTCCGGACAATGCTA
TATAAAGATTTCTTTAAGGGAAAAACAGTATTTAATCACTGGCTGCCAGGAATGTGTTATAGTAATATCACCTTT
CAGCTGGTATCTGAGGCAACTTTTAATAAAAGTACCCTTGTTGAGTACAGTGGTGTCAGTCACGAACCCAAACAG
CACAGAACTGCCCCTTATCCACCTCAAAATATTTCCGTTCGTATCGTAAACTTGAACAAAAACAACTGGGAAGAA
CAGAGTGGCAATTTCCCAGAAGAATCCTTCATGAGATCACAAGATACAATAGGAAAAGAAAAACTCTTCCATTTT
ACAGAAGAAACCCCTGAAATTCCCTCGGGCAACATTTCTTCCGGTTGGCCTGATTTTAATAGCAGTGACTATGAA
ACTACGTCTCAGCCATATTGGTGGGACAGTGCATCTGCAGCTCCTGAAAGTGAAGATGAATTTGTCAGCGTACTT
CCCATGGAATACGAAAATAACAGTACACTCAGTGAGACAGAGAAGTCAACATCAGGCTCTTTCTCCTTTTTCCCT
GTGCAAATGATATTGACCTGGTTACCACCCAAACCACCCACTGCTTTTGATGGGTTCCATATCCATATTGAACGA
GAAGAGAACTTTACTGAATATTTGATGGTGGATGAAGAAGCACATGAATTTGTTGCAGAACTGAAGGAACCTGGG
AAATATAAGTTATCTGTGACAACCTTTAGTTCCTCAGGATCTTGTGAAACTCGAAAAAGTCAGTCAGCAAAATCA
CTCAGCTTTTATATCAGTCCTTCAGGAGAGTGGATTGAAGAACTGACCGAGAAGCCGCAGCACGTGAGTGTCCAC
GTTTTAAGCTCAACCACTGCCTTGATGTCCTGGACATCTTCCCAAGAGAACTACAACAGCACCATTGTGTCTGTG
GTGTCGCTGACCTGCCAGAAACAAAAGGAGAGCCAGAGGCTTGAAAAGCAGTACTGCACTCAGGTGAACTCAAGC
AAACCTATTATTGAAAATCTGGTTCCTGGTGCCCAGTACCAGGTTGTAATATACCTAAGGAAAGGCCCTTTGATT
GGACCACCTTCAGATCCTGTGACATTTGCTATTGTTCCCACAGGAATAAAGGATTTAATGCTCTATCCTTTGGGT
CCTACGGCCGTGGTTCTGAGCTGGACCAGACCTTATTTAGGCGTGTTCAGAAAATACGTGGTTGAAATGTTTTAT
TTCAACCCTGCTACAATGACATCAGAGTGGACCACCTACTATGAAATAGCAGCAACTGTTTCCTTAACTGCATCC
GTGAGAATAGCTAATCTGCTGCCAGCATGGTACTACAACTTCCGGGTTACCATGGTGACGTGGGGAGATCCAGAA
TTGAGCTGCTGTGACAGCTCTACCATCAGCTTCATAACAGCCCCAGTGGCTCCGGAAATCACTTCTGTGGAATAT
TTCAACAGTCTGTTATATATCAGTTGGACATATGGGGATGATACAACGGACTTGTCCCATTCTAGAATGCTTCAC
TGGATGGTGGTTGCAGAAGGAAAAAAGAAAATTAAAAAGAGTGTAACACGCAATGTCATGACTGCAATTCTCAGC
TTGCCTCCAGGCGACATCTATAACCTCTCAGTAACTGCTTGTACTGAAAGAGGAAGTAATACCTCCATGCTCCGC
CTTGTCAAGCTAGAACCAGCTCCACCCAAATCACTCTTCGCAGTGAACAAAACCCAGACTTCAGTGACTTTGCTG
TGGGTGGAAGAGGGAGTAGCTGATTTCTTTGAAGTTTTCTGTCAACAAGTTGGCTCCAGTCAGAAAACCAAACTT
CAGGAACCAGTTGCTGTTTCTTCCCATGTCGTGACCATCTCCAGCCTTCTTCCTGCCACTGCCTACAATTGTAGT
GTCACCAGCTTTAGCCATGACAGCCCCAGTGTCCCTACGTTCATAGCCGTCTCAACAATGGTTACAGAGATGAAT
CCCAATGTGGTAGTGATCTCCGTGCTGGCCATCCTTAGCACACTTTTAATTGGACTGTTGCTTGTTACCCTCATT
ATTCTTAGGAAAAAGCATCTGCAGATGGCTAGGGAGTGTGGAGCTGGTACATTTGTCAATTTTGCATCCTTAGAG
AGGGATGGAAAGCTTCCATACAACTGGCGTAGGAGTATATTTGCTTTCTTAACCCTGCTACCCTCATGTCTTTGG
ACTGATTATCTTTTGGCATTTTATATTAATCCTTGGAGTAAAAATGGTTTAAAGAAGAGGAAACTGACAAACCCG
GTTCAACTGGATGACTTTGATGCCTATATTAAGGATATGGCCAAAGACTCTGACTATAAATTTTCTCTTCAGTTT
GAGGAGTTGAAATTGATTGGACTGGATATCCCACACTTTGCTGCAGATCTTCCACTGAATCGATGTAAAAACCGT
TACACAAACATCCTACCATATGACTTCAGCCGTGTGAGATTAGTCTCCATGAATGAAGAGGAAGGTGCAGACTAC
ATCAATGCCAACTATATTCCTGGATACAACTCACCCCAGGAGTATATTGCCACCCAGGGGCCACTGCCTGAAACC
AGAAATGACTTCTGGAAGATGGTCCTGCAACAAAAGTCTCAGATTATTGTCATGCTCACTCAGTGTAATGAGAAA
AGGAGGGTGAAATGTGACCATTACTGGCCATTCACGGAAGAACCTATAGCCTATGGAGACATCACTGTGGAGATG
ATTTCAGAGGAAGAGCAGGACGACTGGGCCTGTAGACACTTCCGGATCAACTATGCTGACGAGATGCAGGATGTG
ATGCATTTTAACTACACTGCATGGCCTGATCATGGTGTGCCCACAGCAAATGCTGCAGAAAGTATCCTGCAGTTT
GTACACATGGTCCGACAGCAAGCTACCAAGAGCAAAGGTCCCATGATCATTCACTGCAGTGCTGGCGTGGGACGG

FIGURE 1261B

ACAGGAACATTCATTGCCCTGGACAGGCTCTTGCAGCACATTCGGGATCATGAGTTTGTTGACATCTTAGGGCTG
GTGTCAGAAATGAGGTCATACCGGATGTCTATGGTACAGACAGAGGAGCAGTACATTTTTATCCATCAGTGTGTG
CAACTGATGTGGATGAAGAAGAAGCAGCAGTTCTGCATCAGTGATGTCATATACGAGAATGTTAGCAAGTCC**TAG**

TTCAGAATCCGGAGCAGAGAGGACATGATGTGCGCCCATCCTCCCTTGCTTCCAGATTGTTTTAGTGGGCCCTGA
TGGTCATTTTTCTAAACAGAGGCCCTGCTTTGTAATATGTGGCCAAGGAGATAATTTATCTCACAGAAGCACCGG
GAAGACTTAGCCTTAAAGAGCCTACAGTGTCCTTTTGGACTCTTTCACTTCGGGACATTTAATAATGGACCAAAT
TCAACAGAACACCAGGAAGGTCAAGACGCTCTCCAAAGGGCAGGAAGTACAGCACTTCCGAAGAGTTTAGTTGGC
CCTTTGCTGGTTGGGCTGAGTTTTTTATTTTTAAGTGTTTGTTTTTCAGTGCAATAATTTTTGTGTGTGTGTGAT
TCTTATCAGAAAGTTGAATTGTTTTCTGCCTACACCGTTCATCAGCCCCATAACCCAGGAAGGAACAGGCATTGT
TAGCATCAGATTATACCTCATTATTAAAAGGAGGCATGGCCACACATGAAGAAATGGTCATTCTACTTCAAAGAA
ATTGAGCCAGCACTATCTGTACTCCAACATTACCGGATCTGGATTGGGGAGGTTGGTCAGGGAAGAGAGGGGTTC
TACCCACAGATCAACTGTGTAATCTTTTACTATTCAAGCTATAATTCAGCTTCAAAGTAGAGTAGAAAAAAAATT
GTCTTAACTGTTCTAGTTCTTGATGGTTTTCTTCCTTATTAACAGTTGGTGTTTCTTCCTTGGCCCTTTTGGACT
AATGTTACTGTCCAAGTTCTTTCTCAAGAAACCACATCTGGTTCAGAAGAGTGTCAAGTTGGACTCTTTGAACTC
TGTTGCTGTCTGAGCAATCGTGGTGCCTAGACTTTGCATTCCTTGTTCTGTTGACCTGCATACATGTGAGAGCTA
TTTCTTTAAGAACTATATAGGCTGTGAAAACGCACTTTCTTTCCCCCAAAGAGCTGGGAATTTATGAAGTTATGG
CAATGAACTGCAGCATGCTGGGACAATTATTTGACTACTTTTTTTTGTAATATTGTCAAATGTCTCTATGGATTC
TGACAGAGATTTCTTTTTGTTTTGTTATTCTTTTGGTTGTCAGTTTCATTTTAACGAGTGTAACTAGTAACATTT
TATTCTTTGGATTTTGTATAATTACAGTACATGATTGTGTATTGTGACATGAATGCTGTCAAAATGACATTGATG
GCATTGTGAAGCCTGTTACTTTGTGTCACTTCCTGATAAATAAGAGGTGATGACATGGATATACAACAGAAAACA
CTTTGAGTTGAAAGTAAACACAAGCTGGCTGCTTCCCTGTGGCAACTGTGGCT

FIGURE 1262

MGHLPTGIHGARRLLPLLWLFVLFKNATAFHVTVQDDNNIVVSLEASDVISPASVYVVKITGESKNYFFEFEEFN
STLPPPVIFKASYHGLYYIITLVVVNGNVVTKPSRSITVLTKPLPVTSVSIYDYKPSPETGVLFEIHYPEKYNVF
TRVNISYWEGKDFRTMLYKDFFKGKTVFNHWLPGMCYSNITFQLVSEATFNKSTLVEYSGVSHEPKQHRTAPYPP
QNISVRIVNLNKNNWEEQSGNFPEESFMRSQDTIGKEKLFHFTEETPEIPSGNISSGWPDFNSSDYETTSQPYWW
DSASAAPESEDEFVSVLPMEYENNSTLSETEKSTSGSFSFFPVQMILTWLPPKPPTAFDGFHIHIEREENFTEYL
MVDEEAHEFVAELKEPGKYKLSVTTFSSSGSCETRKSQSAKSLSFYISPSGEWIEELTEKPQHVSVHVLSSTTAL
MSWTSSQENYNSTIVSVVSLTCQKQKESQRLEKQYCTQVNSSKPIIENLVPGAQYQVVIYLRKGPLIGPPSDPVT
FAIVPTGIKDLMLYPLGPTAVVLSWTRPYLGVFRKYVVEMFYFNPATMTSEWTTYYEIAATVSLTASVRIANLLP
AWYYNFRVTMVTWGDPELSCCDSSTISFITAPVAPEITSVEYFNSLLYISWTYGDDTTDLSHSRMLHWMVVAEGK
KKIKKSVTRNVMTAILSLPPGDIYNLSVTACTERGSNTSMLRLVKLEPAPPKSLFAVNKTQTSVTLLWVEEGVAD
FFEVFCQQVGSSQKTKLQEPVAVSSHVVTISSLLPATAYNCSVTSFSHDSPSVPTFIAVSTMVTEMNPNVVVISV
LAILSTLLIGLLLVTLIILRKKHLQMARECGAGTFVNFASLERDGKLPYNWRRSIFAFLTLLPSCLWTDYLLAFY
INPWSKNGLKKRKLTNPVQLDDFDAYIKDMAKDSDYKFSLQFEELKLIGLDIPHFAADLPLNRCKNRYTNILPYD
FSRVRLVSMNEEEGADYINANYIPGYNSPQEYIATQGPLPETRNDFWKMVLQQKSQIIVMLTQCNEKRRVKCDHY
WPFTEEPIAYGDITVEMISEEEQDDWACRHFRINYADEMQDVMHFNYTAWPDHGVPTANAAESILQFVHMVRQQA
TKSKGPMIIHCSAGVGRTGTFIALDRLLQHIRDHEFVDILGLVSEMRSYRMSMVQTEEQYIFIHQCVQLMWMKKK
QQFCISDVIYENVSKS

FIGURE 1263

GGACAACCGGCTGGGGTCCTTGCGCGCCGCGGCTCAGGGAGGAGCACCGACTGCGCCGCACCCTGAGAG**ATG**GTT
GGTGCCATGTGGAAGGTGATTGTTTCGCTGGTCCTGTTGATGCCTGGCCCCTGTGATGGGCTGTTTCGCTCCCTA
TACAGAAGTGTTTCCATGCCACCTAAGGGAGACTCAGGACAGCCATTATTTCTCACCCCTTACATTGAAGCTGGG
AAGATCCAAAAAGGAAGAGAATTGAGTTTGGTCGGCCCTTTCCCAGGACTGAACATGAAGAGTTATGCCGGCTTC
CTCACCGTGAATAAGACTTACAACAGCAACCTCTTCTTCTGGTTCTTCCCAGCTCAGATACAGCCAGAAGATGCC
CCAGTAGTTCTCTGGCTACAGGGTGGGCCGGGAGGTTCATCCATGTTTGGACTCTTTGTGGAACATGGGCCTTAT
GTTGTCACAAGTAACATGACCTTGCGTGACAGAGACTTCCCCTGGACCACAACGCTCTCCATGCTTTACATTGAC
AATCCAGTGGGCACAGGCTTCAGTTTTACTGATGATACCCACGGATATGCAGTCAATGAGGACGATGTAGCACGG
GATTTATACAGTGCACTAATTCAGTTTTTCCAGATATTTCCTGAATATAAAAATAATGACTTTTATGTCACTGGG
GAGTCTTATGCAGGGAAATATGTGCCAGCCATTGCACACCTCATCCATTCCCTCAACCCTGTGAGAGAGGTGAAG
ATCAACCTGAACGGAATTGCTATTGGAGATGGATATTCTGATCCCGAATCAATTATAGGGGGCTATGCAGAATTC
CTGTACCAAATTGGCTTGTTGGATGAGAAGCAAAAAAAGTACTTCCAGAAGCAGTGCCATGAATGCATAGAACAC
ATCAGGAAGCAGAACTGGTTTGAGGCCTTTGAAATACTGGATAAACTACTAGATGGCGACTTAACAAGTGATCCT
TCTTACTTCCAGAATGTTACAGGATGTAGTAATTACTATAACTTTTTGCGGTGCACGGAACCTGAGGATCAGCTT
TACTATGTGAAATTTTTGTCACTCCCAGAGGTGAGACAAGCCATCCACGTGGGGAATCAGACTTTTAATGATGGA
ACTATAGTTGAAAAGTACTTGCGAGAAGATACAGTACAGTCAGTTAAGCCATGGTTAACTGAAATCATGAATAAT
TATAAGGTTCTGATCTACAATGGCCAACTGGACATCATCGTGGCAGCTGCCCTGACAGAGCGCTCCTTGATGGGC
ATGGACTGGAAAGGATCCCAGGAATACAAGAAGGCAGAAAAAAAAAGTTTGGAAGATCTTTAAATCTGACAGTGAA
GTGGCTGGTTACATCCGGCAAGTGGGTGACTTCCATCAGGTAATTATTCGAGGTGGAGGACATATTTTACCCTAT
GACCAGCCTCTGAGAGCTTTTGACATGATTAATCGATTCATTTATGGAAAAGGATGGGATCCTTATGTTGGA**TAA**

ACTACCTTCCCAAAAGAGAACATCAGAGGTTTTCATTGCTGAAAAGAAAATCGTAAAAACAGAAAATGTCATAGG
AATAAAAAAAATTATCTTTTCATATCTGCAAGATTTTTTTCATCAATAAAAATTATCCTTGAAA

FIGURE 1264

MVGAMWKVIVSLVLLMPGPCDGLFHSLYRSVSMPPKGDSGQPLFLTPYIEAGKIQKGRELSLVGPFPGLNMKSYA
GFLTVNKTYNSNLFFWFFPAQIQPEDAPVVLWLQGGPGGSSMFGLFVEHGPYVVTSNMTLRDRDFPWTTTLSMLY
IDNPVGTGFSFTDDTHGYAVNEDDVARDLYSALIQFFQIFPEYKNNDFYVTGESYAGKYVPAIAHLIHSLNPVRE
VKINLNGIAIGDGYSDPESIIGGYAEFLYQIGLLDEKQKKYFQKQCHECIEHIRKQNWLEAFEILDKLLDGDLTS
DPSYFQNVTGCSNYYNFLRCTEPEDQLYYVKFLSLPEVRQAIHVGNQTFNDGTIVEKYLREDTVQSVKPWLTEIM
NNYKVLIYNGQLDIIVAAALTEHSLMGMDWKGSQEYKKAEKKVWKILKSDSEVAGYIRQAGDSHQVIIRGGGHIL
PYDQPLRAFDMINRFIYGKGWDPYVG

FIGURE 1265A

CTCCGGCGCCCGCTCTGCCCGCCGCTGGGTCCGACCGCGCTCGCCTTCCTTGCAGCCGCGCCTCGGCCCCATGGA
CGCCCTGTGCGGTTCCGGGGAGCTCGGCTCCAAGTTCTGGGACTCCAACCTGTCTGTGCACACAGAAAACCCGGA
CCTCACTCCCTGCTTCCAGAACTCCCTGCTGGCCTGGGTGCCCTGCATCTACCTGTGGGTCGCCCTGCCCTGCTA
CTTGCTCTACCTGCGGCACCATTGTCGTGGCTACATCATCCTCTCCCACCTGTCCAAGCTCAAGATGGTCCTGGG
TGTCCTGCTGTGGTGCGTCTCCTGGGCGGACCTTTTTTACTCCTTCCATGGCCTGGTCCATGGCCGGGCCCCTGC
CCCTGTTTTCTTTGTCACCCCCTTGGTGGTGGGGGTCACCATGCTGCTGGCCACCCTGCTGATACAGTATGAGCG
GCTGCAGGGCGTACAGTCTTCGGGGGTCCTCATTATCTTCTGGTTCCTGTGTGTGGTCTGCGCCATCGTCCCATT
CCGCTCCAAGATCCTTTTAGCCAAGGCAGAGGGTGAGATCTCAGACCCCTTCCGCTTCACCACCTTCTACATCCA
CTTTGCCCTGGTACTCTCTGCCCTCATCTTGGCCTGCTTCAGGGAGAAACCTCCATTTTTCTCCGCAAAGAATGT
CGACCCTAACCCCTACCCTGAGACCAGCGCTGGCTTTCTCTCCCGCCTGTTTTTCTGGTGGTTCACAAAGATGGC
CATCTATGGCTACCGGCATCCCCTGGAGGAGAAGGACCTCTGGTCCCTAAAGGAAGAGGACAGATCCCAGATGGT
GGTGCAGCAGCTGCTGGAGGCATGGAGGAAGCAGGAAAAGCAGACGGCACGACACAAGGCTTCAGCAGCACCTGG
GAAAAATGCCTCCGGCGAGGACGAGGTGCTGCTGGGTGCCCGGCCCAGGCCCCGGAAGCCCTCCTTCCTGAAGGC
CCTGCTGGCCACCTTCGGCTCCAGCTTCCTCATCAGTGCCTGCTTCAAGCTTATCCAGGACCTGCTCTCCTTCAT
CAATCCACAGCTGCTCAGCATCCTGATCAGGTTTATCTCCAACCCCATGGCCCCCTCCTGGTGGGGCTTCCTGGT
GGCTGGGCTGATGTTCCTGTGCTCCATGATGCAGTCGCTGATCTTACAACACTATTACCACTACATCTTTGTGAC
TGGGGTGAAGTTTCGTACTGGGATCATGGGTGTCATCTACAGGAAGGCTCTGGTTATCACCAACTCAGTCAAACG
TGCGTCCACTGTGGGGGAAATTGTCAACCTCATGTCAGTGGATGCCCAGCGCTTCATGGACCTTGCCCCCTTCCT
CAATCTGCTGTGGTCAGCACCCCTGCAGATCATCCTGGCGATCTACTTCCTCTGGCAGAACCTAGGTCCCTCTGT
CCTGGCTGGAGTCGCTTTCATGGTCTTGCTGATTCCACTCAACGGAGCTGTGGCCGTGAAGATGCGCGCCTTCCA
GGTAAAGCAAATGAAATTGAAGGACTCGCGCATCAAGCTGATGAGTGAGATCCTGAACGGCATCAAGGTGCTGAA
GCTGTACGCCTGGGAGCCCAGCTTCCTGAAGCAGGTGGAGGGCATCAGGCAGGGTGAGCTCCAGCTGCTGCGCAC
GGCGGCCTACCTCCACACCACAACCACCTTCACCTGGATGTGCAGCCCCTTCCTGGTGACCCTGATCACCCTCTG
GGTGTACGTGTACGTGGACCCAAACAATGTGCTGGACGCCGAGAAGGCCTTTGTGTCTGTGTCCTTGTTTAATAT
CTTAAGACTTCCCCTCAACATGCTGCCCCAGTTAATCAGCAACCTGACTCAGGCCAGTGTGTCTCTGAAACGGAT
CCAGCAATTCCTGAGCCAAGAGGAACTTGACCCCCAGAGTGTGGAAAGAAAGACCATCTCCCCAGGCTATGCCAT
CACCATACACAGTGGCACCTTCACCTGGGCCCAGGACCTGCCCCCCACTCTGCACAGCCTAGACATCCAGGTCCC
GAAAGGGGCACTGGTGGCCGTGGTGGGGCCTGTGGGCTGTGGGAAGTCCTCCCTGGTGTCTGCCCTGCTGGGAGA
GATGGAGAAGCTAGAAGGCAAAGTGCACATGAAGGGCTCCGTGGCCTATGTGCCCCAGCAGGCATGGATCCAGAA
CTGCACTCTTCAGGAAAACGTGCTTTTCGGCAAAGCCCTGAACCCCAAGCGCTACCAGCAGACTCTGGAGGCCTG
TGCCTTGCTAGCTGACCTGGAGATGCTGCCTGGTGGGGATCAGACAGAGATTGGAGAGAAGGGCATTAACCTGTC
TGGGGGCCAGCGGCAGCGGGTCAGTCTGGCTCGAGCTGTTTACAGTGATGCCGATATTTTCTTGCTGGATGACCC
ACTGTCCGCGGTGGACTCTCATGTGGCCAAGCACATCTTTGACCACGTCATCGGGCCAGAAGGCGTGCTGGCAGG
CAAGACGCGAGTGCTGGTGACGCACGGCATTAGCTTCCTGCCCCAGACAGACTTCATCATTGTGCTAGCTGATGG
ACAGGTGTCTGAGATGGGCCCGTACCCAGCCCTGCTGCAGCGCAACGGCTCCTTTGCCAACTTTCTCTGCAACTA
TGCCCCCGATGAGGACCAAGGGCACCTGGAGGACAGCTGGACCGCGTTGGAAGGTGCAGAGGATAAGGAGGCACT
GCTGATTGAAGACACACTCAGCAACCACACGGATCTGACAGACAATGATCCAGTCACCTATGTGGTCCAGAAGCA
GTTTATGAGACAGCTGAGTGCCCTGTCCTCAGATGGGGAGGGACAGGGTCGGCCTGTACCCCGGAGGCACCTGGG
TCCATCAGAGAAGGTGCAGGTGACAGAGGCGAAGGCAGATGGGGCACTGACCCAGGAGGAGAAAGCAGCCATTGG
CACTGTGGAGCTCAGTGTGTTCTGGGATTATGCCAAGGCCGTGGGGCTCTGTACCACGCTGGCCATCTGTCTCCT
GTATGTGGGTCAAAGTGCGGCTGCCATTGGAGCCAATGTGTGGCTCAGTGCCTGGACAAATGATGCCATGGCAGA
CAGTAGACAGAACAACACTTCCCTGAGGCTGGGCGTCTATGCTGCTTTAGGAATTCTGCAAGGGTTCTTGGTGAT
GCTGGCAGCCATGGCCATGGCAGCGGGTGGCATCCAGGCTGCCCGTGTGTTGCACCAGGCACTGCTGCACAACAA
GATACGCTCGCCACAGTCCTTCTTTGACACCACACCATCAGGCCGCATCCTGAACTGCTTCTCCAAGGACATCTA
TGTCGTTGATGAGGTTCTGGCCCCTGTCATCCTCATGCTGCTCAATTCCTTCTTCAACGCCATCTCCACTCTTGT
GGTCATCATGGCCAGCACGCCGCTCTTCACTGTGGTCATCCTGCCCCTGGCTGTGCTCTACACCTTAGTGCAGCG
CTTCTATGCAGCCACATCACGGCAACTGAAGCGGCTGGAATCAGTCAGCCGCTCACCTATCTACTCCCACTTTTC
GGAGACAGTGACTGGTGCCAGTGTCATCCGGGCCTACAACCGCAGCCGGGATTTTGAGATCATCAGTGATACTAA

FIGURE 1265B

GGTGGATGCCAACCAGAGAAGCTGCTACCCCTACATCATCTCCAACCGGTGGCTGAGCATCGGAGTGGAGTTCGT
GGGGAACTGCGTGGTGCTCTTTGCTGCACTATTTGCCGTCATCGGGAGGAGCAGCCTGAACCCGGGGCTGGTGGG
CCTTTCTGTGTCCTACTCCTTGCAGGTGACATTTGCTCTGAACTGGATGATACGAATGATGTCAGATTTGGAATC
TAACATCGTGGCTGTGGAGAGGGTCAAGGAGTACTCCAAGACAGAGACAGAGGCGCCCTGGGTGGTGGAAGGCAG
CCGCCCTCCCGAAGGTTGGCCCCCACGTGGGGAGGTGGAGTTCCGGAATTATTCTGTGCGCTACCGGCCGGGCCT
AGACCTGGTGCTGAGAGACCTGAGTCTGCATGTGCACGGTGGCGAGAAGGTGGGGATCGTGGGCCGCACTGGGGC
TGGCAAGTCTTCCATGACCCTTTGCCTGTTCCGCATCCTGGAGGCGGCAAAGGGTGAAATCCGCATTGATGGCCT
CAATGTGGCAGACATCGGCCTCCATGACCTGCGCTCTCAGCTGACCATCATCCCGCAGGACCCCATCCTGTTCTC
GGGGACCCTGCGCATGAACCTGGACCCCTTCGGCAGCTACTCAGAGGAGGACATTTGGTGGGCTTTGGAGCTGTC
CCACCTGCACACGTTTGTGAGCTCCCAGCCGGCAGGCCTGGACTTCCAGTGCTCAGAGGGCGGGGAGAATCTCAG
CGTGGGCCAGAGGCAGCTCGTGTGCCTGGCCCGAGCCCTGCTCCGCAAGAGCCGCATCCTGGTTTTAGACGAGGC
CACAGCTGCCATCGACCTGGAGACTGACAACCTCATCCAGGCTACCATCCGCACCCAGTTTGATACCTGCACTGT
CCTGACCATCGCACACCGGCTTAACACTATCATGGACTACACCAGGGTCCTGGTCCTGGACAAAGGAGTAGTAGC
TGAATTTGATTCTCCAGCCAACCTCATTGCAGCTAGAGGCATCTTCTACGGGATGGCCAGAGATGCTGGACTTGC
C**TAA**AATATATTCCTGAGATTTCCTCCTGGCCTTTCCTGGTTTTCATCAGGAAGGAAATGACACCAAATATGTCC
GCAGAATGGACTTGATAGCAAACACTGGGGGCACCTTAAGATTTTGCACCTGTAAAGTGCCTTACAGGGTAACTG
TGCTGAATGCTTTAGATGAGGAAATGATCCCCAAGTGGTGAATGACACGCCTAAGGTCACAGCTAGTTTGAGCCA
GTTAGACTAGTCCCCCGGTCTCCCGATTCCCAACTGAGTGTTATTTGCACACTGCACTGTTTTCAAATAACGATT
TTATGAAATGACCTCTGTCCTCCCTCTGATTTTTCATATTTTCCTAAAGTTTCGTTTCTGTTTTTTAATAAAAAG
CTTTTTCCTCCTGGAACAGAAGACAGCTGCTGGGTCAGGCCACCCCTAGGAACTCAGTCCTGTACTCTGGGGTGC
TGCCTGAATCCATTAAAAATGGGAGTACTGATGAAATAAAACTACATGGTCAACAGTAAAAAAAAAAAAAAAAAA
A

FIGURE 1266

MDALCGSGELGSKFWDSNLSVHTENPDLTPCFQNSLLAWVPCIYLWVALPCYLLYLRHHCRGYIILSHLSKLKMV
LGVLLWCVSWADLFYSFHGLVHGRAPAPVFFVTPLVVGVTMLLATLLIQYERLQGVQSSGVLIIFWFLCVVCAIV
PFRSKILLAKAEGEISDPFRFTTFYIHFALVLSALILACFREKPPFFSAKNVDPNPYPETSAGFLSRLFFWWFTK
MAIYGYRHPLEEKDLWSLKEEDRSQMVVQQLLEAWRKQEKQTARHKASAAPGKNASGEDEVLLGARPRPRKPSFL
KALLATFGSSFLISACFKLIQDLLSFINPQLLSILIRFISNPMAPSWWGFLVAGLMFLCSMMQSLILQHYYHYIF
VTGVKFRTGIMGVIYRKALVITNSVKRASTVGEIVNLMSVDAQRFMDLAPFLNLLWSAPLQIILAIYFLWQNLGP
SVLAGVAFMVLLIPLNGAVAVKMRAFQVKQMKLKDSRIKLMSEILNGIKVLKLYAWEPSFLKQVEGIRQGELQLL
RTAAYLHTTTTFTWMCSPFLVTLITLWVYVYVDPNNVLDAEKAFVSVSLFNILRLPLNMLPQLISNLTQASVSLK
RIQQFLSQEELDPQSVERKTISPGYAITIHSGTFTWAQDLPPTLHSLDIQVPKGALVAVVGPVGCGKSSLVSALL
GEMEKLEGKVHMKGSVAYVPQQAWIQNCTLQENVLFGKALNPKRYQQTLEACALLADLEMLPGGDQTEIGEKGIN
LSGGQRQRVSLARAVYSDADIFLLDDPLSAVDSHVAKHIFDHVIGPEGVLAGKTRVLVTHGISFLPQTDFIIVLA
DGQVSEMGPYPALLQRNGSFANFLCNYAPDEDQGHLEDSWTALEGAEDKEALLIEDTLSNHTDLTDNDPVTYVVQ
KQFMRQLSALSSDGEGQGRPVPRRHLGPSEKVQVTEAKADGALTQEEKAAIGTVELSVFWDYAKAVGLCTTLAIC
LLYVGQSAAAIGANVWLSAWTNDAMADSRQNNTSLRLGVYAALGILQGFLVMLAAMAMAAGGIQAARVLHQALLH
NKIRSPQSFFDTTPSGRILNCFSKDIYVVDEVLAPVILMLLNSFFNAISTLVVIMASTPLFTVVILPLAVLYTLV
QRFYAATSRQLKRLESVSRSPIYSHFSETVTGASVIRAYNRSRDFEIISDTKVDANQRSCYPYIISNRWLSIGVE
FVGNCVVLFAALFAVIGRSSLNPGLVGLSVSYSLQVTFALNWMIRMMSDLESNIVAVERVKEYSKTETEAPWVVE
GSRPPEGWPPRGEVEFRNYSVRYRPGLDLVLRDLSLHVHGGEKVGIVGRTGAGKSSMTLCLFRILEAAKGEIRID
GLNVADIGLHDLRSQLTIIPQDPILFSGTLRMNLDPFGSYSEEDIWWALELSHLHTFVSSQPAGLDFQCSEGGEN
LSVGQRQLVCLARALLRKSRILVLDEATAAIDLETDNLIQATIRTQFDTCTVLTIAHRLNTIMDYTRVLVLDKGV
VAEFDSPANLIAARGIFYGMARDAGLA

FIGURE 1267

CGATTTCATTCCTCGCTCCCCACAGGTCCCTCTCCCCAAAATATTCCCATCTTGTCCTAGCCCATCCCCCAGACT
ATCTCAAGGACCAGCTGTCCCCACGCCCCCGACCTCCACTAGGCCTGTGCCACCCGCTGCCTGCAGGAAGACGCC
CGGTCCCGGGCCGGGTTAGCCCC**ATG**GGAACGCAGCGCCTGTGTGGCCGCGGGACTCAAGGCTGGCCTGGCTCAA
GTGAACAGCACGTCCAGGAGGCGACCTCGTCCGCGGGTTTGCATTCTGGGGTGGACGAGCTGGGGGTTCGGTCCG
AGCCCGGTGGGAGGCTCCCGGAGCGCAGCCTGGGCCCAGCCCACCCCGCGCCGGCGGCCATGGCAGGCACCCTGG
ACCTGGACAAGGGCTGCACGGTGGAGGAGCTGCTCCGCGGGTGCATCGAAGCCTTCGATGACTCCGGGAAGGTGC
GGGACCCGCAGCTGGTGCGCATGTTCCTCATGATGCACCCCTGGTACATCCCCTCCTCTCAGCTGGCGGCCAAGC
TGCTCCACATCTACCAACAATCCCGGAAGGACAACTCCAATTCCCTGCAGGTGAAAACGTGCCACCTGGTCAGGT
ACTGGATCTCCGCCTTCCCAGCGGAGTTTGACTTGAACCCGGAGTTGGCTGAGCAGATCAAGGAGCTGAAGGCTC
TGCTAGACCAAGAAGGGAACCGACGGCACAGCAGCCTAATCGACATAGACAGCGTCCCTACCTACAAGTGGAAGC
GGCAGGTGACTCAGCGGAACCCTGTGGGACAGAAAAAGCGCAAGATGTCCCTGTTGTTTGACCACCTGGAGCCCA
TGGAGCTGGCGGAGCATCTCACCTACTTGGAGTATCGCTCCTTCTGCAAGATCCTGTTTCAGGACTATCACAGTT
TCGTGACTCATGGCTGCACTGTGGACAACCCCGTCCTGGAGCGGTTCATCTCCCTCTTCAACAGCGTCTCACAGT
GGGTGCAGCTCATGATCCTCAGCAAACCCACAGCCCCGCAGCGGGCCCTGGTCATCACACACTTTGTCCACGTGG
CGGAGAAGCTGCTACAGCTGCAGAACTTCAACACGCTGATGGCAGTGGTCGGGGGCCTGAGCCACAGCTCCATCT
CCCGCCTCAAGGAGACCCACAGCCACGTTAGCCCTGAGACCATCAAGCTCTGGGAGGGTCTCACGGAACTAGTGA
CGGCGACAGGCAACTATGGCAACTACCGGCGTCGGCTGGCAGCCTGTGTGGGCTTCCGCTTCCCGATCCTGGGTG
TGCACCTCAAGGACCTGGTGGCCCTGCAGCTGGCACTGCCTGACTGGCTGGACCCAGCCCGGACCCGGCTCAACG
GGGCCAAGATGAAGCAGCTCTTTAGCATCCTGGAGGAGCTGGCCATGGTGACCAGCCTGCGGCCACCAGTACAGG
CCAACCCCGACCTGCTGAGCCTGCTCACGGTGTCTCTGGATCAGTATCAGACGGAGGATGAGCTGTACCAGCTGT
CCCTGCAGCGGGAGCCGCGCTCCAAGTCCTCGCCAACCAGCCCCACGAGTTGCACCCCACCACCCCGGCCCCCGG
TACTGGAGGAGTGGACCTCGGCTGCCAAACCCAAGCTGGATCAGGCCCTCGTGGTGGAGCACATCGAGAAGATGG
TGGAGTCTGTGTTCCGGAACTTTGACGTCGATGGGGATGGCCACATCTCACAGGAAGAATTCCAGATCATCCGTG
GGAACTTCCCTTACCTCAGCGCCTTTGGGGACCTCGACCAGAACCAGGATGGCTGCATCAGCAGGGAGGAGATGG
TTTCCTATTTCCTGCGCTCCAGCTCTGTGTTGGGGGGGCGCATGGGCTTCGTACACAACTTCCAGGAGAGCAACT
CCTTGCGCCCCGTCGCCTGCCGCCACTGCAAAGCCCTGATCCTGGGCATCTACAAGCAGGGCCTCAAATGCCGAG
CCTGTGGAGTGAACTGCCACAAGCAGTGCAAGGATCGCCTGTCAGTTGAGTGTCGGCGCAGGGCCCAGAGTGTGA
GCCTGGAGGGGTCTGCACCCTCACCCTCACCCATGCACAGCCACCATCACCGCGCCTTCAGCTTCTCTCTGCCCC
GCCCTGGCAGGCGAGGCTCCAGGCCTCCAGAGATCCGTGAGGAGGAGGTACAGACGGTGGAGGATGGGGTGTTTG
ACATCCACTTG**TAA**TAGATGCTGTGGTTGGATCAAGGACTCATTCCTGCCTTGGAGAAAATACTTCAACCAGAGC
AGGGAGCCTGGGGGTGTCGGGGCAGGAGGCTGGGGATGGGGGTGGGATATGAGGGTGGCATGCAGCTGAGGGCAG
GGCCAGGGCTGGTGTCCCTAAGGTTGTACAGACTCTTGTGAATATTTGTATTTTCCAGATGGAATAAAAAGGCCC
GTGTAATTAACCTTCA

FIGURE 1268

MGTQRLCGRGTQGWPGSSEQHVQEATSSAGLHSGVDELGVRSEPGGRLPERSLGPAHPAPAAMAGTLDLDKGCTV
EELLRGCIEAFDDSGKVRDPQLVRMFLMMHPWYIPSSQLAAKLLHIYQQSRKDNSNSLQVKTCHLVRYWISAFPA
EFDLNPELAEQIKELKALLDQEGNRRHSSLIDIDSVPTYKWKRQVTQRNPVGQKKRKMSLLFDHLEPMELAEHLT
YLEYRSFCKILFQDYHSFVTHGCTVDNPVLERFISLFNSVSQWVQLMILSKPTAPQRALVITHFVHVAEKLLQLQ
NFNTLMAVVGGLSHSSISRLKETHSHVSPETIKLWEGLTELVTATGNYGNYRRRLAACVGFRFPILGVHLKDLVA
LQLALPDWLDPARTRLNGAKMKQLFSILEELAMVTSLRPPVQANPDLLSLLTVSLDQYQTEDELYQLSLQREPRS
KSSPTSPTSCTPPPRPPVLEEWTSAAKPKLDQALVVEHIEKMVESVFRNFDVDGDGHISQEEFQIIRGNFPYLSA
FGDLDQNQDGCISREEMVSYFLRSSSVLGGRMGFVHNFQESNSLRPVACRHCKALILGIYKQGLKCRACGVNCHK
QCKDRLSVECRRRAQSVSLEGSAPSPSPMHSHHHRAFSFSLPRPGRRGSRPPEIREEEVQTVEDGVFDIHL

FIGURE 1269

GCCATAAAGGCCGCCGCGCGCCCACGCGCCTCGCTTGCTGCGCGCTGCCGGCGCTCCTTCCTCCTCGGCTCGCGT
CTCACTCAGTGTACCTTCTAGTCCCGCC**ATG**GCCGCTCTCACCCGGGACCCCCAGTTCCAGAAGCTGCAGCAATG
GTACCGCGAGCACCGCTCCGAGCTGAACCTGCGCCGCCTCTTCGATGCCAACAAGGACCGCTTCAACCACTTCAG
CTTGACCCTCAACACCAACCATGGGCATATCCTGGTGGATTACTCCAAGAACCTGGTGACGGAGGACGTGATGCG
GATGCTGGTGGACTTGGCCAAGTCCAGGGGCGTGGAGGCCGCCCGGGAGCGGATGTTCAATGGTGAGAAGATCAA
CTACACCGAGGGTCGAGCCGTGCTGCACGTGGCTCTGCGGAACCGGTCAAACACACCCATCCTGGTAGACGGCAA
GGATGTGATGCCAGAGGTCAACAAGGTTCTGGACAAGATGAAGTCTTTCTGCCAGCGTGTCCGGAGCGGTGACTG
GAAGGGGTACACAGGCAAGACCATCACGGACGTCATCAACATTGGCATTGGCGGCTCCGACCTGGGACCCCTCAT
GGTGACTGAAGCCCTTAAGCCATACTCTTCAGGAGGTCCCCGCGTCTGGTATGTCTCCAACATTGATGGAACTCA
CATTGCCAAAACCCTGGCCCAGCTGAACCCCGAGTCCTCCCTGTTCATCATTGCCTCCAAGACCTTTACTACCCA
GGAGACCATCACGAATGCAGAGACGGCGAAGGAGTGGTTTCTCCAGGCGGCCAAGGATCCTTCTGCAGTGGCGAA
GCACTTTGTTGCCCTGTCTACTAACACAACCAAAGTGAAGGAGTTTGGAATTGACCCTCAAAACATGTTCGAGTT
CTGGGATTGGGTGGGAGGACGCTACTCGCTGTGGTCGGCCATCGGACTCTCCATTGCCCTGCACGTGGGTTTTGA
CAACTTCGAGCAGCTGCTCTCGGGGGCTCACTGGATGGACCAGCACTTCCGCACGACGCCCCTGGAGAAGAACGC
CCCCGTCTTGCTGGCCCTGCTGGGTATCTGGTACATCAACTGCTTTGGGTGTGAGACACACGCCATGCTGCCCTA
TGACCAGTACCTGCACCGCTTTGCTGCGTACTTCCAGCAGGGCGACATGGAGTCCAATGGGAAATACATCACCAA
ATCTGGAACCCGTGTGGACCACCAGACAGGCCCCATTGTGTGGGGGGAGCCAGGGACCAATGGCCAGCATGCTTT
TTACCAGCTCATCCACCAAGGCACCAAGATGATACCCTGTGACTTCCTCATCCCGGTCCAGACCCAGCACCCCAT
ACGGAAGGGTCTGCATCACAAGATCCTCCTGGCCAACTTCTTGGCCCAGACAGAGGCCCTGATGAGGGGAAAATC
GACGGAGGAGGCCCGAAAGGAGCTCCAGGCTGCGGGCAAGAGTCCAGAGGACCTTGAGAGGCTGCTGCCACATAA
GGTCTTTGAAGGAAATCGCCCAACCAACTCTATTGTGTTCACCAAGCTCACACCATTCATGCTTGGAGCCTTGGT
CGCCATGTATGAGCACAAGATCTTCGTTCAGGGCATCATCTGGGACATCAACAGCTTTGACCAGTGGGGAGTGGA
GCTGGGAAAGCAGCTGGCTAAGAAAATAGAGCCTGAGCTTGATGGCAGTGCTCAAGTGACCTCTCACGACGCTTC
TACCAATGGGCTCATCAACTTCATCAAGCAGCAGCGCGAGGCCAGAGTCCAA**TAA**ACTCGTGCTCATCTGCAGCC
TCCTCTGTGACTCCCCTTTCTCTTCTCGTCCCTCCTCCCCGGAGCCGGCACTGCATGTTCCTGGACACCACCCAG
AGCACCCTCTGGTTGTGGGCTTGGACCACGAGCCCTTAGCAGGGAAGGCTGGTCTCCCCCAGCCTAACCCCCAGC
CCCTCCATGTCTATGCTCCCTCTGTGTTAGAATTGGCTGAAGTGTTTTTGTGCAGCTGACTTTTCTGACCCATGT
TCACGTTGTTCACATCCCATGTAGAAAAATAAAGATGCCACGGAGGAGGT

FIGURE 1270

MAALTRDPQFQKLQQWYREHRSELNLRRLFDANKDRFNHFSLTLNTNHGHILVDYSKNLVTEDVMRMLVDLAKSR
GVEAARERMFNGEKINYTEGRAVLHVALRNRSNTPILVDGKDVMPEVNKVLDKMKSFCQRVRSGDWKGYTGKTIT
DVINIGIGGSDLGPLMVTEALKPYSSGGPRVWYVSNIDGTHIAKTLAQLNPESSLFIIASKTFTTQETITNAETA
KEWFLQAAKDPSAVAKHFVALSTNTTKVKEFGIDPQNMFEFWDWVGGRYSLWSAIGLSIALHVGFDNFEQLLSGA
HWMDQHFRTTPLEKNAPVLLALLGIWYINCFGCETHAMLPYDQYLHRFAAYFQQGDMESNGKYITKSGTRVDHQT
GPIVWGEPGTNGQHAFYQLIHQGTKMIPCDFLIPVQTQHPIRKGLHHKILLANFLAQTEALMRGKSTEEARKELQ
AAGKSPEDLERLLPHKVFEGNRPTNSIVFTKLTPFMLGALVAMYEHKIFVQGIIWDINSFDQWGVELGKQLAKKI
EPELDGSAQVTSHDASTNGLINFIKQQREARVQ

FIGURE 1271

CCAAATTATTGTATCTCACAGTGTGGGGAAAAGGAAGAGAGATCAGATTGTTACTGTGTCTGTGTAGAAAGAAGT
AGACATAGGAGACTCCATTTTGTTATGTACTAAGAAAAATTCTTCTGCCTTGAGATTCTGTTAATCTATAACCTT
ACCCCCCAACCCCGTGCTCTCTGAAACATGTGCTGTGTCCTCTCAGAATTGCCTGTTTTTTGTGCTCCTCCGAGC
TCGCTGTTCGTCCGGGTTTTTTACGTTTTAATTTCCAGGACTTGAACTGCC**ATG**TCCTCTGAAGAAGGAAAGCTC
TTCGTGGGAGGGCTCAACTTTAACACCGACGAGCAGGCACTGGAAGACCACTTCAGCAGTTTCGGACCTATCTCT
GAGGTGGTCGTTGTCAAGGACCGGGAGACTCAGCGGTCCAGGGGTTTTGGTTTCATCACCTTCACCAACCCAGAG
CATGCTTCAGTTGCCATGAGAGCCATGAACGGAGAGTCTCTGGATGGTCGTCAGATCCGTGTGGATCATGCAGGC
AAGTCTGCTCGGGGAACCAGAGGAGGTGGCTTTGGGGCCCATGGGCGTGGTCGCAGCTACTCTAGAGGTGGTGGG
GACCAGGGCTATGGGAGTGGCAGGTATTATGACAGTCGACCTGGAGGGTATGGATATGGATATGGACGTTCCAGA
GACTATAATGGCAGAAACCAGGGTGGTTATGACCGCTACTCAGGAGGAAATTACAGAGACAATTATGACAAC**TGA**

AATGAGACATGCACATAATATAGATACACAAGGAATAATTTCTGATCCAGGATCGTCCTTCCAAATGGCTGTATT
TATAAAGGTTTTTGGAGCTGCACTGAAGCATCTTATTTTATAGTATATCAACCTTTTGTTTTTAAATTGACCTGC
CAAGGTAGCTGAAGACCTTTTAGACAGTTCCCATCTTTTTTTTTAAATTTTTTCTGCCTATTTAAAGACAAATTA
TGGGACGTTTGTAGAACCTGAGTATTTTTCTTTTTACCAGTTTTTTAGTTTGAGCTCTTAGGTTTATTGGAGCTA
GCAATAATTGGTTCTGGCAAGTTTGGCCAGACTGACTTCAAAAAATTAATGTGTATCCAGGGACATTTTAAAACC
TGTACACAGTGTTTATTGTGGTTAGGAAGCAATTTCCCAATGTACCTATAAGAAATGTGCATCAAGCCAGCCTGA
CCAACATGGTGAAACCCCATCTGTACTAAACATAAAAAAATTAGCCTGGCATGGTGGTGTACGCCTGTAATCCCA
GTGACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCGGGAGGCGGAGGTTGCAGTGAGCTAAGATCGCGCCA
CTGTACTCCAGCCTGGACAACAGCGAGAGCTCCATCTCAAAAAAAAAAAGGAAATGTGTATCAAGAACATGATTAT
CCAGCGGTATTTTCTAATTCAGATCATCAAACTGATTATATAGAAGAGTTGGCTTTAAAATGTTTGCAAATGTCG
ATGTTGAGAATGGTATTTCTTCAGTTTTATTTTAGGATTTCTATAGTTTGATGATC

FIGURE 1272

MSSEEGKLFVGGLNFNTDEQALEDHFSSFGPISEVVVVKDRETQRSRGFGFITFTNPEHASVAMRAMNGESLDGR
QIRVDHAGKSARGTRGGGFGAHGRGRSYSRGGGDQGYGSGRYYDSRPGGYGYGYGRSRDYNGRNQGGYDRYSGGN
YRDNYDN

FIGURE 1273

TGGGAGGGAGCC**ATG**AAGCATTACGAGGTGGAGATTCTGGACGCAAAGACAAGGGAGAAGCTGTGTTTCTTCGCC
GCGTGGATGGCCTATTACATCAATCACCCTCTCTACACTCCCCCTACCTACGGAGCTCAGCAGGTGAAACTGGCG
CTCGCCATCTTTGTGATCTGCCAGCTCGGCAACTTCTCCATCCACATGGCCCTGCGGGACCTGCGGCCCGCTGGG
TCCAAGACGCGGAAGATCCCATACCCCACCAAGAACCCCTTCACGTGGCTCTTCCTGCTGGTGTCCTGCCCCAAC
TGCACCTACGAGGTGGGGTCCTGGATCGGTTTCGCCATCATGACGCAGTGTCTCCCAGTGGCCCTGTTCTCCCTG
GTGGGCTTCACCCAGATGACCATCTGGGCCAAGGGCAAGCACCGCAGCTACCTGAAGGAGTTCCGGGACTACCCG
CCCCTGCGCATGCCCATCATCCCCTTCCTGCTC**TGA**GCAGCTCACCCCTGCTGAGGCTCAGCCCCTCAACCCGGT
GGCATTCTGGGGGAGGAGTGGGGCCCACAGCTCTCCAGCACCCGGAATAAAGCCCGCCTGTCCCCAGTCGGAACA
AAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1274

MKHYEVEILDAKTREKLCFFAAWMAYYINHPLYTPPTYGAQQVKLALAIFVICQLGNFSIHMALRDLRPAGSKTR
KIPYPTKNPFTWLFLLVSCPNCTYEVGSWIGFAIMTQCLPVALFSLVGFTQMTIWAKGKHRSYLKEFRDYPPLRM
PIIPFLL

FIGURE 1275

ACCCAGGGTCCGGCCTGCGCCTTCCCGCCAGGCCTGGACACTGGTTCAACACCTGTGACTTCATGTGTGCGCGCC
GGCCACACCTGCAGTCACACCTGTAGCCCCCTCTGCCAAGAGATCCATACCGAGGCAGCGTCGGTGGCTACAAGC
CCTCAGTCCACACCTGTGGACACCTGTGACACCTGGCCACACGACCTGTGGCCGCGGCCTGGCGTCTGCTGCGAC
AGGAGCCCTTACCTCCCCTGTTATAACACCTGACAGCCACCTAACTGCCCCTGCAGAAGGAGCAATGGCCTTGGC
TCCTGAGAGGTAAGAGCCCGGCCCACCCTCTCCAG**ATG**CCAGTCCCCGAGCGCCCTGCAGCCGGCCCTGACTCTC
CGCGGCCGGGCACCCGCAGGGCAGCCCCACGCGTGCTGTTCGGAGAGTGGCTCCTTGGAGAGATCAGCAGCGGCT
GCTATGAGGGGCTGCAGTGGCTGGACGAGGCCCGCACCTGTTTCCGCGTGCCCTGGAAGCACTTCGCGCGCAAGG
ACCTGAGCGAGGCCGACGCGCGCATCTTCAAGGCCTGGGCTGTGGCCCGCGGCAGGTGGCCGCCTAGCAGCAGGG
GAGGTGGCCCGCCCCCCGAGGCTGAGACTGCGGAGCGCGCCGGCTGGAAAACCAACTTCCGCTGCGCACTGCGCA
GCACGCGTCGCTTCGTGATGCTGCGAGATAACTCGGGGGACCCGGCCGACCCGCACAAGGTGTACGCGCTCAGCC
GGGAGCTGTGCTGGCGAGAAGGCCCAGGCACGGACCAGACTGAGGCAGAGGCCCCCGCAGCTGTCCCACCACCAC
AGGGTGGGCCCCCAGGGCCATTCCTGGCACACACACATGCTGGACTCCAAGCCCCAGGCCCCCTCCCTGCCCCAG
CTGGTGACGAGGGGGACCTCCTGCTCCAGGCAGTGCAACAGAGCTGCCTGGCAGACCATCTGCTGACAGCGTCAT
GGGGGGCAGATCCAGTCCCAACCAAGGCTCCTGGAGAGGGACAAGAAGGGCTTCCCCTGACTGGGGCCTGTGCTG
GAGGCCCAGGGCTCCCTGCTGGGGAGCTGTACGGGTGGGCAGTAGAGACGACCCCCAGCCCCGGGCCCCAGCCCG
CGGCACTAACGACAGGCGAGGCCGCGGCCCCAGAGTCCCCGCACCAGGCAGAGCCGTACCTGTCACCCTCCCCAA
GCGCCTGCACCGCGGTGCAAGAGCCCAGCCCAGGGGCGCTGGACGTGACCATCATGTACAAGGGCCGCACGGTGC
TGCAGAAGGTGGTGGGACACCCGAGCTGCACGTTCCTATACGGCCCCCCAGACCCAGCTGTCCGGGCCACAGACC
CCCAGCAGGTAGCATTCCCCAGCCCTGCCGAGCTCCCGGACCAGAAGCAGCTGCGCTACACGGAGGAACTGCTGC
GGCACGTGGCCCCTGGGTTGCACCTGGAGCTTCGGGGGCCACAGCTGTGGGCCCGGCGCATGGGCAAGTGCAAGG
TGTACTGGGAGGTGGGCGGCCCCCCAGGCTCCGCCAGCCCCTCCACCCCAGCCTGCCTGCTGCCTCGGAACTGTG
ACACCCCCATCTTCGACTTCAGAGTCTTCTTCCGAGAGCTGGTGGAATTCCGGGCACGGCAGCGCCGTGGCTCCC
CACGCTATACCATCTACCTGGGCTTCGGGCAGGACCTGTCAGCTGGGAGGCCCAAGGAGAAGAGCCTGGTCCTGG
TGAAGCTGGAACCCTGGCTGTGCCGAGTGCACCTAGAGGGCACGCAGCGTGAGGGTGTGTCTTCCCTGGATAGCA
GCAGCCTCAGCCTCTGCCTGTCCAGCGCCAACAGCCTCTATGACGACATCGAGTGCTTCCTTATGGAGCTGGAGC
AGCCCGCC**TAG**AACCCAGTCTAATGAGAACTCCAGAAAGCTGGAGCAGCCCACCTAGAGCTGGCC

FIGURE 1276

MPVPERPAAGPDSPRPGTRRAAPRVLFGEWLLGEISSGCYEGLQWLDEARTCFRVPWKHFARKDLSEADARIFKA
WAVARGRWPPSSRGGGPPPEAETAERAGWKTNFRCALRSTRRFVMLRDNSGDPADPHKVYALSRELCWREGPGTD
QTEAEAPAAVPPPQGGPPGPFLAHTHAGLQAPGPLPAPAGDEGDLLLQAVQQSCLADHLLTASWGADPVPTKAPG
EGQEGLPLTGACAGGPGLPAGELYGWAVETTPSPGPQPAALTTGEAAAPESPHQAEPYLSPSPSACTAVQEPSPG
ALDVTIMYKGRTVLQKVVGHPSCTFLYGPPDPAVRATDPQQVAFPSPAELPDQKQLRYTEELLRHVAPGLHLELR
GPQLWARRMGKCKVYWEVGGPPGSASPSTPACLLPRNCDTPIFDFRVFFRELVEFRARQRRGSPRYTIYLGFGQD
LSAGRPKEKSLVLVKLEPWLCRVHLEGTQREGVSSLDSSSLSLCLSSANSLYDDIECFLMELEQPA

FIGURE 1277

ACTGATGTCTTGACTCATGGGTGTATTCACAAATTCTGTTACTTCAAGTCTTTTTCTTTTAACGGATTGATCTTT
TGCTAGATAGAGACAAAATATCAGTGTGAATTACAGCAAACCCCTATTCCATGCTGTT**ATG**GGTGAAACTCTGGG
AGATTCTCCTATTGACCCAGAAAGCGATTCCTTCACTGATACACTGTCTGCAAACATATCACAAGAAATGACCAT
GGTTGACACAGAGATGCCATTCTGGCCCACCAACTTTGGGATCAGCTCCGTGGATCTCTCCGTAATGGAAGACCA
CTCCCACTCCTTTGATATCAAGCCCTTCACTACTGTTGACTTCTCCAGCATTTCTACTCCACATTACGAAGACAT
TCCATTCACAAGAACAGATCCAGTGGTTGCAGATTACAAGTATGACCTGAAACTTCAAGAGTACCAAAGTGCAAT
CAAAGTGGAGCCTGCATCTCCACCTTATTATTCTGAGAAGACTCAGCTCTACAATAAGCCTCATGAAGAGCCTTC
CAACTCCCTCATGGCAATTGAATGTCGTGTCTGTGGAGATAAAGCTTCTGGATTTCACTATGGAGTTCATGCTTG
TGAAGGATGCAAGGGTTTCTTCCGGAGAACAATCAGATTGAAGCTTATCTATGACAGATGTGATCTTAACTGTCG
GATCCACAAAAAAAGTAGAAATAAATGTCAGTACTGTCGGTTTCAGAAATGCCTTGCAGTGGGGATGTCTCATAA
TGCCATCAGGTTTGGGCGGATGCCACAGGCCGAGAAGGAGAAGCTGTTGGCGGAGATCTCCAGTGATATCGACCA
GCTGAATCCAGAGTCCGCTGACCTCCGGGCCCTGGCAAAACATTTGTATGACTCATACATAAAGTCCTTCCCGCT
GACCAAAGCAAAGGCGAGGGCGATCTTGACAGGAAAGACAACAGACAAATCACCATTCGTTATCTATGACATGAA
TTCCTTAATGATGGGAGAAGATAAAATCAAGTTCAAACACATCACCCCCCTGCAGGAGCAGAGCAAAGAGGTGGC
CATCCGCATCTTTCAGGGCTGCCAGTTTCGCTCCGTGGAGGCTGTGCAGGAGATCACAGAGTATGCCAAAAGCAT
TCCTGGTTTTGTAAATCTTGACTTGAACGACCAAGTAACTCTCCTCAAATATGGAGTCCACGAGATCATTTACAC
AATGCTGGCCTCCTTGATGAATAAAGATGGGGTTCTCATATCCGAGGGCCAAGGCTTCATGACAAGGGAGTTTCT
AAAGAGCCTGCGAAAGCCTTTTGGTGACTTTATGGAGCCCAAGTTTGAGTTTGCTGTGAAGTTCAATGCACTGGA
ATTAGATGACAGCGACTTGGCAATATTTATTGCTGTCATTATTCTCAGTGGAGACCGCCCAGGTTTGCTGAATGT
GAAGCCCATTGAAGACATTCAAGACAACCTGCTACAAGCCCTGGAGCTCCAGCTGAAGCTGAACCACCCTGAGTC
CTCACAGCTGTTTGCCAAGCTGCTCCAGAAAATGACAGACCTCAGACAGATTGTCACGGAACACGTGCAGCTACT
GCAGGTGATCAAGAAGACGGAGACAGACATGAGTCTTCACCCGCTCCTGCAGGAGATCTACAAGGACTTGTAC**TA**
GCAGAGAGTCCTGAGCCACTGCCAACATTTCCCTTCTTCCAGTTGCACTATTCTGAGGGAAAATCTGACACCTAA
GAAATTTACTGTGAAAAAGCGTTTTAAAAAGAAAAGGATTTAGAATATGATCTATTTTATGCATATTGTTTATAA
AGACACATTTACAATTTACTTTTAATATTAAAAATTACCATATTATGAAATTGC

FIGURE 1278

MGETLGDSPIDPESDSFTDTLSANISQEMTMVDTEMPFWPTNFGISSVDLSVMEDHSHSFDIKPFTTVDFSSIST
PHYEDIPFTRTDPVVADYKYDLKLQEYQSAIKVEPASPPYYSEKTQLYNKPHEEPSNSLMAIECRVCGDKASGFH
YGVHACEGCKGFFRRTIRLKLIYDRCDLNCRIHKKSRNKCQYCRFQKCLAVGMSHNAIRFGRMPQAEKEKLLAEI
SSDIDQLNPESADLRALAKHLYDSYIKSFPLTKAKARAILTGKTTDKSPFVIYDMNSLMMGEDKIKFKHITPLQE
QSKEVAIRIFQGCQFRSVEAVQEITEYAKSIPGFVNLDLNDQVTLLKYGVHEIIYTMLASLMNKDGVLISEGQGF
MTREFLKSLRKPFGDFMEPKFEFAVKFNALELDDSDLAIFIAVIILSGDRPGLLNVKPIEDIQDNLLQALELQLK
LNHPESSQLFAKLLQKMTDLRQIVTEHVQLLQVIKKTETDMSLHPLLQEIYKDLY

FIGURE 1279A

GCGGCCCAGGCGGGGTGCGAGTGGCGCAGTCGGAGCCCGTTGCGGCCCCTGAGGAAGCGAGGAGGCGTCGGCGTC
GGCTGAGGCGGGCGGACCGGCGAGGCGAGGCGGCGGCCCCAGGCCCGAGGGACTCGGGAGCTCGAGCAGCGGCGG
CGGCAAGACCTCTCCCCCTCGGAGGCGGCGGGCGGAGGCGGCGGGAGCGGTGGTGCCCCCCCCGGGCACGGGGCC
ATGTACAACGGGATCGGGCTGCCGACGCCCCGGGGCAGCGGCACCAACGGCTACGTCCAGCGCAACCTGTCCCTG
GTGCGGGGCCGCCGGGGTGAGCGGCCTGACTACAAGGGAGAGGAGGAACTGCGGCGCCTGGAGGCTGCCCTGGTG
AAGCGGCCTAATCCTGACATCCTGGACCACGAGCGCAAGCGGCGCGTCGAGCTGCGATGCCTCGAGCTGGAGGAG
ATGATGGAAGAGCAGGGGTACGAGGAACAGCAAATTCAGGAAAAAGTGGCGACCTTTCGACTCATGTTGCTGGAG
AAGGATGTGAACCCTGGGGGCAAGGAGGAGACCCCAGGGCAGAGGCCAGCGGTCACGGAGACTCACCAGTTGGCA
GAATTAAATGAGAAGAAGAATGAAAGACTCCGTGCTGCCTTTGGCATCAGTGATTCTTACGTAGATGGCAGCTCT
TTTGATCCTCAGCGTCGTGCCCGAGAAGCTAAACAACCAGCTCCTGAGCCTCCCAAACCTTACAGCCTTGTTCGG
GAGTCTAGCAGTTCTCGCTCACCAACCCCAAAGCAGAAGAAGAAGAAAAAGAAGAAAGATAGAGGACGCAGGTCA
GAGAGCAGCTCTCCTCGACGGGAGAGAAAGAAAAGCTCAAAGAAGAAGAAGCACAGGTCAGAATCTGAGTCCAAG
AAACGTAAGCATAGGTCTCCCACTCCAAAGAGCAAACGTAAATCTAAGGACAAAAAGCGAAAGCGGTCTCGAAGT
ACAACACCAGCCCCCAAGAGCCGCCGGGCCCACCGTTCAACTTCTGCTGACTCTGCTTCCTCCTCCGATACTTCC
CGCAGTCGGTCTCGAAGTGCTGCAGCTAAAACTCATACAACTGCCTTGGCTGGGCGAAGTCCTTCCCCTGCTTCA
GGGCGACGCGGGGAGGGAGATGCGCCTTTCAGTGAACCAGGTACTACCAGCACACAACGGCCTAGTAGCCCGGAG
ACTGCTACGAAACAGCCTAGCAGCCCTTATGAAGACAAAGATAAAGACAAGAAGGAGAAATCTGCAACTCGACCT
AGCCCCTCTCCGGAAAGGAGCAGCACAGGCCCAGAACCACCTGCTCCCACTCCGCTCCTTGCTGAGCGACATGGC
GGCTCCCCACAACCCCTTGCAACCACCCCCTTAAGCCAGGAGCCAGTGAACCCCCCATCTGAGGCCTCTCCAACT
CGGGACCGTTCACCACCTAAGTCTCCCGAGAAACTTCCCCAGTCTTCTTCCTCAGAGAGCAGCCCACCATCCCCT
CAACCTACCAAAGTTTCTCGGCATGCCAGCTCTTCCCCAGAAAGTCCTAAACCTGCTCCAGCTCCAGGGTCCCAC
CGAGAGATTTCTTCTTCTCCCACATCTAAGAATCGCTCACATGGCCGAGCAAAACGGGATAAATCACATTCTCAT
ACCCCCTCCCGTAGGATGGGGAGGTCCCGTAGCCCTGCCACCGCTAAGAGAGGGCGATCTCGGTCTCGAACCCCT
ACCAAGAGAGGTCATTCTCGATCCCGATCTCCCCAGTGGCGTAGGTCCAGGTCTGCACAGAGGTGGGGAAGATCT
AGAAGCCCCCAGCGACGTGGCCGCTCTAGGTCTCCTCAGCGACCAGGCTGGTCTAGGAGCAGAAATACCCAGAGA
AGAGGCAGGTCTAGGTCAGCAAGGCGAGGGAGGTCCCACTCTAGATCCCCAGCCACTAGGGGTAGATCTCGTTCT
AGAACACCAGCCCGCCGGGGCAGGTCCCGCTCTAGAACACCTGCCAGGCGGAGATCACGATCCAGAACTCCCACC
AGGCGTAGGTCTCGGTCTAGAACACCAGCCCGGAGGGGCAGGTCTCGGTCTAGAACACCTGCTAGGCGCAGATCT
AGGACCCGATCACCAGTACGACGCAGGTCTCGTAGTAGATCACCAGCCAGGAGAAGTGGCAGGTCACGCTCTAGA
ACCCCAGCTAGACGTGGCCGCTCACGCTCCAGAACCCCAGCCAGACGTGGCCGCTCACGCTCTAGAACCCCAGCT
AGACGCAGTGGTCGCTCACGCTCCAGAACACCAGCCAGGAGAGGGAGGTCTCGGTCTAGGACACCAAGACGAGGA
AGATCCCGCAGTAGAAGCTTAGTTAGACGTGGAAGATCTCACTCTAGAACACCTCAAAGAAGAGGCAGATCTGGC
TCATCTTCAGAGCGGAAAAACAAATCCAGAACATCTCAAAGAAGAAGCAGGTCCAATTCAAGCCCAGAAATGAAG
AAATCTCGCATTTCTTCAAGGCGGAGCAGGTCTCTCTCTTCACCACGGTCCAAAGCAAAATCTCGCTTGTCTTTG
AGGCGCAGCCTTTCAGGGTCTTCCCCATGCCCTAAGCAAAAGTCACAGACACCACCCAGGCGCAGTCGCTCTGGA
TCCTCCCAACCTAAAGCTAAATCTAGAACGCCACCCAGACGCAGTCGCTCCAGTTCTTCTCCGCCACCTAAACAG
AAATCTAAGACACCATCAAGACAAAGTCATTCCAGTTCATCTCCTCATCCTAAAGTGAAATCTGGAACACCACCG
AGGCAAGGGTCCATAACAAGTCCCCAGGCCAATGAGCAATCTGTAACGCCACAGAGACGGAGCTGTTTTGAATCA
TCACCTGACCCTGAGTTGAAATCTAGGACCCCTTCTAGACATAGCTGCTCAGGGTCCTCTCCTCCTAGAGTGAAA
TCTAGCACACCTCCCAGACAGAGCCCATCTAGGTCATCATCTCCACAACCCAAAGTGAAGGCAATAATATCACCA
AGACAAAGAAGCCATTCTGGCTCCTCTTCTCCAAGTCCTAGTAGGGTGACGTCGAGAACAACTCCACGGCGAAGC
AGATCAGTATCTCCCTGCTCCAATGTGGAATCCAGATTGTTGCCAAGATACAGTCATTCTGGGTCCTCCTCACCA
GATACCAAAGTGAAACCTGAAACACCGCCAAGACAAAGTCACTCAGGGTCTATTTCACCATACCCCAAAGTAAAG
GCCCAAACTCCACCGGGGCCAAGTCTTTCTGGATCAAAGTCACCATGTCCCCAAGAGAAGTCTAAAGACTCACTA
GTTCAAAGTTGCCCTGGATCCCTCTCTCTCTGTGCAGGAGTAAAATCTAGCACACCACCAGGCGAGAGCTATTTT
GGTGTCTCATCTCTGCAACTGAAAGGACAATCTCAAACTTCACCAGACCACAGATCTGATACTTCAAGTCCAGAA
GTGAGACAGAGTCATTCAGAATCACCATCTCTGCAGAGCAAATCTCAAACATCACCTAAGGGAGGTCGGTCCAGG
TCTTCATCTCCAGTCACTGAGCTGGCATCCAGATCTCCAATAAGACAAGATAGAGGTGAGTTCTCAGCGAGTCCT

FIGURE 1279B

ATGTTGAAATCTGGAATGTCTCCTGAGCAGAGCAGGTTCCAGTCTGACTCTTCTTCATATCCTACAGTGGACTCG
AATTCTCTCTTGGGGCAGAGTAGATTGGAGACTGCTGAATCAAAAGAGAAAATGGCCTTACCCCCTCAGGAGGAT
GCTACTGCATCACCTCCTAGACAGAAAGACAAATTTAGTCCCTTTCCAGTACAGGATAGGCCTGAGTCTTCACTG
GTATTCAAAGACACACTTAGAACCCCGCCAAGAGAAAGAAGTGGTGCTGGGTCATCTCCAGAAACAAAAGAGCAA
AATAGTGCATTGCCTACGTCAAGCCAAGATGAAGAGTTAATGGAGGTGGTAGAGAAGTCTGAAGAACCCGCAGGC
CAAATCCTGTCTCATTTGTCTTCAGAACTTAAAGAAATGTCCACAAGTAACTTTGAATCATCTCCTGAAGTAGAA
GAAAGGCCTGCTGTGTCTTTGACTCTTGATCAGAGCCAGTCACAGGCTTCTTTGGAAGCAGTAGAAGTCCCTTCA
ATGGCCTCATCTTGGGGTGGGCCACATTTTTCTCCAGAACATAAAGAACTGTCTAACTCCCCACTCAGGGAGAAC
AGCTTTGGATCACCTTTAGAATTTAGAAACTCAGGCCCACTTGGTACAGAAATGAATACTGGATTTTCTTCTGAG
GTTAAAGAAGATTTGAATGGACCGTTTCTTAATCAGCTGGAAACAGATCCATCTCTAGACATGAAAGAACAATCG
ACAAGATCCTCTGGACACAGCAGTTCTGAGTTATCCCCAGATGCAGTGGAAAAGGCAGGGATGTCTTCAAATCAG
AGCATCTCTTCACCTGTGCTTGATGCTGTACCCAGAACACCCTCGAGAGAAAGAAGTAGTTCTGCATCTTCTCCT
GAAATGAAAGATGGTTTACCCAGAACTCCATCAAGGAGAAGCAGGTCTGGGTCTTCTCCAGGACTTAGAGATGGG
TCTGGGACTCCCTCGAGGCACAGCCTGTCTGGGTCCTCTCCTGGAATGAAAGATATACCTAGAACGCCATTTAGA
GGGAGAAGCGAATGTGATTCTTCCCCAGAACCGAAAGCTTTGCCTCAGACTCCTAGGCCGAGGAGTCGTTCTCCA
TCATCCCCAGAGCTCAACAACAAGTGTCTTACCCCCCAGAGAGAAAGAAGCGGGTCAGAATCATCAGTTGATCAG
AAAACTGTGGCTCGGACTCCCCTGGGGCAGAGAAGTCGTTCGGGATCCTCTCAAGAACTTGATGTGAAACCCAGT
GCATCCCCTCAGGAAAGAAGTGAGTCAGACTCTTCTCCAGATTCTAAAGCCAAGACACGAACCCCACTTCGGCAG
AGGAGTCGGTCTGGATCATCTCCAGAGGTTGACAGCAAATCTCGACTATCCCCTCGGCGCAGTAGGTCTGGTTCC
TCCCCTGAAGTGAAAGATAAGCCAAGAGCAGCACCCAGGGCACAGAGTGGTTCTGATTCCTCTCCTGAACCTAAA
GCTCCAGCCCCTCGGGCCCTTCCCAGACGAAGCAGATCAGGTTCATCAAGCAAAGGCAGAGGCCCTTCTCCTGAA
GGAAGCAGCAGTACCGAGTCCTCTCCTGAACATCCGCCCAAATCCAGAACTGCTCGCAGAGGTTCCAGGTCATCA
CCAGAGCCCAAGACCAAGTCTCGTACACCACCTCGACGTCGCAGCTCTCGATCATCTCCGGAGCTAACAAGGAAG
GCCAGACTGTCCCGTAGAAGCCGCTCTGCCTCATCCTCACCAGAAACTCGCTCTAGAACTCCCCCAAGGCACCGG
AGAAGTCCCTCAGTGTCTTCCCCGGAGCCAGCCGAAAAATCGAGGTCTTCACGCCGACGGCGCTCAGCTTCATCT
CCACGCACTAAGACAACCTCAAGGAGAGGCCGCTCTCCTTCGCCAAAGCCTCGTGGACTCCAGAGGTCCCGTTCC
CGCTCAAGGAGAGAGAAAACAAGAACAACCCGACGTCGAGATAGGTCTGGATCTTCTCAGTCAACCTCTCGGCGA
AGACAGCGGAGCCGGTCAAGGTCGCGGGTTACTCGGCGGCGGAGGGGAGGCTCTGGTTATCACTCAAGGTCACCT
GCCCGGCAGGAAAGTTCCCGGACCTCCTCTCGACGCCGAAGAGGCCGCTCTCGGACACCCCCAACCAGTCGGAAG
CGTTCTCGCTCACGCACATCACCAGCCCCGTGGAAACGCTCTAGATCTCGAGCCTCTCCAGCCACTCACCGGCGA
TCCAGGTCCAGAACCCCCCTGATAAGCCGACGTAGGTCCAGATCTCGAACTTCACCAGTCAGCCGGAGACGGTCA
AGGTCCAGGACTTCAGTGACTCGACGAAGATCCCGGTCAAGAGCATCCCCAGTGAGCAGAAGGCGATCCAGATCC
AGAACGCCACCAGTAACCCGCCGTCGTTCAAGGTCTAGAACGCCAACAACACGCCGCCGCTCCCGTTCTAGAACT
CCACCAGTGACTCGCAGAAGGTCCAGATCCAGGACTCCACCAGTAACCAGGAGGCGATCTCGAAGCAGAACTTCG
CCTATCACTCGCAGAAGATCAAGATCCAGAACATCTCCGGTCACCCGAAGGAGATCTCGATCTCGCACATCTCCA
GTAACTCGAAGAAGGTCCCGCTCTCGAACCTCACCAGTGACACGCCGCCGCTCTAGGTCCCGGACACCTCCAGCT
ATTCGGCGCCGCTCTAGATCTCGAACGCCACTGTTACCACGCAAACGTTCTCGAAGTCGCTCACCACTTGCTATC
CGCCGCCGCTCCAGATCCCGTACTCCACGAACAGCTCGGGGTAAACGGTCCTTAACAAGATCTCCTCCAGCCATC
CGCAGGCGTTCTGCATCTGGAAGTAGTTCTGATCGTTCACGATCTGCTACTCCTCCAGCAACAAGAAATCATTCT
GGTTCACGGACACCTCCAGTAGCACTCAACAGTTCCAGAATGAGCTGCTTCAGTCGTCCTAGCATGTCCCCAACA
CCTCTTGATCGCTGCAGATCACCTGGAATGCTTGAACCCCTTGGCAGCTCTAGAACACCCATGTCTGTCCTGCAG
CAAGCCGGCGGCTCCATGATGGATGGTCCAGGTCCCCGAATACCTGACCACCAGAGAACATCTGTGCCAGAAAAT
CATGCTCAGTCCAGGATTGCACTTGCCCTGACAGCTATCAGTCTTGGCACCGCTCGGCCTCCTCCGTCCATGTCT
GCTGCTGGCCTTGCTGCAAGAATGTCCCAGGTTCCAGCCCCGGTGCCTCTCATGAGTCTCAGAACCGCACCAGCA
GCCAACCTTGCCAGCAGGATTCCTGCAGCCTCTGCGGCAGCCATGAACCTAGCCAGCGCCAGGACACCTGCCATT
CCAACAGCAGTGAACCTGGCTGACTCTCGAACGCCAGCTGCAGCAGCGGCCATGAACTTGGCCAGCCCCAGAACA
GCGGTGGCACCTTCGGCTGTGAACCTGGCTGACCCTCGCACTCCCACAGCCCCAGCTGTGAACCTAGCAGGGGCC
AGAACCCCAGCTGCCTTGGCAGCTCTGAGTCTCACAGGCTCTGGCACACCACCAACTGCTGCAAACTATCCCTCC

FIGURE 1279C

AGCTCCAGAACACCACAGGCTCCAGCCTCTGCAAACCTGGTGGGTCCTCGGTCTGCACATGCCACAGCTCCTGTG
AATATTGCCGGCTCCAGAACCGCCGCAGCCTTGGCCCCCGCGAGCCTCACCAGTGCTAGGATGGCTCCAGCATTG
TCTGGTGCAAACCTCACCAGCCCCAGGGTGCCCCTTTCTGCCTACGAGCGTGTCAGTGGCAGAACCTCACCACCG
CTCCTTGACCGAGCTAGGTCCAGAACACCACCGTCTGCCCCAAGCCAATCTAGGATGACCTCTGAACGGGCTCCC
TCCCCTTCCTCTAGAATGGGCCAGGCTCCTTCACAGTCTCTTCTCCCTCCAGCACAGGATCAGCCGAGGTCTCCT
GTGCCTTCTGCTTTTTCAGACCAATCCCGTTGTTTGATTGCCCAGACCACCCCTGTAGCAGGGTCTCAGTCCCTT
TCCTCTGGGGCAGTGGCAACGACCACGTCCTCTGCTGGTGATCACAATGGCATGCTCTCTGTCCCTGCCCCTGGG
GTGCCCCACTCTGATGTGGGGGAGCCACCTGCCTCTACTGGGGCCCAGCAGCCTTCTGCATTAGCCGCCCTGCAG
CCAGCAAAGGAGCGGCGGAGTTCCTCCTCGTCGTCGTCGTCCTCTAGCTCCTCCTCCTCTTCATCATCGTCGTCG
TCGTCCTCCTCCTCCTCTGGCTCCAGTTCTAGTGACTCAGAGGGCTCTAGCCTTCCTGTGCAACCTGAGGTGGCA
CTGAAGAGGGTCCCCAGCCCCACCCCAGCCCCAAAGGAGGCTGTTCGAGAGGGACGTCCTCCGGAGCCAACCCCA
GCCAAACGGAAGAGGCGCTCTAGCAGTTCCAGTTCCAGCTCCTCCTCTTCATCTTCCTCCTCCTCCTCCTCC
TCTTCTTCCTCCTCCTCTTCCTCTTCTTCTTCTTCCTCCTCATCTTCCTCCTCCTCGTCGTCTTCCTCCCCTTCC
CCTGCTAAGCCTGGCCCTCAGGCCTTGCCCAAACCTGCAAGCCCCAAGAAGCCACCCCCTGGCGAGCGGAGGTCC
CGCAGCCCCCGGAAGCCAATAGACTCCCTCAGGGACTCTCGGTCCCTCAGCTACTCGCCTGTGGAGCGTCGCCGT
CCCTCGCCCCAGCCCTCACCACGGGACCAGCAGAGCAGCAGCAGTGAGCGGGGTTCCCGGAGAGGCCAGCGTGGG
GACAGCCGCTCCCCCAGCCACAAGCGCAGGAGGGAGACACCTAGCCCTCGGCCCATGAGACACCGCTCCTCCAGG
TCTCCA**TAA**ATTGTCTTTGGGGGATTCCACCACACCCAATGCTCTGGAGCCACAAGGAGTGTCCCTTCTTCCCCA
GCAGAGCCGTGGGAGGGTCCTTGTCTGCTCTCCTTTGAACCTTGGCAGCCCTTGGATGGAGGGCTCCCTTTCCCT
CCCCTTTTTTTTTTCTTTGTTCCTGTGAAATGTTAATCTCCGTGAGTTCTTCCTGGTTCATGTGTTCTGGGGGGT
TTGGGGTGGGAGGGAATGCAGATGGGAGTTGGGGGAGGGGAGGATACAGTTCAGGATACCCCAGCCTGGAGTCAG
GGCCAGGGAGGCATGGCCCCACTTGTATCCAGAAGTTCCCAGGGGTGATTGTGATGGTGGTTGGGACTGGAGGTT
GTATAAGGTGTTCTTGGAAGGAAGGGGCAGGAGTTGGAATTAGTTGGTCCCTACTGTCCCCCATGAGGTTGTGAA
CCCCTCCCCCCAACTTTTCATGTTTCTTAAAGGCATTTTGGTTTTTTAAAATCTGTACAGCAAGAGCAACTTTTT
CTGTCAAATAAAAATGAGAAATGCAGG

FIGURE 1280

MYNGIGLPTPRGSGTNGYVQRNLSLVRGRRGERPDYKGEEELRRLEAALVKRPNPDILDHERKRRVELRCLELEE
MMEEQGYEEQQIQEKVATFRLMLLEKDVNPGGKEETPGQRPAVTETHQLAELNEKKNERLRAAFGISDSYVDGSS
FDPQRRAREAKQPAPEPPKPYSLVRESSSSRSPTPKQKKKKKKKDRGRRSESSSPRRERKKSSKKKKHRSESESK
KRKHRSPTPKSKRKSKDKKRKRSRSTTPAPKSRRAHRSTSADSASSSDTSRSRSRSAAAKTHTTALAGRSPSPAS
GRRGEGDAPFSEPGTTSTQRPSSPETATKQPSSPYEDKDKDKKEKSATRPSPSPERSSTGPEPPAPTPLLAERHG
GSPQPLATTPLSQEPVNPPSEASPTRDRSPPKSPEKLPQSSSSESSPPSPQPTKVSRHASSSPESPKPAPAPGSH
REISSSPTSKNRSHGRAKRDKSHSHTPSRRMGRSRSPATAKRGRSRSRTPTKRGHSRSRSPQWRRSRSAQRWGRS
RSPQRRGRSRSPQRPGWSRSRNTQRRGRSRSARRGRSHSRSPATRGRSRSRTPARRGRSRSRTPARRSRSRTPT
RRRSRSRTPARRGRSRSRTPARRSRTRSPVRRRSRSRSPARRSGRSRSRTPARRGRSRSRTPARRGRSRSRTPA
RRSGRSRSRTPARRGRSRSRTPRRGRSRSRSLVRRGRSHSRTPQRRGRSGSSSERKNKSRTSQRRSRSNSSPEMK
KSRISSRRSRSLSSPRSKAKSRLSLRRSLSGSSPCPKQKSQTPPRRSRSGSSQPKAKSRTPPRRSRSSSSPPPKQ
KSKTPSRQSHSSSSPHPKVKSGTPPRQGSITSPQANEQSVTPQRRSCFESSPDPELKSRTPSRHSCSGSSPPRVK
SSTPPRQSPSRSSSPQPKVKAIISPRQRSHSGSSSPSPSRVTSRTTPRRSRSVSPCSNVESRLLPRYSHSGSSSP
DTKVKPETPPRQSHSGSISPYPKVKAQTPPGPSLSGSKSPCPQEKSKDSLVQSCPGSLSLCAGVKSSTPPGESYF
GVSSLQLKGQSQTSPDHRSDTSSPEVRQSHSESPSLQSKSQTSPKGGRSRSSSPVTELASRSPIRQDRGEFSASP
MLKSGMSPEQSRFQSDSSSYPTVDSNSLLGQSRLETAESKEKMALPPQEDATASPPRQKDKFSPFPVQDRPESSL
VFKDTLRTPPRERSGAGSSPETKEQNSALPTSSQDEELMEVVEKSEEPAGQILSHLSSELKEMSTSNFESSPEVE
ERPAVSLTLDQSQSQASLEAVEVPSMASSWGGPHFSPEHKELSNSPLRENSFGSPLEFRNSGPLGTEMNTGFSSE
VKEDLNGPFLNQLETDPSLDMKEQSTRSSGHSSSELSPDAVEKAGMSSNQSISSPVLDAVPRTPSRERSSSASSP
EMKDGLPRTPSRRSRSGSSPGLRDGSGTPSRHSLSGSSPGMKDIPRTPFRGRSECDSSPEPKALPQTPRPRSRSP
SSPELNNKCLTPQRERSGSESSVDQKTVARTPLGQRSRSGSSQELDVKPSASPQERSESDSSPDSKAKTRTPLRQ
RSRSGSSPEVDSKSRLSPRRSRSGSSPEVKDKPRAAPRAQSGSDSSPEPKAPAPRALPRRSRSGSSSKGRGPSPE
GSSSTESSPEHPPKSRTARRGSRSSPEPKTKSRTPPRRRSSRSSPELTRKARLSRRSRSASSSPETRSRTPPRHR
RSPSVSSPEPAEKSRSSRRRRSASSPRTKTTSRRGRSPSPKPRGLQRSRSRSRREKTRTTRRRDRSGSSQSTSRR
RQRSRSRSRVTRRRRGGSGYHSRSPARQESSRTSSRRRRGRSRTPPTSRKRSRSRTSPAPWKRSRSRASPATHRR
SRSRTPLISRRRSRSRTSPVSRRRSRSRTSVTRRRSRSRASPVSRRRSRSRTPPVTRRRSRSRTPTTRRRSRSRT
PPVTRRRSRSRTPPVTRRRSRSRTSPITRRRSRSRTSPVTRRRSRSRTSPVTRRRSRSRTSPVTRRRSRSRTPPA
IRRRSRSRTPLLPRKRSRSRSPLAIRRRSRSRTPRTARGKRSLTRSPPAIRRRSASGSSSDRSRSATPPATRNHS
GSRTPPVALNSSRMSCFSRPSMSPTPLDRCRSPGMLEPLGSSRTPMSVLQQAGGSMMDGPGPRIPDHQRTSVPEN
HAQSRIALALTAISLGTARPPPSMSAAGLAARMSQVPAPVPLMSLRTAPAANLASRIPAASAAAMNLASARTPAI
PTAVNLADSRTPAAAAAMNLASPRTAVAPSAVNLADPRTPTAPAVNLAGARTPAALAALSLTGSGTPPTAANYPS
SSRTPQAPASANLVGPRSAHATAPVNIAGSRTAAALAPASLTSARMAPALSGANLTSPRVPLSAYERVSGRTSPP
LLDRARSRTPPSAPSQSRMTSERAPSPSSRMGQAPSQSLLPPAQDQPRSPVPSAFSDQSRCLIAQTTPVAGSQSL
SSGAVATTTSSAGDHNGMLSVPAPGVPHSDVGEPPASTGAQQPSALAALQPAKERRSSSSSSSSSSSSSSSSSS
SSSSSSGSSSSDSEGSSLPVQPEVALKRVPSPTPAPKEAVREGRPPEPTPAKRKRRSSSSSSSSSSSSSSSSS
SSSSSSSSSSSSSSSSSSSSSSPSPAKPGPQALPKPASPKKPPPGERRSRSPRKPIDSLRDSRSLSYSPVERRR
PSPQPSPRDQQSSSSERGSRRGQRGDSRSPSHKRRRETPSPRPMRHRSSRSP

FIGURE 1281A

GAATTCGGGGAACGGTGTGGAGCGGAGGCCGCGGAGGCTCCTCGGTCCTTCAGCACCCCTCGGCCCGACGCACCC
ACGCCCCTCACCCCCCGAGAGCCGAAA**ATG**GACCCAAGTGGGGTCAAAGTGCTGGAAACAGCAGAGGACATCCAG
GAGAGGCGGCAGCAGGTCCTAGACCGATACCACCGCTTCAAGGAACTCTCAACCCTTAGGCGTCAGAAGCTGGAA
GATTCCTATCGATTCCAGTTCTTTCAAAGAGATGCTGAAGAGCTGGAGAAATGGATACAGGAAAAACTTCAGATT
GCATCTGATGAGAATTATAAAGACCCAACCAACTTGCAGGGAAAGCTTCAGAAGCATCAAGCATTTGAAGCTGAA
GTGCAGGCCAACTCAGGAGCCATTGTTAAGCTGGATGAAACTGGAAACCTGATGATCTCAGAAGGGCATTTTGCA
TCTGAAACCATACGGACCCGTTTGATGGAGCTGCACCGCCAGTGGGAATTACTTTTGGAGAAGATGCGAGAAAAA
GGAATCAAATTGCTGCAGGCCCAGAACTTGGTGCAGTACTTACGAGAATGTGAGGACGTGATGGACTGGATCAAT
GACAAGGAAGCAATTGTTACTTCTGAAGAGCTGGGCCAGGATCTGGAGCATGTAGAGGTTTTACAGAAGAAATTT
GAAGAGTTTCAAACAGATATGGCTGCTCATGAAGAAAGAGTTAATGAAGTGAACCAGTTTGCTGCCAAACTCATA
CAGGAGCAGCACCCTGAGGAGGAACTGATCAAGACTAAGCAGGATGAAGTCAATGCAGCCTGGCAGCGGCTGAAG
GGCCTGGCTCTGCAGAGGCAGGGGAAGCTCTTTGGGGCAGCAGAAGTTCAGCGCTTTAACAGGGATGTGGATGAG
ACTATCAGTTGGATTAAGGAAAAGGAGCAGTTAATGGCCTCTGATGATTTTGGCCGAGACCTGGCAAGTGTTCAG
GCTCTGCTTCGGAAGCACGAGGGTCTGGAGAGAGATCTTGCTGCTCTAGAAGACAAGGTCAAAGCCCTGTGTGCT
GAGGCTGACCGCCTGCAACAGTCCCACCCTCTGAGTGCAACACAGATTCAAGTGAAGCGAGAGGAACTGATTACA
AACTGGGAGCAGATCCGCACCTTGGCGGCAGAGAGACATGCACGGCTCAATGATTCATACAGGCTTCAACGCTTC
CTTGCTGACTTCCGTGACCTCACCAGCTGGGTGACTGAGATGAAAGCCCTCATCAATGCAGATGAGCTTGCCAGT
GATGTGGCTGGGGCTGAAGCCCTGCTAGATAGACACCAAGAGCACAAGGGTGAAATTGATGCCCATGAAGACAGC
TTCAAATCTGCAGATGAATCTGGACAGGCACTGCTTGCTGCTGGTCACTATGCCTCAGATGAAGTGAGGGAGAAG
CTGACCGTCCTTTCCGAGGAGAGAGCGGCGCTGCTGGAGCTGTGGGAGCTGCGCAGGCAGCAGTACGAGCAGTGC
ATGGACCTGCAGCTCTTCTACCGGGACACTGAGCAGGTGGACAACTGGATGAGCAAGCAGGAGGCGTTCCTGTTG
AATGAAGACTTGGGAGATTTCTTGGATAGTGTGGAAGCGCTTCTTAAGAAGCACGAAGACTTTGAGAAATCCCTT
AGTGCCCAGGAGGAAAAGATTACAGCATTAGATGAATTTGCAACCAAGCTAATTCAGAACAACCACTATGCAATG
GAAGATGTGGCCACTCGCCGAGACGCTCTGTTGAGCCGCCGCAATGCCCTTCACGAGAGAGCCATGCGTCGCCGG
GCCCAGCTAGCCGATTCTTTCCATCTGCAGCAGTTTTTCCGTGATTCTGATGAGCTCAAGAGTTGGGTGAATGAG
AAGATGAAAACTGCCACAGATGAAGCTTATAAAGATCCATCCAACCTACAAGGAAAAGTACAGAAGCATCAGGCT
TTTGAGGCTGAGCTCTCAGCAAACCAGAGCCGAATTGATGCCTTGGAGAAAGCTGGCCAAAAGCTGATTGATGTC
AACCACTATGCCAAGGATGAAGTGGCAGCTCGTATGAATGAGGTGATCAGTTTGTGGAAGAAACTGCTAGAGGCC
ACTGAACTGAAAGGAATAAAGCTTCGTGAAGCCAACCAGCAACAGCAATTTAATCGCAATGTTGAGGATATTGAA
TTGTGGCTATATGAAGTAGAAGGTCACTTGGCTTCGGATGATTACGGCAAAGATCTTACCAATGTGCAGAACCTC
CAGAAGAAACATGCCCTGCTAGAGGCAGATGTGGCTGCTCACCAGGACCGAATTGATGGCGTCACCATTCAGGCC
CGCCAGTTCCAAGATGCTGGCCATTTTGATGCAGAAAACATCAAGAAGAAACAGGAAGCCCTCGTGGCTCGCTAT
GAGGCACTCAAGGAGCCCATGGTTGCCCGGAAGCAGAAGCTGGCCGATTCTCTGCGGTTGCAGCAGCTCTTCCGG
GATGTTGAGGATGAGGAGACGTGGATTCGAGAGAAAGAGCCCATTGCCGCATCTACCAACAGAGGTAAGGATTTA
ATTGGGGTCCAGAATCTGCTAAAGAAACATCAAGCCTTACAAGCAGAAATTGCTGGACATGAACCACGCATCAAA
GCAGTTACACAGAAGGGGAATGCCATGGTGGAGGAAGGCCATTTTGCTGCAGAGGATGTGAAGGCCAAGCTTCAC
GAGCTGAACCAAAAGTGGGAGGCACTGAAAGCAAAAGCTTCCCAGCGTCGGCAGGACCTGGAGGACTCTCTGCAG
GCCCAGCAGTACTTTGCTGATGCTAACGAGGCTGAATCCTGGATGCGGGAGAAGGAACCCATTGTGGGCAGCACT
GACTATGGCAAGGACGAAGACTCTGCTGAGGCTCTACTGAAGAAACACGAAGCTTTGATGTCAGATCTCAGTGCC
TACGGCAGCAGCATCCAGGCTTTGCGAGAACAAGCACAGTCCTGCCGGCAACAAGTGGCCCCCACGGATGATGAG
ACTGGGAAGGAGCTGGTCTTGGCTCTCTACGACTATCAGGAGAAGAGTCCCCGAGAGGTCACCATGAAGAAGGGA
GATATCCTTACCTTACTCAACAGCACCAACAAGGATTGGTGGAAAGTGGAAGTGAACGATCGTCAGGGTTTTGTG
CCGGCTGCGTACGTGAAGAAATTGGACCCCGCCCAGTCAGCCTCCCGGGAGAATCTCCTGGAGGAGCAAGGCAGC
ATAGCACTGCGGCAGGAGCAGATTGACAATCAGACACGCATAACTAAGGAGGCCGGCAGTGTATCTCTGCGTATG
AAGCAGGTGGAAGAACTATATCATTCTCTGCTGGAACTGGGTGAGAAGCGTAAAGGCATGTTGGAGAAGAGTTGC
AAGAAGTTTATGTTGTTCCGTGAAGCGAATGAACTACAGCAATGGATCAATGAGAAGGAAGCCGCTCTGACAAGT
GAGGAGGTCGGAGCAGACTTGGAGCAGGTTGAGGTGCTCCAGAAGAAGTTTGATGACTTCCAGAAGGACCTGAAG
GCCAATGAGTCACGGTTGAAGGACATTAACAAGGTAGCTGAAGACCTGGAGTCTGAAGGTCTTATGGCAGAGGAG

FIGURE 1281B

GTGCAGGCTGTGCAACAACAGGAAGTGTATGGCATGATGCCCAGGGATGAAACTGATTCCAAGACAGCCTCCCCG
TGGAAGTCTGCTCGTCTGATGGTTCACACCGTGGCCACCTTTAATTCCATCAAGGAGCTGAATGAGCGCTGGCGG
TCCCTACAGCAGCTGGCCGAGGAACGGAGCCAGCTCTTGGGCAGCGCCCATGAAGTACAGAGGTTCCACAGAGAT
GCTGATGAAACCAAAGAATGGATTGAAGAGAAGAATCAAGCTCTAAACACAGACAATTATGGACATGATCTCGCC
AGTGTCCAGGCCCTGCAACGCAAGCATGAGGGCTTCGAGAGGGACCTTGCGGCTCTCGGTGACAAGGTAAACTCC
CTTGGTGAAACAGCAGAGCGCCTGACCCAGTCCCATCCCGAGTCAGCAGAAGACCTGCAGGAAAAGTGCACAGAG
TTAAACCAGGCCTGGAGCAGCCTGGGGAAACGTGCAGATCAGCGCAAGGCAAAGTTGGGTGACTCCCACGACCTG
CAGCGCTTCCTTAGCGATTTCCGGGACCTCATGTCTTGGATCAATGGAATACGGGGGTTGGTGTCCTCAGATGAG
CTAGCCAAGGATGTCACCGGAGCTGAGGCATTGCTGGAGCGACACCAGGAACACCGGACAGAAATCGATGCCAGG
GCTGGCACTTTCCAGGCATTTGAGCAGTTTGGACAGCAGCTGTTGGCTCACGGACACTATGCCAGCCCTGAGATC
AAGCAGAAACTTGATATTCTTGACCAGGAGCGTGCAGACCTGGAGAAGGCCTGGGTTCAGCGCAGGATGATGCTG
GATCAGTGCCTTGAACTGCAGCTGTTCCATCGGGACTGTGAGCAAGCTGAGAACTGGATGGCTGCCCGGGAGGCC
TTCTTGAATACCGAAGACAAAGGAGACTCACTGGACAGCGTAGAGGCTCTGATCAAAAAACATGAAGACTTTGAC
AAAGCGATTAACGTCCAGGAAGAGAAGATTGCTGCTCTGCAGGCCTTTGCCGACCAGCTCATCGCTGCCGGCCAT
TATGCCAAGGGAGACATTTCTAGCCGGCGCAATGAGGTCTTGGACAGGTGGCGACGTCTGAAAGCCCAGATGATT
GAGAAAAGGTCAAAGCTAGGAGAATCTCAAACCCTCCAACAGTTCAGCCGGGATGTGGATGAGATTGAGGCTTGG
ATCAGTGAAAAATTGCAAACAGCGAGTGATGAGTCGTACAAGGATCCCACCAACATCCAGAGCAAGCACCAGAAG
CACCAGGCTTTTGAAGCAGAGCTGCATGCCAACGCTGACCGGATCCGTGGGGTTATCGACATGGGCAACTCCCTC
ATTGAACGTGGAGCCTGTGCCGGCAATGAGGATGCTGTCAAGGCCCGCCTGGCTGCCTTAGCTGACCAGTGGCAA
TTCTTGGTGCAAAAGTCAGCGGAAAAGAGCCAGAAACTGAAAGAAGCCAACAAGCAGCAGAACTTCAACACAGGG
ATCAAGGACATTGCATTCTGGCTGTCTGAGGTGGAGGCCCTGCTGGCATCCGAAGATTATGGCAAAGACCTGGCT
TCTGTGAACAACCTGCTGAAAAAGCATCAACTGCTGGAAGCAGATATATCTGCCCATGAGGATCGCCTGAAGGAC
CTGAACAGCCAGGCAGACAGCCTGATGACCAGCAGTGCCTTCGACACCTCCCAAGTAAAGGACAAGAGGGACACC
ATCAACGGGCGCTTCCAGAAGATCAAGAGCATGGCGGCCTCCCGGCGAGCCAAGCTGAATGAATCCCATCGCCTG
CACCAGTTCTTCCGGGACATGGATGACGAGGAGTCCTGGATCAAGGAGAAGAAGCTGCTGGTGGGCTCAGAGGAC
TACGGCCGGGACCTAACTGGCGTGCAGAACCTGAGGAAGAAGCACAAGCGGCTGGAAGCAGAACTGGCTGCGCAT
GAGCCGGCTATTCAGGGTGTCCTGGACACTGGCAAGAAGCTGTCCGATGACAACACCATCGGGAAAGAGGAGATC
CAGCAGCGGCTGGCGCAGTTTGTGGAGCACTGGAAAGAGCTGAAGCAGCTGGCAGCTGCCCGGGGTCAGCGGCTG
GAAGAGTCCTTGGAATATCAGCAGTTTGTAGCCAATGTGGAAGAGGAAGAAGCCTGGATCAATGAGAAAATGACC
CTGGTGGCCAGCGAAGATTATGGCGACACTCTTGCCGCCATCCAGGGCTTACTGAAGAAACATGAAGCTTTTGAG
ACAGCCTTCACCGTCCACAAGGATCGCGTGAATGATGTCTGCACCAATGGACAAGACCTCATTAAGAAGAACAAT
CACCATGAGGAGAACATCTCTTCAAAGATGAAGGGCCTGAACGGGAAAGTGTCAGACCTGGAGAAAGCTGCAGCC
CAGAGAAAGGCGAACGTGGATGAGAACTCGGCCTTCCTTCAGTTCAACTGGAAGGCGGACGTGGTGGAGTCCTGG
ATCGGTGAAAAGGAGAACAGCTTGAAGACAGATGATTATGGCCGAGACCTGTCTTCTGTGCAGACGCTCCTCACC
AAACAGGAAACTTTTGACGCTGGGCTGCAGGCCTTCCAGCAGGAAGGCATTGCCAACATCACTGCCCTCAAAGAT
CAGCTTCTCGCCGCCAAACACGTTCAGTCCAAGGCCATCGAGGCCCGGCACGCCTCCCTCATGAAGAGGTGGAGC
CAGCTTCTGGCCAACTCAGCCGCCCGCAAGAAGAAGCTTCTGGAGGCTCAGAGTCACTTCCGCAAGGTGGAGGAC
CTCTTCCTGACCTTCGCCAAAAAGGCTTCTGCCTTCAACAGCTGGTTTGAAAATGCAGAGGAGGACTTAACAGAC
CCCGTGCGCTGCAACTCCTTGGAAGAAATCAAAGCTTTGCGCGAGGCCCACGACGCCTTCCGCTCCTCCCTCAGC
TCTGCCCAGGCTGACTTCAACCAGCTGGCCGAGCTGGACCGCCAGATCAAGAGCTTCCGCGTAGCCTCCAACCCC
TACACCTGGTTTACCATGGAGGCCCTGGAGGAGACCTGGAGGAACCTACAGAAAATCATCAAGGAGAGGGAGCTG
GAGCTGCAGAAGGAACAGCGGCGGCAGGAGGAGAACGACAAGCTGCGCCAGGAGTTTGCCCAGCACGCCAACGCC
TTCCACCAGTGGATCCAAGAGACCAGGACATACCTCCTCGATGGGTCCTGTATGGTGGAAGAGTCGGGGACCCTC
GAATCCCAGCTTGAAGCTACCAAACGCAAGCACCAGGAAATCCGAGCCATGAGAAGTCAGCTCAAAAAGATCGAG
GACCTGGGGGGCCGCCATGGAGGAGGCCCTCATCCTGGACAACAAGTACACGGAGCACAGCACCGTGGGCCTCGCC
CAGCAGTGGGACCAGCTGGACCAGCTGGGCATGCGCATGCAGCACAACCTGGAGCAGCAGATCCAGGCCAGGAAC
ACAACAGGTGTGACTGAGGAGGCCCTCAAAGAATTCAGCATGATGTTTAAACACTTTGACAAGGACAAGTCTGGC
AGGCTGAACCATCAGGATGGCAAATCTTGCCTGCGCTCCCTGGGCTATGACCTGCCCATGGTGGAGGAAGGGGAA

FIGURE 1281C

CCTGACCCTGAGTTCGAGGCAATCCTGGACACGGTGGATCCGAACAGAGATGGCCATGTCTCCTTGCAAGAATAC
ATGGCTTTCATGATCAGCCGCGAAACTGAGAACGTCAAGTCCAGCGAGGAGATTGAGAGCGCCTTCCGGGCCCTC
AGCTCAGAGGGAAAGCCTTACGTGACCAAGGAGGAGCTCTACCAGAACCTGACCCGGGAACAAGCCGACTACTGC
GTCTCCCACATGAAGCCCATCGTGGACGGCAAGGGCCGCGAGCTCCCCACCGCGTTCGACTACGTGGAGTTCACC
CGCTCGCTTTTCGTGAACTGAGCCACTCCCTGGGTCACCCACCCCTCGCTGCTTGCCCTGCGTCGCCTTGCTGCA
TGTCCGCTCCTCTGTGTGCTCTCACTTTCCACTGTAACCTTAAGCCTGCTTAGCTTGGAATAAGACTTAGGAGAA
AATGGTGCTTCACTAACCCGCTTCCGGTCCAGTCACAATCATCATGTCACTGTGGGACCCAGATCTGTGTCTTGA
AGCAGCTGCCCTCATTCCGACTTCAGAAAATCGAAGCAGCTGGCGCCTCCCCTTCGGAATTC

FIGURE 1282

MDPSGVKVLETAEDIQERRQQVLDRYHRFKELSTLRRQKLEDSYRFQFFQRDAEELEKWIQEKLQIASDENYKDP
TNLQGKLQKHQAFEAEVQANSGAIVKLDETGNLMISEGHFASETIRTRLMELHRQWELLLEKMREKGIKLLQAQN
LVQYLRECEDVMDWINDKEAIVTSEELGQDLEHVEVLQKKFEEFQTDMAAHEERVNEVNQFAAKLIQEQHPEEEL
IKTKQDEVNAAWQRLKGLALQRQGKLFGAAEVQRFNRDVDETISWIKEKEQLMASDDFGRDLASVQALLRKHEGL
ERDLAALEDKVKALCAEADRLQQSHPLSATQIQVKREELITNWEQIRTLAAERHARLNDSYRLQRFLADFRDLTS
WVTEMKALINADELASDVAGAEALLDRHQEHKGEIDAHEDSFKSADESGQALLAAGHYASDEVREKLTVLSEERA
ALLELWELRRQQYEQCMDLQLFYRDTEQVDNWMSKQEAFLLNEDLGDFLDSVEALLKKHEDFEKSLSAQEEKITA
LDEFATKLIQNNHYAMEDVATRRDALLSRRNALHERAMRRRAQLADSFHLQQFFRDSDELKSWVNEKMKTATDEA
YKDPSNLQGKVQKHQAFEAELSANQSRIDALEKAGQKLIDVNHYAKDEVAARMNEVISLWKKLLEATELKGIKLR
EANQQQQFNRNVEDIELWLYEVEGHLASDDYGKDLTNVQNLQKKHALLEADVAAHQDRIDGVTIQARQFQDAGHF
DAENIKKKQEALVARYEALKEPMVARKQKLADSLRLQQLFRDVEDEETWIREKEPIAASTNRGKDLIGVQNLLKK
HQALQAEIAGHEPRIKAVTQKGNAMVEEGHFAAEDVKAKLHELNQKWEALKAKASQRRQDLEDSLQAQQYFADAN
EAESWMREKEPIVGSTDYGKDEDSAEALLKKHEALMSDLSAYGSSIQALREQAQSCRQQVAPTDDETGKELVLAL
YDYQEKSPREVTMKKGDILTLLNSTNKDWWKVEVNDRQGFVPAAYVKKLDPAQSASRENLLEEQGSIALRQEQID
NQTRITKEAGSVSLRMKQVEELYHSLLELGEKRKGMLEKSCKKFMLFREANELQQWINEKEAALTSEEVGADLEQ
VEVLQKKFDDFQKDLKANESRLKDINKVAEDLESEGLMAEEVQAVQQQEVYGMMPRDETDSKTASPWKSARLMVH
TVATFNSIKELNERWRSLQQLAEERSQLLGSAHEVQRFHRDADETKEWIEEKNQALNTDNYGHDLASVQALQRKH
EGFERDLAALGDKVNSLGETAERLTQSHPESAEDLQEKCTELNQAWSSLGKRADQRKAKLGDSHDLQRFLSDFRD
LMSWINGIRGLVSSDELAKDVTGAEALLERHQEHRTEIDARAGTFQAFEQFGQQLLAHGHYASPEIKQKLDILDQ
ERADLEKAWVQRRMMLDQCLELQLFHRDCEQAENWMAAREAFLNTEDKGDSLDSVEALIKKHEDFDKAINVQEEK
IAALQAFADQLIAAGHYAKGDISSRRNEVLDRWRRLKAQMIEKRSKLGESQTLQQFSRDVDEIEAWISEKLQTAS
DESYKDPTNIQSKHQKHQAFEAELHANADRIRGVIDMGNSLIERGACAGNEDAVKARLAALADQWQFLVQKSAEK
SQKLKEANKQQNFNTGIKDIAFWLSEVEALLASEDYGKDLASVNNLLKKHQLLEADISAHEDRLKDLNSQADSLM
TSSAFDTSQVKDKRDTINGRFQKIKSMAASRRAKLNESHRLHQFFRDMDDEESWIKEKKLLVGSEDYGRDLTGVQ
NLRKKHKRLEAELAAHEPAIQGVLDTGKKLSDDNTIGKEEIQQRLAQFVEHWKELKQLAAARGQRLEESLEYQQF
VANVEEEEAWINEKMTLVASEDYGDTLAAIQGLLKKHEAFETAFTVHKDRVNDVCTNGQDLIKKNNHHEENISSK
MKGLNGKVSDLEKAAAQRKANVDENSAFLQFNWKADVVESWIGEKENSLK

FIGURE 1283A

GCCGTGGCTCCGGTAGCAGCAAGTTCGAACCCCGCTCCCGCTCCGCTTCGGTTCTCGCTCCTTCGGCCCTTGGGC
CTCCAAACACCAGTCCCCGGCAGCTCGTTGCGCATTGCGCTCTCCCCGCCACCAGG**ATG**CCGGTAACCGAGAAGG
ATCTAGCTGAGGACGCGCCTTGGAAGAAGATCCAGCAGAACACGTTCACACGCTGGTGCAACGAGCACCTCAAGT
GCGTGAACAAACGCATCGGCAACCTGCAGACCGACCTGAGCGACGGGCTGCGGCTCATCGCGCTGCTCGAGGTGC
TCAGCCAGAAGCGCATGTACCGCAAGTACCATCAGCGGCCCACCTTTCGCCAGATGCAGCTCGAGAATGTGTCCG
TGGCGCTCGAGTTCCTGGACCGTGAGAGCATCAAGCTCGTGTCCATCGATAGCAAAGCCATTGTGGATGGGAACC
TGAAGCTCATCTTGGGTCTGGTGTGGACGCTGATCCTCCACTACTCCATCTCCATGCCCGTGTGGGAGGATGAAG
GGGATGATGATGCCAAGAAGCAGACGCCAAAGCAGAGGCTGCTGGGGTGGATTCAGAACAAGATCCCCTACTTGC
CCATCACCAACTTTAACCAGAACTGGCAAGACGGCAAAGCCCTGGGAGCCCTGGTAGACAGCTGTGCTCCAGGTC
TGTGCCCAGACTGGGAATCCTGGGACCCGCAGAAGCCTGTGGATAATGCACGAGAAGCCATGCAGCAGGCAGATG
ACTGGCTGGGTGTCCCACAGGTCATCACTCCTGAAGAAATCATTCACCCGGATGTGGACGAGCACTCAGTTATGA
CTTACCTGTCCCAGTTCCCCAAAGCCAAGCTCAAGCCGGGGGCTCCTCTCAAACCCAAACTCAACCCGAAGAAAG
CCAGGGCCTATGGCAGAGGAATCGAGCCCACTGGAAACATGGTGAAGCAGCCAGCCAAGTTCACTGTGGACACCA
TCAGCGCCGGGCAAGGAGACGTGATGGTGTTTGTTGAGGACCCAGAAGGGAACAAAGAGGAGGCACAAGTGACCC
CTGACAGCGACAAGAACAAGACATACTCTGTGGAGTATCTGCCCAAGGTCACCGGGCTACACAAAGTCACAGTCC
TCTTTGCAGGACAGCACATCTCCAAGAGCCCATTTGAAGTGAGTGTTGACAAGGCCCAGGGAGATGCCAGTAAAG
TCACTGCAAAAGGTCCAGGGTTGGAAGCTGTAGGGAACATCGCCAATAAGCCCACCTACTTTGACATCTATACGG
CAGGAGCTGGTGTGGGTGACATTGGTGTGGAGGTGGAAGATCCCCAGGGGAAGAACACCGTGGAGTTGCTCGTGG
AAGACAAAGGAAACCAGGTGTATCGATGTGTGTACAAACCCATGCAGCCTGGCCCTCACGTGGTCAAGATCTTCT
TTGCTGGGGACACTATTCCTAAGAGTCCCTTCGTTGTGCAGGTTGGGGAAGCCTGCAATCCAAATGCCTGCCGGG
CCAGTGGCCGAGGCCTACAACCCAAAGGCGTCCGTATCCGGGAGACCACAGATTTCAAGGTTGACACCAAAGCTG
CAGGAAGTGGGGAGCTCGGGGTAACCATGAAGGGTCCTAAGGGTCTGGAGGAGCTGGTGAAGCAGAAAGACTTTC
TGGATGGGGTCTACGCATTCGAGTATTACCCCAGCACCCCGGGGAGATACAGCATTGCCATCACATGGGGGGGAC
ACCACATTCCAAAGAGCCCCTTTGAAGTTCAAGTTGGCCCTGAAGCGGGTATGCAGAAAGTCCGTGCTTGGGGCC
CTGGGCTCCATGGTGGGATTGTCGGGCGGTCAGCGGACTTCGTGGTAGAATCCATTGGCTCTGAAGTGGGGTCTC
TGGGGTTTGCCATTGAAGGCCCCTCTCAGGCAAAGATTGAGTACAACGACCAGAATGATGGATCGTGTGATGTCA
AATACTGGCCCAAGGAGCCTGGCGAATATGCTGTTCACATCATGTGTGACGACGAAGACATCAAGGACAGCCCGT
ACATGGCCTTCATCCACCCAGCCACGGGAGGCTACAACCCTGATCTGGTTCGAGCATACGGGCCAGGTTTGGAGA
AATCTGGATGCATTGTCAACAACCTGGCCGAGTTCACTGTGGATCCTAAGGATGCTGGAAAAGCTCCCTTAAAGA
TATTTGCTCAGGATGGGGAAGGCCAACGCATTGACATCCAGATGAAGAACCGGATGGACGGCACATATGCATGCT
CATACACCCCGGTGAAGGCCATCAAGCACACCATTGCTGTGGTCTGGGGAGGCGTGAACATCCCGCACAGCCCCT
ACAGGGTCAACATCGGGCAAGGTAGCCATCCTCAGAAGGTCAAAGTGTTTGGGCCAGGTGTGGAGAGAAGTGGTC
TGAAGGCAAATGAACCTACACACTTCACGGTGGACTGTACTGAGGCTGGGGAAGGTGATGTCAGTGTTGGCATTA
AGTGTGATGCCCGGGTGTTAAGTGAAGATGAGGAAGACGTGGATTTTGACATTATTCACAATGCCAATGATACGT
TCACAGTCAAATATGTGCCTCCTGCTGCTGGGCGATACACTATCAAAGTTCTCTTTGCATCTCAGGAAATCCCCG
CCAGCCCTTTCAGAGTCAAAGTTGACCCTTCCCACGATGCCAGCAAAGTGAAGGCAGAAGGCCCAGGGCTCAGCA
AAGCAGGTGTGGAAAATGGGAAACCGACCCACTTCACTGTCTACACCAAGGGGGCTGGGAAAGCCCCGCTCAACG
TGCAGTTCAACAGCCCTCTTCCTGGCGATGCAGTGAAGGATTTGGATATCATCGATAATTATGACTACTCTCACA
CGGTTAAATATACACCCACCCAACAGGGCAACATGCAGGTTCTGGTGACTTACGGTGGCGATCCCATCCCTAAAA
GCCCTTTCACTGTGGGTGTTGCTGCACCGCTGGATCTGAGCAAGATAAAACTCAATGGGCTGGAAAACAGGGTGG
AAGTTGGGAAGGATCAGGAGTTCACCGTTGATACCAGGGGGGCAGGAGGCCAGGGGAAGCTGGACGTGACAATCC
TCAGCCCCTCTCGGAAGGTCGTGCCATGCCTAGTGACACCTGTGACAGGCCGGGAGAACAGCACGGCCAAGTTCA
TCCCTCGGGAGGAGGGGCTGTATGCTGTAGACGTGACCTACGATGGACACCCTGTGCCCGGGAGCCCCTACACAG
TGGAGGCCTCGCTGCCACCAGATCCCAGCAAGGTGAAGGCCCACGGTCCCGGCCTCGAAGGTGGTCTCGTGGGCA
AGCCTGCCGAGTTCACCATCGATACCAAAGGAGCTGGTACTGGAGGTCTGGGCTTAACGGTGGAAGGTCCGTGCG
AGGCCAAAATCGAGTGCTCCGACAATGGTGATGGGACCTGCTCCGTCTCTTACCTTCCCACAAAACCCGGGGAGT
ACTTCGTCAACATCCTCTTTGAAGAAGTCCACATACCTGGGTCTCCCTTCAAAGCTGACATTGAAATGCCCTTTG
ACCCCTCTAAAGTCGTGGCATCGGGGCCAGGTCTCGAGCACGGGAAGGTGGGTGAAGCTGGCCTCCTTAGCGTCA

FIGURE 1283B

ACTGCTCGGAAGCGGGACCGGGGGCCCTGGGCCTGGAAGCTGTCTCGGACTCGGGAACAAAAGCCGAAGTCAGTA
TTCAGAACAACAAAGATGGCACCTACGCGGTGACCTACGTGCCCCTGACGGCCGGCATGTACACGTTGACCATGA
AGTATGGTGGCGAACTCGTGCCACACTTCCCCGCCCGGGTCAAGGTGGAGCCCGCCGTGGACACCAGCAGGATCA
AAGTCTTTGGACCAGGAATAGAAGGGAAAGATGTGTTCCGGGAAGCTACCACCGACTTTACAGTTGACTCTCGGC
CGCTGACCCAGGTTGGGGGTGACCACATCAAGGCCCACATTGCCAACCCCTCAGGGGCCTCCACCGAGTGCTTTG
TCACAGACAATGCGGATGGGACCTACCAGGTGGAATACACACCCTTTGAGAAAGGTCTCCATGTAGTGGAGGTGA
CATATGATGACGTGCCTATCCCAAACAGTCCCTTCAAGGTGGCTGTCACTGAAGGCTGCCAGCCATCTAGGGTGC
AAGCCCAAGGACCTGGATTGAAAGAGGCCTTTACCAACAAGCCCAATGTCTTCACCGTGGTTACCAGAGGCGCAG
GAATTGGTGGGCTTGGCATAACTGTTGAGGGACCATCAGAGTCGAAGATAAATTGCAGAGACAACAAGGATGGCA
GCTGCAGTGCTGAGTACATTCCTTTCGCGCCGGGGGATTACGATGTTAATATCACATATGGAGGAGCCCACATCC
CTGGCAGCCCCTTCAGGGTTCCTGTGAAGGATGTTGTGGACCCCAGCAAGGTCAAGATTGCCGGCCCCGGGCTGG
GCTCAGGCGTCCGAGCCCGTGTCCTGCAGTCCTTCACGGTGGACAGCAGCAAGGCTGGCCTGGCTCCGCTGGAAG
TGAGGGTTCTGGGCCCACGAGGCTTGGTGGAGCCAGTGAACATGGTGGACAATGGAGATGGCACACACACAGTAA
CCTACACCCCATCTCAGGAGGGACCTTACATGGTCTCAGTTAAATATGCTGATGAAGAGATTCCTCGCAGTCCCT
TCAAGGTCAAGGTCCTTCCCACATATGATGCCAGCAAAGTGACTGCCAGTGGCCCCGGCCTTAGTTCCTATGGTG
TGCCTGCCAGTCTACCTGTGGACTTTGCAATTGATGCCCGAGATGCCGGGGAAGGCCTGCTTGCTGTTCAAATAA
CGGACCAAGAAGGAAAACCCAAAAGAGCCATTGTCCATGACAATAAAGATGGCACGTATGCTGTCACCTACATCC
CCGACAAGACTGGGCGCTATATGATTGGAGTCACCTACGGGGGTGACGACATCCCACTTTCTCCTTATCGCATCC
GAGCCACACAGACGGGTGATGCCAGCAAGTGCCTGGCCACGGGTCCTGGAATCGCCTCCACTGTGAAAACTGGCG
AAGAAGTAGGCTTTGTGGTTGATGCCAAGACTGCCGGGAAGGGTAAAGTGACCTGCACGGTTCTGACCCCAGATG
GCACTGAGGCCGAGGCCGATGTCATTGAGAATGAAGATGGAACCTATGACATCTTCTACACAGCTGCCAAGCCGG
GCACATATGTGATCTATGTGCGCTTCGGTGGTGTTGATATTCCTAACAGCCCCTTCACTGTCATGGCCACAGATG
GGGAAGTCACAGCCGTGGAGGAGGCACCGGTAAATGCATGTCCCCCTGGATTCAGGCCCTGGGTGACCGAAGAGG
CCTATGTCCCAGTGAGTGACATGAACGGCCTGGGATTTAAGCCTTTTGACCTGGTCATTCCGTTTGCTGTCAGGA
AAGGAGAAATCACTGGAGAGGTCCACATGCCTTCTGGGAAGACAGCCACACCTGAGATTGTGGACAACAAGGACG
GCACGGTCACTGTTAGATATGCCCCCACTGAGGTCGGGCTCCATGAGATGCACATCAAATACATGGGCAGCCACA
TCCCTGAGAGCCCACTCCAGTTCTACGTGAACTACCCCAACAGTGGAAGTGTTTCTGCATACGGTCCAGGCCTCG
TGTATGGAGTGGCCAACAAAACTGCCACCTTCACCATCGTCACAGAGGATGCAGGAGAAGGTGGTCTGGACTTGG
CTATTGAGGGCCCCTCAAAAGCAGAAATCAGCTGCATTGACAATAAAGATGGGACATGCACAGTGACCTACCTGC
CGACTCTGCCAGGCGACTACAGCATTCTGGTCAAGTACAATGACAAGCACATCCCTGGCAGCCCCTTCACAGCCA
AGATCACAGATGACAGCAGGCGGTGCTCCCAGGTGAAGTTGGGCTCAGCCGCTGACTTCCTGCTCGACATCAGTG
AGACTGACCTCAGCAGCCTGACGGCCAGCATTAAGGCCCCATCTGGCCGAGACGAGCCCTGTCTCCTGAAGAGGC
TGCCCAACAACCACATTGGCATCTCCTTCATCCCCCGGGAAGTGGGCGAACATCTGGTCAGCATCAAGAAAAATG
GCAACCATGTGGCCAACAGCCCCGTGTCTATCATGGTGGTCCAGTCGGAGATTGGTGACGCCCGCCGAGCCAAAG
TCTATGGCCGCGGCCTGTCAGAAGGCCGGACTTTCGAGATGTCTGACTTCATCGTGGACACAAGGGATGCAGGTT
ATGGTGGCATATCCTTGGCGGTGGAAGGCCCCAGCAAAGTGGACATCCAGACGGAGGACCTGGAAGATGGCACCT
GCAAAGTCTCCTACTTCCCTACCGTGCCTGGGGTTTATATCGTCTCCACCAAATTCGCTGACGAGCACGTGCCTG
GGAGCCCATTTACCGTGAAGATCAGTGGGGAGGGAAGAGTCAAAGAGAGCATCACCCGCACCAGTCGGGCCCCGT
CCGTGGCCACTGTCGGGAGCATTTGTGACCTGAACCTGAAAATCCCAGAAATCAACAGCAGTGATATGTCGGCCC
ACGTCACCAGCCCCTCTGGCCGTGTGACTGAGGCAGAGATTGTGCCCATGGGGAAGAACTCACACTGCGTCCGGT
TTGTGCCCCAGGAGATGGGCGTGCACACGGTCAGCGTCAAGTACCGTGGGCAGCACGTCACCGGCAGCCCCTTCC
AGTTCACCGTGGGGCCACTTGGTGAAGGAGGCGCCCACAAGGTGCGGGCAGGAGGCCCTGGCCTGGAGAGAGGAG
AAGCGGGAGTCCCAGCTGAGTTCAGCATTTGGACCCGGGAAGCAGGCGCTGGAGGCCTCTCCATCGCTGTTGAGG
GCCCCAGTAAGGCCGAGATTACATTCGATGACCATAAAAATGGGTCGTGCGGTGTATCTTATATTGCCCAAGAGC
CTGGTAACTACGAGGTGTCCATCAAGTTCAATGATGAGCACATCCCGGAAAGCCCCTACCTGGTGCCGGTCATCG
CACCCTCCGACGACGCCCGCCGCCTCACTGTTATGAGCCTTCAGGAATCGGGATTAAAAGTTAACCAGCCAGCAT
CCTTTGCTATAAGGTTGAATGGCGCAAAAGGCAAGATTGATGCAAAGGTGCACAGCCCCTCTGGAGCCGTGGAGG
AGTGCCACGTGTCTGAGCTGGAGCCAGATAAGTATGCTGTTCGCTTCATCCCTCATGAGAATGGTGTCCACACCA

FIGURE 1283C

TCGATGTCAAGTTCAATGGGAGCCACGTGGTTGGAAGCCCCTTCAAAGTGCGCGTTGGGGAGCCTGGACAAGCGG
GGAACCCTGCCCTGGTGTCCGCCTATGGCACGGGACTCGAAGGGGGCACCACAGGTATCCAGTCGGAATTCTTTA
TTAACACCACCCGAGCAGGTCCAGGGACATTATCCGTCACCATCGAAGGCCCATCCAAGGTTAAAATGGATTGCC
AGGAAACACCTGAAGGGTACAAAGTCATGTACACCCCCATGGCTCCTGGTAACTACCTGATCAGTGTCAAATACG
GTGGGCCCAACCACATCGTGGGCAGTCCCTTCAAGGCCAAGGTGACAGGCCAGCGTCTAGTTAGCCCTGGCTCAG
CCAACGAGACCTCATCCATCCTGGTGGAGTCAGTGACCAGGTCGTCTACAGAGACCTGCTATAGCGCCATTCCCA
AGGCATCCTCGGACGCCAGCAAGGTGACCTCTAAGGGGGCAGGGCTCTCAAAGGCCTTTGTGGGCCAGAAGAGTT
CCTTCCTGGTGGACTGCAGCAAAGCTGGCTCCAACATGCTGCTGATCGGGGTCCATGGGCCCACCACCCCCTGCG
AGGAGGTCTCCATGAAGCATGTAGGCAACCAGCAATACAACGTCACATACGTCGTCAAGGAGAGGGGCGATTATG
TGCTGGCTGTGAAGTGGGGGGAGGAACACATCCCTGGCAGCCCTTTTCATGTCACAGTGCCTTAAAACAGTTTTC
TCAAATCCTGGAGAGAGTTCTTGTGGTTGCTTTTGTTGCTTGTTTGTAATTCATTTTATACAAAGCCCTCCAGCC
TGTTTGTGGGGCTGAAACCCCATCCCTAAAATATTGCTGTTGTAAAATGCCTTCAGAAATAAGTCCTAGACTGGA
CTCTTGAGGGACATATTGGAGAATCTTAAGAAATGCAAGCTTGTTCAGGGGGCTGAGAAGATCCTGAGTACACTA
GGTGCAAACCAGAACTCTTGGTGGAACAGACCAGCCACTGCAGCAGACAGACCAGGAACACAATGAGACTGACAT
TTCAAAAAAACAAAACTGGCTAGCCTGAGCTGCTGGTTCACTCTTCAGCATTTATGAAACAAGGCTAGGGGAAGA
TGGGCAGAGAAAAAGGGGACACCTAGTTTGGTTGTCATTTGGCAAAGGAGATGACTTAAAATCCGCTTAATCTCT
TCCAGTGTCCGTGTTAATGTATTTGGCTATTAGATCACTAGCACTGCTTTACCGCTCCTCATCGCCAACACCCCC
ATGCTCTGTGGCCTTCTTACACTTCTCAGAGGGCAGAGTGGCAGCCGGGCACCCTACAGAAACTCAGAGGGCAGA
GTGGCAGCCAGGCCCACATGTCTCTCAAGTACCTGTCCCCTCGCTCTGGTGATTATTTCTTGCAGAATCACCACA
CGAGACCATCCCGGCAGTCATGGTTTTGCTTTAGTTTTCCAAGTCCGTTTCAGTCCCTTCCTTGGTCTGAAGAAA
TTCTGCAGTGGCGAGCAGTTTCCCACTTGCCAAAGATCCCTTTTAACCAACACTAGCCCTTGTTTTTAACACACG
CTCCAGCCCTTCATCAGCCTGGGCAGTCTTACCAAAATGTTTAAAGTGATCTCAGAGGGGCCCATGGATTAACGC
CCTCATCCCAAGGTCCGTCCCATGACATAACACTCCACACCCGCCCCAGCCAACTTCATGGGTCACTTTTTCTGG
AAAATAATGATCTGTACAGACAGGACAGAATGAAACTCCTGCGGCTCTTTGGCCTGAAAGTTGGGAATGGTTGGG
GGAGAGAAGGGCAGCAGCTTATTGGTGGTCTTTTCACCATTGGCAGAAACAGTGAGAGCTGTGTGGTGCAGAAAT
CCAGAAATGAGGTGTAGGGAATTTTGCCTGCCTTCCTGCAGACCTGAGCTGGCTTTGGAATGAGGTTAAAGTGTC
AGGGACGTTGCCTGAGCCCAAATGTGTAGTGTGGTCTGGGCAGGCAGACCTTTAGGTTTTGCTGCTTAGTCCTGA
GGAAGTGGCCACTCTTGTGGCAGGTGTAGTATCTGGGGCGAGTGTTGGGGGTAAAAGCCCACCCTACAGAAAGTG
GAACAGCCCGGACCTGATGTGAAAGGACCACGGGTGTTGTAAGCTGGGACCGGAACCAAACTGGAATCAAACGCG
ACTGTAAATTGTATCTTATAACTTATTAAATAAAACATTGCTCCGTAAAAAAAAAAA

FIGURE 1284

MPVTEKDLAEDAPWKKIQQNTFTRWCNEHLKCVNKRIGNLQTDLSDGLRLIALLEVLSQKRMYRKYHQRPTFRQM
QLENVSVALEFLDRESIKLVSIDSKAIVDGNLKLILGLVWTLILHYSISMPVWEDEGDDDAKKQTPKQRLLGWIQ
NKIPYLPITNFNQNWQDGKALGALVDSCAPGLCPDWESWDPQKPVDNAREAMQQADDWLGVPQVITPEEIIHPDV
DEHSVMTYLSQFPKAKLKPGAPLKPKLNPKKARAYGRGIEPTGNMVKQPAKFTVDTISAGQGDVMVFVEDPEGNK
EEAQVTPDSDKNKTYSVEYLPKVTGLHKVTVLFAGQHISKSPFEVSVDKAQGDASKVTAKGPGLEAVGNIANKPT
YFDIYTAGAGVGDIGVEVEDPQGKNTVELLVEDKGNQVYRCVYKPMQPGPHVVKIFFAGDTIPKSPFVVQVGEAC
NPNACRASGRGLQPKGVRIRETTDFKVDTKAAGSGELGVTMKGPKGLEELVKQKDFLDGVYAFEYYPSTPGRYSI
AITWGGHHIPKSPFEVQVGPEAGMQKVRAWGPGLHGGIVGRSADFVVESIGSEVGSLGFAIEGPSQAKIEYNDQN
DGSCDVKYWPKEPGEYAVHIMCDDEDIKDSPYMAFIHPATGGYNPDLVRAYGPGLEKSGCIVNNLAEFTVDPKDA
GKAPLKIFAQDGEGQRIDIQMKNRMDGTYACSYTPVKAIKHTIAVVWGGVNIPHSPYRVNIGQGSHPQKVKVFGP
GVERSGLKANEPTHFTVDCTEAGEGDVSVGIKCDARVLSEDEEDVDFDIIHNANDTFTVKYVPPAAGRYTIKVLF
ASQEIPASPFRVKVDPSHDASKVKAEGPGLSKAGVENGKPTHFTVYTKGAGKAPLNVQFNSPLPGDAVKDLDIID
NYDYSHTVKYTPTQQGNMQVLVTYGGDPIPKSPFTVGVAAPLDLSKIKLNGLENRVEVGKDQEFTVDTRGAGGQG
KLDVTILSPSRKVVPCLVTPVTGRENSTAKFIPREEGLYAVDVTYDGHPVPGSPYTVEASLPPDPSKVKAHGPGL
EGGLVGKPAEFTIDTKGAGTGGLGLTVEGPCEAKIECSDNGDGTCSVSYLPTKPGEYFVNILFEEVHIPGSPFKA
DIEMPFDPSKVVASGPGLEHGKVGEAGLLSVNCSEAGPGALGLEAVSDSGTKAEVSIQNNKDGTYAVTYVPLTAG
MYTLTMKYGGELVPHFPARVKVEPAVDTSRIKVFGPGIEGKDVFREATTDFTVDSRPLTQVGGDHIKAHIANPSG
ASTECFVTDNADGTYQVEYTPFEKGLHVVEVTYDDVPIPNSPFKVAVTEGCQPSRVQAQGPGLKEAFTNKPNVFT
VVTRGAGIGGLGITVEGPSESKINCRDNKDGSCSAEYIPFAPGDYDVNITYGGAHIPGSPFRVPVKDVVDPSKVK
IAGPGLGSGVRARVLQSFTVDSSKAGLAPLEVRVLGPRGLVEPVNMVDNGDGTHTVTYTPSQEGPYMVSVKYADE
EIPRSPFKVKVLPTYDASKVTASGPGLSSYGVPASLPVDFAIDARDAGEGLLAVQITDQEGKPKRAIVHDNKDGT
YAVTYIPDKTGRYMIGVTYGGDDIPLSPYRIRATQTGDASKCLATGPGIASTVKTGEEVGFVVDAKTAGKGKVTC
TVLTPDGTEAEADVIENEDGTYDIFYTAAKPGTYVIYVRFGGVDIPNSPFTVMATDGEVTAVEEAPVNACPPGFR
PWVTEEAYVPVSDMNGLGFKPFDLVIPFAVRKGEITGEVHMPSGKTATPEIVDNKDGTVTVRYAPTEVGLHEMHI
KYMGSHIPESPLQFYVNYPNSGSVSAYGPGLVYGVANKTATFTIVTEDAGEGGLDLAIEGPSKAEISCIDNKDGT
CTVTYLPTLPGDYSILVKYNDKHIPGSPFTAKITDDSRRCSQVKLGSAADFLLDISETDLSSLTASIKAPSGRDE
PCLLKRLPNNHIGISFIPREVGEHLVSIKKNGNHVANSPVSIMVVQSEIG

FIGURE 1285

CTTCCCCAGCTGTGCACTCTCCATCCAGCTGTGCGCTCTCGTCGGGAGTCCCAGCC**ATG**TCCGACGAGAGAGAGG
TAGCCGAGGCAGCGACCGGGGAAGACGCCTCTTCGCCGCCTCCGAAAACCGAGGCAGCGAGCGACCCCCAGCATC
CCGCGGCCTCCGAAGGGGCCGCCGCCGCCGCCGCCTCGCCGCCACTGCTGCGCTGCCTAGTGCTCACCGGCTTTG
GAGGCTACGACAAGGTGAAGCTGCAGAGCCGGCCGGCAGCGCCCCCGGCCCCTGGGCCCGGCCAGCTGACGCTGC
GTCTGCGGGCCTGCGGGCTCAACTTCGCAGACCTCATGGCTAGGCAGGGGCTGTACGACCGTCTCCCGCCTCTGC
CTGTCACTCCGGGCATGGAGGGCGCGGGTGTTGTGATCGCAGTGGGCGAGGGAGTCAGCGACCGCAAGGCAGGAG
ACCGGGTGATGGTGTTGAACCGGTCAGGGATGTGGCAGGAAGAGGTGACTGTGCCCTCGGTCCAGACCTTCCTGA
TTCCTGAGGCCATGACCTTTGAGGAAGCTGCTGCCTTGCTCGTCAATTACATTACAGCCTACATGGTCCTCTTTG
ACTTCGGCAACCTACAGCCTGGCCACAGCGTCTTGGTACACATGGCTGCAGGGGGTGTGGGTATGGCTGCCGTGC
AGCTGTGCCGTACAGTGGAGAATGTGACAGTGTTCGGAACGGCCTCGGCCAGCAAGCACGAGGCACTGAAGGAGA
ATGGGGTCACACATCCCATCGACTATCACACGACTGACTACGTGGATGAGATCAAGAAGATTTCCCCTAAAGGAG
TGGACATTGTCATGGACCCTCTGGGTGGGTCAGATACTGCCAAGGGCTACAACCTCCTGAAACCCATGGGCAAAG
TCGTCACCTATGGAATGGCCAACCTGCTGACGGGCCCCAAACGGAACCTGATGGCCCTGGCCCGGACATGGTGGA
ATCAGTTCAGCGTGACAGCTCTGCAGCTGCTGCAGGCCAACCGGGCTGTGTGTGGCTTCCACCTGGGCTACCTGG
ATGGTGAGGTGGAGCTGGTCAGTGGTGTGGTGGCCCGCCTCCTGGCTCTGTACAACCAGGGCCACATCAAGCCCC
ACATTGACTCAGTCTGGCCCTTCGAGAAGGTGGCTGATGCCATGAAACAGATGCAGGAGAAGAAGAATGTGGGCA
AGGTCCTCCTGGTTCCAGGGCCAGAGAAGGAGAAC**TAG**GGCAAGTGGCTGTGAGACCCTAGAGACCAGCGAAGGG
AGAAGTTGGGAAGCTACGTTCTGTTGGCCACCAGACTTGCATTTCAGCCTCTGTCATAATGCTCTGCCCTCCCTC
CCCCGAAGTTCTCTGTGGTGATGACCGCTCTCCCCTGCCCCTCCCCGCTTCCTGACCTCTGAAGAGGTTGGGAAG
TGACCATTTGGATGTCTGGGCCCTGCCAAGGCGACAGGGAGGGTCAGAGGGAGGCCGGCTGCTTCCTGCCCCCAC
CCTTTCCCCGGGCCTGCTGTGCTGCTTTTGTGCCAAGGTTAGCCAGTCCCCCCTGTTGTGTTCCATGTGCTTTCA
CCTCTGCCTCATCTTTCCTCCCGTCCCTGCCCCGCCACCTCCCCAAAGAATTGAAACGTCAGCTCAGGATATGGG
GCCAATCTCTGTGAGTCCAGCATGTACCTGTCTCTCCCTAGTGTCCCTTCAGCCTGGGCTGACCAGTGCCCGCCT
CTGGGCTTGACCAGTTCCCAATCTCGTCCTCTGTCCCCAACTTCTTAAGCACAATTGGGCTTCTTCCATCTCCAG
GTTTTCTGCCATTCTTAACCAAGGCTGCCTCTTCCAACAGGGCGGGAATCAGACCTACTCCCCTAGGTCACAACT
CTGGGAAGGATACAGAGCCCCCACCCTTCACTGAGTTCTCTGGATTTGTTCTCAGTGCCTTAGCAACGAAAACCT
GTGCTTGTGTGTGTGTGGCGGCGGGGAGGGAGGATCCTGTTTCCCACCTCCTTCTCCTCCCCTGTACTCCCCAGT
GCCTTCCTTGTTCTGGTGGAGCTGGGGTTTCTCTCCTCCCCAGTCCCACAACACTGCCAAAAATCTGTGTATGTG
CCATTGGGTGGGGCAGCCCCAAGCCTCCTGGGGAGGCAGGGCAAAAACAGGTGCCCTCATCGTGGTCTGTGCCAT
GTCCCGTCTCTATGGTGGTTGAGGAGAAAGGCGGGGAAGCTTCCTCAGCCTTGCAGATATGTGTGGCATTTACTA
GCCAGAGCTCTGAAAGGCAGTGCTGTCTGTTTCTTGTACTGGGACCAAAGTAAAAATCCAAGCACATTCCCCTTG
CAGTTAGGGGAGGCCCTACTGCCTTCTCAAAGCAGAGAGGCAGCTTATCAAACTCAGCCCAAAACTCTGTTTACA
TGGGTGGGGAGATGGAGCAGGGAAGTACAGAGTGGGATGGTCAGGACCTGGGCCATTGCAACCAAAATGGGGACT
TCCTGGGTAGGGAGGTCACTCCCTCTACTCACTGAGCTAGGATTAGGGAGGGTTATTGCCCCAACCATTGCAATG
GGAGGTGGAGGGACAGGCTCAGCCTCCTCATTGTCTAAATGAGGCCTAAATGTGTGAAGTGCGATTTCTGCTTTT
GTGTACCCCACCACCCCATTACCACAGCTGCCTTTGTGTGTTTGTGTCAATAAAAAGCCAAACCCTGGGAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1286

MSDEREVAEAATGEDASSPPPKTEAASDPQHPAASEGAAAAAASPPLLRCLVLTGFGGYDKVKLQSRPAAPPAPG
PGQLTLRLRACGLNFADLMARQGLYDRLPPLPVTPGMEGAGVVIAVGEGVSDRKAGDRVMVLNRSGMWQEEVTVP
SVQTFLIPEAMTFEEAAALLVNYITAYMVLFDFGNLQPGHSVLVHMAAGGVGMAAVQLCRTVENVTVFGTASASK
HEALKENGVTHPIDYHTTDYVDEIKKISPKGVDIVMDPLGGSDTAKGYNLLKPMGKVVTYGMANLLTGPKRNLMA
LARTWWNQFSVTALQLLQANRAVCGFHLGYLDGEVELVSGVVARLLALYNQGHIKPHIDSVWPFEKVADAMKQMQ
EKKNVGKVLLVPGPEKEN

FIGURE 1287

CGCTGTCGCCGCCAGTAGCAGCCTTCGCCAGCAGCGCCGCGGCGGAACCGGGCGCAGGGGAGCGAGCCCGGCCCC
GCCAGCCCAGCCCAGCCCAGCCCTACTCCCTCCCCACGCCAGGGCAGCAGCCGTTGCTCAGAGAGAAGGTGGAGG
AAGAAATCCAGACCCTAGCACGCGCGCACCATC**ATG**GACCATTATGATTCTCAGCAAACCAACGATTACATGCAG
CCAGAAGAGGACTGGGACCGGGACCTGCTCCTGGACCCGGCCTGGGAGAAGCAGCAGAGAAAGACATTCACGGCA
TGGTGTAACTCCCACCTCCGGAAGGCGGGGACACAGATCGAGAACATCGAAGAGGACTTCCGGGATGGCCTGAAG
CTCATGCTGCTGCTGGAGGTCATCTCAGGTGAACGCTTGGCCAAGCCAGAGCGAGGCAAGATGAGAGTGCACAAG
ATCTCCAACGTCAACAAGGCCCTGGATTTCATAGCCAGCAAAGGCGTCAAACTGGTGTCCATCGGAGCCGAAGAA
ATCGTGGATGGGAATGTGAAGATGACCCTGGGCATGATCTGGACCATCATCCTGCGCTTTGCCATCCAGGACATC
TCCGTGGAAGAGACTTCAGCCAAGGAAGGGCTGCTCCTGTGGTGTCAGAGAAAGACAGCCCCTTACAAAAATGTC
AACATCCAGAACTTCCACATAAGCTGGAAGGATGGCCTCGGCTTCTGTGCTTTGATCCACCGACACCGGCCCGAG
CTGATTGACTACGGGAAGCTGCGGAAGGATGATCCACTCACAAATCTGAATACGGCTTTTGACGTGGCAGAGAAG
TACCTGGACATCCCCAAGATGCTGGATGCCGAAGACATCGTTGGAACTGCCCGACCGGATGAGAAAGCCATCATG
ACTTACGTGTCTAGCTTCTACCACGCCTTCTCTGGAGCCCAGAAGGCGGAGACAGCAGCCAATCGCATCTGCAAG
GTGTTGGCCGTCAACCAGGAGAACGAGCAGCTTATGGAAGACTACGAGAAGCTGGCCAGTGATCTGTTGGAGTGG
ATCCGCCGCACAATCCCGTGGCTGGAGAACCGGGTGCCCGAGAACACCATGCATGCCATGCAACAGAAGCTGGAG
GACTTCCGGGACTACCGGCGCCTGCACAAGCCGCCCAAGGTGCAGGAGAAGTGCCAGCTGGAGATCAACTTCAAC
ACGCTGCAGACCAAGCTGCGGCTCAGCAACCGGCCTGCCTTCATGCCCTCTGAGGGCAGGATGGTCTCGGACATC
AACAATGCCTGGGGCTGCCTGGAGCAGGTGGAGAAGGGCTATGAGGAGTGGTTGCTGAATGAGATCCGGAGGCTG
GAGCGACTGGACCACCTGGCAGAGAAGTTCCGGCAGAAGGCCTCCATCCACGAGGCCTGGACTGACGGCAAAGAG
GCCATGCTGCGACAGAAGGACTATGAGACCGCCACCCTCTCGGAGATCAAGGCCCTGCTCAAGAAGCATGAGGCC
TTCGAGAGTGACCTGGCTGCCCACCAGGACCGTGTGGAGCAGATTGCCGCCATCGCACAGGAGCTCAATGAGCTG
GACTATTATGACTCACCCAGTGTCAACGCCCGTTGCCAAAAGATCTGTGACCAGTGGGACAATCTGGGGGCCCTA
ACTCAGAAGCGAAGGGAAGCTCTGGAGCGGACCGAGAAACTGCTGGAGACCATTGACCAGCTGTACTTGGAGTAT
GCCAAGCGGGCTGCACCCTTCAACAACTGGATGGAGGGGGCCATGGAGGACCTGCAGGACACCTTCATTGTGCAC
ACCATTGAGGAGATCCAGGGACTGACCACAGCCCATGAGCAGTTCAAGGCCACCCTCCCTGATGCCGACAAGGAG
CGCCTGGCCATCCTGGGCATCCACAATGAGGTGTCCAAGATTGTCCAGACCTACCACGTCAATATGGCGGGCACC
AACCCCTACACAACCATCACGCCTCAGGAGATCAATGGCAAATGGGACCACGTGCGGCAGCTGGTGCCTCGGAGG
GACCAAGCTCTGACGGAGGAGCATGCCCGACAGCAGCACAATGAGAGGCTACGCAAGCAGTTTGGAGCCCAGGCC
AATGTCATCGGGCCCTGGATCCAGACCAAGATGGAGGAGATCGGGAGGATCTCCATTGAGATGCATGGGACCCTG
GAGGACCAGCTCAGCCACCTGCGGCAGTATGAGAAGAGCATCGTCAACTACAAGCCAAAGATTGATCAGCTGGAG
GGCGACCACCAGCTCATCCAGGAGGCGCTCATCTTCGACAACAAGCACACCAACTACACCATGGAGCACATCCGT
GTGGGCTGGGAGCAGCTGCTCACCACCATCGCCAGGACCATCAATGAGGTAGAGAACCAGATCCTGACCCGGGAT
GCCAAGGGCATCAGCCAGGAGCAGATGAATGAGTTCCGGGCCTCCTTCAACCACTTTGACCGGGATCACTCCGGC
ACACTGGGTCCCGAGGAGTTCAAAGCCTGCCTCATCAGCTTGGGTTATGATATTGGCAACGACCCCCAGGGAGAA
GCAGAATTTGCCCGCATCATGAGCATTGTGGACCCCAACCGCCTGGGGGTAGTGACATTCCAGGCCTTCATTGAC
TTCATGTCCCGCGAGACAGCCGACACAGATACAGCAGACCAAGTCATGGCTTCCTTCAAGATCCTGGCTGGGGAC
AAGAACTACATTACCATGGACGAGCTGCGCCGCGAGCTGCCACCCGACCAGGCTGAGTACTGCATCGCGCGGATG
GCCCCCTACACCGGCCCCGACTCCGTGCCAGGTGCTCTGGACTACATGTCCTTCTCCACGGCGCTGTACGGCGAG
AGTGACCTC**TAA**TCCACCCCGCCCGGCCGCCCTCGTCTTGTGCGCCGTGCCCTGCCTTGCACCTCCGCCGTCGCC
CATCTCCTGCCTGGGTTCGGTTTCAGCTCCCAGCCTCCACCCGGGTGAGCTGGGGCCCACGTGGCATCGATCCTC
CCTGCCCGCGAAGTGACAGTTTACAAAATTATTTTCTGCAAAAAAGAAAAAAAAGTTACGTTAAAAACCAAAAAA
CTACATATTTTATTATAGAAAAAGTATTTTTTCTCCACCAGACAAATGGAAAAAAAGAGGAAAGATTAACTATTT
GCACCGAAATGTCTTGTTTTGTTGCGACATAGGAAAATAACCAAGCACAAAGTTATATTCCATCCTTTTTACTGA
TTTTTTTTTCTTCTATCTGTTCCATCTGCTGTATTCATTTCTCCAATCTCATGTCCATTTTGGTGTGGGAGTCGG
GGTAGGGGGTACTCTTGTCAAAAGGCACATTGGTGCGTGTGTGTTTGCTAGCTCACTTGTCCATGAAAATATTTT
ATGATATTAAAGAAAATCTTTTG

FIGURE 1288

MDHYDSQQTNDYMQPEEDWDRDLLLDPAWEKQQRKTFTAWCNSHLRKAGTQIENIEEDFRDGLKLMLLLEVISGE
RLAKPERGKMRVHKISNVNKALDFIASKGVKLVSIGAEEIVDGNVKMTLGMIWTIILRFAIQDISVEETSAKEGL
LLWCQRKTAPYKNVNIQNFHISWKDGLGFCALIHRHRPELIDYGKLRKDDPLTNLNTAFDVAEKYLDIPKMLDAE
DIVGTARPDEKAIMTYVSSFYHAFSGAQKAETAANRICKVLAVNQENEQLMEDYEKLASDLLEWIRRTIPWLENR
VPENTMHAMQQKLEDFRDYRRLHKPPKVQEKCQLEINFNTLQTKLRLSNRPAFMPSEGRMVSDINNAWGCLEQVE
KGYEEWLLNEIRRLERLDHLAEKFRQKASIHEAWTDGKEAMLRQKDYETATLSEIKALLKKHEAFESDLAAHQDR
VEQIAAIAQELNELDYYDSPSVNARCQKICDQWDNLGALTQKRREALERTEKLLETIDQLYLEYAKRAAPFNNWM
EGAMEDLQDTFIVHTIEEIQGLTTAHEQFKATLPDADKERLAILGIHNEVSKIVQTYHVNMAGTNPYTTITPQEI
NGKWDHVRQLVPRRDQALTEEHARQQHNERLRKQFGAQANVIGPWIQTKMEEIGRISIEMHGTLEDQLSHLRQYE
KSIVNYKPKIDQLEGDHQLIQEALIFDNKHTNYTMEHIRVGWEQLLTTIARTINEVENQILTRDAKGISQEQMNE
FRASFNHFDRDHSGTLGPEEFKACLISLGYDIGNDPQGEAEFARIMSIVDPNRLGVVTFQAFIDFMSRETADTDT
ADQVMASFKILAGDKNYITMDELRRELPPDQAEYCIARMAPYTGPDSVPGALDYMSFSTALYGESDL

FIGURE 1289

CTGCCACTGCCACCTCGCGGATCAGGAGCCAGCGTTGTTCGCCCGACGCCTCGCTGCCGGTGGGAGGAAGCGAGA
GGGAAGCCGCTTGGGCTCTTGTCGCCGCTGCTCGCCCACCGCCTGGAAGAGCCGAGCCCCGGCCAGTCGGTCGCT
TGCCACCGCTCGTAGCCGTTACCCGCGGGCCGCCACAGCCGCCGGCGGGAGAGGCGCGCGCC**ATG**GCTTCTGGAG
CCGATTCAAAAGGTGATGACCTATCAACAGCCATTCTCAAACAGAAGAACCGTCCCAATCGGTTAATTGTTGATG
AAGCCATCAATGAGGACAACAGTGTGGTGTCCTTGTCCCAGCCCAAGATGGATGAATTGCAGTTGTTCCGAGGTG
ACACAGTGTTGCTGAAAGGAAAGAAGAGACGAGAAGCTGTTTGCATCGTCCTTTCTGATGATACTTGTTCTGATG
AGAAGATTCGGATGAATAGAGTTGTTCGGAATAACCTTCGTGTACGCCTAGGGGATGTCATCAGCATCCAGCCAT
GCCCTGATGTGAAGTACGGCAAACGTATCCATGTGCTGCCCATTGATGACACAGTGGAAGGCATTACTGGTAATC
TCTTCGAGGTATACCTTAAGCCGTACTTCCTGGAAGCGTATCGACCCATCCGGAAAGGAGACATTTTTCTTGTCC
GTGGTGGGATGCGTGCTGTGGAGTTCAAAGTGGTGGAAACAGATCCTAGCCCTTATTGCATTGTTGCTCCAGACA
CAGTGATCCACTGCGAAGGGGAGCCTATCAAACGAGAGGATGAGGAAGAGTCCTTGAATGAAGTAGGGTATGATG
ACATTGGTGGCTGCAGGAAGCAGCTAGCTCAGATCAAAGAGATGGTGGAACTGCCCCTGAGACATCCTGCCCTCT
TTAAGGCAATTGGTGTGAAGCCTCCTAGAGGAATCCTGCTTTACGGACCTCCTGGAACAGGAAAGACCCTGATTG
CTCGAGCTGTAGCAAATGAGACTGGAGCCTTCTTCTTCTTGATCAATGGTCCTGAGATCATGAGCAAATTGGCTG
GTGAGTCTGAGAGCAACCTTCGTAAAGCCTTTGAGGAGGCTGAGAAGAATGCTCCTGCCATCATCTTCATTGATG
AGCTAGATGCCATCGCTCCCAAAAGAGAGAAAACTCATGGCGAGGTGGAGCGGCGCATTGTATCACAGTTGTTGA
CCCTCATGGATGGCCTAAAGCAGAGGGCACATGTGATTGTTATGGCAGCAACCAACAGACCCAACAGCATTGACC
CAGCTCTACGGCGATTTGGTCGCTTTGACAGGGAGGTAGATATTGGAATTCCTGATGCTACAGGACGCTTAGAGA
TTCTTCAGATCCATACCAAGAACATGAAGCTGGCAGATGATGTGGACCTGGAACAGGTAGCCAATGAGACTCACG
GGCATGTGGGTGCTGACTTAGCAGCCCTGTGCTCAGAGGCTGCTCTGCAAGCCATCCGCAAGAAGATGGATCTCA
TTGACCTAGAGGATGAGACCATTGATGCCGAGGTCATGAACTCTCTAGCAGTTACTATGGATGACTTCCGGTGGG
CCTTGAGCCAGAGTAACCCATCAGCACTGCGGGAAACCGTGGTAGAGGTGCCACAGGTAACCTGGGAAGACATCG
GGGGCCTAGAGGATGTCAAACGTGAGCTACAGGAGCTGGTCCAGTATCCTGTGGAGCACCCAGACAAATTCCTGA
AGTTTGGCATGACACCTTCCAAGGGAGTTCTGTTCTATGGACCTCCTGGCTGTGGGAAAACTTTGTTGGCCAAAG
CCATTGCTAATGAATGCCAGGCCAACTTCATCTCCATCAAGGGTCCTGAGCTGCTCACCATGTGGTTTGGGGAGT
CTGAGGCCAATGTCAGAGAAATCTTTGACAAGGCCCGCCAAGCTGCCCCCTGTGTGCTATTCTTTGATGAGCTGG
ATTCGATTGCCAAGGCTCGTGGAGGTAACATTGGAGATGGTGGTGGGGCTGCTGACCGAGTCATCAACCAGATCC
TGACAGAAATGGATGGCATGTCCACAAAAAAAAAATGTGTTCATCATTGGCGCTACCAACCGGCCTGACATCATTG
ATCCTGCCATCCTCAGACCTGGCCGTCTTGATCAGCTCATCTACATCCCACTTCCTGATGAGAAGTCCCGTGTTG
CCATCCTCAAGGCTAACCTGCGCAAGTCCCCAGTTGCCAAGGATGTGGACTTGGAGTTCCTGGCTAAAATGACTA
ATGGCTTCTCTGGAGCTGACCTGACAGAGATTTGCCAGCGTGCTTGCAAGCTGGCCATCCGTGAATCCATCGAGA
GTGAGATTAGGCGAGAACGAGAGAGGCAGACAAACCCATCAGCCATGGAGGTAGAAGAGGATGATCCAGTGCCTG
AGATCCGTCGAGATCACTTTGAAGAAGCCATGCGCTTTGCGCGCCGTTCTGTCAGTGACAATGACATTCGGAAGT
ATGAGATGTTTGCCCAGACCCTTCAGCAGAGTCGGGGCTTTGGCAGCTTCAGATTCCCTTCAGGGAACCAGGGTG
GAGCTGGCCCCAGTCAGGGCAGTGGAGGCGGCACAGGTGGCAGTGTATACACAGAAGACAATGATGATGACCTGT
ATGGC**TAA**GTGGTGGTGGCCAGCGTGCAGTGAGCTGGCCTGCCTGGACCTTGTTCCCTGGGGGTGGGGCGCTTGC
CCAGGAGAGGGACCAGGGGTGCGCCCACAGCCTGCTCCATTCTCCAGTCTGAACAGTTCAGCTACAGTCTGACTC
TGGACAGGGGGTTTCTGTTGCAAAAATACAAAACAAAAGCGATAAAATAAAAGCGATTTTCATTTGGTAGGCGGA
GAGTGAATTACCAACAGGGAATTGGGCCTTGGGCCTATGCCATTTCTGTTGTAGTTTGGGGCAGTGCAGGGGACC
TGTGTGGGGTGTGAACCAAGGCACTACTGCCACCTGCCACAGTAAAGCATCTGCACTTGACTCAATGCTGCCCGA
GCCCTCCCTTCCCCCTATCCAACCTGGGTAGGTGGGTAGGGGCCACAGTTGCTGGATGTTTATATAGAGAGTAGG
TTGATTTATTTTACATGCTTTTGAGTTAATGTTGGAAAACTAATCACAAGCAGTTTCTAAACCAAAAAATGACAT
GTTGTAAAAGGACAATAAACGTTGGGTCAAAATGGAAAAAAAAAAAAA

FIGURE 1290

MASGADSKGDDLSTAILKQKNRPNRLIVDEAINEDNSVVSLSQPKMDELQLFRGDTVLLKGKKRREAVCIVLSDD
TCSDEKIRMNRVVRNNLRVRLGDVISIQPCPDVKYGKRIHVLPIDDTVEGITGNLFEVYLKPYFLEAYRPIRKGD
IFLVRGGMRAVEFKVVETDPSPYCIVAPDTVIHCEGEPIKREDEEESLNEVGYDDIGGCRKQLAQIKEMVELPLR
HPALFKAIGVKPPRGILLYGPPGTGKTLIARAVANETGAFFFLINGPEIMSKLAGESESNLRKAFEEAEKNAPAI
IFIDELDAIAPKREKTHGEVERRIVSQLLTLMDGLKQRAHVIVMAATNRPNSIDPALRRFGRFDREVDIGIPDAT
GRLEILQIHTKNMKLADDVDLEQVANETHGHVGADLAALCSEAALQAIRKKMDLIDLEDETIDAEVMNSLAVTMD
DFRWALSQSNPSALRETVVEVPQVTWEDIGGLEDVKRELQELVQYPVEHPDKFLKFGMTPSKGVLFYGPPGCGKT
LLAKAIANECQANFISIKGPELLTMWFGESEANVREIFDKARQAAPCVLFFDELDSIAKARGGNIGDGGGAADRV
INQILTEMDGMSTKKNVFIIGATNRPDIIDPAILRPGRLDQLIYIPLPDEKSRVAILKANLRKSPVAKDVDLEFL
AKMTNGFSGADLTEICQRACKLAIRESIESEIRRERERQTNPSAMEVEEDDPVPEIRRDHFEEAMRFARRSVSDN
DIRKYEMFAQTLQQSRGFGSFRFPSGNQGGAGPSQGSGGGTGGSVYTEDNDDDLYG

FIGURE 1291

CGGCGCCGCAGGGGATTGAGGGGTTGACTGAGCGTTGCGAGCCTTAGCTTTCTCCCGAACGCCAGCGCTGAGGAC
ACG**ATG**TCGCGGCTCTCCCGCTCACTGCTTTGGGCCGCCACCTGCCTGGGCGTGCTCTGCGTGCTGTCCGCGGAC
AAGAACACGACCCAGCACCCGAACGTGACGACTTTAGCGCCCATCTCCAACGTAACCTCGGCGCCGGTGACGTCC
CTCCCGCTGGTCACCACTCCGGCACCAGAAACCTGTGAAGGTCGAAACAGCTGCGTTTCCTGTTTTAATGTTAGC
GTTGTTAATACTACCTGCTTTTGGATAGAATGTAAAGATGAGAGCTATTGTTCACATAACTCAACAGTTAGTGAT
TGTCAAGTGGGGAACACGACAGACTTCTGTTCCGCTAAACCCACAGTTCAGCCCTCCCCTTCTACAACTTCCAAG
ACAGTTACTACATCAGGTACAACAAATAACACTGTGACTCCAACCTCACAACCTGTGCGAAAGTCTACCTTTGAT
GCAGCCAGTTTCATTGGAGGAATTGTCCTGGTCTTGGGTGTGCAGGCTGTAATTTTCTTTCTTTATAAATTCTGC
AAATCTAAAGAACGAAATTACCACACTCTG**TAA**ACAGACCCATTGAATTAATAAGGACTGGTGATTCATTTGTGT
AACTCACTGAAGCCAAAATACTATCTTTTAAGATGTCCCACATGGAAGACGCTATTCCAGGATCTTTAAATTTCC
ATGGATGCATATAGGATGTTTGGGAGCATCATCCGTGAAGAAAAAATCAATTAAATCATTGTGTTCAACAGGAAT
ATTTAAAATATTCTGCATGAATCCTGTGGCTGTCTTATTTTAAATAGCTGCTGCTGTGGGATTATATTTTTTTC
CTTAACATGCCAAATATAACTTTCTGAAAGTGATGGAAAATGTTGTCTTGTGCAGACAACATCATGGCTCTTGGC
AGTTTAAATTTAGTAATTTTAATTTAGTGAACAGAATTGAGAAGAACGTGCCAAATGAGAATCAATTAGGTGGAT
TTTTGGCTGTCATTTCAAAAGTGGAATAAATTTATTAATTTAGTAGTACTAAATGGTATCCTTAGATTAAAATTT
TGTGCTTGATAACAGCTGTTTTTTCTACATTAGAAATAAGATGCCACACAAGGAACTACATTCCAGATTTAAAGA
AATGAAAGGATACCATTAGTGTGTATAACAGATTATTGTTCATACTTGTAAAGCATCTTATGTCATTGAGAATAT
AAAGAACAGTGCCTTAGAAGACAGTGAAAGGTAAGCTCTAGCTTAATGTCTATGATTTGTTCTTTGACATTAAGG
AAGGTAAGGATTGGTCAGAGGATGTAACTTGATGTGAGCAGTAGTAAACCTGTTTTAGATATCATACTGTTAATA
TTTTATTGAAAATTTATTTCAGAGCGGAGAAACTTAAGCTAAAGTCTGTTATACAGAATTGAAAGCCTTCGTATC
TTGAACCTCCCAACATTTTTCTTATGGCTGTTGAAAAGTATAGAGCTAAATTGATTTAATTACACTTTCCTTTGT
ACTTTAAAAAAAAGTATGCTAGCACTATTGTACCTTGAAAGGATTTCCACCAGACTGTCTTGAGTAGTGACTTCT
TTGGTGAGGCAAGAAGGATATACATTATTTTAGAATCATTTACTATTTAAATGAGACAATCATATTATTTTAGAA
TCATTTATTTTAAATGAGACAATCATTTTAAGTTTTAAGATAACAGAAGTGACCAATGTAATTTCACAACACCTA
AGGATTTTTTGGTTGATCAGGTTACTGTAGATTTTTACTGATTGTCCTGGATGAATAGACTGTGCTTTTTCTTTT
TCTCTCCCTTCCTTCTTGGTTTCCCATAGTATAATAAGCATGCATACTTTAACTTCTATAGTTTTCTCCTTTAGA
GGGTCGTCTTCAGTTTTAGAGGTTTACTTCTCCCTTGCCTTTGACTCATTGGACTAGTGCAGAGGCTTTAAGTAG
TTTAAAATGGGCTTTTGCTTTTCTAGGTCATTAACGTTTTTTATTTAGTTTCTTTAGCCAATAGTGGCTGAGTTT
CGCACTTGATTTTCAATATTTTATAGTAAGAAATGACAAACTGCTTTGTTTCATTTCATAAACAAACTCTGCATT
TAGATAACTATTAAAGGTTGTTAAGATGAAGATTTACTGTTTCTTTGTTACTCGTTGGTACAGCTGTTTGTTTTA
CTTGCACATTTGTACATATACTTAATGTTTTCAAGTGCCTTAATTGTTTAAAATCTCTGGCTTCAAAGTTTCTTG
GGGAAAGGTCGGTTTACCTCACATTTTTTGTTTCCATTAGTAATATTCTAGGTACCTCACAAAATGTATTATGGT
GCCATGGCTGTTAGTTTTTAGTGAGTGCTGTAGGATTAATTCGAAAATAGGCAGAATTCCATTCCTCCCAAGGTG
GCAAAAATTAGCTATACTGATGTAATTGTCATTTACCTGGGTATGAATTCCCTGACACACATTCATGTCAACATA
TGTAGCAAATTTTGTGAAAACATAACAATTTGAAGCTTCTGTAATTTTGAGCACTGCTCTAACAACAAGCATAAT
ATAAAATTAGTTAGATTTTGCAAGTCTACAAATGAGCTCTTGCAACAGAACTCACAGCCTTTTTACTTTTTTCCC
CTAACTTTAGCAATGTAGTATCTTGAGCCATTAATTTTTGGGTTTTTTTAAAATCCAGAAGGTATATAGAAACCT
TTTCAGATTTTTCATCTGATTTGTTCTTGCAGATGTTCTTCTATCAAATACCTTATTTTACCTTACAGATATTTG
TTGCACAGGCAGATACTGCTGTATTTAGACATTTCTATTTCAGTTCATTAAAAACTGCAAAACCAATCTGTATCA
TGTACCAAACTGACTTAAAATAAATCTACATGTTTATTGAATT

FIGURE 1292

MSRLSRSLLWAATCLGVLCVLSADKNTTQHPNVTTLAPISNVTSAPVTSLPLVTTPAPETCEGRNSCVSCFNVSV
VNTTCFWIECKDESYCSHNSTVSDCQVGNTTDFCSAKPTVQPSPSTTSKTVTTSGTTNNTVTPTSQPVRKSTFDA
ASFIGGIVLVLGVQAVIFFLYKFCKSKERNYHTL

FIGURE 1293A

CTGAACTAGTTGCCAGTGATCTTGAAACGTGACAGTAACCAAGAGATAAATAGGTGACAATGACAGGAAAATTAG
ATGTAGTAAAAGAGAGTGTTTGAGAGCAGAAGCTATGGCAACTAAAGACTGGATTTGAATCCTTCCTAGCTTGGT
GACATGAGCAAATTACTTGATTTAAGTGAGCATTTTCCCATCTGTACAGTGGAGATAACGATAATTGTGCCTGCT
AAGAAGAATTGCTGTGAAGATTAGTGAAATAATGCATGTAAAACATTTGGTACAGTATGTGACACATAGTACAAA
TAGTTTGCTAGGAAGATTGTTATTATTCTTCACTTGTGATATTGTGAAGTTTTCATACAGCAAATTGGACATCAT
GAGATGGATTGATTAAATAAATAGATTTGAACTTCAAGGACTGGTAGTGTTCTTGCTTTGGAAAGAAGAAACTTG
GTTTATCCTAATAATAGTAGGATAATAATGGTGAAGTGATAGGTACAAGTAATAGTGTTTATGATGCGCTGGTGA
TGATAGGAAAAGAAAGCCATTATATGGGCAAGAGCTAGAAGTAATAAAATGGTGCATTTTTCAGTGATGTTTGGC
CTATGTAGCTATTCTCTGATAACTATAAAAATCCTTATTATTGAAGATTCTTCAGGAAAAAAAAACCCTTAGTCT
GAAACTTTAGCACCAATCCCCCTTGCCCCCCATTGAAATACGTATTTTTAAAACATGGCTTTTGATAATGTGAGG
GTTTTTTCCTTTTTGCGATTTAGCAGTGCTGATTGTGTATTGCAGTAGTTGTGAGAGCATTAGAAGCAGCAGTCG
ATAGGAGGATGGAAGGTCTGGATGCCGCCTTGGGGAGTTAGGAGATTGGCAGACTTACCCTGTACCACTCTAGCC
CTACTCCTTTGCCCAAGACAGAAACACACTGAGATGGATAGGAGAATATGAGCAGTTGATAGGAAAGTTCTCAGT
GGAGTCAGGATTTAGGTTAGGCCAGGAGATTGAGAATATAACAGTTTGTGTATGATGAAATGGCATATTTCACAG
AATGCAGTAAAAGCAGGTAGGGTACAAGTGCAGCAACAGGAAGATGTCTTTTCTTCATTCAGCAAACACTTATTT
GAGAGCTTACCATGTGCTAGGCACATACAAAGATAAATAAGATGCCCTTGATGATCCTCTATTTAAAGGAGACAT
GTAAACAGGTTAACTTAGAGTAGAGATGGTGAATATGTGAACCTGAGGAAAGGAAGAAATAGATTAAATTATCTG
GAGAGAGAGGAAAAGTCAGCAGAATGGGGACGAGAATCTTTCGGAGCTCAGTGTTCTGATAGGAGTTATTTCCTT
GGGCATAGGTTCCAAGTATTTTTCTAATATACCATAGAAGCCAGGAAAACTTTCTTCTGTTATCTCAAATGATTT
AATTACTGACTTGAGTTTGTGTTGTCTCCTTAGACTTGTGCACC**ATG**GACAATTTTGCTGAGGGAGATTTCACTG
TGGCGGATTATGCCTTGTTAGAAGATTGCCCTCACGTGGATGATTGTGTCTTTGCTGCTGAATTTATGAGCAATG
ATTATGTTCGTGTGACTCAGCTTTACTGTGATGGGGTGGGTGTGCAATATAAAGATTATATCCAAAGTGAGAGGA
ATTTGGAATTTGACATCTGCAGTATATGGTGTAGTAAACCAATTTCTGTCCTGCAAGATTATTGCGATGCCATTA
AAATAAACATCTTCTGGCCACTTCTGTTTCAACATCAAAACAGTTCCGTAATATCACGATTGCATCCCTGTGTGG
ACGCCAACAATTCACGTGCTTCTGAGATAAATTTGAAGAAACTACAACATCTTGAGTTGATGGAAGATATTGTGG
ATTTGGCAAAGAAAGTTGCTAATGATTCATTCCTTATTGGAGGCTTATTGAGAATTGGTTGTAAAATAGAAAATA
AAATCTTGGCAATGGAAGAAGCTCTGAATTGGATAAAATATGCAGGCGATGTAACAATTCTAACTAAATTAGGAT
CAATTGACAATTGTTGGCCTATGTTAAGTATTTTCTTTACTGAATACAAGTACCACATAACTAAAATTGTAATGG
AAGACTGCAATTTGCTTGAAGAACTTAAAACTCAAAGTTGTATGGATTGTATAGAGGAAGGAGAACTAATGAAAA
TGAAAGGAAATGAAGAGTTTTCCAAAGAAAGATTTGATATAGCTATTATCTATTACACCAGAGCCATTGAATATA
GACCTGAAAACTACCTTCTTTATGGTAACCGAGCTCTTTGTTTTCTTCGTACTGGACAGTTTAGAAATGCACTCG
GTGATGGAAAGAGAGCCACTATTCTGAAGAACACTTGGCCAAAGGGTCATTATCGTTATTGTGATGCTCTTTCTA
TGCTGGGGGAATATGACTGGGCCCTGCAAGCAAACATAAAAGCTCAAAAACTCTGTAAAAATGACCCTGAGGGAA
TCAAGGATCTAATTCAGCAGCATGTAAAGTTACAAAAACAAATAGAAGACCTACAAGGTCGAACAGCAAATAAGG
ATCCAATTAAAGCCTTTTATGAAAACAGGGCCTACACACCTAGGAGTTTATCAGCACCTATATTTACTACTTCAC
TTAACTTTGTGGAGAAGGAAAGAGATTTCAGAAAAATTAATCACGAAATGGCCAACGGTGGTAATCAGAATCTAA
AGGTGGCGGATGAGGCGTTGAAGGTAGATGATTGTGACTGTCATCCTGAATTTTCACCACCATCAAGTCAGCCTC
CAAAACATAAAGGAAAACAAAAATCTCGAAACAATGAATCAGAAAAGTTCAGTTCTAGTTCACCATTGACTTTAC
CAGCAGATTTGAAGAACATCTTGGAGAAACAGTTTTCTAAATCTTCCAGAGCTGCACACCAGGATTTTGCTAATA
TAATGAAAATGCTGAGAAGCTTAATTCAAGATGGCTATATGGCCTTATTGGAGCAGCGTTGCCGCAGCGCTGCAC
AGGCCTTTACAGAGTTGCTGAACGGTTTAGATCCTCAAAAAATAAAGCAATTGAACCTGGCCATGATTAACTATG
TTTTGGTCGTCTATGGACTTGCCATTTCTCTCCTTGGAATAGGACAGCCTGAGGAATTATCTGAAGCCGAAAACC
AGTTTAAGAGGATTATTGAACACTACCCCAGTGAGGGCCTTGATTGCTTGGCCTACTGTGGAATTGGAAAAGTGT
ATTTGAAAAAAAACAGATTTCTAGAAGCTCTCAATCACTTTGAGAAAGCAAGAACCTTGATTTATCGTCTTCCTG
GAGTGTTAACTTGGCCCACGAGTAATGTGATTATTGAAGAGTCTCAGCCACAAAAAATAAAGATGCTGTTAGAGA
AATTTGTTGAAGAATGCAAGTTCCCTCCAGTGCCAGATGCCATTTGTTGCTATCAGAAGTGCCATGGATATTCTA
AGATCCAGATATACATAACTGATCCAGACTTTAAGGGTTTTATACGCATCAGCTGTTGCCAGTACTGTAAAATAG
AATTTCACATGAATTGCTGGAAGAAGTTAAAAACTACAACCTTTAATGATAAAATTGACAAGGATTTTCTACAAG

FIGURE 1293B

GAATATGTCTTACCCCTGACTGTGAAGGTGTCATTTCTAAGATTATCATCTTCAGCAGTGGTGGTGAAGTTAAAT
GTGAATTTGAACACAAGGTCATAAAAGAAAAGGTTCCTCCAAGACCTATTCTGAAACAGAAATGTTCTAGCCTAG
AGAAACTAAGACTGAAAGAAGACAAAAAATTGAAGAGAAAGATCCAAAAAAAAAGAAGCAAAAAAGTTAGCACAAG
AAAGAATGGAGGAGGACTTAAGAGAAAGTAATCCACCCAAAAATGAAGAGCAGAAAGAAACTGTAGACAATGTTC
AGCGTTGTCAGTTCCTTGATGACAGAATTCTACAGTGTATAAAGCAGTATGCTGACAAGATTAAATCCGGCATAC
AGAATACAGCCATGCTTCTCAAAGAATTGCTTTCTTGGAAAGTTTTGAGCACAGAAGACTATACAACCTGTTTTT
CTAGCAGAAATTTTCTAAATGAAGCAGTGGACTATGTTATTCGCCACTTGATTCAAGAAAATAACAGAGTAAAGA
CAAGAATATTTCTGCATGTTTTGAGTGAGCTTAAAGAAGTGGAGCCCAAATTAGCCGCCTGGATCCAAAAACTTA
ATAGCTTTGGCTTAGATGCCACAGGAACTTTCTTTTCTCGTTATGGAGCATCTCTTAAACTGCTTGATTTTAGTA
TCATGACTTTCCTCTGGAATGAGAAATATGGTCACAAACTAGACTCTATAGAAGGAAAGCAACTTGATTATTTCT
CTGAGCCAGCATCATTGAAGGAAGCCCGTTGTTTAATATGGCTGCTAGAAGAACACAGAGACAAGTTCCCAGCAT
TGCATAGTGCTTTAGATGAATTCTTTGATATAATGGACAGCCGCTGTACTGTGTTAAGGAAACAAGATAGTGGTG
AAGCACCGTTTAGTTCAACCAAGGTGAAAAACAAAAGCAAGAAAAAGAAGCCAAAGGATTCAAAGCCTATGTTAG
TTGGGTCTGGAACAACTTCAGTAACTTCAAATAATGAGATCATCACTTCAAGTGAAGACCATAGCAATCGAAATT
CAGATTCTGCAGGCCCATTTGCAGTGCCTGACCATCTTCGGCAAGATGTAGAAGAATTCGAAGCTCTCTATGACC
AACACAGTAACGAATATGTTGTCCGCAATAAGAAGCTATGGGACATGAACCCAAAACAAAAATGTTCAACTCTAT
ATGATTACTTCTCTCAGTTTTTGGAGGAACATGGTCCCTTGGACATGAGTAACAAGATGTTCTCTGCAGAATATG
AGTTTTTCCCAGAAGAAACTCGACAGATACTAGAAAAAGCAGGAGGTTTAAAACCTTTTCTCTTGGGATGCCCTC
GTTTTGTTGTGATTGACAACTGTATTGCACTGAAGAAGGTTGCATCACGGCTCAAGAAAAAAAGGAAGAAGAAAA
ACATTAAAACAAAAGTAGAAGAAATTTCAAAAGCAGGGGAGTATGTACGAGTTAAACTACAACTGAATCCAGCTG
CTAGGGAATTTAAACCAGATGTAAAGTCTAAACCAGTGTCAGATTCATCTTCAGCACCAGCTTTTGAAAATGTGA
AACCCAAACCTGTGTCTGCAAATTCTCCCAAGCCAGCTTGTGAAGATGTGAAGGCCAAACCAGTATCCGACAATT
CTTCTAGACAAGTTTCTGAGGATGGGCAACCCAAAGGGGTCTCTTCTAATTCTCCTAAACCAGGCTCTGAGGATG
CAAATTACAAGCGAGTCTCCTGTAATTCCCCCAAACCGGTTCTTGAGGATGTGAAACCAACTTATTGGGCTCAAT
CCCATTTGGTCACAGGATACTGTACGTATCTTCCTTTCCAGAGATTTGATATCACCCAGACACCGCCAGCATACA
TAAACGTGTTACCAGGTTTGCCCCAGTACACCAGCATATATACACCCTTGGCCAGCCTTTCTCCTGAATATCAGC
TACCAAGATCAGTACCAGTGGTGCCGTCTTTTGTAGCCAATGACAGAGCAGATAAAAATGCTGCTGCCTATTTTG
AGGGTCATCATTTGAATGCTGAGAATGTTGCTGGTCACCAGATTGCCTCTGAAACACAGATCCTTGAGGGCTCTT
TGGGAATATCTGTAAAGTCACACTGCAGCACAGGTGATGCTCATACAGTCCTGAGTGAGTCTAACAGAAATGATG
AGCACTGTGGAAATTCTAACAACAAATGTGAAGTAATTCCAGAAAGCACCAGTGCAGTAACAAACATTCCACACG
TGCAGATGGTTGCCATACAGGTATCTTGGAACATAATACACCAAGAAGTCAATACTGAGCCATATAATCCTTTTG
AGGAACGACAAGGGGAAATTTCACGGATTGAAAAGGAGCACCAAGTATTACAAGACCAACTTCAAGAAGTGTATG
AAAATTATGAGCAGATAAAACTTAAGGGCTTAGAAGAGACCAGGGACCTGGAAGAGAAGTTGAAAAGGCACTTAG
AAGAAAACAAGATCTCAAAGACGGAATTAGATTGGTTCCTTCAAGATTTGGAAAGAGAAATTAAAAAATGGCAAC
AGGAAAAAAAAGAAATCCAAGAAAGACTAAAATCACTGAAGAAGAAAATTAAAAAGGTTTCAAATGCCAGTGAAA
TGTATACCCAGAAAAATGATGGAAAGGAAAAGGAACATGAATTACATCTGGATCAGTCCCTTGAAATCAGCAACA
CACTTACAAATGAGAAAATGAAAATAGAAGAGTATATAAAGAAAGGGAAAGAGGATTATGAAGAGAGTCATCAGA
GAGCTGTGGCTGCAGAGGTATCCGTACTTGAAAACTGGAAGGAGAGTGAAGTGTATAAGCTACAGATCATGGAGT
CACAAGCAGAAGCCTTTCTGAAGAAGCTGGGGCTGATTAGCCGTGATCCTGCAGCATATCCTGACATGGAGTCTG
ATATACGTTCATGGGAATTGTTTCTTTCTAATGTTACAAAAGAAATTGAGAAAGCAAAGTCTCAGTTTGAAGAAC
AAATTAAGGCAATTAAAAATGGTTCTCGGCTCAGTGAACTTTCTAAAGTGCAGATTTCTGAGCTTTCATTTCCTG
CCTGTAACACGGTTCATCCCGAGTTACTCCCTGAGTCTTCAGGCCACGATGGCCAAGGGCTTGTGACTTCTGCAA
GCGACGTGACTGGAAACCACGCAGCACTTCACAGGGATCCTAGTGTGTTCTCTGCTGGTGATTCCCCAGGGGAGG
CTCCTTCTGCGCTGTTGCCAGGGCCACCCCCTGGTCAGCCTGAAGCCACTCAGCTGACAGGGCCAAAACGGGCTG
GCCAGGCAGCTCTGTCAGAACGAAGCCCTGTGGCTGATCGGAAGCAGCCTGTTCCTCCAGGACGTGCTGCGCGTT
CAAGCCAGTCTCCAAAAAAGCCGTTCAATAGTATTATTGAGCACCTGTCAGTGGTATTCCCATGTTACAACAGCA
CTGAGCTTGCTGGTTTTATTAAAAAAGTGCGAAGCAAAAACAAGAACTCACTCTCAGGATTGAGTATTGATGAAA
TTGTCCAAAGAGTGACAGAACACATTCTAGATGAACAGAAAAAGAAAAAGCCAAACCCAGGAAAGGACAAGAGGA

FIGURE 1293C

CTTATGAGCCCAGCTCTGCCACCCCCGTGACCAGGTCCTCCCAGGGCTCACCCTCGGTGGTTGTTGCACCATCAC
CCAAAACCAAGGGGCAGAAAGCAGAAGATGTCCCTGTGAGGATTGCACTGGGTGCAAGTTCCTGTGAAATATGCC
ACGAGGTGTTCAAATCAAAAAACGTGCGTGTGCTCAAATGTGGGCACAAGTATCACAAAGGGTGCTTTAAGCAGT
GGCTTAAAGGGCAGAGCGCTTGCCCGGCCTGCCAGGGTCGTGATCTCCTGACAGAAGAGTCACCTTCTGGAAGAG
GCTGGCCCAGTCAGAATCAGGAGCTGCCTTCCTGCTCTTCTAGGTAGTCACACTTCACTAAAGTGTCATCCACCA
GTGTGTTGAATCCGAAGAATGACAATTTTCTACCACTGGTGTAAAAAACAAACATTTGAAGACCCTTGTGCATTG
TGTGTCACAAAGCTAAATACATGGAAATCGTTAATATCGCTGATATTAAGTAATTTCCCCACTCTGAGTGAATAC
TTTGATGATTGCCAACAGTGGCTAATAAAATGACGGCTACCACACTCATGGGTCACTGGGGCTGCGCAGGGCTCT
TTGAGGTGGGTGGCTTCTTTTGGAAAGTACTATGAACGTCTCGAAGCAGTATTCTAGTGATAAGAATTCTTAACA
TAGCCAAGCGCCCCACGTTTGTTCCCCACGTTTGTTCCCCTTTTCTGTTTGAAAAACCTGTTCTGGTAGCTCCAC
AAGAGAGATGATACTGACTTTTTAAATTTTTTACAAGAGTCTGTATTCCTGATATGCCTATATTTTTCCTCAAAG
ATTCTGCATTTTAAGGATGGGCATAAGCAAACTATATTTTAATAATTTATAGTTAATGTTAAAATATTGGCTGAT
TTAGACCAAAAGATTCAAATCTCCTCTTTGTGAAATCCCATCTGCATTTGATTTTTTATTATTTTATGTTCCCCC
GTTAGATTGTTTTAAGTGTTTGCTTTTCATCTTTTATAGATGTAATCTGATTTTCAAAAATCATTAACACTTTTT
AATTAGTATCGACTAAGACTTTTTCCCCCTGGAATCGAGGCTGTGTGTCCGTCATCCCAGCCCCCGGTTGGAGCC
TGCTCTTTGAACTCCGCTGCCTTCCTTAGCAGCTTCTGTCCTCTTCTGTGAGTCAGTCAGCGAGTGCTTGGGATC
CGCATCCAGCCGTGCTGAGCACACAACAGGCTGTGTGTGGAAATGGCCACCACCATTCTCCTTCCCCACCCCACC
ACAAAAAGAGAAGCTGTGTCTTTAGACAACCCTGAGGTATCTGTGTTACAATCGTTCTGTGTTTGATATTTGTGT
AAAGTATGCATGCAGTCTTGTACTGTGACCTAAGAACAAAACTGTAACTGCATTAGAAACCATGAAAAAATTAGA
TATTGTTTTGTGACTTTTAGACAGTGGTAAATATAGAACCATGAATTCTGGTCACATTCCATTTCTCTCCAACAT
GAAGGATCAAAAAATGTTTTTCAATGTGTTCTTTGTTCCACTGGAAACTTAGAGTCATGAGTTTATGAGCTGATT
TGGTCACCTTCCTCTGCCTTTGTTCACTGTGAGTTCTGATGTCTTAGTGACTTAGTTCTTAGAAGCTCACGCCTT
AGTTTGAAACAGATTCTCCACGGTGGTCCCCAAAACACTGTCTGCATATCCATAAGAATTGAGCGCTATGGGTGT
TAACGTGCATGAGGATCAGTTTGCAGCAGCAAGTACAAAAGGAGAAGAGGAACATCCGTTGAATGAGTGTGTTTT
GTACATAACTTCAGATACTTGTGAACATGCCTTATATTTGTCCAACAACTGTCAGAATAAAGAACATTCTAAAAT
GAG

FIGURE 1294

MDNFAEGDFTVADYALLEDCPHVDDCVFAAEFMSNDYVRVTQLYCDGVGVQYKDYIQSERNLEFDICSIWCSKPI
SVLQDYCDAIKINIFWPLLFQHQNSSVISRLHPCVDANNSRASEINLKKLQHLELMEDIVDLAKKVANDSFLIGG
LLRIGCKIENKILAMEEALNWIKYAGDVTILTKLGSIDNCWPMLSIFFTEYKYHITKIVMEDCNLLEELKTQSCM
DCIEEGELMKMKGNEEFSKERFDIAIIYYTRAIEYRPENYLLYGNRALCFLRTGQFRNALGDGKRATILKNTWPK
GHYRYCDALSMLGEYDWALQANIKAQKLCKNDPEGIKDLIQQHVKLQKQIEDLQGRTANKDPIKAFYENRAYTPR
SLSAPIFTTSLNFVEKERDFRKINHEMANGGNQNLKVADEALKVDDCDCHPEFSPPSSQPPKHKGKQKSRNNESE
KFSSSSPLTLPADLKNILEKQFSKSSRAAHQDFANIMKMLRSLIQDGYMALLEQRCRSAAQAFTELLNGLDPQKI
KQLNLAMINYVLVVYGLAISLLGIGQPEELSEAENQFKRIIEHYPSEGLDCLAYCGIGKVYLKKNRFLEALNHFE
KARTLIYRLPGVLTWPTSNVIIEESQPQKIKMLLEKFVEECKFPPVPDAICCYQKCHGYSKIQIYITDPDFKGFI
RISCCQYCKIEFHMNCWKKLKTTTFNDKIDKDFLQGICLTPDCEGVISKIIIFSSGGEVKCEFEHKVIKEKVPPR
PILKQKCSSLEKLRLKEDKKLKRKIQKKEAKKLAQERMEEDLRESNPPKNEEQKETVDNVQRCQFLDDRILQCIK
QYADKIKSGIQNTAMLLKELLSWKVLSTEDYTTCFSSRNFLNEAVDYVIRHLIQENNRVKTRIFLHVLSELKEVE
PKLAAWIQKLNSFGLDATGTFFSRYGASLKLLDFSIMTFLWNEKYGHKLDSIEGKQLDYFSEPASLKEARCLIWL
LEEHRDKFPALHSALDEFFDIMDSRCTVLRKQDSGEAPFSSTKVKNKSKKKKPKDSKPMLVGSGTTSVTSNNEII
TSSEDHSNRNSDSAGPFAVPDHLRQDVEEFEALYDQHSNEYVVRNKKLWDMNPKQKCSTLYDYFSQFLEEHGPLD
MSNKMFSAEYEFFPEETRQILEKAGGLKPFLLGCPRFVVIDNCIALKKVASRLKKKRKKKNIKTKVEEISKAGEY
VRVKLQLNPAAREFKPDVKSKPVSDSSSAPAFENVKPKPVSANSPKPACEDVKAKPVSDNSSRQVSEDGQPKGVS
SNSPKPGSEDANYKRVSCNSPKPVLEDVKPTYWAQSHLVTGYCTYLPFQRFDITQTPPAYINVLPGLPQYTSIYT
PLASLSPEYQLPRSVPVVPSFVANDRADKNAAAYFEGHHLNAENVAGHQIASETQILEGSLGISVKSHCSTGDAH
TVLSESNRNDEHCGNSNNKCEVIPESTSAVTNIPHVQMVAIQVSWNIIHQEVNTEPYNPFEERQGEISRIEKEHQ
VLQDQLQEVYENYEQIKLKGLEETRDLEEKLKRHLEENKISKTELDWFLQDLEREIKKWQQEKKEIQERLKSLKK
KIKKVSNASEMYTQKNDGKEKEHELHLDQSLEISNTLTNEKMKIEEYIKKGKEDYEESHQRAVAAEVSVLENWKE
SEVYKLQIMESQAEAFLKKLGLISRDPAAYPDMESDIRSWELFLSNVTKEIEKAKSQFEEQIKAIKNGSRLSELS
KVQISELSFPACNTVHPELLPESSGHDGQGLVTSASDVTGNHAALHRDPSVFSAGDSPGEAPSALLPGPPPGQPE
ATQLTGPKRAGQAALSERSPVADRKQPVPPGRAARSSQSPKKPFNSIIEHLSVVFPCYNSTELAGFIKKVRSKNK
NSLSGLSIDEIVQRVTEHILDEQKKKKPNPGKDKRTYEPSSATPVTRSSQGSPSVVVAPSPKTKGQKAEDVPVRI
ALGASSCEICHEVFKSKNVRVLKCGHKYHKGCFKQWLKGQSACPACQGRD

FIGURE 1295

GTTCTTGCCTGGTGTCGGTGGTTAGTTTCTGCGACTTGTGTTGGGACTGCTGATAGGAAG**ATG**TCTTCAGGAAAT
GCTAAAATTGGGCACCCTGCCCCCAACTTCAAAGCCACAGCTGTTATGCCAGATGGTCAGTTTAAAGATATCAGC
CTGTCTGACTACAAAGGAAAATATGTTGTGTTCTTCTTTTACCCTCTTGACTTCACCTTTGTGTGCCCCACGGAG
ATCATTGCTTTCAGTGATAGGGCAGAAGAATTTAAGAAACTCAACTGCCAAGTGATTGGTGCTTCTGTGGATTCT
CACTTCTGTCATCTAGCATGGGTCAATACACCTAAGAAACAAGGAGGACTGGGACCCATGAACATTCCTTTGGTA
TCAGACCCGAAGCGCACCATTGCTCAGGATTATGGGGTCTTAAAGGCTGATGAAGGCATCTCGTTCAGGGGCCTT
TTTATCATTGATGATAAGGGTATTCTTCGGCAGATCACTGTAAATGACCTCCCTGTTGGCCGCTCTGTGGATGAG
ACTTTGAGACTAGTTCAGGCCTTCCAGTTCACTGACAAACATGGGGAAGTGTGCCCAGCTGGCTGGAAACCTGGC
AGTGATACCATCAAGCCTGATGTCCAAAAGAGCAAAGAATATTTCTCCAAGCAGAAG**TGA**GCGCTGGGCTGTTTT
AGTGCCAGGCTGCGGTGGGCAGCCATGAGAACAAAACCTCTTCTGTATTTTTTTTTTCCATTAGTAAAACACAAG
ACTTCAGATTCAGCCGAATTGTGGTGTCTTACAAGGCAGGCCTTTCCTACAGGGGGTGGAGAGACCAGCCTTTCT
TCCTTTGGTAGGAATGGCCTGAGTTGGCGTTGTGGGCAGGCTACTGGTTTGTATGATGTATTAGTAGAGCAACCC
ATTAATCTTTTGTAGTTTGTATTAAACTTGAACTGAG

FIGURE 1296

MSSGNAKIGHPAPNFKATAVMPDGQFKDISLSDYKGKYVVFFFYPLDFTFVCPTEIIAFSDRAEEFKKLNCQVIG
ASVDSHFCHLAWVNTPKKQGGLGPMNIPLVSDPKRTIAQDYGVLKADEGISFRGLFIIDDKGILRQITVNDLPVG
RSVDETLRLVQAFQFTDKHGEVCPAGWKPGSDTIKPDVQKSKEYFSKQK

FIGURE 1297

GGCACGAGGGAGAGAGAACTAGTCTCGAGTTTTTTTTTTTTTTTTGTGCAGGTAGGAAATGTCTTTATTATTGG
CCTTGAGTCATCATGTAGTGTCTGACATAGGTTACGTGTCCAGAGGATCTGCCTGGCACACGCTAGCTACCCCTG
CCCACTGGAGCAGCCCCTCTGGCCGACGCCAGGCCTTTGTCCATCATGCCAGGGAAGCCAACCCCACCATCCCAC
AAGTTCATGCTAGGGGTGCTGAGGAACAAGGCTGTCCTAGGATTGGACCCTCCATCCTGGACAGGGGTCCTGGGG
AGGATGAGGCTGAGGCCTGGATGATCAGTCTCTTTTTGGTTTCATGATCATTTAAAAAACAGAAAAGACAAACAT
TTCACAGTCTTTAAAAAATAGAAGTCTGAGGAGAGAAGCCAGAGTCCTGGGCCCCGGGAGGCCCCTCGAGGCCTC
AGCATTCCCTGTCCCTTGAGGTCTGTCTGCAGGCCTGGCCACAGCACACGTGGCCCGTTATTGGAGCCAGGCCTA
CACCCCAGCAACC**ATG**TCCAAGGGACCTGCAGTTGGTATTGATCTTGGCACCACCTACTCTTGTGTGGGTGTTTT
CCAGCACGGAAAAGTCGAGATAATTGCCAATGATCAGGGAAACCGAACCACTCCAAGCTATGTCGCCTTTACGGA
CACTGAACGGTTGATCGGTGATGCCGCAAAGAATCAAGTTGCAATGAACCCCACCAACACAGTTTTTGATGCCAA
ACGTCTGATTGGACGCAGATTTGATGATGCTGTTGTCCAGTCTGATATGAAACATTGGCCCTTTATGGTGGTGAA
TGATGCTGGCAGGCCCAAGGTCCAAGTAGAATACAAGGGAGAGACCAAAAGCTTCTATCCAGAGGAGGTGTCTTC
TATGGTTCTGACAAAGATGAAGGAAATTGCAGAAGCCTACCTTGGGAAGACTGTTACCAATGCTGTGGTCACAGT
GCCAGCTTACTTTAATGACTCTCAGCGTCAGGCTACCAAAGATGCTGGAACTATTGCTGGTCTCAATGTACTTAG
AATTATTAATGAGCCAACTGCTGCTGCTATTGCTTACGGCTTAGACAAAAAGGTTGGAGCAGAAAGAAACGTGCT
CATCTTTGACCTGGGAGGTGGCACTTTTGATGTGTCAATCCTCACTATTGAGGATGGAATCTTTGAGGTCAAGTC
TACAGCTGGAGACACCCACTTGGGTGGAGAAGATTTTGACAACCGAATGGTCAACCATTTTATTGCTGAGTTTAA
GCGCAAGCATAAGAAGGACATCAGTGAGAACAAGAGAGCTGTAAGACGCCTCCGTACTGCTTGTGAACGTGCTAA
GCGTACCCTCTCTTCCAGCACCCAGGCCAGTATTGAGATCGATTCTCTCTATGAAGGAATCGACTTCTATACCTC
CATTACCCGTGCCCGATTTGAAGAACTGAATGCTGACCTGTTCCGTGGCACCCTGGACCCAGTAGAGAAAGCCCT
TCGAGATGCCAAACTAGACAAGTCACAGATTCATGATATTGTCCTGGTTGGTGGTTCTACTCGTATCCCCAAGAT
TCAGAAGCTTCTCCAAGACTTCTTCAATGGAAAAGAACTGAATAAGAGCATCAACCCTGATGAAGCTGTTGCTTA
TGGTGCAGCTGTCCAGGCAGCCATCTTGTCTGGAGACAAGTCTGAGAATGTTCAAGATTTGCTGCTCTTGGATGT
CACTCCTCTTTCCCTTGGTATTGAAACTGCTGGTGGAGTCATGACTGTCCTCATCAAGCGTAATACCACCATTCC
TACCAAGCAGACACAGACCTTCACTACCTATTCTGACAACCAGCCTGGTGTGCTTATTCAGGTTTATGAAGGCGA
GCGTGCCATGACAAAGGATAACAACCTGCTTGGCAAGTTTGAACTCACAGGCATACCTCCTGCACCCCGAGGTGT
TCCTCAGATTGAAGTCACTTTTGACATTGATGCCAATGGTATACTCAATGTCTCTGCTGTGGACAAGAGTACGGG
AAAAGAGAACAAGATTACTATCACTAATGACAAGGGCCGTTTGAGCAAGGAAGACATTGAACGTATGGTCCAGGA
AGCTGAGAAGTACAAAGCTGAAGATGAGAAGCAGAGGGACAAGGTGTCATCCAAGAATTCACTTGAGTCCTATGC
CTTCAACATGAAAGCAACTGTTGAAGATGAGAAACTTCAAGGCAAGATTAACGATGAGGACAAACAGAAGATTCT
GGACAAGTGTAATGAAATTATCAACTGGCTTGATAAGAATCAGACTGCTGAGAAGGAAGAATTTGAACATCAACA
GAAAGAGCTGGAGAAAGTTTGCAACCCCATCATCACCAAGCTGTACCAGAGTGCAGGAGGCATGCCAGGAGGAAT
GCCTGGGGGATTTCCTGGTGGTGGAGCTCCTCCCTCTGGTGGTGCTTCCTCAGGGCCCACCATTGAAGAGGTTGA
T**TAA**GCCAACCAAGTGTAGATGTAGCATTGTTCCACACATTTAAAACATTTGAAGGACCTAAATTCGTAGCAAAT
TCTGTGGCAGTTTTAAAAAGTTAAGCTGCTATAGTAAGTTACTGGGCATTCTCAATACTTGAATATGGAACATAT
GCACAGGGGAAGGAAATAACATTGCACTTTATAAACACTGTATTGTAAGTGGAAAATGCAATGTCTTAAATAAAA
CTATTTAAAATTGGCACCATAAAAAAAAAAAAAAAAAAAA

FIGURE 1298

MSKGPAVGIDLGTTYSCVGVFQHGKVEIIANDQGNRTTPSYVAFTDTERLIGDAAKNQVAMNPTNTVFDAKRLIG
RRFDDAVVQSDMKHWPFMVVNDAGRPKVQVEYKGETKSFYPEEVSSMVLTKMKEIAEAYLGKTVTNAVVTVPAYF
NDSQRQATKDAGTIAGLNVLRIINEPTAAAIAYGLDKKVGAERNVLIFDLGGGTFDVSILTIEDGIFEVKSTAGD
THLGGEDFDNRMVNHFIAEFKRKHKKDISENKRAVRRLRTACERAKRTLSSSTQASIEIDSLYEGIDFYTSITRA
RFEELNADLFRGTLDPVEKALRDAKLDKSQIHDIVLVGGSTRIPKIQKLLQDFFNGKELNKSINPDEAVAYGAAV
QAAILSGDKSENVQDLLLLDVTPLSLGIETAGGVMTVLIKRNTTIPTKQTQTFTTYSDNQPGVLIQVYEGERAMT
KDNNLLGKFELTGIPPAPRGVPQIEVTFDIDANGILNVSAVDKSTGKENKITITNDKGRLSKEDIERMVQEAEKY
KAEDEKQRDKVSSKNSLESYAFNMKATVEDEKLQGKINDEDKQKILDKCNEIINWLDKNQTAEKEEFEHQQKELE
KVCNPIITKLYQSAGGMPGGMPGGFPGGGAPPSGGASSGPTIEEVD

FIGURE 1299A

CGGGTGGCGGCTCGGGACGGAGGACGCGCTAGTGTTCTTCTGTGTGGCAGTTCAGA**ATG**ATGGATCAAGCTAGAT
CAGCATTCTCTAACTTGTTTGGTGGAGAACCATTGTCATATACCCGGTTCAGCCTGGCTCGGCAAGTAGATGGCG
ATAACAGTCATGTGGAGATGAAACTTGCTGTAGATGAAGAAGAAAATGCTGACAATAACACAAAGGCCAATGTCA
CAAAACCAAAAAGGTGTAGTGGAAGTATCTGCTATGGGACTATTGCTGTGATCGTCTTTTTCTTGATTGGATTTA
TGATTGGCTACTTGGGCTATTGTAAAGGGGTAGAACCAAAAACTGAGTGTGAGAGACTGGCAGGAACCGAGTCTC
CAGTGAGGGAGGAGCCAGGAGAGGACTTCCCTGCAGCACGTCGCTTATATTGGGATGACCTGAAGAGAAAGTTGT
CGGAGAAACTGGACAGCACAGACTTCACCGGCACCATCAAGCTGCTGAATGAAAATTCATATGTCCCTCGTGAGG
CTGGATCTCAAAAAGATGAAAATCTTGCGTTGTATGTTGAAAATCAATTTCGTGAATTTAAACTCAGCAAAGTCT
GGCGTGATCAACATTTTGTTAAGATTCAGGTCAAAGACAGCGCTCAAAACTCGGTGATCATAGTTGATAAGAACG
GTAGACTTGTTTACCTGGTGGAGAATCCTGGGGGTTATGTGGCGTATAGTAAGGCTGCAACAGTTACTGGTAAAC
TGGTCCATGCTAATTTTGGTACTAAAAAAGATTTTGAGGATTTATACACTCCTGTGAATGGATCTATAGTGATTG
TCAGAGCAGGGAAAATCACCTTTGCAGAAAAGGTTGCAAATGCTGAAAGCTTAAATGCAATTGGTGTGTTGATAT
ACATGGACCAGACTAAATTTCCCATTGTTAACGCAGAACTTTCATTCTTTGGACATGCTCATCTGGGGACAGGTG
ACCCTTACACACCTGGATTCCCTTCCTTCAATCACACTCAGTTTCCACCATCTCGGTCATCAGGATTGCCTAATA
TACCTGTCCAGACAATCTCCAGAGCTGCTGCAGAAAAGCTGTTTGGGAATATGGAAGGAGACTGTCCCTCTGACT
GGAAAACAGACTCTACATGTAGGATGGTAACCTCAGAAAGCAAGAATGTGAAGCTCACTGTGAGCAATGTGCTGA
AAGAGATAAAAATTCTTAACATCTTTGGAGTTATTAAAGGCTTTGTAGAACCAGATCACTATGTTGTAGTTGGGG
CCCAGAGAGATGCATGGGGCCCTGGAGCTGCAAAATCCGGTGTAGGCACAGCTCTCCTATTGAAACTTGCCCAGA
TGTTCTCAGATATGGTCTTAAAAGATGGGTTTCAGCCCAGCAGAAGCATTATCTTTGCCAGTTGGAGTGCTGGAG
ACTTTGGATCGGTTGGTGCCACTGAATGGCTAGAGGGATACCTTTCGTCCCTGCATTTAAAGGCTTTCACTTATA
TTAATCTGGATAAAGCGGTTCTTGGTACCAGCAACTTCAAGGTTTCTGCCAGCCCACTGTTGTATACGCTTATTG
AGAAAACAATGCAAAATGTGAAGCATCCGGTTACTGGGCAATTTCTATATCAGGACAGCAACTGGGCCAGCAAAG
TTGAGAAACTCACTTTAGACAATGCTGCTTTCCCTTTCCTTGCATATTCTGGAATCCCAGCAGTTTCTTTCTGTT
TTTGCGAGGACACAGATTATCCTTATTTGGGTACCACCATGGACACCTATAAGGAACTGATTGAGAGGATTCCTG
AGTTGAACAAAGTGGCACGAGCAGCTGCAGAGGTCGCTGGTCAGTTCGTGATTAAACTAACCCATGATGTTGAAT
TGAACCTGGACTATGAGAGGTACAACAGCCAACTGCTTTCATTTGTGAGGGATCTGAACCAATACAGAGCAGACA
TAAAGGAAATGGGCCTGAGTTTACAGTGGCTGTATTCTGCTCGTGGAGACTTCTTCCGTGCTACTTCCAGACTAA
CAACAGATTTCGGGAATGCTGAGAAAACAGACAGATTTGTCATGAAGAAACTCAATGATCGTGTCATGAGAGTGG
AGTATCACTTCCTCTCTCCCTACGTATCTCCAAAAGAGTCTCCTTTCCGACATGTCTTCTGGGGCTCCGGCTCTC
ACACGCTGCCAGCTTTACTGGAGAACTTGAAACTGCGTAAACAAAATAACGGTGCTTTTAATGAAACGCTGTTCA
GAAACCAGTTGGCTCTAGCTACTTGGACTATTCAGGGAGCTGCAAATGCCCTCTCTGGTGACGTTTGGGACATTG
ACAATGAGTTT**TAA**ATGTGATACCCATAGCTTCCATGAGAACAGCAGGGTAGTCTGGTTTCTAGACTTGTGCTGA
TCGTGCTAAATTTTCAGTAGGGCTACAAAACCTGATGTTAAAATTCCATCCCATCATCTTGGTACTACTAGATGT
CTTTAGGCAGCAGCTTTTAATACAGGGTAGATAACCTGTACTTCAAGTTAAAGTGAATAACCACTTAAAAAATGT
CCATGATGGAATATTCCCCTATCTCTAGAATTTTAAGTGCTTTGTAATGGGAACTGCCTCTTTCCTGTTGTTGTT
AATGAAAATGTCAGAAACCAGTTATGTGAATGATCTCTCTGAATCCTAAGGGCTGGTCTCTGCTGAAGGTTGTAA
GTGGTCGCTTACTTTGAGTGATCCTCCAACTTCATTTGATGCTAAATAGGAGATACCAGGTTGAAAGACCTTCTC
CAAATGAGATCTAAGCCTTTCCATAAGGAATGTAGCTGGTTTCCTCATTCCTGAAAGAAACAGTTAACTTTCAGA
AGAGATGGGCTTGTTTTCTTGCCAATGAGGTCTGAAATGGAGGTCCTTCTGCTGGATAAAATGAGGTTCAACTGT
TGATTGCAGGAATAAGGCCTTAATATGTTAACCTCAGTGTCATTTATGAAAAGAGGGGACCAGAAGCCAAAGACT
TAGTATATTTTCTTTTCCTCTGTCCCTTCCCCCATAAGCCTCCATTTAGTTCTTTGTTATTTTTGTTTCTTCCAA
AGCACATTGAAAGAGAACCAGTTTCAGGTGTTTAGTTGCAGACTCAGTTTGTCAGACTTTAAAGAATAATATGCT
GCCAAATTTTGGCCAAAGTGTTAATCTTAGGGGAGAGCTTTCTGTCCTTTTGGCACTGAGATATTTATTGTTTAT
TTATCAGTGACAGAGTTCACTATAAATGGTGTTTTTTTAATAGAATATAATTATCGGAAGCAGTGCCTTCCATAA
TTATGACAGTTATACTGTCGGTTTTTTTTAAATAAAAGCAGCATCTGCTAATAAAACCCAACAGATACTGGAAGT
TTTGCATTTATGGTCAACACTTAAGGGTTTTAGAAAACAGCCGTCAGCCAAATGTAATTGAATAAAGTTGAAGCT
AAGATTTAGAGATGAATTAAATTTAATTAGGGGTTGCTAAGAAGCGAGCACTGACCAGATAAGAATGCTGGTTTT
CCTAAATGCAGTGAATTGTGACCAAGTTATAAATCAATGTCACTTAAAGGCTGTGGTAGTACTCCTGCAAAATTT

FIGURE 1299B

TATAGCTCAGTTTATCCAAGGTGTAACTCTAATTCCCATTTTGCAAAATTTCCAGTACCTTTGTCACAATCCTAA
CACATTATCGGGAGCAGTGTCTTCCATAATGTATAAAGAACAAGGTAGTTTTTACCTACCACAGTGTCTGTATCG
GAGACAGTGATCTCCATATGTTACACTAAGGGTGTAAGTAATTATCGGGAACAGTGTTTCCCATAATTTTCTTCA
TGCAATGACATCTTCAAAGCTTGAAGATCGTTAGTATCTAACATGTATCCCAACTCCTATAATTCCCTATCTTTT
AGTTTTAGTTGCAGAAACATTTTGTGGTCATTAAGCATTGGGTGGGTAAATTCAACCACTGTAAAATGAAATTAC
TACAAAATTTGAAATTTAGCTTGGGTTTTTGTTACCTTTATGGTTTCTCCAGGTCCTCTACTTAATGAGATAGTA
GCATACATTTATAATGTTTGCTATTGACAAGTCATTTTAACTTTATCACATTATTTGCATGTTACCTCCTATAAA
CTTAGTGCGGACAAGTTTTAATCCAGAATTGACCTTTTGACTTAAAGCAGGGGGACTTTGTATAGAAGGTTTGGG
GGCTGTGGGGAAGGAGAGTCCCCTGAAGGTCTGACACGTCTGCCTACCCATTCGTGGTGATCAATTAAATGTAGG
TATGAATAAGTTCGAAGCTCCGTGAGTGAACCATCATTATAAACGTGATGATCAGCTGTTTGTCATAGGGCAGTT
GGAAACGGCCTCCTAGGGAAAAGTTCATAGGGTCTCTTCAGGTTCTTAGTGTCACTTACCTAGATTTACAGCCTC
ACTTGAATGTGTCACTACTCACAGTCTCTTTAATCTTCAGTTTTATCTTTAATCTCCTCTTTTATCTTGGACTGA
CATTTAGCGTAGCTAAGTGAAAAGGTCATAGCTGAGATTCCTGGTTCGGGTGTTACGCACACGTACTTAAATGAA
AGCATGTGGCATGTTCATCGTATAACACAATATGAATACAGGGCATGCATTTTGCAGCAGTGAGTCTCTTCAGAA
AACCCTTTTCTACAGTTAGGGTTGAGTTACTTCCTATCAAGCCAGTACGTGCTAACAGGCTCAATATTCCTGAAT
GAAATATCAGACTAGTGACAAGCTCCTGGTCTTGAGATGTCTTCTCGTTAAGGAGATGGGCCTTTTGGAGGTAAA
GGATAAAATGAATGAGTTCTGTCATGATTCACTATTCTAGAACTTGCATGACCTTTACTGTGTTAGCTCTTTGAA
TGTTCTTGAAATTTTAGACTTTCTTTGTAAACAAATAATATGTCCTTATCATTGTATAAAAGCTGTTATGTGCAA
CAGTGTGGAGATTCCTTGTCTGATTTAATAAAATACTTAAACACTGAAAAAAAAAAAAAAAAAAA

FIGURE 1300

MMDQARSAFSNLFGGEPLSYTRFSLARQVDGDNSHVEMKLAVDEEENADNNTKANVTKPKRCSGSICYGTIAVIV
FFLIGFMIGYLGYCKGVEPKTECERLAGTESPVREEPGEDFPAARRLYWDDLKRKLSEKLDSTDFTGTIKLLNEN
SYVPREAGSQKDENLALYVENQFREFKLSKVWRDQHFVKIQVKDSAQNSVIIVDKNGRLVYLVENPGGYVAYSKA
ATVTGKLVHANFGTKKDFEDLYTPVNGSIVIVRAGKITFAEKVANAESLNAIGVLIYMDQTKFPIVNAELSFFGH
AHLGTGDPYTPGFPSFNHTQFPPSRSSGLPNIPVQTISRAAAEKLFGNMEGDCPSDWKTDSTCRMVTSESKNVKL
TVSNVLKEIKILNIFGVIKGFVEPDHYVVVGAQRDAWGPGAAKSGVGTALLLKLAQMFSDMVLKDGFQPSRSIIF
ASWSAGDFGSVGATEWLEGYLSSLHLKAFTYINLDKAVLGTSNFKVSASPLLYTLIEKTMQNVKHPVTGQFLYQD
SNWASKVEKLTLDNAAFPFLAYSGIPAVSFCFCEDTDYPYLGTTMDTYKELIERIPELNKVARAAAEVAGQFVIK
LTHDVELNLDYERYNSQLLSFVRDLNQYRADIKEMGLSLQWLYSARGDFFRATSRLTTDFGNAEKTDRFVMKKLN
DRVMRVEYHFLSPYVSPKESPFRHVFWGSGSHTLPALLENLKLRKQNNGAFNETLFRNQLALATWTIQGAANALS
GDVWDIDNEF

FIGURE 1301

GTCACTCGTATAAAAACCTATGCTTTGAAGGTTCTCGTGTGTCTCGGCCTGCAGGTCTCGCTCAGAGCTGTGTCC
CTGAACATCCACCCTGCTGGGGTGGCTTGACGCACTTCTGTGCAAATCTGTTCGCTCGCAACCCTACCTACCTCT
CTCCCGAACCGGAGAAAACCTTCGGCGGGGTCCTTCCGGGTTTTGTGTCGAATCTGCGGCGGCGACCCGGCGCCG
CGTCACGCGGTGGTGAATGTGCGGCAGTACGCGCGCCGCGTCGTTTACGCGGCGATTTCATCATGCTCCGAGCCG
GCGGCGCGCGCCGCTTCCGTCGCCACCCTCTCTGGACAGCCCAGGGCCGCAGGCTCATGCCCTCTCCGCGTCCAG
TGCTGCTTAGAGGTGCTCGCGCCGCTCTGCTGCTGCTGCTGCCGCCCCGGCTCTTAGCCCGACCCTCGCTCCTCC
TCCGCCGGTCCCTCAGCGCGGCCTCCTGCGCCCCGATCTCCTTGCCCGCCGCCGCCTCCCGGAGCAGC**ATG**GACG
GCGCGGGGGCTGAGGAGGTGCTGGCACCTCTGAGGCTAGCAGTGCGCCAGCAGGGAGATCTTGTGCGAAAACTCA
AAGAAGATAAAGCACCCCAAGTAGACGTAGACAAAGCAGTGGCTGAGCTCAAAGCCCGCAAGAGGGTTCTGGAAG
CAAAGGAGCTGGCGTTACAGCCCAAAGATGATATTGTAGACCGAGCAAAAATGGAAGATACCCTGAAGAGGAGGT
TTTTCTATGATCAAGCTTTTGCTATTTATGGAGGTGTTAGTGGTCTGTATGACTTTGGGCCAGTTGGCTGTGCTT
TGAAGAACAATATTATTCAGACCTGGAGGCAGCACTTTATCCAAGAGGAACAGATCCTGGAGATCGATTGCACCA
TGCTCACCCCTGAGCCAGTTTTAAAGACCTCTGGCCATGTAGACAAATTTGCTGACTTCATGGTGAAAGACGTAA
AAAATGGAGAATGTTTTCGTGCTGACCATCTATTAAAAGCTCATTTACAGAAATTGATGTCTGATAAGAAGTGTT
CTGTCGAAAAGAAATCAGAAATGGAAAGTGTTTTGGCCCAGCTTGATAACTATGGACAGCAAGAACTTGCGGATC
TTTTTGTGAACTATAATGTAAAATCTCCCATTACTGGAAATGATCTATCCCCTCCAGTGTCTTTTAACTTAATGT
TCAAGACTTTCATTGGGCCTGGAGGAAACATGCCTGGGTACTTGAGACCAGAAACTGCACAGGGGATTTTCTTGA
ATTTCAAACGACTTTTGGAGTTCAACCAAGGAAAGTTGCCTTTTGCTGCTGCCCAGATTGGAAATTCTTTTAGAA
ATGAGATCTCCCCTCGATCTGGACTGATCAGAGTCAGAGAATTCACAATGGCAGAAATTGAGCACTTTGTAGATC
CCAGTGAGAAAGACCACCCCAAGTTCCAGAATGTGGCAGACCTTCACCTTTATTTGTATTCAGCAAAAGCCCAGG
TCAGCGGACAGTCCGCTCGGAAAATGCGCCTGGGAGATGCTGTTGAACAGGGTGTGATTAATAACACAGTATTAG
GCTATTTCATTGGCCGCATCTACCTCTACCTCACGAAGGTTGGAATATCTCCAGATAAACTCCGCTTCCGGCAGC
ACATGGAGAATGAGATGGCCCATTATGCCTGTGACTGTTGGGATGCAGAATCCAAAACATCCTACGGTTGGATTG
AGATTGTTGGATGTGCTGATCGTTCCTGTTATGACCTCTCCTGTCATGCACGAGCCACCAAAGTCCCACTTGTAG
CTGAGAAACCTCTGAAAGAACCCAAAACAGTCAATGTTGTTCAGTTTGAACCCAGTAAGGGAGCAATTGGTAAGG
CATATAAGAAGGATGCAAAACTGGTGATGGAGTATCTTGCCATTTGTGATGAGTGCTACATTACAGAAATGGAGA
TGCTGCTGAATGAGAAAGGGGAATTCACAATTGAAACTGAAGGGAAAACATTTCAGTTAACAAAAGACATGATCA
ATGTGAAGAGATTCCAGAAAACACTATATGTGGAAGAAGTTGTTCCGAATGTAATTGAACCTTCCTTCGGCCTGG
GTAGGATCATGTATACGGTATTTGAACATACATTCCATGTACGAGAAGGAGATGAACAGAGAACATTCTTCAGTT
TCCCTGCTGTAGTTGCTCCATTCAAATGTTCCGTCCTCCCACTGAGCCAAAACCAGGAGTTCATGCCATTTGTCA
AGGAATTATCGGAAGCCCTGACCAGGCATGGAGTATCTCACAAAGTAGACGATTCCTCTGGGTCAATCGGAAGGC
GCTATGCCAGGACTGATGAGATTGGCGTGGCTTTTGGTGTCACCATTGACTTTGACACAGTGAACAAGACCCCCC
ACACTGCAACTCTGAGGGACCGTGACTCAATGCGGCAGATAAGAGCAGAGATCTCTGAGCTGCCCAGCATAGTCC
AAGACCTAGCCAATGGCAACATCACATGGGCTGATGTGGAGGCCAGGTATCCTCTGTTTGAAGGGCAAGAGACTG
GTAAAAAAGAGACAATCGAGGAA**TGA**GGACAATTTTGACAACTTTTGACCACTTGCGCTAATAAAAAAAAAAAAA
CTACTCTTATGTCCACTTTACAAAAGAAAACAGCATTGTGATTACTCCCAGGGACCGTATTTTATCTTCAGTGGC
TGCCTGATTTTACCCCCACAATTAAAGTTGAAGGAATCCTGA

FIGURE 1302

MDGAGAEEVLAPLRLAVRQQGDLVRKLKEDKAPQVDVDKAVAELKARKRVLEAKELALQPKDDIVDRAKMEDTLK
RRFFYDQAFAIYGGVSGLYDFGPVGCALKNNIIQTWRQHFIQEEQILEIDCTMLTPEPVLKTSGHVDKFADFMVK
DVKNGECFRADHLLKAHLQKLMSDKKCSVEKKSEMESVLAQLDNYGQQELADLFVNYNVKSPITGNDLSPPVSFN
LMFKTFIGPGGNMPGYLRPETAQGIFLNFKRLLEFNQGKLPFAAAQIGNSFRNEISPRSGLIRVREFTMAEIEHF
VDPSEKDHPKFQNVADLHLYLYSAKAQVSGQSARKMRLGDAVEQGVINNTVLGYFIGRIYLYLTKVGISPDKLRF
RQHMENEMAHYACDCWDAESKTSYGWIEIVGCADRSCYDLSCHARATKVPLVAEKPLKEPKTVNVVQFEPSKGAI
GKAYKKDAKLVMEYLAICDECYITEMEMLLNEKGEFTIETEGKTFQLTKDMINVKRFQKTLYVEEVVPNVIEPSF
GLGRIMYTVFEHTFHVREGDEQRTFFSFPAVVAPFKCSVLPLSQNQEFMPFVKELSEALTRHGVSHKVDDSSGSI
GRRYARTDEIGVAFGVTIDFDTVNKTPHTATLRDRDSMRQIRAEISELPSIVQDLANGNITWADVEARYPLFEGQ
ETGKKETIEE

FIGURE 1303

CGGCAGCCCTCCTACCTGCGCACGTGGTGCCGCTGCTGCTGCCTCCCGCTCGCCCTGAACCCAGTGCCTGCAGCC
ATGGCTCCCGGCCAGCTCGCCTTATTTAGTGTCTCTGACAAAACCGGCCTTGTGGAATTTGCAAGAAACCTGACC
GCTCTTGGTTTGAATCTGGTCGCTTCCGGAGGGACTGCAAAAGCTCTCAGGGATGCTGGTCTGGCAGTCAGAGAT
GTCTCTGAGTTGACGGGATTTCCTGAAATGTTGGGGGGACGTGTGAAAACTTTGCATCCTGCAGTCCATGCTGGA
ATCCTAGCTCGTAATATTCCAGAAGATAATGCTGACATGGCCAGACTTGATTTCAATCTTATAAGAGTTGTTGCC
TGCAATCTCTATCCCTTTGTAAAGACAGTGGCTTCTCCAGGTGTAACTGTTGAGGAGGCTGTGGAGCAAATTGAC
ATTGGTGGAGTAACCTTACTGAGAGCTGCAGCCAAAAACCACGCTCGAGTGACAGTGGTGTGTGAACCAGAGGAC
TATGTGGTGGTGTCCACGGAGATGCAGAGCTCCGAGAGTAAGGACACCTCCTTGGAGACTAGACGCCAGTTAGCC
TTGAAGGCATTCACTCATACGGCACAATATGATGAAGCAATTTCAGATTATTTCAGGAAACAGTACAGCAAAGGC
GTATCTCAGATGCCCTTGAGATATGGAATGAACCCACATCAGACCCCTGCCCAGCTGTACACACTGCAGCCCAAG
CTTCCCATCACAGTTCTAAATGGAGCCCCTGGATTTATAAACTTGTGCGATGCTTTGAACGCCTGGCAGCTGGTG
AAGGAACTCAAGGAGGCTTTAGGTATTCCAGCCGCTGCCTCTTTCAAACATGTCAGCCCAGCAGGTGCTGCTGTT
GGAATTCCACTCAGTGAAGATGAGGCCAAAGTCTGCATGGTTTATGATCTCTATAAAACCCTCACACCCATCTCA
GCGGCATATGCAAGAGCAAGAGGGGCTGATAGGATGTCTTCATTTGGTGATTTTGTTGCATTGTCCGATGTTTGT
GATGTACCAACTGCAAAAATTATTTCCAGAGAAGTATCTGATGGTATAATTGCCCCAGGATATGAAGAAGAAGCC
TTGACAATACTTTCCAAAAAGAAAAATGGAAACTATTGTGTCCTTCAGATGGACCAATCTTACAAACCAGATGAA
AATGAAGTTCGAACTCTCTTTGGTCTTCATTTAAGCCAGAAGAGAAATAATGGTGTCGTCGACAAGTCATTATTT
AGCAATGTTGTTACCAAAAATAAAGATTTGCCAGAGTCTGCCCTCCGAGACCTCATCGTAGCCACCATTGCTGTC
AAGTACACTCAGTCTAACTCTGTGTGCTACGCCAAGAACGGGCAGGTTATCGGCATTGGAGCAGGACAGCAGTCT
CGTATACACTGCACTCGCCTTGCAGGAGATAAGGCAAACTATTGGTGGCTTAGACACCATCCACAAGTGCTTTCG
ATGAAGTTTAAAACAGGAGTGAAGAGAGCAGAAATCTCCAATGCCATCGATCAATATGTGACTGGAACCATTGGC
GAGGATGAAGATTTGATAAAGTGGAAGGCACTGTTTGAGGAAGTCCCTGAGTTACTCACTGAGGCAGAGAAGAAG
GAATGGGTTGAGAAACTGACTGAAGTTTCTATCAGCTCTGATGCCTTCTTCCCTTTCCGAGATAACGTAGACAGA
GCTAAAAGGAGTGGTGTGGCGTACATTGCGGCTCCCTCCGGTTCTGCTGCTGACAAAGTTGTGATTGAGGCCTGC
GACGAACTGGGAATCATCCTCGCTCATACGAACCTTCGGCTCTTCCACCAC**TGA**TTTTACCACACACTGTTTTTT
GGCTTGCTTATGTGTAGGTGAACAGTCACGCCTGAAACTTTGAGGATAACTTTTTAAAAAAATAAAACAGTATCT
CTTAAAACAATGTTTTGATCTACATAAACATTGTAAAAATTTTCAATCACGCTTTTTAACTTTCTTACCACAAAA
AAATGATAAGTGGGTGAAGTGATGGTTATGTTAATTAGCGTGC

FIGURE 1304

MAPGQLALFSVSDKTGLVEFARNLTALGLNLVASGGTAKALRDAGLAVRDVSELTGFPEMLGGRVKTLHPAVHAG
ILARNIPEDNADMARLDFNLIRVVACNLYPFVKTVASPGVTVEEAVEQIDIGGVTLLRAAAKNHARVTVVCEPED
YVVVSTEMQSSESKDTSLETRRQLALKAFTHTAQYDEAISDYFRKQYSKGVSQMPLRYGMNPHQTPAQLYTLQPK
LPITVLNGAPGFINLCDALNAWQLVKELKEALGIPAAASFKHVSPAGAAVGIPLSEDEAKVCMVYDLYKTLTPIS
AAYARARGADRMSSFGDFVALSDVCDVPTAKIISREVSDGIIAPGYEEEALTILSKKKNGNYCVLQMDQSYKPDE
NEVRTLFGLHLSQKRNNGVVDKSLFSNVVTKNKDLPESALRDLIVATIAVKYTQSNSVCYAKNGQVIGIGAGQQS
RIHCTRLAGDKANYWWLRHHPQVLSMKFKTGVKRAEISNAIDQYVTGTIGEDEDLIKWKALFEEVPELLTEAEKK
EWVEKLTEVSISSDAFFPFRDNVDRAKRSGVAYIAAPSGSAADKVVIEACDELGIILAHTNLRLFHH

FIGURE 1305

AATTCGGGGGCCGTGGAGTTTGTGACATACGAGGTGACACCCCTCGAGTCACTTCCCTTCAACTCCAGCTGGAGC
GCCTGCTTGGCTTTGGGTTCGTTCTGCAGCCTTCGCCCCGCTCCTAGCCTCAGGGCCGGACTCCAGCGCAGAGCC
CAGCCCAGCGCAGCCTGCCAGCAGCCACCCAGCCGCCCAGCCGCCCAGCCCCGCACGAAACCCGGCCAGAGCTTC
CTAGCAGCCCGAGCC**ATG**AACACCGAAATGTATCAGACCCCCATGGAGGTGGCGGTCTACCAGCTGCACAATTTC
TCCATCTCCTTCTTCTCTTCTCTGCTTGGAGGGGATGTGGTTTCCGTTAAGCTGGACAACAGTGCCTCCGGAGCC
AGCGTGGTGGCCATAGACAACAAGATCGAACAGGCCATGGATCTGGTGAAGAATCATCTGATGTATGCTGTGAGA
GAGGAGGTGGAGATCCTGAAGGAGCAGATCCGAGAGCTGGTGGAGAAGAACTCCCAGCTAGAGCGTGAGAACACC
CTGTTGAAGACCCTGGCAAGCCCAGAGCAGCTGGAGAAGTTCCAGTCCTGTCTGAGCCCTGAAGAGCCAGCTCCC
GAATCCCCACAAGTGCCCGAGGCCCCTGGTGGTTCTGCGGTG**TAA**GTGGCTCTGTCCTCAGGGTGGGCAGAGCCA
CTAAACTTGTTTTACCTAGTTCTTTCCAGTTTGTTTTTGGCTCCCCAAGCATCATCTCACGAGGAGAACTTTACA
CCTAGCACAGCTGGTGCCAAGAGATGTCCTAAGGACATGGCCACCTGGGTCCACTCCAGCGACAGACCCCTGACA
AGAGCAGGTCTCTGGAGGCTGAGTTGCATGGGGCCTAGTAACACCAAGCCAGTGAGCCTCTAATGCTACTGCGCC
CTGGGGGCTCCCAGGGCCTGGGCAACTTAGCTGCAACTGGCAAAGGAGAAGGGTAGTTTGAGGTGTGACACCAGT
TTGCTCCAGAAAGTTTAAGGGGTCTGTTTCTCATCTCCATGGACATCTTCAACAGCTTCACCTGACAACGACTGT
TCCTATGAAGAAGCCACTTGTGTTTTAAGCAGAGGCAACCTCTCTCTTCTCCTCTGTTTCGTGAAGGCAGGGGAC
ACAGATGGGAGAGATTGAGCCAAGTCAGCCTTCTGTTGGTTAATATGGTATAATGCATGGCTTTGTGCACAGCCC
AGTGTGGGATTACAGCTTTGGGATGACCGCTTACAAAGTTCTGTTTGGTTAGTATTGGCATAGTTTTTCTATATA
GCCATAAATGCGTATATATACCCATAGGGCTAGATCTGTATCTTAGTGTAGCGATGTATACATATACACATCCAC
CTACATGTTGAAGGGCCTAACCAGCCTTGGGAGTATTGACTGGTCCCTTACCTCTTATGGCTAAGTCTTTGACTG
TGTTCATTTACCAAGTTGACCCAGTTTGTCTTTTAGGTTAAGTAAGAACTCGAGAGTAAAGGCAAGGAGGGGGGC
CAGCCTCTGAATGCGGCCACGGATGCCTTGCTGCTGCAACCCTTTCCCCAGCTGTCCACTGAAACGTGAAGTCCT
GTTTTGAATGCCAAACCCACCATTCACTGGTGCTGACTACATAGAATGGGTTGAGAGAAGATCAGTTTGGGCTTC
ACAGTGTCATTTGAAAAAGCGTTTTTGTTTTGTTTTGAATTATTGTGGAAAACTTTCAAGTGAACAGAAGGATGG
TGTCCTACTGTGGATGAGGGATGAACAAGGGGATGGCTTTGATCCAATGGAGCCTGGGAGGTGTGCCCAGAAAGC
TTGTCTGTAGCGGGTTTTGTGAGAGTGAACACTTTCCACTTTTTGACACCTTATCCTGATGTATGGTTCCAGGAT
TTGGATTTTGATTTTCCAAATGTAGCTTGAAATTTCAATAAACTTTGCTCTGTTTTTCTAAAAAATAAAAA

FIGURE 1306

MNTEMYQTPMEVAVYQLHNFSISFFSSLLGGDVVSVKLDNSASGASVVAIDNKIEQAMDLVKNHLMYAVREEVEI
LKEQIRELVEKNSQLERENTLLKTLASPEQLEKFQSCLSPEEPAPESPQVPEAPGGSAV

FIGURE 1307

TTAAGGCAGGGGCTGATATAGAACTTGGCTGCTCCACACCTCTG**ATG**GAGGCATCTCAGGAGGGACACCTGGAAT
TGGTTAAATATTTGCTGGCTTCTGGCGCTAATGTGCATGCTACAACAGCAACAGGAGACACAGCCTTAACCTATG
CTTGTGAAAATGGACATACGGATGTTGCAGATGTTTTACTTCAAGCAGGGGCTGATTTAGACAAGCAGGAGGACA
TGAAGACTATTTTGGAGGGCATAGATCCGGCCAAGCATCAGGAACATGAATCTGAAGGTGGAAGAACACCTTTGA
TGAAAGCTGCAAGAGCTGGTCATTTGTGCACTGTGCAGTTTCTTATTAGCAAAGGTGCCAATGTTAACAGGGCTA
CAGCCAATAATGATCATACAGTAGTGTCGCTGGCATGTGCAGGAGGCCACCTGGCAGTTGTTGAGCTTCTCTTGG
CTCATGGGGCTGACCCTACTCATCGACTCAAGGATGGTTCAACAATGCTCATTGAAGCTGCAAAGGGTGGCCATA
CTAATGTAGTTTCTTATCTGTTGGATTATCCAAATAATGTTCTGTCAGTTCCCACCACAGATGTGTCTCAGCTCC
CTCCACCTTCTCAAGATCAGTCTCAGGAACCTGACAGAACTTCACAGGAGAACTCTCCTGCCCTTTTAGGAGTGC
AAAAAGCTGTGAGTACCAGAGTGCCCACTGGTTCCAACAGTTCTTCTCAGACCACAGAGTGTCTTACACCTGAAT
CCTGTTCGCAGACTACAAGCAATGTGGCTTCCCAATCGATGCCTCCTGTGTATCCTTCAGTTGACGTTGATGCAC
ATACTGAGAGCAATCATGACACAGCATTAACACTAGCTTGTGCAGGTGGTCATGAAGAACTTGTATCTGTGCTCA
TTGCACGGGATGCCAAAATTGAACACAGAGACAAAAAAGGTTTCACACCACTAATCCTGGCAGCAACAGCAGGGC
ATGTTGGAGTTGTTGAAATCCTTTTGGATAAAGGTGGAGATATAGAAGCACAGTCTGAACGAACTAAGGATACTC
CGCTTTCATTGGCATGTTCTGGTGGACGTCAGGAGGTGGTAGACTTGCTGCTGGCTCGAGGTGCAAATAAAGAAC
ATAGGAACGTATCTGATTATACACCACTGAGTCTAGCTGCGTCTGGAGGATATGTTAATATCATTAAGATTCTGC
TTAATGCTGGGGCAGAAATTAATTCAAGGACTGGGAGTAAACTAGGTATTTCTCCCCTGATGTTGGCTGCAATGA
ATGGACATGTTCCTGCAGTAAAATTGCTGCTCGATATGGGTTCAGACATTAATGCCCAAATAGAGACCAATCGGA
ACACGGCTCTCACCCTGGCCTGTTTCCAGGGCCGAGCAGAAGTAGTGAGTTTGCTTCTGGACCGAAAAGCCAATG
TTGAACATAGGGCAAAGACGGGTCTTACCCCCTTGATGGAAGCAGCTTCTGGAGGGTATGCAGAGGTTGGAAGAG
TTCTTCTTGATAAAGGAGCAGATGTTAATGCTCCCCCTGTGCCTTCCTCAAGAGATACTGCTTTAACAATAGCAG
CAGACAAAGGTCACTACAAATTTTGTGAACTCCTGATTCATAGGGGAGCCCACATTGATGTTCGTAACAAAAAGG
GAAATACGCCACTTTGGCTGGCATCCAATGGAGGTCATTTTGATGTTGTGCAGTTGCTAGTGCAAGCAGGTGCTG
ATGTGGATGCAGCAGATAACCGGAAAATCACACCTCTTATGTCAGCATTTCGCAAGGGTCATGTAAAAGTTGTTC
AATATTTGGTAAAGGAAGTAAATCAGTTCCCTTCTGATATAGAATGCATGAGATACATAGCAACAATTACAGATA
AGGAACTGTTGAAAAAATGTCATCAATGTGTCGAAACCATTGTGAAGGCTAAAGACCAGCAAGCTGCGGAAGCAA
ATAAGAATGCGAGTATTCTTTTAAAGGAACTTGATCTGGAAAAGTCAAGAGAAGAGAGCAGAAAGCAGGCTCTTG
CTGCTAAAAGAGAAAAAAGAAAAGAAAAGAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

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FIGURE 1308

MEASQEGHLELVKYLLASGANVHATTATGDTALTYACENGHTDVADVLLQAGADLDKQEDMKTILEGIDPAKHQE
HESEGGRTPLMKAARAGHLCTVQFLISKGANVNRATANNDHTVVSLACAGGHLAVVELLLAHGADPTHRLKDGST
MLIEAAKGGHTNVVSYLLDYPNNVLSVPTTDVSQLPPPSQDQSQEPDRTSQENSPALLGVQKAVSTRVPTGSNSS
SQTTECLTPESCSQTTSNVASQSMPPVYPSVDVDAHTESNHDTALTLACAGGHEELVSVLIARDAKIEHRDKKGF
TPLILAATAGHVGVVEILLDKGGDIEAQSERTKDTPLSLACSGGRQEVVDLLLARGANKEHRNVSDYTPLSLAAS
GGYVNIIKILLNAGAEINSRTGSKLGISPLMLAAMNGHVPAVKLLLDMGSDINAQIETNRNTALTLACFQGRAEV
VSLLLDRKANVEHRAKTGLTPLMEAASGGYAEVGRVLLDKGADVNAPPVPSSRDTALTIAADKGHYKFCELLIHR
GAHIDVRNKKGNTPLWLASNGGHFDVVQLLVQAGADVDAADNRKITPLMSAFRKGHVKVVQYLVKEVNQFPSDIE
CMRYIATITDKELLKKCHQCVETIVKAKDQQAAEANKNASILLKELDLEKSREESRKQALAAKREKRKEKRKKKK
KKKKKKKKKK

FIGURE 1309

ATGGCGCTTGCCAGCGTGTTGGAGAGACCGCTACCGGTGAACCAGCGCGGGTTTTTCGGACTTGGGGGTCGTGCA
GATCTGCTGGATCTAGGTCCAGGGAGTCTCAGTGATGGTCTGAGCCTGGCCGCGCCAGGCTGGGGTGTCCCAGAA
GAGCCAGGAATCGAAATGCTTCATGGAACAACCACCCTGGCCTTCAAGTTCCGCCATGGAGTCATAGTTGCAGCT
GACTCCAGGGCTACAGCGGGTGCTTACATTGCCTCCCAGACGGTGAAGAAGGTGATAGAGATCAACCCATACCTG
CTAGGCACCATGGCTGGGGGCGCAGCGGATTGCAGCTTCTGGGAACGGCTGTTGGCTCGGCAATGTCGAATCTAT
GAGCTTCGAAATAAGGAACGCATCTCTGTAGCAGCTGCCTCCAAACTGCTTGCCAACATGGTGTATCAGTACAAA
GGCATGGGGCTGTCCATGGGCACCATGATCTGTGGCTGGGATAAGAGAGGCCCTGGCCTCTACTACGTGGACAGT
GAAGGGAACCGGATTTCAGGGGCCACCTTCTCTGTAGGTTCTGGCTCTGTGTATGCATATGGGGTCATGGATCGG
GGCTATTCCTATGACCTGGAAGTGGAGCAGGCCTATGATCTGGCCCGTCGAGCCATCTACCAAGCCACCTACAGA
GATGCCTACTCAGGAGGTGCAGTCAACCTCTACCACGTGCGGGAGGATGGCTGGATCCGAGTCTCCAGTGACAAT
GTGGCTGATCTACATGAGAAGTATAGTGGCTCTACCCCC**TGA**

FIGURE 1310

MALASVLERPLPVNQRGFFGLGGRADLLDLGPGSLSDGLSLAAPGWGVPEEPGIEMLHGTTTLAFKFRHGVIVAA
DSRATAGAYIASQTVKKVIEINPYLLGTMAGGAADCSFWERLLARQCRIYELRNKERISVAAASKLLANMVYQYK
GMGLSMGTMICGWDKRGPGLYYVDSEGNRISGATFSVGSGSVYAYGVMDRGYSYDLEVEQAYDLARRAIYQATYR
DAYSGGAVNLYHVREDGWIRVSSDNVADLHEKYSGSTP

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FIGURE 1311

CGGTGCCTGGTGCGGGAGCTACGGGGCCCAGGGATTGTGTTTAAAGTAGTGCTTCTACCAACATGTCCCGTGGTT
CCAGCGCCGGTTTTGACCGCCACATTACCATTTTTTCACCCGAGGGTCGGCTCTACCAAGTAGAATATGCTTTTA
AGGCTATTAACCAGGGTGGCCTTACATCAGTAGCTGTCAGAGGGAAAGACTGTGCAGTAATTGTCACACAGAAGA
AAGTACCTGACAAATTATTGGATTCCAGCACAGTGACTCACTTATTCAAGATAACTGAAAACATTGGTTGTGTGA
TGACCGGAATGACAGCTGACAGCAGATCCCAGGTACAGAGGGCACGCTATGAGGCAGCTAACTGGAAATACAAGT
ATGGCTATGAGATTCCTGTGGACATGCTGTGTAAAAGAATTGCCGATATTTCTCAGGTCTACACACAGAATGCTG
AAATGAGGCCTCTTGGTTGTTGTATGATTTTAATTGGTATAGATGAAGAGCAAGGCCCTCAGGTATATAAGTGTG
ATCCTGCAGGTTACTACTGTGGGTTTAAAGCCACTGCAGCGGGAGTTAAACAAACTGAGTCAACCAGCTTCCTTG
AAAAAAAAGTGAAGAAGAAATTTGATTGGACATTTGAACAGACAGTGGAAACTGCAATTACATGCCTGTCTACTG
TTCTATCAATTGATTTCAAACCTTCAGAAATAGAAGTTGGAGTAGTGACAGTTGAAAATCCTAAATTCAGGATTC
TTACAGAAGCAGAGATTGATGCTCACCTTGTTGCTCTAGCAGAGAGAGACTAAACATTGTCGTTAGTTTACCAGA
TCCGTGATGCCACTTACCTGTGTGTTTGGTAACAACAAACAAACATCATGGAGGTCCCTGGATTGAAAAAGGAGC
CTCTCCCACTCCTCCTACCACCGAAGTGGTTAGGACTCTATATAAATAAAAACAAGGCTTTTGGAAAAAAAAAAA
AAAA

FIGURE 1312

MSRGSSAGFDRHITIFSPEGRLYQVEYAFKAINQGGLTSVAVRGKDCAVIVTQKKVPDKLLDSSTVTHLFKITEN
IGCVMTGMTADSRSQVQRARYEAANWKYKYGYEIPVDMLCKRIADISQVYTQNAEMRPLGCCMILIGIDEEQGPQ
VYKCDPAGYYCGFKATAAGVKQTESTSFLEKKVKKKFDWTFEQTVETAITCLSTVLSIDFKPSEIEVGVVTVENP
KFRILTEAEIDAHLVALAERD

FIGURE 1313

GATGTGGCCCGTGGCCTAGCTCGTCAAGTTGCCGTGGCGCGGAGAACTCTGCAAAACAAGAGGCTGAGGATTGCG
TTAGAGATAAACCAGTTCACGCCGGAGCCCCGTGAGGGAAGCGTCTCCGTTGGGTCCGGCCGCTCTGCGGGACTC
TGAGGAAAAGCTCGCACCAGGTGGACGCGGATCTGTCAAC**ATG**GGTAAAGGAGACCCCAACAAGCCGCGGGGCAA
AATGTCCTCGTACGCCTTCTTCGTGCAGACCTGCCGGGAAGAGCACAAGAAGAAACACCCGGACTCTTCCGTCAA
TTTCGCGGAATTCTCCAAGAAGTGTTCGGAGAGATGGAAGACCATGTCTGCAAAGGAGAAGTCGAAGTTTGAAGA
TATGGCAAAAAGTGACAAAGCTCGCTATGACAGGGAGATGAAAAATTACGTTCCTCCCAAAGGTGATAAGAAGGG
GAAGAAAAAGGACCCCAATGCTCCTAAAAGGCCACCATCTGCCTTCTTCCTGTTTTGCTCTGAACATCGCCCAAA
GATCAAAAGTGAACACCCTGGCCTATCCATTGGGGATACTGCAAAGAAATTGGGTGAAATGTGGTCTGAGCAGTC
AGCCAAAGATAAACAACCATATGAACAGAAAGCAGCTAAGCTAAAGGAGAAATATGAAAAGGATATTGCTGCATA
TCGTGCCAAGGGCAAAAGTGAAGCAGGAAAGAAGGGCCCTGGCAGGCCAACAGGCTCAAAGAAGAAGAACGAACC
AGAAGATGAGGAGGAGGAGGAGGAAGAAGAAGATGAAGATGAGGAGGAAGAGGATGAAGATGAAGAA**TAA**ATGGC
TATCCTTTAATGATGCGTGTGGAATGTGTGTGTGTGCTCAGGCAATTATTTTGCTAAGAATGTGAATTCAAGTGC
AGCTCAATACTAGCTTCAGTATAAAAACTGTACAGATTTTTGTATAGCTGATAAGATTCTCTGTAGAGAAAATAC
TTTTAAAAAATGCAGGTTGTAGCTTTTTGATGGGCTACTCATACAGTTAGATTTTACAGCTTCTGATGTTGAATG
TTCCTAAATATTTAATGGTTTTTTTAATTTCTGTGTGTATGGTAGCACAGCAAACTTGTAGGAATTAGTATCAAT
AGTAAATTTTGGGTTTTTTAGGATGTTGCATTTCGTTTTTTTAAAAAAAATTTTGTAATAAAATTATGTATATTA
TTTCTATTGTCTTTGTCTTAATATGCTAAGTTAATTTTCACTTTAAAAAAGCCATTTGAAGACCAAAAAAAAAAA
AA

FIGURE 1314

MGKGDPNKPRGKMSSYAFFVQTCREEHKKKHPDSSVNFAEFSKKCSERWKTMSAKEKSKFEDMAKSDKARYDREM
KNYVPPKGDKKGKKKDPNAPKRPPSAFFLFCSEHRPKIKSEHPGLSIGDTAKKLGEMWSEQSAKDKQPYEQKAAK
LKEKYEKDIAAYRAKGKSEAGKKGPGRPTGSKKKNEPEDEEEEEEEEDEDEEEEDEDEE

FIGURE 1315

TCTCTTGATTCCTAGTCTCTCGAT**ATG**GCACCTCCGTCAGTCTTTGCCGAGGTTCCGCAGGCCCAGCCTGTCCTG
GTCTTCAAGCTCACTGCCGACTTCAGGGAGGATCCGGACCCCCGCAAGGTCAACCTGGGAGTGGGAGCATATCGC
ACGGATGACTGCCATCCCTGGGTTTTGCCAGTAGTGAAGAAAGTGGAGCAGAAGATTGCTAATGACAATAGCCTA
AATCACGAGTATCTGCCAATCCTGGGCCTGGCTGAGTTCCGGAGCTGTGCTTCTCGTCTTGCCCTTGGGGATGAC
AGCCCAGCACTCAAGGAGAAGCGGGTAGGAGGTGTGCAATCTTTGGGGGGAACAGGTGCACTTCGAATTGGAGCT
GATTTCTTAGCGCGTTGGTACAATGGAACAAACAACAAGAACACACCTGTCTATGTGTCCTCACCAACCTGGGAG
AATCACAATGCTGTGTTTTCCGCTGCTGGTTTTAAAGACATTCGGTCCTATCGCTACTGGGATGCAGAGAAGAGA
GGATTGGACCTCCAGGGCTTCCTGAATGATCTGGAGAATGCTCCTGAGTTCTCCATTGTTGTCCTCCACGCCTGT
GCACACAACCCAACTGGGATTGACCCAACTCCGGAGCAGTGGAAGCAGATTGCTTCTGTCATGAAGCACCGGTTT
CTGTTCCCCTTCTTTGACTCAGCCTATCAGGGCTTCGCATCTGGAAACCTGGAGAGAGATGCCTGGGCCATTCGC
TATTTTGTGTCTGAAGGCTTCGAGTTCTTCTGTGCCCAGTCCTTCTCCAAGAACTTCGGGCTCTACAATGAGAGA
GTCGGGAATCTGACTGTGGTTGGAAAAGAACCTGAGAGCATCCTGCAAGTCCTTTCCCAGATGGAGAAGATCGTG
CGGATTACTTGGTCCAATCCCCCCGCCCAGGGAGCACGAATTGTGGCCAGCACCCTCTCTAACCCTGAGCTCTTT
GAGGAATGGACAGGTAATGTGAAGACAATGGCTGACCGGATTCTGACCATGAGATCTGAACTCAGGGCACGACTA
GAAGCCCTCAAAACCCCTGGGACCTGGAACCACATCACTGATCAAATTGGCATGTTCAGCTTCACTGGGTTGAAC
CCCAAGCAGGTTGAGTATCTGGTCAATGAAAAGCACATCTACCTGCTGCCAAGTGGTCGAATCAACGTGAGTGGC
TTAACCACCAAAAATCTAGATTACGTGGCCACCTCCATCCATGAAGCAGTCACCAAAATCCAG**TGA**AGAAACACC
ACCCGTCCAGTACCACCAAAGTAGTTCTCTGTCATGTGTGTTCCCTGCCTGCACAAACCTACATGTACATACCAT
GGATTAGAGACACTTGCAGGACTGAAAGCTGCTCTGGTGAGGCAGCCTCTGTTTAAACCGGCCCCACATGAAGAG
AACATCCCTTGAGACGAATTTGGAGACTGGGATTAGAGCCTTTGGAGGTCAAAGCAAATTAAGATTTTTATTTAA
GAATAAAAGAGTACTTTGATCATGAGACATAGGTATCTTGTCCCTCTCACTAAAAAGGAGTGTTGTGTGTGGCGG
CCACGTGCTTCTATGTGGTGTTTGACTCTGTACAAATTCTAGTCCCAAAGATCAAGTTGTCTGAAGGAGCCAAAG
TGTGAATGTGGGTGTCGGCTGCGGCATTAAATTCATCATCTCAACCCAGAGTGTCTGGTCTCCCTGCTCTTTCTG
CATGGTTGTGTCCCTAGTCCTAAGCTTTGGTTCTTTAGGGTGACTGTGGTAAGAAGGATATTTAATCATGACATG
CACGGACACGTACATATTTAACTGAAACAAGTTTTACCAAACAGTATTTACTCGTGATGTGCGTAGTGCATTCTG
ATATTTTTGAGCCATTCTATTGTGTTCTACTTCACCTAAAAAAATAAAATAAAAATGTTGATCAAG

FIGURE 1316

MAPPSVFAEVPQAQPVLVFKLTADFREDPDPRKVNLGVGAYRTDDCHPWVLPVVKKVEQKIANDNSLNHEYLPIL
GLAEFRSCASRLALGDDSPALKEKRVGGVQSLGGTGALRIGADFLARWYNGTNNKNTPVYVSSPTWENHNAVFSA
AGFKDIRSYRYWDAEKRGLDLQGFLNDLENAPEFSIVVLHACAHNPTGIDPTPEQWKQIASVMKHRFLFPFFDSA
YQGFASGNLERDAWAIRYFVSEGFEFFCAQSFSKNFGLYNERVGNLTVVGKEPESILQVLSQMEKIVRITWSNPP
AQGARIVASTLSNPELFEEWTGNVKTMADRILTMRSELRARLEALKTPGTWNHITDQIGMFSFTGLNPKQVEYLV
NEKHIYLLPSGRINVSGLTTKNLDYVATSIHEAVTKIQ

FIGURE 1317

CCCACGCGTCCGCAGTACCGGAGGAGAAAG**ATG**GCGGCTACCTTACTAGCTGCTCGGGGAGCCGGGCCAGCACCG
GCTTGGGGGCCGGAGGCGTTCACTCCAGACTGGGAAAGCCGAGAAGTTTCCACTGGGACCACTATCATGGCCGTG
CAGTTTGACGGGGGCGTGGTTCTGGGGGCGGACTCCAGAACAACCACTGGGTCCTACATCGCCAATCGAGTGACT
GACAAGCTGACACCTATTCACGACCGCATTTTCTGCTGTCGCTCAGGCTCAGCTGCTGATACCCAGGCAGTAGCT
GATGCTGTCACCTACCAGCTCGGTTTCCACAGCATTGAACTGAATGAGCCTCCACTGGTCCACACAGCAGCCAGC
CTCTTTAAGGAGATGTGTTACCGATACCGGGAAGACCTGATGGCGGGAATCATCATCGCAGGCTGGGACCCTCAA
GAAGGAGGGCAGGTGTACTCAGTGCCTATGGGGGGTATGATGGTAAGGCAGTCCTTTGCCATTGGAGGCTCCGGG
AGCTCCTACATCTATGGCTATGTTGATGCTACCTACCGGGAAGGCATGACCAAGGAAGAGTGTCTGCAATTCACT
GCCAATGCTCTCGCTTTGGCCATGGAGCGGGATGGCTCCAGTGGAGGAGTGATCCGCCTGGCAGCCATTGCAGAG
TCAGGGGTAGAGCGGCAAGTACTTTTGGGAGACCAGATACCCAAATTCGCCGTTGCCACTTTACCACCCGCC**TGA**

ATCCTGGGATTCTAGTATGCAATAAGAGATGCCCTGTACTGATGCAAAATTTAATAAAGTTTGTCACAGAGAAAA
AAAAAAAAAAAAAAAAAAAAA

FIGURE 1318

MAATLLAARGAGPAPAWGPEAFTPDWESREVSTGTTIMAVQFDGGVVLGADSRTTTGSYIANRVTDKLTPIHDRI
FCCRSGSAADTQAVADAVTYQLGFHSIELNEPPLVHTAASLFKEMCYRYREDLMAGIIIAGWDPQEGGQVYSVPM
GGMMVRQSFAIGGSGSSYIYGYVDATYREGMTKEECLQFTANALALAMERDGSSGGVIRLAAIAESGVERQVLLG
DQIPKFAVATLPPA

FIGURE 1319

ATGACGAAGAACGAGAAGAAGTCCCTCAACCAGAGCCTGGCCGAGTGGAAGCTCTTCATCTACAACCCGACCACC
GGAGAATTCCTGGGGCGCACCGCCAAGAGCTGGGGTTTGATCTTGCTCTTCTACCTAGTTTTTTATGGGTTCCTG
GCTGCACTCTTCTCATTCACGATGTGGGTTATGCTTCAGACTCTCAACGATGAGGTTCCAAAATACCGTGACCAG
ATTCCTAGCCCAGGACTCATGGTTTTTCCAAAACCAGTGACCGCATTGGAATATACATTCAGTAGGTCTGATCCA
ACTTCGTATGCAGGGTACATTGAAGACCTTAAGAAGTTTCTAAAACCATATACTTTAGAAGAACAGAAGAACCTC
ACAGTCTGTCCTGATGGAGCACTTTTTGAACAGAAGGGTCCAGTTTATGTTGCATGTCAGTTTCCTATTTCATTA
CTTCAAGCATGCAGTGGTATGAATGATCCTGATTTTGGCTATTCTCAAGGAAACCCTTGTATTCTTGTGAAAATG
AACAGAATAATTGGATTAAAGCCTGAAGGAGTGCCAAGGATAGATTGTGTTTCAAAGAATGAAGATATACCAAAT
GTAGCAGTTTATCCTCATAATGGAATGATAGACTTAAAATATTTCCCATATTATGGGAAAAAACTGCATGTTGGG
TATCTACAGCCATTGGTTGCTGTTCAGGTCAGCTTTGCTCCTAACAACACTGGGAAAGAAGTAACAGTTGAGTGC
AAGATTGATGGATCAGCCAACCTAAAAAGTCAGGATGATCGTGACAAGTTTTTGGGACGAGTTATGTTCAAAATC
ACAGCACGTGCA**TAG**TATGAGTAGGATATCTCCACAGAGTAAATGTTGTGTTGTCTGTCTTCATTTTGTAACAGC
TGGACCTTCCATTCTAGAATTATGAGACCACCTTGGAGAAAGGTGTGTGGTACATGACATTGGGTTACATCATAA
CGTGCTTCCAGATCATAGTGTTCAGTGTCCTCTGAAGTAACTGCCTGTTGCCTCTGCTGCCCTTTGAACCAGTGT
ACAGTCGCCAGATAGGGACCGGTGAACACCTGATTCCAAACATGTAGGATGGGGGTCTTGTCCTCTTTTTATGTG
GTTTAATTGCCAAGTGTCTAAAGCTTAATATGCCGTGCTATGTAAATATTTTATGGATATAACAACTGTCATATT
TTGATGTCAACAGAGTTTTAGGGATAAAATGGTACCCGGCCAACATCAAGTGACTTTATAGCTGCAAGAAATGTG
GTATGTGGAGAAGTTCTGTATGTGAGGAAGGAAAAAAAGAAAATAAAAGTGTGTTTGAAAAATATTATCTTGGGT
TCTTTGTAAAATTTATTTTTTACATGCTGAATTAGCCTCGATCTTTTTGATTAAGAGCACAAACTTTTTTTTGTA
AAACATGTAAAAAAAAAAACTGGGATTAATTTTTAGTGTTGGAACTGCCTCTTATTTTAGGCTGTAGATAAAATA
GCATTTTTAGGTTAGCCAGTGTGACTATGCACCTAATTTTTTATGAGATTAAATTCATAAGACTTAATTTGTACA
ATAGTTTGTGAAATATCTTGTTACTGCTTTTATTTAGCAGACTGTGGACTGTAATAAAGTATATAAATTGTGAAA
TATAAAAACTTGGAACTTATTCAAAGCTT

FIGURE 1320

MTKNEKKSLNQSLAEWKLFIYNPTTGEFLGRTAKSWGLILLFYLVFYGFLAALFSFTMWVMLQTLNDEVPKYRDQ
IPSPGLMVFPKPVTALEYTFSRSDPTSYAGYIEDLKKFLKPYTLEEQKNLTVCPDGALFEQKGPVYVACQFPISL
LQACSGMNDPDFGYSQGNPCILVKMNRIIGLKPEGVPRIDCVSKNEDIPNVAVYPHNGMIDLKYFPYYGKKLHVG
YLQPLVAVQVSFAPNNTGKEVTVECKIDGSANLKSQDDRDKFLGRVMFKITARA

FIGURE 1321

CCCTTACATCCTCCTAGGACCCGGTCGGTAGTCGTCGCCCCAGCCCGCCGGGGGCGCAGCGCCCGAGCCGCGGCC
CTCGAGACGGGACCGAGAGCATC**ATG**GGCAGCACTGTCCCGCGCTCCGCCTCCGTGCTGCTTCTGCTGCTGCTCC
TGCGCCGGGCCGAGCAGCCCTGCGGGGCCGAGCTCACCTTCGAGCTGCCGGACAACGCCAAGCAGTGCTTCCACG
AGGAGGTGGAGCAGGGCGTGAAGTTCTCCCTGGATTACCAGGTCATCACTGGAGGCCACTACGATGTTGACTGCT
ATGTAGAGGACCCCCAGGGGAACACCATCTACAGAGAAACGAAGAAGCAGTACGACAGCTTCACGTACCGGGCTG
AAGTCAAGGGCGTTTATCAGTTTTGCTTCAGTAATGAGTTTTCCACCTTCTCTCACAAGACCGTCTACTTTGACT
TTCAAGTGGGCGATGAGCCTCCCATTCTCCCAGACATGGGGAACAGGGTCACAGCTCTCACCCAGATGGAGTCCG
CCTGCGTGACCATCCATGAGGCTCTGAAAACGGTGATTGACTCCCAGACGCATTACCGGCTGCGGGAGGCCCAGG
ACCGGGCCCGAGCGGAAGACCTTAATAGCCGAGTCTCTTACTGGTCTGTTGGCGAGACGATTGCCCTGTTCGTGG
TCAGCTTCAGTCAGGTGCTACTGTTGAAAAGCTTCTTCACAGAAAAACGACCCATCAGCAGGGCAGTCCACTCC**T**
AGCCCCGGCATCCTGCTCTAGGGCCCCTCATGCCCCAGGCTGGAGCAGCTCTCCTAGGTCACAGCCTGCTGGGCT
GGGTCGCGTAGCCCAGGGTGGAGGCAGAACGATGCTGCTGTGGTAGCCCTTTGCCTTTCATGCCCATGCTTGATT
CTTGCACCTCAGCAGCTGAAGGTCTCAGAGACCAGTAATCAGAAGGCATCCGACTGCATTAAGTGTGCAGCGCTG
AAAAGACATTTACAACTAGGCCAGGGATTAGCCACTGTGGGAGGGTGGACAGGCAATGGTTCAGTGGCCTGGCTG
TTGGCAGGAACTCCAAGTGCCCAGGCCTCTTGGGCAGCTTAGGGCCCTGCCTCTGTTTCATGATGCATGGGTCAT
TTGTCTTGGGTGTCCTATCCCATATGGAGAAGAAAGGGGCTCTAAGTTCTGGCTCTTCTTTCTTTGGGGTTCTCT
GTACCTGAGGAAACCAGGCCCTGGGTGACTTTGCAGATCTGCTCACCCTCGGTGAGCAACAGTGTCAGCCATGCA
AGCAGGACAGAATGGTGACTGGGTGCCCTTGGTGAGCTGTGTATTTCCTAGGAGGTAGAAAACTGTGGGAAACTG
TGGCTAATAAAAACTAAGTGTGAGCGTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAA

FIGURE 1322

MGSTVPRSASVLLLLLLLRRAEQPCGAELTFELPDNAKQCFHEEVEQGVKFSLDYQVITGGHYDVDCYVEDPQGN
TIYRETKKQYDSFTYRAEVKGVYQFCFSNEFSTFSHKTVYFDFQVGDEPPILPDMGNRVTALTQMESACVTIHEA
LKTVIDSQTHYRLREAQDRARAEDLNSRVSYWSVGETIALFVVSFSQVLLLKSFFTEKRPISRAVHS

FIGURE 1323A

CAACCTCCAGCCAGTCCCTGGGTCGGGCGGATCCTCCCAGAGGTGGCACA**ATG**GAGCGATCTCCAGGAGAGGGCC
CCAGCCCCAGCCCCATGGACCAGCCCTCTGCTCCCTCCGACCCCACTGACCAGCCCCCCGCTGCTCACGCAAAGC
CAGACCCAGGTTCTGGGGGCCAACCTGCTGGCCCTGGCGCGGCGGGTGAGGCCCTGGCGGTGCTGACTTCATTCG
GGAGGCGGTTGCTGGTGCTGATACCTGTGTATTTGGCCGGGGCAGTGGGACTCAGCGTGGGTTTCGTGCTCTTCG
GCCTCGCCCTCTACCTGGGCTGGCGCCGGGTCCGCGACGAGAAAGAACGGAGCCTTCGAGCAGCGAGGCAGCTAC
TGGACGACGAGGAGCAGCTCACTGCGAAAACTCTCTATATGAGTCATCGAGAGCTACCTGCCTGGGTCAGCTTCC
CAGACGTGGAAAAGGCTGAATGGCTCAATAAGATTGTGGCCCAGGTCTGGCCCTTCCTGGGCCAGTATATGGAGA
AGCTTCTGGCTGAAACTGTGGCTCCGGCTGTTAGGGGATCTAACCCCCATCTGCAAACATTTACATTTACACGAG
TGGAACTGGGTGAAAAGCCATTGCGCATCATTGGAGTCAAGGTTCACCCAGGTCAGAGAAAAGAGCAGATCCTGC
TGGACTTGAACATCAGCTATGTAGGTGATGTGCAGATTGATGTGGAAGTGAAGAAATATTTTTGCAAAGCAGGAG
TCAAGGGCATGCAGCTACATGGCGTTTTGCGGGTGATACTGGAGCCACTCATTGGGGACCTTCCCTTCGTGGGGG
CTGTGTCAATGTTCTTCATCCGACGCCCGACCCTAGACATCAACTGGACAGGGATGACCAACCTGCTGGATATCC
CAGGACTTAGCTCACTCTCTGACACCATGATCATGGACTCCATTGCTGCCTTCCTCGTGTTGCCCAACCGATTAC
TGGTGCCCCTTGTGCCTGACCTTCAAGATGTGGCTCAGTTGCGTTCCCCTCTGCCCAGGGGCATTATTCGAATTC
ACCTGCTGGCTGCTCGAGGGCTGAGTTCCAAGGACAAATATGTGAAGGGCCTGATTGAGGGCAAGTCAGACCCAT
ATGCACTTGTGCGTTTGGGTACCCAGACATTCTGCAGTCGTGTCATTGATGAAGAACTCAACCCACAGTGGGGAG
AGACTTATGAGGTGATGGTACACGAGGTCCCAGGGCAGGAGATTGAAGTGGAGGTGTTCGACAAGGATCCAGATA
AAGATGACTTTCTGGGCAGAATGAAGCTGGATGTAGGGAAGGTGTTACAGGCTAGCGTTCTGGATGATTGGTTCC
CTCTACAAGGTGGGCAAGGCCAAGTTCACTTGAGGCTAGAATGGCTGTCACTTTTGTCAGATGCAGAGAAACTGG
AGCAGGTTCTACAGTGGAATTGGGGAGTCTCCTCTCGACCAGATCCCCCGTCAGCTGCCATCTTAGTTGTCTACC
TGGATCGGGCCCAGGATCTTCCTCTGAAGAAGGGGAACAAGGAACCCAACCCTATGGTACAACTGTCAATTCAGG
ATGTGACTCAGGAGAGCAAGGCTGTCTACAGTACCAACTGCCCAGTGTGGGAGGAAGCGTTCCGGTTCTTCCTAC
AAGACCCTCAAAGCCAGGAGCTCGATGTGCAAGTGAAGGATGATTCCAGGGCCCTGACTTTAGGAGCACTGACGC
TGCCTCTGGCCCGCCTGCTGACTGCCCCAGAACTCATCCTGGACCAGTGGTTCCAGCTCAGCAGCTCTGGTCCAA
ACTCCAGACTCTATATGAAACTAGTCATGAGGATCCTGTACTTGGATTCATCAGAAATATGCTTCCCCACGGTGC
CTGGTTGTCCTGGTGCTTGGGACGTGGACAGTGAGAATCCCCAGAGAGGCAGCAGTGTGGATGCCCCACCTCGAC
CCTGTCACACGACTCCTGATAGCCAGTTTGGGACTGAGCATGTGCTTCGGATCCATGTATTAGAGGCCCAGGACC
TGATTGCCAAAGACCGTTTCTTGGGGGGACTGGTGAAGGGCAAGTCAGACCCCTATGTCAAACTAAAGTTGGCAG
GACGAAGCTTCCGGAGCCATGTTGTTCGGGAAGATCTCAATCCCCGCTGGAATGAGGTTTTTGAGGTGATCGTCA
CATCAGTTCCAGGCCAAGAGCTAGAGGTTGAAGTCTTTGACAAGGACTTGGACAAGGATGATTTTCTGGGCAGGT
GTAAAGTGCGTCTCACCACAGTCTTAAACAGTGGCTTCCTTGATGAGTGGCTGACCCTGGAGGATGTCCCATCTG
GCCGCCTGCACTTGCGCCTGGAGCGTCTCACCCCCCGTCCCACTGCTGCTGAGTTAGAGGAGGTGCTGCAGGTGA
ATAGTTTGATCCAGACTCAGAAGAGTGCGGAGCTGGCTGCGGCCCTGCTATCCATCTATATGGAGCGGGCAGAGG
ACCTCCCGCTGCGAAAAGGCACCAAGCACCTCAGCCCTTATGCTACTCTCACTGTGGGAGATAGTTCTCATAAAA
CCAAGACTATTTCGCAAACTTCAGCCCCTGTCTGGGATGAGAGTGCCTCCTTTCTCATCAGGAAACCACACACTG
AGAGCCTAGAGTTGCAGGTTCGGGGTGAGGGCACTGGCGTGCTGGGCTCATTATCCCTGCCCCTCTCAGAGCTCC
TCGTGGCTGACCAGCTCTGCTTGGACCGCTGGTTTACACTCAGCAGTGGTCAGGGGCAGGTGCTACTGAGAGCAC
AGCTAGGGATCCTGGTGTCCCAGCACTCGGGAGTGGAAGCTCATAGCCACAGCTACAGCCACAGCTCCTCATCGC
TGAGTGAAGAACCAGAGCTCTCGGGGGGACCCCCTCACATCACCTCCTCAGCCCCAGAGCTCCGGCAGCGCCTAA
CACATGTTGACAGTCCCCTTGAGGCTCCAGCCGGGCCTCTGGGCCAGGTGAAACTGACTCTGTGGTACTACAGTG
AAGAACGAAAGCTGGTCAGCATTGTTCATGGTTGCCGGTCCCTTCGACAGAATGGACGTGATCCTCCTGATCCCT
ATGTGTCACTGTTGCTACTGCCAGACAAGAACCGAGGCACCAAGAGGAGGACCTCACAGAAGAAGAGGACCCTGA
GTCCTGAATTTAATGAACGGTTTGAGTGGGAACTCCCCCTGGATGAGGCCCAGAGACGAAAGCTGGATGTCTCTG
TCAAGTCTAATTCCTCCTTCATGTCAAGAGAGCGTGAGCTGCTGGGGAAGGTGCAGCTGGACCTAGCTGAGACAG
ACCTTTCCCAGGGTGTAGCCCGGTGGTATGACCTGATGGACAACAAGGACAAGGGCAGCTCC**TAG**GAGCTGGCGA
GTCCCAGCCTGACTGCTCTGTCTTCCTGCCTTCGTCTCGCTCCATCACCGCCTCAATGTGATGAGCCTAAAGCTA
GGGTCCAAGGGCAGAGCCTGTGCCCTTCAGCCCTTTCACCTAACAGGCCCATATTCGGGCCTTTGCCTGACCAAA
GAGAAGAACCGTATGTTCCCTTTACTGCACGGCCTTTATCCTTCTGGGCCCCTGGGGCGGGGACCTGAGCTGGCT

FIGURE 1323B

GTTTCCTGCTTTGCCTGCACATTGTTCTCCCTTCCTCCCAACTCCTCAGGGCCTTCTGTATCTGTGCCTGGCCAG
TGGCAGCACTAGCAGTGGTATTAGCTTATGCCAAATACAGCTTTGGAAGGATCTTTTTTTCTTTAACTAGATGGT
CACCTTCTTCCCTACCACACATGGGTGGGAAGGTGGACAGGCTAACCTCTCCAGCTGTGAGCCTCTTAGACTACT
GCATGTAGCAAATGTTCAGCAGCTCAGGCCCCCATGTCCAGTTCTGTCCCCACTGTCCTCAACCCTGTCCTGAAA
ATTCTACTGCTTTGATGGCTGGGGCCAGTCTCTTGTCACTTTGGAAACTGAGGACGCGTGGATTCTACTCAAGCC
TCCAAGTAGTGGCATATCAGTCTTGGAGCTCCTAGCTGGTGATACGGAGAGGGCTTTGGAGGACTTGGGACAGCA
GGGCCAATTTTTTTGCCCAAGTGCCTAGGCTGCTAACTCACTGACTAGAACTTAATCTGGTACTTTACAGTTTTG
CACCAACTCTGCCAAGCCACTGGATCTTACATTAAACATCATACTCAAAAAAAAAAAAAAAAAAA

FIGURE 1324

MERSPGEGPSPSPMDQPSAPSDPTDQPPAAHAKPDPGSGGQPAGPGAAGEALAVLTSFGRRLLVLIPVYLAGAVG
LSVGFVLFGLALYLGWRRVRDEKERSLRAARQLLDDEEQLTAKTLYMSHRELPAWVSFPDVEKAEWLNKIVAQVW
PFLGQYMEKLLAETVAPAVRGSNPHLQTFTFTRVELGEKPLRIIGVKVHPGQRKEQILLDLNISYVGDVQIDVEV
KKYFCKAGVKGMQLHGVLRVILEPLIGDLPFVGAVSMFFIRRPTLDINWIGMTNLLDIPGLSSLSDTMIMDSIAA
FLVLPNRLLVPLVPDLQDVAQLRSPLPRGIIRIHLLAARGLSSKDKYVKGLIEGKSDPYALVRLGTQTFCSRVID
EELNPQWGETYEVMVHEVPGQEIEVEVFDKDPDKDDFLGRMKLDVGKVLQASVLDDWFPLQGGQGQVHLRLEWLS
LLSDAEKLEQVLQWNWGVSSRPDPPSAAILVVYLDRAQDLPLKKGNKEPNPMVQLSIQDVTQESKAVYSTNCPVW
EEAFRFFLQDPQSQELDVQVKDDSRALTLGALTLPLARLLTAPELILDQWFQLSSSGPNSRLYMKLVMRILYLDS
SEICFPTVPGCPGAWDVDSENPQRGSSVDAPPRPCHTTPDSQFGTEHVLRIHVLEAQDLIAKDRFLGGLVKGKSD
PYVKLKLAGRSFRSHVVREDLNPRWNEVFEVIVTSVPGQELEVEVFDKDLDKDDFLGRCKVRLTTVLNSGFLDEW
LTLEDVPSGRLHLRLERLTPRPTAAELEEVLQVNSLIQTQKSAELAAALLSIYMERAEDLPLRKGTKHLSPYATL
TVGDSSHKTKTISQTSAPVWDESASFLIRKPHTESLELQVRGEGTGVLGSLSLPLSELLVADQLCLDRWFTLSSG
QGQVLLRAQLGILVSQHSGVEAHSHSYSHSSSSLSEEPELSGGPPHITSSAPELRQRLTHVDSPLEAPAGPLGQV
KLTLWYYSEERKLVSIVHGCRSLRQNGRDPPDPYVSLLLLPDKNRGTKRRTSQKKRTLSPEFNERFEWELPLDEA
QRRKLDVSVKSNSSFMSRERELLGKVQLDLAETDLSQGVARWYDLMDNKDKGSS

FIGURE 1325

GAATTCGCTTTGGATCCATTTCCATCGGTCCTTACAGCCGCTCGTCAGACTCCAGCAGCCAAG**ATG**GTGAAGCAG
ATCGAGAGCAAGACTGCTTTTCAGGAAGCCTTGGACGCTGCAGGTGATAAACTTGTAGTAGTTGACTTCTCAGCC
ACGTGGTGTGGGCCTTGCAAAATGATCAACCCTTTCTTTCATTCCCTCTCTGAAAAGTATTCCAACGTGATATTC
CTTGAAGTAGATGTGGATGACTGTCAGGATGTTGCTTCAGAGTGTGAAGTCAAATGCACGCCAACATTCCAGTTT
TTTAAGAAGGGACAAAAGGTGGGTGAATTTTCTGGAGCCAATAAGGAAAAGCTTGAAGCCACCATTAATGAATTA
GTC**TAA**TCATGTTTTCTGAAAACATAACCAGCCATTGGCTATTTAAACTTGTATTTTTTTATTTACAAAATATAA
ATATGAAGACATAACCAGTTGCCATCTGCGTGACAATAAACATTATGCTAA

FIGURE 1326

MVKQIESKTAFQEALDAAGDKLVVVDFSATWCGPCKMINPFFHSLSEKYSNVIFLEVDVDDCQDVASECEVKCTP
TFQFFKKGQKVGEFSGANKEKLEATINELV

FIGURE 1327

CTTGGAGGGAGGGATTAGAAGCCGCTAGACTTTTTTTCCTCCCCTCTCAGTAGCACGGAGTCCGAATTAATTGGA
TTTCATTCACTGGGGAGGAACAAAAACTATCTGGGCAGCTTCATTGAGAGAGATTCATTGACACTAAGAGCCAGC
GGCTGCAGCTGGGTGCAGAGAGAACCTCCGGCTTTACTTCTGTCTCGTCTGCCCCAACCGCTAGCCTCGGCTTGG
GTAAGGCGAGGCGGAATTAAACCCCGCTCCGAGAGCGGCAGCTTCGCGCGCGGTGCGCTCGGCCTATGCCTGCCC
CGAGGGGCGTCTGGTAGGCACCCCGCCCTCTCCCGCAGCTCGACCCCC**ATG**ATAGATACGCTCAGACCCGTGCCC
TTCGCGTCGGAAATGGCGATCAGCAAGACGGTGGCGTGGCTCAACGAGCAGCTGGAGCTGGGCAACGAGCGGCTG
CTGCTGATGGACTGCCGGCCGCAGGAGCTATACGAGTCGTCGCACATCGAGTCGGCCATCAACGTGGCCATCCCG
GGCATCATGCTGCGGCGCCTGCAGAAGGGTAACCTGCCGGTGCGCGCGCTCTTCACGCGCGGCGAGGACCGGGAC
CGCTTCACCCGGCGCTGTGGCACCGACACAGTGGTGCTCTACGACGAGAGCAGCAGCGACTGGAACGAGAATACG
GGCGGCGAGTCGTTGCTCGGGCTGCTGCTCAAGAAGCTCAAGGACGAGGGCTGCCGGGCGTTCTACCTGGAAGGT
GGCTTCAGTAAGTTCCAAGCCGAGTTCTCCCTGCATTGCGAGACCAATCTAGACGGCTCGTGTAGCAGCAGCTCG
CCGCCGTTGCCAGTGCTGGGGCTCGGGGGCCTGCGGATCAGCTCTGACTCTTCCTCGGACATCGAGTCTGACCTT
GACCGAGACCCCAATAGTGCAACAGACTCGGATGGTAGTCCGCTGTCCAACAGCCAGCCTTCCTTCCCAGTGGAG
ATCTTGCCCTTCCTCTACTTGGGCTGTGCCAAAGACTCCACCAACTTGGACGTGTTGGAGGAATTCGGCATCAAG
TACATCTTGAACGTCACCCCCAATTTGCCGAATCTCTTTGAGAACGCAGGAGAGTTTAAATACAAGCAAATCCCC
ATCTCGGATCACTGGAGCCAAAACCTGTCCCAGTTTTTCCCTGAGGCCATTTCTTTCATAGATGAAGCCCGGGGC
AAGAACTGTGGTGTCTTGGTACATTGCTTGGCTGGCATTAGCCGCTCAGTCACTGTGACTGTGGCTTACCTTATG
CAGAAGCTCAATCTGTCGATGAACGATGCCTATGACATTGTCAAAATGAAAAAATCCAACATATCCCCTAACTTC
AACTTCATGGGTCAGCTGCTGGACTTCGAGAGGACGCTGGGACTCAGCAGCCCATGTGACAACAGGGTTCCAGCA
CAGCAGCTGTATTTTACCACCCCTTCCAACCAGAATGTATACCAGGTGGACTCTCTGCAATCTACG**TGA**AAGACC
CCACATCCCTCCTTGCTGGAATGTGTCTGGCCCTTCAGCAGTTTCTCTTGGCAGCATCAGCTGGGCTGCTTTCTT
TGTGTGTGGCCCCAGGTGTCAAAATGACACCAGCTGTCTGTACTAGACAAGGTTACCAAGTGCGGAATTGGTTAA
TACTAACAGAGAGATTTGCTCCATTCTCTTTGGAATAACAGGACATGCTGTATAGATACAGGCAGTAGGTTTGCT
CTGTACCCATGTGTACAGCCTACCCATGCAGGGACTGGGATTCGAGGACTTCCAGGCGCATAGGGTAGAACCAAA
TGATAGGGTAGGAGCATGTGTTCTTTAGGGCCTTGTAAGGCTGTTTCCTTTTGCATCTGGAACTGACTATATAAT
TGTCTTCAATGAAGACTAATTCAATTTTGCATATAGAGGAGCCAAAGAGAGATTTCAGCTCTGTATTTGTGGTAT
CAGTTTGGAAAAAAAAATCTGATACTCCATTTGATTATTGTAAATATTTGATCTTGAATCACTTGACAGTGTTTG
TTTGAATTGTGTTTGTTTTTTCCTTTGATGGGCTTAAAAGAAATTATCCAAAGGGAGAAAGAGCAGTATGCCACT
TCTTAAAACAGAACAAAACAAAAAAAGAAAATTGTGCTCTTTTCTAATCCAAAGGGTATATTTGCAGCATGCTTG
ACTTTACCAATTCTGATGACATCTTTACGGACACTATTATCACTAAGACCTTGTTATGGCGAAGTCTTTAGTCTT
TTTCATGTATTTTCCTCATGATTTTTTCTCTTTATGTAGTTTGACTATGCCTTACCTTTGTAAATATTTTTGCTT
GTGTTGTCGCAAAGGGGATAATCTGGGAAAGACACCAAATCATGGGCTCACTTTAAAAAAAGAAAGAATAAAAAA
ACCTTCAGCTGTGCTAAACAGTATATTACCTCTGTATAAAATTCTTCAGGGAGTGTCACCTCAAATGCAATACTT
TGGGTTGGTTTCTTTCCTTTAAAAAAATTTGTATAAAACTGGAAGTGTGTGTGTGTGAGCATGGGTACCCATTTG
ATAAGAGAAATGCATTTGATTGTGAAGAAGGGAGAGTTAAATTCTCCATTATGTTCGTGGTGTAAAGTTTAGAGC
TGGAATTTATTATAAGAATGTAAAACCTTAAATTATTAATAAATAACTATTTTGGCTATTGAAAAAAAAAAAAAA
AAAAAAAAA

FIGURE 1328

MIDTLRPVPFASEMAISKTVAWLNEQLELGNERLLLMDCRPQELYESSHIESAINVAIPGIMLRRLQKGNLPVRA
LFTRGEDRDRFTRRCGTDTVVLYDESSSDWNENTGGESLLGLLLKKLKDEGCRAFYLEGGFSKFQAEFSLHCETN
LDGSCSSSSPPLPVLGLGGLRISSDSSSDIESDLDRDPNSATDSDGSPLSNSQPSFPVEILPFLYLGCAKDSTNL
DVLEEFGIKYILNVTPNLPNLFENAGEFKYKQIPISDHWSQNLSQFFPEAISFIDEARGKNCGVLVHCLAGISRS
VTVTVAYLMQKLNLSMNDAYDIVKMKKSNISPNFNFMGQLLDFERTLGLSSPCDNRVPAQQLYFTTPSNQNVYQV
DSLQST

FIGURE 1329

CCAGCCTCGGAGGGAGGGATTAGAAGCCGCTAGACTTTTTTTCCTCCCCTCTCAGTAGCACGGAGTCCGAATTAA
TTGGATTTCATTCACTGGGGAGGAACAAAAACTATCTGGGCAGCTTCATTGAGAGAGATTCATTGACACTAAGAG
CCAGCGCTGCAGCTGGTGCAGAGAGAACCTCCGGCTTTGACTTCTGTCTCGTCTGCCCCAAGGCCGCTAGCCTCG
GCTTGGGAAGGCGAGGCGGAATTAAACCCCGCTCCGAGAGCGCACGTTCGCGCGCGGTGCGTCGGCCATTGCCTG
CCCCGAGGGGCGTCTGGTAGGCACCCCGCCCTCTCCCGCAGCTCGACCCCC**ATG**ATAGATACGCTCAGACCCGTG
CCCTTCGCGTCGGAAATGGCGATCAGCAAGACGGTGGCGTGGCTCAACGAGCAGCTGGAGCTGGGCAACGAGCGG
CTGCTGCTGATGGACTGCCGGCCGCAGGAGCTATACGAGTCGTCGCACATCGAGTCGGCCATCAACGTGGCCATC
CCGGGCATCATGCTGCGGCGCCTGCAGAAGGGTAACCTGCCGGTGCGCGCGCTCTTCACGCGCGGCGAGGACCGG
GACCGCTTCACCCGGCGCTGTGGCACCGACACAGTGGTGCTCTACGACGAGAGCAGCAGCGACTGGAACGAGAAT
ACGGGCGGCGAGTCGTTGCTCGGGCTGCTGCTCAAGAAGCTCAAGGACGAGGGCTGCCGGGCGTTCTACCTGGAA
GATGAAGCCCGGGGCAAGAACTGTGGTGTCTTGGTACATTGCTTGGCTGGCATTAGCCGCTCAGTCACTGTGACT
GTGGCTTACCTTATGCAGAAGCTCAATCTGTCGATGAACGATGCCTATGACATTGTCAAAATGAAAAAATCCAAC
ATATCCCCTAACTTCAACTTCATGGGTCAGCTGCTGGACTTCGAGAGGACGCTGGGACTCAGCAGCCCATGTGAC
AACAGGGTTCCAGCACAGCAGCTGTATTTTACCACCCCTTCCAACCAGAATGTATACCAGGTGGACTCTCTGCAA
TCTACG**TGA**AAGACCCCACACCCCTCCTTGCTGGAATGTGTCTGGCCCTTCAGCAGTTTCTCTTGGCAGCATCAG
CTGGGCTGCTTTCTTTGTGTGTGGCCCCAGGTGTCAAAATGACACCAGCTGTCTGTACTAGACAAGGTTACCAAG
TGCGGAATTGGTTAATACTAACAGAGAGATTTGCTCCATTCTCTTTGGAATAACAGGACATGCTGTATAGATACA
GGCAGTAGGTTTGCTCTGTACCCATGTGTACAGCCTACCCATGCAGGGACTGGGATTCGAGGACTTCCAGGCGCA
TAGGGTAGAACCAAATGATAGGGTAGGAGCATGTGTTCTTTAGGGCCTTGTAAGGCTGTTTCCTTTTGCATCTGG
AACTGACTATATAATTGTCTTCAAGTGAAGACTAATTCAATTTTGCATATAGAGGAGCCAAAGAGAGATTTCAGC
TCTGTATTTGTGGTATCAGTGTTGGAAAAGAGAAATCTGATACTCCATTTGGATTATTGTAAATATTTGATCTTG
AATCACTTGACAGTGTTTGTTTGAATTGTGTTTGTTTTTTCCTTTGATGGGCTTAAAAGAAATTATCCAAAGGGA
GAAAGAGCAGTATGCCACTTCTTAAAACAGAACAAAACAAAAAAAGAAAATTGTGCTCTGTTGTAATCCAAAGGG
GAGATTTGCAGCATGCTTGACTTTACCAATTCTGATGACATCTTTACGGACACTATTATCACTAAGACCTTGTTA
TGGCGAAGTCTTTAGTCTTTTTCATGTATTTTCCTCATGATTTTTTCTCTTTATGTAGTTTGAGTATGCCTTACC
TTTGTAAATATTTTTGCTTGTGTTGTCGCAAAGGGGATAATCTGGGAAAGACACCAAATCATGGGCTCACTTTAA
AA

FIGURE 1330

MIDTLRPVPFASEMAISKTVAWLNEQLELGNERLLLMDCRPQELYESSHIESAINVAIPGIMLRRLQKGNLPVRA
LFTRGEDRDRFTRRCGTDTVVLYDESSSDWNENTGGESLLGLLLKKLKDEGCRAFYLEDEARGKNCGVLVHCLAG
ISRSVTVTVAYLMQKLNLSMNDAYDIVKMKKSNISPNFNFMGQLLDFERTLGLSSPCDNRVPAQQLYFTTPSNQN
VYQVDSLQST

FIGURE 1331

GTGACAACCGGAAGCGGAAGTGAAAATGGGTGTCCCTGCTGCCTCTTAGCAACAAGAGGGGTCAAGTGACACAAC
CAGCTGACTCCCGTAGAGGAAGACACTGTGGAGGCCAGTTCTGGAGCTATTGCAGCCTCGGTTGCCCGGCCGGGG
ACCCGAGCCGAAAAGTTATCGTCAGA**ATG**TCGGGCAAAGACCGAATTGAAATCTTTCCCTCGCGAATGGCACAGA
CCATCATGAAGGCTCGTTTAAAGGGAGCACAGACAGGTCGAAACCTCCTGAAGAAAAAATCTGATGCCTTAACTC
TTCGATTTCGACAGATCCTAAAGAAGATAATAGAGACTAAAATGTTGATGGGCGAAGTGATGAGAGAAGCTGCCT
TTTCACTAGCTGAAGCCAAGTTCACAGCAGGTGACTTCAGCACTACAGTTATCCAAAATGTCAATAAAGCGCAAG
TGAAGATTCGAGCGAAGAAAGATAATGTAGCAGGTGTTACTTTGCCAGTATTTGAACATTACCATGAAGGAACTG
ACAGTTATGAACTGACTGGTTTAGCCAGAGGTGGGGAACAGTTGGCTAAATTAAAGAGGAATTATGCCAAAGCAG
TGGAACTACTGGTGGAACTAGCTTCTCTGCAGACTTCTTTTGTTACTTTGGATGAAGCTATTAAGATAACCAACA
GGCGTGTAAATGCCATTGAACATGTCATCATTCCCCGGATTGAACGTACTCTTGCTTATATCATCACAGAGCTGG
ATGAGAGAGAGCGAGAAGAGTTCTATAGGTTAAAGAAAATACAAGAGAAGAAAAAGATTCTAAAGGAAAAATCTG
AGAAGGACTTGGAGCAAAGGAGAGCAGCTGGAGAGGTGTTGGAGCCTGCTAATCTTCTGGCTGAAGAGAAGGACG
AGGATCTTCTATTTGAA**TAA**TCTTTCCTGTTCTGGTTCTTTGAGAAACCCTAACACTGGCTTCATTTTAATTCAC
AGTGTGTAGGTTTGATTTGTGTGGCTATTTATTTTTTGGCCTAAGAATTTCACTGGTTGTAAAATTTACCTAGAT
GTCTATTTATGGGATTACTTTTGCAGAATCATAATTTAGCAACCATTTATCATGGATGAAAGAGATCTGTAAAAC
CTGCCCAGGAACTTACAGAATTTACTTTGCAGAAGCGTTATCATACTCCATTTACATCTGTGTTACACGTGATCT
GCTTACCAAGCATATTAGGAAATACCTCTTAGGAAGCATTAGCGGTCTCAGGCCAATTACTGTGGAGCAGCTTTC
ATTCCTACCCACTTGCAAACCTTGGCGCTGTTGTCTGAGATTGCTGCAGCCATTCTTGTTACCATGGTACTTCTC
AAACTTTGTGAAAACCTGCACTTTTCCTTGCATGACAGGTTCCTGTCTTGTCTGTCATGGGAGCCATTCTGCCAA
TTTAAATGCGACTGTGGTATAAACAGTAAAATGATTTAAAAGTAAGTCATTCCGTTTTTATTAATTTACTGTTAA
GTCATGTTCTCATGCTCAGATCAGTAGTGTCAGCCAGAGCTTTCTCTGCAGACATGTAGGAAGTGGGTAGCTATT
TTTCCCACTCCATGTATTAGAGTTTTACAAAAAGGCTTACTTTTGAGACAACTGTTGCATTTTGGGGTACTAATA
AATGATTGCCGATGAGTTAAAAAAA

FIGURE 1332

MSGKDRIEIFPSRMAQTIMKARLKGAQTGRNLLKKKSDALTLRFRQILKKIIETKMLMGEVMREAAFSLAEAKFT
AGDFSTTVIQNVNKAQVKIRAKKDNVAGVTLPVFEHYHEGTDSYELTGLARGGEQLAKLKRNYAKAVELLVELAS
LQTSFVTLDEAIKITNRRVNAIEHVIIPRIERTLAYIITELDEREREEFYRLKKIQEKKKILKEKSEKDLEQRRA
AGEVLEPANLLAEEKDEDLLFE

FIGURE 1333

GGGGAGAGAGTGGGGACGTCCGGCTTCGGAGCGGGAGTGTTCGTTGTGCCAGCGACTAAAAAGAGAATTAAATATG
GGGTGATGTTGAGAAAGGCAAGAAGATTTTTATTATGAAGTGTTCCCAGTACCACACCGTTGAAAAGGGAGGCAA
GCACAAGACTGGGCCAAATCTCCATGGTCTCTTTGGGCGGAAGACAGGTCAGGCCCCTGGATACTCTTACACAGC
CGCCAATAAGAACAAAGGCATCATCTGGGGAGAGGATACACTGATGGAGTATTTGGAGAATCCCAAGAAGTACAT
CCCTGGAACAAAAATGATCTTTGTCGGCATTAAGAAGAAGGAAGAAAGGGCAGACTTAATAGCTTATCTCAAAAA
AGCTACTAATGAGTAATAATTGGCCACTGCCTTATTTATTACAAAACAGAAATGTCTCATGACTTTTTTATGTGT
ACCATCCTTTAATAGATCTCATACACCAGAATTCAGATCATGAATGACTGACAGAATATTTTGTTGGGCAGTCCT
GATTTAAAACTAAGACTGGCTTGTGGTTAAATGAATATGTTCAGTTTTTGAATTTTAATAGTAACTCCAATTCAG
TAAATGGTATCACTGTTTACCCCTTTTAAAGATATGATTAGACTTCGTTAGTAATGTTCAACTTTTCACAAAGAT
GGTGAGTGCCATCTTAAAACTTACTGGAGATTGGTTTTATATTTAGATTTATATAACTGGTTATGTGAATATATT
TAAATACTGGGGAAATTGCTTCACTGTCTTAGAACCAAGCAAGATTCACCTGTGTTTTGTGTTCATGTTCATTTG
CCTCTTAAAGGCAAGGGTTGAAGATAAATAAGGTAGCAATGTCTATAGTTTTGGCCTTAACTATGCCAATCTAAT
TATAATTCCCTGTATTTAAAATGGTTTCTTTTACTTATTGAAAGGCATTTTAGTGTGGTTTATGTGTAATATTAA
AGATTATTCAACACCCCAAAAAAAAAAAAAAAAAAAAAAAAAAA

1500/2825

FIGURE 1334

MGDVEKGKKIFIMKCSQYHTVEKGGKHKTGPNLHGLFGRKTGQAPGYSYTAANKNKGIIWGEDTLMEYLENPKKY
IPGTKMIFVGIKKKEERADLIAYLKKATNE

1501/2825

FIGURE 1335

GGCACGAGGCCTAAGAGTTCCTCTGCTGTACGACTGCACTCCCGCACCCTCCCCTAAATCCCCCCTCTTCGGCCT
GTTTACCTTTTAACTTGGCTTCGTTGCACGTTTGTGTGTGTGTTTGCTCTTCGCAGCCTCTTGAGCGTCTTTT
GTACTTAATTCTTACACTGTGGACGCTCTCTCGCGCCCGCCATCCCCCGACCCCTCTGATCTCCGATCCTTGACG
ATGTCTAGCCTGCATTGATTGGCCCTTTTCCCTGGGTATGGCAGATCTATTGCTTGATGATCCTCTCCCCCCAAG
AATTCTAACACAGGAGCTGTCCTGAGGCTCTGGATGACTTTATTCTTCAAATGGCTTTACCCTCCCAGTAGCTCC
AGGGACCCTCCATTTTCCATATCCAGGAAAATGTGATGCGCCACAGGTATCAGCGTCTGGATCGCCACTTCACGT
TTTAGCCACAAGTGACTCAGTGGAAGATCCAGAGTCAACAGAGGCTCGTCAGGAAG**ATG**TCTACAGAAAAGGTAG
ACCAAAAGGAGGAAGCTGGGGAAAAAGAGGTGTGCGGAGACCAGATCAAAGGACCGGACAAAGAGGAGGAACCAC
CAGCTGCTGCATCCCATGGCCAGGGGTGGCGTCCAGGTGGCAGAGCAGCTAGGAACGCAAGGCCTGAACCTGGGG
CCAGACACCCTGCTCTCCCGGCCATGGTCAACGACCCTCCAGTACCTGCCTTACTGTGGGCCCAGGAGGTGGGCC
AAGTCTTGGCAGGCCGTGCCCGCAGGCTGCTGCTGCAGTTTGGGGTGCTCTTCTGCACCATCCTCCTTTTGCTCT
GGGTGTCTGTCTTCCTCTATGGCTCCTTCTACTATTCCTATATGCCGACAGTCAGCCACCTCAGCCCTGTGCATT
TCTACTACAGGACCGACTGTGATTCCTCCACCACCTCACTCTGCTCCTTCCCTGTTGCCAATGTCTCGCTGACTA
AGGGTGGACGTGATCGGGTGCTGATGTATGGACAGCCGTATCGTGTTACCTTAGAGCTTGAGCTGCCAGAGTCCC
CTGTGAATCAAGATTTGGGCATGTTCTTGGTCACCATTTCCTGCTACACCAGAGGTGGCCGAATCATCTCCACTT
CTTCGCGTTCGGTGATGCTGCATTACCGCTCAGACCTGCTCCAGATGCTGGACACACTGGTCTTCTCTAGCCTCC
TGCTATTTGGCTTTGCAGAGCAGAAGCAGCTGCTGGAGGTGGAACTCTACGCAGACTATAGAGAGAACTCGTACG
TGCCGACCACTGGAGCGATCATTGAGATCCACAGCAAGCGCATCCAGCTGTATGGAGCCTACCTCCGCATCCACG
CGCACTTCACTGGGCTCAGATACCTGCTATACAACTTCCCGATGACCTGCGCCTTCATAGGTGTTGCCAGCAACT
TCACCTTCCTCAGCGTCATCGTGCTCTTCAGCTACATGCAGTGGGTGTGGGGGGGCATCTGGCCCCGACACCGCT
TCTCTTTGCAGGTTAACATCCGAAAAAGAGACAATTCCCGGAAGGAAGTCCAACGAAGGATCTCTGCTCATCAGC
CAGGTGCAGGGCCTGAAGGCCAGGAGGAGTCAACTCCGCAATCAGATGTTACAGAGGATGGTGAGAGCCCTGAAG
ATCCCTCAGGGACAGAGGGTCAGCTGTCCGAGGAGGAGAAACCAGATCAGCAGCCCCTGAGCGGAGAAGAGGAGC
TAGAGCCTGAGGCCAGTGATGGTTCAGGCTCCTGGGAAGATGCAGCTTTGCTGACGGAGGCCAACCTGCCTGCTC
CTGCTCCTGCTTCTGCTTCTGCCCCTGTCCTAGAGACTCTGGGCAGCTCTGAACCTGCTGGGGGTGCTCTCCGAC
AGCGCCCCACCTGCTCTAGTTCC**TGA**AGAAAAGGGGCAGACTCCTCACATTCCAGCACTTTCCCACCTGACTCCT
CTCCCCTCGTTTTTCCTTCAATAAACTATTTTGTGTCAGCTTCAAAAAAAAAAAAAAAAAAA

FIGURE 1336

MSTEKVDQKEEAGEKEVCGDQIKGPDKEEEPPAAASHGQGWRPGGRAARNARPEPGARHPALPAMVNDPPVPALL
WAQEVGQVLAGRARRLLLQFGVLFCTILLLLWVSVFLYGSFYYSYMPTVSHLSPVHFYYRTDCDSSTTSLCSFPV
ANVSLTKGGRDRVLMYGQPYRVTLELELPESPVNQDLGMFLVTISCYTRGGRIISTSSRSVMLHYRSDLLQMLDT
LVFSSLLLFGFAEQKQLLEVELYADYRENSYVPTTGAIIEIHSKRIQLYGAYLRIHAHFTGLRYLLYNFPMTCAF
IGVASNFTFLSVIVLFSYMQWVWGGIWPRHRFSLQVNIRKRDNSRKEVQRRISAHQPGAGPEGQEESTPQSDVTE
DGESPEDPSGTEGQLSEEEKPDQQPLSGEEELEPEASDGSGSWEDAALLTEANLPAPAPASASAPVLETLGSSEP
AGGALRQRPTCSSS

FIGURE 1337A

AAATCCCCCAAGTTCTCATGATCCTTGCTTCCCTTTCCAGTCACCCTTGGTGCCCTGTACTTCACTGTGGTCCTG
AACTGAAGAGCTGTGTTTTTCAGGAAGACTTGGCCAGGCCGTGTTCCGTGTCTCTGGATTCAAGTCCCAGGAGTC
CTGACCAGAGAGCAGGCATCAGTGTTTTTCTGACCGAAGTGCTCATTTCCTGACA**ATG**GAAATGGAACAAGAAAA
AATGACCATGAATAAGGAATTGAGTCCAGACGCGGCTGCTTACTGCTGCTCGGCCTGCCACGGCGATGAGACCTG
GAGTTACAACCACCCCATCCGGGGCCGGGCCAAGTCTCGCAGCCTGTCTGCCTCGCCCGCCCTGGGGAGCACCAA
GGAGTTCAGGAGGACACGCTCTCTTCATGGGCCATGCCCGGTGACCACTTTTGGACCAAAGGCCTGTGTGCTGCA
GAACCCCCAGACCATCATAGCCACTCCTTTGTCACTCGCATCTCAGCTGCTGCCTTCACCAGCCGTCAGTCACTC
GGGCCAGGGCGGGGTCACCGGACAGGTGCATGTTCTGCCTCAGCCCTCAGACCAGGGCGTACTCAGTGGTCCCCG
AGCTGCCCGAGGCCAGACAGCCCCGCAGGAGGAAGCGGTGACCCAGGAAGAGGTCGAGGCGCTGGTTTGTGGTCA
CACACAGCGGTGGGTGCCTGGGCCGGTGTACGACGCCGCTGCTGGTGGCTCTGGCTGGGCTCAGCTGAGCCTCAG
GGCTGGAATGGGTGTAGGCCAGGCCACTGGGCACATTCAGGACCCCGCGAGCCAGCGGCTGACGTGGAACAAGTC
CCCAAAGAGCGTCCTTGTCATCAAGAAGATGAGAGATGCCAGCCTACTGCAGCCGTTCAAGGAGCTCTGCACGCA
CCTCATGGAGGCACGCGGGGCAGGGGGGAAGGGGGCCTGGGGTGCACATGGAGTTGGGGGGGCCTCCATCCACAT
CACCGCCCCGAGGGTGGGGTCTGCAGGTGGAATGAGCAGGTTGGCACTTTGCTTCCAGGAGAACATGATCGTGTA
TGTGGAAAAGAAAGTGCTAGAAGACCCTGCCATCGCCAGCGATGAAAGCTTTGGGGCAGTGAAGAAGAAATTCTG
TACCTTTCGAGAAGATTATGATGACATTTCCAATCAGATAGACTTCATCATCTGCCTGGGGGGGAGACGGGACGCT
GCTGTACGCTTCCTCGCTTTTCCAGGGCAGCGTCCCTCCGGTCATGGCCTTCCACCTGGGCTCCCTGGGCTTCCT
GACCCCATTCAGCTTTGAGAACTTTCAGTCCCAAGTTACTCAGGTGATAGAGGGGAACGCAGCTGTTGTTCTCCG
GAGTCGGCTGAAGGTCAGGGTGGTGAAGGAGCTCCGGGGGGAAGAAGACGGCCGTGCACAATGGGCTGGGTGAGAA
CGGCTCGCAGGCTGCAGGCCTGGACATGGATGTCGGGAAGCAGGCCATGCAGTACCAGGTCCTGAATGAGGTGGT
GATTGACAGAGGCCCCTCCTCCTACCTGTCCAATGTGGATGTCTACCTGGACGGACACCTCATCACCACGGTGCA
GGGCGACGGAGTGATCGTGTCCACCCCGACGGGCAGCACGGCGTATGCGGCCGCGGCCGGGGCCTCCATGATCCA
CCCCAACGTGCCGGCCATCATGATCACGCCCATCTGCCCCCACTCGCTGTCCTTCCGGCCCATCGTGGTCCCCGC
AGTCGAGCTGAAGATCATGCTGTCACCTGAAGCAAGGAACACAGCATGGGTGTCCTTTGATGGACGGAAGAGACA
AGAGATCCGCCATGGAGACAGCATCAGCATCACTACCTCATGCTACCCGCTCCCCTCCATCTGTGTGCGGGACCC
CGTGAGCGACTGGTTTGAGAGCCTCGCCCAGTGCCTGCATTGGAACGTCCGGAAGAAGCAAGCCCACTTCGAGGA
GGAGGAGGAGGAGGAGGAGGAGGGC**TAG**GTCAAGCCCCTATCCAGGCCCGAATCCTTCCGCTGCCCTCCAAGCGC
CCTCTGGGGACAGACCAATCTGCGTGTGTCTGTGACCGCCTGTCATCAGTGGCACGGCCACTTCCTTTCTGTAGC
TGGGTTAGAGCCTGGGTCTGCCTTTTGTCCAGATCAGCTGTTTTTTTAAAATCTCTGACTTTTTTTGCATTTCTA
AAGAAGCGTGAGAAATGGGCTGGGAGTGCTTCTGTCCTGCTGACACCCCGCGGTGGGTCCCTGGAGCGCGGCCTC
CAGCTGCCGCAATTTCCATGCCAGGATATTTTTCCGCAAATCAGTCGGTTGAAATTCAGAGGAGTCAGAATGACT
CGACCTGTCCTTCAATGTTGATAATAAATGTCTCAGCCAAAAACCTTCCTTGAGCTGCCATGCTTTTCCCCTTGA
CCTGCACCTCTTCCCCTAAAATTTCTGCAGGGAAGCCCCTGGCGGAGGCGCCATTGAAAGCATGGTCTTGCCAGT
GGCTGGCAAGGCGGTTTTGTTCTGCTCAGTTTCTGGAGAGGGTTGGATGCGTCCCCTGCCATCCAGCCCTCCCCG
CTTGAGGCCAGCACTGAGTCTGGGACACTCAGCGGGAAGGGGGCTGGCATCGCCACGGACCCACACATTCCTCAC
GTAGCTTCTGCTCCCAGGAAGGTAGTTTAAATCCTGTATATACTTTTTAGAGACTCTTTTAAACTTTCTGAAGTG
CTGATGTACATACTTTCTCGTACACACTTTTGTGAAGATTTCAAGGGGAAGGGAGTTGTCTGCCATTCAATGTTT
ACATTTATGTTCTGCAAGACGCTGTCCTCAGGGACCATTAGGGGACCATTCTGTTCAGTGCGATCCTGATGGTCC
GGGAGATGAGGGTTTCCGGGGCTAGTGATCGTGATCCCTTTTATTTGCAACTGTAATGAGAATTTTTCACACTAA
CACAGCGAGGGACTCAACACGCTGATTCTCCTCCTGCCTCTCCCGTGAGTCTCCAGCCTGCCCAGCACCAGCAGC
TGTGGAGCACGTGGATGCTGCCTACCCCGGCGCCCGCGTCTTCCACGGGCACAGGTGTGTGGAGGCCGTGGTCGG
ACCCTGGTGTCCTGGTTACTGCTGCCCGGGTGTCTTTTTTTTGAGTAACTGCTCTCTGAGTTTTGCACACGAAGT
TGCCCTCATCTGCTGGAGATCGATAAGGAAGGCACAAGACGTTCTCCTCTGCCCGTGAGGAGCTTCCCGCAGCCG
CCTGGCCCAGCCTGGGCACGTTCTCCGAGGCATGTGTCTCCCTGCTCACCCTCGTCTGGGCACCTCAGCATCTGT
GGACTTGAGCGTCCAAAAACCCTGAGTGTGATTCTGGGCAGCCGGCCTGGCTTGAAGTCCGCCATGACCCTGGGC
ACAGGGGAAGCCCAGCCGTGGGCTTAGGAGAGAGGGACCAGCGCCCAGCGTTAGGGCTGGAAGACGGCAGTGTTC
AGAATTCCAGCCGCTCATCTGAACACAGAAGGTGTGAACTGACCTCTAAAGCAGCGTGAGATGGGAATGATCTAG
AAAACTTTGGATTTTTGAAGTAAATTTTAATGTTTCATATTAATTTCTTGAAAATGTATTAAATGTCATTGAAAG

FIGURE 1337B

CCTTATTACGCTTTTCAGATCCTTTCAATAAACAAGACTTGTAGAAAATAAAAAAAAAAAAAAAAAAAAAAAAA
A

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FIGURE 1338

MEMEQEKMTMNKELSPDAAAYCCSACHGDETWSYNHPIRGRAKSRSLSASPALGSTKEFRRTRSLHGPCPVTTFG
PKACVLQNPQTIIATPLSLASQLLPSPAVSHSGQGGVTGQVHVLPQPSDQGVLSGPRAARGQTAPQEEAVTQEEV
EALVCGHTQRWVPGPVYDAAAGGSGWAQLSLRAGMGVGQATGHIQDPASQRLTWNKSPKSVLVIKKMRDASLLQP
FKELCTHLMEARGAGGKGAWGAHGVGGASIHITAPRVGSAGGMSRLALCFQENMIVYVEKKVLEDPAIASDESFG
AVKKKFCTFREDYDDISNQIDFIICLGGDGTLLYASSLFQGSVPPVMAFHLGSLGFLTPFSFENFQSQVTQVIEG
NAAVVLRSRLKVRVVKELRGKKTAVHNGLGENGSQAAGLDMDVGKQAMQYQVLNEVVIDRGPSSYLSNVDVYLDG
HLITTVQGDGVIVSTPTGSTAYAAAAGASMIHPNVPAIMITPICPHSLSFRPIVVPAVELKIMLSPEARNTAWVS
FDGRKRQEIRHGDSISITTSCYPLPSICVRDPVSDWFESLAQCLHWNVRKKQAHFEEEEEEEEEG

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FIGURE 1339

GGCACGAGGGAGCGCTTGGGAGTTAGGTTGTTTGCCGGCGTAGCGGCCAGCGCCTGAGCCCGCCGTTGATCTTCG
CTGTGGC**ATG**GCGGACGAGGGGAAGTCGTACAGCGAACACGATGATGAACGCGTTAATTTCCCTCAAAGAAAGAA
GAAAGGCCGGGGTCCCTTCCGGTGGAAATATGGTGAAGGAAACCGTAGGTCTGGAAGAGGCGGTTCTGGTATTCG
GTCTTCCCGCCTTGAGGAAGATGATGGAGATGTGGCAATGAGTGATGCCCAGGATGGTCCCCGAGTACGATACAA
CCCCTATACCACCCGACCTAACCGTCGGGGTGATACTTGGCATGATCGAGATCGCATTCATGTTACTGTGCGGAG
AGACAGAGCTCCTCCAGAGAGAGGAGGGGCTGGCACCAGCCAGGATGGGACCTCAAAGAACTGGTTCAAGATTAC
AATTCCTTATGGCAGAAAGTATGACAAGGCATGGCTCCTGAGCATGATTCAGAGCAAGTGCAGTGTGCCCTTCAC
CCCTATTGAGTTTCACTATGAGAATACACGGGCCCAGTTCTTCGTTGAAGACGCCAGTACTGCCTCTGCATTGAA
GGCTGTCAACTATAAGATTTTGGATCGGGAGAACCGAAGGATATCTATCATCATCAACTCTTCTGCTCCACCCCA
CACTATACTGAATGAACTGAAGCCAGAACAAGTAGAACAGCTAAAGCTGATCATGAGCAAACGATACGATGGCTC
CCAACAAGCCCTTGACCTCAAAGGCCTCCGTTCAGACCCAGATTTGGTGGCCCAGAACATTGACGTTGTCCTGAA
TCGCAGAAGCTGTATGGCAGCTACCCTGAGGATCATTGAAGAGAACATCCCTGAGCTATTGTCCTTGAACTTGAG
CAACAACAGGCTGTACAGGCTGGATGACATGTCTAGCATTGTTCAGAAGGCACCCAACCTGAAGATCCTAAACCT
TTCTGGAAATGAATTGAAGTCTGAGCGGGAATTGGACAAGATAAAGGGGCTGAAGCTAGAAGAGCTCTGGCTCGA
TGGAAACTCCCTGTGTGACACCTTCCGAGACCAGTCCACCTACATCAGCGCCATTCGCGAACGATTTCCCAAGTT
ACTACGCCTGGATGGCCATGAGCTACCCCCACCAATTGCCTTTGATGTTGAAGCCCCCACGACGTTACCGCCCTG
CAAGGGAAGCTATTTTGGAACAGAAAACTTGAAGAGTCTGGTCTTGCACTTCCTGCAACAGTACTATGCAATTTA
CGACTCTGGAGACCGACAAGGGCTCCTGGATGCCTACCATGATGGGGCCTGCTGTTCCCTGAGCATTCCTTTCAT
TCCTCAGAACCCTGCCCGAAGCAGCTTAGCCGAGTATTTCAAGGATAGCAGAAATGTGAAGAAGCTTAAAGACCC
TACCTTGCGGTTCCGGCTGCTGAAGCACACGCGTCTCAACGTTGTTGCCTTCCTCAATGAGTTGCCCAAAACCCA
GCACGACGTCAATTCCTTCGTGGTAGACATAAGCGCCCAGACAAGCACATTGCTGTGTTTTTCTGTCAATGGAGT
CTTCAAGGAAGTGGACGGAAAGTCCCGGGATTCTTTGCGAGCCTTCACCCGGACATTCATTGCTGTTCCTGCTAG
CAATTCAGGGCTATGTATTGTAAATGATGAGCTATTTGTGCGGAATGCCAGTTCTGAAGAGATCCAAAGAGCCTT
CGCTATGCCTGCACCCACGCCTTCCTCCAGCCCGGTGCCCACCCTCTCTCCAGAGCAGCAGGAAATGTTGCAAGC
ATTCTCTACCCAGTCTGGCATGAACCTCGAGTGGTCCCAGAAGTGCCTTCAGGACAACAACTGGGACTACACCAG
ATCTGCCCAGGCCTTCACTCATCTCAAGGCCAAGGGCGAGATCCCAGAAGTGGCATTCATGAAG**TGA**TCGTAGTC
ATGCCTCAGAAGCAGTCCCCCCTGTAAATAGTCCTTGGATATTACCGTCTGGTTGTCGTCTGTCATCTCCTCCTG
TCTGGCCCGAGGCCGCCCCGTGACTGTGACCGAGGGAGGGAGGGCTGCCTGATCCCTCTCCTCGCCTGCCTTCTG
GAAGACTTCAGAAGATTGAGCCTCACTGGTGCCAGGAAGCCAAAGCTTACTTTGTAGAACTGACACTAAACTACC
CGAAGGACTTAGGTGCTTTGTGTACTTAACCCCAGGACCTCCTTACTTTTTAATATAAAGAGTGATGTTGTAAAA
AAAAAAAAAAAAAA

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FIGURE 1340

MADEGKSYSEHDDERVNFPQRKKKGRGPFRWKYGEGNRRSGRGGSGIRSSRLEEDDGDVAMSDAQDGPRVRYNPY
TTRPNRRGDTWHDRDRIHVTVRRDRAPPERGGAGTSQDGTSKNWFKITIPYGRKYDKAWLLSMIQSKCSVPFTPI
EFHYENTRAQFFVEDASTASALKAVNYKILDRENRRISIIINSSAPPHTILNELKPEQVEQLKLIMSKRYDGSQQ
ALDLKGLRSDPDLVAQNIDVVLNRRSCMAATLRIIEENIPELLSLNLSNNRLYRLDDMSSIVQKAPNLKILNLSG
NELKSERELDKIKGLKLEELWLDGNSLCDTFRDQSTYISAIRERFPKLLRLDGHELPPPIAFDVEAPTTLPPCKG
SYFGTENLKSLVLHFLQQYYAIYDSGDRQGLLDAYHDGACCSLSIPFIPQNPARSSLAEYFKDSRNVKKLKDPTL
RFRLLKHTRLNVVAFLNELPKTQHDVNSFVVDISAQTSTLLCFSVNGVFKEVDGKSRDSLRAFTRTFIAVPASNS
GLCIVNDELFVRNASSEEIQRAFAMPAPTPSSSPVPTLSPEQQEMLQAFSTQSGMNLEWSQKCLQDNNWDYTRSA
QAFTHLKAKGEIPEVAFMK

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FIGURE 1341

CGGGAAGCGCGGCGGGGCCTCCAGACCGGGGCGGGCTTAAGGGTGACATCTGCGCTTTAAAGGGTCCGGGTCAGC
TGACTCCCGACTCTGTGGAGTCTAGCTGCCAGGGTCGCGGCAGTGCGGGGAGAG**ATG**ACTGGGGAGCGACCCAGC
ACGGCGCTCCCGGACAGACGCTGGGGGCCGCGGATTCTGGGCTTCTGGGGAGGCTGTAGGGTTTGGGTGTTTGCC
GCGATCTTCCTGCTGCTGTCTCTGGCAGCCTCCTGGTCCAAGGCTGAGAACGACTTCGGTCTGGTGCAGCCGCTG
GTGACCATGGAGCAACTGCTGTGGGTGAGCGGGAGACAGATCGGCTCAGTGGACACCTTCCGCATCCCGCTCATC
ACAGCCACTCCGCGGGGCACTCTTCTCGCCTTTGCTGAGGCGAGGAAAATGTCCTCATCCGATGAGGGGGCCAAG
TTCATCGCCCTGCGGAGGTCCATGGACCAGGGCAGCACATGGTCTCCTACAGCGTTCATTGTCAATGATGGGGAT
GTCCCCGATGGGCTGAACCTTGGGGCAGTAGTGAGCGATGTTGAGACAGGAGTAGTATTTCTTTTCTACTCCCTT
TGTGCTCACAAGGCCGGCTGCCAGGTGGCCTCTACCATGTTGGTATGGAGCAAGGATGATGGTGTTTCCTGGAGC
ACACCCCGGAATCTCTCCCTGGATATTGGCACTGAAGTGTTTGCCCCTGGACCGGGCTCTGGTATTCAGAAACAG
CGGGAGCCACGGAAGGGCCGCCTCATCGTGTGTGGCCATGGGACGCTGGAGCGGGACGGAGTCTTCTGTCTCCTC
AGCGATGATCATGGTGCCTCCTGGCGCTACGGAAGTGGGGTCAGCGGCATCCCCTACGGTCAGCCCAAGCAGGAA
AATGATTTCAATCCTGATGAATGCCAGCCCTATGAGCTCCCAGATGGCTCAGTCGTCATCAATGCCCGAAACCAG
AACAACTACCACTGCCACTGCCGAATTGTCCTCCGCAGCTATGATGCCTGTGATACACTAAGGCCCCGTGATGTG
ACCTTCGACCCTGAGCTCGTGGACCCTGTGGTAGCTGCAGGAGCTGTAGTCACCAGCTCCGGCATTGTCTTCTTC
TCCAACCCAGCACATCCAGAGTTCCGAGTGAACCTGACCCTGCGATGGAGCTTCAGCAATGGTACCTCATGGCGG
AAAGAGACAGTCCAGCTATGGCCAGGCCCCAGTGGCTATTCATCCCTGGCAACCCTGGAGGGCAGCATGGATGGA
GAGGAGCAGGCCCCCCAGCTCTACGTCCTGTATGAGAAAGGCCGGAACCACTACACAGAGAGCATCTCCGTGGCC
AAAATCAGTGTCTATGGGACACTC**TGA**GCTGTGCCACTGCCACAGGGGTATTCTGCCTTCAGGACTCTGCCTTCA
GGAACACGGGTCTGTAGAGGGTCTGCTGGAGACGCCTGAAAGACAGTTCCATCTTCCTTTAGACTCCAGCCTTGG
CAAAATCACCTTCCCTTTACCAGGGAAATCACTTCCTTTAGGACTGAAAGCTAGGCGTCCTCTCCCACAAAAAAG
TCCTGCCCTCATCTGAGAATACTGTCTTTCCATATGGCTAAGTGTGGCCCCACCACCCTCTCTGCCTCCCGGGAC
ATTGATTGGTCCTGTCTTGGGCAGGTCTAGTGAGCTGTAGAATTGAATCAATGTGAACTCAGGGAACTGGGGAAG
GCTGAGCCTCCTCTTTGGTGTTGCGGTAAGATAACCGACAGGGCTGGTGAAAGTCCCCAGATGGCAGGATATTTG
GTTTCAGAGTAAGGACTAGGTGCACCACCATGACTGACTATCAATCAAAATGTTTGTAACTTAAAATTTTTAATG
AAGGATAATGAATATTTTA

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FIGURE 1342

MTGERPSTALPDRRWGPRILGFWGGCRVWVFAAIFLLLSLAASWSKAENDFGLVQPLVTMEQLLWVSGRQIGSVD
TFRIPLITATPRGTLLAFAEARKMSSSDEGAKFIALRRSMDQGSTWSPTAFIVNDGDVPDGLNLGAVVSDVETGV
VFLFYSLCAHKAGCQVASTMLVWSKDDGVSWSTPRNLSLDIGTEVFAPGPGSGIQKQREPRKGRLIVCGHGTLER
DGVFCLLSDDHGASWRYGSGVSGIPYGQPKQENDFNPDECQPYELPDGSVVINARNQNNYHCHCRIVLRSYDACD
TLRPRDVTFDPELVDPVVAAGAVVTSSGIVFFSNPAHPEFRVNLTLRWSFSNGTSWRKETVQLWPGPSGYSSLAT
LEGSMDGEEQAPQLYVLYEKGRNHYTESISVAKISVYGTL

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FIGURE 1343

GAACACCAGCGAGCTGGTCTCCAGCGAGGTCTACCTGCTCAGTGCCTTGGCTGCTCTGCAGAAGGTTGTGGAGAC
TCTCCCGCACTTCATCAGCCCCTATCTGGAAGGCATTCTCTCCCAGGTGATTCATCTGGAGAAAATCACTAGTGA
A**ATG**GGTTCTGCGTCACAGGCTAATATCCGTCTCACATCTCTTAAAAAGACACTGGCTACCACACTTGCACCCCG
AGTCCTGTTGCCCGCCATCAAAAAAACTTACAAGCAGATTGAGAAGAACTGGAAGAATCACATGGGTCCGTTTAT
GAGCATCTTGCAAGAGCATATTGGGGCGATGAAGAAGGAAGAGCTCACCTCCCATCAGTCTCAGCTAACCGCCTT
TTTCCTGGAGGCCCTGGACTTCCGAGCCCAGCACTCTGAGAACGATCTGGAGGAAGTTGGAAAAACGGAAAATTG
TATCATTGACTGTCTAGTAGCCATGGTTGTCAAACTTTCCGAGGTCACATTCAGGCCCCTGTTCTTCAAGCTGTT
TGATTGGGCTAAAACAGAAGATGCCCCAAAGGACAGGTTGTTGACATTTTACAACTTGGCAGATTGCATTGCTGA
AAAGCTGAAAGGGCTTTTTACTCTGTTTGCCGGCCACTTAGTGAAGCCTTTTGCTGACACCTTGGACCAGGTGAA
CATCTCCAAAACAGATGAAGCATTTTTTGACTCTGAAAATGACCCTGAAAAGTGCTGCTTGCTGTTGCAGTTTAT
TTTGAACTGTTTATACAAAATCTTCCTTTTTGATACCCAGCATTTTATAAGTAAAGAGAGAGCAGGAGCCTTGAT
GATGCCTCTGGTGGATCAGCTGGAAAACAGGCTTGGGGGAGAAGAGAAATTCCAGGAACGGGTGACAAAGCACCT
GATACCATGCATCGCACAGTTTTCAGTGGCCATGGCGGATGACTCTCTTTGGAAACCACTGAACTACCAGATTCT
GCTAAAGACGAGAGACTCCTCGCCTAAGGTTCGATTTGCTGCTTTGATTACTGTGTTAGCACTGGCTGAAAAACT
AAAGGAGAATTATATTGTCTTGCTACCAGAATCCATTCCTTTCTTAGCAGAGTTGATGGAAGATGAATGTGAAGA
AGTAGAACATCAGTGCCAAAAGACTATTCAGCAACTGGAAACTGTCCTGGGAGAGCCACTCCAGAGCTATTTC**TA**
AGACTTTCTGTGGTGTTTCATACTCTACTCAGAGTTCACACTCATATTTCATATTTTTATTTTTGGGTGTTGGGT
GCCATGTTACTTTTGGTGCCTTAATACACCTACTTGGATTACTTACAAATGTTTTATCACTTCGTTACAAAATCC
CCACCTGGCTTGTGCTGCCACATAAGCCTCTCCTGCCTATCGTATAGAGCTGCAGAAAGAGTAAATGATACACGG
TATTTTTAAAAAAAAAAAAAAA

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FIGURE 1344

MGSASQANIRLTSLKKTLATTLAPRVLLPAIKKTYKQIEKNWKNHMGPFMSILQEHIGAMKKEELTSHQSQLTAF
FLEALDFRAQHSENDLEEVGKTENCIIDCLVAMVVKLSEVTFRPLFFKLFDWAKTEDAPKDRLLTFYNLADCIAE
KLKGLFTLFAGHLVKPFADTLDQVNISKTDEAFFDSENDPEKCCLLLQFILNCLYKIFLFDTQHFISKERAGALM
MPLVDQLENRLGGEEKFQERVTKHLIPCIAQFSVAMADDSLWKPLNYQILLKTRDSSPKVRFAALITVLALAEKL
KENYIVLLPESIPFLAELMEDECEEVEHQCQKTIQQLETVLGEPLQSYF

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FIGURE 1345

CCGAGCCTGGAGTTTGCATGAAACTTTCACCTGCGCTCCGGGGAGACTTTCGGCTCCGGCTCCCACCGCGCGCCT
CGCCGCCCTCGCAACCGCGGGCTCCGTCCAACCCGGCCCGAC**ATG**GACGTGCTCCCCATGTGCAGCATCTTCCAG
GAGCTCCAGATCGTGCACGAGACCGGCTACTTCTCGGCGCTGCCGTCTCTGGAGGAGTACTGGCAACAGACCTGC
CTAGAGCTGGAACGTTACCTCCAGAGCGAGCCCTGCTATGTTTCAGCCTCAGAAATCAAATTTGACAGCCAGGAA
GATCTGTGGACCAAAATCATTCTGGCTCGGGAGAAAAAGGAGGAATCCGAACTGAAGATATCTTCCAGTCCTCCA
GAGGACACTCTCATCAGCCCGAGCTTTTGTTACAACTTAGAGACCAACAGCCTGAACTCAGATGTCAGCAGCGAA
TCCTCTGACAGCTCCGAGGAACTTTCTCCCACGGCCAAGTTTACCTCCGACCCCATTGGCGAAGTTTTGGTCAGC
TCGGGAAAATTGAGCTCCTCTGTCACCTCCACGCCTCCATCTTCTCCGGAACTGAGCAGGGAACCTTCTCAACTG
TGGGGTTGCGTGCCCGGGGAGCTGCCCTCGCCAGGGAAGGTGCGCAGCGGGACTTCGGGGAAGCCAGGTGACAAG
GGAAATGGCGATGCCTCCCCCGACGGCAGGAGGAGGGTGCACCGGTGCCACTTTAACGGCTGCAGGAAAGTTTAC
ACCAAAAGCTCCCACTTGAAAGCACACCAGCGGACGCACACAGGAGAAAAGCCTTACAGATGCTCATGGGAAGGG
TGTGAGTGGCGTTTTGCAAGAAGTGATGAGTTAACCAGGCACTTCCGAAAGCACACCGGGGCCAAGCCTTTTAAA
TGCTCCCACTGTGACAGGTGTTTTTCCAGGTCTGACCACCTGGGCCTGCACATGAAGAGGCACCTC**TGA**GGGAGC
AAAGAGGTGGATCCTGTAGGCTAAAAGGCTTCCAGGCTGAGAGCCGGCCGTGGAAGGAGGGATGCGTGTTCCAGC
CAAAGCATGCCGTTCTGCACCTACCCAGTTGCCTCCAGGGCCTCTCCTTGGAAGGTCTTTTGAAGGCTAAAAAGG
TCCTGTAAGAAGTGGCATAGCACCCGTGGTGCATGGTATGTGGGTGACCCTGGACTCGCCACTGGTACCCGCCCT
TCCGAGCGGCGCCTAAGCCTTTGCCGTGAGCATGCACACTGAGAATGCTAATGGTTGGGTTGATTGTATGTTGAG
GATCTATTACTGACCGTATGATGAGGCCAACTTTTTTTCCTTGTGGTTAGCAAGACTGCAAGAGATGGAAAAAAA
GTAGTTTGAATGTTTTGTGTGAAAGGAGTATACCATGAGATGAGATGACCACCAATCATTTCCTTGGGGGGAGGG
GGTGTCTGCACCTTAGAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1346

MDVLPMCSIFQELQIVHETGYFSALPSLEEYWQQTCLELERYLQSEPCYVSASEIKFDSQEDLWTKIILAREKKE
ESELKISSSPPEDTLISPSFCYNLETNSLNSDVSSESSDSSEELSPTAKFTSDPIGEVLVSSGKLSSSVTSTPPS
SPELSREPSQLWGCVPGELPSPGKVRSGTSGKPGDKGNGDASPDGRRRVHRCHFNGCRKVYTKSSHLKAHQRTHT
GEKPYRCSWEGCEWRFARSDELTRHFRKHTGAKPFKCSHCDRCFSRSDHLGLHMKRHL

FIGURE 1347A

TCCACTCCTGGAGCCCGCGGACCCCGAGCACGCGCCTGACAGCCCCTGCTGGCCCGGCGCGCGGCGTCGCCAGGC
CAGCT**ATG**GCCCCCGACCCGGTGGCCGCCGAGACCGCGGCTCAGGGACCTACCCCGCGCTACTTCACCTGGGACG
AGGTGGCCCAGCGCTCAGGGTGCGAGGAGCGGTGGCTAGTGATCGACCGTAAGGTGTACAACATCAGCGAGTTCA
CCCGCCGGCATCCAGGGGGCTCCCGGGTCATCAGCCACTACGCCGGGCAGGATGCCACGGATCCCTTTGTGGCCT
TCCACATCAACAAGGGCCTTGTGAAGAAGTATATGAACTCTCTCCTGATTGGAGAACTGTCTCCAGAGCAGCCCA
GCTTTGAGCCCACCAAGAATAAAGAGCTGACAGATGAGTTCCGGGAGCTGCGGGCCACAGTGGAGCGGATGGGGC
TCATGAAGGCCAACCATGTCTTCTTCCTGCTGTACCTGCTGCACATCTTGCTGCTGGATGGTGCAGCCTGGCTCA
CCCTTTGGGTCTTTGGGACGTCCTTTTTGCCCTTCCTCCTCTGTGCGGTGCTGCTCAGTGCAGTTCAGGCCCAGG
CTGGCTGGCTGCAGCATGACTTTGGGCACCTGTCGGTCTTCAGCACCTCAAAGTGGAACCATCTGCTACATCATT
TTGTGATTGGCCACCTGAAGGGGGCCCCCGCCAGTTGGTGGAACCACATGCACTTCCAGCACCATGCCAAGCCCA
ACTGCTTCCGCAAAGACCCAGACATCAACATGCATCCCTTCTTCTTTGCCTTGGGGAAGATCCTCTCTGTGGAGC
TTGGGAAACAGAAGAAAAAATATATGCCGTACAACCACCAGCACAAATACTTCTTCCTAATTGGGCCCCCAGCCT
TGCTGCCTCTCTACTTCCAGTGGTATATTTTCTATTTTGTTATCCAGCGAAAGAAGTGGGTGGACTTGGCCTGGA
TGATTACCTTCTACGTCCGCTTCTTCCTCACTTATGTGCCACTATTGGGGCTGAAAGCCTTCCTGGGCCTTTTCT
TCATAGTCAGGTTCCTGGAAAGCAACTGGTTTGTGTGGGTGACACAGATGAACCATATTCCCATGCACATTGATC
ATGACCGGAACATGGACTGGGTTTCCACCCAGCTCCAGGCCACATGCAATGTCCACAAGTCTGCCTTCAATGACT
GGTTCAGTGGACACCTCAACTTCCAGATTGAGCACCATCTTTTTCCCACGATGCCTCGACACAATTACCACAAAG
TGGCTCCCCTGGTGCAGTCCTTGTGTGCCAAGCATGGCATAGAGTACCAGTCCAAGCCCCTGCTGTCAGCCTTCG
CCGACATCATCCACTCACTAAAGGAGTCAGGGCAGCTCTGGCTAGATGCCTATCTTCACCAA**TAA**CAACAGCCAC
CCTGCCCAGTCTGGAAGAAGAGGAGGAAGACTCTGGAGCCAAGGCAGAGGGGAGCTTGAGGGACAATGCCACTAT
AGTTTAATACTCAGAGGGGGTTGGGTTTGGGGACATAAAGCCTCTGACTCAAACTCCTCCCTTTTATCTTCTAGC
CACAGTTCTAAGACCCAAAGTGGGGGGTGGACACAGAAGTCCCTAGGAGGGAAGGAGCTGTTGGGGCAGGGGTGT
AAATTATTTCCTTTTTCTAGTTTGGCACATGCAGGTAGTTGGTGAACAGAGAGAACCAGGAGGGTAACAGAAGAG
GAGGGACCTACTGAACCCAGAGTCAGGAAGAGATTTAACACTAAAATTCCACTCATGCCGGGCGTGGTGGCACGC
GCCTGTAATCCCAGCTACCCAGGAGGCTGAGGCAGGAGAATCGCTTGAACCGGGGAGGTGGAGGTTGCAGTGAGC
TGAGATCACGCCATTGTACTCCAGCCTGGGCGACAGAGCAAGACTCCATTTCAAAAAAAAAAAAAAAAATCCACTC
ATATAAAAGGTGAGCTCAGCTCACTGGTCCATTTCTCAGTGGCTTCTCCATCCTCATTTGCAAACCTCAGAGGGA
TAAGGCAGTTGAACCTGATGAGCAAGAATTATAACAGCAAGGAAACATTAATGCTTAGAATTCTGAGATCCAGCA
CAACTCAGTCTGTGGGAGCTCAGCTCGCTGCCCAGGGATAGGTATGACCTATGTCTGCCTTAGGCTGCTGGGAGA
TGCCATTCTCCAGTTTCAGAAGCAGGCAGGGCAAAGGTCAAGACTGTGGTATTGGGGTCTTTTGGCTCTGAAGGA
TCCTGGAACCACTGATTTTGGTTTATTCCCTCCAGGGTCTAAAGAGAACAAGAGGTGCTAGCTCTTACCAAAACA
GATGGTAGAGAGAGTTGCTGGCTATTTAAAAAGCTCTTTCATCTTTTAATTCACCTCTTCTTTTCACCTCTTTAA
CCACTCCTCAGGAACAGAACACTTCTAGGACTGGGGGTCTTTTAGCTCCATAAGCAAGTGAGCAGATGGGACAAG
TTAGTCTTTTCTCCCTAGAAACAAAGGGGATGCCCAGTGGTTTCCCTTTGCTTCCCAACCTAAAATTTCAAGTTT
AATAAAATAGCAATTAGCAGAAGTGACCAAATTGGGAGATAATTATCAGTCATGAGGAAAGACACAGATTTCGGT
CATAAAGAATGTAAGGGCTATAAGTAGAAACTTTCTATAACCTAAATGATGTTATAGAATTATTTTGAGCAGGA
GCAGAAAGATTAAATATGATCACTTCATACTTCTAAATCAGAAATAGGAAGATTAAAACCACAGAACAGTTTGTG
ATTTCTATTGCTGTAGCTAGGTATCTTACTCTGTCCACTCTTGTTCAAGTATCTAACTCTTCTGGAAACCAAATA
GGCTTTAGAAGAGATTATCCTATATTCCTATCAGTATAATACTAAAATGTAACTTTTTAATCATCTGGTTTTTAA
AAGATAAACAGTTTAGCCCATCTCTCCAGAGAGCAAACATAGGAATATGACTCAGGAGCCTCCTAGGGCTTATCA
TCAGCCCTCACACCCGCTTCCCCCTCCAACCCACAGCCTTTGCTTCCAGGTGGCAGGATTACTACTTTGCCTCTT
CAGCAGCATCTACTCTAGGCATATTGATCATTTTAGACACTGGGAGAAGAGAACCTCAAACTAGGAGGAAAAGAC
AGAGCCTCCACTTAGTTTTGGGAGGGGATGGCAGACAGTCAAGGAGATGAGCGTCCTAAGGCATGTTGGGATAGG
GTCAGATGCACCACCCATGGAGAGGTTTGTCAACACAAAGACATGGAAGGTTAGAGGTTTGTCAACAAAAAGACA
TGGAAGGTTAGGTTTGTCAACACAAAGACATGGAAGATTAGAGGTTTGTCAACACAAAGACACAGGAAGAATGGG
CTGCAGAAGATTTAGATGTTTTCCATTTGGGCACATTTTACTTAGCTGGAGAACTAGGTTTAAAACAGCCTGGGT
AGGAAAATTAGAAGCAAGCTGGATGCAGTGGCTCATGCCTGTAATCCCAACACTTTTGGGAGGTCCAGGCAGGAG
GATCACTTGGGCCCAGGAGGTCAAGCCTGCAGCGAGCTGAGATCACACCACTGCACTCCAGCCTGGGGTGATAGA

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FIGURE 1347B

ACAAGACCCTGTCTCAAAAAAAAAAAAAAACAACAAAAACTTAGAATTGAGGAGTTGTACCTCCATTGGCTTCCT
CACTCCAAAATAGGTGCTGATCCTTCCTATTCCTATTCTTTGCCACCTTTTGGGTGTGGTGTCACCAGCCTGTTT
AGCCAAGTAGCTTTGGGCATAGGCTGCCCAATCTGAGCAAACACCAGTGAGGCTCTATTGAGCCAAGACCAAGTC
CTCAAAGCACCTGAACCACTGTGGCCTTCTCAGCCTACAGCAGTGTGGTCTCTTACATGGCCACAAAGGGACACA
CAGTGACAAAAGGCTCGGAATGTTACAATGGTAAAATGAGTGATCTCAAATCCACTGACAGATATAAAATAGGCT
TAGAGAGGAAAAGCTGCCTCTGGTCAAGTAGATCATGGCAGCATGAATTCCAACTCACTTTTTTACAACTCCAAC
TTCTATGTTTATCTTTGTTACTTTCACTTTTTTACAACCTGGCCAGAGGCATTTTTTAAATCAGGCCCAATATCA
GTATTCTTTTTGTGTGTGCCAATTTTGTTATCACATCCCTATGAAGTTGAAAAATAAAGTTAATTTTGACCAAAA
AAAAAAAAAAAAG

FIGURE 1348

MAPDPVAAETAAQGPTPRYFTWDEVAQRSGCEERWLVIDRKVYNISEFTRRHPGGSRVISHYAGQDATDPFVAFH
INKGLVKKYMNSLLIGELSPEQPSFEPTKNKELTDEFRELRATVERMGLMKANHVFFLLYLLHILLLDGAAWLTL
WVFGTSFLPFLLCAVLLSAVQAQAGWLQHDFGHLSVFSTSKWNHLLHHFVIGHLKGAPASWWNHMHFQHHAKPNC
FRKDPDINMHPFFFALGKILSVELGKQKKKYMPYNHQHKYFFLIGPPALLPLYFQWYIFYFVIQRKKWVDLAWMI
TFYVRFFLTYVPLLGLKAFLGLFFIVRFLESNWFVWVTQMNHIPMHIDHDRNMDWVSTQLQATCNVHKSAFNDWF
SGHLNFQIEHHLFPTMPRHNYHKVAPLVQSLCAKHGIEYQSKPLLSAFADIIHSLKESGQLWLDAYLHQ

FIGURE 1349

GGCACGAGGCTGCTGTTTGTCTACTTCCTCCTGCTTCCCCGCCGCCGCCGCCGCCATC**ATG**AGGGAAATCGTGCA
CTTGCAGGCCGGGCAGTGCGGCAACCAAATCGGCGCCAAGTTTTGGGAGGTGATCAGCGATGAGCACGGCATCGA
CCCCACGGGCACCTACCACGGGGACAGCGACCTGCAGCTGGAACGCATCAACGTGTACTACAATGAGGCCACCGG
CGGCAAGTACGTGCCCCGCGCCGTGCTCGTGGATCTGGAGCCCGGCACCATGGACTCCGTGCGCTCGGGGCCCTT
CGGGCAGATCTTCCGGCCGGACAACTTCGTTTTCGGTCAGAGTGGTGCTGGGAACAACTGGGCCAAGGGGCACTA
CACAGAAGGCGCGGAGCTGGTGGACTCGGTGCTGGATGTTGTGAGAAAGGAGGCTGAGAGCTGTGACTGCCTGCA
GGGTTTCCAGCTGACCCACTCCCTGGGTGGGGGGACTGGGTCTGGGATGGGTACCCTCCTCATCAGCAAGATCCG
GGAGGAGTACCCAGACAGGATCATGAACACGTTTAGTGTGGTGCCTTCGCCCAAAGTGTCAGACACAGTGGTGGA
GCCCTACAACGCCACCCTCTCAGTCCACCAGCTCGTAGAAAACACAGACGAGACCTACTGCATTGATAACGAAGC
TCTCTACGACATTTGCTTCAGAACCCTAAAGCTGACCACGCCCACCTATGGTGACCTGAACCACCTGGTGTCTGC
TACCATGAGTGGGGTCACCACCTGCCTGCGCTTCCCAGGCCAGCTCAATGCTGACCTGCGGAAGCTGGCTGTGAA
CATGGTCCCGTTTCCCCGGCTGCACTTCTTCATGCCCGGCTTTGCCCCACTGACCAGCCGGGGCAGCCAGCAGTA
CCGGGCGCTGACCGTGCCCGAGCTCACCCAGCAGATGTTTGATGCCAAGAACATGATGGCTGCCTGCGACCCCCG
CCATGGCCGCTACCTGACGGTTGCCGCCGTGTTCAGGGGCCGCATGTCCATGAAGGAGGTGGATGAGCAAATGCT
TAATGTCCAAAACAAAAACAGCAGCTATTTTGTTGAGTGGATCCCCAACAATGTGAAAACGGCTGTCTGTGACAT
CCCACCTCGGGGGCTAAAAATGTCCGCCACCTTCATTGGCAACAGCACGGCCATCCAGGAGCTGTTCAAGCGCAT
CTCCGAGCAGTTCACGGCCATGTTCCGGCGCAAGGCCTTCCTGCACTGGTACACGGGCGAGGGCATGGACGAGAT
GGAGTTCACCGAGGCCGAGAGCAACATGAATGACCTGGTGTCCGAGTACCAGCAGTACCAGGATGCCACAGCCGA
GGAGGAGGGCGAGTTCGAGGAGGAGGCTGAGGAGGAGGTGGCC**TAG**AGCCTTCAGTCACTGGGGAAAGCAGGGAA
GCAGTGTGAACTCTTTATTCACTCCCAGCCTGTCCTGTGGCCTGTCCCACTGTGTGCACTTGCTGTTTTCCCTGT
CCACATCCATGCTGTACAGACACCACCATTAAAGCATTTTCATAGTGAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

FIGURE 1350

MREIVHLQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLERINVYYNEATGGKYVPRAVLVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKEAESCDCLQGFQLTHSLGGGTGSGMGTL
LISKIREEYPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTTPTYGDL
NHLVSATMSGVTTCLRFPGQLNADLRKLAVNMVPFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQMFDAKNMM
AACDPRHGRYLTVAAVFRGRMSMKEVDEQMLNVQNKNSSYFVEWIPNNVKTAVCDIPPRGLKMSATFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEEGEFEEEAEEEVA

FIGURE 1351

GCGGGCGCATGCGCAAGGGGGCGCGCCGCCTCTGCCCCGCGGCGAGGGTGTCTATGGAGAGGCGGCGGCCGCGGC
TGCTGAGGCGGAGGCTGAGGCAGTGGCG**ATG**GCGCCCTTTCCTGAAGAAGTGGACGTCTTCACCGCCCCACACTG
GCGGATGAAGCAGCTGGTGGGGCTCTACTGCGACAAGCTTTCTAAAACCAATTTTTCCAACAACAACGATTTCCG
TGCTCTTCTGCAGTCTTTGTATGCTACTTTCAAGGAGTTCAAAATGCATGAGCAGATTGAAAATGAATACATTAT
TGGTTTGCTTCAACAACGCAGCCAGACCATTTATAATGTACATTCTGACAATAAACTCTCCGAGATGCTTAGCCT
CTTTGAAAAGGGACTGAAGAATGTTAAGAATGAATATGAACAGTTAAATTATGCAAAACAACTGAAAGAGAGATT
GGAGGCTTTTACAAGAGATTTTCTTCCTCACATGAAAGAGGAAGAGGAGGTTTTTCAGCCCATGTTAATGGAATA
TTTTACCTATGAAGAGCTTAAGGATATTAAAAAGAAAGTGATTGCACAACACTGCTCTCAGAAGGATACTGCAGA
ACTCCTTAGAGGTCTTAGCCTATGGAATCATGCTGAAGAGCGACAGAAGTTTTTTAAATATTCCGTGGATGAAAA
GTCAGATAAAGAAGCAGAAGTGTCAGAACACTCCACAGGTATAACCCATCTTCCTCCTGAGGTAATGCTGTCAAT
TTTCAGCTATCTTAATCCTCAAGAGTTATGTCGATGCAGTCAAGTAAGCATGAAATGGTCTCAGCTGACAAAAAC
GGGATCGCTTTGGAAACATCTTTACCCTGTTCATTGGGCCAGAGGTGACTGGTATAGTGGTCCCGCAACTGAACT
TGATACTGAACCTGATGATGAATGGGTGAAAAATAGGAAAGATGAAAGTCGTGCTTTTCATGAGTGGGATGAAGA
TGCTGACATTGATGAATCTGAAGAGTCTGCGGAGGAATCAATTGCTATCAGCATTGCACAAATGGAAAAACGTTT
ACTCCATGGCTTAATTCATAACGTTCTACCATATGTTGGTACTTCTGTAAAAACCTTAGTATTAGCATACAGCTC
TGCAGTTTCCAGCAAAATGGTTAGGCAGATTTTAGAGCTTTGTCCTAACCTGGAGCATCTGGATCTTACCCAGAC
TGACATTTCAGATTCTGCATTTGACAGTTGGTCTTGGCTTGGTTGCTGCCAGAGTCTTCGGCATCTTGATCTGTC
TGGTTGTGAGAAAATCACAGATGTGGCCCTAGAGAAGATTTCCAGAGCTCTTGGAATTCTGACATCTCATCAAAG
TGGCTTTTTGAAAACATCTACAAGCAAAATTACTTCAACTGCGTGGAAAAATAAAGACATTACCATGCAGTCCAC
CAAGCAGTATGCCTGTTTGCACGATTTAACTAACAAGGGCATTGGAGAAGAAATAGATAATGAACACCCCTGGAC
TAAGCCTGTTTCTTCTGAGAATTTCACTTCTCCTTATGTGTGGATGTTAGATGCTGAAGATTTGGCTGATATTGA
AGATACTGTGGAATGGAGACATAGAAATGTTGAAAGTCTTTGTGTAATGGAAACAGCATCCAACTTTAGTTGTTC
CACCTCTGGTTGTTTTAGTAAGGACATTGTTGGACTAAGGACTAGTGTCTGTTGGCAGCAGCATTGTGCTTCTCC
AGCCTTTGCGTATTGTGGTCACTCATTTTGTTGTACAGGAACAGCTTTAAGAACTATGTCATCACTCCCAGAATC
TTCTGCAATGTGTAGAAAAGCAGCAAGGACTAGATTGCCTAGGGGAAAAGACTTAATTTACTTTGGGAGTGAAAA
ATCTGATCAAGAGACTGGACGTGTACTTCTGTTTCTCAGTTTATCTGGATGTTATCAGATCACAGACCATGGTCT
CAGGGTTTTGACTCTGGGAGGAGGGCTGCCTTATTTGGAGCACCTTAATCTCTCTGGTTGTCTTACTATAACTGG
TGCAGGCCTGCAGGATTTGGTTTCAGCATGTCCTTCTCTGAATGATGAATACTTTTACTACTGTGACAACATTAA
CGGTCCTCATGCTGATACCGCCAGTGGATGCCAGAATTTGCAGTGTGGTTTTCGAGCCTGCTGCCGCTCTGGCGA
A**TGA**CCCTTGACTTCTGATCTTTGTCTACTTCATTTAGCTGAGCAGGCTTTCTTTCATGCACTTTACTCATAGCA
CATTTCTTGTGTTAACCATCCCTTTTTGAGCGTGACTTGTTTTGGCCCCATTTCTTACAACTTCAGAAATCTTAA
TTTACCAGTGAATTGTAATGTTGTTTCTCTTGCAAATTATACTTTTGGTTTAGAAAGGGATTAGGTCTTTTCAAA
AGGGTGAGAACAGTCTTACATTTTTCTTTTAAATGAAATGCTTTAAAGAATGTTGGTAATGCCATGTCATTTAAA
GTATTTCATAGATAATTTTGAGTTTTAAAGTCCATGGAGGTGATTGGTTCTCTTTACACATTAACACTGTACCAA
GCTTTGCAGATCTTTTCCGACACACATGTCTGAAGACTTATTTTCAAAGACAGCACATTTTTGGAAACTAATCTC
TTTTCCGTAATATTTCCTTTATTTCAATGATTCTCAGAAGGCCAATTCAAACAAACCCACATTTAAGGTTCTTTA
GGATTATAGAATAAATTGGCTTCTGAGTGTTAGCTCAGTGAGCTAGGAAAGCACCAATCGATATTTGTTTCCTTT
AGGGATACTTTGTTCTCACCACTGTCCCTATGTCATCAAATTTGGGAGAGATTTTTTAAAATACCACAATCATTT
GAAGAAATGTATAAATAAAATCTACTTTGAGGACTTTACCAAGTAATACTGTTGTGTTGTGATTTTTATTATAAA
TCTCAATCCAGGTTTACTTTAGTATAGAATAGGACTACATACTTTGTCTTTGGACCTCCCATGAACTTATTACCC
TGACAAATAGTTTTAGACAGATACTGAATTTTATTGAGCTGAATTTTCTTTTTGAAATGAGTTATTCAGTAGTCA
AAATTTGAATCCGTAAGTATATCTACTTTGCTTTGTTAAAACATCATGAGAGTGGAGGCCTGCCACCCAGAAAGG
CACATACTAGTGCCTTTTAGTACAATTTTATGTCATGTAGAAGAAAATGGCAATGTTCCTCCTATTGATACAGAT
ACAGGCATATGTCATCTTATTGCGTTTTGCTTTATTGCACTTTGCAAATAATGCATTTTTTACAAATGGAAGGTT
TATGGCAACTCTGCGTTGAGCCAGTCTATTGGTGCCATGTTTCCAATAAAACTTCTCCTTTCATGTCTCGT

FIGURE 1352

MAPFPEEVDVFTAPHWRMKQLVGLYCDKLSKTNFSNNNDFRALLQSLYATFKEFKMHEQIENEYIIGLLQQRSQT
IYNVHSDNKLSEMLSLFEKGLKNVKNEYEQLNYAKQLKERLEAFTRDFLPHMKEEEEVFQPMLMEYFTYEELKDI
KKKVIAQHCSQKDTAELLRGLSLWNHAEERQKFFKYSVDEKSDKEAEVSEHSTGITHLPPEVMLSIFSYLNPQEL
CRCSQVSMKWSQLTKTGSLWKHLYPVHWARGDWYSGPATELDTEPDDEWVKNRKDESRAFHEWDEDADIDESEES
AEESIAISIAQMEKRLLHGLIHNVLPYVGTSVKTLVLAYSSAVSSKMVRQILELCPNLEHLDLTQTDISDSAFDS
WSWLGCCQSLRHLDLSGCEKITDVALEKISRALGILTSHQSGFLKTSTSKITSTAWKNKDITMQSTKQYACLHDL
TNKGIGEEIDNEHPWTKPVSSENFTSPYVWMLDAEDLADIEDTVEWRHRNVESLCVMETASNFSCSTSGCFSKDI
VGLRTSVCWQQHCASPAFAYCGHSFCCTGTALRTMSSLPESSAMCRKAARTRLPRGKDLIYFGSEKSDQETGRVL
LFLSLSGCYQITDHGLRVLTLGGGLPYLEHLNLSGCLTITGAGLQDLVSACPSLNDEYFYYCDNINGPHADTASG
CQNLQCGFRACCRSGE

FIGURE 1353

AGTGCGCATCCGGACGTAGGAGGTGGAGGTTGTGGAATTCGCCGTTCGAAAGCAGGGACTAAAAGCCCCACTTCG
TCTTACGTTCCGAAAGGAAGGCGTCTGTTGAGCCTTTCTCTCAGTCGTGAGGGAGGCGTCGACGGCGTGCGGAAG
TCCTGAGTTGAGGCTTGCGGGATCCTTTCCGGAGAAAGCGCAGGCTAAAGCCGCAGGTGAAG**ATG**TCCAACTACG
TGAACGACATGTGGCCGGGCTCGCCGCAGGAGAAGGATTCGCCCTCGACCTCGCGGTCGGGCGGGTCCAGCCGGC
TGTCGTCGCGGTCTAGGAGCCGCTCTTTTTCCAGAAGCTCTCGGTCCCATTCCCGCGTCTCGAGCCGGTTTTCGT
CCAGGAGTCGGAGGAGCAAGTCCAGGTCCCGTTCCCGAAGGCGCCACCAGCGGAAGTACAGGCGCTACTCGCGGT
CATACTCGCGGAGCCGGTCGCGATCCCGCAGCCGCCGTTACCGAGAGAGGCGCTACGGGTTCACCAGGAGATACT
ACCGGTCTCCTTCGCGGTACCGGTCCCGGTCCCGTAGCAGGTCGCGCTCTCGGGGAAGGTCGTACTGCGGAAGGG
CGTACGCGATCGCGCGGGGACAGCGCTACTACGGCTTTGGTCGCACAGTGTACCCGGAGGAGCACAGCAGATGGA
GGGACAGATCCAGGACGAGGTCGCGGAGCAGAACCCCCTTTCGCTTAAGTGAAAAAGATCGAATGGAGCTGTTAG
AAATAGCAAAAACCAATGCAGCGAAAGCTCTAGGAACAACCAACATTGACTTGCCAGCTAGTCTCAGAACTGTTC
CTTCAGCCAAAGAAACAAGCCGTGGAATAGGTGTATCAAGTAATGGTGCAAAGCCTGAAGTAAGTATTCTAGGTT
TGTCGGAACAAAACTTTCAGAAAGCCAACTGTCAAATC**TGA**TTAGCCACTTATATCTTAGACTATACTTTTTGGG
AAGTCTAGAGATGTATATAATGTGCTAAATTCAAAGTAGCAAATCTGAAGATAGGCAATGTCAAACCCATGAAAA
TGGGAGATTAATGAGCTTTATTTGGCCGTGCATGGTGCCTCATGCCTGTAATGAGGCAGATGGCTTGAGTCCAGG
AGTTCAAGACTAGCCTGGGCAATGTGGCAAAACCGCGTGTTTACAAAAAATACAAAAATTAGCCAGGCATGGTGG
TGCATGCCTGTAGTCCCAGCTGTTTGGGAGGCTGAGGCAGGAGGATCTTTGAGCCTAGGATGCTAAGGTTGCAGT
GAGCCAAGATGGCACCATTGCACTCTAGCCTGGGCAGCAGAGCGAGACCCTGTCTCAAAAAATACATTTATTTTT
TTCATTTTCAGTTAACAGTGTACTCTTATAACACCGTTATTAGCTGGTACTTTGGTGATTTCTATTACTAGTTTT
TCTAAGCTATTTACAGAGTGTTTGTAGCTTTCATTTGCAGCATTATGTTCCCACAAATTCTGTACTCAGCATATA
CAGTATAGTTTATCTGCTCTATTTCTGTCTTATAGAAATCATGAATGTGGTCTGCAGACATTGATGAAGAAAATC
TGTTGGTAATTGATACATGGGCTAAAGCATCAGAGGTTTAATTTGAAGTTTATGTTCACACACTGAAAACTTAGT
TTTTTTGTTGGTAGATCCATGTGCATGCTAGAATTTGGGACAGGCACTATTTGCATAAAGTATTAAAGTCAATTT
TTAAACTAAGCAAAGGTACACGTTGTAACGGTGGGGCATCTGTGAAAAAGATGTCCCTTTCATAATATATGCAAT
ATATTCCAGATGTTTTGAGAGATTACAGAAGAGGAGGCCTGCTTCACTTGCAGATAAGTTTATTATAATTCTCCA
GAAATGTGCAGGATGTGCATTAGCAAATTGCACTGTACTTTTCACTCCAGCCTGGGTGACAGAGCAAGACTCCCG
TCTCGGGGGCTT

FIGURE 1354

MSNYVNDMWPGSPQEKDSPSTSRSGGSSRLSSRSRSRSFSRSSRSHSRVSSRFSSRSRRSKSRSRSRRRHQRKYR
RYSRSYSRSRSRSRSRRYRERRYGFTRRYYRSPSRYRSRSRSRSRSRGRSYCGRAYAIARGQRYYGFGRTVYPEE
HSRWRDRSRTRSRSRTPFRLSEKDRMELLEIAKTNAAKALGTTNIDLPASLRTVPSAKETSRGIGVSSNGAKPEV
SILGLSEQNFQKANCQI

FIGURE 1355

GGACGTAGGAGGTGGAGGTTGTGGAATTCGCCGTTCGAAAGCAGGGACTAAAAGCCCCACTTCGTCTTACGTTCC
GAAAGGAAGGCGTCTGTTGAGCCTTTCTCTCAGTCGTGAGGGAGGCGTCGACGGCGTGCGGAAGTCCTGAGTTGA
GGCTTGCGGGATCCTTTCCGGAGAAAGCGCAGGCTAAAGCCGCAGGTGAAGATGTCCAACTACGTGAACGACATG
TGGCCGGGCTCGCCGCAGGAGAAGGATTCGCCCTCGACCTCGCGGTCGGGCGGGTCCAGCCGGCTGTCGTCGCGG
TCTAGGAGCCGCTCTTTTTCCAGAAGCTCTCGGTCCCATTCCCGCGTCTCGAGCCGGTTTTCGTCCAGGAGTCGG
AGGAGCAAGTCCAGGTCCCGTTCCCGAAGGCGCCACCAGCGGAAGTACAGGCGCTACTCGCGGTCATACTCGCGG
AGCCGGTCGCGATCCCGCAGCCGCCGTTACCGAGAGAGGCGCTACGGGTTCACCAGGAGATACTACCGGTCTCCT
TCGCGGTACCGGTCCCGGTCCCGTAGCAGGTCGCGCTCTCGGGGAAGGTCGTACTGCGGAAGGGCGTACGCGATC
GCGCGGGGACAGCGCTACTACGGCTTTGGTCGCACAGTGTACCCGGAGGAGCACAGCAGATGGAGGGACAGATCC
AGGACGAGGTCGCGGAGCAGAACCCCCTTTCGCTTAAGTGAAAAAGATCGAATGGAGCTGTTAGAAATAGCAAAA
ACCAATGCAGCGAAAGCTCTAGGAACAACCAACATTGACTTGCCAGCTAGTCTCAGAACTGTTCCTTCAGCCAAA
GAAACAAGCCGTGGAATAGGTGTATCAAGTAATGGTGCAAAGCCTGAACTGTCGGAAAAGGTAACAGAAGATGGA
ACTCGAAATCCCAATGGAAAACCTACCCAGCAAAGAAGCATAGCTTTTAGCTCTAATAATTCTGTAGCAAAGCCA
ATACAAAAATCAGCTAAAGCTGCCACAGAAGAGGCATCTTCAAGATCACCAAAAATAGATCAGAAAAAAAGTCCA
TATGGACTGTGGATACCTATCTAAAAGAAGAAAACTGATGGCTAAGTTTGCATGAAAACTGCACTTTATTGCAAG
TTAGTGTTTCTAGCATTATCCCATCCCTTTGAGCCATTCAGGGGTACTTGTGCATTTAAAAACCAACACAAAAAG
ATGTAAATACTTAACACTCAAATATTAACATTTTAGGTTTCTCTTGCAGATATGAGAGATAGCACAGATGGACCA
AAGGTTATGCACAGGTGGGAGTCTTTTGTATATAGTTGTAAATATTGTCTTGGTTATGTAAAAATGAAATTTTTT
AGACACAGTAATTGAACTGTATTCCTGTTTTGTATATTTAATAAATTTCTTGTTTTCATTCTTAAAAAAAAAAAA
AAAAAA

FIGURE 1356

GCGAGTTGTGTGAGCCGCCAGTATGGCCGGGCTATGGCGGCGAGCACTGGCTACGTGCGACTGTGGGGAGCGGCG
CGGTGCTGGGTGCTGCGGCGGCCGATGCTGGCCGCCGCCGGGGGGCGGGTTCCCACTGCAGCAGGAGCGTGGTTG
CTCCGAGGCCAGCGGACCTGCGACGCCTCTCCTCCTTGGGCACTGTGGGGCCGAGGCCCGGCAATTGGGGGCCAA
TGGCGGGGGTTTTGGGAAGCGAGCAGCCGCGGCGGAGGCGCATTCTCGGGGGGCGAGGACGCCTCCGAGGGCGGC
GCGGAGGAAGGAGCCGGCGGCGCGGGGGGCAGCGCGGGCGCCGGGGAAGGCCCGGTCATAACGGCGCTCACGCCC
ATGACGATCCCCGATGTGTTTCCGCACCTGCCGCTCATCGCCATCACCCGCAACCCGGTGTTCCCGCGCTTTATC
AAGATTATCGAGGTTAAAAATAAGAAGTTGGTTGAGCTGCTGAGAAGGAAAGTTCGTCTCGCCCAGCCTTATGTC
GGCGTCTTTCTAAAGAGAGATGACAGCAATGAGTCGGATGTGGTCGAGAGCCTGGATGAAATCTACCACACGGGG
ACGTTTGCCCAGATCCATGAGATGCAGGACCTTGGGGACAAGCTGCGCATGATCGTCATGGGACACAGAAGAGTC
CATATCAGCAGACAGCTGGAGGTGGAGCCCGAGGAGCCGGAGGCGGAGAACAAGCACAAGCCCCGCAGGAAGTCA
AAGCGGGGCAAGAAGGAGGCGGAGGACGAGCTGAGCGCCAGGCACCCGGCGGAGCTGGCGATGGAGCCCACCCCT
GAGCTCCCGGCTGAGGTGCTCATGGTGGAGGTAGAGAACGTTGTCCACGAGGACTTCCAGGTCACGGAGGAGGTG
AAAGCCCTGACTGCAGAGATCGTGAAGACCATCCGGGACATCATTGCCTTGAACCCTCTCTACAGGGAGTCAGTG
CTGCAGATGATGCAGGCTGGCCAGCGGGTGGTGGACAACCCCATCTACCTGAGCGACATGGGCGCCGCGCTCACC
GGGGCCGAGTCCCATGAGCTGCAGGACGTCCTGGAAGAGACCAATATTCCTAAGCGGCTGTACAAGGCCCTCTCC
CTGCTGAAGAAGGAATTTGAACTGAGCAAGCTGCAGCAGCGCCTGGGGCGGGAGGTGGAGGAGAAGATCAAGCAG
ACCCACCGTAAGTACCTGCTGCAGGAGCAGCTAAAGATCATCAAGAAGGAGCTGGGCCTGGAGAAGGACGACAAG
GATGCCATCGAGGAGAAGTTCCGGGAGCGCCTGAAGGAGCTCGTGGTCCCCAAGCACGTCATGGATGTTGTGGAC
GAGGAGCTGAGCAAGCTGGGCCTGCTGGACAACCACTCCTCGGAGTTCAATGTCACCCGCAACTACCTAGACTGG
CTCACGTCCATCCCTTGGGGCAAGTACAGCAACGAGAACCTGGACCTGGCGCGGGCACAGGCAGTGCTGGAGGAA
GACCACTACGGCATGGAGGACGTCAAGAAACGCATCCTGGAGTTCATTGCCGTTAGCCAGCTCCGCGGCTCCACC
CAGGGCAAGATCCTCTGCTTCTATGGCCCCCCTGGCGTGGGTAAGACCAGCATTGCTCGCTCCATCGCCCGCGCC
CTGAACCGAGAGTACTTCCGCTTCAGCGTCGGGGGCATGACTGACGTGGCTGAGATCAAGGGCCACAGGCGGACC
TACGTGGGCGCCATGCCCGGGAAGATCATCCAGTGTTTGAAGAAGACCAAGACGGAGAACCCCCTGATCCTCATC
GACGAGGTGGACAAGATCGGCCGAGGCTACCAGGGGGACCCGTCGTCGGCACTGCTGGAGCTGCTGGACCCAGAG
CAGAATGCCAACTTCCTGGACCACTACCTGGACGTGCCCGTGGACTTGTCCAAGGTGCTGTTCATCTGCACGGCC
AACGTCACGGACACCATCCCCGAGCCGCTGCGAGACCGTATGGAGATGATCAACGTGTCGGGCTACGTGGCCCAG
GAGAAGCTGGCCATTGCGGAGCGCTACCTGGTGCCCCAGGCTCGCGCCCTGTGTGGCTTGGATGAGAGCAAGGCC
AAGCTGTCATCGGACGTGCTGACGCTGCTCATCAAGCAGTACTGCCGCGAGAGCGGTGTCCGCAACCTGCAGAAG
CAAGTGGAGAAGGTGTTACGGAAATCGGCCTACAAGATTGTCAGCGGCGAGGCCGAGTCCGTGGAGGTGACGCCC
GAGAACCTGCAGGACTTCGTGGGGAAGCCCGTGTTCACCGTGGAGCGCATGTATGACGTGACACCGCCCGGCGTG
GTCATGGGGCTGGCCTGGACCGCAATGGGAGGCTCCACGCTGTTTGTGGAGACATCCCTGAGACGGCCACAGGAC
AAGGATGCCAAGGGTGACAAGGATGGCAGCCTGGAGGTGACAGGCCAGCTGGGGGAGGTGATGAAGGAGAGCGCC
CGCATAGCCTACACCTTCGCCAGAGCCTTCCTCATGCAGCACGCCCCCGCCAATGACTACCTGGTGACCTCACAC
ATCCACCTGCATGTGCCCGAGGGCGCCACCCCCAAGGACGGCCCAAGCGCAGGCTGCACCATCGTCACGGCCCTG
CTGTCCCTGGCCATGGGCAGGCCTGTCCGGCAGAATCTGGCCATGACTGGCGAAGTCTCCCTCACGGGCAAGATC
CTGCCTGTTGGTGGCATCAAGGAGAAGACCATTGCGGCCAAGCGCGCAGGGGTGACGTGCATCGTCCTGCCAGCC
GAGAACAAGAAGGACTTCTACGACCTGGCAGCCTTCATCACCGAGGGCCTGGAGGTGCACTTCGTGGAACACTAC
CGGGAGATCTTCGACATCGCCTTCCCGGACGAGCAGGCAGAGGCGCTGGCCGTGGAACGGTGACGGCCACCCCGG
GACTGCAGGCGGCGGATGTCAGGCCCTGTCTGGGCCAGAACTGAGCGCTGTGGGGAGCGCGCCCGGACCTGGCAG
TGGAGCCACCGAGCGAGCAGCTCGGTCCAGTGACCCAGATCCCAGGGACCTCAGTCGGCTTAATCAGAGTGTGGC
ATAGAAGCTATTTAATGATTAAAGTCATTTGCAGTA

FIGURE 1357

MAASTGYVRLWGAARCWVLRRPMLAAAGGRVPTAAGAWLLRGQRTCDASPPWALWGRGPAIGGQWRGFWEASSRG
GGAFSGGEDASEGGAEEGAGGAGGSAGAGEGPVITALTPMTIPDVFPHLPLIAITRNPVFPRFIKIIEVKNKKLV
ELLRRKVRLAQPYVGVFLKRDDSNESDVVESLDEIYHTGTFAQIHEMQDLGDKLRMIVMGHRRVHISRQLEVEPE
EPEAENKHKPRRKSKRGKKEAEDELSARHPAELAMEPTPELPAEVLMVEVENVVHEDFQVTEEVKALTAEIVKTI
RDIIALNPLYRESVLQMMQAGQRVVDNPIYLSDMGAALTGAESHELQDVLEETNIPKRLYKALSLLKKEFELSKL
QQRLGREVEEKIKQTHRKYLLQEQLKIIKKELGLEKDDKDAIEEKFRERLKELVVPKHVMDVVDEELSKLGLLDN
HSSEFNVTRNYLDWLTSIPWGKYSNENLDLARAQAVLEEDHYGMEDVKKRILEFIAVSQLRGSTQGKILCFYGPP
GVGKTSIARSIARALNREYFRFSVGGMTDVAEIKGHRRTYVGAMPGKIIQCLKKTKTENPLILIDEVDKIGRGYQ
GDPSSALLELLDPEQNANFLDHYLDVPVDLSKVLFICTANVTDTIPEPLRDRMEMINVSGYVAQEKLAIAERYLV
PQARALCGLDESKAKLSSDVLTLLIKQYCRESGVRNLQKQVEKVLRKSAYKIVSGEAESVEVTPENLQDFVGKPV
FTVERMYDVTPPGVVMGLAWTAMGGSTLFVETSLRRPQDKDAKGDKDGSLEVTGQLGEVMKESARIAYTFARAFL
MQHAPANDYLVTSHIHLHVPEGATPKDGPSAGCTIVTALLSLAMGRPVRQNLAMTGEVSLTGKILPVGGIKEKTI
AAKRAGVTCIVLPAENKKDFYDLAAFITEGLEVHFVEHYREIFDIAFPDEQAEALAVER

FIGURE 1358A

TCAACATATGAAAAATCAATGTAATATTTCATATTAACAGTTGGAAGACTCACAATTCATAGTTTCAGAATTTAC
AACACAAACCTACAGGAATAAAGACAATGTAGTATTAGAATAAGGTCAGATATATAGATCAATGGACAGAATTGA
CAGTCCAGAAATACACCCATACGATTACGGTCACCTGATTTTTGACTAAGGTTCCAAAACAATTCACTAGGGGAA
AGAATAGTCTTGTCAAAAAATGGTGCTCAGACAAGTGGATAGCCATAAGCACAGAATGAGTTTGGACCCCTATCT
CAAATCTCAAATACAAACATTAACTCCGAATTAATCAAATGCCTAAATTTAAGAGCTAAAATTTTAAAGCTCTTA
GAAGAAAACATAGGTACACATCTTTGTGACTTTGAATTAGGTCACGGTTTCCTTGACATGACACTTAAAAGTACA
AGCAACAAAAGAAAAAAATAGATAAAATGAACTTCAGCAAAATTAGAATGTTTATGCTTCAGAAAACACTGTGAA
GAAAGTGATCAGACAACTCACAGAATGGGAAAAATATTTGTGAATCATATCTCTTAATAAGGGTCCAGCAGAAAA
GGGCAAAGGTGGAAATGGAGGAGGAAAACCTCCTTCTGGTCCAAACCGA**ATG**AATGGTCATCACCAACAGAATGG
AGTGGAAAACATGATGTTGTTTGAAGTTGTTAAAATGGGCAAGAGTGCTATGCAGTCGGTGGTAGATGATTGGAT
AGAATCATACAAGCATGACCGAGATATAGCACTTCTTGACCTTATCAACTTTTTTATTCAGTGTTCAGGCTGTAA
AGGAGTTGTCACAGCAGAAATGTTTAGACATATGCAGAACTCTGAGATAATTCGAAAAATGACTGAAGAATTCGA
TGAGGATAGTGGAGATTATCCACTTACCATGGCTGGTCCTCAGTGGAAGAAGTTCAAATCCAGTTTTTGTGAATT
CATTGGCGTGTTAGTACGGCAATGTCAATATAGTATCATATATGATGAGTATATGATGGATACAGTCATTTCACT
TCTTACAGGATTGTCTGACTCACAAGTCAGAGCATTTCGACATACAAGCACCCTGGCAGCTATGAAGTTGATGAC
AGCTTTGGTGAATGTGGCACTAAATCTTAGCATTAATATGGATAATACACAAAGACAATATGAAGCAGAACGAAA
TAAAATGATTGGGAAACGAGCCAATGAGAGGCTAGAACTCCTGCTACAAAAGCGGAAAGAGCTTCAGGAAAATCA
AGATGAAATAGAAAATATGATGAATGCAATATTTAAAGGAGTGTTTGTACATAGATACCGTGATGCGATACGTGA
AATTCGAGCTATTTGCATTGAAGAGATTGGCATTTGGATGAAGATGTATAGTGATGCCTTTCTTAATGACAGTTA
TTTAAAATATGTTGGTTGGACTATGCATGATAAGCAAGGTGAAGTAAGACTCAAATGTCTTACTGCTCTACAAGG
GCTTTATTATAACAAAGAGCTTAATTCCAAACTGGAACTTTTTACCAGTCGGTTCAAGGATAGAATTGTGTCTAT
GACCCTTGACAAAGAATATGATGTTGCAGTACAAGCAATAAAATTACTCACTCTTGTTTTACAGAGTAGTGAAGA
AGTTCTCACTGCAGAAGATTGTGAAAATGTCTATCATCTGGTTTATTCAGCTCACCGGCCAGTAGCAGTAGCAGC
TGGAGAATTTCTCTACAAAAAGCTCTTCAGTCGTAGAGATCCAGAGGAGGATGGAATGATGAAAAGAAGAGGAAG
ACAAGGTCCAAATGCCAACCTTGTTAAGACATTGGTTTTTTTCTTTCTAGAAAGTGAGTTACATGAGCATGCAGC
ATACCTTGTGGATAGCATGTGGGACTGTGCTACTGAGCTGCTGAAAGACTGGGAATGTATGAATAGCTTGTTACT
GGAAGAGCCACTTAGTGGAGAGGAAGCACTAACAGATAGGCAAGAGAGTGCTCTGATTGAAATAATGCTTTGTAC
CATTAGACAAGCGGCTGAATGTCATCCTCCCGTGGGAAGAGGGACAGGAAAAAGGGTGCTTACAGCAAAGGAGAA
GAAGACACAGTTGGATGATAGGACAAAAATCACTGAGCTTTTTGCCGTGGCCCTTCCTCAGTTATTAGCAAAATA
CTCTGTAGATGCAGAAAAGGTGACTAACTTGTTGCAGTTGCCTCAGTACTTTGATTTGGAAATATATACCACTGG
ACGATTAGAAAACGATTTGGATGCCTTATTGCGACAGATCCGGAATATTGTAGAGAAGCACACAGATACAGATGT
TTTGGAAGCATGTTCTAAAACTTACCATGCACTCTGTAATGAAGAGTTCACAATCTTCAACAGAGTAGATATTTC
AAGAAGTCAACTGATAGATGAATTGGCAGATAAATTTAACCGGCTTCTTGAAGATTTTCTGCAAGAGGGTGAAGA
ACCTGATGAAGATGATGCATATCAGGTATTGTCAACATTGAAGAGGATCACTGCTTTTCATAATGCCCATGACCT
TTCAAAGAGGGATTTATTTGCTTGTAATTACAAACTCTTGAAAACTGGAATCGAAAATGGAGACATGCCTGAGCA
GATTGTTATTCACGCACTGCAGTGTACTCACTATGTAATCCTTTGGCAACTTGCTAAGATAACTGAAAGCAGCTC
TACAAAGGAGGACTTGCTGCGTTTAAAGAAACAAATGAGAGTATTTTGTCAGATATGTCAACATTACCTGACCAA
CGTGAATACTACTGTTAAGGAACAGGCCTTCACTATTCTGTGTGATATTTTGATGATCTTCAGCCATCAGATTAT
GTCAGGAGGGCGTGACATGTTAGAGCCATTAGTGTATACCCCTGATTCTTCATTGCAGTCTGAGTTGCTCAGCTT
TATTTTGGATCATGTCTTCATTGAACAGGATGATGATAATAATAGTGCAGATGGTCAGCAAGAGGATGAAGCCAG
TAAAATTGAAGCTCTGCACAAGAGAAGAAATTTACTTGCAGCATTTTGTAAGCTAATTGTATATACTGTGGTGGA
GATGAATACAGCTGCAGATATCTTCAAACAGTATATGAAGTATTATAATGACTATGGAGATATCATCAAAGAAAC
AATGAGTAAAACAAGGCAGATAGACAAAATTCAGTGTGCTAAGACCCTTATTCTCAGTCTGCAACAGCTTTTTAA
TGAAATGATACAAGAAAATGGCTATAATTTTGATAGATCATCCTCTACATTTAGTGGCATAAAAGAACTTGCTCG
ACGTTTTGCTTTAACTTTTGGACTTGATCAGTTGAAAACAAGAGAAGCCATTGCCATGCTACACAAAGATGGCAT
AGAATTTGCTTTTAAAGAGCCTAATCCGCAAGGGGAGAGCCATCCACCTTTAAATTTGGCATTTCTTGATATTCT
GAGTGAATTTTCTTCTAAACTACTTCGACAAGACAAAAGAACAGTGTATGTTTACTTGGAAAAGTTCATGACCTT
TCAGATGTCACTCCGAAGAGAGGATGTGTGGCTTCCACTGATGTCTTACCGAAATTCTTTGCTAGCTGGTGGTGA

FIGURE 1358B

TGATGACACCATGTCAGTCATTAGTGGAATCAGCAGCCGGGGGTCAACAGTACGGAGTAAAAAATCAAAACCATC
TACAGGAAAACGGAAAGTGGTTGAGGGCATGCAGCTTTCACTCACTGAAGAAAGTAGTAGTAGTGACAGTATGTG
GTTAACGAGAGAACAAACACTGCACACCCCTGTTATGATGCAGACACCACAACTCACCTCCACTATTATGAGAGA
GCCCAAAAGATTACGGCCTGAGGATAGCTTCATGAGTGTTTATCCTAAGCAGACTGAACATCATCAAACACCTCT
TGATTATAATCGGCGTGGCACAAGCCTAATGGAAGATGATGAAGAGCCAATTGTGGAAGATGTTATGATGTCCTC
AGAAGGGAGGATTGAGGATCTTAATGAGGGAATGGATTTTGACACCATGGATATAGATTTGCCACCATCAAAGAA
CAGACGAGAGAGAACAGAACTGAAGCCTGATTTCTTTGATCCAGCTTCAATTATGGATGAATCAGTTCTTGGAGT
GTCAATGTTT**TAA**TACCAGTACACAATTAAATCTGTGGTGAAGTC

FIGURE 1359

MNGHHQQNGVENMMLFEVVKMGKSAMQSVVDDWIESYKHDRDIALLDLINFFIQCSGCKGVVTAEMFRHMQNSEI
IRKMTEEFDEDSGDYPLTMAGPQWKKFKSSFCEFIGVLVRQCQYSIIYDEYMMDTVISLLTGLSDSQVRAFRHTS
TLAAMKLMTALVNVALNLSINMDNTQRQYEAERNKMIGKRANERLELLLQKRKELQENQDEIENMMNAIFKGVFV
HRYRDAIREIRAICIEEIGIWMKMYSDAFLNDSYLKYVGWTMHDKQGEVRLKCLTALQGLYYNKELNSKLELFTS
RFKDRIVSMTLDKEYDVAVQAIKLLTLVLQSSEEVLTAEDCENVYHLVYSAHRPVAVAAGEFLYKKLFSRRDPEE
DGMMKRRGRQGPNANLVKTLVFFFLESELHEHAAYLVDSMWDCATELLKDWECMNSLLLEEPLSGEEALTDRQES
ALIEIMLCTIRQAAECHPPVGRGTGKRVLTAKEKKTQLDDRTKITELFAVALPQLLAKYSVDAEKVTNLLQLPQY
FDLEIYTTGRLENDLDALLRQIRNIVEKHTDTDVLEACSKTYHALCNEEFTIFNRVDISRSQLIDELADKFNRLL
EDFLQEGEEPDEDDAYQVLSTLKRITAFHNAHDLSKRDLFACNYKLLKTGIENGDMPEQIVIHALQCTHYVILWQ
LAKITESSSTKEDLLRLKKQMRVFCQICQHYLTNVNTTVKEQAFTILCDILMIFSHQIMSGGRDMLEPLVYTPDS
SLQSELLSFILDHVFIEQDDDNNSADGQQEDEASKIEALHKRRNLLAAFCKLIVYTVVEMNTAADIFKQYMKYYN
DYGDIIKETMSKTRQIDKIQCAKTLILSLQQLFNEMIQENGYNFDRSSSTFSGIKELARRFALTFGLDQLKTREA
IAMLHKDGIEFAFKEPNPQGESHPPLNLAFLDILSEFSSKLLRQDKRTVYVYLEKFMTFQMSLRREDVWLPLMSY
RNSLLAGGDDDTMSVISGISSRGSTVRSKKSKPSTGKRKVVEGMQLSLTEESSSSDSMWLTREQTLHTPVMMQTP
QLTSTIMREPKRLRPEDSFMSVYPKQTEHHQTPLDYNRRGTSLMEDDEEPIVEDVMMSSEGRIEDLNEGMDFDTM
DIDLPPSKNRRERTELKPDFFDPASIMDESVLGVSMF

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FIGURE 1360

CTTTTTCTCCATCTCAGAACCTTCCTGCCGTCGCGTTTGCACCTCGCTGCTCCAGCCTCTGGGGCGCATTCCAAC
CTTCCAGCCTGCGACCTGCGGAGAAAAAAAATTACTTATTTTCTTGCCCCATACATACCTTGAGGCGAGCAAAAA
AATTAAATTTTAACC**ATG**AGGGAAATCGTGCACATCCAGGCTGGTCAGTGTGGCAACCAGATCGGTGCCAAGTTC
TGGGAGGTGATCAGTGATGAACATGGCATCGACCCCACCGGCACCTACCACGGGGACAGCGACCTGCAGCTGGAC
CGCATCTCTGTGTACTACAATGAAGCCACAGGTGGCAAATATGTTCCTCGTGCCATCCTGGTGGATCTAGAACCT
GGGACCATGGACTCTGTTCGCTCAGGTCCTTTTGGCCAGATCTTTAGACCAGACAACTTTGTATTTGGTCAGTCT
GGGGCAGGTAACAACTGGGCCAAAGGCCACTACACAGAGGGCGCCGAGCTGGTTGATTCTGTCCTGGATGTGGTA
CGGAAGGAGGCAGAGAGCTGTGACTGCCTGCAGGGCTTCCAGCTGACCCACTCACTGGGCGGGGGCACAGGCTCT
GGAATGGGCACTCTCCTTATCAGCAAGATCCGAGAAGAATACCCTGATCGCATCATGAATACCTTCAGTGTGGTG
CCTTCACCCAAAGTGTCTGACACCGTGGTCGAGCCCTACAATGCCACCCTCTCCGTCCATCAGTTGGTAGAGAAT
ACTGATGAGACCTATTGCATTGACAACGAGGCCCTCTATGATATCTGCTTCCGCACTCTGAAGCTGACCACACCA
ACCTACGGGGATCTGAACCACCTTGTCTCAGCCACCATGAGTGGTGTCACCACCTGCCTCCGTTTCCCTGGCCAG
CTCAATGCTGACCTCCGCAAGTTGGCAGTCAACATGGTCCCCTTCCCACGTCTCCATTTCTTTATGCCTGGCTTT
GCCCCTCTCACCAGCCGTGGAAGCCAGCAGTATCGAGCTCTCACAGTGCCGGAACTCACCCAGCAGGTCTTCGAT
GCCAAGGACATGATGGCTGCCTGTGACCCCCGCCACGGCCGATACCTCACCGTGGCTGCTGTCTTCCGTGGTCGG
ATGTCCATGAAGGAGGTCGATGAGCAGATGCTTAACGTGCAGAACAAGAACAGCAGCTACTTTGTGGAATGGATC
CCCAACAATGTCAAGACAGCCGTCTGTGACATCCCACCTCGTGGCCTCAAGATGGCAGTCACCTTCATTGGCAAT
AGCACAGCCATCCAGGAGCTCTTCAAGCGCATCTCGGAGCAGTTCACTGCCATGTTCCGCCGGAAGGCCTTCCTC
CACTGGTACACAGGCGAGGGCATGGACGAGATGGAGTTCACCGAGGCTGAGAGCAACATGAACGACCTCGTCTCT
GAGTATCAGCAGTACCAGGATGCCACCGCAGAAGAGGAGGAGGATTTCGGTGAGGAGGCCGAAGAGGAGGCC**TAA**

GGCAGAGCCCCCATCACCTCAGGCTTCTCAGTTCCCTTAGCCGTCTTACTCAACTGCCCCTTTCCTCTCCCTCAG
AATTTGTGTTTGCTGCCTCTATCTTGTTTTTTGTTTTTTCTTCTGGGGGGGGGGTCTAGAACAGTGCCTGGCACAT
AGTAGGCGCTCAATAAATACTTGTTTGTTGAAAAAAAAAAAAAAAA

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FIGURE 1361

MREIVHIQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLDRISVYYNEATGGKYVPRAILVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKEAESCDCLQGFQLTHSLGGGTGSGMGTL
LISKIREEYPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTTPTYGDL
NHLVSATMSGVTTCLRFPGQLNADLRKLAVNMVPFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQVFDAKDMM
AACDPRHGRYLTVAAVFRGRMSMKEVDEQMLNVQNKNSSYFVEWIPNNVKTAVCDIPPRGLKMAVTFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEEEDFGEEAEEEA

FIGURE 1362

TGTTCCGCGATCTTCTCAGGCTCTCCTAGCAGCATCCATCGCCGCCACCCTATCTTCACTGGCTTCACCTTCTCC
TTCTCTCTTCGTTGCTGAGCGACAAGCTTCCTAGCGCT**ATG**ACTGTCGTCTCCGTCCCGCAGCGGGAGCCGCTCG
TCCTGGGTGGCCGCCTTGCGCCGCTTGGCTTTTCCTCCCGAGGTTACTTTGGGGCCCTCCCGATGGTGACCACGG
CTCCGCCTCCTTTACCCCGGATCCCGGACCCCCGGGCACTGCCCCCGACCCTCTTCCTCCCTCATTTCCTAGGGG
GAGATGGCCCGTGTCTGACCCCCCAGCCTCGCGCTCCAGCAGCTCTGCCCAACCGCAGCCTCGCCGTGGCGGGAG
GCACTCCTCGGGCAGCGCCGAAGAAGCGGCGAAAGAAGAAGGTGCGGGCCAGCCCCGCAGGGCAGCTGCCCAGCC
GCTTCCACCAGTACCAGCAGCACCGGCCGAGTCTGGAGGGCGGCCGGAGCCCCGCGACCGGCCCGAGCGGAGCGC
AGGAGGTCCCGGGCCCGGCCGCCGCCTTGGCCCCGAGTCCTGCAGCCGCAGCCGGCACGGAGGGAGCCAGCCCCG
ACCTTGCCCCGCTGCGGCCCGCGGCTCCCGGCCAAACCCCCCTCAGGAAAGAGGTTTTAAAATCAAAGATGGGAA
AATCGGAGAAAATTGCCCTTCCCCATGGCCAGCTTGTTCATGGTATACACTTGTATGAGCAACCAAAGATAAACA
GACAGAAAAGCAAATATAACTTGCCACTAACCAAGATCACCTCTGCAAAAAGAAATGAAAACAACTTTTGGCAGG
ATTCTGTTTCATCTGACAGAATTCAGAAGCAGGAAAAAAAGCCTTTTAAAAATACCGAGAACATTAAAAATTCGC
ATTTGAAGAAATCAGCATTTCTAACTGAAGTGAGCCAAAAGGAAAATTATGCTGGGGCAAAGTTTAGTGATCCAC
CTTCTCCTAGTGTTCTTCCAAAGCCTCCTAGTCACTGGATGGGAAGCACTGTTGAAAATTCCAACCAAAACAGGG
AGCTGATGGCAGTACACTTAAAAACCCTCCTCAAAGTTCAAACT**TAG**ATTTCAGATTTCAGTATGTGTGTAAAAC
ATAATTTTTCCCATATCCCTGGACTCTTGAGAAAATTGGTACAGAAATGGAAATTTGCCTTGTTGCAACATACAA
TTGCAAAAGATGAGTTTAAAAAATTACATACAAACAGCTTGTATTATATTTTATATTTTGTAAATACTGTATACC
ATGTATTATGTGTATATTGTTCATACTTGAGAGGTATATTATAGTTTTGTTATGAAAGTATGTATTTTGCCCTGC
CCACATTGCAGGTGTTTTGTATATATACAATGGATAAATTTTAAGTGTGTGCTAAGGCACATGGAAGACCGATTT
TATTTGCACAAGGTACTGAGATTTTTTTCAAGAAACAGCTGTCAAATCTCAAGGTGAAGATCTAAATGTGAACAG
TTTACTAATGCACTACTGAAGTTTAAATCTGTGGCACAATCAATGTAAGCATGGGGTTTGTTTCTCTAAATTGAT
TTGTAATCTGAAATTACTGAACAACTCCTATTCCCATTTTTGCTAAACTCAATTTCTGGTTTTGGTATATATCCA
TTCCAGCTTAATGCCTCTAATTTTAATGCCAACAAAATTGGTTGTAATCAAATTTTAAAATAATAATAATTTGGC
CCCCCCTTTTAAAATAGTCTTGACTCTTTGTGTGTGACTGTTTCTCATGTTTGAATGTGTGACTAGGAGATGATT
TTGTGTGGTTGGATTTTTTTGACTTCTACTTTACTGGCTGAGTGTGAGCCGCCATGCCTGGCCATAATCTACATT
TTCTTACCAGGAGCAGCATTGAGGTTTTTGAGCATAGTACTTGACTACTCTAGAGGCTGAGACGGGAGCATCTCT
TGAGCCTGAGAAGTGGAGATTGCAATTGAGCTAGGATCAGGCCACTGCACTCCAGCCTGGGTAACAGACGCTGTC
TCAAAAAAAAGGCCAAGAGAAAGTAAGGGAGACAGA

FIGURE 1363

MTVVSVPQREPLVLGGRLAPLGFSSRGYFGALPMVTTAPPPLPRIPDPRALPPTLFLPHFLGGDGPCLTPQPRAP
AALPNRSLAVAGGTPRAAPKKRRKKKVRASPAGQLPSRFHQYQQHRPSLEGGRSPATGPSGAQEVPGPAAALAPS
PAAAAGTEGASPDLAPLRPAAPGQTPLRKEVLKSKMGKSEKIALPHGQLVHGIHLYEQPKINRQKSKYNLPLTKI
TSAKRNENNFWQDSVSSDRIQKQEKKPFKNTENIKNSHLKKSAFLTEVSQKENYAGAKFSDPPSPSVLPKPPSHW
MGSTVENSNQNRELMAVHLKTLLKVQT

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FIGURE 1364

CCGGCTGCTCAGCGCGCTCCGCGGTC**ATG**GAGATCCCCGGGAGCTTGTGCAAGAAAGTCAAGCTGAGCAATAACG
CGCAGAACTGGGGAATGCAGAGAGCAACCAATGTCACCTACCAAGCCCATCATGTCAGCAGGAACAAGAGAGGTC
AGGTGGTGGGGACCAGAGGTGGCTTTCGTGGTTGCACAGTTTGGCTAACAGGCTTGTCTGGAGCGGGAAAGACTA
CTGTGAGCATGGCCTTGGAGGAGTACCTGGTTTGTCATGGTATTCCATGCTACACTCTGGATGGTGACAATATTC
GTCAAGGTCTCAATAAAAATCTTGGCTTTAGTCCTGAAGACAGAGAAGAGAATGTTCGACGCATCGCAGAAGTTG
CTAAACTGTTTGCAGATGCTGGCTTAGTGTGCATCACAAGTTTCATATCACCTTACACTCAGGATCGCAACAATG
CAAGGCAAATTCATGAAGGTGCAAGTTTACCGTTTTTTGAAGTATTTGTTGATGCTCCTCTGCATGTTTGTGAAC
AGAGGGATGTCAAAGGACTCTACAAAAAAGCCCGGGCAGGAGAAATTAAAGGTTTCACTGGGATCGATTCTGAAT
ATGAAAAGCCAGAGGCCCCTGAGTTGGTGCTGAAAACAGACTCCTGTGATGTAAATGACTGTGTCCAGCAAGTTG
TGGAACTTCTACAGGAACGGGATATTGTACCTGTGGATGCATCTTATGAAGTAAAAGAACTATATGTGCCAGAAA
ATAAACTTCATTTGGCAAAAACAGATGCGGAAACATTACCAGCACTGAAAATTAATAAAGTGGATATGCAGTGGG
TGCAGGTTTTGGCAGAAGGTTGGGCAACCCCATTGAATGGCTTTATGAGAGAGAGGGAGTACTTGCAGTGCCTTC
ATTTTGATTGTCTTCTGGATGGAGGTGTCATTAACTTGTCAGTACCTATAGTTCTGACTGCGACTCATGAAGATA
AAGAGAGGCTGGACGGCTGTACAGCATTTGCTCTGATGTATGAGGGCCGCCGTGTGGCCATTCTTCGCAATCCAG
AGTTTTTTGAGCACAGGAAAGAGGAGCGCTGTGCCAGACAGTGGGGAACGACATGCAAGAACCACCCCTATATTA
AGATGGTGATGGAACAAGGAGATTGGCTGATTGGAGGAGATCTTCAAGTCTTGGATCGAGTTTATTGGAATGATG
GTCTTGATCAGTATCGTCTTACTCCTACTGAGCTAAAGCAGAAATTTAAAGATATGAATGCTGATGCTGTCTTTG
CATTTCAACTACGCAACCCAGTGCACAATGGACATGCCCTGTTAATGCAGGATACCCATAAGCAACTTCTAGAGA
GGGGCTACCGGCGCCCTGTCCTCCTCCTCCACCCTCTGGGTGGCTGGACAAAGGATGACGATGTTCCTTTGATGT
GGCGTATGAAGCAGCATGCTGCAGTGTTGGAGGAAGGAGTTCTGAATCCTGAGACGACAGTGGTGGCCATCTTCC
CATCTCCCATGATGTATGCTGGACCAACTGAGGTCCAGTGGCATTGCAGAGCACGGATGGTTGCAGGAGCCAACT
TTTACATTGTTGGACGAGACCCTGCTGGCATGCCTCATCCAGAAACAGGGAAGGATCTTTATGAGCCAAGTCATG
GTGCCAAAGTGCTGACGATGGCCCCTGGTTTAATCACTTTGGAAATAGTTCCCTTTCGAGTTGCAGCTTACAACA
AGAAAAAGAAGCGTATGGACTACTATGACTCTGAACACCATGAAGACTTTGAATTTATTTCAGGAACACGAATGC
GCAAACTTGCTCGAGAAGGCCAGAAACCACCTGAAGGTTTCATGGCTCCCAAGGCTTGGACCGTGCTGACAGAAT
ACTACAAATCCTTGGAGAAAGCT**TAG**GCTGTTAACCCAGTCACTCCACCTTTGACACATTACTAGTAACAAGAGG
GGACCACATAGTCTCTGTTGGCATTTCTTTGTGGTGTCTGTCTGGACATGCTTCCTAAAAACAGACCATTTTCCT
TAACTTGCATCAGTTTTGGTCTGCCTTATGAGTTCTGTTTTGAACAAGTGTAACACACTGATGGTTTTAATGTAT
CTTTTCCACTTATTATAGTTATATTCCTACAATACAATTTTAAAATTGTCTTTTTATATTATATTTATGCTTCTG
TGTCATGATTTTTTCAAGCTGTTATATTAGTTGTAACCAGTAGTATTCACATTAAATCTTGCTTTTTTTCCCCTT
AAAAAAAAAAAAAAA

FIGURE 1365

MEIPGSLCKKVKLSNNAQNWGMQRATNVTYQAHHVSRNKRGQVVGTRGGFRGCTVWLTGLSGAGKTTVSMALEEY
LVCHGIPCYTLDGDNIRQGLNKNLGFSPEDREENVRRIAEVAKLFADAGLVCITSFISPYTQDRNNARQIHEGAS
LPFFEVFVDAPLHVCEQRDVKGLYKKARAGEIKGFTGIDSEYEKPEAPELVLKTDSCDVNDCVQQVVELLQERDI
VPVDASYEVKELYVPENKLHLAKTDAETLPALKINKVDMQWVQVLAEGWATPLNGFMREREYLQCLHFDCLLDGG
VINLSVPIVLTATHEDKERLDGCTAFALMYEGRRVAILRNPEFFEHRKEERCARQWGTTCKNHPYIKMVMEQGDW
LIGGDLQVLDRVYWNDGLDQYRLTPTELKQKFKDMNADAVFAFQLRNPVHNGHALLMQDTHKQLLERGYRRPVLL
LHPLGGWTKDDDVPLMWRMKQHAAVLEEGVLNPETTVVAIFPSPMMYAGPTEVQWHCRARMVAGANFYIVGRDPA
GMPHPETGKDLYEPSHGAKVLTMAPGLITLEIVPFRVAAYNKKKKRMDYYDSEHHEDFEFISGTRMRKLAREGQK
PPEGFMAPKAWTVLTEYYKSLEKA

FIGURE 1366A

AGAGATGGGTCTCGCCATCACCATGTTGCCCAGTCTGGTCTCCAACTCCTGGGCTCAAGCGATCCTCCTGCCTTG
GTCTCCCAAAGTGCTGGGATTACAGGTGTGAGCCCCCACACCCGGCCTGAGTGAGTGGGTTCTGAATGGTGACTG
TTGTTGTCCATAGCCTTCCCCCTGCTTCTGAGAGTGGAGTCCCTCCCCTCATGTTGGAGACCTCCCAAGGTCCAT
GTGGTCCTATAGGGGCTGTTCAGCCTCCCTAGCCCCTTAACGTGTCAGGTAATACTGTATATATTCCATGAAATG
TGAATAATTAGTTATATAATTCCTAAGCACTTATTTTAAAAAACAGCAATGTGATGCTTAACTCTTCCCACCTCT
GTTCCTGTCCCCCTTAGAAAACCACTGATAACTCTTTTTTTTTTTGAGACGGAGTCTTGCCCTGTCGCCCAGGCT
GGAGTGTAGTGGCCTGATCTCGGCTCGGCTCATTGTAACCTCCGCCTCGGGTTTGAGCGATTCTCCTGCCTCAGC
CTCCTGAGTAGCTGGGATTATAGGCGTGCACCACCACGCCTGGCTAATTTTTTGTATCTTTAGTAGGGACGGGTT
TCACCATGTTGGCCAGAGTGGTCTTGAACTCCTGACCTTGTGATCCGCTCGCCTCAGCCTCCCAAAGTGCTGGGA
TTACAGGCATGAGCCACCGTGCCTGTCCTAGAACCACTGGTAACTCTTAACTGXXXAGTGTTCTAAGAACGGAAG
CATCTGGGCTGG**ATG**GAATTTAGCATCAAGCAGAGTCCCCTTTCTGTTCAGAGTGTTGTAAAGTGCATAAAGATG
AAGCAGGCACCAGAAATCCTCGGCAGTGCCAACGGGAAGACTCCGAGCTGCGAGGTGAACCGCGAGTGTTCTGTG
TTCCTCAGCAAAGCCCAGCTCTCCAGTAGCCTGCAGGAGGGGGTCATGCAGAAGTTTAACGGCCACGACGCCCTG
CCCTTTATTCCAGCCGACAAGCTGAAAGATCTTACTTCCCGGGTGTTTAATGGAGAACCCGGCGCACACGATGCC
AAACTGCGTTTTGAGTCCCAGGAAATGAAAGGGATTGGGACACCCCCTAACACTACCCCTATCAAAAATGGCTCT
CCAGAAATTAAGCTGAAAATCACCAAAACATACATGAATGGGAAGCCTCTCTTTGAATCTTCCATTTGTGGTGAC
AGTGCTGCTGATGTGTCTCAGTCAGAAGAAAATGGACAAAAACCAGAAAACAAGGCGAGAAGGAACAGGAAGAGG
AGCATAAAATATGACTCCTTGCTGGAGCAGGGCCTTGTCGAAGCAGCTCTTGTGTCTAAGATCTCAAGTCCTTCA
GATAAAAAGATTCCAGCTAAGAAAGAGTCTTGTCCAAACACTGGAAGAGACAAAGACCACCTGTTGAAATACAAC
GTTGGTGATTTGGTGTGGTCCAAAGTGTCGGGTTACCCTTGGTGGCCTTGCATGGTTTCTGCAGATCCACTCCTT
CACAGCTATACCAAACTTAAAGGTCAGAAAAAGAGTGCACGCCAGTATCACGTACAGTTCTTTGGTGACGCCCCA
GAAAGAGCTTGGATATTTGAGAAGAGCCTCGTAGCTTTTGAAGGAGAAGGACAGTTTGAAAAATTATGCCAGGAA
AGTGCCAAGCAGGCACCCACGAAAGCTGAGAAAATTAAGCTATTGAAACCAATTTCAGGGAAATTGAGGGCCCAG
TGGGAAATGGGCATTGTTCAAGCAGAAGAAGCTGCAAGCATGTCAGTGGAGGAGCGGAAAGCCAAGTTCACCTTT
CTCTATGTGGGGGACCAGCTTCATCTCAACCCTCAAGTAGCCAAGGAGGCTGGCATTGCTGCAGAGTCTTTGGGA
GAAATGGCAGAATCCTCAGGAGTCAGTGAAGAAGCTGCTGAAAACCCCAAGTCTGTGAGAGAAGAGTGCATTCCC
ATGAAGAGAAGGCGGAGGGCCAAACTGTGTAGCTCTGCAGAGACCCTGGAGAGTCACCCCGACATAGGGAAGAGT
ACTCCTCAAAAGACGGCAGAGGCTGACCCCAGAAGAGGAGTAGGGTCTCCTCCTGGGAGGAAGAAGACCACAGTC
TCCATGCCACGAAGCAGGAAGGGAGATGCAGCATCCCAGTTTTTGGTCTTCTGTCAAAAACACAGGGATGAGGTG
GTAGCTGAGCACCCAGATGCTTCAGGTGAGGAGATTGAAGAGCTGCTCAGGTCACAGTGGAGTCTGCTGAGTGAG
AAGCAGAGAGCACGCTACAACACCAAGTTTGCCCTGGTGGCCCCTGTCCAGGCTGAAGAAGACTCTGGTAATGTA
AATGGGAAAAAAAGAAACCACACAAAGAGGATACAGGACCCTACAGAAGATGCTGAAGCTGAGGACACACCCAGG
AAAAGACTCAGGACGGACAAGCACAGTCTTCGGAAGAGAGACACAATCACTGACAAAACGGCCAGAACAAGCTCT
TACAAGGCCATGGAGGCAGCCTCCTCGCTCAAGAGCCAGGCAGCAACGAAAAATCTGTCTGATGCATGTAAACCA
CTGAAGAAGCGAAATCGGGCTTCCACGGCAGCATCTTCAGCTCTTGGGTTTAGCAAAAGTTCATCTCCTTCTGCA
TCCTTAACTGAGAATGAGGTCTCGGACAGCCCGGGAGACGAGCCCTCGGAGTCCCCATACGAAAGTGCAGACGAA
ACACAAACTGAAGTATCTGTCTCATCCAAAAAGTCTGAGCGAGGAGTGACTGCCAAAAAGGAGTATGTGTGCCAG
CTGTGTGAGAAGCCGGGCAGCCTCCTGCTCTGTGAAGGACCCTGCTGCGGAGCTTTCCACCTCGCCTGCCTTGGG
CTTTCCCGGAGGCCAGAAGGGAGGTTCACCTGCAGCGAGTGTGCCTCAGGGATTCACTCATGTTTCGTGTGTAAA
GAGAGCAAGACAGATGTTAAGCGCTGTGTGGTAACTCAGTGTGGAAAATTTTACCATGAGGCTTGTGTGAAAAAA
TACCCTCTGACTGTATTTGAGAGCCGAGGTTTCCGCTGCCCCCTCCACAGCTGTGTGAGCTGCCATGCTTCCAAC
CCTTCAAACCCAAGGCCGTCAAAAGGTAAAATGATGCGGTGTGTCCGCTGCCCCGTTGCCTATCACAGCGGGGAT
GCTTGTCTGGCAGCAGGATGCTCAGTGATCGCCTCCAACAGCATCATCTGCACTGCCCACTTCACTGCTCGGAAG
GGGAAGCGACACCACGCCCACGTCAACGTGAGCTGGTGCTTCGTGTGCTCCAAAGGGGGGAGCCTTCTGTGCTGT
GAGTCCTGCCCAGCGGCCTTCCACCCTGACTGCCTGAACATCGAGATGCCTGACGGCAGCTGGTTCTGCAATGAC
TGCAGGGCTGGGAAGAAGCTGCACTTCCAGGATATCATTTGGGTGAAACTTGGGAACTACAGATGGTGGCCGGCA
GAAGTTTGCCATCCCAAAAATGTTCCCCCAAATATTCAGAAAATGAAGCACGAGATTGGAGAATTCCCTGTGTTT
TTCTTTGGGTCTAAAGATTATTACTGGACGCATCAGGCGCGAGTGTTCCCGTACATGGAGGGGGACCGGGGCAGC

FIGURE 1366B

CGCTACCAGGGGGTCAGAGGGATCGGAAGAGTCTTCAAAAACGCACTGCAAGAAGCTGAAGCTCGTTTTCGTGAA
ATTAAGCTTCAGAGGGAAGCCCGAGAAACACAGGAGAGCGAGCGCAAGCCCCCACCATACAAGCACATCAAGGTG
AATAAGCCTTACGGGAAAGTCCAGATCTACACAGCGGATATTTCAGAAATCCCTAAGTGCAACTGCAAGCCCACA
GATGAGAATCCTTGTGGCTTTGATTCGGAGTGTCTGAACAGGATGCTGATGTTTGAGTGCCACCCGCAGGTGTGT
CCCGCGGGCGAGTTCTGCCAGAACCAGTGCTTCACCAAGCGCCAGTACCCAGAGACCAAGATCATCAAGACAGAT
GGCAAAGGGTGGGGCCTGGTCGCCAAGAGGGACATCAGAAAGGGAGAATTTGTTAACGAGTACGTTGGGGAGCTG
ATCGACGAGGAGGAGTGCATGGCGAGAATCAAGCACGCACACGAGAACGACATCACCCACTTCTACATGCTCACT
ATAGACAAGGACCGTATAATAGACGCTGGCCCCAAAGGAAACTACTCTCGATTTATGAATCACAGCTGCCAGCCC
AACTGTGAGACCCTCAAGTGGACAGTGAATGGGGACACTCGTGTGGGCCTGTTTGCCGTCTGTGACATTCCTGCA
GGGACGGAGCTGACTTTTAACTACAACCTCGATTGTCTGGGCAATGAAAAAACGGTCTGCCGGTGTGGAGCCTCC
AATTGCAGTGGATTCCTCGGGGATAGACCAAAGACCTCGACGACCCTTTCATCAGAGGAAAAGGGCAAAAAGACC
AAGAAGAAAACGAGGCGGCGCAGAGCAAAAGGGGAAGGGAAGAGGCAGTCAGAGGACGAGTGCTTCCGCTGCGGT
GATGGCGGGCAGCTGGTGCTGTGTGACCGCAAGTTCTGCACCAAGGCCTACCACCTGTCCTGCCTGGGCCTTGGC
AAGCGGCCCTTCGGGAAGTGGGAATGTCCTTGGCATCATTGTGACGTGTGTGGCAAACCTTCGACTTCATTTTGC
CACCTCTGCCCCAATTCGTTCTGTAAGGAGCACCAGGACGGGACAGCCTTCAGCTGCACCCCGGACGGGCGGTCC
TACTGCTGTGAGCATGACTTAGGGGCGGCATCGGTCAGAAGCACCAAGACTGAGAAGCCCCCCCCAGAGCCAGGG
AAGCCGAAGGGGAAGAGGCGGCGGCGGAGGGGCTGGCGGAGAGTCACAGAGGGCAAA**TAG**CGCCAGGCGGCCGCT
TGGCCGGATCCAGGGGCGGTGCAGGGCGGCCGGCCCTGCCTGCGGGAGAGGGCGAGCATGAACTGGCCCGGAGGA
CCCAGCTCGAGCCGCCAGGACACAGACGTACAGGCCTCCTCGGGAGGGAGCGCCTCCCCACCACTGAGCCATCCT
CAGCAGCGTCCGCTGCGTCTGCACTGATGACCGTCTGAGCCCAGCTCAGCGTTCCTGGACAAACAGCCTCACTCC
TCAGCGTTACCGCCACACTTGAATTTCTCCGAATGTCAAGGTTCCCTCCCACTCTATTTTTTTAGGTTAAAGTTA
ATTGGCATATGGAATGTTTTAATCTCCTCTGAAATGTGTAGCGTAGGCTTTTCCCAAGGGTCGCTAGAAACTCGT
CTTCGCGTTGCCCCCTTTCTGGCTCTCAGCGCCGTCGCCACTCGGGAGAGGCTGGGTGAGGCCCGTGTGAGGACT
GACCCTGGATTCCTCGAAACTGCCATTGTGATCATTACTCTGCTCTTTGGTGGCTGTATCATTTTTTTGTACTAA
TGTGAATTGTTCCTCAGAAACGCTTCTTTTCCATCCTAGTGAGAAGCTGGCCCTGCAGGTGGTGGCAGCAATGGT
GTTGTAAGATTTCCTCCCGTAGTTTTTTCTCCTCATGGATTTGAATGAAATGCCAATAACACGTCCACTTTCAAC
GTGTAGTTTACGCGGAGCACTTTCGAGGCCTGGCCGGGTTGGGCCTACTTCTCACCTGGGCCTATCTTCTGAACT
CGCTAGGTTCTTATCAACATTTGGGGGATAACTTTGTATATTTTTTTCATTTGGCTTTTCTTTACCAGTTTCTGA
TTTTTATTCTCAATATATTTTTGCTAAACCTATTTCACAAATCACCACCGACTGAAGTGTGTGTTTACTGATGCG
GCCCTGAGCTCCATGGCGAAAGGAGTGACTTTGCAGGGCGTGAGACCGCAGTCTGCTTAGAGCACAGGAAGTGAC
AACTTAGGGAGCCCCGTAGGGCGCTGCAGGCCCCGGGGACCCCAGCACGTGGGTCTAAAGAGAGACGGAGTCTAG
CTCTCCTGCCACCCAGAGTGGCTTCCATCTCAGCACTCTGTGGGTCTGGTGATGGAAGATGCAGTCTCTGCTGAT
CACATGTGCCCTCTGCCAGGGCACCTACTGAGAGGTGCGGTCCTGGGGGTGGAGGCCTGCCTGGCAGGTGTGCGT
GCCTCGTACGTGTGTTATGGGCACTGGTCTAGGCCAGGTATGACACCCACTCTCCTGTGAGATTTCACTTTAGTT
TTTAAAAGGTCCAGTTCTACAGAGTGAGACCTATCTATCTGAGTACTACATATGTTTTAAGACTTGGTTCTTTTT
TTGAGGGATCCTTGACCCTGGGAAGTCTGGAGCACCCTGAGAAGGGGGCACCATGTGTGCCTTTGCCCACGTGTC
CTGAGGGGCTGCTTGTCTGGGAGGGAGGGAGAGAACATTCAGCAGCAGGTGCTTTTTTATGGCCTTTTCTTAAAA
TAACCTAAGGGGGACACATCCATCTTGCAGAGAAGTTTACAGAACTCCCCTTGAAAACTGCTGCTGAGGCTCCTG
TTAAATTTTCTGTGGCATCTTTTATGCCTTGGTAAAAACTGCAGTGTCTTTGGACCTGAGAGTGGCTACTCCGTG
GTTTTGTGACCTGTAAGCGTGGGGTTCAGGGGTGTGTGGCCCTGCAGGGTCCCACGCCTCCCTGAGCACTGACTG
GAAGTTTCACTGGCTGGTGGCTGTCCCTTCTCCCATCAGGGTCCCCAGCAAAGTTAACTACACAGAGGACCCAGG
GGAAACGAGCTGTGTAGCCACTGACTTGCTCGCGCGGCCGTGGCCTCTGAGGGGCACTCGCCGGTTAAGACAGGG
TGGGAGTAGTGCTTTCCAGTTCAGACTCTAACTTCTCCCAAAGTGTCCTAAGAAAATACTGGATCGGCTCATAGA
TTTATGCTCCTTATGATGCCCTAACTTGGAAGGTTGTTCTAGGGACAGGCCGGGCAGTGTCCCCACACACACCTT
AGAGTCGAAGGCCCCAGGGCCCCGCTGTCACTTGCCCAAAAGATCCCTTCCGGCAGGTAAGGGACTACCAATGCT
TACGTCAAAACAGCAGAATCGGCTTTGCAGTGCACTTTGGGGAGCAGATATTAACTTATTTTTGTGTTGGACAGT
AGTGAAATCTTGTGATTTTTAATCGCTTTGATAATACTTCCAAATTTTATGATTTTTCTGAAGGAAATAATGCAA
ACATTTTAAATATGTTTCTCCCCCTTTCCAAAAACTGTTAAACTAATGAGCAAGTAACACTAACTTTGAATGTCT

FIGURE 1366C

CTACAATACCCGTTGATAACTCAGTGGAGCCAGGCTTTGGGGTAGCGGCCCTGAGCTTGCAGGGTTTCTCGCCAC
TGGGGCTGACCACGCCCCCAGCTGTGACCGTGGGTGTGGCTGGCTCTCGGCCCTGCCCAGCTTTGTTCTGAGGAC
GTGGTGACTTCCTGAACATCAGCTTCAATCCTCCATCATTAATGTGAAGCAAAACACAAAAACCGCCCCAATCCC
TCAGGATTCCTTGGCATCCGAAACCAGCATCTGCACCTAAACCCATACCCACCCGTGTGCGCCCACAGGGGGATG
TGTCCGAATGGGCAGCTTAAAATGTGGTCACCTGTGGGGGAAACTCTTCAGGCACCTGAAGTGAGAACCCAGCTG
TCCGTCCTCAGGCCGGCCTTTCTTCCGGCGACACCCGTCCATGGCTGGCTGGGTCCCCTTCGCAGTGTTTGTCTG
TCTTGACATCTAAACCCCGGCGTGTGCAGTGCCCATCTTCCAGGACTACCTTATTTTCCAGAATTAAACCTGTTT
TATAATTCAAGTTAATGCAAATGACTGTCAGTTGCCAAATATCTTGATCCTGTGAGTGTAGTTGATGACTGTTTG
TTAGTCAGTAGAGTAAAATGCTGTGTCCACGGGGTGTCACAGCCTCACCATACCCTGTTGAGGTGTGAAATGCCC
CGTCAGAAATTAAATACAAACTTAAATGTGCCTATTGGTGTCTAAACTTCATACAATGTAAGGTCAGATTCCTTT
TAGGAATACTGGGTGCTGTCACCAGGTTTGATAGTTAGACTTAAAAACTTGAAATTCACTTTTTGGGGGGAGGGA
TATACTGAAATAGAGAGTTGAGACTTGCCAGTTGGGGGAAAATAGCATTTAAAATGGAAAGCTGTGTTTGGAAAA
TTGTGTATGAGTATTTTTGTATTAAAAACATTTTAAA

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FIGURE 1367

MEFSIKQSPLSVQSVVKCIKMKQAPEILGSANGKTPSCEVNRECSVFLSKAQLSSSLQEGVMQKFNGHDALPFIP
ADKLKDLTSRVFNGEPGAHDAKLRFESQEMKGIGTPPNTTPIKNGSPEIKLKITKTYMNGKPLFESSICGDSAAD
VSQSEENGQKPENKARRNRKRSIKYDSLLEQGLVEAALVSKISSPSDKKIPAKKESCPNTGRDKDHLLKYNVGDL
VWSKVSGYPWWPCMVSADPLLHSYTKLKGQKKSARQYHVQFFGDAPERAWIFEKSLVAFEGEGQFEKLCQESAKQ
APTKAEKIKLLKPISGKLRAQWEMGIVQAEEAASMSVEERKAKFTFLYVGDQLHLNPQVAKEAGIAAESLGEMAE
SSGVSEEAAENPKSVREECIPMKRRRRAKLCSSAETLESHPDIGKSTPQKTAEADPRRGVGSPPGRKKTTVSMPR
SRKGDAASQFLVFCQKHRDEVVAEHPDASGEEIEELLRSQWSLLSEKQRARYNTKFALVAPVQAEEDSGNVNGKK
RNHTKRIQDPTEDAEAEDTPRKRLRTDKHSLRKRDTITDKTARTSSYKAMEAASSLKSQAATKNLSDACKPLKKR
NRASTAASSALGFSKSSSPSASLTENEVSDSPGDEPSESPYESADETQTEVSVSSKKSERGVTAKKEYVCQLCEK
PGSLLLCEGPCCGAFHLACLGLSRRPEGRFTCSECASGIHSCFVCKESKTDVKRCVVTQCGKFYHEACVKKYPLT
VFESRGFRCPLHSCVSCHASNPSNPRPSKGKMMRCVRCPVAYHSGDACLAAGCSVIASNSIICTAHFTARKGKRH
HAHVNVSWCFVCSKGGSLLCCESCPAAFHPDCLNIEMPDGSWFCNDCRAGKKLHFQDIIWVKLGNYRWWPAEVCH
PKNVPPNIQKMKHEIGEFPVFFFGSKDYYWTHQARVFPYMEGDRGSRYQGVRGIGRVFKNALQEAEARFREIKLQ
REARETQESERKPPPYKHIKVNKPYGKVQIYTADISEIPKCNCKPTDENPCGFDSECLNRMLMFECHPQVCPAGE
FCQNQCFTKRQYPETKIIKTDGKGWGLVAKRDIRKGEFVNEYVGELIDEEECMARIKHAHENDITHFYMLTIDKD
RIIDAGPKGNYSRFMNHSCQPNCETLKWTVNGDTRVGLFAVCDIPAGTELTFNYNLDCLGNEKTVCRCGASNCSG
FLGDRPKTSTTLSSEEKGKKTKKKTRRRRAKGEGKRQSEDECFRCGDGGQLVLCDRKFCTKAYHLSCLGLGKRPF
GKWECPWHHCDVCGKPSTSFCHLCPNSFCKEHQDGTAFSCTPDGRSYCCEHDLGAASVRSTKTEKPPPEPGKPKG
KRRRRRGWRRVTEGK

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FIGURE 1368

GGTCGTTCGTTGGGCGGTGCTGGTTTTTCGCTCGTCGACTGCGGCTCTTCCTCGGGCAGCGGAAGCGGCGCGGCG
GTCGGAGAAGTGGCCTAAAACTTCGGCGTTGGGTGAAAGAAA**ATG**GCCCGAACCAAGCAGACTGCTCGTAAGTCC
ACCGGTGGGAAAGCCCCCCGCAAACAGCTGGCCACGAAAGCCGCCAGGAAAAGCGCTCCCTCTACCGGCGGGGTG
AAGAAGCCTCATCGCTACAGGCCCGGGACCGTGGCGCTTCGAGAGATTCGTCGTTATCAGAAGTCGACCGAGCTG
CTCATCCGGAAGCTGCCCTTCCAGAGGTTGGTGAGGGAGATCGCGCAGGATTTCAAAACCGACCTGAGGTTTCAG
AGCGCAGCCATCGGTGCGCTGCAGGAGGCTAGCGAAGCGTACCTGGTGGGTCTGTTCGAAGATACCAACCTGTGT
GCCATCCACGCTAAGAGAGTCACCATCATGCCCAAAGACATCCAGTTGGCTCGCCGGATACGGGGAGAGAGAGCT
TAAGTGAAGGCAGTTTTTATGGCGTTTTGTAGTAAATTCTGTAAAATACTTTGGTTTAATTTGTGACTTTTTTTG
TAAGAAATTGTTTATAATATGTTGCATTTGTACTTAAGTCATTCCATCTTTCACTCAGGATGAATGCGAAAAGTG
ACTGTTCACAGACCTCAGTGATGTGAGCACTGTTGCTCAGGAGTGACAAGTTGCTAATATGCAGAAGGGATGGGT
GATACTTCTTGCTTCTCATGATGCATGTTTCTGTATGTTAATGACTTGTTGGGTAGCTATTAAGGTACTAGAGTT
GATAAATGTGTACAGGGTCCTTTTGCAATAAAACTGGTTATGACTTGATCCAAGTGTTTAACAATTGGGGCTGTT
AAGTCTGACCATACATCACTGTGATAGAATGTGGGCTTTTTCAAGGGTGAAGATACAAGTCTTAACCACAGTGTA
ACTTACAGTTTCCTTTAAAAAAAAAAAAAGTAAACCTGGCAGCTATAGAATACACTATGTGCATTTATAATAGCT
ATTTTATATATTGTAGTATCAACATTTTTAAATTAAATGTTTTACATTCACAAGTGGTGGGGAGTCTTGTCATTA
AGGTGTGTGTAATTTAGAGTCCAGTTGGTTTTCTTCTGACTGCACTTGTTCTCATAGTAGTAAAATGCTATGCGC
ATTTATACCTTGCATAAGTCCTCATTCTACCACATGTTAACCCTCTAGCTGATAATGCAAACACTAACTGGGGGA
TTTTATTTATAAGGGCTCTAGAAAAAACGAGTTATTCACACCAGCATCATCTTAACTAACATTCTGAACTAGTTA
GTGCAGCTTTTCATTGTGTTGTGTGGTTGGTCTCATAACTAGGTTGAGTTTTTCTCCTCTGCTGAGGAAACAGTA
CCGAAGTTCTTTTTCTTGTGGCATTTGTATTATAAAAACTTGGTGTGGGGGAGGAGCACAAAACTCCAGCCCACT
GAACCTCTGCCAATTAAGATGGTGTTGGGTTAGGTTACATCTGGTTACTGTCCTGGGAAAATCATTTTTATAGAG
ATGGCCTTCCAAGTGGTTTTAAAATTTACTGAAGTTTTTAGGTCAATTATGTATGTTGACTAAATTTACAAATAA
ACTTGTTTATCC

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FIGURE 1369

MARTKQTARKSTGGKAPRKQLATKAARKSAPSTGGVKKPHRYRPGTVALREIRRYQKSTELLIRKLPFQRLVREI
AQDFKTDLRFQSAAIGALQEASEAYLVGLFEDTNLCAIHAKRVTIMPKDIQLARRIRGERA

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FIGURE 1370

GAGC**ATG**GAGGCGGGGGCGGCTGAGGCAGCTGTAGCGGCCGTGGAGGAGGTCGGCTCAGCCGGGCAGTTTGAGGA
GCTGCTGCGCCTCAAAGCCAAGTCCCTCCTTGTGGTCCATTTCTGGGCACCATGGGCTCCACAGTGTGCACAGAT
GAACGAAGTTATGGCAGAGTTAGCTAAAGAACTCCCTCAAGTTTCATTTGTGAAGTTGGAAGCTGAAGGTGTTCC
TGAAGTATCTGAAAAATATGAAATTAGCTCTGTTCCCACTTTTCTGTTTTTCAAGAATTCTCAGAAAATCGACCG
ATTAGATGGTGCACATGCCCCAGAGTTGACCAAAAAAGTTCAGCGACATGCATCTAGTGGCTCCTTCCTACCCAG
CGCTAATGAACATCTTAAAGAAGATCTCAACCTTCGCTTGAAGAAATTGACTCATGCTGCCCCCTGCATGCTGTT
TATGAAAGGAACTCCTCAAGAACCACGCTGTGGTTTCAGCAAGCAGATGGTGGAAATTCTTCACAAACATAATAT
TCAGTTTAGCAGTTTTGATATCTTCTCAGATGAAGAGGTTCGACAGGGACTCAAAGCCTATTCCAGTTGGCCTAC
CTATCCTCAGCTCTATGTTTCTGGAGAGCTCATAGGAGGACTTGATATAATTAAGGAGCTAGAAGCATCTGAAGA
ACTAGATACAATTTGTCCCAAAGCTCCCAAATTAGAGGAAAGGCTCAAAGTGCTGACAAATAAAGCTTCTGTGAT
GCTCTTTATGAAAGGAAACAAACAGGAAGCAAAATGTGGATTCAGCAAACAAATTCTGGAAATACTAAATAGTAC
TGGTGTTGAATATGAAACATTCGATATATTGGAGGATGAAGAAGTTCGGCAAGGATTAAAAGCTTACTCAAATTG
GCCAACATACCCTCAGCTGTATGTGAAAGGGGAGCTGGTGGGAGGATTGGATATTGTGAAGGAACTGAAAGAAAA
TGGTGAATTGCTGCCTATACTGAGAGGAGAAAAT**TAA**TAAATCTTAAACTTGGTGCCCAACTATTACGGGGTCTG
GCTCTGTCACCCAGGCTGGAGTGCAGTGGCACGATTATGGCTCATTGCAGCCTCGACTTCTCGGGGCCAAGCGAT
CCTCCTGCCTCAGCCTTCTGAGTAGCTGGGACCACAGGCGTGCACCACCATGCCCACCTAATTTTTTATTTCTTG
TAGAGATGAGGTCTCCTGCCTCAGCCTCCCAAAGTGCTGGAATTTACAGGAGTGTCGGCTGTGCCCCTTGTGATG
GATGAGGAAAGGTATCCACCTTTCTGAATCAGACACAAGCTGCAGTAGCTTCCTGATGCCTCATTCACCAGGATG
GGTAACTTTAAAGACAAGTTTTATAACTGGCATCCCATCTGGTTTCAGAGTCTTGGGGGCTTTTTTCATACAGCT
TTGTCTGATATTTAGAGACATTCAGATTCAGAAGCCATGAGTTCAGTTAGCTCATGGGCCGGGCACGTGCACTGA
CTCACTGGCTGCAGCAGAACACATTGAGGGAGTCTTGGTGCACTTAGGTCACTGTAAGGTTCTAGGGCTGGGAGC
TGGGATTTGAACCAGGATCTGTCAGCGCAGCCCCAGTGCTGTGCTTGAAGCCTCGTGCCACACTGGCTTTGAGGT
AGCACGCTGCAAGTTAGTGAGTGGAGTTGCCCAAGTCTGGGGCTTCTGAAATGACCTGGTATTTTTATGTTCCTG
TTAGAAATGGTGTGGCTTTCACAAATTAAGTGCCAGGCTGGGCACAATGGCTCGTGCTTGTAATCCCAGCACTTT
GGGAGGCGGAGGCAGGCGGGTTGCTTGAGCTCCGGAGCTTGAGACCAGCCTGAGCAACATGGCGAAACCTCATAT
CTACAAAAAATAAAAAATTAACTGGTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1371

MEAGAAEAAVAAVEEVGSAGQFEELLRLKAKSLLVVHFWAPWAPQCAQMNEVMAELAKELPQVSFVKLEAEGVPE
VSEKYEISSVPTFLFFKNSQKIDRLDGAHAPELTKKVQRHASSGSFLPSANEHLKEDLNLRLKKLTHAAPCMLFM
KGTPQEPRCGFSKQMVEILHKHNIQFSSFDIFSDEEVRQGLKAYSSWPTYPQLYVSGELIGGLDIIKELEASEEL
DTICPKAPKLEERLKVLTNKASVMLFMKGNKQEAKCGFSKQILEILNSTGVEYETFDILEDEEVRQGLKAYSNWP
TYPQLYVKGELVGGLDIVKELKENGELLPILRGEN

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FIGURE 1372

TCAGCGGGCGAGTCCCCGGCTCCTCCAGCTCCTTCCTCCTCTTCCTCCTCCTCCTCCACCTCCGGCTTTTGGGGG
ATCACTGTCCTCTCTCGGCAGCAGA**ATG**AGCCGGCAGGTGGTCCGCTCCAGCAAGTTCCGCCACGTGTTTGGACA
GCCGGCCAAGGCCGACCAGTGCTATGAAGATGTGCGCGTCTCACAGACCACCTGGGACAGTGGCTTCTGTGCTGT
CAACCCTAAGTTTGTGGCCCTGATCTGTGAGGCCAGCGGGGGAGGGGCCTTCCTGGTGCTGCCCCTGGGCAAGAC
TGGACGTGTGGACAAGAATGCGCCCACGGTCTGTGGCCACACAGCCCCTGTGCTAGACATCGCCTGGTGCCCGCA
CAATGACAACGTCATTGCCAGTGGCTCCGAGGACTGCACAGTCATGGTGTGGGAGATCCCGGATGGGGGCCTGAT
GCTGCCCCTGCGGGAGCCCGTCGTCACCCTGGAGGGCCACACCAAGCGTGTGGGCATTGTGGCCTGGCACACCAC
AGCCCAGAACGTGCTGCTCAGTGCAGGTTGTGACAACGTGATCATGGTGTGGGACGTGGGCACTGGGGCGGCCAT
GCTGACACTGGGCCCAGAGGTGCACCCAGACACGATCTACAGTGTGGACTGGAGCCGAGATGGAGGCCTCATTTG
TACCTCCTGCCGTGACAAGCGCGTGCGCATCATCGAGCCCCGCAAAGGCACTGTCGTAGCTGAGAAGGACCGTCC
CCACGAGGGGACCCGGCCCGTGCGTGCAGTGTTCGTGTCGGAGGGGAAGATCCTGACCACGGGCTTCAGCCGCAT
GAGTGAGCGGCAGGTGGCGCTGTGGGACACAAAGCACCTGGAGGAGCCGCTGTCCCTGCAGGAGCTGGACACCAG
CAGCGGTGTCCTGCTGCCCTTCTTTGACCCTGACACCAACATCGTCTACCTCTGTGGCAAGGGTGACAGCTCAAT
CCGGTACTTTGAGATCACTTCCGAGGCCCCTTTCCTGCACTATCTCTCCATGTTCAGTTCCAAGGAGTCCCAGCG
GGGCATGGGCTACATGCCCAAACGTGGCCTGGAGGTGAACAAGTGTGAGATCGCCAGGTTCTACAAGCTGCACGA
GCGGAGGTGTGAGCCCATTGCCATGACAGTGCCTCGAAAGTCGGACCTGTTCCAGGAGGACCTGTACCCACCCAC
CGCAGGGCCCGACCCTGCCCTCACGGCTGAGGAGTGGCTGGGGGGTCGGGATGCTGGGCCCCTCCTCATCTCCCT
CAAGGATGGCTACGTACCCCCAAAGAGCCGGGAGCTGAGGGTCAACCGGGGCCTGGACACCGGGCGCAGGAGGGC
AGCACCAGAGGCCAGTGGCACTCCCAGCTCGGATGCCGTGTCTCGGCTGGAGGAGGAGATGCGGAAGCTCCAGGC
CACGGTGCAGGAGCTCCAGAAGCGCTTGGACAGGCTGGAGGAGACAGTCCAGGCCAAG**TAG**AGCCCCGCAGGGCC
TCCAGCAGGGTCAGCCATTCACACCCATCCACTCACCTCCCATTCCCAGCCACATGGCAGAGAAAAAAATCATAA
TAAAATGGCTTTATTTTCTGGTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGG
GGGGGGGGA

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FIGURE 1373

MSRQVVRSSKFRHVFGQPAKADQCYEDVRVSQTTWDSGFCAVNPKFVALICEASGGGAFLVLPLGKTGRVDKNAP
TVCGHTAPVLDIAWCPHNDNVIASGSEDCTVMVWEIPDGGLMLPLREPVVTLEGHTKRVGIVAWHTTAQNVLLSA
GCDNVIMVWDVGTGAAMLTLGPEVHPDTIYSVDWSRDGGLICTSCRDKRVRIIEPRKGTVVAEKDRPHEGTRPVR
AVFVSEGKILTTGFSRMSERQVALWDTKHLEEPLSLQELDTSSGVLLPFFDPDTNIVYLCGKGDSSIRYFEITSE
APFLHYLSMFSSKESQRGMGYMPKRGLEVNKCEIARFYKLHERRCEPIAMTVPRKSDLFQEDLYPPTAGPDPALT
AEEWLGGRDAGPLLISLKDGYVPPKSRELRVNRGLDTGRRRAAPEASGTPSSDAVSRLEEEMRKLQATVQELQKR
LDRLEETVQAK

FIGURE 1374

GCTAACCTAGTGCCTATAGCTAAGGCAGGTACCTGCATCCTTGTTTTTGTTTAGTGGATCCTCTATCCTTCAGAG
ACTCTGGAACCCCTGTGGTCTTCTCTTCATCTAATGACCCTGAGGGG**ATG**GAGTTTTCAAGTCCTTCCAGAGAGG
AATGTCCCAAGCCTTTGAGTAGGGTAAGCATCATGGCTGGCAGCCTCACAGGTTTGCTTCTACTTCAGGCAGTGT
CGTGGGCATCAGGTGCCCGCCCCTGCATCCCTAAAAGCTTCGGCTACAGCTCGGTGGTGTGTGTCTGCAATGCCA
CATACTGTGACTCCTTTGACCCCCCGACCTTTCCTGCCCTTGGTACCTTCAGCCGCTATGAGAGTACACGCAGTG
GGCGACGGATGGAGCTGAGTATGGGGCCCATCCAGGCTAATCACACGGGCACAGGCCTGCTACTGACCCTGCAGC
CAGAACAGAAGTTCCAGAAAGTGAAGGGATTTGGAGGGGCCATGACAGATGCTGCTGCTCTCAACATCCTTGCCC
TGTCACCCCCTGCCCAAAATTTGCTACTTAAATCGTACTTCTCTGAAGAAGGAATCGGATATAACATCATCCGGG
TACCCATGGCCAGCTGTGACTTCTCCATCCGCACCTACACCTATGCAGACACCCCTGATGATTTCCAGTTGCACA
ACTTCAGCCTCCCAGAGGAAGATACCAAGCTCAAGATACCCCTGATTCACCGAGCCCTGCAGTTGGCCCAGCGTC
CCGTTTCACTCCTTGCCAGCCCCTGGACATCACCCACTTGGCTCAAGACCAATGGAGCGGTGAATGGGAAGGGGT
CACTCAAGGGACAGCCCGGAGACATCTACCACCAGACCTGGGCCAGATACTTTGTGAAGTTCCTGGATGCCTATG
CTGAGCACAAGTTACAGTTCTGGGCAGTGACAGCTGAAAATGAGCCTTCTGCTGGGCTGTTGAGTGGATACCCCT
TCCAGTGCCTGGGCTTCACCCCTGAACATCAGCGAGACTTCATTGCCCGTGACCTAGGTCCTACCCTCGCCAACA
GTACTCACCACAATGTCCGCCTACTCATGCTGGATGACCAACGCTTGCTGCTGCCCCACTGGGCAAAGGTGGTAC
TGACAGACCCAGAAGCAGCTAAATATGTTCATGGCATTGCTGTACATTGGTACCTGGACTTTCTGGCTCCAGCCA
AAGCCACCCTAGGGGAGACACACCGCCTGTTCCCCAACACCATGCTCTTTGCCTCAGAGGCCTGTGTGGGCTCCA
AGTTCTGGGAGCAGAGTGTGCGGCTAGGCTCCTGGGATCGAGGGATGCAGTACAGCCACAGCATCATCACGAACC
TCCTGTACCATGTGGTCGGCTGGACCGACTGGAACCTTGCCCTGAACCCCGAAGGAGGACCCAATTGGGTGCGTA
ACTTTGTCGACAGTCCCATCATTGTAGACATCACCAAGGACACGTTTTACAAACAGCCCATGTTCTACCACCTTG
GCCACTTCAGCAAGTTCATTCCTGAGGGCTCCCAGAGAGTGGGGCTGGTTGCCAGTCAGAAGAACGACCTGGACG
CAGTGGCACTGATGCATCCCGATGGCTCTGCTGTTGTGGTCGTGCTAAACCGCTCCTCTAAGGATGTGCCTCTTA
CCATCAAGGATCCTGCTGTGGGCTTCCTGGAGACAATCTCACCTGGCTACTCCATTCACACCTACCTGTGGCATC
GCCAG**TGA**TGGAGCAGATACTCAAGGAGGCACTGGGCTCAGCCTGGGCATTAAAGGGACAGAGTCAGCTCACACG
CTGTCTGTGACTAAAGAGGGCACAGCAGGGCCAGTGTGAGCTTACAGCGACGTAAGCCCAGGGGCAATGGTTTGG
GTGACTCACTTTCCCCTCTAGGTGGTGCCCAGGGCTGGAGGCCCCTAGAAAAAGATCAGTAAGCCCCAGTGTCCC
CCCAGCCCCCATGCTTATGTGAACATGCGCTGTGTGCTGCTTGCTTTGGAAACTXGCCTGGGTCCAGGCCTAGGG
TGAGCTCACTGTCCGTACAAACACAAGATCAGGGCTGAGGGTAAGGAAAAGAAGAGACTAGGAAAGCTGGGCCCA
AAACTGGAGACTGTTTGTCTTTCCTAGAGATGCAGAACTGGGCCCGTGGAGCAGCAGTGTCAGCATCAGGGCGGA
AGCCTTAAAGCAGCAGCGGGTGTGCCCAGGCACCCAGATGATTCCTATGGCACCAGCCAGGAAAAATGGCAGCTC
TTAAAGGAGAAAATGTTTGAGCCCA

FIGURE 1375

MEFSSPSREECPKPLSRVSIMAGSLTGLLLLQAVSWASGARPCIPKSFGYSSVVCVCNATYCDSFDPPTFPALGT
FSRYESTRSGRRMELSMGPIQANHTGTGLLLTLQPEQKFQKVKGFGGAMTDAAALNILALSPPAQNLLLKSYFSE
EGIGYNIIRVPMASCDFSIRTYTYADTPDDFQLHNFSLPEEDTKLKIPLIHRALQLAQRPVSLLASPWTSPTWLK
TNGAVNGKGSLKGQPGDIYHQTWARYFVKFLDAYAEHKLQFWAVTAENEPSAGLLSGYPFQCLGFTPEHQRDFIA
RDLGPTLANSTHHNVRLLMLDDQRLLLPHWAKVVLTDPEAAKYVHGIAVHWYLDFLAPAKATLGETHRLFPNTML
FASEACVGSKFWEQSVRLGSWDRGMQYSHSIITNLLYHVVGWTDWNLALNPEGGPNWVRNFVDSPIIVDITKDTF
YKQPMFYHLGHFSKFIPEGSQRVGLVASQKNDLDAVALMHPDGSAVVVVLNRSSKDVPLTIKDPAVGFLETISPG
YSIHTYLWHRQ

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FIGURE 1376

GCGCAGGGAGGGGAGACCTTGGCGGACGGCGGAGCCCCAGCGGAGGTGAAAGTATTGGCGGAAAGGAAAATACAG
CGGAAAA**ATG**CAGAGCTGGAGTCGTGTGTACTGCTCCTTGGCCAAGAGAGGCCATTTCAATCGAATATCTCATGG
CCTACAGGGACTTTCTGCAGTGCCTCTGAGAACTTACGCAGATCAGCCGATTGATGCTGATGTAACAGTTATAGG
TTCTGGTCCTGGAGGATATGTTGCTGCTATTAAAGCTGCCCAGTTAGGCTTCAAGACAGTCTGCATTGAGAAAAA
TGAAACACTTGGTGGAACATGCTTGAATGTTGGTTGTATTCCTTCTAAGGCTTTATTGAACAACTCTCATTATTA
CCATATGGCCCATGGAACAGATTTTGCATCTAGAGGAATTGAAATGTCCGAAGTTCGCTTGAATTTAGACAAGAT
GATGGAGCAGAAGAGTACTGCAGTAAAAGCTTTAACAGGTGGAATTGCCCACTTATTCAAACAGAATAAGGTTGT
TCATGTCAATGGATATGGAAAGATAACTGGCAAAAATCAAGTCACTGCTACGAAAGCTGATGGCGGCACTCAGGT
TATTGATACAAAGAACATTCTTATAGCCACGGGTTCAGAAGTTACTCCTTTTCCTGGAATCACGATAGATGAAGA
TACAATAGTGTCATCTACAGGTGCTTTATCTTTAAAAAAAGTTCCAGAAAAGATGGTTGTTATTGGTGCAGGAGT
AATAGGTGTAGAATTGGGTTCAGTTTGGCAAAGACTTGGTGCAGATGTGACAGCAGTTGAATTTTTAGGTCATGT
AGGTGGAGTTGGAATTGATATGGAGATATCTAAAAACTTTCAACGCATCCTTCAAAAACAGGGGTTTAAATTTAA
ATTGAATACAAAGGTTACTGGTGCTACCAAGAAGTCAGATGGAAAAATTGATGTTTCTATTGAAGCTGCTTCTGG
TGGTAAAGCTGAAGTTATCACTTGTGATGTACTCTTGGTTTGCATTGGCCGACGACCCTTTACTAAGAATTTGGG
ACTAGAAGAGCTGGGAATTGAACTAGATCCTAGAGGTAGAATTCCAGTCAATACCAGATTTCAAACTAAAATTCC
AAATATCTATGCCATTGGTGATGTAGTTGCTGGTCCAATGCTGGCTCACAAAGCAGAGGATGAAGGCATTATCTG
TGTTGAAGGAATGGCTGGTGGTGCTGTGCACATTGACTACAATTGTGTGCCATCAGTGATTTACACACACCCTGA
AGTTGCTTGGGTTGGCAAATCAGAAGAGCAGTTGAAAGAAGAGGGTATTGAGTACAAAGTTGGGAAATTCCCATT
TGCTGCTAACAGCAGAGCTAAGACAAATGCTGACACAGATGGCATGGTGAAGATCCTTGGGCAGAAATCGACAGA
CAGAGTACTGGGAGCACATATTCTTGGACCAGGTGCTGGAGAAATGGTAAATGAAGCTGCTCTTGCTTTGGAATA
TGGAGCATCCTGTGAAGATATAGCTAGAGTCTGTCATGCACATCCGACCTTATCAGAAGCTTTTAGAGAAGCAAA
TCTTGCTGCGTCATTTGGCAAATCAATCAACTTT**TGA**ATTAGAAGATTATATATTTTTTTTCTGAAATTTCCTG
GGAGCTTTTGTAGAAGTCACATTCCTGAACAGGATATTCTCACAGCTCCAAGAATTTCTAGGACTGAATTATGAA
ACTTTTGGAAGGTATTTAATAGGTTTGGACAAAATGGAATACTCTTATATCTATATTTTACATAAATTTAGTATT
TTGTTTCAGTGCACTAATATGTAAGACAAAAAGGACTACTTATTGTAGTCATCCTGGAATATCTCCGTCAACTCA
TATTTTCATGCTGTTCATGAAAGATTCAATGCCCCTGAATTTAAATAGCTCTTTTCTCTGATACAGAAAAGTTGA
ATTTTACATGGCTGGAGCTAGAATTTGATATGTGAACAGTTGTGTTTGAAGCACAGTGATCAAGTTATTTTTAAT
TTGGTTTTCACATTGGAAACAAGTCAGTCATTCAGATATGATTCAAATGTCTATAAACCAAACTGATGTAAGTAA
ATGGTCTCTCACTTGTTTTATTTAACCTCTAAATTCTTTCATTTTAGGGGTAGCATTTGTGTTGAAGAGGTTTTA
AAGCTTCCATTGTTGTCTGCAACTCTGAAGGGTAATTATATAGTTACCCAAATTAAGAGAGTCTATTTACGGAAC
TCAAATACGTGGGCATTCAAATGTATTACAGTGGGGAATGAAGATACTGAAATAAACGTCTTAAATATTC

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FIGURE 1377

MQSWSRVYCSLAKRGHFNRISHGLQGLSAVPLRTYADQPIDADVTVIGSGPGGYVAAIKAAQLGFKTVCIEKNET
LGGTCLNVGCIPSKALLNNSHYYHMAHGTDFASRGIEMSEVRLNLDKMMEQKSTAVKALTGGIAHLFKQNKVVHV
NGYGKITGKNQVTATKADGGTQVIDTKNILIATGSEVTPFPGITIDEDTIVSSTGALSLKKVPEKMVVIGAGVIG
VELGSVWQRLGADVTAVEFLGHVGGVGIDMEISKNFQRILQKQGFKFKLNTKVTGATKKSDGKIDVSIEAASGGK
AEVITCDVLLVCIGRRPFTKNLGLEELGIELDPRGRIPVNTRFQTKIPNIYAIGDVVAGPMLAHKAEDEGIICVE
GMAGGAVHIDYNCVPSVIYTHPEVAWVGKSEEQLKEEGIEYKVGKFPFAANSRAKTNADTDGMVKILGQKSTDRV
LGAHILGPGAGEMVNEAALALEYGASCEDIARVCHAHPTLSEAFREANLAASFGKSINF

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FIGURE 1378

ATGGCATCCGTTGCAGTTGATCCACAACCGAGTGTGGTGACTCGGGTGGTCAACCTGCCCTTGGTGAGCTCCACG
TATGACCTCATGTCCTCAGCCTATCTCAGTACAAAGGACCAGTATCCCTACCTGAAGTCTGTGTGTGAGATGGCA
GAGAACGGTGTGAAGACCATCACCTCCGTGGCCATGACCAGTGCTCTGCCCATCATCCAGAAGCTAGAGCCGCAA
ATTGCAGTTGCCAATACCTATGCCTGTAAGGGGCTAGACAGGATTGAGGAGAGACTGCCTATTCTGAATCAGCCA
TCAACTCAGATTGTTGCCAATGCCAAAGGCGCTGTGACTGGGGCAAAAGATGCTGTGACGACTACTGTGACTGGG
GCCAAGGATTCTGTGGCCAGCACGATCACAGGGGTGATGGACAAGACCAAAGGGGCAGTGACTGGCAGTGTGGAG
AAGACCAAGTCTGTGGTCAGTGGCAGCATTAACACAGTCTTGGGGAGTCGGATGATGCAGCTCGTGAGCAGTGGC
GTAGAAAATGCACTCACCAAATCAGAGCTGTTGGTAGAACAGTACCTCCCTCTCACTGAGGAAGAACTAGAAAAA
GAAGCAAAAAAAGTTGAAGGATTTGATCTGGTTCAGAAGCCAAGTTATTATGTTAGACTGGGATCCCTGTCTACC
AAGCTTCACTCCCGTGCCTACCAGCAGGCTCTCAGCAGGGTTAAAGAAGCTAAGCAAAAAAGCCAACAGACCATT
TCTCAGCTCCATTCTACTGTTCACCTGATTGAATTTGCCAGGAAGAATGTGTATAGTGCCAATCAGAAAATTCAG
GATGCTCAGGATAAGCTCTACCTCTCATGGGTAGAGTGGAAAAGGAGCATTGGATATGATGATACTGATGAGTCC
CACTGTGCTGAGCAATTTGAGTCACGTACTCTTGCAATTGCCCGCAACCTGACTCAGCAGCTCCAGACCACGTGC
CACACCCTCCTGTCCAACATCCAAGGTGTACCACAGAACATCCAAGATCAAGCCAAGCACATGGGGGTGATGGCA
GGCGACATCTACTCAGTGTTCCGCAATGCTGCCTCCTTTAAAGAAGTGTCTGACAGCCTCCTCACTTCTAGCAAG
GGGCAGCTGCAGAAAATGAAGGAATCTTTAGATGACGTGATGGATTATCTTGTTAACAACACGCCCCTCAACTGG
CTGGTAGGTCCCTTTTATCCTCAGCTGACTGAGTCTCAGAATGCTCAGGACCAAGGTGCAGAGATGGACAAGAGC
AGCCAGGAGACCCAGCGATCTGAGCATAAAACTCAT**TAA**

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FIGURE 1379

MASVAVDPQPSVVTRVVNLPLVSSTYDLMSSAYLSTKDQYPYLKSVCEMAENGVKTITSVAMTSALPIIQKLEPQ
IAVANTYACKGLDRIEERLPILNQPSTQIVANAKGAVTGAKDAVTTTVTGAKDSVASTITGVMDKTKGAVTGSVE
KTKSVVSGSINTVLGSRMMQLVSSGVENALTKSELLVEQYLPLTEEELEKEAKKVEGFDLVQKPSYYVRLGSLST
KLHSRAYQQALSRVKEAKQKSQQTISQLHSTVHLIEFARKNVYSANQKIQDAQDKLYLSWVEWKRSIGYDDTDES
HCAEQFESRTLAIARNLTQQLQTTCHTLLSNIQGVPQNIQDQAKHMGVMAGDIYSVFRNAASFKEVSDSLLTSSK
GQLQKMKESLDDVMDYLVNNTPLNWLVGPFYPQLTESQNAQDQGAEMDKSSQETQRSEHKTH

FIGURE 1380

GGCACGAGGGGGAGCCGGGCTGGCAGGAGCAGG**ATG**GCGGCGGCGGCGGCTGCAGGCGAGGCGCGCCGGGTGCTG
GTGTACGGCGGCAGGGGCGCTCTGGGTTCTCGATGCGTGCAGGCTTTTCGGGCCCGCAACTGGTGGGTTGCCAGC
GTTGATGTGGTGGAGAATGAAGAGGCCAGCGCTAGCATCATTGTTAAAATGACAGACTCGTTCACTGAGCAGGCT
GACCAGGTGACTGCTGAGGTTGGAAAGCTCTTGGGTGAAGAGAAGGTGGATGCAATTCTTTGCGTTGCTGGAGGA
TGGGCCGGGGGCAATGCCAAATCCAAGTCTCTCTTTAAGAACTGTGACCTGATGTGGAAGCAGAGCATATGGACA
TCGACCATCTCCAGCCATCTGGCTACCAAGCATCTCAAGGAAGGAGGCCTCCTGACCTTGGCTGGCGCAAAGGCT
GCCCTGGATGGGACTCCTGGTATGATCGGGTACGGCATGGCCAAGGGTGCTGTTCACCAGCTCTGCCAGAGCCTG
GCTGGGAAGAACAGCGGCATGCCGCCCGGGGCAGCCGCCATCGCTGTGCTCCCGGTTACCCTGGATACCCCGATG
AACAGGAAATCAATGCCTGAGGCTGACTTCAGCTCCTGGACACCCTTAGAATTCCTAGTTGAAACTTTCCATGAC
TGGATCACAGGGAAAAACCGACCGAGCTCAGGAAGCCTAATCCAGGTGGTAACCACAGAAGGAAGGACGGAACTC
ACCCCAGCATATTTT**TAG**GCCTCATCTCAGTGCCTATGAGGGGCCTGCCAGAAAAGTCACTAACCTGTCTCAGTG
TGGCCTTGTCCAGCCTTGTGTTTTCTGTAACCCCTGTTTGTGGTACGAGATAATGAGTCCTATTTTTCTCTCACA
TAATATGCATTTGCTCTCCTAGGACAGTGTAATACATTTATGTGAAGTAAAGACATGCGAGACTGGTGGCCTGCA
AATAGCATCCGTCAATCTGTGTTAACTGCATAGGGAGGGCTCTGCATAGCACCTGCTATAGCGGTGTCATGTTGG
ATCGCTTTTGTGACTGTTCATCTGTCCTTGACAGTGGCTGTCATCTTGACTACTTTGTTGATTTGTTGGTATTGG
GGACATTTTAAAGGCTGAGTTATTTTTGAATGTCATGTTTATGTCATAGACGTAGTTTTCGCATCCTTGAATTAA
ACTGCCTTAACTCCTTTTGTGGTATAAGCAAAACTCCATGGACTCTGTCCTGGTATCCTTTTCCTGTGTGGTTGC
CCTGTGTCCTCTGGCCTAGGGTTAAGTGTGCAAGATAACTACTCGTGAGTATTCAGAATGTTGTTCCTAATAAAT
GCACTTGTTGTCTGTCTTCTTTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1381

MAAAAAAGEARRVLVYGGRGALGSRCVQAFRARNWWVASVDVVENEEASASIIVKMTDSFTEQADQVTAEVGKLL
GEEKVDAILCVAGGWAGGNAKSKSLFKNCDLMWKQSIWTSTISSHLATKHLKEGGLLTLAGAKAALDGTPGMIGY
GMAKGAVHQLCQSLAGKNSGMPPGAAAIAVLPVTLDTPMNRKSMPEADFSSWTPLEFLVETFHDWITGKNRPSSG
SLIQVVTTEGRTELTPAYF

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FIGURE 1382

CGCCCGGGCAGGTCCCAAAATTAGGGGGGAAGAGGAAAAAAAAAAGCCAGAAAAAGTTTTCTTTTCTGGAGTCCC
AAACGAGGTGCGGGACGGAAGAGGGGGTGAAGGCCAGAGGCTCGGGGCTTCAAGACCGCTGTCTGGAGTCCCCCT
TTCCAGGCC**ATG**TCGGGGCCCACCTGGCTGCCCCCGAAGCAGCCGGAGCCCGCCAGAGCCCCTCAGGGGAGGGCG
ATCCCCCGCGGCACCCCGGGGCCACCACCGGCCCACGGAGCAGCACTCCAGCCCCACCCCAGGGTCAATTTTTGC
CCCCTTCCATCTGAGCAGTGTTACCAGGCCCCAGGGGGACCGGAGGATCGGGGGCCGGCGTGGGTGGGGTCCCAT
GGAGTACTCCAGCACACGCAGGGGCTCCCTGCAGACAGGGGGGGCCTTCGCCCTGGAAGCCTGGACGCCGAGATA
GACTTGCTGAGCACCACGCTGGCCAAACTGAATGGGGGTCGGGGTCATGCGTCACGGCGACCAGACCGACAGGCA
TATGAGCCCCCGCCACCTCCTGCCTACCGCACGGGCTCCCTGAAGCCAAATCCAGCCTCGCCGCTCCCAGCGTCT
CCCTATGGGGGCCCCACTCCAGCCTCTTACACTACCGCCAGCACCCCGGCTGGCCCAGCCTTCCCCGTGCAAGTG
AAGGTGGCACAGCCAGTGAGGGGCTGCGGCCCACCCAGGCGGGGAGCCTCTCAGGCTTCTGGGCCCCTCCCGGGC
CCCCACTTTCCTCTCCCAGGCCGAGGTGAAGTCTGGGGGCCTGGCTATAGGAGCCAGAGAGAGCCAGGGCCAGGG
GCCAAAGAGGAAGCTGCTGGGGTCTCTGGCCCTGCAGGAAGAGGAAGAGGAGGCGAGCACGGGCCCCAGGTGCCC
CTGAGCCAGCCTCCAGAGGATGAGCTGGATAGGCTGACGAAGAAGCTGGTTCACGACATGAACCACCCGCCCAGC
GGGGAGTACTTTGGCCAGTGTGGTGGCTGCGGAGAAGATGTGGTTGGGGATGGGGCTGGGGTTGTGGCCCTTGAT
CGCGTCTTTCACGTGGGCTGCTTTGTATGTTCTACATGCCGGGCCCAGCTTCGCGGCCAGCATTTCTACGCCGTG
GAGAGGAGGGCATATTGCGAGGGCTGCTACGTGGCCACCCTGGAGAAATGTGCCACGTGCTCCCAGCCCATCCTG
GACCGGATCCTGCGGGCTATGGGGAAGGCCTACCACCCTGGCTGCTTCACCTGCGTGGTGTGTCACCGCGGCCTC
GACGGCATCCCCTTCACAGTGGATGCTACGAGCCAGATCCACTGTATTGAGGACTTTCACAGGAAGTTTGCCCCA
AGATGCTCAGTGTGCGGTGGGGCCATAATGCCTGAGCCAGGTCAGGAGGAGACTGTGAGAATTGTTGCTCTGGAT
CGAAGTTTTCACATTGGCTGTTACAAGTGCGAGGAGTGTGGGCTGCTGCTCTCCTCTGAGGGCGAGTGTCAGGGC
TGCTACCCGCTGGATGGGCACATCTTGTGCAAGGCCTGCAGCGCCTGGCGCATCCAGGAGCTCTCAGCCACCGTC
ACCACTGACTGC**TGA**GTCTTCCTAGAAGTACCTGCTGGGTTCTCAGTTCCAGTTCCCATCCTTTGATTGATCACT
CTCCCTGACATCCACCTGTATGACTTTGTCACCAAATGCTGTCTTCTCTTTCTCCAATCAAGAAATAATAATCCC
TCGAGTTTACAAAAAAAAAAAAAAAAAAA

FIGURE 1383

MSGPTWLPPKQPEPARAPQGRAIPRGTPGPPPAHGAALQPHPRVNFCPLPSEQCYQAPGGPEDRGPAWVGSHGVL
QHTQGLPADRGGLRPGSLDAEIDLLSTTLAKLNGGRGHASRRPDRQAYEPPPPPAYRTGSLKPNPASPLPASPYG
GPTPASYTTASTPAGPAFPVQVKVAQPVRGCGPPRRGASQASGPLPGPHFPLPGRGEVWGPGYRSQREPGPGAKE
EAAGVSGPAGRGRGGEHGPQVPLSQPPEDELDRLTKKLVHDMNHPPSGEYFGQCGGCGEDVVGDGAGVVALDRVF
HVGCFVCSTCRAQLRGQHFYAVERRAYCEGCYVATLEKCATCSQPILDRILRAMGKAYHPGCFTCVVCHRGLDGI
PFTVDATSQIHCIEDFHRKFAPRCSVCGGAIMPEPGQEETVRIVALDRSFHIGCYKCEECGLLLSSEGECQGCYP
LDGHILCKACSAWRIQELSATVTTDC

FIGURE 1384

GGCTTCTTGGCGCG**ATG**AGGTTCCGGTTCTGTGGTGATCTGGACTGTCCCGACTGGGTCCTGGCAGAAATCAGCA
CGCTGGCCAAGATGTCCTCTGTGAAGTTGCGGCTGCTCTGCAGCCAGGTACTAAAGGAGCTGCTGGGACAGGGGA
TTGATTATGAGAAGATCCTGAAGCTCACGGCTGACGCCAAGTTTGAGTCAGGCGATGTGAAGGCCACAGTGGCAG
TGCTGAGTTTCATCCTCTCCAGTGCGGCCAAGCACAGTGTCGATGGCGAATCCTTGTCCAGTGAACTGCAGCAGC
TGGGGCTGCCCAAAGAGCACGCGGCCAGCCTGTGCCGCTGTTATGAGGAGAAGCAAAGCCCCTTGCAGAAGCACT
TGCGGGTCTGCAGCCTACGCATGAATAGGTTGGCAGGTGTGGGCTGGCGGGTGGACTACACCCTGAGCTCCAGCC
TGCTGCAATCCGTGGAAGAGCCCATGGTGCACCTGCGGCTGGAGGTGGCAGCTGCCCCAGGGACCCCAGCCCAGC
CTGTTGCCATGTCCCTCTCAGCAGACAAGTTCCAGGTCCTCCTGGCAGAACTGAAGCAGGCCCAGACCCTGATGA
GCTCCCTGGGC**TGA**GGAGAAGGGTGTTCCAGGCCTGTGTGGAGCCGCCCTGCCCGTATGGAGTCACGCCCTCTGA
ACTGCTCTTCGGGAGGCAGCCCTGGTTCTAGGATGCTGAGGCCCTGGCCCGGACTCTGGCCTCCCAGATCCCCAG
CTGCCTCACTTCTCTCTTGAGAACTTGGCTCAGGGCTCCTGAGGACCTTTCCCAGCATTACCTTCCCTTCCCTTG
AAAGTAGAGATGAGGTTTCTCCATGTTGGTCAGGCTGGTCTCGAACTCCTGACCTCAGGTGATCCACCCACCTTG
CCCTCCCAAAGTGCTGGGATTACAGGCGTAAGCCACTGCGCCCAGCCACTGCCATCATCTTTAGGAAGAGAGAAG
TGACCATGCCTGAACCAGTCATTGGCAAGAGGAACGGTGTTATGGACTGAATGTTCATGTTCCTCCAGAATTCAT
ATGCTGAAGCCTCTGTCCACACATGCACACCAGATGAGGGCCATGTGCGCACACGAGGTGGCTGTCTACAAGGCC
AGAAAGAGGGCTGTCAACAGGAACTGCGTCTGCTGGCACCTTGATCTTGAACTTCCCAGCCTCCAGAACTGTGAG
AAAGAAATCTCTATGGTGTAAGCCACTAGTCTGTGGCATTGTTATAGCAGCTCGAGAAGACTAAGGCAGATGGGC
TTCCAGGACTGGCCCAGACCAGCCAGGGCTCCTTGTAGAAAAGGCTGATGCCAGGGTTGGCACATGGAGGGTACA
AGGAGGACTCGCCTGGAGTATCTTAAGGAACCTATCGAAGAATAATGGCTTGTTCCACTGGCCAAAGATGGGACA
ATTTGAACATCAAAAGAGATACTTACTGACTCCACTCCTGACTTCTGCTTCTGAAAAAATGAAGTAGGTGTTTTC
CCTATTCCTCCCACTAAGTACAGTTAACAACCCTGGATGTTACATATAAAACAAACAAAAAGACTCCGAGCGATG
GAGAGAAGGCACCCTAGCCTGGCTGGGATCCTCAGGACCTGAGGCTCCACAGAGAGAAATTCCTGGAATCTGGAC
CCCATGGCCCAGTCAGGTTACACAAAACTGATCATCACAGATCTGTAGAACTATACAAAAGTGCTAACATTCATG
ATTAGGGTCTCAGAAGGTAAGGAGGAAGAGAGTGGAATGGAAAAAGTATTCAAAAAAATAATCACTAAAGGCCAG
GTGCAGTGGCCCATGCCTGTAATCCCAGCACTTTGGGAGGTGGGACAATTGCTTTAGACCTTGCAACTGGCCTGA
GCAACACAGGGAGACTCAGTTTCTCCAAAAAAATAAAAAATTAGCCGATCATGAAAAAAAAAAAAAAAAAAAA

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FIGURE 1385

MRFRFCGDLDCPDWVLAEISTLAKMSSVKLRLLCSQVLKELLGQGIDYEKILKLTADAKFESGDVKATVAVLSFI
LSSAAKHSVDGESLSSELQQLGLPKEHAASLCRCYEEKQSPLQKHLRVCSLRMNRLAGVGWRVDYTLSSSLLQSV
EEPMVHLRLEVAAAPGTPAQPVAMSLSADKFQVLLAELKQAQTLMSSLG

FIGURE 1386

CGGACCGTGCAATGGCCCAGCGTAAGAATGCCAAGAGCAGCGGCAACAGCAGCAGCAGCGGCTCCGGCAGCGGTA
GCACGAGTGCGGGCAGCAGCAGCCCCGGGGCCCGGAGAGAGACAAAGCATGGAGGACACAAGAATGGGAGGAAAG
GCGGACTCTCAGGAACTTCATTCTTCACGTGGTTTATGGTGATTGCATTGCTGGGCGTCTGGACATCTGTAGCTG
TCGTTTGGTTTGATCTTGTTGACTATGAGGAAGTTCTAGGAAAACTAGGAATCTATGATGCTGATGGTGATGGAG
ATTTTGATGTGGATGATGCCAAAGTTTTATTAGGACTTAAAGAGAGATCTACTTCAGAGCCAGCAGTCCCGCCAG
AAGAGGCTGAGCCACACACTGAGCCCGAGGAGCAGGTTCCTGTGGAGGCAGAACCCCAGAATATCGAAGATGAAG
CAAAAGAACAAATTCAGTCCCTTCTCCATGAAATGGTACACGCAGAACATGTTGAGGGAGAAGACTTGCAACAAG
AAGATGGACCCACAGGAGAACCACAACAAGAGGATGATGAGTTTCTTATGGCGACTGATGTAGATGATAGATTTG
AGACCCTGGAACCTGAAGTATCTCATGAAGAAACCGAGCATAGTTACCACGTGGAAGAGACAGTTTCACAAGACT
GTAATCAGGATATGGAAGAGATGATGTCTGAGCAGGAAAATCCAGATTCCAGTGAACCAGTAGTAGAAGATGAAA
GATTGCACCATGATACAGATGATGTAACATACCAAGTCTATGAGGAACAAGCAGTATATGAACCTCTAGAAAATG
AAGGGATAGAAATCACAGAAGTAACTGCTCCCCCTGAGGATAATCCTGTAGAAGATTCACAGGTAATTGTAGAAG
AAGTAAGCATTTTTCCTGTGGAAGAACAGCAGGAAGTACCACCAGATACTTAAAGCTTCAAAAAGACTGCCCCTA
CCACCACAGGAGGACCAGCCTAACCATACGCTCCAAAAGATGGCTGTGATAGATCTTGTGAAGCAATTACTGAGC
AGATCAAGATCTTTGGGAAGGAACACTAAAGATGTTTTGAATGAATTATAGTCCACTGGCATTTTAGTGTATTTT
TTTTTCTTTTTACAAACACACATTTCTAAAAATGTCATGTTACATTCCTGCATGTCCCTTTTGATAGCATTAGTG
GATCCATTGGATTTCTTTTTTCTTTTTGTGAGACAGCTTTTAGTCTTACCTGAATTTATGTGTGTTTTTCCGACA
GTGGTTAATAATTATATTGGTGATGTAGCAGCAATTGTGTTGGCAGGGTTTTCATATATTATTAGTAATTAACAC
TAACTGTTGGACTGACTTGTGTACACTGTGTTAAACATGATTTAAAAGCTATTAAGAGTACTTTGTGTTAGCACT
CTTAAAAACGCTAACAGAGATCATCATTAGCTGTGAAGATTTGAGTTGTATATACCTGCACTGATATTCTTATCA
AAAATTTCTACATTAGCTTTAAGTGTTCAGATTAACACTTTTGAAATTTTTGTAGCTTTTAGCTGATTAATTAGA
AAAATTAATATTTCAGTGAAAGTTTTAAATTATCATTTATTTATTTTTTTAAATGAGAGGGGAAAGCTGAAATTC
CTTGTTAAGACACAAGGAAAAAGAATGGCCCTACTATTATCATGCAAAAATGCTTTGTTGGCACCTCAGATTAAT
CATATAATAGCTATAGTCTCTTCAGCATTTGTTTAAATTTTAGAAAACCTGTATAAATTACTGGTGCATAACTTA
AAGATTATTCTGCCTTTGGCTAATTGAGTAATTCCCCTCCAGCACTAGAGACCGCTCAGTGCTCTTACTAGATGA
ACTCAGTAACGCCTTGAGCTGGGTTGATTGAGGATGTGTGAAAAGCTCACAGAGCCCGATGCCTGCTGCTATTTC
ACGGCAATGAGCCTTTTTCTTTCTACACTGAAGATTTTCTTCTTATTTAATGTGGTTTATTTTGGGCTCAGAAAT
AATTGCTCTGTTGAAAATAATCCTTTGTCAGAAAAGAAGGTAGCTACCACATCATTTTGAAAGGACCATGAGCAA
CTATAAGCAAAGCCATAAGAAGTGGTTTGATCGATATATTAGGGGTAGCTCTTGATTTTGTTAACATTAAGATAA
GGTGACTTTTTCCCCCTGCTTTTAGGATTAAAATCAAAGATACTTCTATATTTTTATCACTATAGATCATAGTTA
TTATACAATGTAGTGAGTCCTGCATGGGTACTCGATGTGTAATGAAACCTGAAATAATAAGATAATAAGAAAAGC
AATAATTTTCTAAAGCTGTGCTGTCGGTGATACAGAGACGATACTCAAATTATAATAAAACTCTTCATTTTGTGA
ATTATAGAAGCTACTTTTTATAAAGCCATATTTTTTTAGGGAAACTAAGGAGTGACATAGAACTGATGAATGAGC
AAAAGTAAGTTTTGCTGGATTTTTGTAGAACTCTGGACGTTGAGGATTCATTATGCTGTGGTTAACTTTAAATAT
TTTTGAATTCCAAATATCTGAATTAATGAGCCTTGTGTTTACAAATATGTGCCATTGTGCAACATCGGTGGATTT
TCTAAAAATAATGTAAATGTCTTCTATTAAATGTTGAGTGCAATAAAATCCAGAA

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FIGURE 1387

MAQRKNAKSSGNSSSSGSGSGSTSAGSSSPGARRETKHGGHKNGRKGGLSGTSFFTWFMVIALLGVWTSVAVVWF
DLVDYEEVLGKLGIYDADGDGDFDVDDAKVLLGLKERSTSEPAVPPEEAEPHTEPEEQVPVEAEPQNIEDEAKEQ
IQSLLHEMVHAEHVEGEDLQQEDGPTGEPQQEDDEFLMATDVDDRFETLEPEVSHEETEHSYHVEETVSQDCNQD
MEEMMSEQENPDSSEPVVEDERLHHDTDDVTYQVYEEQAVYEPLENEGIEITEVTAPPEDNPVEDSQVIVEEVSI
FPVEEQQEVPPETNRKTDDPEQKAKVKKKKPKLLNKFDKTIKAELDAAEKLRKRGKIEEAVNAFKELVRKYPQSP
RARYGKAQCEDDLAEKRRSNEVLRGAIETYQEVASLPDVPADLLKLSLKRRSDRQQFLGHMRGSLLTLQRLVQLF
PNDTSLKNDLGVGYLLIGDNDNAKKVYEEVLSVTPNDGFAKVHYGFILKAQNKIAESIPYLKEGIESGDPGTDDG
RFYFHLGDAMQRVGNKEAYKWYELGHKRGHFASVWQRSLYNVNGLKAQPWWTPKETGYTELVKSLERNWKLIRDE
GLAVMDKAKGLFLPEDENLREKGDWSQFTLWQQGRRNENACKGAPKTCTLLEKFPETTGCRRGQIKYSIMHPGTH
VWPHTGPTNCRLRMHLGLVIPKEGCKIRCANETKTWEEGKVLIFDDSFEHEVWQDASSFRLIFIVDVWHPELTPQ
QRRSLPAI

FIGURE 1388

AGGCTGTCTGCAGAGATTTGAAAA**ATG**GCAACAAATGAAAGTGTCAGCATCTTTAGTTCAGCATCCTTGGCTGTG
GAATATGTAGATTCACTTTTACCTGAGAATCCTCTGCAAGAACCATTTAAAAATGCTTGGAACTATATGTTGAAT
AATTATACAAAGTTCCAGATTGCAACATGGGGATCCCTTATAGTTCATGAAGCCCTTTATTTCTTATTCTGTTTA
CCTGGATTTTTATTTCAATTTATACCTTATATGAAAAAATACAAAATTCAAAAGGATAAGCCAGAGACATGGGAA
AACCAATGGAAGTGTTTCAAAGTTCTTCTCTTTAATCACTTCTGTATCCAGCTGCCTTTGATTTGTGGAACCTAT
TATTTTACAGAGTATTTCAATATTCCTTATGATTGGGAAAGAATGCCAAGATGGTATTTTCTTTTGGCAAGATGC
TTTGGTTGTGCAGTCATTGAAGATACTTGGCACTATTTTCTGCATAGACTCTTACACCACAAAAGAATATACAAG
TATATTCATAAAGTTCATCATGAGTTTCAGGCTCCATTTGGAATGGAAGCTGAATATGCACATCCTTTGGAGACT
CTAATTCTTGGAACTGGATTTTTCATTGGAATCGTGCTTTTGTGTGATCATGTAATTCTTCTTTGGGCATGGGTG
ACCATTCGTTTATTAGAAACTATTGATGTCCATAGTGGTTATGATATTCCTCTCAACCCTTTAAATCTGATCCCT
TTCTATGCTGGTTCTCGGCATCATGATTTCCACCACATGAACTTCATTGGAAACTATGCTTCAACATTTACATGG
TGGGATCGAATTTTTGGAACAGACTCTCAGTATAATGCCTATAATGAAAAGAGGAAGAAGTTTGAGAAAAAGACT
GAA**TAA**ATATCTCACGTAAACCTTCCTGAAAGATAAACGTTTTCCTGAATTCAGAAACTAGTAGCTAACATTGCT
TCTGGAGAGCAGAAATAAGCATGTCTTCTGGCTACTAAGTGATAAAAAGAACATTAACAACCTTTAATTACCTTC
CTAGTGGGAACTTTTTCTACTTTACCTACAAGTTCTATATATGTAGAAATGAATAAATATATATTTAAGTACAGT
TTTCATGAGGAAGTTTTAAAAGACCATGTTCCTAAGCTTCCAAGAAGGTTTTGGATACTAGAAGTATTAATCTAT
GGCTTTTCTCCCAGTAAAACCATAGGCCTGAAGTTCACATTGGGTCTTTAAATCTTTTAGATATATACTGGTCAT
TTCAGAAAATTCTTCATAGTGGTATTGGCCTTATATTTAACTTTTTTTTTATTTTTTTTTTGAGACAAAGCCACA
CTCTGTCTCCTTGGCTGGAGTGTGGTGGCACAGTCTCAGCTCACTGCAACCTCTGCCTCCCAGTTCAAGCAATTC
TTCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGGCACCCGCCACCACGCCCAGCTAATTTTTGTATTTTTGTA
GAGATGGGGTTTCACGATGTTGGCCAGGCTGGTCTCAAACTTCTGACCTCAAGTGATCTGCCCACCTTGGCCTCC
CAAAGTGCTGGGATTACAGGTGTAAGCCACTGCGCCCGGCCTTTTTAACTTTAAACATGTTTTAGAATTCACCTA
AAGATCAAAATATCATGGATTGAACCTCATCAATTGATAGCAGTGAGTGACTGAAGCTTCCAAATCAAGAAAAGC
CGGCACCAAGAACTTCCATTCTAATCTAGAGCTGACCAGTTTGAGCTGATTCTCTCTTTGAAGAGTCCTTCTTGA
TTGCAGTGCAGTACTGGCATTTCTGAATGGATGTAAGTGGAGTATTTTAGTCTAAAGGCTTTTCAAATTACTTGA
ATTTTTTTAAAAATTGAGGAGCTTTATTTCTATTTACCCTTCCATTTTTGTGTGAAAAAAAAAAAAAAA

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FIGURE 1389

MATNESVSIFSSASLAVEYVDSLLPENPLQEPFKNAWNYMLNNYTKFQIATWGSLIVHEALYFLFCLPGFLFQFI
PYMKKYKIQKDKPETWENQWKCFKVLLFNHFCIQLPLICGTYYFTEYFNIPYDWERMPRWYFLLARCFGCAVIED
TWHYFLHRLLHHKRIYKYIHKVHHEFQAPFGMEAEYAHPLETLILGTGFFIGIVLLCDHVILLWAWVTIRLLETI
DVHSGYDIPLNPLNLIPFYAGSRHHDFHHMNFIGNYASTFTWWDRIFGTDSQYNAYNEKRKKFEKKTE

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FIGURE 1390

AGGGGCGCTCCGGCCAGTGATTGGCTGGAGGTTTGTTAACTATTCATGAGGGGGCGGGCCGAGCGGGGCGGCCTT
TGTTAAGCAGCGAGGGCGCGACCGCGGGTACTCTGCTGCCGGCTTCTCGGAGCGGCGCTGGGCGACCAGAGCAGG
GTCGAG**ATG**TCCTACATCCCGGGCCAGCCGGTCACCGCCGTGGTGCAAAGAGTTGAAATTCACAAGCTGCGTCAA
GGTGAGAACTTAATCCTGGGTTTCAGCATTGGAGGTGGAATCGACCAGGACCCTTCCCAGAATCCCTTCTCTGAA
GACAAGACGGACAAGGGTATTTATGTCACACGGGTGTCTGAAGGAGGCCCTGCTGAAATCGCTGGGCTGCAGATT
GGAGACAAGATCATGCAGGTGAACGGCTGGGACATGACCATGGTCACACACGACCAGGCCCGCAAGCGGCTCACC
AAGCGCTCGGAGGAGGTGGTGCGTCTGCTGGTGACGCGGCAGTCGCTGCAGAAGGCCGTGCAGCAGTCCATGCTG
TCC**TAG**CAGCCACCACCATCTGCGACTCCTGCCTGCCGCCTCTCTGTACAGTAACGCCACTTCCACACTCTGTCC
CCATCTGGCTTCTGCTGACCGCTGGGCCCCAGCTCAGAAGGGCTATAGCTGGTCCCAGAGGCCTGGCCTGGCCTT
CCTTCCCTTCTCCCATCCCTGGCCTGGGGCCTCTGGGACCAGCTTTCTCTCCTGGACACCGAGGATTGGAAATAA
GGGCCTGGAGCTGAGTAGTAGCCAGTCTGCTGTGACCACAGGCTCAGGTCCGACCCTGCTGCTTGGCCACAGCAG
TGGCTGGGCAAGTGGGAACCACTATCTCTTGGGAGCCCCCAAAAGCTGGGAAATGCTGGAGGAACCAGGCCTTTC
CCGCTTTTGCCTGGCTGCAGGGTTCGGCTCCGCCCCTGCCCCCCAGCCCTCGTGTGTCCACACCGCAGTGCCTCT
GCCCCTCGGGGGACTGGACACACATCCTGCCAGAGGCGCTACGAAGCTTTGCCCAGATGAAGCCAGGTGGGCTCC
GCGTTCACTCCCACTCTCCCGAGGGGTGCTGGCCTCCCCAGGGTTTGCCTTCTTACGGATTTAGACGAGGTTCGA
GGCTCACCTATCAGGGCAGCTCTCAGGATTGTCATTTTCCTCTTTGCCTGTGGGTTTAACTTTTGTATTTTTTTA
ATCACAAGTTTGATACAAAATGTTTTTATCGTACTCTTTGGAGATGCCCATTCTACTTTTGAATTTAGCTTTTAC
TAATTCGCATCTGGAAGCTCAGCAAGTGCACAAGCCTTACTTTGGTTACCGTGGAAACCACTGCCGCCCCTCCCC
GATGTGGTGCGCTCAATAAAAATGCTGGAATTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1391

MSYIPGQPVTAVVQRVEIHKLRQGENLILGFSIGGGIDQDPSQNPFSEDKTDKGIYVTRVSEGGPAEIAGLQIGD
KIMQVNGWDMTMVTHDQARKRLTKRSEEVVRLLVTRQSLQKAVQQSMLS

FIGURE 1392

GCGCCCGCGCCTCGGGCCGTCGGGAGCGGAGCCTCCTCGGGACCAGGACTTCAGGGCCACAGGTGCTGCCAAGATG
GCTCCAGGGCACCTGCTCCGTGCTCCTGCTCTGGGGAATCCTGGGGGCCATCCAGGCCCAGCAGCAGGAGGTCAT
CTCGCCGGACACTACCGAGAGAAACAACAACTGCCCAGAGAAGACCGACTGCCCCATCCACGTGTACTTCGTGCT
GGACACCTCGGAGAGCGTCACCATGCAGTCCCCCACGGACATCCTGCTCTTCCACATGAAGCAGTTCGTGCCGCA
GTTCATCAGCCAGCTGCAGAACGAGTTCTACCTGGACCAGGTGGCGCTGAGCTGGCGCTACGGCGGCCTGCACTT
CTCTGACCAGGTGGAGGTGTTCAGCCCACCGGGCAGCGACCGGGCCTCCTTCATCAAGAACCTGCAGGGCATCAG
CTCCTTCCGCCGCGGCACCTTCACCGACTGCGCGCTGGCCAACATGACGGAGCAGATCCGGCAGGACCGCAGCAA
GGGCACCGTCCACTTCGCCGTGGTCATCACCGACGGCCACGTCACCGGCAGCCCCTGCGGGGGCATCAAGCTGCA
GGCCGAGCGGGCCCGCGAGGAGGGCATCCGGCTCTTCGCCGTGGCCCCCAACCAGAACCTGAAGGAGCAGGGCCT
GCGGGACATCGCCAGCACGCCGCACGAGCTCTACCGCAACGACTACGCCACCATGCTGCCCGACTCCACCGAGAT
CAACCAGGACACCATCAACCGCATCATCAAGGTCATGAAACACGAAGCCTACGGAGAGTGCTACAAGGTGAGCTG
CCTGGAAATCCCTGGGCCCTCTGGGCCCAAGGGCTACCGTGGACAGAAGGGTGCCAAGGGCAACATGGGTGAGCC
GGGAGAGCCTGGCCAGAAGGGAAGACAGGGAGACCCGGGCATCGAAGGCCCCATTGGATTCCCAGGACCCAAGGG
CGTTCCTGGCTTCAAAGGAGAGAAGGGTGAATTTGGAGCCGACGGTCGCAAGGGGGCCCCTGGCCTGGCTGGCAA
GAACGGGACCGATGGACAGAAGGGCAAGCTGGGGCGCATCGGACCTCCTGGCTGCAAGGGAGACCCTGGAAACCG
GGGCCCCGACGGTTACCCGGGGGAAGCAGGGAGTCCAGGGGAGCGAGGAGACCAAGGCGGCAAGGGGGACCCTGG
CCGCCCAGGACGCAGAGGGCCCCCGGGAGAAATCGGGGCCAAGGGAAGCAAGGGGTATCAAGGCAACAATGGAGC
CCCAGGAAGTCCTGGTGTGAAAGGAGCCAAGGGCGGGCCTGGGCCCCGCGGACCCAAAGGCGAGCCGGGGCGCAG
GGGAGACCCCGGCACCAAGGGCAGCCCAGGCAGCGATGGCCCCAAGGGGGAGAAGGGGGACCCTGGCCCTGAGGG
CCCCCGCGGCCTGGCTGGAGAGGTTGGCAACAAAGGAGCCAAGGGAGACCGAGGCTTGCCTGGACCCAGAGGCCC
CCAGGGAGCTCTTGGGGAGCCCGGAAAGCAGGGATCTCGGGGAGACCCCGGTGATGCAGGACCCCGTGGAGACTC
AGGACAGCCAGGCCCCAAGGGAGACCCCGGCAGGCCTGGATTCAGCTACCCAGGACCCCGAGGAGCACCCGGAGA
AAAAGGCGAGCCCGGCCCACGCGGCCCCGAGGGAGGCCGAGGCGACTTTGGCTTGAAAGGAGAACCTGGGAGGAA
AGGAGAGAAAGGAGAGCCTGCGGATCCTGGTCCCCCTGGTGAGCCAGGCCCTCGGGGGCCAAGAGGAGTCCCAGG
ACCCGAGGGTGAGCCCGGCCCCCCTGGAGACCCCGGTCTCACGGAGTGTGACGTCATGACCTACGTGAGGGAGAC
CTGCGGGTGCTGCGACTGTGAGAAGCGCTGTGGCGCCCTGGACGTGGTCTTCGTCATCGACAGCTCCGAGAGCAT
TGGGTACACCAACTTCACACTGGAGAAGAACTTCGTCATCAACGTGGTCAACAGGCTGGGTGCCATCGCTAAGGA
CCCCAAGTCCGAGACAGGGACGCGTGTGGGCGTGGTGCAGTACAGCCACGAGGGCACCTTTGAGGCCATCCAGCT
GGACGACGAACATATCGACTCCCTGTCGAGCTTCAAGGAGGCTGTCAAGAACCTCGAGTGGATTGCGGGCGGCAC
CTGGACACCCTCAGCCCTCAAGTTTGCCTACGACCGCCTCATCAAGGAGAGCCGGCGCCAGAAGACACGTGTGTT
TGCGGTGGTCATCACGGACGGGCGCCACGACCCTCGGGACGATGACCTCAACTTGCGGGCGCTGTGCGATCGCGA
CGTCACAGTGACGGCCATCGGCATCGGGGACATGTTCCACGAGAAGCACGAGAGTGAAAACCTCTACTCCATCGC
CTGCGACAAGCCACAGCAGGTGCGCAACATGACGCTGTTCTCCGACCTGGTCGCTGAGAAGTTCATCGATGACAT
GGAGGACGTCCTCTGCCCGGACCCTCAGATCGTGTGCCCAGACCTTCCCTGCCAAACAGAGCTGTCCGTGGCACA
GTGCACGCAGCGGCCCGTGGACATCGTCTTCCTGCTGGACGGCTCCGAGCGGCTGGGTGAGCAGAACTTCCACAA
GGCCCGGCGCTTCGTGGAGCAGGTGGCGCGGCGGCTGACGCTGGCCCGGAGGGACGACGACCCTCTCAACGCACG
CGTGGCGCTGCTGCAGTTTGGTGGCCCCGGCGAGCAGCAGGTGGCCTTCCCGCTGAGCCACAACCTCACTGCCAT
CCACGAGGCGCTGGAGACCACACAATACCTGAACTCCTTCTCGCACGTGGGCGCAGGCGTGGTGCACGCCATCAA
TGCCATCGTGCGCAGCCCGCGTGGCGGGGCCCGGAGGCACGCAGAGCTGTCCTTCGTGTTCCTCACGGACGGCGT
CACGGGCAACGACAGTCTGCACGAGTCGGCGCACTCCATGCGCAAGCAGAACGTGGTACCCACCGTGCTGGCCTT
GGGCAGCGACGTGGACATGGACGTGCTCACCACGCTCAGCCTGGGTGACCGCGCCGCCGTGTTCCACGAGAAGGA
CTATGACAGCCTGGCGCAACCCGGCTTCTTCGACCGCTTCATCCGCTGGATCTGCTAGCGCCGCCGCCCGGGCCC
CGCAGTCGAGGGTCGTGAGCCCACCCCGTCCATGGTGCTAAGCGGGCCCGGGTCCCACACGGCCAGCACCGCTGC
TCACTCGGACGACGCCCTGGGCCTGCACCTCTCCAGCTCCTCCCACGGGGTCCCCGTAGCCCCGGCCCCCGCCCA
GCCCCAGGTCTCCCCAGGCCCTCCGCAGGCTGCCCGGCCTCCCTCCCCCTGCAGCCATCCCAAGGCTCCTGACCT
ACCTGGCCCCTGAGCTCTGGAGCAAGCCCTGACCCAATAAAGGCTTTGAACCCAAAAAAAAAAA

FIGURE 1393

MLQGTCSVLLLWGILGAIQAQQQEVISPDTTERNNNCPEKTDCPIHVYFVLDTSESVTMQSPTDILLFHMKQFVP
QFISQLQNEFYLDQVALSWRYGGLHFSDQVEVFSPPGSDRASFIKNLQGISSFRRGTFTDCALANMTEQIRQDRS
KGTVHFAVVITDGHVTGSPCGGIKLQAERAREEGIRLFAVAPNQNLKEQGLRDIASTPHELYRNDYATMLPDSTE
INQDTINRIIKVMKHEAYGECYKVSCLEIPGPSGPKGYRGQKGAKGNMGEPGEPGQKGRQGDPGIEGPIGFPGPK
GVPGFKGEKGEFGADGRKGAPGLAGKNGTDGQKGKLGRIGPPGCKGDPGNRGPDGYPGEAGSPGERGDQGGKGDP
GRPGRRGPPGEIGAKGSKGYQGNNGAPGSPGVKGAKGGPGPRGPKGEPGRRGDPGTKGSPGSDGPKGEKGDPGPE
GPRGLAGEVGNKGAKGDRGLPGPRGPQGALGEPGKQGSRGDPGDAGPRGDSGQPGPKGDPGRPGFSYPGPRGAPG
EKGEPGPRGPEGGRGDFGLKGEPGRKGEKGEPADPGPPGEPGPRGPRGVPGPEGEPGPPGDPGLTECDVMTYVRE
TCGCCDCEKRCGALDVVFVIDSSESIGYTNFTLEKNFVINVVNRLGAIAKDPKSETGTRVGVVQYSHEGTFEAIQ
LDDEHIDSLSSFKEAVKNLEWIAGGTWTPSALKFAYDRLIKESRRQKTRVFAVVITDGRHDPRDDDLNLRALCDR
DVTVTAIGIGDMFHEKHESENLYSIACDKPQQVRNMTLFSDLVAEKFIDDMEDVLCPDPQIVCPDLPCQTELSVA
QCTQRPVDIVFLLDGSERLGEQNFHKARRFVEQVARRLTLARRDDDPLNARVALLQFGGPGEQQVAFPLSHNLTA
IHEALETTQYLNSFSHVGAGVVHAINAIVRSPRGGARRHAELSFVFLTDGVTGNDSLHESAHSMRKQNVVPTVLA
LGSDVDMDVLTTLSLGDRAAVFHEKDYDSLAQPGFFDRFIRWIC

FIGURE 1394

CTCTGAGGAGAAGCAGCAGCAAACATTTGCTAGTCAGACAAGTGACAGGGA**ATG**GATTCCAAACAGCAGTGTGTA
AAGCTAAATGATGGCCACTTCATGCCTGTATTGGGATTTGGCACCTATGCACCTCCAGAGGTTCCGAGAAGTAAA
GCTTTGGAGGTCACAAAATTAGCAATAGAAGCTGGGTTCCGCCATATAGATTCTGCTCATTTATACAATAATGAG
GAGCAGGTTGGACTGGCCATCCGAAGCAAGATTGCAGATGGCAGTGTGAAGAGAGAAGACATATTCTACACTTCA
AAGCTTTGGTCCACTTTTCATCGACCAGAGTTGGTCCGACCAGCCTTGGAAAACTCACTGAAAAAAGCTCAATTG
GACTATGTTGACCTCTATCTTATTCATTCTCCAATGTCTCTAAAGCCAGGTGAGGAACTTTCACCAACAGATGAA
AATGGAAAAGTAATATTTGACATAGTGGATCTCTGTACCACCTGGGAGGCCATGGAGAAGTGTAAGGATGCAGGA
TTGGCCAAGTCCATTGGGGTGTCAAACTTCAACCGCAGGCAGCTGGAGATGATCCTCAACAAGCCAGGACTCAAG
TACAAGCCTGTCTGCAACCAGGTAGAATGTCATCCGTATTTCAACCGGAGTAAATTGCTAGATTTCTGCAAGTCG
AAAGATATTGTTCTGGTTGCCTATAGTGCTCTGGGATCTCAACGAGACAAACGATGGGTGGACCCGAACTCCCCG
GTGCTCTTGGAGGACCCAGTCCTTTGTGCCTTGGCAAAAAAGCACAAGCGAACCCCAGCCCTGATTGCCCTGCGC
TACCAGCTGCAGCGTGGGGTTGTGGTCCTGGCCAAGAGCTACAATGAGCAGCGCATCAGACAGAACGTGCAGGTT
TTTGAGTTCCAGTTGACTGCAGAGGACATGAAAGCCATAGATGGCCTAGACAGAAATCTCCACTATTTTAACAGT
GATAGTTTTGCTAGCCACCCTAATTATCCATATTCAGATGAATAT**TAA**CATGGAGAGCTTTGCCTGATGTCTACC
AGAAGCCCTGTGTGTGGATGGTGACGCAGAGGACGTCTCTATGCCGGTGACTGGACATATCACCTCTACTTAAAT
CCGTCCTGTTTAGCGACTTCAGTCAACTACAGCTGAGTCCATAGGCCAGAAAGACAATAAATTTTTATCATTTTG
AAAT

FIGURE 1395

MDSKQQCVKLNDGHFMPVLGFGTYAPPEVPRSKALEVTKLAIEAGFRHIDSAHLYNNEEQVGLAIRSKIADGSVK
REDIFYTSKLWSTFHRPELVRPALENSLKKAQLDYVDLYLIHSPMSLKPGEELSPTDENGKVIFDIVDLCTTWEA
MEKCKDAGLAKSIGVSNFNRRQLEMILNKPGLKYKPVCNQVECHPYFNRSKLLDFCKSKDIVLVAYSALGSQRDK
RWVDPNSPVLLEDPVLCALAKKHKRTPALIALRYQLQRGVVVLAKSYNEQRIRQNVQVFEFQLTAEDMKAIDGLD
RNLHYFNSDSFASHPNYPYSDEY

FIGURE 1396A

GCGGGGACCGCGACGAGCCCGGGTCGCCGTTGGCAGCAGCAGCAGCAACACCAGCAGCAGCAGCAGCCCCGGCGG
CGGCGCGGAACCCCGAGCGCCCGGGCGCACCCCGGCTTCCCGGAGCGCGACGCGGCGGCAGCAGCCCCGGTGCGG
CCGCGCGCGCCTTAGGCTCGGCCCCGCGGCTCGGGGACCCCGACTCCCGGCCCAGCGAGCGCGTCCCCCGGCGCC
GCCCGAGAGCCCGAGGAGGCAGCGGCCGCAGAGCCCGGGGGAGGGGGGCGGCCACCGCCCGCGCCGGGCATCCTC
AGGAGCCCCAGAGCGCGGAGGGCGCGGCGCCGCCGAGCGGTGCTGGCCCCCGCGGGCTCCCCGGACCTTCCCCAC
CGCCTGGGCCCGAGGGACGCGTGATCGGGCGGGCGGCCGGGCGCAAGGGTGGGAGGGAGCCGCCCCCGCCCGCGC
CCCCTCCGCCCCTCGCCCCAAACCCCTGGGCGCCGGGCCCGGGCCGCGCGGCCTGAAGCGCCCGCG**ATG**GCGAGC
CCGCCGCGGCACGGGCCGCCCGGGCCGGCGAGCGGAGACGGCCCCAACCTCAACAACAACAACAACAACAACAAC
AACCACAGCGTGCGCAAGTGCGGCTACCTGCGCAACGAAGAGCATGGCCACAAGCGCTTCTTCGTGCTGCGCGGA
CCCGGCGCGGGCGGCGACGAGGCGACGGCGGGCGGGGGGTCGGCGCCGCAACCGCCGCGGCTCGAGTACTACGAG
AGCGAGAAAAAGTGGCGGAGCAAGGCAGGCGCGCCGAAACGGGTGATCGCTCTCGACTGCTGCCTGAACATCAAC
AAGCGCGCCGACGCCAAGCACAAGTACCTGATCGCCCTCTACACCAAGGACGAGTACTTCGCCGTGGCCGCCGAG
AACGAGCAGGAGCAGGAGGGCTGGTACCGCGCGCTCACCGACCTGGTCAGCGAGGGCCGCGCGGCCGCCGGAGAC
GCGCCCCCCGCCGCCGCGCCCGCCGCGTCCTGCAGCGCCTCCCTGCCCGGCGCCCTGGGCGGCTCTGCCGGCGCC
GCCGGGGCCGAGGACAGCTACGGGCTGGTGGCTCCCGCCACGGCCGCCTACCGTGAGGTGTGGCAGGTGAACCTG
AAGCCCAAGGGTCTGGGCCAGAGCAAGAACCTGACGGGGGTGTACCGTCTGTGCCTGTCTGCGCGCACCATCGGC
TTCGTGAAGCTCAACTGCGAGCAGCCGTCGGTGACGCTGCAGCTCATGAACATCCGCCGCTGCGGCCACTCGGAC
AGCTTCTTCTTCATCGAGGTGGGCCGCTCGGCCGTCACAGGCCCCGGCGAGCTGTGGATGCAGGCGGACGACTCG
GTGGTGGCGCAGAACATCCACGAGACCATCCTGGAGGCCATGAAGGCGCTCAAGGAGCTCTTCGAGTTCCGGCCG
CGCAGTAAGAGCCAATCGTCGGGGTCGTCGGCCACGCACCCCATCAGCGTCCCCGGCGCGCGCCGCCACCACCAC
CTGGTCAACCTGCCCCCCAGCCAGACGGGCCTGGTGCGCCGCTCGCGCACCGACAGCCTGGCCGCCACCCCGCCG
GCGGCCAAGTGCAGCTCGTGCCGGGTGCGCACCGCCAGCGAGGGCGACGGCGGCCGGGCTGCGGGAGCGGCGGCC
GCGGCGCAGAGGCTGGTGTCGGTGGCTGGGAGCCCCCTGAGCCCCGGGCCGGTGCGCGCGCCCCTGAGCCGCTCG
CACACCCTGAGCGGCGGCTGCGGCGGCCGCGGGAGCAAGGTGGCGCTGCTGCCGGCAGGGGGCGCGCTGCAACAC
AGCCGCTCCATGTCCATGCCCGTGGCGCACTCGCCGCCCGCCGCCACCAGCCCCGGCTCCCTGTCGTCCAGCAGC
GGCCACGGCTCGGGCTCCTACCCGCCGCCGCCCGGCCCGCACCCGCCTCTGCCGCATCCGCTGCACCACGGCCCC
GGCCAGCGGCCCTCCAGCGGCAGCGCCTCCGCCTCGGGCTCCCCCAGCGACCCCGGCTTCATGTCCCTGGACGAG
TACGGCTCCAGCCCAGGCGACCTGCGCGCCTTCTGCAGCCACCGAAGCAACACGCCCGAGTCCATCGCGGAGACG
CCCCCGGCCCGAGACGGCGGCGGCGGCGGTGAGTTCTACGGGTACATGACCATGGACAGGCCCCTGAGCCACTGT
GGCCGCTCCTACCGCCGGGTCTCGGGGGACGCGGCCCAGGACCTGGACCGAGGGCTGCGCAAGAGGACCTACTCC
CTGACCACGCCAGCCCGGCAGCGGCCGGTGCCCCAGCCCTCCTCTGCCTCGCTGGATGAATACACCCTGATGCGG
GCCACCTTCTCGGGCAGCGCGGGCCGCCTCTGCCCGTCCTGCCCCGCGTCCTCTCCCAAGGTGGCCTACCACCCC
TACCCAGAGGACTACGGAGACATCGAGATCGGCTCCCACAGGAGCTCCAGCAGCAACCTGGGGGCAGACGACGGC
TACATGCCCATGACGCCCGGCGCGGCCTTCGCGGGCAGTGGGAGCGGCAGCTGCAGGAGCGACGACTACATGCCC
ATGAGCCCCGCCAGCGTGTCCGCCCCCAAGCAGATCTTGCAGCCCAGGGCCGCCGCCGCCGCCGCCGCCGTG
CCTTCTGCGGGGCCTGCGGGGCCAGCACCCACCTCTGCGGCGGGCAGGACATTCCCGGCGAGCGGGGGCGGCTAC
AAGGCCAGCTCGCCCGCCGAGAGCTCCCCCGAGGACAGTGGGTACATGCGCATGTGGTGCGGTTCCAAGCTGTCC
ATGGAGCATGCAGATGGCAAGCTGCTGCCCAACGGGGACTACCTCAACGTGTCCCCCAGCGACGCGGTCACCACG
GGCACCCCGCCCGACTTCTTCTCCGCAGCCCTGCACCCCGGCGGGGAGCCGCTCAGGGGCGTTCCCGGCTGCTGC
TACAGCTCCTTGCCCCGCTCCTACAAGGCCCCCTACACCTGTGGCGGGGACAGCGACCAGTACGTGCTCATGAGC
TCCCCCGTGGGGCGCATCCTGGAGGAGGAGCGTCTGGAGCCTCAGGCCACGCCAGGGCCCAGCCAGGCGGCCAGC
GCCTTCGGGGCCGGCCCCACGCAGCCCCCTCACCCTGTAGTGCCTTCGCCCGTGCGGCGTAGCGGCCGCCGGTCA
GGTTTCTTGGGCCAGCGCGGCCGGGCGGTGAGGCCCACGCGCCTGTCCCTGGAGGGGCTGCCCAGCCTGCCCAGC
ATGCACGAGTACCCACTGCCACCGGAGCCCAAGAGCCCCGGCGAGTACATCAACATCGACTTTGGCGAGCCCGGG
GCCCGCCTGTCGCCGCCCGCGCCTCCCCTGCTGGCGTCGGCGGCCTCGTCCTCCTCGCTCTTGTCCGCCAGCAGC
CCGGCCTCGTCGCTGGGCTCAGGCACCCCGGGCACCAGCAGCGACAGCCGGCAGCGGTCTCCGCTCTCCGACTAC
ATGAACCTCGACTTCAGCTCCCCCAAGTCTCCTAAGCCGGGCGCCCCGAGCGGCCACCCCGTGGGCTCCTTGGAC
GGCCTCCTGTCCCCCGAGGCCTCCTCCCCGTATCCGCCGTTGCCCCCGCGTCCGTCCGCGTCCCCGTCGTCGTCT

FIGURE 1396B

CTGCAGCCGCCGCCACCGCCGCCGGCCCCGGGGGAGCTGTACCGCCTGCCCCCCGCCTCGGCCGTTGCCACCGCC
CAGGGCCCGGGCGCCGCCTCATCGTTGTCCTCGGACACCGGGGACAATGGTGACTACACCGAGATGGCTTTTGGT
GTGGCCGCCACCCCGCCGCAACCTATCGCGGCCCCCCCGAAGCCAGAAGCTGCCCGCGTGGCCAGCCCGACGTCG
GGCGTGAAGAGGCTGAGCCTCATGGAGCAGGTGTCGGGAGTCGAGGCCTTCCTGCAGGCCAGCCAGCCCCCGGAC
CCCCACCGCGGCGCCAAGGTCATCCGCGCAGACCCGCAGGGGGGCCGCCGCCGCCACAGTTCCGAGACCTTCTCC
TCCACCACGACGGTCACCCCCGTGTCCCCGTCCTTCGCCCACAACCCCAAGCGCCACAACTCGGCCTCCGTGGAA
AATGTCTCTCTCAGGAAAAGCAGCGAGGGCGGCGTGGGTGTCGGCCCTGGAGGGGGCGACGAGCCGCCCACCTCC
CCACGACAGTTGCAGCCGGCGCCCCCTTTGGCACCGCAGGGCCGGCCGTGGACCCCGGGTCAGCCCGGGGGCTTG
GTCGGTTGTCCTGGGAGCGGTGGATCGCCCATGCGCAGAGAGACCTCTGCCGGCTTCCAGAATGGTCTCAACTAC
ATCGCCATCGACGTGAGGGAGGAGCCCGGGCTGCCACCCCAGCCGCAGCCGCCGCCGCCGCCGCTTCCTCAGCCG
GGAGACAAGAGCTCCTGGGGCCGGACCCGAAGCCTCGGGGGTCTCATCAGCGCTGTGGGCGTCGGCAGCACCGGC
GGCGGGTGCGGGGGGCCGGGTCCCGGTGCCCTGCCCCCTGCCAACACCTACGCCAGCATTGACTTCTTGTCCCAC
CACTTGAAGGAGGCCACCATCGTGAAAGAG**TGA**AGATCTGTCTGGCTTTATCACCAGGATGTCACATGTCAGAGA
ATATCATTAAAAGAAGACGCTCAGCGCTGTTTCAGCCCGAAGCTGCTTGCAGTTTTCTTTTGGATCTGAGCAATG
ACTGTGTTTGGAAACATCTGTGGACTCTGATAGATGGGGCACAACAAGGCAAGGTCACCTGCCTCTTTCCCTTGT
TCCCGGATGGGCATTCATCATTGTGCTGTTTGCGTTTTGTTTTGTTTTGTTTTAACAAAATTAGCTGAAGAAGTT
ATTCTCAAGAAAATTGGATGTTTTCATTGGCCTTCTTAAATTGTGGCCAGTGTCTTTTAATTTCTTCTTCTTTTC
CTTTTGGCAAAGCAGATATAACCCTCAGCATGCTAGGAGAGTGCACCCGTACCTATGGAAGTGGTAAAATCTGGT
ATTTACTGGCTTACACTCAAAACGACCACAGTCCTACCTCAGTTCAAGGTAAAGCCGGATTTCCGTGGCGGGGGT
CCACAGGACCTCCTGTAGTAGCCCCTGCGCTGTGTGTCTGGAGCGCGTCCTCGCCTTATTTAAATGGTCCAGTAG
ACAGCTGCTTGTTGGATTCCAGTGCAGGTACCTGCGATGTTTACGTCCACACCGAGCCCAGTGTGGGACTGACAT
TTCTCAATGGAAGTGAAATTTGGGATTGGACTTTGAAGACGATTACTAAATAATAATTATTATATGTAACTGAAG
CAACCTACTTTTGAAAATCAACTGTATTGGGTAGTGGGAGGTGGGAGGGAAGGGCTTTGGGAAGGGGATGAATAT
CTCTTTTTACCTTTAACAGACTTGTTTAATCTTCTCGATGTAGATGTTTATGTAGGTACTTCACATTGCAAACGC
CTTTTATTCTATTTACAAGCTCAGATGTCTCTGCTCTCCTGAATCTTGGGCATGCCTTTCTGTAACCAAAAATCC
CTGTAGGCGTGCTAGCAATTCCAGGGTGGTCCGGGTTTGGCAGATTTGATTTTTAAAAAATGTATTATCTTTAAT
AAAAATGTTATTATGTCAACCAGTGAGGCTGCCCTGAACAAAAAAAAACAAAAAGAAAAAAAAAAAAAGGAAAGA
AAGAAACTGATAAAAAGAGGCATCCAGCCCCTATGTTATTGATGGAAAAAGAAAAAGAAGAAAAGCAATCTCGCA
GTACATGTTACTTGTCGAAAAAATTCCGGACAAGACTACCCTTGTTTTATGTTTTCAGTATTCTGAAAATACCAG
TGTGTGGCAGTTCTCGCAGATGTTACCTAAAACTGCTGAACTTGACCGGCAGAATGTTCTGCCGTTTTCTGCTCC
CTCGACACTTGATTGGAGGGCTGTCGACCTCTCCTCCCGTGGGGGCTTCCCCAGTGCCTATCTTCTCTGATAGTC
ATGGAGAGGTTACACTAATTCATTGGAGATGTAAGTTGTTGGTTTTGTTTTGTTTTGTTTTTAGAAAAATATATA
TAAATATATAATAGATATCTATCGCTATAGAATAATGCATTAATAAAATGAGGCTTTTTTAGAGGAAGACCAAAA
AATTCAATGTCTTAAAAATATATTTAATGGCAATGCAAAAGTCTTCCTGCTTCCGTGCTGAACTTTAGAACAGAG
GATTGTATTGCAAGACAAAGTTGAATGTAAAGTGATCTCCCTGAACATTTTTAAGGTTTTACTTTTCTGAAATTA
TACATCACAGCAGTGCATAGGCCATATAATGTTAGCTGGAAGGTCAATTTCAGTGTATGATATACTTTATTAAGA
TGTATAAAACATCCTGAAGTTTTTATTTAGTTTTGGGAATAGGCATCAGTGGGTGGTATTTGCTTTGTAACTCCC
CCCAGGTACGATAGGGACTGAATATGGACCCTGCTGAAAGCAGTGTATTGACGCATATTTAACTCGCCCTCTATC
CGTAGAGTAGTCATGACACTATACAGATGGTTCGTGTTCATACTGCAGCTTAAAACAAGCAAAATACACAGATGA
TAATATGCTAAATTTTCCTCTATCCTGTACATTTCACAAAAAGGCATATGCAATATTTACATTTTTAATTTAGTT
TACAGAATGGAACCAAAATGTATAAATGTTATGTTTGCTAAAACTTCACAATGTATATTGGGTCTTTGTACATTT
TGCCTGACTTACCTTAAATTTAAAATATTTTTTGCTATATAAACTTTAACAGTTATTAAACAGTGTTTTCCTTTT
GGGTACGTATTGTTTCTGGATATCAAGATGTTAAATATATTTCTTGCTATTGTGATATGACAAGAGACTTAACTT
ATCTTGCTCTGTCTTCCACTGTACACGCTGTATATAGGGGTCAATGTGATGCTGCTGGAGACGAGAATAAACTGG
ACTAGAATAGTGCATTGTATTTAGTCTGTATTGATCATGGATGCCCTCCTTAATAGCCATATGCAATAAAATAAA
GTACATTATTTATGAAATGAA

FIGURE 1397

MASPPRHGPPGPASGDGPNLNNNNNNNNNNHSVRKCGYLRNEEHGHKRFFVLRGPGAGGDEATAGGGSAPQPPRLE
YYESEKKWRSKAGAPKRVIALDCCLNINKRADAKHKYLIALYTKDEYFAVAAENEQEQEGWYRALTDLVSEGRAA
AGDAPPAAAPAASCSASLPGALGGSAGAAGAEDSYGLVAPATAAYREVWQVNLKPKGLGQSKNLTGVYRLCLSAR
TIGFVKLNCEQPSVTLQLMNIRRCGHSDSFFFIEVGRSAVTGPGELWMQADDSVVAQNIHETILEAMKALKELFE
FRPRSKSQSSGSSATHPISVPGARRHHHLVNLPPSQTGLVRRSRTDSLAATPPAAKCSSCRVRTASEGDGGRAAG
AAAAAQRLVSVAGSPLSPGPVRAPLSRSHTLSGGCGGRGSKVALLPAGGALQHSRSMSMPVAHSPPAATSPGSLS
SSSGHGSGSYPPPPGPHPPLPHPLHHGPGQRPSSGSASASGSPSDPGFMSLDEYGSSPGDLRAFCSHRSNTPESI
AETPPARDGGGGGEFYGYMTMDRPLSHCGRSYRRVSGDAAQDLDRGLRKRTYSLTTPARQRPVPQPSSASLDEYT
LMRATFSGSAGRLCPSCPASSPKVAYHPYPEDYGDIEIGSHRSSSSNLGADDGYMPMTPGAAFAGSGSGSCRSDD
YMPMSPASVSAPKQILQPRAAAAAAAAVPSAGPAGPAPTSAAGRTFPASGGGYKASSPAESSPEDSGYMRMWCGS
KLSMEHADGKLLPNGDYLNVSPSDAVTTGTPPDFFSAALHPGGEPLRGVPGCCYSSLPRSYKAPYTCGGDSDQYV
LMSSPVGRILEEERLEPQATPGPSQAASAFGAGPTQPPHPVVPSPVRRSGRRSGFLGQRGRAVRPTRLSLEGLPS
LPSMHEYPLPPEPKSPGEYINIDFGEPGARLSPPAPPLLASAASSSSLLSASSPASSLGSGTPGTSSDSRQRSPL
SDYMNLDFSSPKSPKPGAPSGHPVGSLDGLLSPEASSPYPPLPPRPSASPSSSLQPPPPPPAPGELYRLPPASAV
ATAQGPGAASSLSSDTGDNGDYTEMAFGVAATPPQPIAAPPKPEAARVASPTSGVKRLSLMEQVSGVEAFLQASQ
PPDPHRGAKVIRADPQGGRRRHSSETFSSTTTVTPVSPSFAHNPKRHNSASVENVSLRKSSEGGVGVGPGGGDEP
PTSPRQLQPAPPLAPQGRPWTPGQPGGLVGCPGSGGSPMRRETSAGFQNGLNYIAIDVREEPGLPPQPQPPPPPL
PQPGDKSSWGRTRSLGGLISAVGVGSTGGGCGGPGPGALPPANTYASIDFLSHHLKEATIVKE

FIGURE 1398A

GGGTGATTCAGCGCCCGGCGAGGCGGAACGGGCCGCAAGAGGAGGAGGGGAGAGCCCGTCCGCGCCTGGGCTCCC
GGGGTGGCACGAGCCCGCGGCCGGAGTGCGAGGCGGAGGCGAGGAGGCCGCGGGGACGGGAGGCGAGGCCGGCCG
GGCCCCCGAAGCC**ATG**GAGAACGCGCACACCAAGACGGTGGAGGAGGTGCTGGGCCACTTCGGCGTCAACGAGAG
TACGGGGCTGAGCCTGGAACAGGTCAAGAAGCTTAAGGAGAGATGGGGCTCCAACGAGTTACCGGCTGAAGAAGG
AAAAACCTTGCTGGAACTTGTGATTGAGCAGTTTGAAGACTTGCTAGTTAGGATTTTATTACTGGCAGCATGTAT
ATCTTTTGTTTTGGCTTGGTTTGAAGAAGGTGAAGAAACAATTACAGCCTTTGTAGAACCTTTTGTAATTTTACT
CATATTAGTAGCCAATGCAATTGTGGGTGTATGGCAGGAAAGAAATGCTGAAAATGCCATCGAAGCCCTTAAGGA
ATATGAGCCTGAAATGGGCAAAGTGTATCGACAGGACAGAAAGAGTGTGCAGCGGATTAAAGCTAAAGACATAGT
TCCTGGTGATATTGTAGAAATTGCTGTTGGTGACAAAGTTCCTGCTGATATAAGGTTAACTTCCATCAAATCTAC
CACACTAAGAGTTGACCAGTCAATTCTCACAGGTGAATCTGTCTCTGTCATCAAGCACACTGATCCCGTCCCTGA
CCCACGAGCTGTCAACCAAGATAAAAAGAACATGCTGTTTTCTGGTACAAACATTGCTGCTGGGAAAGCTATGGG
AGTGGTGGTAGCAACTGGAGTTAACACCGAAATTGGCAAGATCCGGGATGAAATGGTGGCAACAGAACAGGAGAG
AACACCCCTTCAGCAAAAACTAGATGAATTTGGGGAACAGCTTTCCAAAGTCATCTCCCTTATTTGCATTGCAGT
CTGGATCATAAATATTGGGCACTTCAATGACCCGGTTCATGGAGGGTCCTGGATCAGAGGTGCTATTTACTACTT
TAAAATTGCAGTGGCCCTGGCTGTAGCAGCCATTCCTGAAGGTCTGCCTGCAGTCATCACCACCTGCCTGGCTCT
TGGAACTCGCAGAATGGCAAAGAAAAATGCCATTGTTCGAAGCCTCCCGTCTGTGGAAACCCTTGGTTGTACTTC
TGTTATCTGCTCAGACAAGACTGGTACACTTACAACAAACCAGATGTCAGTCTGCAGGATGTTCATTCTGGACAG
AGTGGAAGGTGATACTTGTTCCCTTAATGAGTTTACCATAACTGGATCAACTTATGCACCTATTGGAGAAGTGCA
TAAAGATGATAAACCAGTGAATTGTCACCAGTATGATGGTCTGGTAGAATTAGCAACAATTTGTGCTCTTTGTAA
TGACTCTGCTTTGGATTACAATGAGGCAAAGGGTGTGTATGAAAAAGTTGGAGAAGCTACAGAGACTGCTCTCAC
TTGCCTAGTAGAGAAGATGAATGTATTTGATACCGAATTGAAGGGTCTTTCTAAAATAGAACGTGCAAATGCCTG
CAACTCAGTCATTAAACAGCTGATGAAAAAGGAATTCACTCTAGAGTTTTCACGTGACAGAAAGTCAATGTCGGT
TTACTGTACACCAAATAAACCAAGCAGGACATCAATGAGCAAGATGTTTGTGAAGGGTGCTCCTGAAGGTGTCAT
TGACAGGTGCACCCACATTCGAGTTGGAAGTACTAAGGTTCCTATGACCTCTGGAGTCAAACAGAAGATCATGTC
TGTCATTCGAGAGTGGGGTAGTGGCAGCGACACACTGCGATGCCTGGCCCTGGCCACTCATGACAACCCACTGAG
AAGAGAAGAAATGCACCTTGAGGACTCTGCCAACTTTATTAAATATGAGACCAATCTGACCTTCGTTGGCTGCGT
GGGCATGCTGGATCCTCCGAGAATCGAGGTGGCCTCCTCCGTGAAGCTGTGCCGGCAAGCAGGCATCCGGGTCAT
CATGATCACTGGGGACAACAAGGGCACTGCTGTGGCCATCTGTCGCCGCATCGGCATCTTCGGGCAGGATGAGGA
CGTGACGTCAAAAGCTTTCACAGGCCGGGAGTTTGATGAACTCAACCCCTCCGCCCAGCGAGACGCCTGCCTGAA
CGCCCGCTGTTTTGCTCGAGTTGAACCCTCCCACAAGTCTAAAATCGTAGAATTTCTTCAGTCTTTTGATGAGAT
TACAGCTATGACTGGCGATGGCGTGAACGATGCTCCTGCTCTGAAGAAAGCCGAGATTGGCATTGCTATGGGCTC
TGGCACTGCGGTGGCTAAAACCGCCTCTGAGATGGTCCTGGCGGATGACAACTTCTCCACCATTGTGGCTGCCGT
TGAGGAGGGGCGGGCAATCTACAACAACATGAAACAGTTCATCCGCTACCTCATCTCGTCCAACGTCGGGGAAGT
TGTCTGTATTTTCCTGACAGCAGCCCTTGGATTTCCCGAGGCTTTGATTCCTGTTCAGCTGCTCTGGGTCAATCT
GGTGACAGATGGCCTGCCTGCCACTGCACTGGGGTTCAACCCTCCTGATCTGGACATCATGAATAAACCTCCCCG
GAACCCAAAGGAACCATTGATCAGCGGGTGGCTCTTTTTCCGTTACTTGGCTATTGGCTGTTACGTCGGCGCTGC
TACCGTGGGTGCTGCTGCATGGTGGTTCATTGCTGCTGACGGTGGTCCAAGAGTGTCCTTCTACCAGCTGAGTCA
TTTCCTACAGTGTAAAGAGGACAACCCGGACTTTGAAGGCGTGGATTGTGCAATCTTTGAATCCCCATACCCGAT
GACAATGGCGCTCTCTGTTCTAGTAACTATAGAAATGTGTAACGCCCTCAACAGCTTGTCCGAAAACCAGTCCTT
GCTGAGGATGCCCCCCTGGGAGAACATCTGGCTCGTGGGCTCCATCTGCCTGTCCATGTCACTCCACTTCCTGAT
CCTCTATGTCGAACCCTTGCCACTCATCTTCCAGATCACACCGCTGAACGTGACCCAGTGGCTGATGGTGCTGAA
AATCTCCTTGCCCGTGATTCTCATGGATGAGACGCTCAAGTTTGTGGCCCGCAACTACCTGGAACCTGGTAAAGA
GTGTGTGCAGCCTGCCACCAAATCCTGCTCGTTCTCGGCATGCACCGATGGGATTTCCTGGCCGTTTGTGCTGCT
CATAATGCCCCTGGTGATCTGGGTCTATAGCACAGACACTAACTTTAGCGATATGTTCTGGTCT**TGA**CTGACAGT
TTTCCATAAAGAAGATGTTTAACTTAATCAATTAATTTTTTTATTGTTTAAAGCAACTGTCTATTTCTGCTGAAT
TTTCACATGAACATACTGGCTGGTGATGGAGGTTTCATACTCTAGATTTTGTTTTGCTTTTTCTGACTCCAGTGG
GGCAAGATTTTCCTTTTTTATACACATAATTAAAGTGTCCATTGACATGTACAGAGAACTAACACTATTTTATGC
AAATATTTTTTTGTAGATGAAAAAGCATGTACAGTGTTCTGTTTAATACTCATCCTTGTATAAAAAAAATAGTTG

FIGURE 1398B

AGCCAGCAGACATTGTCAGCAAATTAATTGGCAGCAGATTTTAGGAAATGAATGTGTGTGGTTTTTTTTCTAAAA
CTAAATAGCATGTATTGTGTCTTTTGCATGATGATCCGGATTTAATTTGATATCACAGTCTAATTTTTATTCATA
AGCCAATTTTTCTGCACTGAGCAGAGTCTTGCTACCTCAGTCAGTATTGTTTTGGTTTGCTACTTCCCTCACCCA
CTTTGGCCTCCGTTCACCCCACCCCACCCCACCTCTCCCCACCTTACCCCCGCCCCGCTTGGCTTCTTCTTTAGG
ATTGTGATGGTTCGTTCTGTTTACATCAGTTTTAACGAGAGGTATGCCTGTACTCGCTTGTGCAGAAAACATTGT
TCCAGATTCAATCGACTGGGTTTATGTCCCTTCACATAGTTTTTAAGGTTATTTATTTAAATGTCTAATGTATTT
TATTGTAACAGACATTGTTTTGCCAACATTGCCTATTTCAGTGGCACGTCATCTAGTTTTAAAAAAATAAAACAT
TTTAAAAAG

FIGURE 1399

MENAHTKTVEEVLGHFGVNESTGLSLEQVKKLKERWGSNELPAEEGKTLLELVIEQFEDLLVRILLLAACISFVL
AWFEEGEETITAFVEPFVILLILVANAIVGVWQERNAENAIEALKEYEPEMGKVYRQDRKSVQRIKAKDIVPGDI
VEIAVGDKVPADIRLTSIKSTTLRVDQSILTGESVSVIKHTDPVPDPRAVNQDKKNMLFSGTNIAAGKAMGVVVA
TGVNTEIGKIRDEMVATEQERTPLQQKLDEFGEQLSKVISLICIAVWIINIGHFNDPVHGGSWIRGAIYYFKIAV
ALAVAAIPEGLPAVITTCLALGTRRMAKKNAIVRSLPSVETLGCTSVICSDKTGTLTTNQMSVCRMFILDRVEGD
TCSLNEFTITGSTYAPIGEVHKDDKPVNCHQYDGLVELATICALCNDSALDYNEAKGVYEKVGEATETALTCLVE
KMNVFDTELKGLSKIERANACNSVIKQLMKKEFTLEFSRDRKSMSVYCTPNKPSRTSMSKMFVKGAPEGVIDRCT
HIRVGSTKVPMTSGVKQKIMSVIREWGSGSDTLRCLALATHDNPLRREEMHLEDSANFIKYETNLTFVGCVGMLD
PPRIEVASSVKLCRQAGIRVIMITGDNKGTAVAICRRIGIFGQDEDVTSKAFTGREFDELNPSAQRDACLNARCF
ARVEPSHKSKIVEFLQSFDEITAMTGDGVNDAPALKKAEIGIAMGSGTAVAKTASEMVLADDNFSTIVAAVEEGR
AIYNNMKQFIRYLISSNVGEVVCIFLTAALGFPEALIPVQLLWVNLVTDGLPATALGFNPPDLDIMNKPPRNPKE
PLISGWLFFRYLAIGCYVGAATVGAAAWWFIAADGGPRVSFYQLSHFLQCKEDNPDFEGVDCAIFESPYPMTMAL
SVLVTIEMCNALNSLSENQSLLRMPPWENIWLVGSICLSMSLHFLILYVEPLPLIFQITPLNVTQWLMVLKISLP
VILMDETLKFVARNYLEPGKECVQPATKSCSFSACTDGISWPFVLLIMPLVIWVYSTDTNFSDMFWS

FIGURE 1400

AACCGCATCTGCAGCGAGCAACTGAGAAGCCAAGACTGAGCCGGCGGCCGCGGCGCAGCGAACGAGCAGTGACCG
TGCTCCTACCCAGCTCTGCTTCACAGCGCCCACCTGTCTCCGCCCCTCGGCCCCTCGCCCGGCTTTGCCTAACCG
CCACG**ATG**ATGTTCTCGGGCTTCAACGCAGACTACGAGGCGTCATCCTCCCGCTGCAGCAGCGCGTCCCCGGCCG
GGGATAGCCTCTCTTACTACCACTCACCCGCAGACTCCTTCTCCAGCATGGGCTCGCCTGTCAACGCGCAGGACT
TCTGCACGGACCTGGCCGTCTCCAGTGCCAACTTCATTCCCACGGTCACTGCCATCTCGACCAGTCCGGACCTGC
AGTGGCTGGTGCAGCCCGCCCTCGTCTCCTCTGTGGCCCCATCGCAGACCAGAGCCCCTCACCCTTTCGGAGTCC
CCGCCCCCTCCGCTGGGGCTTACTCCAGGGCTGGCGTTGTGAAGACCATGACAGGAGGCCGAGCGCAGAGCATTG
GCAGGAGGGGCAAGGTGGAACAGTTATCTCCAGAAGAAGAAGAGAAAAGGAGAATCCGAAGGGAAAGGAATAAGA
TGGCTGCAGCCAAATGCCGCAACCGGAGGAGGGAGCTGACTGATACACTCCAAGCGGAGACAGACCAACTAGAAG
ATGAGAAGTCTGCTTTGCAGACCGAGATTGCCAACCTGCTGAAGGAGAAGGAAAAACTAGAGTTCATCCTGGCAG
CTCACCGACCTGCCTGCAAGATCCCTGATGACCTGGGCTTCCCAGAAGAGATGTCTGTGGCTTCCCTTGATCTGA
CTGGGGGCCTGCCAGAGGTTGCCACCCCGGAGTCTGAGGAGGCCTTCACCCTGCCTCTCCTCAATGACCCTGAGC
CCAAGCCCTCAGTGGAACCTGTCAAGAGCATCAGCAGCATGGAGCTGAAGACCGAGCCCTTTGATGACTTCCTGT
TCCCAGCATCATCCAGGCCCAGTGGCTCTGAGACAGCCCGCTCCGTGCCAGACATGGACCTATCTGGGTCCTTCT
ATGCAGCAGACTGGGAGCCTCTGCACAGTGGCTCCCTGGGGATGGGGCCCATGGCCACAGAGCTGGAGCCCCTGT
GCACTCCGGTGGTCACCTGTACTCCCAGCTGCACTGCTTACACGTCTTCCTTCGTCTTCACCTACCCCGAGGCTG
ACTCCTTCCCCAGCTGTGCAGCTGCCCACCGCAAGGGCAGCAGCAGCAATGAGCCTTCCTCTGACTCGCTCAGCT
CACCCACGCTGCTGGCCCTG**TGA**GGGGGCAGGGAAGGGGAGGCAGCCGGCACCCACAAGTGCCACTGCCCGAGCT
GGTGCATTACAGAGAGGAGAAACACATCTTCCCTAGAGGGTTCCTGTAGACCTAGGGAGGACCTTATCTGTGCGT
GAAACACACCAGGCTGTGGGCCTCAAGGACTTGAAAGCATCCATGTGTGGACTCAAGTCCTTACCTCTTCCGGAG
ATGTAGCAAAACGCATGGAGTGTGTATTGTTCCCAGTGACACTTCAGAGAGCTGGTAGTTAGTAGCATGTTGAGC
CAGGCCTGGGTCTGTGTCTCTTTTCTCTTTCTCCTTAGTCTTCTCATAGCATTAACTAATCTATTGGGTTCATTA
TTGGAATTAACCTGGTGCTGGATATTTTCAAATTGTATCTAGTGCAGCTGATTTTAACAATAACTACTGTGTTCC
TGGCAATAGTGTGTTCTGATTAGAAATGACCAATATTATACTAAGAAAAGATACGACTTTATTTTCTGGTAGATA
GAAATAAATAGCTATATCCATGTACTGTAGTTTTTCTTCAACATCAATGTTCATTGTAATGTTACTGATCATGCA
TTGTTGAGGTGGTCTGAATGTTCTGACATTAACAGTTTTCCATGAAAACGTTTTATTGTGTTTTTAATTTATTTA
TTAAGATGGATTCTCAGATATTTATATTTTTATTTTATTTTTTTCTACCTTGAGGTCTTTTGACATGTGGAAAGT
GAATTTGAATGAAAAATTTAAGCATTGTTTGCTTATTGTTCCAAGACATTGTCAATAAA

FIGURE 1401

MMFSGFNADYEASSSRCSSASPAGDSLSYYHSPADSFSSMGSPVNAQDFCTDLAVSSANFIPTVTAISTSPDLQW
LVQPALVSSVAPSQTRAPHPFGVPAPSAGAYSRAGVVKTMTGGRAQSIGRRGKVEQLSPEEEEKRRIRRERNKMA
AAKCRNRRRELTDTLQAETDQLEDEKSALQTEIANLLKEKEKLEFILAAHRPACKIPDDLGFPEEMSVASLDLTG
GLPEVATPESEEAFTLPLLNDPEPKPSVEPVKSISSMELKTEPFDDFLFPASSRPSGSETARSVPDMDLSGSFYA
ADWEPLHSGSLGMGPMATELEPLCTPVVTCTPSCTAYTSSFVFTYPEADSFPSCAAAHRKGSSSNEPSSDSLSSP
TLLAL

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FIGURE 1402

GGGCACGAGGGCAGAGCCAGTTCCTAGCGCAGAGCCGCGCCCGCC**ATG**AGGGAGATCGTGCACATCCAGGCGGGC
CAGTGCGGGAACCAGATCGGCACCAAGTTTTGGGAAGTGATCAGCGATGAGCACGGCATCGACCCGGCCGGAGGC
TACGTGGGAGACTCGGCGCTGCAGCTGGAGAGAATCAACGTCTACTACAATGAGTCATCGTCTCAGAAATATGTG
CCCAGGGCCGCCCTGGTGGACTTAGAGCCAGGCACCATGGACAGCGTGCGGTCTGGGCCTTTTGGGCAGCTTTTC
CGGCCTGACAACTTCATCTTTGGCCAGACGGGTGCAGGGAACAACTGGGCGAAAGGGCACTACACGGAGGGCGCG
GAGCTGGTGGACGCAGTGCTGGACGTGGTGCGGAAGGAGTGCGAGCACTGCGACTGCCTGCAGGGCTTCCAGCTC
ACGCACTCGCTGGGCGGCGGCACGGGCTCAGGCATGGGCACGCTGCTCATCAGCAAGATCCGTGAGGAGTTCCCG
GACCGCATCATGAACACCTTCAGCGTCATGCCCTCGCCCAAGGTGTCGGACACGGTGGTGGAGCCCTACAATGCC
ACACTGTCGGTGCACCAGCTGGTGGAGAATACAGACGAGACCTACTGCATCGACAACGAGGCGCTCTATGACATC
TGCTTCCGCACTCTGAAGCTGACAACGCCCACCTACGGGGACCTCAACCACCTGGTGTCCGCCACCATGAGTGGG
GTCACCACCTCGCTGCGCTTCCCGGGCCAGCTCAATGCTGACCTGCGCAAGCTGGCGGTGAACATGGTGCCCTTC
CCGCGCCTGCACTTCTTCATGCCTGGCTTCGCGCCGCTCACCAGCCGCGGCAGCCAGCAGTACCGGGCCCTGACC
GTGCCCGAGCTCACCCAGCAGATGTTCGACGCCAGGAACATGATGGCCGCCTGCGATCCGCGCCATGGCCGCTAC
CTGACCGTGGCCACCGTGTTCCGCGGGCCCATGTCCATGAAGGAGGTGGACGAGCAGATGCTGGCCATCCAGAGT
AAGAACAGCAGCTACTTCGTGGAGTGGATTCCCAACAACGTGAAGGTGGCCGTGTGCGACATCCCGCCCCGCGGC
CTGAAGATGGCCTCCACCTTCATCGGCAACAGCACGGCCATCCAGGAGCTGTTCAAGCGCATCTCCGAGCAGTTC
TCAGCCATGTTCCGGCGCAAGGCCTTCCTGCACTGGTTCACGGGTGAGGGCATGGATGAAATGGAGTTCACCGAG
GCGGAGAGCAACATGAACGACCTGGTATCCGAGTACCAGCAGTACCAGGATGCCACCGCCAATGACGGGGAGGAA
GCTTTTGAGGATGAGGAAGAGGAGATCGATGGA**TAG**TCGGAATAGAGCCGCCCCAACTCAGATCCTACAACACGC
AAGTTCCTTCTTGAACCCTGGTGCCTCCTACCCTATGGCCCTGAATGGTGCACTGGTTTAATTGTGTTGGTGTCG
GCCCCTCACAAATGCAGCCAAGTCATGTAATTAGTCATCTGGAACAAAGACTAAAAACAGCAGAGAATTGCGGGT
TCTACCCAGTCAGAAGATCACACCATGGAGACTTTCTACTAGAGGACTTGAAAGAGAACTGAGGGGCCACAAAAT
AAACTTCACCTTCCATTAAGTGTTCAAGCATGTCTGCAAATTAGGAGGGAGTTAGAAACAGTCTTTTTCATCCTT
TGTGATGAAGCCTGAAATTGTGCCGTGTTGCCTTATATGAATATGCAGTATGGGACTTTGAAATAATGATTCATA
ATAAAATACTAAACGTGTGTCTTCAAAAAAAAAAAAAAAAAA

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FIGURE 1403

MREIVHIQAGQCGNQIGTKFWEVISDEHGIDPAGGYVGDSALQLERINVYYNESSSQKYVPRAALVDLEPGTMDS
VRSGPFGQLFRPDNFIFGQTGAGNNWAKGHYTEGAELVDAVLDVVRKECEHCDCLQGFQLTHSLGGGTGSGMGTL
LISKIREEFPDRIMNTFSVMPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTTPTYGDL
NHLVSATMSGVTTSLRFPGQLNADLRKLAVNMVPFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQMFDARNMM
AACDPRHGRYLTVATVFRGPMSMKEVDEQMLAIQSKNSSYFVEWIPNNVKVAVCDIPPRGLKMASTFIGNSTAIQ
ELFKRISEQFSAMFRRKAFLHWFTGEGMDEMEFTEAESNMNDLVSEYQQYQDATANDGEEAFEDEEEEIDG

FIGURE 1404

GAGGAGGCCCGAGAGGAGTCGGTGGCAGCGGCGGCGGCGGGACCGGCAGCAGCAGCAGCAGCAGCAGCAACC
ACTAGCCTCCTGCCCCGCGGCGTTGCGACGAGCCCCACGAGCCGCTCACCCCGCCGTTCTCAGCGCTGCCCGACC
CCGCTGGCGCGCCTCCCGCCGCAGTCCCGGCAGCGCCTCAGTTGTCCTCCGACTCGCCCTCGGCCTTCGCGCAGC
GCAGCACAGCCGCACGCACCGCAGCACAGCACAGCACAGCCCAGGCATAGCTTCGGCACAGCCCCGGCTCCGGCT
CCTGCGGCAGCTCCTCTGGCACGTCCCTGCGCCGACATTCTGGAGGTTGG**ATG**CTCTTGTCCAAAATCAACTCGC
TTGCCCACCTGCGCGCCGCGCCCTGCAACGACCTGCACGCCACCAAGCTGGCGCCCGGCAAGGAGAAGGAGCCCC
TGGAGTCGCAGTACCAGGTGGGCCCGCTACTGGGCAGCGGCGGCTTCGGCTCGGTCTACTCAGGCATCCGCGTCT
CCGACAACTTGCCGGTGGCCATCAAACACGTGGAGAAGGACCGGATTTCCGACTGGGGAGAGCTGCCTAATGGCA
CTCGAGTGCCCATGGAAGTGGTCCTGCTGAAGAAGGTGAGCTCGGGTTTCTCCGGCGTCATTAGGCTCCTGGACT
GGTTCGAGAGGCCCGACAGTTTCGTCCTGATCCTGGAGAGGCCCGAGCCGGTGCAAGATCTCTTCGACTTCATCA
CGGAAAGGGGAGCCCTGCAAGAGGAGCTGGCCCGCAGCTTCTTCTGGCAGGTGCTGGAGGCCGTGCGGCACTGCC
ACAACTGCGGGGTGCTACACCGCGACATCAAGGACGAAAACATCCTTATCGACCTCAATCGCGGCGAGCTCAAGC
TCATCGACTTCGGGTCGGGGGCGCTGCTCAAGGACACCGTCTACACGGACTTCGATGGGACCCGAGTGTATAGCC
CTCCAGAGTGGATCCGCTACCATCGCTACCATGGCAGGTCGGCGGCAGTCTGGTCCCTGGGGATCCTGCTGTATG
ATATGGTGTGTGGAGATATTCCTTTCGAGCATGACGAAGAGATCATCAGGGGCCAGGTTTTCTTCAGGCAGAGGG
TCTCTTCAGAATGTCAGCATCTCATTAGATGGTGCTTGGCCCTGAGACCATCAGATAGGCCAACCTTCGAAGAAA
TCCAGAACCATCCATGGATGCAAGATGTTCTCCTGCCCCAGGAAACTGCTGAGATCCACCTCCACAGCCTGTCGC
CGGGGCCCAGCAAA**TAG**CAGCCTTTCTGGCAGGTCCTCCCCTCTCTTGTCAGATGCCCGAGGGAGGGGAAGCTTC
TGTCTCCAGCTTCCCGAGTACCAGTGACACGTCTCGCCAAGCAGGACAGTGCTTGATACAGGAACAACATTTACA
ACTCATTCCAGATCCCAGGCCCCTGGAGGCTGCCTCCCAACAGTGGGGAAGAGTGACTCTCCAGGGGTCCTAGGC
CTCAACTCCTCCCATAGATACTCTCTTCTTCTCATAGGTGTCCAGCATTGCTGGACTCTGAAATATCCCGGGGGT
GGGGGGTGGGGGTGGGCAGAACCCTGCCAATGGAACTCTTTCTTCATCATGAGTTCTGCTGAATGCCGCGATGGG
TCAGGTAGGGGGGAAACAGGTTGGGATGGGATAGGACTAGCACATTTTAAGTCCCTGTCACCTCTTCCGACTCTT
TCTGAGTGCCTTCTGTGGGGACTCCGGCTGTGCTGGGAGAAATACTTGAACTTGCCTCTTTTACCTGCTGCTTCT
CCAAAAATCTGCCTGGGTTTTGTTCCCTATTTTTCTCTCCTGTCCTCCCTCACCCCCTCCTTCATATGAAAGGTG
CCATGGAAGAGGCTACAGGGCCAAACGCTGAGCCACCTGCCCTTTTTTCTGCCTCCTTTAGTAAAACTCCGAGTG
AACTGGTCTTCCTTTTTGGTTTTTACTTAACTGTTTCAAAGCCAAGACCTCACACACACAAAAAAATGCACAAAC
CAAGCAATCAACAGAAAAGCTGTAAATGTGTGTACAGTTGGCATGGTAGTATACAAAAAGATTGTAGTGGATCTA
ATTTTTAAGAAATTTTGCCTTTAAGTTATTTTACCTGTTTTTGTTTCTTGTTTTGAAAGATGCGCATTCTAACCT
GGAGGTCAATGTTATGTATTTATTTATTTATTTATTTGGTTCCCTTCCTATTCCAAGCTTCCATAGCTGCTGCCC
TAGTTTTCTTTCCTCCTTTCCTCCTCTGACTTGGGGACCTTTTGGGGGAGGGCTGCGACGCTTGCTCTGTTTGTG
GGGTGACGGGACTCAGGCGGGACAGTGCTGCAGCTCCCTGGCTTCTGTGGGGCCCCTCACCTACTTACCCAGGTG
GGTCCCGGCTCTGTGGGTGATGGGAGGGGCCATTGCTGACTGTGTATATAGGATAATTATGAAACACAGTTCTGG
ATGGTGTGCCTTCCAGATCCTCTCTGGGGCTGTGTTTTGAGCAGCAGGTAGCCTGCTGGTTTTATCTGAGTGAAA
TACTGTACAGGGGAATAAAAGAGATCTTATTTTTTTTTTATACTTGCGTTTGGAATAAAAACCCTTTGGCTTT

FIGURE 1405

MLLSKINSLAHLRAAPCNDLHATKLAPGKEKEPLESQYQVGPLLGSGGFGSVYSGIRVSDNLPVAIKHVEKDRIS
DWGELPNGTRVPMEVVLLKKVSSGFSGVIRLLDWFERPDSFVLILERPEPVQDLFDFITERGALQEELARSFFWQ
VLEAVRHCHNCGVLHRDIKDENILIDLNRGELKLIDFGSGALLKDTVYTDFDGTRVYSPPEWIRYHRYHGRSAAV
WSLGILLYDMVCGDIPFEHDEEIIRGQVFFRQRVSSECQHLIRWCLALRPSDRPTFEEIQNHPWMQDVLLPQETA
EIHLHSLSPGPSK

FIGURE 1406A

GAATTCCCAGCTCTCTGCTCGCTCTGCTCGCAGTCACAGACACTTGAGCACACGCGTACACCCAGACATCTTCGG
GCTGCTATTGGATTGACTTTGAAGGTTCTGTGTGGGTCGCCGTGGCTGCATGTTTGAATCAGGTGGAGAAGCACT
TCAACGCTGGACGAAGTAAAGATTATTGTTGTTATTTTTTTTTTCTCTCTCTCTCTCTCTTAAGAAAGGAAAATA
TCCCAAGGACTAATCTGATCGGGTCTTCCTTCATCAGGAACGAATGCAGGAATTTGGGAACTGAGCTGTGCAAGT
GCTGAAGAAGGAGATTTGTTTGGAGGAAACAGGAAAGAGAAAGAAAAGGAAGGAAAAAATACATAATTTCAGGGA
CGAGAGAGAGAAGAAAAACGGGGACT**ATG**GGGAGAAAAAAGATTCAGATTACGAGGATTATGGATGAACGTAACA
GACAGGTGACATTTACAAAGAGGAAATTTGGGTTGATGAAGAAGGCTTATGAGCTGAGCGTGCTGTGTGACTGTG
AGATTGCGCTGATCATCTTCAACAGCACCAACAAGCTGTTCCAGTATGCCAGCACCGACATGGACAAAGTGCTTC
TCAAGTACACGGAGTACAACGAGCCGCATGAGAGCCGGACAAACTCAGACATCGTGGAGACGTTGAGAAAGAAGG
GCCTTAATGGCTGTGACAGCCCAGACCCCGATGCGGACGATTCCGTAGGTCACAGCCCTGAGTCTGAGGACAAGT
ACAGGAAAATTAACGAAGATATTGATCTAATGATCAGCAGGCAAAGATTGTGTGCTGTTCCACCTCCCAACTTCG
AGATGCCAGTCTCCATCCCAGTGTCCAGCCACAACAGTTTGGTGTACAGCAACCCTGTCAGCTCACTGGGAAACC
CCAACCTATTGCCACTGGCTCACCCTTCTCTGCAGAGGAATAGTATGTCTCCTGGTGTAACACATCGACCTCCAA
GTGCAGGTAACACAGGTGGTCTGATGGGTGGAGACCTCACGTCTGGTGCAGGCACCAGTGCAGGGAACGGGTATG
GCAATCCCCGAAACTCACCAGGTCTGCTGGTCTCACCTGGTAACTTGAACAAGAATATGCAAGCAAAATCTCCTC
CCCCAATGAATTTAGGAATGAATAACCGTAAACCAGATCTCCGAGTTCTTATTCCACCAGGCAGCAAGAATACGA
TGCCATCAGTGTCTGAGGATGTCGACCTGCTTTTGAATCAAAGGATAAATAACTCCCAGTCGGCTCAGTCATTGG
CTACCCCAGTGGTTTCCGTAGCAACTCCTACTTTACCAGGACAAGGAATGGGAGGATATCCATCAGCCATTTCAA
CAACATATGGTACCGAGTACTCTCTGAGTAGTGCAGACCTGTCATCTCTGTCTGGGTTTAACACCGCCAGCGCTC
TTCACCTTGGTTCAGTAACTGGCTGGCAACAGCAACACCTACATAACATGCCACCATCTGCCCTCAGTCAGTTGG
GAGCTTGCACTAGCACTCATTTATCTCAGAGTTCAAATCTCTCCCTGCCTTCTACTCAAAGCCTCAACATCAAGT
CAGAACCTGTTTCTCCTCCTAGAGACCGTACCACCACCCCTTCGAGATACCCACAACACACGCGCCACGAGGCGG
GGAGATCTCCTGTTGACAGCTTGAGCAGCTGTAGCAGTTCGTACGACGGGAGCGACCGAGAGGATCACCGGAACG
AATTCCACTCCCCCATTGGACTCACCAGACCTTCGCCGGACGAAAGGGAAAGTCCCTCAGTCAAGCGCATGCGAC
TTTCTGAAGGATGGGCAACA**TGA**TCAGATTATTACTTACTAGTTTTTTTTTTTTCTTGCAGTGTGTGTGTGTGC
TATACCTTAATGGGGAAGGGGGGTCGATATGCATTATATGTGCCGTGTGTGGAAAAAAAAAAAGTCAGGTACTCT
GTTTTGTAAAAGTACTTTTAAATTGCCTCAGTGATACAGTATAAAGATAAACAGAAATGCTGAGATAAGCTTAGC
ACTTGAGTTGTACAACAGAACACTTGTACAAAATAGATTTTAAGGCTAACTTCTTTTCACTGTTGTGCTCCTTTG
CAAAATGTATGTTACAATAGATAGTGTCATGTTGCAGGTTCAACGTTATTTACATGTAAATAGACAAAAGGAAAC
ATTTGCCAAAAGCGGCAGATCTTTACTGAAAGAGAGAGCAGCTGTTATGCAACATATAGAAAAATGTATAGATGC
TTGGACAGACCCGGTAATGGGTGGCCATTGGTAAATGTTAGGAACACACCAGGTCACCTGACATCCCAAGAATGC
TCACAAACCTGCAGGCATATCATTGGCGTATGGCACTCATTAAAAAGGATCAGAGACCATTAAAAGAGGACCATA
CCTATTAAAAAAAAATGTGGAGTTGGAGGGCTAACATATTTAATTAAATAAATAAATAAATCTGGGTCTGCATCT
CTTATTAAATAAAAATATAAAAATATGTACATTACATTTTGCTTATTTTCATATAAAAGGTAAGACAGAGTTTGC
AAAGCATTTGTGGCTTTTTGTAGTTTACTTAAGCCAAAATGTGTTTTTTTCCCCTTGATAGCTTCGCTAATATTT
TAAACAGTCCTGTAAAAAACCAAAAAGGACTTTTTGTATAGAAAGCACTACCCTAAGCCATGAAGAACTCCATGC
TTTGCTAACCAAGATAACTGTTTTCTCTTTGTAGAAGTTTTGTTTTTGAAATGTGTATTTCTAATTATATAAAAT
ATTAAGAATCTTTTAAAAAAATCTGTGAAATTAACATGCTTGTGTATAGCTTTCTAATATATATAATATTATGGT
AATAGCAGAAGTTTTGTTATCTTAATAGCGGGAGGGGGGTATATTTGTGCAGTTGCACATTTGAGTAACTATTTT
CTTTCTGTTTTCTTTTACTCTGCTTACATTTTATAAGTTTAAGGTCAGCTGTCAAAAGGATAACCTGTGGGGTTA
GAACATATCACATTGCAACACCCTAAATTGTTTTTAATACATTAGCAATCTATTGGGTCAACTGACATCCATTGT
ATATACTAGTTTCTTTCATGCTATTTTTATTTTGTTTTTTGCATTTTTATCAAATGCAGGGCCCCTTTCTGATCT
CACCATTTCACCATGCATCTTGGAATTCAGTAAGTGCATATCCTAACTTGCCCATATTCTAAATCATCTGGTTGG
TTTTCAGCCTAGAATTTGATACGCTTTTTAGAAATATGCCCAGAATAGAAAAGCTATGTTGGGGCACATGTCCTG
CAAATATGGCCCTAGAAACAAGTGATATGGAATTTACTTGGTGAATAAGTTATAAATTCCCACAGAAGAAAAATG
TGAAAGACTGGGTGCTAGACAAGAAGGAAGCAGGTAAAGGGATAGTTGCTTTGTCATCCGTTTTTAATTATTTTA
ACTGACCCTTGACAATCTTGTCAGCAATATAGGACTGTTGAACAATCCCGGTGTGTCAGGACCCCCAAATGTCAC
TTCTGCATAAAGCATGTATGTCATCTATTTTTTCTTCAATAAAGAGATTTAATAGCCATTTCAAGAAATCCCATA

FIGURE 1406B

AAGAACCTCTCTATGTCCCTTTTTTTAATTTAAAAAAATGACTCTTGTCTAATATTCGTCTATAAGGGATTAATT
TTCAGACCCTTTAATAAGTGAGTGCCATAAGAAAGTCAATATATATTGTTTAAAAGATATTTCAGTCTAGGAAAG
ATTTTCCTTCTCTTGGAATGTGAAGATCTGTCGATTCATCTCCAATCATATGCATTGACATACACAGCAAAGAAG
ATATAGGCAGTAATATCAACACTGCTATATCATGTGTAGGACATTTCTTATCCATTTTTTCTCTTTTACTTGCAT
AGTTGCTATGTGTTTCTCATTGTAAAAGGCTGCCGCTGGGTGGCAGAAGCCAAGAGACCTTATTAACTAGGCTAT
ATTTTTCTTAACTTGATCTGAAATCCACAATTAGACCACAATGCACCTTTGGTTGTATCCATAAAGGATGCTAGC
CTGCCTTGTACTAATGTTTTATATATT

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FIGURE 1407

MGRKKIQITRIMDERNRQVTFTKRKFGLMKKAYELSVLCDCEIALIIFNSTNKLFQYASTDMDKVLLKYTEYNEP
HESRTNSDIVETLRKKGLNGCDSPDPDADDSVGHSPESEDKYRKINEDIDLMISRQRLCAVPPPNFEMPVSIPVS
SHNSLVYSNPVSSLGNPNLLPLAHPSLQRNSMSPGVTHRPPSAGNTGGLMGGDLTSGAGTSAGNGYGNPRNSPGL
LVSPGNLNKNMQAKSPPPMNLGMNNRKPDLRVLIPPGSKNTMPSVSEDVDLLLNQRINNSQSAQSLATPVVSVAT
PTLPGQGMGGYPSAISTTYGTEYSLSSADLSSLSGFNTASALHLGSVTGWQQQHLHNMPPSALSQLGACTSTHLS
QSSNLSLPSTQSLNIKSEPVSPPRDRTTTPSRYPQHTRHEAGRSPVDSLSSCSSSYDGSDREDHRNEFHSPIGLT
RPSPDERESPSVKRMRLSEGWAT

FIGURE 1408

ATAACGGTCCTAAGGTAGCGATATATATGTTTAAAAGATATTTCAGTCTAGGAAAGATTTTCCTTCTCTTGGAAT
GTGAAGATCTGTCGATTCATCTCCAATCATATGCATTGACATACACAGCAAAGAAGATA**TAG**GCAGTAATATCAA
CACTGCTATATCATGTGTAGGACATTTCTTATCCATTTTTTCTCTTTTACTTGCATAGTTGCTATGTGTTTCTCA
TTGTAAAAGGCTGCCGCTGGGTGGCAGAAGCCAAGAGACCTTATTAACTAGGCTATATTTTTCTTAACTTGATCT
GAAATCCACAATTAGACCACAATGCACCTTGGTTGTATCCATAAAGGATGCTAGCCTGCCTTGTACTAATGNNNN
NNNNNNNNNNNNNNNNNNNTCTATCAACCATTTCATATATATCCCACTACTCAAGGTATCCATGGAACATGAAAG
AATAACATTTATGCAGAGGAAAAACAAAAACATCCCTGAAAATATACACACTCATACACACACACGCACAGGGGA
ATAAAATAAGAAAATCATTTTCCTCACCATAGACTTGATCCCATCCTTACAACCCATCCTTCTAACTTGATGTGT
ATAAAATATGCAAACATTTCACAAATGTTCTTTGTCATTTCAAAATACTTTAGTATATCAATATCAGTAGATACC
AGTGGGTGGGAAAGGGTCATTACATGAAAATATGAAGAAATAGCCATATTAGTTTTTTAACCTGCAATTTGCCTC
AGCAACAAAGAAAAAGTGAATTTTTAATGCTGAAGATAAAGTAAGCTAAAGTACCAGCAGAAGCCTTGGCTATTT
ATAGCAGTTCTGACAATAGTTTTATAAGAACATGAAGAGAACAGAATCACTTGAAAATGGATGCCAGTCATCTCT
TGTTCCCACTACTGAATTCTTATAAAGTGGTGGCAAGATAGGGAAGGGATAATCTGAGAATTTTTAAAAGATGAT
TTAATGAGAAGAAGCACAATTTTGATTGTGATGAGTCACTTTCTGTAAACAATCTTGGTCTATCTTTACCCTTAT
ACCTTATCTGTAATTTACCATTTATTGTATTTGCAAAGCTAGTATGGTTTTTAATCACAGTAAATCCTTTGTATT
CCAGACTTTAGGGCAGAGCCCTGAGGGAGTATTATTTTACATAACCCGTCCTAGAGTAACATTTTAGGCAACATT
CTTCATTGCAAGTAAAAGATCCATAAGTGGCATTTTACACGGCTGCGAGTATTGTTATATCTAATCCTATTTTAA
AAGATTTTTGGTAATATGAAGCTTGAATACTGGTAACAGTGATGCAATATACGCAAGCTGCACAACCTGTATATT
GTATGCATTGCTGCGTGGAGGCTGTTTATTTCAACCTTTTTAAAAATTGTGTTTTTTAGTAAAATGGCTTATTTT
TTCCCAAAGGTGGAATTTAGCATTTTGTAATGATGAATATAAAAATACCTGTCATCCCCAGATCATTTAAAAGTT
AACTAAAGTGAGAATGAAAAAACAAAATTCCAAGACACTTTTTAAAAGAATGTCTGCCCTCACACACTTTTATGG
ATTTGTTTTTCTTACATACCCATCTTTTAACTTAGAGATAGCATTTTTTGCCCTCTTTATTTTGTTGTTTGTTTC
TCCAGAGAGTAAACGCTTTGTAGTTCTTTCTTTAAAAAACATTTTTTTTAAAGAAGAAGAAGCCACTTGAACCCT
CAATAAAGGCTGTTGCCTAAGCATGGCATACTTCATCTGTTCTCATTTGTGCCATCTGCCGTGATGTCGTCACTT
TTATGGCGTTAATTTCCTGCCACTACAGATCTTTTGAAGATTGCTGGAATACTGGTGTCTGTTAGAATGCTTCAG
ACTACAGATGTAATTAAAGGCTTTTCTTAATATGTTTTAACCAAAGATGTGGAGCAATCCAAGCCACATATCTTC
TACATCAAATTTTTCCATTTTGGTTATTTTCATAATCTGGTATTGCATTTTGCCTTCCCTGTTCATACCTCAAAT
TGATTCATACCTCAGTTTAATTCAGAGAGGTCAGTTAAGTGACGGATTCTGTTGTGGTTTGAATGCAGTACCAGT
GTTCTCTTCGAGCAAAGTAGACCTGGGTCACTGTAGGCATAGGACTTGGATTGCTTCAGATGGTTTGCTGTATCA
TTTTTCTTCTTTTTCTTTTCCTGGGGACTTGTTTCCATTAAATGAGAGTAATTAAAATCGCTTGTAAATGAGGGC
ATACAAGCATTTGCAACAAATATTCAAATAGAGGCTCACAGCGGCATAAGCTGGACTTTGTCGCCACTAGATGAC
AAGATGTTATAACTAAGTTAAACCACATCTGTGTATCTCAAGGGACTTAATTCAGCTGTCTGTAGTGAATAAAAG
TGGGAAATTTTCAAAAGTTTCTCCTGCTGGAAATAAGGTATAATTTGTATTTTGCAGACAATTCAGTAAAGTTAC
TGGCTTTCTTAGTGATGCAGTGTCCGTGGTGCATTTTTTTAAATTAATGTTTTGCTGTTTAAATTTATTCAATTT
TATTGTGTTTTTTAAAAAGCAGCTTATGCCACAAGCACAAATGAGCTTTCTCAGTTTTCAACTCAAAATATTATA
TGAAAAGATGG

FIGURE 1409

NGPKVAIYMFKRYFSLGKIFLLLECEDLSIHLQSYALTYTAKKI

FIGURE 1410

CAGACTCGAGCAGTCTCTGGAACACGCTGCGGGGCTCCCGGGCCTGAGCCAGGTCTGTTCTCCACGCAGGTGTTC
CGCGCGCCCCGTTCAGCC**ATG**TCGTCCGGCATCCATGTAGCGCTGGTGACTGGAGGCAACAAGGGCATCGGCTTG
GCCATCGTGCGCGACCTGTGCCGGCTGTTCTCGGGGGACGTGGTGCTCACGGCGCGGGACGTGACGCGGGGCCAG
GCGGCCGTACAGCAGCTGCAGGCGGAGGGCCTGAGCCCGCGCTTCCACCAGCTGGACATCGACGATCTGCAGAGC
ATCCGCGCCCTGCGCGACTTCCTGCGCAAGGAGTACGGGGGCCTGGACGTGCTGGTCAACAACGCGGGCATCGCC
TTCAAGGTTGCTGATCCCACACCCTTTCATATTCAAGCTGAAGTGACGATGAAAACAAATTTCTTTGGTACCCGA
GATGTGTGCACAGAATTACTCCCTCTAATAAAACCCCAAGGGAGAGTGGTGAACGTATCTAGCATCATGAGCGTC
AGAGCCCTTAAAAGCTGCAGCCCAGAGCTGCAGCAGAAGTTCCGCAGTGAGACCATCACTGAGGAGGAGCTGGTG
GGGCTCATGAACAAGTTTGTGGAGGATACAAAGAAGGGAGTGCACCAGAAGGAGGGCTGGCCCAGCAGCGCATAC
GGGGTGACGAAGATTGGCGTCACCGTTCTGTCCAGGATCCACGCCAGGAAACTGAGTGAGCAGAGGAAAGGGGAC
AAGATCCTCCTGAATGCCTGCTGCCCAGGGTGGGTGAGAACTGACATGGCGGGACCCAAGGCCACCAAGAGCCCA
GAAGAAGGTGCAGAGACCCCTGTGTACTTGGCCCTTTTGCCCCCAGATGCTGAGGGTCCCCATGGACAATTTGTT
TCAGAGAAGAGAGTTGAACAGTGG**TGA**GCTGGGCTCACAGCTCCATCCATGGGCCCCATTTTGTACCTTGTCCTG
AGTTGGTCCAAAGGGCATTTACAATGTCATAAATATCCTTATATAAGAAAAAAAATGATCTCTTATCAATTAGCA
CTCACTAATGTACTACTAATTGAGCAACCTACGCACTCAGTTGACTACGTAAATCTGTCAGGTCTTTTGTGATTT
CCTCTGATGCAGGAGAGGAAAAATTGTAATTGATGAAAATAATGAATGAAAATCAACAGATGAATAAATGGTTCT
TTATAAGTG

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FIGURE 1411

MSSGIHVALVTGGNKGIGLAIVRDLCRLFSGDVVLTARDVTRGQAAVQQLQAEGLSPRFHQLDIDDLQSIRALRD
FLRKEYGGLDVLVNNAGIAFKVADPTPFHIQAEVTMKTNFFGTRDVCTELLPLIKPQGRVVNVSSIMSVRALKSC
SPELQQKFRSETITEEELVGLMNKFVEDTKKGVHQKEGWPSSAYGVTKIGVTVLSRIHARKLSEQRKGDKILLNA
CCPGWVRTDMAGPKATKSPEEGAETPVYLALLPPDAEGPHGQFVSEKRVEQW

FIGURE 1412

CGGGAGGTCAGAAAACCGGGCCGCGGGCGGCACCGACAGCTGGGGCCCGGGTCAGGGACACGCGGAGGTCAGGCC
GGTGAAGGCGGCAGGAAGCTGGAGCACGATCCCAGGAGGAACAATCCTGCACC**ATG**ACTCAACAGCCACTTCGAG
GAGTGACCAGCCTGCGTTTCAACCAAGACCAAAGCTGCTTTTGCTGCGCCATGGAGACAGGTGTGCGCATCTACA
ACGTGGAGCCCTTGATGGAGAAGGGGCATCTGGACCACGAGCAGGTGGGCAGCATGGGCTTGGTGGAGATGCTGC
ACCGCTCCAACCTTCTGGCCTTGGTGGGCGGTGGTAGTAGTCCCAAGTTCTCAGAGATCTCAGTGCTGATCTGGG
ACGATGCCCGGGAGGGCAAGGACTCCAAGGAGAAGCTGGTGCTGGAGTTCACCTTCACCAAGCCAGTGCTTTCTG
TGCGCATGCGCCATGACAAGATCGTGATCGTGCTGAAGAACCGCATCTATGTGTACTCCTTCCCCGACAATCCCC
GAAAGCTGTTTGAGTTTGATACCCGGGACAACCCCAAGGGGCTCTGTGACCTCTGCCCCAGCCTGGAGAAGCAAC
TGCTAGTGTTCCCGGGACACAAGTGTGGGAGTCTGCAACTTGTGGACCTGGCGAGCACAAAGCCTGGCACCTCGT
CTGCTCCATTCACGATCAATGCACATCAGAGTGACATAGCCTGTGTGTCTCTAAACCAGCCAGGCACTGTAGTGG
CCTCAGCCTCCCAGAAGGGTACCCTTATTCGCCTCTTTGACACACAATCCAAGGAGAAACTGGTGGAGCTGCGCC
GAGGCACTGACCCTGCCACCCTCTACTGCATTAACTTCAGCCACGACTCCTCCTTCCTCTGCGCTTCCAGTGATA
AGGGTACTGTCCATATCTTTGCTCTCAAGGATACCCGCCTCAACCGCCGCTCCGCGCTGGCTCGCGTGGGCAAGG
TGGGGCCTATGATTGGGCAGTACGTGGACTCTCAGTGGAGCCTGGCGAGCTTCACTGTGCCTGCTGAGTCAGCTT
GCATCTGCGCCTTCGGTCGCAATACTTCCAAGAACGTCAACTCTGTCATTGCCATCTGCGTAGATGGGACCTTCC
ACAAATATGTCTTCACTCCTGATGGAAACTGCAACAGAGAGGCTTTCGACGTGTACCTTGACATCTGTGATGATG
ATGACTTT**TAA**GGACCCTGGGGGCTGTGCTAGGGACCTGCAGTGGCAGAACTGCAGAGCTGAGCCTTGGCAGTGG
GGCGTGCTTGGAAGCCACCAGCCAGCAAGCATTAATGGGGCTGGTGCCCACTTTCCACTCAGCAGAGCTATGTCT
AAATAAAGAGCTCACTTCCCCCCAGCACTTCTTGATGACTGTGTGCCCCAAGGGCCAGGCCAGAGACCCAGGAAG
GCAGCGACCCCTTGGGATCCCTAACCTGGAGGAAATTGCCAGGGACCCAGAGGGAGTGCCCTAATCCAACCTGGG
GATTTTTTAAAAGCTTCCTAGGAAGAGATGATCTCCGATGTGATGAATACGAATAAAAGGCCCTTAATGGC

FIGURE 1413

MTQQPLRGVTSLRFNQDQSCFCCAMETGVRIYNVEPLMEKGHLDHEQVGSMGLVEMLHRSNLLALVGGGSSPKFS
EISVLIWDDAREGKDSKEKLVLEFTFTKPVLSVRMRHDKIVIVLKNRIYVYSFPDNPRKLFEFDTRDNPKGLCDL
CPSLEKQLLVFPGHKCGSLQLVDLASTKPGTSSAPFTINAHQSDIACVSLNQPGTVVASASQKGTLIRLFDTQSK
EKLVELRRGTDPATLYCINFSHDSSFLCASSDKGTVHIFALKDTRLNRRSALARVGKVGPMIGQYVDSQWSLASF
TVPAESACICAFGRNTSKNVNSVIAICVDGTFHKYVFTPDGNCNREAFDVYLDICDDDDF

FIGURE 1414

ACGCCCTATACAACTTGGCTTCACATACTTTTACACTAACTTTATATGATTTTTAAAAACTGGTCTGATCGGACT
TCTCGTCCTGGGACACTGTTTACTGGAGTCTGGCCGGCTCTCCGTGCTCCTCTTGGTACCTCATTTTGGGGAGAA
CCTTAAACCCACTCGAGCAGATAATCTCCGCCTTGACCGGTGCCACCAAAGAAGGGTTGGAACC**ATG**TGGACTTT
TCTGGGCATTGCCACTTTCACCTATTTTTATAAGAAGTTCGGGGACTTCATCACTTTGGCCAACAGGGAGGTCCT
GTTGTGCGTGCTGGTGTTCCTCTCGCTGGGCCTGGTGCTCTCCTACCGCTGTCGCCACCGAAACGGGGGTCTCCT
CGGGCGCCAGCGGAGCGGCTCCCAGTTCGCCCTCTTCTCGGATATTCTCTCAGGCCTGCCTTTCATTGGCTTCTT
CTGGGCCAAATCCCCCCCTGAATCAGAAAATAAGGAGCAGCTCGGGGCCAGGAGGCGCAGAAAAGGAACCAATAT
TTCAGAAACAAGCTTAATAGGAACAGCTGCCTGTACATCAACATCTTCTCAGAATGACCCAGAAGTTATCATCGT
GGGAGCTGGCGTGCTTGGCTCTGCTTTGGTAGCTGTGCTTTCCAGAGATGGAAGAAAGGTGACAGTCATTGAGAG
AGACTTAAAAGAGCCTGACAGAATAGTTGGAGAATTCCTGCAGCCGGGTGGTTATCATGTTCTCAAAGACCTTGG
TCTTGGAGATACAGTGGAAGGTCTTGATGCCCAGGTTGTAAATGGTTACATGATTCATGATCAGGAAAGCAAATC
AGAGGTTCAGATTCCTTACCCTCTGTCAGAAAACAATCAAGTGCAGAGTGGAAGAGCTTTCCATCACGGAAGATT
CATCATGAGTCTCCGGAAAGCAGCTATGGCAGAGCCCAATGCAAAGTTTATTGAAGGTGTTGTGTTACAGTTATT
AGAGGAAGATGATGTTGTGATGGGAGTTCAGTACAAGGATAAAGAGACTGGAGATATCAAGGAACTCCATGCTCC
ACTGACTGTTGTTGCAGATGGGCTTTTCTCCAAGTTCAGGAAAAGCCTGGTCTCCAATAAAGTTTCTGTATCATC
TCATTTTGTTGGCTTTCTTATGAAGAATGCACCACAGTTTAAAGCAAATCATGCTGAACTTATTTTAGCTAACCC
GAGTCCAGTTCTCATCTACCGGATTTCATCCAGTGAAACTCGAGTACTTGTTGACATTAGAGGAGAAATGCCAAG
GAATTTAAGAGAATACATGGTTGAAAAAATTTACCCACAAATACCTGATCACCTGAAAGAACCATTCTTAGAAGC
CACTGACAATTCTCATCTGAGGTCCATGCTAGCAAGCTTCCTTCCTCCTTCATCAGTGAAGAAACGAGGTGTTCT
TCTTTTGGGAGACGCATATAATATGAGGCATCCACTTACTGGTGGAGGAATGACTGTTGCTTTTAAAGATATAAA
ACTATGGAGAAAACTGCTAAAGGGTATCCCTGACCTTTATGATGATGCAGCTATTTTCGAGGCCAACAAATCATT
TTACTGGGCAAGAAAAACATCTCATTCCTTTGTCGTGAATATCCTTGCTCAGGCTCTTTATGAATTATTTTCTGC
CACAGATGATTCCCTGCATCAACTAAGAAAAGCCTGTTTTCTTTATTTCAAACTTGGTGGCGAATGTGTTGCGGG
TCCTGTTGGGCTGCTTTCTGTATTGTCTCCTAACCCTCTAGCTTTAATTGGACACTTCTTTGCTGTTGCAATCTA
TGCCGTGTATTTTTGCTTTAAGTCAGAACCTTGGATTACAAAACCTCGAGCCCTTCTCAGTAGTAGTGCTGTATT
GTACAAAGCGTGTTCTGTAATATTTCCTCTAATTTACTCAGAAATGAAGTATATGGTTCAT**TAA**GCTTAAAGGGG
AACCATTTGTGAATGAATATTTGGAACTTACCAAGTCCTAAGAGACTTTTGGAAGAGGATATATATAGCATAGTA
CCATACCACTTATAAAGTGGAAACTCTTGGACCAAGATTTGGATTAATTTGTTTTTGAAGTTTTTTGTATATAAA
TATGTAAATACATGCTTTAATTTGCAATTTAAAATGAAGGGGTTAAATAAGTTAGACATTTGAAAGAAATGATTG
TTACCATAAATTAGTGCTAATGCTGAGGAGAACTACAGTTTTTCTTTTGAATTTAGTATTTGAGATGAGTTGTTG
GGACATGCAAATAAAATGAAGAATGAC

FIGURE 1415

MWTFLGIATFTYFYKKFGDFITLANREVLLCVLVFLSLGLVLSYRCRHRNGGLLGRQRSGSQFALFSDILSGLPF
IGFFWAKSPPESENKEQLGARRRRKGTNISETSLIGTAACTSTSSQNDPEVIIVGAGVLGSALVAVLSRDGRKVT
VIERDLKEPDRIVGEFLQPGGYHVLKDLGLGDTVEGLDAQVVNGYMIHDQESKSEVQIPYPLSENNQVQSGRAFH
HGRFIMSLRKAAMAEPNAKFIEGVVLQLLEEDDVVMGVQYKDKETGDIKELHAPLTVVADGLFSKFRKSLVSNKV
SVSSHFVGFLMKNAPQFKANHAELILANPSPVLIYRISSSETRVLVDIRGEMPRNLREYMVEKIYPQIPDHLKEP
FLEATDNSHLRSMLASFLPPSSVKKRGVLLLGDAYNMRHPLTGGGMTVAFKDIKLWRKLLKGIPDLYDDAAIFEA
NKSFYWARKTSHSFVVNILAQALYELFSATDDSLHQLRKACFLYFKLGGECVAGPVGLLSVLSPNPLALIGHFFA
VAIYAVYFCFKSEPWITKPRALLSSSAVLYKACSVIFPLIYSEMKYMVH

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FIGURE 1416

CAGCCTTATAAGCTGAGGGAGTGGAGAGGCCCGGGGCCAGGAAAGCAGAGACAGACAAAGCGTTAGGAGAAGAAG
AGAGGCAGGGAAGACAAGCCAGGCACG**ATG**GCCACCTTCCCACCAGCAACCAGCGCCCCCCAGCAGCCCCCAGGC
CCGGAGGACGAGGACTCCAGCCTGGATGAATCTGACCTCTATAGCCTGGCCCATTCCTACCTCGGAGGTGGAGGC
CGGAAAGGTCGCACCAAGAGAGAAGCTGCTGCCAACACCAACCGCCCCAGCCCTGGCGGGCACGAGAGGAAACTG
GTGACCAAGCTGCAGAATTCAGAGAGGAAGAAGCGAGGGGCACGGCGC**TGA**GACAGAGCTGGAGATGAGGCCAGA
CCATGGACACTACACCCAGCAATAGAGACGGGACTGCGGAGGAAGGAGGACCCAGGACAGGATCCAGGCCGGCTT
GCCACACCCCCCACCCCTAGGACTTATTCCCGCTGACTGAGTCTCTGAGGGGCTACCAGGAAAGCGCCTCCAACC
CTAGCAAAAGTGCAAGATGGGGAGTGAGAGGCTGGGAATGGAGGGGCAGAGCCAGGAAGATCCCCCAGAAAAGAA
AGCTACAGAAGAAACTGGGGCTCCTCCAGGGTGGCAGCAACAATAAATAGACACGCACGGCAGCCACAGCTTGGG
TGTGTGTTCATCCTTGTTAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1417

MATFPPATSAPQQPPGPEDEDSSLDESDLYSLAHSYLGGGGRKGRTKREAAANTNRPSPGGHERKLVTKLQNSER
KKRGARR

FIGURE 1418A

CTGAGGAAACTTGGCTGTAACTTCAAAAGAAGATTTGATTCTTTATTTCTGGACTGCATATATATATATAACAAG
GCCATTAAAATGTCGGGAGCCTCAGTGAAGGTGGCTGTCCGGGTAAGGCCCTTCAATTCTCGAGAGACCAGCAAG
GAATCCAAATGCATCATTCAGATGCAAGGCAACTCGACCAGTATTATTAACCCAAAGAATCCAAAGGAAGCTCCA
AAGTCCTTCAGCTTCGACTATTCCTACTGGTCTCATACCTCACCCGAAGATCCCTGTTTTGCATCTCAAAACCGT
GTGTACAATGACATTGGCAAGGAAATGCTCTTACACGCCTTTGAGGGATATAATGTCTGTATTTTTGCCTATGGG
CAGACTGGTGCTGGAAAATCTTATACAATGATGGGTAAACAAGAAGAAAGCCAGGCTGGCATCATTCCACAGTTA
TGTGAAGAACTTTTTGAGAAAATCAATGACAACTGTAATGAAGAAATGTCTTACTCTGTAGAGGTGAGCTACATG
GAAATTTACTGTGAAAGAGTACGAGATTTGCTGAATCCAAAAAACAAGGGTAATTTGCGTGTGCGTGAACACCCA
CTTCTTGGACCCTATGTGGAGGATCTGTCCAAGTTGGCAGTTACTTCCTACACAGACATTGCTGACCTCATGGAT
GCTGGGAACAAAGCCAGGACAGTGGCAGCTACAAACATGAATGAAACAAGTAGCCGTTCCCACGCTGTGTTTACG
ATTGTTTTCACCCAGAAGAAACACGATAATGAGACCAACCTTTCCACTGAGAAGGTCAGTAAAATCAGCTTGGTG
GATCTAGCAGGAAGTGAACGAGCTGATTCAACTGGTGCCAAAGGGACTCGATTAAAGGAAGGAGCAAATATTAAT
AAGTCTCTTACAACTTTGGGCAAAGTCATTTCAGCCTTGGCCGAGGTGGATAACTGCACTAGCAAGAGTAAAAAG
AAGAAGAAAACAGATTTTATTCCCTACAGGGATTCTGTACTTACTTGGCTCCTTCGAGAAAATTTAGGTGGCAAT
TCTCGGACTGCAATGGTTGCTGCTCTGAGCCCCGCGGATATCAACTACGATGAGACTTTGAGCACTCTGAGATAT
GCAGATCGTGCAAAACAAATTAAATGCAATGCTGTTATCAATGAGGGCCCCAATGCCAAGCTGGTTCGTGAATTA
AAGGAGGAGGTGACACGGCTGAAGGACCTTCTTCGTGCTCAGGGCCTGGGAGATATTATTGATATTGATCCACTG
ATCGATGATTACTCTGGAAGTGGAAGCAAATATCTGAAAGATTTTCAGAACAATAAGCATAGATACTTGCTAGCC
TCTGAGAATCAACGCCCTGGCCATTTTTCCACAGCATCC**ATG**GGGTCCCTCACTTCATCCCCATCTTCCTGCTCA
CTCAGTAGTCAGGTGGGCTTGACGTCTGTGACCAGTATTCAAGAGAGGATCATGTCTACACCTGGAGGAGAGGAA
GCTATTGAACGTTTAAAGGAATCAGAGAAGATCATTGCTGAGTTGAATGAAACTTGGGAAGAGAAGCTTCGTAAA
ACAGAGGCCATCAGAATGGAGAGAGAGGCTTTGTTGGCTGAGATGGGAGTTGCCATTCGGGAAGATGGAGGAACC
CTAGGGGTTTTCTCACCTAAAAAGACCCCACATCTTGTTAACCTCAATGAAGACCCACTAATGTCTGAGTGCCTA
CTTTATTACATCAAAGATGGAATTACAAGGGTTGGCCAAGCAGATGCTGAGCGGCGCCAGGACATAGTGCTGAGC
GGGGCTCACATTAAAGAAGAGCATTGTATCTTCCGGAGTGAGAGAAGCAACAGCGGGGAAGTTATCGTGACCTTA
GAGCCCTGTGAGCGCTCAGAAACCTACGTAAATGGCAAGAGGGTGTCCCAACCTGTTCAGCTGCGCTCAGGAAAC
CGTATCATCATGGGTAAAAACCATGTTTTCCGCTTTAACCACCCGGAACAAGCACGAGCTGAGCGAGAGAAGACT
CCTTCTGCTGAGACCCCCTCTGAGCCTGTGGACTGGACATTTGCCCAGAGGGAGCTTCTGGAAAAACAAGGAATT
GATATGAAACAAGAGATGGAGAAAAGGCTACAGGAAATGGAGATCTTATACAAAAAGGAGAAGGAAGAAGCAGAT
CTTCTTTTGGAGCAGCAGAGACTGGACTATGAGAGTAAATTGCAGGCCTTGCAGAAGCAGGTTGAAACCCGATCT
CTGGCTGCAGAAACAACTGAAGAGGAGGAAGAAGAAGAAGAAGTTCCTTGGACACAGCATGAATTTGAGTTGGCC
CAATGGGCCTTCCGGAAATGGAAGTCTCATCAGTTTACTTCATTACGGGACTTACTCTGGGGCAATGCCGTGTAC
CTAAAGGAGGCCAATGCCATCAGTGTGGAACTGAAAAAGAAGGTGCAGTTTCAGTTTGTTCTGCTGACTGACACA
CTGTACTCCCCTTTGCCTCCTGAATTACTTCCCACTGAGATGGAAAAAACTCATGAGGACAGGCCTTTCCCTCGC
ACAGTGGTAGCAGTAGAAGTCCAGGATTTGAAGAATGGAGCAACACACTATTGGTCTTTGGAGAAACTCAAGCAG
AGGCTGGATTTGATGCGAGAGATGTATGATAGGGCAGGGGAGATGGCCTCCAGTGCCCAAGACGAAAGCGAAACC
ACTGTGACTGGCAGCGATCCCTTCTATGATCGGTTCCACTGGTTCAAACTTGTGGGGAGCTCCCCCATTTTCCAC
GGCTGTGTGAACGAGCGCCTTGCCGACCGCACACCCTCCCCCACTTTTTCCACGGCCGATTCCGACATCACTGAG
CTGGCTGACGAGCAGCAAGATGAGATGGAGGATTTTGATGATGAGGCATTCGTGGATGACGCCGGCTCTGACGCA
GGGACGGAGGAGGGATCAGATCTCTTCAGTGACGGGCATGACCCGTTTTACGACCGATCCCCTTGGTTCATTTTA
GTGGGAAGGGCATTTGTTTACCTGAGCAATCTGCTGTATCCCGTGCCCCTGATCCACAGGGTGGCCATCGTCAGT
GAGAAAGGTGAAGTGCGGGGATTTCTGCGTGTGGCTGTACAGGCCATCGCAGCGGATGAAGAAGCTCCTGATTAT
GGCTCTGGAATTCGACAGTCAGGAACAGCTAAAATATCTTTTGATAATGAATACTTTAATCAGAGTGACTTTTCG
TCTGTTGCAATGACTCGTTCTGGTCTGTCCTTGGAGGAGTTGAGGATTGTGGAAGGACAGGGTCAGAGTTCTGAG
GTCATCACTCCTCCAGAAGAAATCAGTCGAATTAATGACTTGGATTTGAAGTCAAGCACTTTGCTGGATGGTAAG
ATGGTAATGGAAGGGTTTTCTGAAGAGATTGGCAACCACCTGAAACTGGGCAGTGCCTTCACTTTCCGAGTAACA
GTGTTGCAGGCCAGTGGAATCCTCCCAGAGTATGCAGATATCTTCTGTCAGTTCAACTTTTTGCATCGCCATGAT
GAAGCATTCTCCACGGAGCCCCTCAAAAACAATGGCAGAGGAAGTCCCCTGGCCTTTTATCATGTGCAGAATATT

FIGURE 1418B

GCAGTGGAGATCACTGAATCATTTGTGGATTACATCAAAACCAAGCCTATTGTATTTGAAGTCTTTGGGCATTAT
CAGCAGCACCCACTTCATCTGCAAGGACAGGAGCTTAACAGTCCGCCTCAGCCGTGCCGCCGATTCTTCCCTCCA
CCCATGCCACTGTCCAAGCCAGTTCCAGCCACCAAGTTAAACACGATGAGCAAAACCAGCCTTGGCCAGAGCATG
AGCAAGTATGACCTCCTGGTTTGGTTTGAGATCAGTGAACTGGAGCCTACAGGAGAGTATATCCCAGCTGTGGTT
GACCACACAGCAGGCTTGCCTTGCCAGGGGACATTTTTGCTTCATCAGGGCATCCAGCGAAGGATCACAGTGACC
ATTATCCATGAGAAGGGGAGCGAGCTCCATTGGAAAGATGTTCGTGAACTGGTGGTAGGTCGTATTCGGAATAAG
CCTGAGGTGGATGAAGCTGCAGTTGATGCCATCCTCTCCCTAAATATTATTTCTGCCAAGTACCTGAAGTCTTCC
CACAACTCTAGCAGGACCTTCTACCGCTTTGAGGCTGTGTGGGATAGCTCTCTGCATAACTCCCTTCTTCTGAAC
CGAGTGACACCCTATGGAGAAAAGATCTACATGACCTTGTCGGCCTACCTAGAGCTGGATCATTGCATCCAGCCG
GCTGTCATCACCAAGGATGTGTGCATGGTCTTCTACTCCCGAGATGCCAAGATCTCACCACCACGCTCTCTGCGT
AGCCTCTTTGGCAGCGGCTACTCAAAGTCACCAGATTCGAATCGAGTCACTGGCATTTACGAACTCAGCTTATGC
AAAATGTCAGACACAGGTAGTCCAGGTATGCAGAGAAGGAGAAGAAAAATCTTAGATACGTCAGTGGCATATGTG
CGGGGAGAAGAGAACTTAGCAGGCTGGCGGCCCCGTGGAGACAGCCTCATCCTTGAGCACCAGTGGGAGCTGGAG
AAGCTGGAGCTCCTACATGAGGTGGAAAAAACCCGCCACTTTTTGCTGCTGCGTGAGAGACTTGGTGACAGCATC
CCCAAATCCCTGAGCGACTCGTTATCCCCCAGCCTCAGCAGTGGGACCCTCAGCACCTCCACCAGTATCTCCTCT
CAGATCTCAACCACTACCTTTGAAAGCGCCATCACACCTAGCGAGAGCAGTGGCTATGATTCAGGAGACATCGAA
AGCCTGGTGGACCGAGAGAAAGAGCTGGCTACCAAGTGCCTGCAACTTCTCACCCACACTTTCAACAGAGAATTC
AGCCAGGTGCACGGCAGCGTCAGTGACTGTAAGTTGTCTGATATCTCTCCAATTGGACGGGATCCCTCTGAGTCC
AGTTTCAGCAGTGCCACCCTCACTCCCTCCTCCACCTGTCCCTCTCTGGTAGACTCTAGGAGCAACTCTCTGGAT
CAGAAGACCCCAGAAGCCAATTCCCGGGCCTCTAGTCCCTGCCCAGAATTTGAACAGTTTCAGATTGTCCCAGCT
GTGGAAACACCATATTTGGCCCGAGCAGGAAAAAACGAATTTCTCAATCTTGTTCCAGATATTGAAGAAATTAGA
CCAAGCTCAGTGGTCTCTAAGAAAGGATACCTTCATTTCAAGGAGCCTCTTTACAGTAACTGGGCTAAACATTTT
GTTGTCGTCCGTCGGCCTTATGTCTTCATCTATAACAGTGACAAAGACCCTGTGGAGCGTGGAATCATTAACCTG
TCCACAGCACAGGTGGAGTACAGTGAGGACCAGCAGGCCATGGTGAAGACACCAAACACCTTTGCTGTCTGCACA
AAGCACCGTGGGGTCCTTTTGCAGGCCCTCAATGACAAAGACATGAACGACTGGTTGTATGCCTTCAACCCACTT
CTAGCTGGCACAATACGACCAGGTCATCTGGCTTCCGAGATCATCAGAGAAGATAAGTCTGTCTCTTTCAGCTGC
CAG**TAA**GTTTTCCAGGATGAGAGGGGAAAAAGAAAGCCTCCAGTGACTTCAGTTGCTTTGCCAGTTGTCTTGGGA
TTGTTTTACACCATCCTTTACTTCCCTTGCTCAGACCTCTCTGTTTCACCATTGCTCAGGCATTCAGGAAAGTAT
CTGCTCACTCCCACTTGGTGAGTCCTCGGCCTTGAGGTTGCTGACTCTCAGGCGTTAGGCAGCTGGATGACTTCC
CGCTTCACGCAGCAAAGGCCAGGGGCTTGCGCGCCTCTGCAGAGTTGTTGCTAGGGAGACTTGTGTCATCATCCA
CAACCTTGTTTCTCACTTCCTGGTTGGGCTCATCTCTGAAGAACAGGTCTCCCAGCTTCGCTCCTTATCACTGCA
TTGTGAAGAGGAGGAAAAGTGAATCACGGAGAGAGAAAGGAAAGGATAGAATCACAGGCTGCGTCTGCACCTGAA
AAGTGACCCGCGGAAACTCTATGGCGGATTTTTTTTTTAACTTTCTTCTTCCTGTTAAAACATAGGTCACTAACT
GTGATGTTATTTGTTTTCTAAGTGGTATGTGAGATTTTCTAATGTAGTTAGAAGTTTCATTGTCTGATGGACACA
ATATGCCCTTCCGGTTCTATTCAAACCAGCAGGATCTGTCGGTGCTTAGAGATGGCTGCCTGGACTGGAATCAAA
TCTAATTTCAGGGAAATGAAGATGGAATTTGAAGGTCACTTTTAAAATTAAGTCATTGATGCTGCTGTTACAGAG
TGTGACAGAGGATCCATGTCTGTGACACAGGACGGTGGGAAGCCTGAGAGAGAGTGAAATTATGTGATACACTGA
AATGACTTTTGTTTTTCTTCTAACTCATACAAAACTGGTTTGGAAAGTCTTTGCTTTGGAAGCGTCAGACATTAG
AACAGGCCAAACTGGACTGTCTGTTCATAGCGTGCCTGAATAAGAAGGCCTCTTAGGGAGCCAGAGGGAGCAGAG
TGGTCGTGTCCTGCGTGCTCTTCACCCTCTGGGGGCGCCCCTGCTGCGGCTGGCAGGTGCAGACAGCCTTTGCTGG
TCCCCAGCACGTCCAGGGTGGGTGCTCCCTTGCCCGACAGAACCATCCCCACTGTGAGGCTGTGAGAGATTTGTG
GCAGGAACTGTTTATGAGGCTCTAGTTGTTGCTGTTGTGGCGGGAAAGTTAAGAAACATAGCCCTTAAGGAAACC
ACCTTTATGTATTTTCTTAAAGCACGCCTTTAAATAAGCAAAAACTTTAAAAGGCAGGAAAGAGAATTCTTAGGC
AAATTCAGAGAAATAAGTGCTAGTTAATACTAATCACCTCCTCCTCTGTCTCTCATCCTCCTTTCTCCCATCAAA
GCAAAATATGGCCTCACCACCAGCCCCAAATCAGTGCTCAGACCCTCTCTGTGTCTGTGTGCCCTCCTGGGAGTC
AGTCAGCGCTCAGGCCAGGACTGTGCAGGGCCAGCCAGCCCATGCGCTAGTCAGGAGCACAGGCAAGGGGTGCTT
GTGGCAGTGGCCGGGCACCTGAGCCCCAGCTCGTTGTTAAACGTGCTGACGGCAAGGGGCAATGGAGTGAGTTTC
CCAACTAAGAAACCACTATTATATATTTTTTCCCTTCAGTCACATAGACTTCAGACAACTCTCCTATTTTTTATG

FIGURE 1418C

GATTTTTCAGCTCATTTCAGATGAAGGAACTAAGTCATTGTGAACTGTCTCTTGAGATCTAAAAACAAGATGACT
TTTCCTGGCACATATTCCAAAGCAAAGACTTTGTTGCCTGCTGCTTATTGTCTAATTTACAGGGATATTTAATTT
TGTCAGGTCTATGTATATTTATCCAGCTATACTTACTTGCACAGTGGATTGGAGAGAAAGGATTCTCCAGTGTGC
ACACTCATCGGTACTCTTTCTGCATTTCCCTCGTGCTGTGTCCCGCTCGGGTTCCAATGGACAGTATCAGGGCTT
GTTTGACTTAGGTCTTTCAGTTTTCCTTTCGGTTCCCTTTTAAAAATGTGATTGTTAACCTGCCTCTTGAAAGAT
TCAACCGGGTGTGGTGGCTCACGCCTGTAATCCCAGCACATTGGGAGGCCAAGGCAGGTGGATCACCTGAGGTCA
GAAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCCGTCTCTACTAAAAATACAAAAGGTAGCCAGGCGTGGT
GGCGTGTGCCTGTGGTCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATGGCTTGAACCTGGGAGGTGGAGGCTGC
AGTGAGTTGAGACTGCGCCATTGCACTCCAGCCTGGGTGACAAAGCAGGACTCCGTCTCAAAAAAAAAGAAAAGA
TTCATGATGCTGCTGCTCCCAGAAGGTTTGCTGGATGTGTTTACATAGGACTCTAACTTGTGTGCACTACAGTTG
TTCACCAGGGCCAGTGATTCACCCCAGTGTGTGGCCAGACCATGACTGTGTAGCAGGAATGTTTTAATTTGTGCT
TCCTTAGTAAATTGAAATATCAGCTGAGAGATTATTTGCTGCTGTTATTCAAAAGGCCATTTATGAAGTTAGTAT
TTGAGCCCCATAAGATCTTTAAAAAGCCTCCAATCATTTAAAGGAAGAAATCAGAGTTGCTATAAAATTCAGTAA
AAAGCTCATAGCCAAACGGCTGTGCTCAGATGGAAAGTCTGAGCTGAGGTTGGTCTCTTGCCAAACCGTGGCTGT
TGTGTGTTGTTCTTCATGTCTTCGAGTTCATTTTTTTTCATTCTGCCTATTCTGGCATCAGCTCACTTGAGGAGT
CCCTCAGCCTTCTTGTATTTAAGGCATCGTCTTAGACTTTGTGGCTCTAAAGTACCTGTCTGTTGAGATTTCAAG
TCTCTTGTCACCATCCTCACACATGACAACAAAACCCATAATGCATAAGTGGCCTTTTTGAACCAAGACTTTGCA
AACTGATCTCTCCCCCGTGAAGGAGTTGAGCACATTAGCAACAATGTACATTAATTTTGGATTTTCATTTTCATG
TTTTATTTTGTAAATATTATCTGATGTTTGGAGCTTGAGTATACAGACTGTAAATATAGTTCTTGTATTTGTACT
AATTCTGATTCTTTTGCTGTATAGCCTTAGATGTGCAATGCAGACACTATCTAACTGTGTGTGGTAACCTTGCGT
CACGGAGCTGTTAGTGAACGAGGTAAAAATAATAAAGGTACAGCCAGTGCAAAAAAAAAAAAAAAAAAAAAAAA
A

FIGURE 1419

MGSLTSSPSSCSLSSQVGLTSVTSIQERIMSTPGGEEAIERLKESEKIIAELNETWEEKLRKTEAIRMEREALLA
EMGVAIREDGGTLGVFSPKKTPHLVNLNEDPLMSECLLYYIKDGITRVGQADAERRQDIVLSGAHIKEEHCIFRS
ERSNSGEVIVTLEPCERSETYVNGKRVSQPVQLRSGNRIIMGKNHVFRFNHPEQARAEREKTPSAETPSEPVDWT
FAQRELLEKQGIDMKQEMEKRLQEMEILYKKEKEEADLLLEQQRLDYESKLQALQKQVETRSLAAETTEEEEEEE
EVPWTQHEFELAQWAFRKWKSHQFTSLRDLLWGNAVYLKEANAISVELKKKVQFQFVLLTDTLYSPLPPELLPTE
MEKTHEDRPFPRTVVAVEVQDLKNGATHYWSLEKLKQRLDLMREMYDRAGEMASSAQDESETTVTGSDPFYDRFH
WFKLVGSSPIFHGCVNERLADRTPSPTFSTADSDITELADEQQDEMEDFDDEAFVDDAGSDAGTEEGSDLFSDGH
DPFYDRSPWFILVGRAFVYLSNLLYPVPLIHRVAIVSEKGEVRGFLRVAVQAIAADEEAPDYGSGIRQSGTAKIS
FDNEYFNQSDFSSVAMTRSGLSLEELRIVEGQGQSSEVITPPEEISRINDLDLKSSTLLDGKMVMEGFSEEIGNH
LKLGSAFTFRVTVLQASGILPEYADIFCQFNFLHRHDEAFSTEPLKNNGRGSPLAFYHVQNIAVEITESFVDYIK
TKPIVFEVFGHYQQHPLHLQGQELNSPPQPCRRFFPPPMPLSKPVPATKLNTMSKTSLGQSMSKYDLLVWFEISE
LEPTGEYIPAVVDHTAGLPCQGTFLLHQGIQRRITVTIIHEKGSELHWKDVRELVVGRIRNKPEVDEAAVDAILS
LNIISAKYLKSSHNSSRTFYRFEAVWDSSLHNSLLLNRVTPYGEKIYMTLSAYLELDHCIQPAVITKDVCMVFYS
RDAKISPPRSLRSLFGSGYSKSPDSNRVTGIYELSLCKMSDTGSPGMQRRRRKILDTSVAYVRGEENLAGWRPRG
DSLILEHQWELEKLELLHEVEKTRHFLLLRERLGDSIPKSLSDSLSPSLSSGTLSTSTSISSQISTTTFESAITP
SESSGYDSGDIESLVDREKELATKCLQLLTHTFNREFSQVHGSVSDCKLSDISPIGRDPSESSFSSATLTPSSTC
PSLVDSRSNSLDQKTPEANSRASSPCPEFEQFQIVPAVETPYLARAGKNEFLNLVPDIEEIRPSSVVSKKGYLHF
KEPLYSNWAKHFVVVRRPYVFIYNSDKDPVERGIINLSTAQVEYSEDQQAMVKTPNTFAVCTKHRGVLLQALNDK
DMNDWLYAFNPLLAGTIRPGHLASEIIREDKSVSFSCQ

FIGURE 1420A

GGCGGCTGTCGCGGGGACCGGAGGCGGAGGCTGCAGCGGGCACTGCGGCGCCGAGGCGCGGCGGCAGGACGGGAA
CCACGCGAGCTGCAGCCAGCTAGGTCTTGACTCCACTAACGGGGACTTCTCATACGGCTTTGAACTTGGACCTTG
GTGCATAAGCAAATGTAACTCAGCGAATTGTAATGGAAAGCATATGGACAGGTCTACGCCACATCACTTAGGTGC
TAAGAGATGCCGTTTGCAGGCCTCATCTCTGCTTGAGAATCGGGGGCTCCAGGCACTAGAAGAGCCGGCTGATCC
TGGGCTCCTAGCTTGAATAAGCCTTCACTTCCAGCTGCTCTCCCCAACGGCTGTGTAAACTACTCGTTTCTCTTA
ATGATGGGTATTGGTAAGAATACCACATCCAAATCAATGGAGGCTGGAAGTTCAACAGAAGGCAAATACGAAGAC
GAGGCAAAGCACCCAGCTTTCTTCACTCTTCCGGTGGTGATAAATGGAGGCGCCACCTCCAGCGGTGAGCAGGAC
AATGAGGACACTGAGCTCATGGCGATCTACACTACGGAAAACGGCATTGCAGAAAAGAGCTCTCTCGCTGAGACC
CTGGATAGCACTGGCAGTCTGGACCCCCAGCGATCAGACATGATTTATACCATAGAAGATGTTCCTCCCTGGTAC
CTGTGTATATTTCTGGGGCTACAGCACTACCTGACATGCTTCAGCGGCACGATCGCAGTGCCCTTCCTGTTGGCT
GATGCCATGTGTGTGGGGTACGACCAGTGGGCCACCAGCCAGCTCATTGGGACCATTTTCTTCTGTGTGGGAATC
ACTACTTTGCTACAGACAACGTTTGGATGCAGGTTACCCCTGTTTCAGGCCAGTGCTTTTGCATTTTTGGCCCCT
GCTCGAGCCATCCTGTCTTTAGATAAATGGAAATGTAACACCACAGATGTTTCAGTTGCCAATGGAACAGCAGAG
CTGTTGCACACAGAACACATCTGGTATCCCCGGATCCGAGAGATCCAGGGGGCCATCATCATGTCCTCACTGATA
GAAGTAGTCATCGGCCTCCTCGGCCTGCCTGGGGCTCTACTGAAGTACATCGGTCCCTTGACCATTACACCCACG
GTGGCCCTAATTGGCCTCTCTGGTTTCCAGGCAGCGGGGGAGAGAGCCGGGAAGCACTGGGGCATTGCCATGCTG
ACAATATTCCTAGTATTACTGTTTTCTCAATACGCCAGAAATGTTAAATTTCCTCTCCCGATTTATAAATCCAAG
AAAGGATGGACTGCGTACAAGTTACAGCTGTTCAAAATGTTCCCTATCATCCTGGCCATCCTGGTATCCTGGCTG
CTCTGCTTCATCTTCACGGTGACAGATGTCTTCCCTCCCGACAGCACAAAGTATGGCTTCTATGCTCGCACAGAT
GCCAGGCAAGGCGTGCTTCTGGTAGCCCCGTGGTTTAAGGTTCCATACCCATTTCAGTGGGGACTGCCCACCGTG
TCTGCGGCCGGTGTCATCGGCATGCTCAGTGCCGTGGTCGCCAGCATCATCGAGTCTATTGGTGACTACTACGCC
TGTGCACGGCTGTCCTGTGCCCCACCCCCCCCCATCCACGCAATAAACAGGGGAATTTTCGTGGAAGGCCTCTCC
TGTGTTCTTGATGGCATATTTGGTACTGGGAATGGCTCTACTTCATCCAGTCCCAACATTGGAGTTTTGGGAATT
ACAAAGGTCGGCAGCCGCCGCGTGATACAGTGCGGAGCAGCCCTCATGCTCGCTCTGGGCATGATCGGGAAGTTC
AGCGCCCTCTTTGCGTCCCTTCCGGATCCTGTGCTGGGAGCCCTGTTCTGCACGCTCTTTGGAATGATCACAGCT
GTTGGCCTCTCTAACCTGCAGTTCATTGATTTAAATTCTTCCCGGAACCTCTTTGTGCTTGGATTTTCGATCTTC
TTTGGGCTCGTCCTTCCAAGTTACCTCAGACAGAACCCTCTGGTCACAGGGATAACAGGAATCGATCAAGTGTTG
AACGTCCTTCTCACAACTGCTATGTTTGTAGGGGGCTGTGTGGCTTTTATCCTGGATAACACCATCCCAGGCACT
CCAGAGGAAAGAGGAATCCGGAAATGGAAGAAGGGTGTGGGCAAAGGGAACAAATCACTCGACGGCATGGAGTCG
TACAATTTGCCATTTGGCATGAACATTATAAAAAAATACAGATGCTTCAGCTACTTACCCATCAGCCCAACCTTT
GTGGGCTACACATGGAAAGGCCTCAGGAAGAGCGACAACAGCCGGAGTTCAGATGAAGACTCCCAGGCCACGGGA
TAGCCTTTGCTGTGCCCTGTGGCCTGGCCGCAGTGAGGCATGTATCTGTAGTTCCTTGCTGAGTAACAAGAAGTA
AAATACATGTTTGTATATCTACATTTACATTCTGCGCCCCAGAGCTAAGACAGACTGCGAATCACTTTTCTGCTG
TGAGGGTGATGGTGCCTGATGCGGTGTCTCGCCTATCTCCTTATTTAAGCCCTTAACTCCTTGCCCTTTGAGAGT
GTCCATTGCTGGCCATGGTCACTAAATTTGAAGTTCCAGTCCTCCCTTTGGAGTGGACATTTAAAATCTGCAGCC
ATTCCTTGCTTCAGTTCCCTTCCACCACCCAGGGCTGGCTTTCCTATAAGCCACCTCCAGGGTCCAGGGGCTTTC
TCTCTCTCTCCGAAGCCCCTGGACCTGTTTCCTTGTCATTTGACCCTCGTCTGTGCCCGCGGAGACCTCCTCTGA
CCAAGGGGCACTAGTATGCCTTGCGCTATCATGACTGACTGGCCCAGTATGATTCTGTTGTCGCTGATCTCCCGG
AGGAGGAGGCTGTTGACCTGAAAACAGTGGCGTGGCTCCCCTGTGCCCAGATCTGGCCATGGGTGAGGCCTGCAC
AGATGTTGAATGAACATCTGTTTGGGGCATTGGAGGGAAAAGGAAAGGACCCTGAAGCCAATATCTGATTCTCGG
CTGCACCTTCTCTTGGCCACCCTGGCCCTGACCGGGCCAGCACGTGCACACTGGCCTCTTTTCATTTCACTAGTG
GCCGAGACACCCTCTCTGGCATTTATCACTGTTGGCCGGTGTGATGAGTATAGAGTGCCACCCAAGGCACCAGTC
ACACAAGCTGATGGGCGTCTTGGCTCTGCCGTCATGTGGATGTTATTGTCGCGCGCGTCTATAATTACAAGGTTT
TATTCCTATTTAATGTTATTGACTATAGCAGATTTTGGAAATCAGTGTTTTCCATGTGACCCTCTTTCCTTGCAT
CCCTATTCCTTGTCCCCCACCCACTCTTCCCCCCATCAAGAAAAGAACCAGCATTTGTAAAGCTGTGGACACCAT
CAGGGAAGCTTGTTGTAACGGCTTTTGAAGGCCAGTAACCATTGTTGTGGTTGTGTTTTGTATTGCTTGATACCA
TGAAAGTGTAAATACTGTAATGCCTAATCTATTTATCAAAACTGACTACTGGACCGGAGCCCAGAAACCATGGGT
CAAGTTACACGTGAATTTGTTTTGTGAAGAAGGGAAGCTGGGGCAGGTAACACGCAGAGCCGCCACGTGGAACGG

FIGURE 1420B

TCTGTCCGCCGGTCTGTCCCGCTTGCCGGGCTTCTGTTGCAAGTCTTGGCTTAAGGAGACTTCCTGTGGGTTGCC
ATGTCGCACGTCCGTTAGATCTTGATTTTACAGGTGAGGGTGGTTGCCAAAGGTGATAAGAAAAGCAGCCAACAG
GCTCCCTCTCACTTAAGAGAGTTCTAATTAATAACACTAAATTCTTCCTGAGAAATGACTCCTCTTGGTTTGGTT
TGAAGTTTTTCAGTGAAGGAAAAGGCCTGAGATAGGAAGCAGTGCCCTCGCTTCATGAGGTGGCACATCTTCGGT
GGCCGTTGGCCTGGTCGAGCTTTGGTCAGCTGCGTGGGTGCCTGTCTCCTGTCTCCAGCGGCAGGGCATGGTTCT
TGGCAGCCTGGTGTCCACACGGTGCATTCCTGTCCCCCTCGGCCCCAGGCTGGCTCAGCTCTCCAGTGCTGCGGC
GCTGTCTTTGCAGCATTGCCATGTCACCGTAGCCCCCTTCACTCTTGGAAGTTTGGGGCTTCAAGGTTTATTCTG
GCAAGAACACCTCGGAGCCACTGCATTGTTTTGCCAAAAACTTACTGCAGATTAAGTAAAGAACTTAGATGCTAA
ATTACATCTAATTTTGTATGTTTTTTTAAATGTGTCTTTGATGCATACTTTAGAAGCACACTGGCTCGCGGTTTC
CATCCCTCTTGCCTTGGGACACTCTTGAGGCTGGCAGCCCTCCTGCAATGAGTTGCTCTCAGTTCCTTCTGTTTG
GATTTTGCTCAACATCTCCAGTTTCTCTGCTCTGAAAAATGGGGAAAACTGCTAAACATCCCAGAGATTTGCAAT
CTTCTAGCTCTCCAGGTGAGCAGAAAGACCAAATATCCAAATAAAAGCCTGAAAGCCATTGGTGATCCAGGGGCA
CCTTCTCTTCAGCTTGACTGGGCGTCTTCCGCTGCATAACACTCAAGGTGTCTGCTCTAGTCATCCAGAAACCCA
CTCCCTTCTGAAGCCCCTCCTTGGGCCGGGTTGTATCAGGAGGATTCAACCCCGCTAACATGTGGGGTGCCCTCT
GTAGGCCTTCACACAGGGAAGGAAGCCCTACCCTTTCAACTCCTGTTGGAGTGAGAGTTTCCTGTTCTGATTCCA
CTGTGGCCAACCCAATAATTCTGTCCGAGGAGGGGTAAGGGAATAGGAGGTGGGGAGCAAAGAGGGCAGCCTGAC
TAGATGCCCCTGCTGAATCTGGTACTTTCTGCACAGCCTTGAGTGATTGGAGTCCCCTAATGACTAATAAACTTG
AACATGTAACACACACACACACACACACACACACCATTTTAGGAAGTGGTTCTCCTACTGGAAAATATGCTACAG
AATGAAAGTTTGTAATTGAAAGAAAAAGAATGTATTCATCTGCTTCTTGGGTTTAAGCACACACCTGAAGGGGAG
ATATTGGGGGACACGGTGGCCACTCGCGGTCTGTGTCATGACACTTCCCATTCACATCATTGGCCTGCGTTGCTG
GGGCTTTGAACCACCACCCCGTACTTTGTTTTGCCTGTAGAGTGTTGTAAAATATTTTGGATGTGAATGTCCTTG
CAGGCCGGTTAGTCTCCAGTTTCCACAGAGACCACCTACCCACCACCTTCCCAGGTCACCTGCCTGGTCCCTGAA
AGAAAGCATTTGTGTGGGCAATCCCAACATGAAATGTAGACAGCGTGAATACGGACAGGAGGTGATGCCATATTC
ACAGTGGGGGATGGAGGGCCCCCACCCCTGCTTCACAGAATAATGGGAAGTGACTCTAGTCTTTGTAAGCAATTT
TCATTCTCATTAGGAAGTTAAATGTAGATTCACAGATACATTTACTTTCAGAATCCTCAAGAGGATTTCAAATGC
TAACTTTTAGTTTCTTGGGATTGATCAAGGCAAGAGAAGTGGCTTTAACCATGCCAGCCAGAATGAAGCATCATG
GGTCCTGATGGTTTCCCGTTTTCATGGTAACAAATTCGCACAGAGGTTTTGCTTTATGCTGTAGAATACCGACTT
TCATGATGACAACTTGGTTTATGCATGAATATTGCAGTATTTCCATATAGCAAAATAACATTTCTACCCAGGATA
ATAGTCACAGTTTTCCAGGGAGGGAATGATATAATTTTCATGACAATGTCATGTGATGATAGAATTTCTCCATTG
ATGAATCTCTAGTATGTGTGTATACTTTATTTACCCATACGTATATTTTATGACCATGAGCTAAGTTGTTATTTC
TTTCATTCATATCCCTGCTGAAATATTGGTACTAGCAACTTAAAGTTGGCAAGTCTCATCTTCAGTAATACGGAT
GCCATGGGAGTGGCCAGGCCAGATTGAAGGTGAATATGGAGCAGTAGCAGAAGCCTCATTCCAGAACCCATCTGG
CCAGAGAAGCAGCAGCATCCTGGGGGATGGCCGTGCATGGGGTGTACACTCGCTATAGGCATAGGCCCGGCATGG
CTGTCGCTGGACGCCAGCTGTGCACACCCAGCCACACCTGCTGCACGCCGCGTTAGTGTGCGGCTCCGGGCCTGA
GCATTCGCAAAGCTCGCTTCTCCAGGGAGCCTCCTCTTGGCTTTGGAAAAGAGCCCAGGGACTTAACGTGCTGCC
TGTTGTACTCTGTCCCCTCATGACTTTTTAGACACAGGGACTAGGACATCGACCACCCTCTGCCCCTCCTGCAGT
CAGAACCCGAGTAGTGCAAGAACGGCCACCCGGTTTTGCCAGCGTTCAGCGTCTGCCCATGGACCCATAAGGCAC
ATTAGCGTTGGGGGTCTCTTTTCAGCAGCCTCACAGACATTCCCGTCCTTTCTGGTTGGTGTTGACTGTGTTTCA
GCATCACTCTACCCTCCCATGTCCTTAGCATTGCTGTGCGTGTTTCCAGGCACTTAGGACACCCTTCCCCACGTT
GCCATCTTACTGACAGTTCAAATGACTCTCCTTTTTTGTTCGTTAGTAACAATCTTCATTTGACACCTTAATACA
TTTCTGACTGTTCTTAAAACAGTGGGGATGCCTATATTTTCCTTGAGTTTTTGTGACTGACTTTGGCTATATATA
CCTTTCTGGGGTTTTGTTTGTTTTTTATTTTTATTTTGATTACCGAGGGTATTTGGGGTGGGGTTGTTTTTTGAG
ATGTGTAATTCTTTTATGGAGTTTTTAAAAAGAATTTTCATATTGTTTTTCTAACATGGCTTCATTAAACGTTTA
AGTATTTTAAAAATATGTAATATTTGGACCAGATGTTGTGAATAATAGTAGAGATAAAGCTATTTTATTCTGTAT
TTTTAAAACTGTTCCGTACAAATAAAAGCTCTCCTGGACAC

FIGURE 1421

ATGCGTGAGTGCATCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGCAATGCCTGCTGGGAGCTCTACTGC
CTGGAACACGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAGACCATTGGGGGAGGAGATGATTCCTTCAAC
ACCTTCTTCAGTGAAACGGGTGCTGGCAAGCATGTGCCCCGGGCAGTGTTTGTAGACTTGGAACCCACAGTCATT
GATGAAGTTCGCACTGGCACTTACCGCCAGCTCTTCCACCCTGAGCAACTCATCACAGGCAAGGAAGATGCTGCC
AATAACTATGCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTCGTGTTGGACCGAATTCGCAAGCTG
GCTGACCAGTGCACCGGTCTTCAGGGCTTCTTGGTTTTCCACAGCTTTGGTGGGGGAACTGGTTCTGGGTTCACC
TCGCTGCTCATGGAACGTCTCTCAGTTGATTATGGCAAGAAGTCCAAGCTGGAGTTCTCCATTTACCCGGCGCCC
CAGGTTTCCACAGCTGTAGTTGAGCCCTACAACTCCATCCTCACCACCCACACCACCCTGGAGCACTCTGATTGT
GCCTTCATGGTAGACAATGAGGCCATCTATGACATCTGTCGTAGAAACCTCGATATCGAGCGCCCAACCTACACT
AACCTTAACCGCCTTATTAGCCAGATTGTGTCCTCCATCACTGCTTCCCTGAGATTTGATGGAGCCCTGAATGTT
GACCTGACAGAATTCCAGACCAACCTGGTGCCCTACCCCCGCATCCACTTCCCTCTGGCCACATATGCCCCTGTC
ATCTCTGCTGAGAAAGCCTACCATGAACAGCTTACTGTAGCAGAGATCACCAATGCTTGCTTTGAGCCAGCCAAC
CAGATGGTGAAATGTGACCCTCGCCATGGTAAATACATGGCTTGCTGCCTGTTATACCGTGGTGACGTGGTTCCC
AAAGATGTCAATGCTGCCATTGCCACCATCAAAACCAAGCGTACCATCCAGTTTGTGGATTGGTGCCCCACTGGC
TTCAAGGTTGGCATTAATTACCAGCCTCCCACTGTGGTGCCTGGCGGAGACCTGGCCAAGGTACAGAGAGCTGTG
TGCATGCTGAGCAATACCACAGCTGTTGCCGAGGCCTGGGCTCGCCTGGACCACAAGTTTGACCTGATGTATGCC
AAGCGTGCCTTTGTTCACTGGTACGTGGGTGAGGGGATGGAGGAAGGCGAGTTTTCAGAGGCCCGTGAGGACATG
GCTGCCCTTGAGAAGGATTATGAGGAGGTTGGAGCAGATAGTGCTGACGGAGAGGATGAGGGTGAAGAGTAT**TAA**

FIGURE 1422

MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMPSDKTIGGGDDSFNTFFSETGAGKHVPRAVFVDLEPTVI
DEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEIIDLVLDRIRKLADQCTGLQGFLVFHSFGGGTGSGFT
SLLMERLSVDYGKKSKLEFSIYPAPQVSTAVVEPYNSILTTHTTLEHSDCAFMVDNEAIYDICRRNLDIERPTYT
NLNRLISQIVSSITASLRFDGALNVDLTEFQTNLVPYPRIHFPLATYAPVISAEKAYHEQLTVAEITNACFEPAN
QMVKCDPRHGKYMACCLLYRGDVVPKDVNAAIATIKTKRTIQFVDWCPTGFKVGINYQPPTVVPGGDLAKVQRAV
CMLSNTTAVAEAWARLDHKFDLMYAKRAFVHWYVGEGMEEGEFSEAREDMAALEKDYEEVGADSADGEDEGEEY

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FIGURE 1423

AGTGTGGTTTTAGTTTTTCCTAAGAAGTGGCGTGGTTTGGGGCTTTATATCCGGGAGGAGCATATGTACGCAAAT
CCTGGGGGCGTTTGCAAACCCGGATCCGGGGCGTCTGGCCCCATGCCCGGCCGGGCGTTTGAGGGCTACTGCCACG
CAGCGTTTCTGGAGCCTGCCGGCTGGTGCCCTGGTGGCCTTTATCTCTGTCCCCCTTTGTCCTCTTTATCTCAGG
CTCTCCAGGAGGCCGGGGGGCCCACTCCGCCTATCGCTCCCCTCGGCTACGCTGCCACTCCAATGCCCCGCAGGT
CGCGAGCTGCTGTTCTTTCGAAGGCGCCGGAGAACCAGGGGCGTCCCGCGCCACCTCTGACTCGGAGCAGCGCCG
AGCACTGACGCTCCCGCCCTTGGGCAAGGACGCCAGTGCGCCCGCGCGCGTCCCTCTGCGCGGCAGCCCGTCGCG
GGCCCTCAAGGGGAAGCCCAGGCCAGG**ATG**GCCCCGGGTCGCGCGGTGGCCGGGCTCCTGTTGCTGGCGGCCGCC
GGCCTCGGAGGAGTGGCGGAGGGGCCAGGGCTAGCCTTCAGCGAGGATGTGCTGAGCGTGTTCGGCGCGAATCTG
AGCCTGTCGGCGGCGCAGCTCCAGCACTTGCTGGAGCAGATGGGAGCCGCCTCCCGCGTGGGCGTCCCGGAGCCT
GGCCAGCTGCACTTCAACCAGTGTTTAACTGCTGAAGAGATCTTTTCCCTTCATGGCTTTTCAAATGCTACCCAA
ATAACCAGCTCCAAATTCTCTGTCATCTGTCCAGCAGTCTTACAGCAATTGAACTTTCACCCATGTGAGGATCGG
CCCAAGCACAAAACAAGACCAAGTCATTCAGAAGTTTGGGGATATGGATTCCTGTCAGTGACGATTATTAATCTG
GCATCTCTCCTCGGATTGATTTTGACTCCACTGATAAAGAAATCTTATTTCCCAAAGATTTTGACCTTTTTTGTG
GGGCTGGCTATTGGGACTCTTTTTTCAAATGCAATTTTCCAACTTATTCCAGAGGCATTTGGATTTGATCCCAAA
GTCGACAGTTATGTTGAGAAGGCAGTTGCTGTGTTTGGTGGATTTTACCTACTTTTCTTTTTTGAAAGAATGCTA
AAGATGTTATTAAAGACATATGGTCAGAATGGTCATACCCACTTTGGAAATGATAACTTTGGTCCTCAAGAAAAA
ACTCATCAACCTAAAGCATTACCTGCCATCAATGGTGTGACATGCTATGCAAATCCTGCTGTCACAGAAGCTAAT
GGACATATCCATTTTGATAATGTCAGTGTGGTATCTCTACAGGATGGAAAAAAAGAGCCAAGTTCATGTACCTGT
TTGAAGGGGCCCAAACTGTCAGAAATAGGGACGATTGCCTGGATGATAACGCTCTGCGATGCCCTCCACAATTTC
ATCGATGGCCTGGCGATTGGGGCTTCCTGCACCTTGTCTCTCCTTCAGGGACTCAGTACTTCCATAGCAATCCTA
TGTGAGGAGTTTCCCCACGAGTTAGGAGACTTTGTGATCCTACTCAATGCAGGGATGAGCACTCGACAAGCCTTG
CTATTCAACTTCCTTTCTGCATGTTCCTGCTATGTTGGGCTAGCTTTTGGCATTTTGGTGGGCAACAATTTCGCT
CCAAATATTATATTTGCACTTGCTGGAGGCATGTTCCTCTATATTTCTCTGGCAGATATGTTTCCAGAGATGAAT
GATATGCTGAGAGAAAAGGTAACTGGAAGAAAAACCGATTTCACCTTCTTCATGATTCAGAATGCTGGAATGTTA
ACTGGATTCACAGCCATTCTACTCATTACCTTGTATGCAGGAGAAATCGAATTGGAG**TAA**TAGAAAATGGAAGAT
GGTGTTGTTAATAAAGGCATTTAATAGATAAAAACATCTCCAAAAAGGATTTTGAAGCTGATCCTATTTAGTTAA
AAAGATAATTTTGCTTTCAACTGTAGGTCCAGAAAACTAATTATTGGCATCAGTCTGTGAAATAGTCCATTATTT
GTTGTTAAAAATGCTTCAAAAGGTTTTCAGTGTCAGTCTGAGATGCCTGGTATATAGGAGCCTTTGGGAAATACT
TATTTTTCAGTATTCCATGCATATTAGATATCACCATGAAGCAAGAGACATGCATTCTATAATCATGTAGACACT
CAGACTCAGGGGAAAATACAAGTTATATCCTGAAAGCCTTTAAAACTCTATGGTAGGATCAAAGATTCAAATGGT
TTCAGAGAGGTTTTATTTCAATTAATTTGTTCTAGTGCTTTCAAGAGCAAGTACATCAAAATGTAGAAGGTAAAA
TGTATGCAACACTAATATAAATTATTCCAAGTCTTTAAGGAGCCAAAGAAAAAAAAGATTTCTCACAGCTTTTTG
TTCTGTTTTGTATTTCAATTAGGAACTTGCAGTATTATTTTGAAAACCATTCTAAAATAATAGGAGTTAGGAAAT
AAATAAAGTTTTGCTAGCCCTGCTAAGTTCAGGCTTAGAGGCTTATCGCTAAGTXTAAACTTCACCAGATTCCAC
GAAAAGCTGGATAGCTTTTTTTCTGACTTATGTTGTGGTTGCACCCCTCACAAATGGCAGAACAGTATGTAAAGC
TGGTAACACCTCGGTTTCAGTGCACCATGTGTTTGCTTTGTGAAGGTGAAGAATATGTTGGTTTAGAGAAAGAAA
TTGGATGTAATTTTATGCAATTTACTTTTAAAGACAAACATAACTATTTAGCAGAGAATATTTTAATAAATGCAA
AACAACAGCTGGACTGCTGTACATCAAGGACAGATTAACTGGAAAACATATGTTCCTTATGTGTGATTGAGAGCC
ATTCAGAAAAGACTTCCTTTGTGTTCAGCCTATACTTTTCCATATGGTATACCTTGAAAAAAATTAGCACACCAT
GGTTATTTTTCTACCTTTTATAAAAGACAGAGCCTGTTTACTCATTTAGAAGATAGAGAAAATTGGTCTAAAATT
GAACATCCTAGATTCACACTCCCAAGTCACTTAAGGTGATTTGATGGTGAGGAAAATGATTGACAAAGCCCAACA
ATGATCTCAGGAATTACATTTTCCAACAGACCAAAAAATGTTTTCATGTAGCAGCAATGCAGATTTGGTGAATAT
TTAATATATATTTTAGTATGTATTTCACTTTATGACTGACAATTAAAAAATATTGTTTGGCCAAATAGTAAACAC
CCTTTTGAAACCATGAAAAAA

FIGURE 1424

MAPGRAVAGLLLLAAAGLGGVAEGPGLAFSEDVLSVFGANLSLSAAQLQHLLEQMGAASRVGVPEPGQLHFNQCL
TAEEIFSLHGFSNATQITSSKFSVICPAVLQQLNFHPCEDRPKHKTRPSHSEVWGYGFLSVTIINLASLLGLILT
PLIKKSYFPKILTFFVGLAIGTLFSNAIFQLIPEAFGFDPKVDSYVEKAVAVFGGFYLLFFFERMLKMLLKTYGQ
NGHTHFGNDNFGPQEKTHQPKALPAINGVTCYANPAVTEANGHIHFDNVSVVSLQDGKKEPSSCTCLKGPKLSEI
GTIAWMITLCDALHNFIDGLAIGASCTLSLLQGLSTSIAILCEEFPHELGDFVILLNAGMSTRQALLFNFLSACS
CYVGLAFGILVGNNFAPNIIFALAGGMFLYISLADMFPEMNDMLREKVTGRKTDFTFFMIQNAGMLTGFTAILLI
TLYAGEIELE

FIGURE 1425A

GGCCAAAGGTCAAGATACTTCTCTGGGAAATGTTGCTGCTGATGCTGCTTTACAAAGTCATACAATGAGTGTTTG
GTTTAAGAAAGATTTTCATACTTAAAAGATTTTCATCTTGGAAATACATCAAGTGAAAATTAAATTCTTTTGGGA
AACATTTTCCTTCTGATATATTATACTTGTA**ATG**GGCGACATGGCAAACAACTCAGTTGCTTACAGTGGTGTGAA
AAACTCTTTGAAGGAAGCTAATCATGATGGAGACTTTGGAATTACGCTCGCAGAGCTGCGGGCTCTCATGGAGCT
CAGGTCCACAGATGCATTACGAAAAATACAGGAAAGCTATGGAGATGTCTATGGAATTTGCACCAAATTGAAAAC
ATCTCCCAATGAAGGTTTAAGTGGAAACCCTGCAGATTTAGAAAGAAGAGAAGCAGTGTTTGGAAAGAATTTTAT
ACCTCCTAAAAAGCCAAAAACCTTTCTTCAATTAGTATGGGAAGCATTACAAGATGTCACTTTAATTATATTAGA
AATTGCAGCCATAGTATCATTGGGCCTTTCTTTTTATCAGCCTCCAGAAGGGGATAATGCACTTTGTGGAGAAGT
TTCTGTTGGGGAGGAAGAAGGTGAAGGTGAAACTGGGTGGATTGAAGGAGCTGCAATCCTCTTGTCTGTAGTGTG
TGTGGTGTTAGTAACAGCTTTCAATGACTGGAGTAAGGAGAAACAGTTTAGAGGTTTGCAGAGCCGAATTGAACA
AGAACAGAAGTTCACTGTCATCAGGGGTGGTCAGGTCATTCAGATACCTGTAGCTGACATTACTGTTGGAGATAT
TGCTCAAGTGAAATATGGTGATCTTCTTCCAGCTGACGGCATACTTATTCAAGGCAACGATCTTAAAATTGATGA
AAGCTCATTGACTGGTGAATCAGATCATGTTAAAAAGTCTTTAGATAAGGATCCCTTACTTCTATCAGGTACTCA
TGTAAGGGAAGGCTCTGGAAGAATGGTAGTTACAGCTGTAGGTGTAAATTCTCAAACTGGAATTATCTTTACCTT
ACTTGGAGCTGGAGGTGAAGAGGAAGAGAAGAAAGATGAGAAGAAAAAGGAAAAGAAAAATAAGAAACAAGATGG
AGCTATTGAGAATCGCAACAAAGCAAAAGCCCAGGATGGTGCAGCCATGGAAATGCAGCCATTGAAGAGTGAAGA
AGGTGGAGATGGTGATGAAAAAGATAAAAAGAAAGCAAATTTGCCAAAAAAGGAAAAATCTGTTTTACAAGGGAA
ACTTACAAAACTGGCTGTTCAGATTGGCAAAGCAGGTCTGTTGATGTCTGCCATCACAGTTATCATTCTAGTATT
ATATTTTGTCATTGACACCTTCTGGGTTCAGAAAAGACCATGGCTTGCTGAGTGCACACCAATTTATATACAATA
CTTTGTGAAGTTCTTCATTATTGGAGTTACAGTTTTAGTGGTCGCAGTGCCAGAAGGTCTTCCACTTGCAGTCAC
GATCTCACTGGCTTATTCAGTCAAAAAAATGATGAAAGATAATAACTTAGTAAGGCATCTGGATGCTTGTGAAAC
CATGGGAAATGCTACAGCTATTTGTTCAGATAAAACAGGAACTTTGACAATGAACAGAATGACAGTCGTTCAAGC
TTACATAAATGAAAAACATTATAAAAAGGTTCCTGAACCAGAAGCTATTCCACCAAATATTTTGTCCTATCTTGT
AACAGGAATTTCTGTGAATTGTGCTTATACATCAAAAATATTGCCACCAGAGAAAGAGGGTGGATTACCTCGTCA
CGTTGGTAATAAAACTGAATGTGCCTTGTTGGGACTTCTTTTGGATTTAAAACGGGATTATCAGGATGTTAGAAA
TGAAATACCAGAAGAAGCACTGTACAAAGTCTACACCTTCAATTCTGTTAGGAAGTCCATGAGTACTGTCCTGAA
AAATTCAGATGGAAGTTATCGAATATTCAGCAAGGGTGCATCTGAGATAATTCTGAAAAAGTGTTTCAAAATCTT
GAGTGCTAATGGTGAGGCAAAAGTATTCAGACCAAGGGACCGTGATGATATTGTAAAAACTGTGATTGAACCGAT
GGCATCAGAAGGCTTGAGAACCATATGTCTTGCATTCAGAGATTTTCCAGCAGGAGAACCAGAACCAGAGTGGGA
TAATGAAAATGATATTGTCACCGGCCTTACATGCATTGCTGTTGTGGGGATTGAAGATCCTGTGAGACCTGAGGT
GCCAGATGCAATTAAAAAGTGTCAGAGGGCTGGAATTACTGTGCGGATGGTCACTGGTGATAATATTAATACTGC
TCGGGCCATTGCTACCAAATGTGGTATTTTACATCCTGGGGAAGATTTTCTGTGCCTAGAAGGTAAAGATTTTAA
CAGAAGAATACGAAATGAAAAAGGAGAGATTGAGCAAGAGAGGATAGACAAGATTTGGCCAAAACTTCGAGTACT
TGCAAGATCATCTCCTACTGATAAGCATACACTGGTTAAAGGTATAATTGACAGCACTGTCTCAGACCAACGCCA
GGTTGTAGCTGTAACTGGTGATGGTACAAATGATGGCCCAGCACTAAAGAAAGCAGATGTTGGATTTGCAATGGG
TATTGCTGGAACTGATGTAGCTAAAGAAGCATCCGATATTATTCTCACAGATGACAACTTTACAAGCATTGTTAA
AGCAGTTATGTGGGGACGAAATGTCTATGACAGCATCTCAAAATTCCTTCAGTTCCAACTTACTGTTAATGTAGT
AGCAGTGATTGTTGCTTTTACGGGCGCCTGCATTACTCAAGACTCACCGCTTAAGGCTGTGCAGATGCTGTGGGT
AAACCTCATAATGGATACACTCGCTTCCCTGGCTCTGGCAACGGAACCACCCACTGAGTCTCTCTTGCTTCGGAA
ACCTTATGGTAGAAATAAGCCTCTCATCTCACGTACAATGATGAAGAATATTTTGGGTCATGCATTCTATCAACT
TGTAGTAGTCTTTACACTCTTATTTGCTGGAGAAAAGTTTTTTGACATTGATAGTGGAAGAAATGCTCCTTTGCA
TGCTCCTCCTTCAGAACATTATACTATTGTTTTTAATACCTTTGTGCTGATGCAACTTTTCAACGAAATAAATGC
CCGGAAAATTCATGGTGAAAGAAATGTATTCGAAGGAATCTTTAACAATGCCATCTTCTGCACAATTGTTTTAGG
CACTTTTGTGGTACAGATAATAATTGTGCAGTTTGGTGGAAAACCTTTCAGTTGTTCAGAACTTTCAATAGAACA
GTGGCTATGGTCAATATTCCTAGGAATGGGAACATTACTCTGGGGCCAGCTTATTTCAACAATTCCAACTAGCCG
TTTAAAATTCCTCAAAGAAGCTGGTCATGGAACACAAAAGGAAGAAATACCTGAGGAGGAATTAGCAGAGGATGT
TGAAGAGATTGATCACGCTGAAAGGGAGTTGCGGCGTGGCCAAATCTTGTGGTTTAGAGGTCTGAACAGAATCCA
AACACAGATTCGAGTGGTGAATGCATTTCGTAGTTCTTTATATGAAGGGTTAGAAAAACCGGAATCAAGAAGTTC

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FIGURE 1425B

GATTCACAACTTTATGACACATCCTGAGTTTAGGATAGAAGATTCAGAGCCTCATATCCCCCTTATTGATGACAC
TGATGCCGAAGATGATGCTCCTACAAAACGTAACTCCAGTCCTCCACCCTCTCCCAACAAAAATAACAATGCTGT
TGACAGTGGAATTCACCTTACAATAGAAATGAACAAGTCTGCTACCTCTTCATCCCCAGGAAGCCCACTACATAG
TTTGGAAACATCACTC**TGA**TTGTAAGCTGAATGTTAACACACTAGCTGCATTGTAAAGAAACAAATTGAAACTGG
GTCTTTTCACATATTGTGATGGACAAGCTAGTATTCTTGTCTTTGGACTTCAACAGAAGACACACTTGTACGAAT
GTAGATTTATTTTTTTAAAAAAAAAAAAAGCAAAGCTTTCTGCCAGACTGAGGGTGCTTTTTGGGGGGTGGGAGAA
ATGAACTGACAGATAAACAGTAACTCAGCGTAAGTGACCTGTGGATCATCAGTAGTACCCAAGCATGGTCCTGAA
CAGTGTATTAGCAGAGCTTTAGTTTATCTCAGTCCTGGATGGGAGAGAGAGGGAGGAGTAAAACTGGGCAAGACA
AAGAGCCCTGGATCGTTGAATTGATAGTTTAATTTCTGCTGTTGGCTGTTAATAATTTGGATTATTTATGTTTAT
AAATGATACAGATCTGTTTACAAGGTTTGTAGATACTTTTTTTGTTCCTGTTCATAGATGGGAAGCTTCCTTATA
ACTGATGCAGAGAAAAATTAGTCCTTCAAATACTGCTGTATTTTCAGG

FIGURE 1426

MGDMANNSVAYSGVKNSLKEANHDGDFGITLAELRALMELRSTDALRKIQESYGDVYGICTKLKTSPNEGLSGNP
ADLERREAVFGKNFIPPKKPKTFLQLVWEALQDVTLIILEIAAIVSLGLSFYQPPEGDNALCGEVSVGEEEGEGE
TGWIEGAAILLSVVCVVLVTAFNDWSKEKQFRGLQSRIEQEQKFTVIRGGQVIQIPVADITVGDIAQVKYGDLLP
ADGILIQGNDLKIDESSLTGESDHVKKSLDKDPLLLSGTHVREGSGRMVVTAVGVNSQTGIIFTLLGAGGEEEEK
KDEKKKEKKNKKQDGAIENRNKAKAQDGAAMEMQPLKSEEGGDGDEKDKKKANLPKKEKSVLQGKLTKLAVQIGK
AGLLMSAITVIILVLYFVIDTFWVQKRPWLAECTPIYIQYFVKFFIIGVTVLVVAVPEGLPLAVTISLAYSVKKM
MKDNNLVRHLDACETMGNATAICSDKTGTLTMNRMTVVQAYINEKHYKKVPEPEAIPPNILSYLVTGISVNCAYT
SKILPPEKEGGLPRHVGNKTECALLGLLLDLKRDYQDVRNEIPEEALYKVYTFNSVRKSMSTVLKNSDGSYRIFS
KGASEIILKKCFKILSANGEAKVFRPRDRDDIVKTVIEPMASEGLRTICLAFRDFPAGEPEPEWDNENDIVTGLT
CIAVVGIEDPVRPEVPDAIKKCQRAGITVRMVTGDNINTARAIATKCGILHPGEDFLCLEGKDFNRRIRNEKGEI
EQERIDKIWPKLRVLARSSPTDKHTLVKGIIDSTVSDQRQVVAVTGDGTNDGPALKKADVGFAMGIAGTDVAKEA
SDIILTDDNFTSIVKAVMWGRNVYDSISKFLQFQLTVNVVAVIVAFTGACITQDSPLKAVQMLWVNLIMDTLASL
ALATEPPTESLLLRKPYGRNKPLISRTMMKNILGHAFYQLVVVFTLLFAGEKFFDIDSGRNAPLHAPPSEHYTIV
FNTFVLMQLFNEINARKIHGERNVFEGIFNNAIFCTIVLGTFVVQIIIVQFGGKPFSCSELSIEQWLWSIFLGMG
TLLWGQLISTIPTSRLKFLKEAGHGTQKEEIPEEELAEDVEEIDHAERELRRGQILWFRGLNRIQTQIRVVNAFR
SSLYEGLEKPESRSSIHNFMTHPEFRIEDSEPHIPLIDDTDAEDDAPTKRNSSPPPSPNKNNNAVDSGIHLTIEM
NKSATSSSPGSPLHSLETSL

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FIGURE 1427

GGGGGCCCTCCGCAGGTTCAGTCCTCGCGTCGGCCGCCCCGCGCTCAGTCGCGCGCACCTTCTCTCGCGGCCGGG
GGACCGCAGCGCGGGGCTAGCCCGGAGACCCGGCCACCGGCCTGGGGCGCCTTCACGCCGTCTCGGAGCGGATAA
TGCGGTGAGCAGGCACCACGCCGGCAGACTCGGCTGGATCTGCGCACAGCGGCAGGGATTGCGTGCGCCCGCGGG
AGGCCCGGGGCAGCGGCTGGGATCCTCAGCGGCGGCCGGTTTGTCCTGGTTGTGGTCAAGACTGGATGATGTAAC
TGGCTCTCTAGGAAGCCTCACTTGGCCGTAACCTCAGGAAGGTTCTCTTTGACCCCATCTCATTTCGAAGCCACT
TCTGAAGCCACTTGAGAAAAATGATGTGACAGTTCCTATCAAAAAGGATTCAGAAACATATACCATCTGTGAAGA
AAGTGGCCCTTTCTCCCGCTTGCAAAATAGACATTCTCAAATTCCAAAATGCCAGCCAAGACCCCAATTTACCTG
AAAGCAGCCAATAACAAGAAAGGAAAGAAATTTAAACTGAGGGACATTCTGTCTCCTGAT**ATG**ATCAGTCCCCCG
CTTGGAGACTTTCGCCACACCATCCACATTGGCAAAGAGGGCCAGCACGATGTCTTTGGAGATATTTCCTTTCTT
CAAGGGAACTACGAGCTTTTACCTGGAAACCAGGAGAAAGCACACCTGGGCCAGTTCCCTGGGCATAATGAGTTC
TTCCGGGCCAACAGCACCTCGGACTCTGTGTTCACAGAAACGCCCTCCCCGGTGCTCAAAAATGCCATCTCCCTC
CCGACCATTGGAGGATCCCAAGCTCTCATGTTGCCCTTATTGTCACCAGTGACATTTAATTCCAAACAGGAGTCC
TTCGGGCCAGCAAAGCTGCCCAGGCTTAGCTGCGAGCCCGTCATGGAGGAAAAAGCTCAGGAGAAAAGCAGTCTG
TTGGAGAATGGGACAGTCCACCAGGGAGACACCTCGTGGGGCTCCAGCGGTTCTGCATCTCAGTCCAGCCAAGGC
AGAGACAGCCACTCCTCCAGCCTGTCCGAACAGTACCCCGACTGGCCAGCCGAGGACATGTTTGACCATCCCACC
CCATGCGAGCTCATCAAGGGAAAGACTAAGTCAGAGGAGTCCCTCTCTGACCTTACAGGTTCCCTCCTCTCCCTG
CAGCTTGATCTTGGGCCCTCACTTTTGGATGAGGTGCTGAATGTAATGGATAAAAATAAG**TAA**CAAGATGCCAAC
TTTTTTCCTTTGGGGTAAAAGGTACAAAAACAAACTAACCACAGTTGAAGAGAAGGGCTTCCGGAGCTGTATTTG
CAGTTTTGTGTTGGGTTTTCTAAAATAATATTCTTACAAAGTATTTTTTTACCTGTTATGCCCTGTTTGCAAAAA
CAATTTAGAAAAAAACAACAAAGCAAAACCTATCTTGGCAAAAAAAGGAAGTGAGTCAGAGCCCATTTTCAGGAG
GCATTGGTGATGTTCGGCTCACATATTGTTTGCAGACACACAAGAAATCTGGCTTGGCCAGGATTGGCACTAGCT
ATGAAGGGCTGAGCGAGTCACATTAAGGAACTTCACGGAACTTTATAGCACTCCGACATTTTCTGAGCAAGAGGA
AGTCAAAATTTATTTAACACCTAAGCCTTTTTGTAGACTCTTTTCTATATATTGCTTAGGCTCACCATAGTGAAT
TCTCCAGTGTTAAAACTTTTCTGTTTTCACATTTGAACTTTATGGGTTTTGGGGATTTTCTTGTAGTTCTTATAT
ATCCCTATATATTATATCTATATTGCAAAATTTTGACTGTCAGCTACATGTTGGTAAGACACAGGCAAAGTATTA
CTGTAACTAAGTTATTTTTAAAGTTAAAATATATTTTTACGTGCCTTTGGCTTTTTATTGCAGAGTCTACATTTT
ATAGATTCTACATCAGATGTTGTCACTTATTTCCATTGGGATTCCATTGTAAGCTGTGTATGTGCGTGTTTGGAA
AAGTGTATTCATACTTAGTTTTTTTTTCTTCATCTGTTATCATACTTTTAACAGCAACCAATAACGGATTGTAAA
GTGTAAAGGCACAGGTTACTCATGATGCTTCTGCAGAGACTGTGGGCTACACCACATATGTTATTTGGAAATATA
GGTATTTTAGTACAGTACATACTTGCATTACATAGGTACTTCAAGCAACACAATAAAAAGTAAATGATAAAGTGA
ACTTGCTTGTTTATAGTAATAAACAAGACCATAAGAGAATAAGTATAGCTAGAGAAATTGCTTCTCTGAAATGTA
CATGAGCCCTTAAGGTAAGAGATGATTTCCATCTACTCTCATTTTGATTACTTCCTTATGGTTTGAGAGGCTAGA
AACTGAGCCTCTCTACTTTTGGAAAAATGAACATGTGAGGTCAGATTTTTTTTTTTTTTAAGTCAGCACTGATG
CCACCCTCTCAGTGGTCATTTCTGAGCATCTTCCTGACTTGAACACCTTCTACAGCAAACTCTTGCAAGTCCAGT
TTCATCCCTGTAAGGCAAATGTCTTTTCACGCAGAAAGTGCCATATAGACGAGATAAAGGCAGCTAAAACGAGGG
CAGTAGAGAGCACTTACCCGACCCCAAGGTGCCAGAGATGCCCTGAGGATGGTGGTTAAGGAAACAGGAGCAGGA
AATGTACACACAGATTCCTGTCCCTTTGCCAACTACTCCTTCCCCATCAAAGAAAAACACTTGCACACAGTAACT
ACCAGCTCCTTCTCTCAAACTTGTATTTCTCCTGGAAATGTATCTCAGAAATGACCTCCTCTCCCAACCACTTCA
ACGATTCTTTCTTTGGGTTTGGGGTTCTTGCAGTTCTATCATCTAAAATAACCTTTGGACTGCAGGTAAAATGCA
ATTAGGACAACTAACCAAGTAGACGAAACAAGTTCCCCTAGGCAGGGGTGTCCAATATTTTAGCTTCCCTGGACC
GCATTGGAAGAATTTTCTTGGGCCACATGTAAAACACACTAACACTAACCATAGTTGATGAGCTTAAAAAAATAA
AAATAGAAAATTGC

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FIGURE 1428

MISPPLGDFRHTIHIGKEGQHDVFGDISFLQGNYELLPGNQEKAHLGQFPGHNEFFRANSTSDSVFTETPSPVLK
NAISLPTIGGSQALMLPLLSPVTFNSKQESFGPAKLPRLSCEPVMEEKAQEKSSLLENGTVHQGDTSWGSSGSAS
QSSQGRDSHSSSLSEQYPDWPAEDMFDHPTPCELIKGKTKSEESLSDLTGSLLSLQLDLGPSLLDEVLNVMDKNK

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FIGURE 1429

GGCGCCCAAGCCGCCGCCGCCAGATCGGTGCCGATTCCTGCCCTGCCCCGACCGCCAGCGCGACC**ATG**TCCCATC
ACTGGGGGTACGGCAAACACAACGGACCTGAGCACTGGCATAAGGACTTCCCCATTGCCAAGGGAGAGCGCCAGT
CCCCTGTTGACATCGACACTCATACAGCCAAGTATGACCCTTCCCTGAAGCCCCTGTCTGTTTCCTATGATCAAG
CAACTTCCCTGAGGATCCTCAACAATGGTCATGCTTTCAACGTGGAGTTTGATGACTCTCAGGACAAAGCAGTGC
TCAAGGGAGGACCCCTGGATGGCACTTACAGATTGATTCAGTTTCACTTTCACTGGGGTTCACTTGATGGACAAG
GTTCAGAGCATACTGTGGATAAAAAGAAATATGCTGCAGAACTTCACTTGGTTCACTGGAACACCAAATATGGGG
ATTTTGGGAAAGCTGTGCAGCAACCTGATGGACTGGCCGTTCTAGGTATTTTTTTGAAGGTTGGCAGCGCTAAAC
CGGGCCTTCAGAAAGTTGTTGATGTGCTGGATTCCATTAAAACAAAGGGCAAGAGTGCTGACTTCACTAACTTCG
ATCCTCGTGGCCTCCTTCCTGAATCCCTGGATTACTGGACCTACCCAGGCTCACTGACCACCCCTCCTCTTCTGG
AATGTGTGACCTGGATTGTGCTCAAGGAACCCATCAGCGTCAGCAGCGAGCAGGTGTTGAAATTCCGTAAACTTA
ACTTCAATGGGGAGGGTGAACCCGAAGAACTGATGGTGGACAACTGGCGCCCAGCTCAGCCACTGAAGAACAGGC
AAATCAAAGCTTCCTTCAAA**TAA**GATGGTCCCATAGTCTGTATCCAAATAATGAATCTTCGGGTGTTTCCCTTTA
GCTAAGCACAGATCTACCTTGGTGATTTGGACCCTGGTTGCTTTGTGTCTAGTTTTCTAGACCCTTCATCTCTTA
CTTGATAGACTTACTAATAAAATGTGAAGACTAGACCAATTGTCATGCTTGACACAACTGCTGTGGCTGGTTGGT
GCTTTGTTTATGGTAGTAGTTTTTCTGTAACACAGAATATAGGATAAGAAATAAGAATAAAGTACCTTGACTTTG
TTCACAGCATGTAGGGTGATGAGCACTCACAATTGTTGACTAAAATGCTGCTTTTAAAACATAGGAAAGTAGAAT
GGTTGAGTGCAAATCCATAGCACAAGATAAATTGAGCTAGTTAAGGCAAATCAGGTAAAATAGTCATGATTCTAT
GTAATGTAAACCAGAAAAAATAAATGTTCATGATTTCAAGATGTTATATTAAAGAAAAACTTTAAAAATTATTAT
ATATTTATAGCAAAGTTATCTTAAATATGAATTCTGTTGTAATTTAATGACTTTTGAATTACAGAGATATAAATG
AAGTATTATCTGTAAAAATTGTTATAATTAGAGTTGTGATACAGAGTATATTTCCATTCAGACAATATATCATAA
CTTAATAAATATTGTATTTTAGATATATTCTCTAATAAAATTCAGAATTCT

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FIGURE 1430

MSHHWGYGKHNGPEHWHKDFPIAKGERQSPVDIDTHTAKYDPSLKPLSVSYDQATSLRILNNGHAFNVEFDDSQD
KAVLKGGPLDGTYRLIQFHFHWGSLDGQGSEHTVDKKKYAAELHLVHWNTKYGDFGKAVQQPDGLAVLGIFLKVG
SAKPGLQKVVDVLDSIKTKGKSADFTNFDPRGLLPESLDYWTYPGSLTTPPLLECVTWIVLKEPISVSSEQVLKF
RKLNFNGEGEPEELMVDNWRPAQPLKNRQIKASFK

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FIGURE 1431

AGCGTCGGACTACCGTTGGTTTCCGCAACTTCCTGGATTATCCTCGCCAAGGACTTTGCAATATATTTTTCCGCC
TTTTCTGGAAGGATTTCGCTGCTTCCCGAAGTCTTGGACGAGCGCTCTAGCTCTGTGGGAAGGTTTTGGGCTCTC
TGGCTCGGATTTTGCAATTTCTCCCTGGGGACTGCCGTGGAGCCGCATCCACTGTGGATTATAATTGCAACATGA
CGCTGGAAGAGCTCGTGGCGTGCGACAACGCGGCGCAGAAGATGCAGACGGTGACCGCCGCGGTGGAGGAGCTTT
TGGTGGCCGCTCAGCGCCAGGATCGCCTCACAGTGGGGGTGTACGAGTCGGCCAAGTTGATGAATGTGGACCCAG
ACAGCGTGGTCCTCTGCCTCTTGGCCATTGACGAGGAGGAGGAGGATGACATCGCCCTGCAAATCCACTTCACGC
TCATCCAGTCCTTCTGCTGTGACAACGACATCAACATCGTGCGGGTGTCGGGCATGCAGCGCCTGGCGCAGCTCC
TGGGAGAGCCGGCCGAGACCCAGGGCACCACCGAGGCCCGAGACCTGCATTGTCTCCTGGTCACGAACCCTCACA
CGGACGCCTGGAAGAGCCACGGCTTGGTGGAGGTGGCCAGCTACTGCGAAGAAAGCCGGGGCAACAACCAGTGGG
TCCCCTACATCTCTCTTCAGGAACGCTGAGGCCCTTCCCAGCAGCAGAATCTGTTGAGTTGCTGCCACAAACAAA
AAATACAATAAATATTTGAACCCCCTCCCCCCCAGCACAACCCCCCCAAAACAACCCAACCCACGAGGACCATCG
GGGGCAGAGTCGTTGGAGACTGAAGAGGAAGAGGAGGAGGAGAAGGGGAGTGAGCGGTCCGCCCCCAGGGACGCT
CTCCAGGAGCTGGCGGCCGCCGATCAGATGGAGAAGGGGGGACCCAGGCCAGCAGGAGACAGGACCCCCGAAGCT
GAGGCCTTGGGATGGAGCAGAAGCCGGAGTGGCGGGGCACGCTGCCGCCTTCCCCATCACGGAGGGTCCAGACTG
TCCACTCGGGGGTGGAGTGAGACTGACTGCAAGCCCCACCCTCCTTGAGACTGGAGCTGGCGTCTGCATACGAGA
GACTTGGTTGAACTTGGTTGGTCCTTGTCTGCACCCTCGACAAGACCACACTTTGGGACTTGGGAGCTGGGGCTG
AAGTTGCTCTGTACCCATGAACTCCCAGTTTGCGAATTATAGAGACAATCTATTTTGTTACTTGCACTTGTTATT
CGAACCACTGAGAGCGAGATGGGAAGCATAGATATCTATATTTTTATTTCTACTATGAGGGCCTTGTAATAAATT
TCTAAAGCCTCTGAAAAAAAAAAAAAAA

FIGURE 1432

MTLEELVACDNAAQKMQTVTAAVEELLVAAQRQDRLTVGVYESAKLMNVDPDSVVLCLLAIDEEEEDDIALQIHF
TLIQSFCCDNDINIVRVSGMQRLAQLLGEPAETQGTTEARDLHCLLVTNPHTDAWKSHGLVEVASYCEESRGNNQ
WVPYISLQER

FIGURE 1433

GCTCTTTCCAACGCTGTAAAAAGGACAGAGGCTGTTCCCTATGGCAGAAGGCAACCACAGAAAAAAGCCACTTAA
GGTGTTGGAATCCCTGGGCAAAGATTTCCTCACTGGTGTTTTGGATAACTTGGTGGAACAAAATGTACTGAACTG
GAAGGAAGAGGAAAAAAAGAAATATTACGATGCTAAAACTGAAGACAAAGTTCGGGTCATGGCAGACTCTATGCA
AGAGAAGCAACGTATGGCAGGACAAATGCTTCTTCAAACCTTTTTTAACATAGACCAAATATCCCCCAATAAAAA
AGGTGATAAATTGGGTCACAGAGGCAGAAATCACAATTTATGTTCTGCAATATCCTGCAGCTCATCCGAAT**ATG**G
AGGCTGGACCACCTGAGTCAGGAGAATCTACAGATGCCCTCAAGCTTTGTCCTCATGAAGAATTCCTGAGACTAT
GTAAAGAAAGAGCTGAAGAGATCTATCCAATAAAGGAGAGAAACAACCGCACACGCCTGGCTCTCATCATATGCA
ATACAGAGTTTGACCATCTGCCTCCGAGGAATGGAGCTGACTTTGACATCACAGGGATGAAGGAGCTACTTGAGG
GTCTGGACTATAGTGTAGATGTAGAAGAGAATCTGACAGCCAGGGATATGGAGTCAGCGCTGAGGGCATTTGCTA
CCAGACCAGAGCACAAGTCCTCTGACAGCACATTCTTGGTACTCATGTCTCATGGCATCCTGGAGGGAATCTGCG
GAACTGTGCATGATGAGAAAAAACCAGATGTGCTGCTTTATGACACCATCTTCCAGATATTCAACAACCGCAACT
GCCTCAGTCTGAAGGACAAACCCAAGGTCATCATTGTCCAGGCCTGCAGAGGTGCAAACCGTGGGGAACTGTGGG
TCAGAGACTCTCCAGCATCCTTGGAAGTGGCCTCTTCACAGTCATCTGAGAACCTGGAGGAAGATGCTGTTTACA
AGACCCACGTGGAGAAGGACTTCATTGCTTTCTGCTCTTCAACGCCACACAACGTGTCCTGGAGAGACAGCACAA
TGGGCTCTATCTTCATCACACAACTCATCACATGCTTCCAGAAATATTCTTGGTGCTGCCACCTAGAGGAAGTAT
TTCGGAAGGTACAGCAATCATTTGAAACTCCAAGGGCCAAAGCTCAAATGCCCACCATAGAACGACTGTCCATGA
CAAGATATTTCTACCTCTTTCCTGGCAAT**TGA**AAATGGAAGCCACAAGCAGCCCAGCCCTCCTTAATCAACTTCA
AGGAGCACCTTCATTAGTACAGCTTGCATATTTAACATTTTGTATTTCAATAAAAGTGAAGACAAACG

FIGURE 1434

MEAGPPESGESTDALKLCPHEEFLRLCKERAEEIYPIKERNNRTRLALIICNTEFDHLPPRNGADFDITGMKELL
EGLDYSVDVEENLTARDMESALRAFATRPEHKSSDSTFLVLMSHGILEGICGTVHDEKKPDVLLYDTIFQIFNNR
NCLSLKDKPKVIIVQACRGANRGELWVRDSPASLEVASSQSSENLEEDAVYKTHVEKDFIAFCSSTPHNVSWRDS
TMGSIFITQLITCFQKYSWCCHLEEVFRKVQQSFETPRAKAQMPTIERLSMTRYFYLFPGN

FIGURE 1435

CACGAGGAAGACGTGGATGGCGGGAATTCTCGCTTCTGGCCTGGGTGAGCTAGAAGGGAGAAGCAAGGACATTGG
AGTCCCTATCACCGGTTGCCTAGACAACTTCATGGGAAGGCCCTTGGGAATCTGAG**ATG**GAGCAGGCGAACCCTT
TACGTCCAGATGGCGAGTCCAAAGGAGGTGTTTTAGCTCACTTGGAAAGGCTAGAGACCCAAGTGAGCAGATCCC
GTAAACAGTCTGAAGAGCTGCAGAGCGTGCAGGCCCAGGAAGGTGCTCTTGGAACCAAGATTCATAAACTAAGGC
GTCTGCGAGATGAGCTGAGGGCTGTGGTGCGGCACCGGCGAGCCAGCGTGAAAGCATGTATTGCCAATGTAGAAC
CCAACCAAACAGTGGAGATCAATGAGCAAGAAGCATTGGAAGAGAAATTGGAAAATGTGAAAGCCATTCTGCAGG
CATATCATTTTACAGGCCTCAGTGGTAAACTGACCAGCCGAGGAGTTTGTGTCTGCATCAGTACTGCTTTTGAGG
GGAACCTATTGGATTCCTATTTTGTGGACCTTGTCATACAGAAACCACTCCGGATACATCACCATTCAGTCCCAG
TCTTCATTCCCCTGGAAGAGATAGCTGCAAAATATTTACAGACCAACATCCAGCACTTCCTGTTCAGTCTCTGCG
AGTACCTGAATGCTTACTCTGGGAGGAAGTACCAGGCAGACCGGCTTCAGAGTGACTTTGCAGCCCTCCTGACTG
GGCCCTTGCAGAGAAACCCACTGTGTAACTTGCTGTCATTTACTTACAAACTGGATCCAGGGGGTCAGTCCTTCC
CGTTCTGTGCTAGATTGCTGTATAAGGACCTCACAGCAACTCTTCCCACTGACGTCACCGTGACATGTCAAGGAG
TGGAAGTATTATCCACTTCATGGGAGGAGCAACGAGCATCTCATGAAACTCTGTTCTGTACGAAGCCCTTGCATC
AAGTGTTTGCCTCATTTACAAGAAAAGGAGAAAAGTTGGATATGAGTCTGGTCTCC**TAA**TAGATTGTTTTCACTG
CACTGGGAGCACATCAGAGAAATAAATCCCCCCTCCCCTGCCAGGTGAAAGGAAATATTGCACTTTCTGTTCTCA
TGACTAAGGGGACAGGAGTTCCAGAAGAACCTTTCAAGATGATCAGGAACACCAGGACGAGGGCCGTCTCACCTC
ACTCGGACCACATGGAGACCTCCCTTCAAAATGGGAGCCATGTCCTGCCCCACCAAGCCCTGTCTGAAGTGGAGC
TTCCCCGCCTGTGCTCCCTCCACAGTCCCGGAAAGCCCAGCGGCAAAGGCAGCTTTGTCCCAGCTCTGCCACCCT
CCTGCTCACAGTGGTCAGGGCCCCTCAGGGGCAAGGACGGCAGGGATTGGAACGAGGGCTCTGGAAGGACTGTTC
AGCCCTATGCCTAAGACCCCTATGCTGGGGACACTACAGGCACACAGAGGAATAGCAGGGCCACCCTCAGAGCTC
ACACATCCACGAACAAATGAAGGCTGAGGAGGTTTCTAAACCTAAAGTCCATGAGTGTGCACTTCAATCCAGGAA
GGTCGGGACTTCCTTCAGTTTCAAAAAATAAATTCTCCCTTCCGGTTTGGACTGTTAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAA

FIGURE 1436

MEQANPLRPDGESKGGVLAHLERLETQVSRSRKQSEELQSVQAQEGALGTKIHKLRRLRDELRAVVRHRRASVKA
CIANVEPNQTVEINEQEALEEKLENVKAILQAYHFTGLSGKLTSRGVCVCISTAFEGNLLDSYFVDLVIQKPLRI
HHHSVPVFIPLEEIAAKYLQTNIQHFLFSLCEYLNAYSGRKYQADRLQSDFAALLTGPLQRNPLCNLLSFTYKLD
PGGQSFPFCARLLYKDLTATLPTDVTVTCQGVEVLSTSWEEQRASHETLFCTKPLHQVFASFTRKGEKLDMSLVS

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FIGURE 1437

GGGAGCCGCGCGGGAGCAGCGCAGCTACGGCGGCGGCAGCGGCGGCGCGGTTGCGATTCCGAGCCGTTGAGACGC
CTCTGCGGCAGCTGGTGGCGCAGGTGGCTTGCGTGGACGCGGGTAGAGGCGACCGGCCAGCAACCGCAGCGTCGG
CGCCCGCGGCCCCGGCAGCAGGCGCGTCGGGACGCCCCGAGGCATCCTCCCCCGCCCGCGGGCCCGGTAGCTGGG
CCCGCGTCCGCCGCCCGCATCCCCGCGCCGCCGCATCTCCTCGCCGCCTCCCGGGCTTCGGACCCCCGGTCTCGC
CCCCGGAAAC**ATG**ACTCGCGATTTCAAACCTGGAGACCTCATCTTCGCCAAGATGAAAGGTTATCCCCATTGGCC
AGCTCGAGTAGACGAAGTTCCTGATGGAGCTGTAAAGCCACCCACAAACAAACTACCCATTTTCTTTTTTGGAAC
TCATGAGACTGCTTTTTTAGGACCAAAGGATATATTTCCTTACTCAGAAAATAAGGAAAAGTATGGCAAACCAAA
TAAAAGAAAAGGTTTTAATGAAGGTTTATGGGAGATAGATAACAATCCAAAAGTGAAATTTTCAAGTCAACAGGC
AGCAACTAAACAATCAAATGCATCATCTGATGTTGAAGTTGAAGAAAAGGAAACTAGTGTTTCAAAGGAAGATAC
CGACCATGAAGAAAAAGCCAGCAATGAGGATGTGACTAAAGCAGTTGACATAACTACTCCAAAAGCTGCCAGAAG
GGGGAGAAAGAGAAAGGCAGAAAAACAAGTAGAAACTGAGGAGGCAGGAGTAGTGACAACAGCAACAGCATCTGT
TAATCTAAAAGTGAGTCCTAAAAGAGGACGACCTGCAGCTACAGAAGTCAAGATTCCAAAACCAAGAGGCAGACC
CAAAATGGTAAAACAGCCCTGTCCTTCAGAGAGTGACATCATTACTGAAGAGGACAAAAGTAAGAAAAAGGGGCA
AGAGGAAAAACAACCTAAAAAGCAGCCTAAGAAGGATGAAGAGGGCCAGAAGGAAGAAGATAAGCCAAGAAAAGA
GCCGGATAAAAAAGAGGGGAAGAAAGAAGTTGAATCAAAAAGGAAAAATTTAGCTAAAACAGGGGTTACTTCAAC
CTCCGATTCTGAAGAAGAAGGAGATGATCAAGAAGGTGAAAAGAAGAGAAAAGGTGGGAGGAACTTTCAGACTGC
TCACAGAAGGAATATGCTGAAAGGCCAACATGAGAAAGAAGCAGCAGATCGAAAACGCAAGCAAGAGGAACAAAT
GGAAACTGAGCAGCAGAATAAAGATGAAGGAAAGAAGCCAGAAGTTAAGAAAGTGGAGAAGAAGCGAGAAACATC
AATGGATTCTCGACTTCAAAGGATACATGCTGAGATTAAAAATTCACTCAAAATTGATAATCTTGATGTGAACAG
ATGCATTGAGGCCTTGGATGAACTTGCTTCACTTCAGGTCACAATGCAACAAGCTCAGAAACACACAGAGATGAT
TACTACACTGAAAAAAATACGGCGATTCAAAGTTAGTCAGGTAATCATGGAAAAGTCTACAATGTTGTATAACAA
GTTTAAGAACATGTTCTTGGTTGGTGAAGGAGATTCCGTGATCACCCAAGTGCTGAATAAATCTCTTGCTGAACA
AAGACAGCATGAGGAAGCGAATAAAACCAAAGATCAAGGGAAGAAAGGGCCAAACAAAAAGCTAGAGAAGGAACA
AACAGGGTCAAAGACTCTAAATGGAGGATCTGATGCTCAAGATGGTAATCAGCCACAACATAACGGGGAGAGCAA
TGAAGACAGCAAAGACAACCATGAAGCCAGCACGAAGAAAAAGCCATCCAGTGAAGAGAGAGAGACTGAAATATC
TCTGAAGGATTCTACACTAGATAAC**TAG**GTTGACATACCTGGAATATAGAGAACACTTGAGAAGTTTGTAATGGT
TTTCATTTGAAATAGACTGCTGGAAGTTTAAATTTTTATAAGCATAGGTTTGATGTTGAAAACTTGTTTTGAGGG
AGAAAATCCCTTTGTTTTAAAGTAAAGTAAACATTATCGCTAAGTGTAACTTGTGCAGTATTAACAGCTACATTA
TACAGTAAATGTGGGATAAAATCCATTTAGAAAATGTTAAACTGCTTTTCCAGACATGGTTGTAGCATATTTTCA
ATTAGTGTGTGTATGTTAATGTGTAATTGATAGTAGAACAAAGTTACATTTTTAAAACTGCTACTTGTATAAACC
TTGCCTCTTTTCCCAAATACTGTGGGTTTTGTGCATAGTTTTTACAAACCTTGGATTTACCAGACTGTCTTTTCA
CTGTTTGTGGGTTTTGTAGAAGTTACACATTTTTATGGTAGATAAAATGTTACTTCTATACAAGTACTCACTCCC
TTTTTATCAAAAGTTAATTTTAATCTCACAGTCTACATTGTGCTACATTATCCAGCTTCTTTGGAACAATGTGTG
CTCTGTATGGTTTTTTTTGGTATGACAACTAATTAAGCAACTGACATTGAACTGAGAATTCTACAAACTATAAAA
CATTAATTTTTGAAGGTAATTTAGTTTTGTGGCTGGGCATTCAGTGAAGTCTTAGGACTTCTTTGCAGACAACTG
ACTGGGTATATATAGGAATGAATCTGGCTTTAGGGTTAAATCATTTAAGGTCCTTTTATAGGCAGGCACTAGTAA
CTAAAACTGAAAACTAAGTAAGTTTATTTTTGAGGAATGTTGTTAAAAATGTCTTTAGGAAGTCACTAAAACTTA
ATTGGAAGAAAAAATCATGATGCTTATACAATAAATATGAATAAATGTTATATAAGGAAACTCACCTATTTGAAA
TCATGGCTATATTGTTTTTATTTTCTAGATTCCAAAAATACAAACACTAGTTGTTCCAGCATTGTACTTTGATAA
GTCTGTACATTGACGTGTATGGACTAAATCCAGGGTAAAATCAATGTTACAAAATTTAAGGGTATGTTAACTAAA
GGATAGCATTTCTAAGATATTTTGAATATTAGGGTCATTTGGCACTTCTCAGCAAGTAGGATACTTCTCATGTTT
TTGAAATTATATGAATATGGAAAAAAATGGCTTAAGACCAGCGTCTCTGTATGACATTGTGTGGTTGACCCTCTG
AGATAACTGTTTTCATCTACAGAATTGCATTTTTGCTTTTAAAGAGGTCTTATAATGGAACTAGGAATCACCGTT
TTGAGAGAACCTGCATATATACCAGTCATTATCTGTTTGGTCCTTATACAGTTTTAACTTACTTAGATTTATTCT
AGTTAAGCCATAAGTTCAACGTGTAAACTTGTTTTCATTAAAGAATTTTTCTATCAAAAAAAAAAAAAAAAAAA
AA

FIGURE 1438

MTRDFKPGDLIFAKMKGYPHWPARVDEVPDGAVKPPTNKLPIFFFGTHETAFLGPKDIFPYSENKEKYGKPNKRK
GFNEGLWEIDNNPKVKFSSQQAATKQSNASSDVEVEEKETSVSKEDTDHEEKASNEDVTKAVDITTPKAARRGRK
RKAEKQVETEEAGVVTTATASVNLKVSPKRGRPAATEVKIPKPRGRPKMVKQPCPSESDIITEEDKSKKKGQEEK
QPKKQPKKDEEGQKEEDKPRKEPDKKEGKKEVESKRKNLAKTGVTSTSDSEEEGDDQEGEKKRKGGRNFQTAHRR
NMLKGQHEKEAADRKRKQEEQMETEQQNKDEGKKPEVKKVEKKRETSMDSRLQRIHAEIKNSLKIDNLDVNRCIE
ALDELASLQVTMQQAQKHTEMITTLKKIRRFKVSQVIMEKSTMLYNKFKNMFLVGEGDSVITQVLNKSLAEQRQH
EEANKTKDQGKKGPNKKLEKEQTGSKTLNGGSDAQDGNQPQHNGESNEDSKDNHEASTKKKPSSEERETEISLKD
STLDN

FIGURE 1439

GGCACGAGGCTGTGCTCCCGGCGCTGACGTGTCTGGGCGGTCGGCTTCCACTCCTTCAGGCGTCGGCAGCCACTA
GTCGTGGCGAGAGGGGCGGGGTGGCCGGGGCTGGCGCTCCACTTGGCCCCCGCTCCCGGCCCGCCCCGCCGCCGC
GGCCCCCCGGATGAGGGTATATATTCGGAGCGAGCGCGGGACGCCGATGAGTGGCCGCGCGGAAGGAGCTGGAGA
CGGTCGTAGCTGCGGTCGCGCCGAGAAAGGTTTACAGGTACATACATTACACCCCTATTTCTACAAAGCTTGGCT
ATTAGAGCATT**ATG**AACATTAATGACCTCAAACTCACGTTGTCCAAAGCTGGGCAAGAGCACCTACTACGTTTCT
GGAATGAGCTTGAAGAAGCCCAACAGGTAGAACTTTATGCAGAGCTCCAGGCCATGAACTTTGAGGAGCTGAACT
TCTTTTTCCAAAAGGCCATTGAAGGTTTTAACCAGTCTTCTTACCAAAAGAATGTGGATGCACGAATGGAACCTG
TGCCTCGAGAGGTATTAGGCAGTGCTACAAGGGATCAAGATCAGCTCCAGGCCTGGGAAAGTGAAGGACTTTTCC
AGATTTCTCAGAATAAAGTAGCAGTTCTTCTTCTAGCTGGTGGGCAGGGGACAAGACTCGGCGTTGCATATCCTA
AGGGGATGTATGATGTTGGTTTGCCATCCCGTAAGACACTTTTTCAGATTCAAGCAGAGCGTATCCTGAAGCTAC
AGCAGGTTGCTGAAAAATATTATGGCAACAAATGCATTATTCCATGGTATATAATGACCAGTGGCAGAACAATGG
AATCTACAAAGGAGTTCTTCACCAAGCACAAGTACTTTGGTTTAAAAAAAGAGAATGTAATCTTTTTTCAGCAAG
GAATGCTCCCCGCCATGAGTTTTGATGGGAAAATTATTTTGGAAGAGAAGAACAAAGTTTCTATGGCTCCAGATG
GGAATGGTGGTCTTTATCGGGCACTTGCAGCCCAGAATATTGTGGAGGATATGGAGCAAAGAGGCATTTGGAGCA
TTCATGTCTATTGTGTTGACAACATATTAGTAAAAGTGGCAGACCCACGGTTCATTGGATTTTGCATTCAGAAAG
GAGCAGACTGTGGAGCAAAGGTGGTAGAGAAAACGAACCCTACAGAACCAGTTGGAGTGGTTTGCCGAGTGGATG
GAGTTTACCAGGTGGTAGAATATAGTGAGATTTCCCTGGCAACAGCTCAAAAACGAAGCTCAGACGGACGACTGC
TGTTCAATGCGGGGAACATTGCCAACCATTTCTTCACTGTACCATTTCTGAGAGATGTTGTCAATGTTTATGAAC
CTCAGTTGCAGCACCATGTGGCTCAAAAGAAGATTCCTTATGTGGATACCCAAGGACAGTTAATTAAGCCAGACA
AACCCAATGGAATAAAGATGGAAAAATTTGTCTTTGACATCTTCCAGTTTGCAAAGAAGTTTGTGGTATATGAAG
TATTGCGAGAAGATGAGTTTTCCCCACTAAAGAATGCTGATAGTCAGAATGGGAAAGACAACCCTACTACTGCAA
GGCATGCTTTGATGTCCCTTCATCATTGCTGGGTCCTCAATGCAGGGGGCCATTTCATAGATGAAAATGGCTCTC
GCCTTCCAGCAATTCCCCGCTTGAAGGATGCCAATGATGTACCAATCCAATGTGAAATCTCTCCTCTTATCTCCT
ATGCTGGAGAAGGATTAGAAAGTTATGTGGCAGATAAAGAATTCCATGCACCTCTAATCATCGATGAGAATGGAG
TTCATGAGCTGGTGAAAAATGGTATT**TGA**ACCAGATACCAAGTTTTGTTTGCCACGATAGGAATAGCTTTTATTT
TTGATAGACCAACTGTGAACCTACAAGACGTCTTGGACAACTGAAGTTTAAATATCCACAGGGTTTTATTTTGCT
TGTTGAACTCTTAGAGCTATTGCAAACTTCCCAAGATCCAGATGACTGAATTTCAGATAGCATTTTTATGATTCC
CAACTCATTGAAGGTCTTATTTATATAATTTTTTCCAAGCCAAGGAGACCATTGGCCATCCAGGAAATTTCGTAC
AGCTGAAATATAGGCAGGATGTTCAACATCAGTTTACTTGCAGCTGGAAGCATTTGTTTTTGAAGTTGTACATAG
TAATAATATGTCATTGTACATGTTGAAAGGTTTCTATGGTACTAAAAGTTTGTTTTATTTTATCAAACATTAAGC
TTTTTTAAGAAAATAATTGGGCAGTGAAATAAATGTATCTTCTTGTCTCTGGAAAAAAAAAAAAAAAAAAAAAA
AAAAAAA

FIGURE 1440

MNINDLKLTLSKAGQEHLLRFWNELEEAQQVELYAELQAMNFEELNFFFQKAIEGFNQSSYQKNVDARMEPVPRE
VLGSATRDQDQLQAWESEGLFQISQNKVAVLLLAGGQGTRLGVAYPKGMYDVGLPSRKTLFQIQAERILKLQQVA
EKYYGNKCIIPWYIMTSGRTMESTKEFFTKHKYFGLKKENVIFFQQGMLPAMSFDGKIILEEKNKVSMAPDGNGG
LYRALAAQNIVEDMEQRGIWSIHVYCVDNILVKVADPRFIGFCIQKGADCGAKVVEKTNPTEPVGVVCRVDGVYQ
VVEYSEISLATAQKRSSDGRLLFNAGNIANHFFTVPFLRDVVNVYEPQLQHHVAQKKIPYVDTQGQLIKPDKPNG
IKMEKFVFDIFQFAKKFVVYEVLREDEFSPLKNADSQNGKDNPTTARHALMSLHHCWVLNAGGHFIDENGSRLPA
IPRLKDANDVPIQCEISPLISYAGEGLESYVADKEFHAPLIIDENGVHELVKNGI

FIGURE 1441

TGCTGCTGTCCTGGAGGGAAATGGAGCAGGCTGTGGAGCTCTGTGGGCGGGTAGGAGACTCATTTGGGTTTCGGA
ACTTACCAAGGGGGTGAGATTTTGTGCTCCCACTTTTCACTTTCTCATCAAACACTGGGTCGATCTCTGTCAAAA
ATCAGGTGTTCCTCACCATGCTTTGAGCTTAACTGGACCAGCTGAAAAGAGGCCAAGAGAGTAGCCAGTGAAGGG
AGCCCCTCTGTGGCCAGATGCAAGAGCTGCATGAATGGACAGAGATGGTCCAGGTTTAAATAAGAAGCAAGGGTT
AGGTTCCCTTGGGGAAAAGCCAAGACCATTTCCTGTTAGGAAGGGCATTGGATGGATGATCAACACTCCCTCTTG
TCGAAGGTTTTTGACTAATTTTGTTGGGATGCTAAATCCATAGGAAATAAAAGGTCTAGGCAGAAAGTCTCAGGG
CAGCGTAAATCAGATGTCACCAAAAAAAGTTAATTATGAAGGCAAAGGAAATACATGTGACTTAATGAACCTCAC
ACAAACTGAAGGTTGAAGTCAGGCTCCGGGGCTTTTTCCTGGACTTATCCTCTGTTTTCCCCTGTGTACTTGGGC
AAGGATCTTCACCTGTGTCTTAGTATCGATTTTTATGAATCAGTACTGATGGAGTATATGTGTGTTTAATGGTGA
ATATTAACCATAGAAGGGCTGAGTGCTCCTCCCCATCTTGGGACTCATAATCTGTGAAATAAAACAGTCTGGGCC
TCCCTGCCCGGGTAGCATCAGGATAGACAGATGAAGAGAAGAGAAAGTAATGTGTCTTGGGCATCTTCTGTATGC
CAGGCACCATGCCAGAGGCTTTAAGTACTTCATCTTACTTGACTCCTCAGATGGCCCTGTTAGAAGCCTATTTTA
TGCAAAAGGAAACTGTAGCTGGGGGTAAGTAACTTGCCAAGGGGTCACACAGCTAGAAAGCGGTGGACCCTAGAT
GCAGGCGCAGGGCATTCAGACCCCACAGTCCACATTCCTTTGAGCCAGTCCATTGAGGGTCCTCAGGGAATGTGG
CGGGTCCCCTGGTCTCGCTCCCCCGCAGATCTTGCATCTCAGCATGCGCCTACCACATCAGTTGACATTAGCACA
GCTTTTCCATTAGGAGAACGAAGTGAAACTCCTGGTAGAACGG**ATG**ATGGCTCTGCAGACCGACATTGTGGACTT
ACAGAGGAGCCCCATGGGCCGGAAGCAGGGGGGAACGCTGGACGACCTAGAGGAGCAAGCAAGGGAGCTGTACAG
GAGACTAAGGGAAAAACCTCGAGACCAGCGAACTGAGGGTGACAGTCAGGAAATGGTACGGCTGCTGCTTCAGGC
AATTCAGAGCTTCGAGAAGAAAGTGCGAGTGATCTATACGCAGCTCAGTAAAACTGTGGTTTGCAAGCAGAAGGC
GCTGGAACTGTTGCCCAAGGTGGAAGAGGTGGTGAGCTTAATGAATGAGGATGAGAAGACTGTTGTCCGGCTGCA
GGAGAAGCGGCAGAAGGAGCTCTGGAATCTCCTGAAGATTGCTTGTAGCAAGGTCCGTGGTCCTGTCAGTGGAAG
CCCGGATAGCATGAATGCCTCTCGACTTAGCCAGCCTGGGCAGCTGATGTCTCAGCCCTCCACGGCCTCCAACAG
CTTACCTGAGCCAGCCAAGAAGAGTGAAGAACTGGTGGCTGAAGCACATAACCTCTGCACCCTGCTAGAAAATGC
CATACAGGACACTGTGAGGGAACAAGACCAGAGTTTCACGGCCCTAGACTGGAGCTGGTTACAGACGGAAGAAGA
AGAGCACAGCTGCCTGGAGCAGGCCTCA**TGA**TGTGGGGGGACTCGACCCCCTGACATGGGGCAGCCCATAGCAGG
CCTTGTGCGGTGGGGGGACTCGACCCCCTGACATGGGGCTGCCTGGAGCAGGCCGCGTGACGTGGGGCTGCCTGG
CCGCGGCTCTCACATGGTGGTTCCTGCTGCACTGATGGCCCAGGGGTCTCTGGTATCCAGATGGAGCTCTCGCTT
CCTCAGCAGCTGTGACTTTCACCCAGGACCCAGGACGCAGCCCTCCGTGGGCACTGCCGGCGCCTTGTCTGCACA
CTGGAGGTCCTCCATTACAGAGGCCCAGCGCACATCGCTGGCCCCACAAACGTTCAGGGGTACAGCCATGGCAGC
TCCTTCCTCTGCCGTGAGAAAAGTGCTTGGAGTACGGTTTGCCACACACGTGACTGGACAGTGTCCAATTCAAAT
CTTTCAGGGCAGAGTCCGAGCAGCGCTTGGTGACAGCCTGTCCTCTCCTGCTCTCCAAAGGCCCTGCTCCCTGTC
CTCTCTCACTTTACAGCTTGTGTTTCTTCTGGATTCAGCTTCTCCTAAACAGACAGTTTAATTATAGTTGCGGCC
TGGCCCCATCCTCACTTCCTCTTTTTATTTCACTGCTGCTAAAATTGTGTTTTTACCTACTACTTTGGTGGTTGT
CCTCTTTTCGGCAAAGTTGGAGCGAGTGCCAAGCTCTCCATCTGTGGTCCTTTCTGCCAAGAGCGACTCATAGTA
ACCAGGATGGGAGAGCAGCTGCCTTATTCTGAATCCCAAAAATTACTTGGGGGTGATTGTCACAGAGGAGGGACA
GAAAGGGTATCTGCTGACCACCAGCCTGCCTACCCATGCCCATGTCTCCATTCCTGCTCAAGCGTGTGTGCTGGG
CCGGGGAGTCCCTGTCTCTCACAGCATCTAGCAGTATTATTAAATGGATTCATTTTAAAAATAGCTCCTATATTT
TGTAACATGTCTCAAACACTCATACTGGGTTCCACAATCCACTGTTAGAATACCTATGGTTAGGGCTTCTGAACT
AAAATAATGGAAAATTTTAACAATTTGTATAGTGCCTGGATCATTACTAGTGCCATAACCCTGCTTCTTCAACAT
TTCACAGAACTTCTCTTTTATATAAAGGCAAGAGCACAAAATGAGTTCAGATGATCACAAACAGGTGAGTTTTGT
TGGAGAAGAAAGTTGGAGTAGGAGACTTTCACAAGTGGTTTCCATGGAGATAGAATGAAGCATTCTGTGGTCAAG
TAAGTTTAGGGAGCTATTCATGTTTCACTTGCTTTGTGGAGATTCACACTATGCACTGGGAAAGTATCTGAAAAG
TCTTATAATAAAGAAACAGGCTTAACTTTGTGTAAGAACACTGTTTATCAATGTCATTTGGCTATAGAAACATTT
TCTCCTGCTGATTGTGTGTGTGAAACATGTATTAACATTCCAATGAACTAGCATTTAATAAAGCACAATTTTGGA
AACCCTGGTAAATGACAGTGGGAAATAACACCCGAAAGGCAAGGACGGGCAGATTGGGGAGGGAAAGGATGTTGG
GCTAAGGGCTGTGAGCTTATGTTACAGGCAACTGAGCCACTGAAGAATTTTGACGAAGAAAATGCCAACCAAAGC
AGTCATTTTAAAAGTTTATGGCTGTTCAGTTACAGGACAAGTTGTGAAAAGAAAGAAAAAAAAATGG

FIGURE 1442

MMALQTDIVDLQRSPMGRKQGGTLDDLEEQARELYRRLREKPRDQRTEGDSQEMVRLLLQAIQSFEKKVRVIYTQ
LSKTVVCKQKALELLPKVEEVVSLMNEDEKTVVRLQEKRQKELWNLLKIACSKVRGPVSGSPDSMNASRLSQPGQ
LMSQPSTASNSLPEPAKKSEELVAEAHNLCTLLENAIQDTVREQDQSFTALDWSWLQTEEEEHSCLEQAS

FIGURE 1443

GAGCCCAGCCGAGCGTCCGCCGCTGCCCGTGCGCCTCTGCGCTCCGCGCC**ATG**GCCGGCCTCAACTCCCTGGAGG
CGGTGAAACGCAAGATCCAGGCCCTGCAGCAGCAGGCGGACGAGGCGGAAGACCGCGCGCAGGGCCTGCAGCGGG
AGCTGGACGGCGAGCGCGAGCGGCGCGAGAAAGCTGAAGGTGATGTGGCCGCCCTCAACCGACGCATCCAGCTCG
TTGAGGAGGAGTTGGACAGGGCTCAGGAACGACTGGCCACGGCCCTGCAGAAGCTGGAGGAGGCAGAAAAAGCTG
CAGATGAGAGTGAGAGAGGAATGAAGGTGATAGAAAACCGGGCCATGAAGGATGAGGAGAAGATGGAGATTCAGG
AGATGCAGCTCAAAGAGGCCAAGCACATTGCGGAAGAGGCTGACCGCAAATACGAGGAGGTAGCTCGTAAGCTGG
TCATCCTGGAGGGTGAGCTGGAGAGGGCAGAGGAGCGTGCGGAGGTGTCTGAACTAAAATGTGGTGACCTGGAAG
AAGAACTCAAGAATGTTACTAACAATCTGAAATCTCTGGAGGCTGCATCTGAAAAGTATTCTGAAAAGGAGGACA
AATATGAAGAAGAAATTAAACTTCTGTCTGACAAACTGAAAGAGGCTGAGACCCGTGCTGAATTTGCAGAGAGAA
CGGTTGCAAAACTGGAAAAGACAATTGATGACCTGGAAGAGAAACTTGCCCAGGCCAAAGAAGAGAACGTGGGCT
TACATCAGACACTGGATCAGACACTAAACGAACTTAACTGTATA**TAA**GCAAAACAGAAGAGTCTTGTTCCAACAG
AAACTCTGGAGCTCCGTGGGTCTTTCTCTTCTCTTGTAAGAAGTTCCTTTTGTTATTGCCATCTTCGCTTTGCTG
GAAATGTCAAGCAAATTATGAATACATGACCAAATATTTTGTATCGGAGAAGCTTTGAGCACCAGTTAAATCTCA
TTCCTTCCCTTTTTTTTTCAAATGGCACCAGCTTTTTCAGCTCTCTTATTTTTTCCTTAAGTAGCATTTATTCCT
AAGGTAGGCAGGGTATTTCCTAGTAAGCATACTTTCTTAAGACGGAGGCCATTTGGTTCCTGGGAGAATAGGCAG
CCCCACACTTTGAAGAATACAGACCCCAGTATCTAGTCGTGGATATAATTAAAACGCTGAAGACCATAACCTTTT
GGGTCAACTGTTGGTCAAACTATAGGAGAGACCAGGGACCATCACATGGGTAGGGATTTTCCATCCAGAGCCAAT
AAAAGGACTGGTGGGGGCCGGGGGTGGCTATTGTGGGAAGTCATAACCCACAGATAGATCAACCTAAGAATCCTG
GCCCTTCTCCACTCTCCACCATGCAGGACAAACATCTTCTCAAGCAGTCAACGTAGAATGCTTGGGAAATAGTCA
TAATTACCCACATATAGTAATTAATAGATGGTAATTAATTGATCCTTGATGTGATGTTCTTTTGCATATTTCCTT
CATTCTAAAGTTGTTCCCTGGCCGGGAGCGTTTGCTTTCGCCTGTAATCCCAACACTTTGGGAGGCCAGGACAGA
TCACTTGAGGTCAGGAGTTCGAGACCAGCCCAGCCAACATGGCGAAACCATGTCTCTACTAAAAATACAAAAATT
ATGGTGACGCCTGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAGGAGGATCGCTTGAACCCAGGAAGTGGAG
ACTGCAGTGAGCCGATATCGCACCACAGCGCTCCAGCCTGGTCGACAGAGTGAGACTCCATCTCAAGAAAAAATA
AAAATAAAGTTGTTCTCTGAAGAGCAAATGTCTCATTCCAGTAATGACCCACTCAGCAGGAATATGGTGGAGTTC
AGTCCAATTCAGGTCAGCCATATCCAAAAGACCACAAGTCATTACTAAGTTGAGCAAAAGAGTTTTTATCTATTA
GCAGAAAGGGCCTCTCTGGCAGCAGAGATTAAAAACTGGCCCAACTTCATTTCCATACTTCAGGGAACAGCAAAT
TGAGGATTTACTTATCTAGGACTT

FIGURE 1444

MAGLNSLEAVKRKIQALQQQADEAEDRAQGLQRELDGERERREKAEGDVAALNRRIQLVEEELDRAQERLATALQ
KLEEAEKAADESERGMKVIENRAMKDEEKMEIQEMQLKEAKHIAEEADRKYEEVARKLVILEGELERAEERAEVS
ELKCGDLEEELKNVTNNLKSLEAASEKYSEKEDKYEEEIKLLSDKLKEAETRAEFAERTVAKLEKTIDDLEEKLA
QAKEENVGLHQTLDQTLNELNCI

FIGURE 1445A

CGGCCGCGAGCGCAGTGGTGTGGAGCGCGCCGGGTCCCGGAGCCGGCTGTCTGAGGG**ATG**GACGAGACGAGCCCA
CTAGTGTCCCCCGAGCGGGCCCAACCCCCGGACTACACCTTCCCGTCGGGCTCGGGCGCTCACTTTCCGCAGGTG
CCCGGGGGCGCGGTCCGAGTGGCGGCGGCGGCCGGCTCGGGCCCCTCTCCGCCAGGCTCGCCGGGCCACGACCGC
GAGCGGCAGCCACTGTTGGATCGGGCCCGGGGCGCGGCGGCCCAGGGCCAGACCCAAACCGTGGCGGCGCAGGCC
CAGGCTCTGGCCGCTCAGGCCGCGGCGGCAGCCCACGCCGCTCAGGCCCACCGCGAGCGGAACGAGTTCCCGGAG
GATCCTGAGTTCGAGGCGGTGGTGCGGCAGGCCGAGCTGGCCATCGAGCGCTGCATCTTTCCCGAGCGCATCTAC
CAGGGCTCCAGCGGAAGCTACTTCGTCAAGGACCCTCAGGGGAGGATCATTGCTGTCTTCAAACCCAAGAATGAA
GAGCCCTATGGGCATCTTAATCCTAAGTGGACCAAGTGGCTGCAGAAGCTGTGCTGTCCTTGCTGCTTTGGCCGT
GACTGCCTTGTCCTTAACCAGGGCTATCTCTCAGAAGCAGGGGCCAGCCTGGTGGACCAAAAACTGGAACTCAAC
ATTGTTCCCCGTACAAAGGTAGTATACCTGGCCAGTGAGACCTTCAACTATAGTGCCATTGACCGAGTGAAGTCC
AGGGGCAAGCGGCTTGCACTAGAGAAAGTGCCAAAAGTTGGACAGCGGTTTAACCGCATCGGGCTACCACCAAAG
GTTGGTTCATTCCAGCTCTTTGTTGAAGGCTACAAAGATGCAGACTATTGGCTGCGGCGTTTTGAAGCAGAACCT
CTTCCTGAGAACACTAACCGGCAACTACTGCTCCAGTTTGAGCGGTTGGTGGTGCTGGATTACATCATCCGCAAC
ACTGATCGAGGCAATGACAACTGGCTGATTAAATATGACTGTCCAATGGATAGTTCTAGCTCTCGGGACACAGAC
TGGGTGGTGGTGAAGGAGCCTGTTATCAAGGTGGCTGCCATAGACAATGGGCTGGCCTTCCCACTGAAGCATCCT
GACTCCTGGAGGGCATATCCTTTTTACTGGGCCTGGTTGCCCCAGGCGAAAGTCCCATTTTCTCAGGAGATCAAA
GATCTGATCCTTCCAAAGATATCGGACCCTAACTTCGTCAAGGACTTGGAAGAGGACCTATATGAACTCTTCAAG
AAAGATCCTGGTTTCGACAGGGGCCAGTTCCATAAGCAGATTGCTGTCATGCGGGGCCAGATCTTAAATCTGACC
CAGGCCTTGAAAGACAACAAGAGTCCCCTGCACCTCGTCCAGATGCCACCTGTGATTGTCGAGACGGCCCGTTCC
CACCAGCGGTCTTCTAGCGAGTCCTACACACAGAGCTTTCAGAGCCGGAAGCCCTTCTTTTCATGGTGG**TAG**CTC
CAGAGGCAGGCAGAGGAAATATTGTCAGAGACTGGTGGGAGGAAGCCTGGGGAGTGGGGTGCAGGAAAAGCCAGA
GAAGCCGGTGGAGAGCAGCACCTTTAAGAGCCCTCTCTCTCTGCTTGCCACCCTGCTCAGAGCTTTCCACCCACA
GGGAGAAGCACAATCAGGAACAGTGAGTGCTCCTCGCCCTTCTGATGTGGGGGAGGCTGGAGCTCCATGCACGTA
GTCCAGATGCCTGGGAAGGAACATCTCCCTTCCAGCATCTGCTGGTAGCAGGCTGGGACAGTCCCTTCCTTCCCT
GAAACCCTGCTCTATTGCAATTCCCTATTATATTCTGCATCAGAAAAACAAACAAAACAAAAACAACTTTAAATG
CTTGTAGCAGAACCCCGGGTCATCTCATGTCAGAAACCTTTAATCCAGGCCTAAATTTGCATAGACCTGACATTC
AGCTGCCTTGCAGTTGCTTCCTCCCATGAGCCAAGGTGGTGTCAGAGGGCAACTGGATGACTCGCAGTACCACAG
CACTGGGACAGACAGAAGCCACACCTTTCTTTTGGGTTTTTGCCAAGCCTCCTCCATCTCCCATCAGTGCTGTGG
GCTGGCTGCAAGCCTCGAAACAGTTCTCCTGGAAGGGAGGTTTTTGCTTTACCCCCGCCAGCACTTCCGCACACA
ATCATAGAGAACCTCTCTGCTCTCTGCTGGCCTACAGCTTGTCTGTTTCTCAAGCAGAGGCAGGAAGAGCTAGTC
TTAGCATTTATATTTTAATAGGAAGTTGACTCCCAGCATGTAAAAGTGATCCACGCAGCCGGAGTGTATGCCGGG
AGCTAAGTGGTCTATGGGTGAACATATCCCACCTTGCTTCCTGAGTCCTTGGTCCCAATCTTCTCATTTGTTCCT
CTCGTTTTAAATTTTTTCCCCCCAACTCTTTTGATGTAAGAGTTCAGTTTGTCTTCGGGAGTGGGTCTCTGCAAG
GGCTCTGGGATGAGTCTTGGCTTCCAAGAGGACAGGCTATTAGGTTCTTGGACTTTTTTCTGTGCTACCGCTGCT
GCTTGGTGGAAGTAACAGGACGTGGATTCTGCCTCATAAGTGGCAGTTTCCCTTTTCTCTCTGACTTGTCCTAGG
CCGATTTCTCTATGGCTTCCCTGAGAAAGGTGAGGCCCAAAGGAGAGAGGCCTTCAAACTGTCCCAGGTCCTGCG
CAGCTCAGTGCGTATCTTCTTGCTTCCATGTGTCTTTTCCCCTGCTGCCTCACTCCCCACCCCCACTTGCCAGGT
GTTTGAGCCATTTCTACACCAAAGCAAAGTACGGCCTCAGGAGGGAGTAAAAAGGGTGCCATCTGTGTCTGGAGG
GGCAGCTGTGTTCATGCCCTGTGCTACTGGACATTTCACAATTCTGGCACCTTGCGATTGGTCAGTCAACCTCAG
AAAGTAACTATCTTGAAGGTTTGAAAAACAACCAAAGAAAGGGAGTGAGGACTATGGCTGCATGTCCTCTGCTTG
CCCGGCTGCAGAGCAGAGATGTGCAGCCCTCTGGTCAGCTGGTCCAGGCTGGTCCCCGCCGGTCCCCTTCCAGTC
CAGCCACCAAGAGTCCACTTGTCCCGGGCTTCCACCTGGCTGACAGGAAGAATTTCTGAGAGCTGGATGTGCATG
CCCTGTGGACGAAGGTACAGCTCGCCTGCCTGCCCCAATCCCAGCCCCGACAATCACATGCAGCTGACTCGGACA
CTGGCCTTGGGAACAATGTTCGAGAGAACACTTGCCCCTTGACTGTAGGAGCCAGAAGGGGACCCAGGTGTGCAT
AGCTCTCTGTAGACATTTTTACCCAAACCTGTTGGTAAAGTGCCCATCTGGTGCTCAAGAGAGCCTGGGGGTCTA
ACAGGGAGCCCGGCTGCCTCACCTGGCCACAGCCTCCACACCAGATCTCCACATTGTCTTGATCCAGACCAGCTC
TGTGATCAGAAGGAAATTGGGTCCAGTGTAGGAGAGAGCTGGTCCTGGGCCTGGCAGGCAAGAGTGTGGGCATCC
TTTCCTGGCCTTTCTCCACTCTCCCTCAAGCCTGTGCTCAGGTTGCCTTGAATGTGGACTCTGGAAGAGCCAGGG

FIGURE 1445B

GCCCAGAATGCCGGGGGAGGCTTCTGAGTGGCACTCATGGAACACCGTCCCTCTGCCAGCCATAGGCCCTGCCTC
CAGTGTCAGGGAATGGAGGCTGGGCTGCGAGAGTGTTGCTGCCCCCTGTGTCATTCTTCTAATCCAATGTAGAAA
TTGTACGTAATGTATTTAAATCAACGCAAATGTATGAATAACAAATACAGTTCTGACCTTTTTTGTCCAGTTTCT
TTGGGGGAAGGAAGACAAAGAAGGTAGGAACGGAATTTTGAGGGCAAAGAAACCTGTGTTTCCATGGAATTGCTG
AGACGTGGCTCCTGGGGCTATTTCTCCCTAATAAAGGATGATCCAGGTCCTCATTTCCAAAGTCCCAATGCTCTG
AAAACCAAAAGTATTTTCATAACCCATTTGAAACCAAACCTGACCTGAACTTACACTGATAGGAAGCTATGGGTA
ATTATGATGTGTTCCTTTTAGTGTGATTCTTTGTTGCAGAAATGTCAATATATTTTATGACATGGTTCCCTACTA
GGGATTATACAGTATTTGCTGACTACTTCCTAAGAGCCAAAAATAAAAAATCTGAATTCC

FIGURE 1446

MDETSPLVSPERAQPPDYTFPSGSGAHFPQVPGGAVRVAAAAGSGPSPPGSPGHDRERQPLLDRARGAAAQGQTQ
TVAAQAQALAAQAAAAAHAAQAHRERNEFPEDPEFEAVVRQAELAIERCIFPERIYQGSSGSYFVKDPQGRIIAV
FKPKNEEPYGHLNPKWTKWLQKLCCPCCFGRDCLVLNQGYLSEAGASLVDQKLELNIVPRTKVVYLASETFNYSA
IDRVKSRGKRLALEKVPKVGQRFNRIGLPPKVGSFQLFVEGYKDADYWLRRFEAEPLPENTNRQLLLQFERLVVL
DYIIRNTDRGNDNWLIKYDCPMDSSSSRDTDWVVVKEPVIKVAAIDNGLAFPLKHPDSWRAYPFYWAWLPQAKVP
FSQEIKDLILPKISDPNFVKDLEEDLYELFKKDPGFDRGQFHKQIAVMRGQILNLTQALKDNKSPLHLVQMPPVI
VETARSHQRSSSESYTQSFQSRKPFFSWW

FIGURE 1447A

CGGCCGCGAGCGCAGTGGTGTGGAGCGCGCCGGGTCCCGGAGCCGGCTGTCTGAGGG**ATG**GACGAGACGAGCCCA
CTAGTGTCCCCCGAGCGGGCCCAACCCCCGGACTACACCTTCCCGTCGGGCTCGGGCGCTCACTTTCCGCAGGTG
CCCGGGGGCGCGGTCCGAGTGGCGGCGGCGGCCGGCTCGGGCCCCTCTCCGCCAGGCTCGCCGGGCCACGACCGC
GAGCGGCAGCCACTGTTGGATCGGGCCCGGGGCGCGGCGGCCCAGGGCCAGACCCAAACCGTGGCGGCGCAGGCC
CAGGCTCTGGCCGCTCAGGCCGCGGCGGCAGCCCACGCCGCTCAGGCCCACCGCGAGCGGAACGAGTTCCCGGAG
GATCCTGAGTTCGAGGCGGTGGTGCGGCAGGCCGAGCTGGCCATCGAGCGCTGCATCTTTCCCGAGCGCATCTAC
CAGGGCTCCAGCGGAAGCTACTTCGTCAAGGACCCTCAGGGGAGGATCATTGCTGTCTTCAAACCCAAGAATGAA
GAGCCCTATGGGCATCTTAATCCTAAGTGGACCAAGTGGCTGCAGAAGCTGTGCTGTCCTTGCTGCTTTGGCCGT
GACTGCCTTGTCCTTAACCAGGGCTATCTCTCAGAAGCAGGGGCCAGCCTGGTGGACCAAAAACTGGAACTCAAC
ATTGTTCCCCGTACAAAGGTAGTATACCTGGCCAGTGAGACCTTCAACTATAGTGCCATTGACCGAGTGAAGTCC
AGGGGCAAGCGGCTTGCACTAGAGAAAGTGCCAAAAGTTGGACAGCGGTTTAACCGCATCGGGCTACCACCAAAG
GTTGGTTCATTCCAGCTCTTTGTTGAAGGCTACAAAGATGCAGACTATTGGCTGCGGCGTTTTGAAGCAGAACCT
CTTCCTGAGAACACTAACCGGCAACTACTGCTCCAGTTTGAGCGGTTGGTGGTGCTGGATTACATCATCCGCAAC
ACTGATCGAGGCAATGACAACTGGCTGATTAAATATGACTGTCCAATGGATAGTTCTAGCTCTCGGGACACAGAC
TGGGTGGTGGTGAAGGAGCCTGTTATCAAGGTGGCTGCCATAGACAATGGGCTGGCCTTCCCACTGAAGCATCCT
GACTCCTGGAGGGCATATCCTTTTTACTGGGCCTGGTTGCCCCAGGCGAAAGTCCCATTTTCTCAGGAGATCAAA
GATCTGATCCTTCCAAAGATATCGGACCCTAACTTCGTCAAGGACTTGGAAGAGGACCTATATGAACTCTTCAAG
AAAGATCCTGGTTTCGACAGGGGCCAGTTCCATAAGCAGATTGCTGTCATGCGGGGCCAGATCTTAAATCTGACC
CAGGCCTTGAAAGACAACAAGAGTCCCCTGCACCTCGTCCAGATGCCACCTGTGATTGTCGAGACGGCCCGTTCC
CACCAGCGGTCTTCTAGCGAGTCCTACACACAGAGCTTTCAGAGCCGGAAGCCCTTCTTTTCATGGTGG**TAG**CTC
CAGAGGCAGGCAGAGGAAATATTGTCAGAGACTGGTGGGAGGAAGCCTGGGGAGTGGGGTGCAGGAAAAGCCAGA
GAAGCCGGTGGAGAGCAGCACCTTTAAGAGCCCTCTCTCTCTGCTTGCCACCCTGCTCAGAGCTTTCCACCCACA
GGGAGAAGCACAATCAGGAACAGTGAGTGCTCCTCGCCCTTCTGATGTGGGGGAGGCTGGAGCTCCATGCACGTA
GTCCAGATGCCTGGGAAGGAACATCTCCCTTCCAGCATCTGCTGGTAGCAGGCTGGGACAGTCCCTTCCTTCCCT
GAAACCCTGCTCTATTGCAATTCCCTATTATATTCTGCATCAGAAAAACAAACAAAACAAAAACAACTTTAAATG
CTTGTAGCAGAACCCCGGGTCATCTCATGTCAGAAACCTTTAATCCAGGCCTAAATTTGCATAGACCTGACATTC
AGCTGCCTTGCAGTTGCTTCCTCCCATGAGCCAAGGTGGTGTCAGAGGGCAACTGGATGACTCGCAGTACCACAG
CACTGGGACAGACAGAAGCCACACCTTTCTTTTGGGTTTTTGCCAAGCCTCCTCCATCTCCCATCAGTGCTGTGG
GCTGGCTGCAAGCCTCGAAACAGTTCTCCTGGAAGGGAGGTTTTTGCTTTACCCCCGCCAGCACTTCCGCACACA
ATCATAGAGAACCTCTCTGCTCTCTGCTGGCCTACAGCTTGTCTGTTTCTCAAGCAGAGGCAGGAAGAGCTAGTC
TTAGCATTTATATTTTAATAGGAAGTTGACTCCCAGCATGTAAAAGTGATCCACGCAGCCGGAGTGTATGCCGGG
AGCTAAGTGGTCTATGGGTGAACATATCCCACCTTGCTTCCTGAGTCCTTGGTCCCAATCTTCTCATTTGTTCCT
CTCGTTTTAAATTTTTTCCCCCCAACTCTTTTGATGTAAGAGTTCAGTTTGTCTTCGGGAGTGGGTCTCTGCAAG
GGCTCTGGGATGAGTCTTGGCTTCCAAGAGGACAGGCTATTAGGTTCTTGGACTTTTTTCTGTGCTACCGCTGCT
GCTTGGTGGAAGTAACAGGACGTGGATTCTGCCTCATAAGTGGCAGTTTCCCTTTTCTCTCTGACTTGTCCTAGG
CCGATTTCTCTATGGCTTCCCTGAGAAAGGTGAGGCCCAAAGGAGAGAGGCCTTCAAACTGTCCCAGGTCCTGCG
CAGCTCAGTGCGTATCTTCTTGCTTCCATGTGTCTTTTCCCCTGCTGCCTCACTCCCCACCCCCACTTGCCAGGT
GTTTGAGCCATTTCTACACCAAAGCAAAGTACGGCCTCAGGAGGGAGTAAAAAGGGTGCCATCTGTGTCTGGAGG
GGCAGCTGTGTTCATGCCCTGTGCTACTGGACATTTCACAATTCTGGCACCTTGCGATTGGTCAGTCAACCTCAG
AAAGTAACTATCTTGAAGGTTTGAAAAACAACCAAAGAAAGGGAGTGAGGACTATGGCTGCATGTCCTCTGCTTG
CCCGGCTGCAGAGCAGAGATGTGCAGCCCTCTGGTCAGCTGGTCCAGGCTGGTCCCCGCCGGTCCCCTTCCAGTC
CAGCCACCAAGAGTCCACTTGTCCCGGGCTTCCACCTGGCTGACAGGAAGAATTTCTGAGAGCTGGATGTGCATG
CCCTGTGGACGAAGGTACAGCTCGCCTGCCTGCCCCAATCCCAGCCCCGACAATCACATGCAGCTGACTCGGACA
CTGGCCTTGGGAACAATGTTCGAGAGAACACTTGCCCCTTGACTGTAGGAGCCAGAAGGGGACCCAGGTGTGCAT
AGCTCTCTGTAGACATTTTTACCCAAACCTGTTGGTAAAGTGCCCATCTGGTGCTCAAGAGAGCCTGGGGGTCTA
ACAGGGAGCCCGGCTGCCTCACCTGGCCACAGCCTCCACACCAGATCTCCACATTGTCTTGATCCAGACCAGCTC
TGTGATCAGAAGGAAATTGGGTCCAGTGTAGGAGAGAGCTGGTCCTGGGCCTGGCAGGCAAGAGTGTGGGCATCC
TTTCCTGGCCTTTCTCCACTCTCCCTCAAGCCTGTGCTCAGGTTGCCTTGAATGTGGACTCTGGAAGAGCCAGGG

FIGURE 1447B

GCCCAGAATGCCGGGGGAGGCTTCTGAGTGGCACTCATGGAACACCGTCCCTCTGCCAGCCATAGGCCCTGCCTC
CAGTGTCAGGGAATGGAGGCTGGGCTGCGAGAGTGTTGCTGCCCCCTGTGTCATTCTTCTAATCCAATGTAGAAA
TTGTACGTAATGTATTTAAATCAACGCAAATGTATGAATAACAAATACAGTTCTGACCTTTTTTGTCCAGTTTCT
TTGGGGGAAGGAAGACAAAGAAGGTAGGAACGGAATTTTGAGGGCAAAGAAACCTGTGTTTCCATGGAATTGCTG
AGACGTGGCTCCTGGGGCTATTTCTCCCTAATAAAGGATGATCCAGGTCCTCATTTCCAAAGTCCCAATGCTCTG
AAAACCAAAAGTATTTTCATAACCCATTTGAAACCAAACCTGACCTGAACTTACACTGATAGGAAGCTATGGGTA
ATTATGATGTGTTCCTTTTAGTGTGATTCTTTGTTGCAGAAATGTCAATATATTTTATGACATGGTTCCCTACTA
GGGATTATACAGTATTTGCTGACTACTTCCTAAGAGCCAAAAATAAAAAATCTGAATTCC

FIGURE 1448

MDETSPLVSPERAQPPDYTFPSGSGAHFPQVPGGAVRVAAAAGSGPSPPGSPGHDRERQPLLDRARGAAAQGQTQ
TVAAQAQALAAQAAAAAHAAQAHRERNEFPEDPEFEAVVRQAELAIERCIFPERIYQGSSGSYFVKDPQGRIIAV
FKPKNEEPYGHLNPKWTKWLQKLCCPCCFGRDCLVLNQGYLSEAGASLVDQKLELNIVPRTKVVYLASETFNYSA
IDRVKSRGKRLALEKVPKVGQRFNRIGLPPKVGSFQLFVEGYKDADYWLRRFEAEPLPENTNRQLLLQFERLVVL
DYIIRNTDRGNDNWLIKYDCPMDSSSSRDTDWVVVKEPVIKVAAIDNGLAFPLKHPDSWRAYPFYWAWLPQAKVP
FSQEIKDLILPKISDPNFVKDLEEDLYELFKKDPGFDRGQFHKQIAVMRGQILNLTQALKDNKSPLHLVQMPPVI
VETARSHQRSSSESYTQSFQSRKPFFSWW

FIGURE 1449A

ATCTTTTTTCATCTTCTAGCTGTAGCTCGGGCTGCTTGTCGGCTTGGCTCCCCCTCCCCCCTTTGCTCTCTGCCT
CGTCTTTCCCCAGGACTTCGCTATTTTGCTTTTTTTAAAAAAAGGCAAGAAAGAACTAAACTCCCCCCTCCCTCTC
CTCCAGTCGGGCTGCACCTCTGCCTTGCACTTTGCACAGAGGTAGAGAGCGCGCGAGGGAGAGAGAGGAAAGAAA
AAAAATAATAAAGAGAGCCAAGCAGAAGAGGAGGCGAGAAGCATGAAGTGTTAACTCCCCCGTGCCAAGGCCCGC
GCCGCCCGGACAGACGCCCGCCGCGCCTTCCAGCCCCGAGCGGACGCCGCGCGCCGCCCTGCCTGCAGCCCGGGC
CGGCGACGGCGAGCCCTTCCTTATGCAAAGCGCGCCAGCAGCGCGAAGGCGGGACGCCGCGCACCGGGCCGGGCT
CCTCCAGCTTCGCCGCCGCAGCCACCACCGCCGCCACCGCAGCTCGCGGAGGATCTTCCCGAGCCTGAAGCCGCC
GGCTCGGCGCGCAAGGAGGCGAGCGCAAGGAGGGGCCGGGGCGAGCGAGGGAGCACATTGGCGTGAGCAGGGGGG
AGGGAGGGCGGGCGCGGGGGGCGCGGGCAGGGCGGGGGGGTGTGTGTGTGAGCGCGCTTGGAGGTTTCGGGCCAG
CCACCGCCGCGCAAGCTAGAAGCGCCCCAGCCCGGCAAGCTGGCTCACCCGCTGGCCACCCAGCACAGCCCGCTG
GCCCCTCTCCTGCAGCCCATCTGGCGGAGCGGCGGCGGCGGCGGCGGCAGGAGA**ATG**GCATCAGAACTGGCA
ATGAGCAACTCCGACCTGCCCACCAGTCCCCTGGCCATGGAATATGTTAATGACTTCGATCTGATGAAGTTTGAA
GTGAAAAAGGAACCGGTGGAGACCGACCGCATCATCAGCCAGTGCGGCCGTCTCATCGCCGGGGGCTCGCTGTCC
TCCACCCCCATGAGCACGCCGTGCAGCTCGGTGCCCCCTTCCCCCAGCTTCTCGGCGCCCAGCCCGGGCTCGGGC
AGCGAGCAGAAGGCGCACCTGGAAGACTACTACTGGATGACCGGCTACCCGCAGCAGCTGAACCCCGAGGCGCTG
GGCTTCAGCCCCGAGGACGCGGTCGAGGCGCTCATCAGCAACAGCCACCAGCTCCAGGGCGGCTTCGATGGCTAC
GCGCGCGGGGCGCAGCAGCTGGCCGCGGCGGCCGGGGCCGGTGCCGGCGCCTCCTTGGGCGGCAGCGGCGAGGAG
ATGGGCCCCGCGGCCGCCGTGGTGTCCGCCGTGATCGCCGCGGCCGCCGCGCAGAGCGGCGCGGGCCCGCACTAC
CACCACCACCACCACCACGCCGCCGGCCACCACCACCACCCGACGGCCGGCGCGCCCGGCGCCGCGGGCAGCGCG
GCCGCCTCGGCCGGTGGCGCTGGGGGCGCGGGCGGCGGTGGCCCGGCCAGCGCTGGGGGCGGCGGCGGCGGCGGC
GGCGGCGGAGGCGGCGGGGGCGCGGCGGGGGCGGGGGGCGCCCTGCACCCGCACCACGCCGCCGGCGGCCTGCAC
TTCGACGACCGCTTCTCCGACGAGCAGCTGGTGACCATGTCTGTGCGCGAGCTGAACCGGCAGCTGCGCGGGGTC
AGCAAGGAGGAGGTGATCCGGCTGAAGCAGAAGAGGCGGACCCTGAAAAACCGCGGCTATGCCCAGTCCTGCCGC
TTCAAGAGGGTGCAGCAGAGACACGTCCTGGAGTCGGAGAAGAACCAGCTGCTGCAGCAAGTCGACCACCTCAAG
CAGGAGATCTCCAGGCTGGTGCGCGAGAGGGACGCGTACAAGGAGAAATACGAGAAGTTGGTGAGCAGCGGCTTC
CGAGAAAACGGCTCGAGCAGCGACAACCCGTCCTCTCCCGAGTTTTTCATG**TGA**GTCTGACACGCGATTCCAGCT
AGCCACCCTGATAAGTGCTCCGCGGGGGTCCGGCTCGGGTGTGGGCTTGCTAGTTCTAGAGCCATGCTCGCCACC
ACCTCACCACCCCCACCCCCACCGAGTTTGGCCCCCTTGGCCCCCTACACACACACAAACCCGCACGCACACACC
ACACACACACACACACACACACACACACACCCCACACCCTGCTCGAGTTTGTGGTGGTGGTGGCTGTTTTAAACT
GGGGAGGGAATGGGTGTCTGGCTCATGGATTGCCAATCTGAAATTCTCCATAACTTGCTAGCTTGTTTTTTTTTT
TTTTTTTTACACCCCCCCGCCCCACCCCCCGGACTTGCACAATGTTCAATGATCTCAGCAGAGTTCTTCATGTGA
AACGTTGATCACCTTTGAAGCCTGCATCATTCACATATTTTTTCTTCTTCTTCCCCTTCAGTTCATGAACTGGTG
TTCATTTTCTGTGTGTGTGTGTTTTATTTTGTTTGGATTTTTTTTTTTTAATTTTACTTTTAGAGCTTGCTGTG
CTTGCCCACCTCTTTTCCAACCTCCACCCTCACTCCTTCTCAACCCATCTCTTCCGAGATGAAAGAAAAAAAAAA
GCAAAGTTTTTTTTTCTTCTCCTGAGTTCTTCAGTGAGATTGAGCTTGCAAAGGAAAAAAAAATGTGAAATGTTA
TAGACTTGCAGCGTGCCGAGTTCCATCGGGTTTTTTTTTTAGCATTGTTATGCTAAAATAGAGAAAAAAATCCTC
ATGAACCTTCCACAATCAAGCCTGCATCAACCTTCTGGGTGTGACTTGTGAGTTTTGGCCTTGTGATGCCAAATC
TGAGAGTTTAGTCTGCCATTAAAAAAACTCATTCTCATCTCATGCATTATTATGCTTGCTACTTTGTCTTAGCAA
CAATGAACTATAACTGTTTCAAAGACTTTATGGAAAAGAGACATTATATTAATAAAAAAAAAAGCCTGCATGCTG
GACATATATGGTATAATTATTTTTTCCTTTTTTTTTCCTTTTGGCTTGGAAATGGACGTTCGAAGACTTATAGCA
TGGCATTCATACTTTTGTTTTATTGCCTCATGACTTTTTTGAGTTTAGAACAAAACAGTGCAACCGTAGAGCCTT
CTTCCCATGAAATTTTGCATCTGCTCCAAAACTGCTTTGAGTTACTCAGAACTTCAACCTCCCAATGCACTGAAG
GCATTCCTTGTCAAAGATACCAGAATGGGTTACACATTTAACCTGGCAAACATTGAAGAACTCTTAATGTTTTCT
TTTTAATAAGAATGACGCCCACTTTGGGGACTAAAATTGTGCTATTGCCGAGAAGCAGTCTAAAATTTATTTTTX
AAAAAGAGAAACTGCCCCATTATTTTTGGTTTGTTTTATTTTTATTTTATATTTTTTGGCTTTTGGTCATTGTCA
AATGTGGAATGCTCTGGGTTTCTAGTATATAATTTAATTCTAGTGTTTATAATCTGTTAGCCCAGTTAAAATGTA
TGCTACAGATAAAGGAATGTTATAGATAAATTTGAAAGAGTTAGGTCTGTTTAGCTGTAGATTTTTTAAACGATT
GATGCACTAAATTGTTTACTATTGTGATGTTAAGGGGGGTAGAGTTTGCAAGGGGACTGTTTAAAAAAAGTAGCT

FIGURE 1449B

TATACAGCATGTGCTTGCAACTTAAATATAAGTTGGGTATGTGTAGTCTTTGCTATACCACTGACTGTATTGAAA
ACCAAAGTATTAAGAGGGGAAACGCCCCTGTTTATATCTGTAGGGGTATTTTACATTCAAAAATGTATGTTTTTT
TTTCTTTTCAAAATTAAAGTATTTGGGACTGAATTGCACTAAGATATAACCTGCAAGCATATAATACAAAAAAAA
ATTGCAAAACTGTTTAGAACGCTAATAAAATTTATGCAGTTATAAAAATGGCATTACTGCACAGTTTTAAGATGA
TGCAGATTTTTTTACAGTTGTATTGTGGTGCAGAACTGGATTTTCTGTAACTTAAAAAAAATCCACAGTTTTAAA
GGCAATAATCAGTAAATGTTATTTTCAGGGACTACATCCTGTCTTTAAAAAGAAATGAAAAGTAAATCTTACCAC
AATAAATATAAAAAAATCTTGTCAGTTACTTTTCTTTTACATATTTTGCTGTGCAAAATTGTTTTATATCTTGAG
TTACTAACTAACCACGCGTGTTGTTCCTATGTGCTTTTCTTTCATTTTCAATTCTGGTTATATCAAGAAAAGATA
ATCTACAATAATAAACGGCATTTTTTTTTGATTCTGTAAAAAAAAA

FIGURE 1450

MASELAMSNSDLPTSPLAMEYVNDFDLMKFEVKKEPVETDRIISQCGRLIAGGSLSSTPMSTPCSSVPPSPSFSA
PSPGSGSEQKAHLEDYYWMTGYPQQLNPEALGFSPEDAVEALISNSHQLQGGFDGYARGAQQLAAAAGAGAGASL
GGSGEEMGPAAAVVSAVIAAAAAQSGAGPHYHHHHHHAAGHHHHPTAGAPGAAGSAAASAGGAGGAGGGGPASAG
GGGGGGGGGGGGGAAGAGGALHPHHAAGGLHFDDRFSDEQLVTMSVRELNRQLRGVSKEEVIRLKQKRRTLKNRG
YAQSCRFKRVQQRHVLESEKNQLLQQVDHLKQEISRLVRERDAYKEKYEKLVSSGFRENGSSSDNPSSPEFFM

FIGURE 1451

GGCACGAGGGGAAGGTGGCCGAGCGCCCGCGCTGCCCACTCGCTCGCTCGCGCACTCAGACGCGCGCCACAACAG
CGCGCCCCAAGCTGCGCAGCTCTGCAAAAGTTTCTGCTCGGGATCTGGCTCTCTTCCCCTTGGACTTTAGAACGA
TTTAGGGTTGACAGAGGAAAGCAGAGGCGCGCAGGAGGAGCAGAAAACACCACCTTCTGCAGTTGGAGGCAGGCA
GCCCCGGCTGCACTCTAGCCGCCGCGCCCGGAGCCGGGGCCGACCCGCCACTATCCGCAGCAGCCTCGGCCAGGA
GGCGACCCGGGCGCCTGGGTGTGTGGCTGCTGTTGCGGGACGTCTTCGCGGGGCGGGAGGCTCGCGCCGCAGCCA
GCGCC**ATG**CAAAACTACAAGTACGACAAAGCGATCGTCCCGGAGAGCAAGAACGGCGGCAGCCCGGCGCTCAACA
ACAACCCGAGGAGGAGCGGCAGCAAGCGGGTGCTGCTCATCTGCCTCGACCTCTTCTGCCTCTTCATGGCGGGCC
TCCCCTTCCTCATCATCGAGACAAGCACCATCAAGCCTTACCACCGAGGGTTTTACTGCAATGATGAGAGCATCA
AGTACCCACTGAAAACTGGTGAGACAATAAATGACGCTGTGCTCTGTGCCGTGGGGATCGTCATTGCCATCCTCG
CGATCATCACGGGGGAATTCTACCGGATCTATTACCTGAAGAAGTCGCGGTCGACGATTCAGAACCCCTACGTGG
CAGCACTCTATAAGCAAGTGGGCTGCTTCCTCTTTGGCTGTGCCATCAGCCAGTCTTTCACAGACATTGCCAAAG
TGTCCATAGGGCGCCTGCGTCCTCACTTCTTGAGTGTCTGCAACCCTGATTTCAGCCAGATCAACTGCTCTGAAG
GCTACATTCAGAACTACAGATGCAGAGGTGATGACAGCAAAGTCCAGGAAGCCAGGAAGTCCTTCTTCTCTGGCC
ATGCCTCCTTCTCCATGTACACTATGCTGTATTTGGTGCTATACCTGCAGGCCCGCTTCACTTGGCGAGGAGCCC
GCCTGCTCCGGCCCCTCCTGCAGTTCACCTTGATCATGATGGCCTTCTACACGGGACTGTCTCGCGTATCAGACC
ACAAGCACCATCCCAGTGATGTTCTGGCAGGATTTGCTCAAGGAGCCCTGGTGGCCTGCTGCATAGTTTTCTTCG
TGTCTGACCTCTTCAAGACTAAGATGACGCTCTCCCTGCCTGCCCCTGCTATCCGGAAGGAAATCCTTTCACCTG
TGGACATTATTGACAGGAACAATCACCACAACATGATG**TAG**GTGCCACCCACCTCCTGAGCTGTTTTTGTAAAAT
GACTGCTGACAGCAAGTTCTTGCTGCTCTCCAATCTCATCAGACAGTAGAATGTAGGGAAAAACTTTTGCCCGAC
TGATTTTTAAAAAAAAAAAAAAAAAA

FIGURE 1452

MQNYKYDKAIVPESKNGGSPALNNNPRRSGSKRVLLICLDLFCLFMAGLPFLIIETSTIKPYHRGFYCNDESIKY
PLKTGETINDAVLCAVGIVIAILAIITGEFYRIYYLKKSRSTIQNPYVAALYKQVGCFLFGCAISQSFTDIAKVS
IGRLRPHFLSVCNPDFSQINCSEGYIQNYRCRGDDSKVQEARKSFFSGHASFSMYTMLYLVLYLQARFTWRGARL
LRPLLQFTLIMMAFYTGLSRVSDHKHHPSDVLAGFAQGALVACCIVFFVSDLFKTKMTLSLPAPAIRKEILSPVD
IIDRNNHHNMM

FIGURE 1453

ACAACCGTAACAGCCACCAGACAAGCTTCAGTGGCCGGCCCTTCACATCCAGACTTGCCTGAGAGGACCCACCTC
TGAGTGTCCAGTGGTCAGTTGCCCCAGG**ATG**GGGACCACAGCCAGAGCAGCCTTGGTCTTGACCTATTTGGCTGT
TGCTTCTGCTGCCTCTGAGGGAGGCTTCACGGCTACAGGACAGAGGCAGCTGAGGCCAGAGCACTTTCAAGAAGT
TGGCTACGCAGCTCCCCCCTCCCCACCCCTATCCCGAAGCCTCCCCATGGATCACCCTGACTCCTCTCAGCATGG
CCCTCCCTTTGAGGGACAGAGTCAAGTGCAGCCCCCTCCCTCTCAGGAGGCCACCCCTCTCCAACAGGAAAAGCT
GCTACCTGCCCAACTCCCTGCTGAAAAGGAAGTGGGTCCCCCTCTCCCTCAGGAAGCTGTCCCCCTCCAAAAAGA
GCTGCCCTCTCTCCAGCACCCCAATGAACAGAAGGAAGGAACGCCAGCTCCATTTGGGGACCAGAGCCATCCAGA
ACCTGAGTCCTGGAATGCAGCCCAGCACTGCCAACAGGACCGGTCCCAAGGGGGCTGGGGCCACCGGCTGGATGG
CTTCCCCCCTGGGCGGCCTTCTCCAGACAATCTGAACCAAATCTGCCTTCCTAACCGTCAGCATGTGGTATATGG
TCCCTGGAACCTACCACAGTCCAGCTACTCCCACCTCACTCGCCAGGGTGAGACCCTCAATTTCCTGGAGATTGG
ATATTCCCGCTGCTGCCACTGCCGCAGCCACACAAACCGCCTAGAGTGTGCCAAACTTGTGTGGGAGGAAGCAAT
GAGCCGATTCTGTGAGGCCGAGTTCTCGGTCAAGACCCGACCCCACTGGTGCTGCACGCGGCAGGGGGAGGCTCG
GTTCTCCTGCTTCCAGGAGGAAGCTCCCCAGCCACACTACCAGCTCCGGGCCTGCCCCAGCCATCAGCCTGATAT
TTCCTCGGGTCTTGAGCTGCCTTTCCCTCCTGGGGTGCCCACATTGGACAATATCAAGAACATCTGCCACCTGAG
GCGCTTCCGCTCTGTGCCACGCAACCTGCCAGCTACTGACCCCCTACAAAGGGAGCTGCTGGCACTGATCCAGCT
GGAGAGGGAGTTCCAGCGCTGCTGCCGCCAGGGGAACAATCACACCTGTACATGGAAGGCCTGGGAGGATACCCT
TGACAAATACTGTGACCGGGAGTATGCTGTGAAGACCCACCACCACTTGTGTTGCCGCCACCCTCCCAGCCCTAC
TCGGGATGAGTGCTTTGCCCGTCGGGCTCCTTACCCCAACTATGACCGGGACATCTTGACCATTGACATCAGTCG
AGTCACCCCCAACCTCATGGGCCACCTCTGTGGAAACCAAAGAGTTCTCACCAAGCATAAACATATTCCTGGGCT
GATCCACAACATGACTGCCCGCTGCTGTGACCTGCCATTTCCAGAACAGGCCTGCTGTGCAGAGGAGGAGAAATT
AACCTTCATCAATGATCTGTGTGGTCCCCGACGTAACATCTGGCGAGACCCTGCCCTCTGCTGTTACCTGAGTCC
TGGGGATGAACAGGTCAACTGCTTCAACATCAATTATCTGAGGAACGTGGCTCTAGTGTCTGGAGACACTGAGAA
CGCCAAGGGCCAGGGGGAGCAGGGCTCAACTGGAGGAACAAATATCAGCTCCACCTCTGAGCCCAAGGAAGAATG
AGTCACCCCAGAGCCCTAGAGGGTCAGATGGGGGGAACCCCACCCTGCCCCACCCATCTGAACACTCATTACACT
AAACACCTCTTGGATTTGGAAAAAAAAAAAAAAAAA

FIGURE 1454

MGTTARAALVLTYLAVASAASEGGFTATGQRQLRPEHFQEVGYAAPPSPPLSRSLPMDHPDSSQHGPPFEGQSQV
QPPPSQEATPLQQEKLLPAQLPAEKEVGPPLPQEAVPLQKELPSLQHPNEQKEGTPAPFGDQSHPEPESWNAAQH
CQQDRSQGGWGHRLDGFPPGRPSPDNLNQICLPNRQHVVYGPWNLPQSSYSHLTRQGETLNFLEIGYSRCCHCRS
HTNRLECAKLVWEDTLDKYCDREYAVKTHHHLCCRHPPSPTRDECFARRAPYPNYDRDILTIDISRVTPNLMGHL
CGNQRVLTKHKHIPGLIHNMTARCCDLPFPEQACCAEEEKLTFINDLCGPRRNIWRDPALCCYLSPGDEQVNCFN
INYLRNVALVSGDTENAKGQGEQGSTGGTNISSTSEPKEE

FIGURE 1455

AGTGGAGTGGGACAGGTATATAAAGGAAGTACAGGGCCTGGGGAAGAGGCCCTGTCTAGGTAGCTGGCACCAGGA
GCCGTGGGCAAGGGAAGAGGCCACACCCTGCCCTGCTCTGCTGCAGCCAGA**ATG**GGTGTGAAGGCGTCTCAAACA
GGCTTTGTGGTCCTGGTGCTGCTCCAGTGCTGCTCTGCATACAAACTGGTCTGCTACTACACCAGCTGGTCCCAG
TACCGGGAAGGCGATGGGAGCTGCTTCCCAGATGCCCTTGACCGCTTCCTCTGTACCCACATCATCTACAGCTTT
GCCAATATAAGCAACGATCACATCGACACCTGGGAGTGGAATGATGTGACGCTCTACGGCATGCTCAACACACTC
AAGAACAGGAACCCCAACCTGAAGACTCTCTTGTCTGTCGGAGGATGGAACTTTGGGTCTCAAAGATTTTCCAAG
ATAGCCTCCAACACCCAGAGTCGCCGGACTTTCATCAAGTCAGTACCGCCATTCCTGCGCACCCATGGCTTTGAT
GGGCTGGACCTTGCCTGGCTCTACCCTGGACGGAGAGACAAACAGCATTTTACCACCCTAATCAAGGAAATGAAG
GCCGAATTTATAAAGGAAGCCCAGCCAGGGAAAAAGCAGCTCCTGCTCAGCGCAGCACTGTCTGCGGGGAAGGTC
ACCATTGACAGCAGCTATGACATTGCCAAGATATCCCAACACCTGGATTTCATTAGCATCATGACCTACGATTTT
CATGGAGCCTGGCGTGGGACCACAGGCCATCACAGTCCCCTGTTCCGAGGTCAGGAGGATGCAAGTCCTGACAGA
TTCAGCAACACTGACTATGCTGTGGGGTACATGTTGAGGCTGGGGGCTCCTGCCAGTAAGCTGGTGATGGGCATC
CCCACCTTCGGGAGGAGCTTCACTCTGGCTTCTTCTGAGACTGGTGTTGGAGCCCCAATCTCAGGACCGGGAATT
CCAGGCCGGTTCACCAAGGAGGCAGGGACCCTTGCCTACTATGAGATCTGTGACTTCCTCCGCGGAGCCACAGTC
CATAGAACCCTCGGCCAGCAGGTCCCCTATGCCACCAAGGGCAACCAGTGGGTAGGATACGACGACCAGGAAAGC
GTCAAAAGCAAGGTGCAGTACCTGAAGGATAGGCAGCTGGCAGGCGCCATGGTATGGGCCCTGGACCTGGATGAC
TTCCAGGGCTCCTTCTGCGGCCAGGATCTGCGCTTCCCTCTCACCAATGCCATCAAGGATGCACTCGCTGCAACG
TAGCCCTCTGTTCTGCACACAGCACGGGGGCCAAGGATGCCCCGTCCCCCTCTGGCTCCAGCTGGCCGGGAGCCT
GATCACCTGCCCTGCTGAGTCCCAGGCTGAGCCTCAGTCTCCCTCCCTTGGGGCCTATGCAGAGGTCCACAACAC
ACAGATTTGAGCTCAGCCCTGGTGGGCAGAGAGGTAGGGATGGGGCTGTGGGGATAGTGAGGCATCGCAATGTAA
GACTCGGGATTAGTACACACTTGTTGATGATTAATGGAAATGTTTACAGATCCCCAAGCCTGGCAAGGGAATTTC
TTCAACTCCCTGCCCCCTAGCCCTCCTTATCAAAGGACACCATTTTGGCAAGCTCTATCACCAAGGAGCCAAACA
TCCTACAAGACACAGTGACCATACTAATTATACCCCCTGCAAAGCCAGCTTGAAACCTTCACTTAGGAACGTAAT
CGTGTCCCCTATCCTACTTCCCCTTCCTAATTCCACAGCTGCTCAATAAAGTACAAGAGTTTAACAGTGTGTTGG
CGCTTTGCTTTGGTCTATCTTTGAGCGCCCACTAGACCCACTGGACTCACCTCCCCCATCTCTTCTGGGTTCCTT
CCTCTGAGCCTTGGGACCCCTGAGCTTGCAGAGATGAAGGCCGCCATGTT

FIGURE 1456

MGVKASQTGFVVLVLLQCCSAYKLVCYYTSWSQYREGDGSCFPDALDRFLCTHIIYSFANISNDHIDTWEWNDVT
LYGMLNTLKNRNPNLKTLLSVGGWNFGSQRFSKIASNTQSRRTFIKSVPPFLRTHGFDGLDLAWLYPGRRDKQHF
TTLIKEMKAEFIKEAQPGKKQLLLSAALSAGKVTIDSSYDIAKISQHLDFISIMTYDFHGAWRGTTGHHSPLFRG
QEDASPDRFSNTDYAVGYMLRLGAPASKLVMGIPTFGRSFTLASSETGVGAPISGPGIPGRFTKEAGTLAYYEIC
DFLRGATVHRTLGQQVPYATKGNQWVGYDDQESVKSKVQYLKDRQLAGAMVWALDLDDFQGSFCGQDLRFPLTNA
IKDALAAT

FIGURE 1457

GGCACGAGGGCGGGAGAGACGGAGGTAGAGGGAGGACACAGAGCCGCGCCGCCCGCACCACAGACCTTCGCCTCG
CCCCGCCGGTTCCTCACCCTCGGGGAGCAACATGGCAGATAATCTCAGTGATACCTTGAAGAAGCTGAAGATAAC
AGCTGTTGACAAGACTGAGGATAGTTTAGAAGGATGCTTGGATTGTCTGCTTCAAGCCCTGGCTCAAAATAATAC
GGAAACAAGTGAAAAAATCCAAGCAAGTGGAATACTTCAGCTGTTTGCAACTCTGTTGACTCCACAGTCTTCCTG
CAAAGCCAAAGTAGCTAACATCATAGCAGAAGTAGCCAAAAATGAGTTTATGCGAATTCCATGTGTGGATGCTGG
ATTGATTTCACCACTGGTGCAGCTGCTAAATAGCAAAGACCAGGAAGTGCTGCTTCAAACGGGCAGGGCTCTAGG
AAACATATGTTACGATAGCCATGAGGGCAGAAGTGCAGTTGACCAAGCAGGTGGTGCACAGATTGTAATTGACCA
TTTAAGGTCACTGTGCAGTATAACAGATCCCGCCAATGAGAAGCTCTTGACTGTCTTTTGTGGCATGCTGATGAA
CTATAGCAATGAGAATGATTCGCTTCAAGCTCAGCTTATCAATATGGGTGTTATTCCTACCTTAGTGAAATTACT
GGGCATCCACTGCCAAAATGCAGCTCTTACAGAA**ATG**TGTCTTGTTGCATTTGGTAATTTAGCAGAACTTGAGTC
AAGTAAAGAACAGTTTGCCAGTACAAACATTGCTGAAGAGCTAGTAAAACTCTTCAAGAAACAAATAGAACATGA
TAAGAGAGAAATGATTTTTGAAGTTCTTGCTCCATTGGCAGAAAATGATGCTATTAAACTACAGCTGGTTGAAGC
AGGCCTAGTAGAGTGTCTACTAGAGATTGTTCAGCAAAAAGTGGATAGTGACAAAGAAGATGATATTACTGAGCT
CAAAACTGGTTCAGATCTCATGGTTTTATTACTTCTTGGAGATGAATCCATGCAGAAGTTATTTGAAGGAGGAAA
AGGTAGTGTATTTCAAAGGGTACTCTCTTGGATCCCATCAAATAACCACCAGCTACAGCTTGCTGGAGCATTGGC
AATTGCAAATTTTGCCAGAAATGATGCAAATTGTATTCATATGGTAGACAATGGGATTGTAGAAAAACTTATGGA
TTTACTGGACAGACATGTAGAAGATGGAAATGTAACAGTACAGCATGCAGCACTAAGTGCCCTCAGAAACCTGGC
CATTCCAGTTATAAATAAAGCAAAGATGTTATCAGCTGGGGTCACAGAGGCAGTTTTGAAATTTCTTAAATCTGA
AATGCCTCCTGTTCAGTTCAAACTTCTGGGAACATTAAGAATGTTAATAGATGCACAAGAAGCTGCTGAACAATT
GGGAAAGAATGTTAAGTTAGTGGAGCGTTTGGTGGAATGGTGTGAAGCCAAAGATCATGCTGGTGTGATGGGGGA
GTCAAACAGACTGCTGTCTGCCCTTATACGACACAGTAAATCAAAAGATGTAATTAAAACCATTGTGCAGAGTGG
TGGCATCAAGCATCTAGTTACCATGGCAACTAGTGAACATGTAATAATGCAGAATGAAGCTCTTGTTGCTTTGGC
ATTAATAGCAGCTTTAGAATTGGGCACTGCTGAGAAAGATCTAGAAAGTGCTAAACTTGTACAGATTTTACATAG
ACTGCTAGCAGATGAGAGAAGTGCTCCTGAAATCAAATATAATTCCATGGTCCTGATATGTGCTCTTATGGGATC
TGAATGTCTACACAAGGAAGTACAGGATTTGGCTTTTCTAGATGTCGTATCCAAACTTCGCAGTCATGAGAACAA
AAGTGTTGCCCAGCAGGCCTCTCTCACAGAGCAGAGACTTACTGTGGAAAGC**TGA**GAACTGCCCGATACACGGCA
TCATCCCATCTCTAATTTCCCCTCTGTCCTCCATCCAGCGGCTTCTTCCGCTTCATTCTCTACCATACCACTTGT
GCATGCATGTGATGTTCTAATACCAATTGAAGAACCGCTGTAGGTACCTCCCTAATAAGATTTCTAAACCTATAG
TTAGTGTGATCATGACTTTGTCAAAGGCAAGTCTCCACCCATAACCGTTCTCTTGTATTCCTGTTGCTTGAGCTA
CATTAAGTAGAATGTGCATGTTGTAGTCCTATGATGATGTAAACTTGGTACTACATAATGACTTGCTCCACACAT
GCAGTAAACTACATAATGATGTACTGGTAAACTAGAAACAAAGAATGCAGCAGGATCTGTCTAGCTTATTAAAGA
TGAAACTGAATTGGAAAAATAGCTCCATTTTTTGGTGCTTGGGAAGCACAGTGACCAAAAAAGTTGTATGGCTGC
TTATTCATTAGTCTTTCCTACTGATGTCAAATCCATGGTACCTAGAGTTAAATAAAATTCCAATGCTCTTACTCT
TTAAAAAAAAAAAAAAAAAAA

FIGURE 1458

MCLVAFGNLAELESSKEQFASTNIAEELVKLFKKQIEHDKREMIFEVLAPLAENDAIKLQLVEAGLVECLLEIVQ
QKVDSDKEDDITELKTGSDLMVLLLLGDESMQKLFEGGKGSVFQRVLSWIPSNNHQLQLAGALAIANFARNDANC
IHMVDNGIVEKLMDLLDRHVEDGNVTVQHAALSALRNLAIPVINKAKMLSAGVTEAVLKFLKSEMPPVQFKLLGT
LRMLIDAQEAAEQLGKNVKLVERLVEWCEAKDHAGVMGESNRLLSALIRHSKSKDVIKTIVQSGGIKHLVTMATS
EHVIMQNEALVALALIAALELGTAEKDLESAKLVQILHRLLADERSAPEIKYNSMVLICALMGSECLHKEVQDLA
FLDVVSKLRSHENKSVAQQASLTEQRLTVES

FIGURE 1459

GGCACGAGGGCGACCGCTCCCCGGCGGGAGCCAGCGAAGGTTTCCATGTCAGAGGCCGATGGAGAACTGAAGATT
GCCACCTACGCACAAAGGCCATTGAGACACTTCGTGTAGCTGGAAGACACCAACTTCCTGACAGGAGCTTTATTT
CATTTGGGATTTCAAGTTTACAG**ATG**GTATCTTCTCAAAAGTTGGAAAAACCTATAGAGATGGGCAGTAGCGAAC
CCCTTCCCATCGCAGATGGTGACAGGAGGAGGAAGAAGAAGCGGAGGGGCCGGGCCACTGACTCCTTGCCAGGAA
AGTTTGAAGATATGTACAAGCTGACCTCTGAATTGCTTGGAGAGGGAGCCTATGCCAAAGTTCAAGGTGCCGTGA
GCCTACAGAATGGCAAAGAGTATGCCGTCAAAATCATCGAGAAACAAGCAGGGCACAGTCGGAGTAGGGTGTTTC
GAGAGGTGGAGACGCTGTATCAGTGTCAGGGAAACAAGAACATTTTGGAGCTGATTGAGTTCTTTGAAGATGACA
CAAGGTTTTACTTGGTCTTTGAGAAATTGCAAGGAGGTTCCATCTTAGCCCACATCCAGAAGCAAAAGCACTTCA
ATGAGCGAGAAGCCAGCCGAGTGGTGCGGGACGTTGCTGCTGCCCTTGACTTCCTGCATACCAAAGACAAAGTCT
CTCTCTGTCACCTAGGCTGGAGTGCTATGGCGCCATCAGGGCTCACTGCAGCCCCAACCTCCCTGGGCTCCAGTG
ATCCTCCCACCTCAGCCTCCCAAGTAGCTGGGACTACAGGCATTGCTCATCGTGATCTGAAACCAGAAAATATAT
TGTGTGAATCTCCAGAAAAGGTGTCTCCAGTGAAAATCTGTGACTTTGACTTGGGCAGTGGGATGAAACTGAACA
ACTCCTGTACCCCCATAACCACACCAGAGCTGACCACCCCATGTGGCTCTGCAGAATACATGGCCCCTGAGGTAG
TGGAGGTCTTCACGGACCAGGCCACATTCTACGACAAGCGCTGTGACCTGTGGAGCCTGGGCGTGGTCCTCTACA
TCATGCTGAGTGGCTACCCACCCTTCGTGGGTCACTGCGGGGCCGACTGTGGCTGGGACCGGGGCGAGGTCTGCA
GGGTGTGCCAGAACAAGCTGTTTGAAAGCATCCAGGAAGGCAAGTATGAGTTTCCTGACAAGGACTGGGCACACA
TCTCCAGTGAAGCCAAAGACCTCATCTCCAAGCTCCTGGTGCGAGATGCAAAGCAGAGACTTAGCGCCGCCCAAG
TTCTGCAGCACCCATGGGTGCAGGGGCAAGCTCCAGAAAAGGGACTCCCCACGCCGCAAGTCCTCCAGAGGAACA
GCAGCACAATGGACCTGACGCTCTTCGCAGCTGAGGCCATCGCCCTTAACCGCCAGCTATCTCAGCACGAAGAGA
ACGAACTAGCAGAGGAGCCAGAGGCACTAGCTGATGGCCTCTGCTCCATGAAGCTTTCCCCTCCCTGCAAGTCAC
GCCTGGCCCGGAGACGGGCCCTGGCCCAGGCAGGCCGTGGTGAAGACAGGAGCCCGCCCACAGCACTC**TGA**AATG
CTCCAGTCACACCTTATAGGCCCTAGGCCTGGCCAGGCATTGTCCCCTGGAAACCTGTGTGGCTAAAGTCTGCTG
AGCAGGCAGCAGCCTCTGCTCTGTGGCTCCATTCAGGCTTTTTCATCTACGAAGGCCCTGAGGTTCCCATCAACC
CCCATTTCCCTAGGGTCCTGGAGGAAAAAGCTTTTTCCAAAGGGGTTGTCTTTGAAAAGGAAAGCAATCACTTCT
CACTTTGCATAATTGCCTGCAGCAGGAACATCTCTTCACTGGGCTCCACCTGCTCACCCGCCTGCAGATCTGGGA
TCCAGCCTGCTCTCACCGCTGTAGCTGTGGCGGCTGGGGCTGCAGCCTGCAGGGAGAAGCAAGAAGCATCAGTTG
ACAGAGGCTGCCGACACGTGCCTCTTCCCTCTCTTCTCTGTCACCCTCCTCTGGCGGTCCTTCCACCTTCCTCTG
TCCTCCGGATGTCCTCTTTGCCCGTCTTCTCCCTTGGCTGAGCAAAGCCATCCCCTCAATTCAGGGAAGGGCAAG
GAGCCTTCCTCATTCAGGAAATCAAATCAGTCTTCCGGTCTGCAGCACGGAAAAGCACATAATCTTTCTTTGCTG
TGACTGAAATGTATCCCTCGTTTATCATCCCCTTTGTTTGTGATTGCTGCTAAAGTCAGTAGTATCGTTTTTTTA
AAAAAAAAGTTTGGTGTTTTTAACCATGCTGTTCCAGCAAAGATGATACCTTAAACTCCCACTGCAAGCCCATGA
ACTTCCCAGAGAGTGGAACGGCTTGCTCTTCTTTCTAGAATGTCCATGCACTTGGGTTTTAATCAGCAGTTCCCT
ATTATTCTGATTTTAAGCTGTTCCTGTGATGAACTTAGAGACAGCATCGGTGTCTGCTGCTGTGTCCCCAGGTCT
TGTGTGGGTGGCACAGATCTGGGCAGTTAGATAGTGCTCTGTGCCTAAGGTGAAGCCACACTAGGGTGAAGCCTC
ACTTCCCTGTTTGAGCAATGCAGTGCCTGCTGCCCGTGTGCATGAAGGTACAGCCATTCAGATAAGTGGAACTAT
TGAGTTACATAAAGAAAATAGATTTGCATTTGTCAGGCAGACGTTTATACAACACCACGGTGCTTTTATACATTG
TGCTTATTTTAATAAAACTGAAATTCTAAAAAAAAAAAAAAAAAA

FIGURE 1460

MVSSQKLEKPIEMGSSEPLPIADGDRRRKKKRRGRATDSLPGKFEDMYKLTSELLGEGAYAKVQGAVSLQNGKEY
AVKIIEKQAGHSRSRVFREVETLYQCQGNKNILELIEFFEDDTRFYLVFEKLQGGSILAHIQKQKHFNEREASRV
VRDVAAALDFLHTKDKVSLCHLGWSAMAPSGLTAAPTSLGSSDPPTSASQVAGTTGIAHRDLKPENILCESPEKV
SPVKICDFDLGSGMKLNNSCTPITTPELTTPCGSAEYMAPEVVEVFTDQATFYDKRCDLWSLGVVLYIMLSGYPP
FVGHCGADCGWDRGEVCRVCQNKLFESIQEGKYEFPDKDWAHISSEAKDLISKLLVRDAKQRLSAAQVLQHPWVQ
GQAPEKGLPTPQVLQRNSSTMDLTLFAAEAIALNRQLSQHEENELAEEPEALADGLCSMKLSPPCKSRLARRRAL
AQAGRGEDRSPPTAL

FIGURE 1461A

TGGAAGAAG**ATG**GCGGAAGGCGGAGCGGCGGATCTGGACACCCAGCGGTCTGACATCGCGACGCTGCTCAAAACC
TCGCTCCGGAAAGGGGACACCTGGTACCTAGTCGATAGTCGCTGGTTCAAACAGTGGAAAAAATATGTTGGCTTT
GACAGTTGGGACAAATACCAGATGGGAGATCAAAATGTGTATCCTGGACCCATTGATAACTCTGGACTTCTCAAA
GATGGTGATGCCCAGTCACTTAAGGAACATCTTATTGATGAATTGGATTACATACTGTTGCCAACTGAAGGTTGG
AATAAACTTGTCAGCTGGTACACATTGATGGAAGGTCAAGAGCCAATAGCACGAAAGGTGGTTGAACAGGGTATG
TTTGTAAAGCACTGCAAAGTAGAAGTATATCTCACAGAATTGAAGCTATGTGAAAATGGAAACATGAATAATGTT
GTAACTCGAAGATTTAGCAAAGCTGACACAATAGATACAATTGAAAAGGAAATAAGAAAAATCTTCAGTATTCCA
GATGAAAAGGAGACCAGATTGTGGAACAAATACATGAGTAACACATTTGAACCACTGAATAAACCAGACAGCACC
ATTCAGGATGCTGGTTTATACCAAGGACAGGTATTAGTGATAGAACAGAAAAATGAAGATGGAACATGGCCAAGG
GGTCCTTCTACTCCTAATGTGAAAAACTCAAATTACTGTCTTCCATCATATACCGCTTATAAGAACTATGATTAT
TCGGAACCTGGAAGAAACAATGAACAGCCAGGCCTCTGTGGCCTAAGTAACTTGGGAAATACGTGTTTCATGAAC
TCAGCTATTCAGTGTTTGAGCAACACACCTCCACTTACTGAGTATTTCCTCAATGATAAGTATCAAGAAGAACTG
AATTTTGACAATCCCTTAGGAATGAGAGGTGAAATAGCTAAATCTTATGCCGAACTGATCAAGCAAATGTGGTCT
GGAAAGTTTAGCTACGTCACCCCAAGAGCCTTTAAGACACAGGTAGGACGTTTTGCACCTCAGTTCTCTGGATAT
CAGCAGCAAGACTGTCAAGAACTGTTAGCTTTCCTATTAGATGGATTACATGAGGATTTGAATAGAATTAGGAAA
AAACCATATATACAATTAAAAGATGCAGATGGAAGGCCAGATAAGGTGGTTGCCGAAGAAGCCTGGGAAAACCAT
TTAAAACGAAATGATTCTATCATAGTAGATATATTTCATGGCCTTTTCAAATCAACTTTAGTTTGTCCTGAGTGT
GCTAAGATTTCAGTAACATTTGATCCTTTTTGTTACTTGACACTTCCATTGCCCATGAAAAAAGAACGCACCTTG
GAAGTTTACTTAGTTAGAATGGATCCGCTTACCAAACCTATGCAGTACAAAGTGGTTGTCCCCAAAATTGGAAAC
ATATTAGATCTTTGTACAGCATTGTCTGCTTTGTCAGGAATACCTGCAGATAAGATGATAGTTACTGATATATAC
AATCATAGATTTCACAGAATATTCGCTATGGATGAAAACCTTAGTAGTATTATGGAACGGGATGATATTTATGTG
TTTGAAATTAACATCAATAGGACAGAAGATACAGAGCACGTGATTATTCCTGTTTGCCTAAGAGAAAAATTCAGA
CACTCGAGTTATACCCACCATACTGGTTCTTCACTTTTTGGTCAGCCCTTTCTTATGGCTGTACCACGAAACAAT
ACTGAAGACAAACTTTATAATCTCCTGCTCTTGAGAATGTGCCGATATGTCAAAATATCTACTGAAACTGAAGAA
ACTGAAGGATCCCTACACTGCTGTAAGGACCAAAATATTAATGGGAATGGCCCAAATGGCATACATGAAGAAGGC
TCACCAAGTGAAATGGAAACAGATGAGCCAGATGATGAATCCAGCCAGGATCAAGAACTTCCCTCAGAGAATGAA
AACAGTCAGTCTGAAGATTCAGTTGGAGGAGATAATGATTCTGAAAATGGATTATGTACTGAGGATACTTGCAAA
GGTCAACTCACGGGACACAAAAAACGATTGTTTACATTCCAGTTCAACAACTTAGGCAATACTGATATCAACTAC
ATCAAAGATGATACCAGGCATATAAGATTTGATGATAGGCAGCTTAGGCTAGATGAAAGATCTTTTCTTGCTTTG
GATTGGGATCCTGATTTGAAAAAAAGATATTTTGATGAAAATGCTGCTGAGGACTTTGAAAAACATGAAAGTGTG
GAGTATAAACCTCCTAAAAAACCCTTTGTGAAATTAAAAGATTGCATTGAACTTTTTACAACAAAAGAAAAGCTA
GGTGCTGAAGATCCCTGGTATTGTCCGAATTGTAAAGAACATCAGCAAGCCACAAAGAAATTGGATTTATGGTCC
CTGCCTCCAGTACTTGTAGTACATCTCAAGCGATTTTCTTACAGTCGATACATGAGAGACAAGTTGGATACCTTA
GTTGATTTTCCTATCAATGACTTGGATATGTCGGAATTCTTAATTAATCCAAATGCAGGTCCTTGCCGCTATAAT
CTGATTGCTGTTTCCAACCACTATGGAGGGATGGGAGGAGGACACTATACTGCTTTTGCAAAAAATAAAGATGAT
GGAAAATGGTACTATTTTGATGACAGTAGTGTCTCCACTGCATCTGAAGACCAAATTGTGTCCAAAGCAGCATAT
GTACTCTTCTACCAGAGACAAGACACTTTCAGTGGAACTGGCTTTTTTCCTCTTGACCGAGAAACTAAAGGTGCT
TCAGCTGCCACTGGCATCCCATTAGAAAGTGATGAAGATAGCAATGATAATGACAATGATATAGAAAATGAAAAC
TGTATGCACACTAAC**TAA**TGAAAGTCCTAGAAGCCATAAAAGAGACACTTTCCTGCTGGTGGTATCTATGGAAAT
GATGAAGTTACCCACCACATTAAAACAAAAGTCTGAGATGGGGAGTTTCAGATAACCGAATGTAAATCCTTTATC
AGATTTTAACTTGTGCAGTACTTGAAGTGAAACACAATGAAAACTTTAACAGAAATTGTCTCTTAATACATTTAC
AGTCTTGTATTTACAAGCTAAATATATATAGGAAATCACAAATAAATCCCTTTTAAGTTTGCTGCTGTTTTGATT
AATTATGTTTCCTTTAATTTTTTGGATGTGAGTTGATGACAAATGTTAAATTTGTGGATGTTGGTCATTTATTTT
GCTCTAATAATACTGCAAGAAAACTATGGCTGAACTTAGTTTTTGGATAATCTAGTTCATGTGCATTAGGCTGCC
GTATATACTACTATGATATTTAGCTGCAGTATCAATGTGGCATAAATACTGCGGCAGCATTCTTCGAAAACCGCA
TTTTCAAATTTATCCCCGTAATCAATGTGGGCCTATTAAAAAACCAAATCATGATACAAGAAACAACCTTGGAAA
AGTTATTTCCCTTTGTAATACCTTTAAAAATCCAGAGTATTATATTCATTTTACTGCCACTGTGGAAACAGGTTC
TAGATTTCATACTCCATCTAAAGTCATTTTTCAGTTACATGTAAGTATTATTTACTGCTATTGGGATCTATTCTT

FIGURE 1461B

CAGATATTCAAAAACATTTTTTGCTTTAAAATGCATATCTTTAATTGGGTGTTGGTCCAAAATTAAAATTTTTGC
TGTCTGTTTTTCTCTACCCCATTTTGTGGTAATTTGGCAACTTGAGCTCTCCCAATTATTGTAATATAAGGACAG
ACATAATAGTATTCTGTACCCATAGTAATAATTGCATCAAGCTTAGATGAGAAATTTTTTTCATATACTGGCCTT
TAAATCATTAATGGACAATTGGCTATAAAGGTAGGTCTGTTAACTTTCTTTGTGTGTTCCTGATGGAATTCACCA
TAGCCTTACAGCTTTTCTCAGAAGGTAACTTGTTATAAGAGAAATGGCATTTGCATGTTCCAGAGTCAGAACCTG
TACAGTATATAAAGCATAAACACCTTGAATTTGATTTTAGTTCACCACATTCAAGGATCCAGGATGCCAAAAATA
TGTGTGAACATTTGAAACATTTTTATTTGCTGCTTTTTCCCTTTGATATAGTTGAAAGAATGTATTGTAAATTGG
CATACAATACTGCCTTTAATAGAAAACCTAAATGCTGGGGCACATTTCACATATCGACTACCTGAGAAATTGCTT
TGTGTCCCACTGTTATTAAAGCAAAAAGTATAATGTTCTTCACTTGAACTAATCAAATACAATAGATTATAAATT
GTGTATTGTAAATAAAAGTTCACTCTGTGAGTGCACATTTTGGTAAATTATTTATTTATGTTAGCATTTAAAAGT
TTAAAAAAAATGCATTTGACCAGGATAAATGAGGTATGTTGATCATGGCTTTGCTTTATATCTTGATATTAAAGC
TGGTTTATCATCCTGGTATTTTAAAAGCTGCTTTGGGGTTTTTTTTTTCTTTTTTTTTTTTTTTAATGTAAACTAA
CCTCCTGCATGACAGAGGTTAAAATTTTGTCTGCACTTGAGTTCACTTGAGTTTACATTTGAAATGTGCATGTTT
ATTTATATAGATTTCAATAAAGCTATTCAAGGCCTT

FIGURE 1462

MAEGGAADLDTQRSDIATLLKTSLRKGDTWYLVDSRWFKQWKKYVGFDSWDKYQMGDQNVYPGPIDNSGLLKDGD
AQSLKEHLIDELDYILLPTEGWNKLVSWYTLMEGQEPIARKVVEQGMFVKHCKVEVYLTELKLCENGNMNNVVTR
RFSKADTIDTIEKEIRKIFSIPDEKETRLWNKYMSNTFEPLNKPDSTIQDAGLYQGQVLVIEQKNEDGIWPRGPS
TPNVKNSNYCLPSYTAYKNYDYSEPGRNNEQPGLCGLSNLGNTCFMNSAIQCLSNTPPLTEYFLNDKYQEELNFD
NPLGMRGEIAKSYAELIKQMWSGKFSYVTPRAFKTQVGRFAPQFSGYQQQDCQELLAFLLDGLHEDLNRIRKKPY
IQLKDADGRPDKVVAEEAWENHLKRNDSIIVDIFHGLFKSTLVCPECAKISVTFDPFCYLTLPLPMKKERTLEVY
LVRMDPLTKPMQYKVVVPKIGNILDLCTALSALSGIPADKMIVTDIYNHRFHRIFAMDENLSSIMERDDIYVFEI
NINRTEDTEHVIIPVCLREKFRHSSYTHHTGSSLFGQPFLMAVPRNNTEDKLYNLLLLRMCRYVKISTETEETEG
SLHCCKDQNINGNGPNGIHEEGSPSEMETDEPDDESSQDQELPSENENSQSEDSVGGDNDSENGLCTEDTCKGQL
TGHKKRLFTFQFNNLGNTDINYIKDDTRHIRFDDRQLRLDERSFLALDWDPDLKKRYFDENAAEDFEKHESVEYK
PPKKPFVKLKDCIELFTTKEKLGAEDPWYCPNCKEHQQATKKLDLWSLPPVLVVHLKRFSYSRYMRDKLDTLVDF
PINDLDMSEFLINPNAGPCRYNLIAVSNHYGGMGGGHYTAFAKNKDDGKWYYFDDSSVSTASEDQIVSKAAYVLF
YQRQDTFSGTGFFPLDRETKGASAATGIPLESDEDSNDNDNDIENENCMHTN

FIGURE 1463

CCAGGGCCGGTGTCTCCAGGAGAGGGCCGAGCGCACAGCAGCTCTAGGACCTCGCAGGCGCCTCGGCGCGGCACT
CACGTAGAGCCCAAGGAGCAGTCCCCGACCTCTCCTCGGAGGGCCGTGCAGGCTTCCCCGGCGGTCCCTACCTGC
GCCTCCGCCCGCCAGCGGCGCTGGGGAAGGGGAGGAGCGGCCCGGACGCTGCCCGCCGCGCGCAGGGAGCCGCCC
GCCGCAGGCCTTGCCGCCGCCCGCCCGCGCTCTCCCCGCGAGCCCCGGAGGGCGGGTCTGCGGCCGAGCCAGCGG
CGGCGGAGGGGCAGCGCAGACCTCTGCGGCCCGGGCGGGCGCGGCGCGGGAGTCCTGGGCCGCTGGCGGGCAACG
CCTCTGCCCGACCTCGCTGGGGAAGGCTGGCGCTGCTGCCCGGCCGGAGCCAGGGGCAGGCTGCGCAAAGGTGAC
TTAGGGAGACCTTGCGGGCCGCCCTGGGTCGCGCCTCCCGGATCGGCTCGCCTCGGCTCGACTGGAGGGGAGGAG
GAGGAGCAGGCCGAGCGCATTCGCGCTGGAGCTTGCGAGGAGCGCAGGGTGGAGCGCGCCAGCCGGGGTCCTCGG
ATCTGGCCCAGGTGAGGAATTTTAAATTGGAACAAGAGCAAGAAAAAAACAAAATCTTGTCAGAAGCACTGGAGA
CGCTGGCCACTGAACATCATGAATTAGAGCAGTCTCTGGTGAAAGGCTCTCCACCCGCCAGCATCCTTAGCGAGG
ACGAGTTCTATGATGCGCTGTCAGATTCCGAGTCCGAAAGGTCCCTGAGTAGATTGGAAGCAGTGACAGCACGCT
CCTTTGAAGAGGAAGGAGAGCATTTGGGCAGTAGAAAACACAGA**ATG**TCCGAAGAAAAAGACTGTGGTGGCGGAG
ATGCTCTCTCCAATGGCATCAAGAAACACAGAACAAGTTTGCCTTCTCCTATGTTTTCCAGAAATGACTTCAGTA
TCTGGAGCATCCTCAGAAAATGTATTGGAATGGAACTATCCAAGATCACGATGCCAGTTATATTTAATGAGCCTC
TGAGCTTCCTACAGCGCCTAACTGAATACATGGAGCATACTTACCTCATCCACAAGGCCAGTTCACTCTCTGATC
CTGTGGAAAGGATGCAGTGTGTAGCTGCGTTTGCTGTATCTGCTGTTGCTTCTCAGTGGGAACGGACTGGAAAAC
CTTTCAACCCACTGCTGGGAGAGACTTATGAATTAGTGCGAGATGACCTTGGATTTAGACTCATCTCCGAACAGG
TCAGCCATCACCCACCAATCAGTGCATTTCATGCTGAAGGATTAAACAATGACTTCATCTTTCATGGCTCTATCT
ATCCCAAACTGAAATTCTGGGGGGAAGAGTGTAGAAGCAGAACCCAAAGGAACCATCACCTTGGAGCTCCTTGAAC
ACAATGAGGCATATACATGGACAAATCCCACCTGCTGTGTGCATAATATCATTGTGGGTAAACTGTGGATCGAAC
AGTATGGCAATGTGGAAATTATAAACCACAAGACTGGGGACAAATGTGTGTTGAATTTTAAGCCATGTGGCCTTT
TTGGTAAGGAATTACACAAAGTTGAAGGCTACATTCAAGATAAAAGCAAAAAGAAGCTCTGTGCCCTCTATGGGA
AGTGGACTGAATGTTTATACAGTGTTGACCCTGCCACGTTTGACGCTTACAAAAAAAAATGATAAGAAAAATACAG
AAGAGAAGAAGAACAGCAAACAGATGAGCACCTCTGAGGAGTTGGATGAAATGCCAGTGCCGGATTCTGAAAGTG
TATTCATTATCCCTGGAAGCGTTCTTCTATGGCGAATAGCCCCACGGCCTCCAAATTCTGCCCAGATGTATAATT
TTACTAGTTTTGCAATGGTTTTGAATGAAGTAGACAAAGACATGGAGAGTGTGATTCCCAAGACAGACTGCAGGT
TACGGCCTGACATCAGAGCCATGGAAAATGGAGAGATAGATCAAGCTAGTGAAGAAAAAAAACGACTTGAGGAAA
AACAAAGAGCAGCCCGCAAAAACAGGTCCAAGTCAGAAGAGGACTGGAAGACGAGGTGGTTCCATCAAGGTCCTA
ATCCCTACAATGGAGCACAGGACTGGATTTACTCTGGCAGCTACTGGGACAGAAATTACTTCAATTTGCCTGACA
TTTAT**TAA**AATGCATACAAGTCAGGGTGTTTGGCTAATCTACAAATAAGTCTTAAACCTATGTTTTTAAATTTTT
TTCCCTTGGTTTCTACTTATCTTTTAAAAAAAAAATGAAAAAACACTCATGAGATAACTGCATTTCACCCAACAA
AAGCAGGGTATAAGGCGATATTGGTGATGAAAGTCTTAGGAAAAATGCATAATTTTGCTATAAAATGTACTTATT
TGGAATACTATTTTATATAGAGGTAAGAGAACACTGCTGGGGAATATGCTTTTTATGGTTGCTGTTGCCATATTT
ACTGAAGGTTTATACCTAAATGTAACTTTAGCTTTATGGAACTATATAGTAATCCCAAATCAAGTTATTTTGAAT
ATTTTTATGCTGTCATGCTTGAATGTTTTAGATGTAACCTTTGACATATTTAGAACTCTCCTCCTATACAATGTT
TATTCTCAGATATAGAGGTTATGTCATTTTATAAAGACTTCATTGATAAGATGGCTTTTATTCATACTAATCCTC
CCAATGTTACCCCTTCCATCTTCCAAGAAGAAAAAAAATGCCTGAATATTCAGAATAGATATTTCTGATTTGAAA
ATTCTAAAGAATTAAACTGGAAAAGTATTTCATTTACTTAGTGCTCTGAATTTACTTTTACAGTTTTCTGCAGTC
AGTATCATTAAAATGGTTAAGTTTACATTTGAACTGAAAATATGTATAAAATCTAGCAATTCACAAAAATGCCCT
AGAAATATAGATTTTAATCACCATTACATAATGACAAACCTTGTTAAATGCTTCCACTTCCAGTGGCAAATGCCA
CTAGGGAAAGTAAGTTGCACTCATGTAAGTATCAAACTATATAAAAGGAGGCCTTGTGCATTTCAAGTTTGCAAA
GTACCTGTGTACTTAAAATATGTGTGGAGACCTACTGTACAGTAGTTTTGCCCCTTTAATTGGGGCACATTCATC
TTAAATCTTATAGTATTTATCCACCCAAACCCCAGACTGAGATACTGCTCCCAGGGGCCTAGGTAGCTGCCAGTC
CGTGATTTTAATTGCTGTCTTGAAGTTAACAAGTGTTATAATGAAATAATCTACCTGATGCTAAATAAAGGCTTT
AGAATGTTCCCCAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1464

MSEEKDCGGGDALSNGIKKHRTSLPSPMFSRNDFSIWSILRKCIGMELSKITMPVIFNEPLSFLQRLTEYMEHTY
LIHKASSLSDPVERMQCVAAFAVSAVASQWERTGKPFNPLLGETYELVRDDLGFRLISEQVSHHPPISAFHAEGL
NNDFIFHGSIYPKLKFWGKSVEAEPKGTITLELLEHNEAYTWTNPTCCVHNIIVGKLWIEQYGNVEIINHKTGDK
CVLNFKPCGLFGKELHKVEGYIQDKSKKKLCALYGKWTECLYSVDPATFDAYKKNDKKNTEEKKNSKQMSTSEEL
DEMPVPDSESVFIIPGSVLLWRIAPRPPNSAQMYNFTSFAMVLNEVDKDMESVIPKTDCRLRPDIRAMENGEIDQ
ASEEKKRLEEKQRAARKNRSKSEEDWKTRWFHQGPNPYNGAQDWIYSGSYWDRNYFNLPDIY

FIGURE 1465

GGCACGAGGAAGCTACTCAGATAAGAGGCTCCAAGAGGACATTTTTGGATGTGAAAAACAATGAGAAGGAGGACA
ACACACATTTACAATCGTCTTAATTTTGTACTCAGAAAAAGGATGTGAAGACAATGCACAGGGAATACAATAGTT
TCAGATCTGTGTACAGTTTCCTTTTGCTTCATCTCCTGCAACAATGTAATGAAGACACCATGATATCATTAACAT
TTCACACAAAAGGAAAATGAGGCTGAAATGGTGTGGGCAAGGCCCAGGAATCTGGAGCATCCCTAACCAAGCAGC
AGAGCACCTGGGATAGAGAAAGTGCTCAAGAATGTTCACTTACTGATTACTACAATCAAAAAAAGATACGACACT
AATTTACCACATTCTTCTTACTTATTTTATGAGATACTATTCTTCCAAGGTGGAGAAAGTGGAGAAAGTAGAGTG
ACGCAGCTAAGGGAGTAAATCGACCCTCAGCCAACAAGTGGCAAAAGCCTGAAGAAAGTGATCAAGATCACTGAT
GACCCCGCGGCCCATCTCCAAGGGGGCGGGTATCACAACCCCGACGCCACACCACGTATCATTCCGCAAAACTCC
CGCGCCTCCCACGCAGAACTGGCAAGAGGGAAGGCGAGACAGCAGTGAACAGCTGGTACGCAGCACCCACAGCAC
CGCGGCAGCAGCTAGTGCCGACTCCCGCCTAGCTCTTTTGACTCTGTTCGCGGGAAGAATGGGGAAACAGTAAGG
TTGCGGCGCCTCCCGCGAGACGAGGTACCTGAGGCTGGCCCCGCAGTCCCCCGCCGCACCAGCACCGGAGCTTCA
CACCCCACTTCCGGGGTCAAGTCACCGCCGGGAATCCTGTGATCGCAGAAAGGTAGTCTCAGGTTCCGCCCCTAT
CCAAGTCCCGCCTCCACTGCCTCTCGCCCTGTATCTGTCAACTTCCGGGACGCCGCGCGTCACTAAGCAGCCAAT
CTCCACTTCCGGACTCATCCAGCCCCTTCTCCACCCCTTTCAGAGACAGCGCGATTGCGATTTAGGTTTCCGCGC
ATTTAATTGGCGAAGCTGGAGCGCTAGTCTTCGCTGATTGGTGCCGAGAAATCTGCCCCATAGACACCCGCGGGG
CGCACAGTTTCAGTCGTCCGTGGGTTTCCCGCCAGCCGCAGTCTTGGACCATAATC**ATG**GTGGACATGATGGACT
TGCCCAGGTCGCGCATCAACGCCGGCATGCTAGCTCAATTCATCGACAAGCCTGTCTGCTTCGTAGGGAGGCTGG
AAAAGATTCATCCCACCGGAAAAATGTTTATTCTTTCAGATGGAGAAGGAAAAAATGGAACCATCGAGTTGATGG
AACCCCTTGATGAAGAAATCTCTGGAATTGTGGAAGTGGTTGGAAGAGTAACCGCCAAGGCCACCATCTTGTGTA
CATCTTATGTCCAGTTTAAAGAAGATAGCCATCCTTTTGATCTTGGACTTTACAATGAAGCTGTGAAAATTATCC
ATGACTTCCCTCAGTTTTATCCTTTAGGGATTGTGCAACATGAT**TGA**TCTTGATGGATTTTCATACGATTGTAAA
TGAGCTATATTAAAGTCTATTAAAGGAAAAAAAAAAAAAAAAAAAA

FIGURE 1466

MVDMMDLPRSRINAGMLAQFIDKPVCFVGRLEKIHPTGKMFILSDGEGKNGTIELMEPLDEEISGIVEVVGRVTA
KATILCTSYVQFKEDSHPFDLGLYNEAVKIIHDFPQFYPLGIVQHD

FIGURE 1467

GTTTTGAAAGTTGATGGAGCGAACTGCTTTTCCAAAGACTCTTTTGAAAAACTTTTTAAGTAGGCCATTCTGACT
TTAACATTTCTCTTTGTCTTAACATTAGACAAAAAGTAACCTTCCTGAAGAGGACATGTGATTGGAAGTTGTCAA
TTGTTGAAGCATTGGTAACTCCAGTCTCTAACGTTTTAGAAAATCATAACAAGCGGTTCTCTACCCTGTAAAGGT
GAACTACTGAGTTCTTCATT**ATG**TCTGATGGAGATTATGATTACCTCATCAAGTTTTTAGCTTTGGGAGACTCTG
GTGTAGGGAAGACCAGTGTACTTTACCAATATACAGATGGTAAATTTAACTCCAAATTTATCACAACAGTGGGCA
TTGATTTCAGGGAAAAAAGAGTGGTGTACAGAGCCAGTGGGCCGGATGGAGCCACTGGCAGAGGCCAGAGAATCC
ACCTGCAGTTATGGGACACAGCAGGGCAGGAGAGGTTTCGTAGCTTAACGACAGCGTTCTTCAGAGATGCTATGG
GTTTTCTTCTACTTTTTGATCTGACAAATGAGCAAAGTTTCCTCAATGTCAGAAACTGGATAAGCCAGCTACAGA
TGCATGCATATTGTGAAAACCCAGATATAGTGCTGTGTGGAAACAAGAGTGATCTGGAGGACCAGAGAGTAGTGA
AAGAGGAGGAAGCCATAGCACTCGCAGAGAAATATGGAATCCCCTACTTTGAAACTAGTGCTGCCAATGGGACAA
ACATAAGCCAAGCAATTGAGATGCTTCTGGACCTGATAATGAAGCGAATGGAACGGTGTGTGGACAAGTCCTGGA
TTCCTGAAGGAGTGGTGCGATCAAATGGTCATGCCTCTACGGATCAGTTAAGTGAAGAAAAGGAGAAAGGGGCAT
GTGGCTGT**TGA**GAAGTCAAGTAAGTGACATAGTAGTTCAGGTGGCCCATGCCTGGGATCTTCTCTATGATTGATA
CATGGCACAGTGAGAGATTAATGGGCATTGTGTACAAATTGCTTCTCACCATCCCCATTAGACCTACGAATAAAG
CATCCGGTTCTAAAATTAATTTGTTGCAGCTTTGTAAATATTTCTTTAAGATTCAGCCTGAGAGTTAGGAGAAAT
ATTTCAGAGCCAAAAGTGCCTTATACAACCTTAGCCTATTATAGTAAATCATTCAAGGATTCAGAATTTTGCAGT
CACAGAAGAGTGTATTTATTATGTAGAATGAATGAGGGTACTGTCACCTGCCTTAATGTAGGTAGGCCCAGAGTC
TTACATTTAAGATCTTACATGCAGTTATAAAACCGCCACAGTCTTCAATCCAGATTTGAAGACTCATGCCATAGG
TGACATTCTAAAATACCATTAAAGCCACTTAAATGTTAAATAAGAATATACATGCACATCAGCTCAATGTCTTTG
AGTATTAATTTTATGTAAGCATTCTATTTAACATGAATATAGGACAAATCATGGCTATATCTATAGACCTTGGAT
AAACTGGATTGACCAATTATACACTCACGGTGACTTTTTTATTGGTGGGAAGGGGATTGGGGTGGGGCAGGCTGG
CTTAATGTAATATGAGCAACCAAAGTGGGACTTCTGTCTCCCCGCTATATTCCCATTGCTCTGAATGGTTGATTG
AAGGGTCAGGGAACTAGATTTTATGGCTTTAGTTCACTGTGATTGTACATTTATACTTGGCCTATGTGCTGGCCG
CACCTGAACATAGCTGGTGCTTATGCCGAGTTATTTGTGATGAGTAAATATTTAGTTTCTTTTTCTTCATATTTA
TAATGTTGATCTGGCATCCTCAGGCTGCAGCTTTATTAGCTTATAAATTACTCATCTCTGTCTTTACCAGCAGGC
TCTGTATTGTTGATATTTGCAACTTGTTTTGCTTTTCCATTGGTGGAATTGAAATAATTAGTTTTTAATTACATA
AGATGCCTGTTTGCTATTTGGTGGAAGATAGATGTTCATATTGAAGCAGTCACATTTGTACTGTAGTTCAATAAA
AGAAAAATGAAGTATTCTGTAGCCTATATTTTTCATAGAGCTCATGAGCATTTACTGTACTTGCTGGGTCTTGCC
AAGATCATTTATTCCGCTGCATTGCCAAAGTGTCTTCATACCAAATTAAAGGTGGTTTTAATATATGTTTCATGG
AAGTTGTTTATAAAATTCAAAGGTATTTCATTTAGGTGAAAAGTCTTATTTATTAAAGTGGTTTGAATAAAGTAG
ATCAAAACTTCCAGAGATCTTAATGGCTATATAGGAAGAAATATCACTCACCATAATTTAAATAAAGAATAAAAA
TACATGTATTTTATGGTGGCAAATGTTTGGTAGAACTGTAATTAGAAAAATACAAGTATATTTGCGTGATGGTTA
CACTAGAAGCCCAGACTTTACGACTACACAATATATTCATGTATCTAAACTGTACTTGTACCCCCTAAATTTATT
TTTAAAAAAAAAAAAAAAAAA

FIGURE 1468

MSDGDYDYLIKFLALGDSGVGKTSVLYQYTDGKFNSKFITTVGIDFREKRVVYRASGPDGATGRGQRIHLQLWDT
AGQERFRSLTTAFFRDAMGFLLLFDLTNEQSFLNVRNWISQLQMHAYCENPDIVLCGNKSDLEDQRVVKEEEAIA
LAEKYGIPYFETSAANGTNISQAIEMLLDLIMKRMERCVDKSWIPEGVVRSNGHASTDQLSEEKEKGACGC

FIGURE 1469

AGCCGCCGCCTCGCCGCTTCCCCTCGTCGGAGCGGCCGCTCGTCCGCCCGGCTTGAGGCCCGCGGGGAGCGCGGC
GCAATTCGTCGGCCCGCGGGGGGGCGGCCTCCCGGCATCTTCGCGGCGACCAAGGACTACCAGGAAGGGGAGCGG
CTGGG**ATG**GCGCGTCCGCGGCCCCGCGAGTACAAAGCGGGCGACCTGGTCTTCGCCAAGATGAAGGGCTACCCGC
ACTGGCCGGCCCGGATTGATGAACTCCCAGAGGGCGCTGTGAAGCCTCCAGCAAACAAGTATCCTATCTTCTTTT
TTGGCACCCATGAAACTGCATTTCTAGGTCCCAAAGACCTTTTTCCATATAAGGAGTACAAAGACAAGTTTGGAA
AGTCAAACAAACGGAAAGGATTTAACGAAGGATTGTGGGAAATAGAAAATAACCCAGGAGTAAAGTTTACTGGCT
ACCAGGCAATTCAGCAACAGAGCTCTTCAGAAACTGAGGGAGAAGGTGGAAATACTGCAGATGCAAGCAGTGAGG
AAGAAGGTGATAGAGTAGAAGAAGATGGAAAAGGCAAAAGAAAGAATGAAAAAGCAGGCTCAAAACGGAAAAAGT
CATATACTTCAAAGAAATCCTCTAAACAGTCCCGGAAATCTCCAGGAGATGAAGATGACAAAGACTGCAAAGAAG
AGGAAAACAAAAGCAGCTCTGAGGGTGGAGATGCGGGCAACGACACAAGAAACACAACTTCAGACTTGCAGAAAA
CCAGTGAAGGGACC**TAA**CTACCATAATGAATGCTGCATATTAAGAGAAACCACAAGAAGGTTATATGTTTGGTTG
TCTAATATTCTTGGATTTGATATGAACCAACACATAGTCCTTGTTGTCATTGACAGAACCCCAGTTTGTATGTAC
ATTATTCATATTCCTCTCTGTTGTGTTTCGGGGGGAAAAGACATTTTAGCCTTTTTTAAAAGTTACTGATTTAAT
TTCATGTTATTTGGTTGCATGAAGTTGCCCTTAACCACTAAGGATTATCAAGATTTTTGCGCAGACTTATACATG
TCTAGGATCCTTTTATCAAGGCAGTTATGATCATCGTTTTCCTGCCTTGACCCCACCATCATCAAACACTCAGTT
AAATATAAATTAACATTTTTTAGATGACCACTCAACATAATGCTTAAGAATGGAATTTCCTCTCTGTGACAGAAC
CCAGGAATTAATTCCTAAATACATAACGTTGGTATATTGAAGACGAAATTAAAATTGTCCTTCAGTTTTGAGGCC
ATGTGTAAAGTTTAACCATATTGTAAAATATCTATTCCGTATTAGAAATAGCTAGTTGACAGCTTATACTTCTCA
AAATTCATATTGTTATGTACACAAACTAAGTTTCTATATGTGAAGTTAGTGAGTCTTTTTGTGTTACTCCAAAAT
AAAGGCAATGATTTATTTTTTTCCCAGTGCCAATACAATTTTGAGCTAAGCACTCAAGGTGGATACTTTACATTT
TAAAGCTGGAATCAGCAACAGCCCTATGGGAAACCAGACAAAGCATTGACTTTTAAATGTAGACTTTTAAAATAA
ACTGTTTTCTTTTGGAACTACAATTAGAATAGTTAATATTCATCCTTAAACCATTATTATGTGTACATTATTGTT
GCTATTGTGATAATAGAGAATTTTATTTATTTTTATGCCAGCTTATATTGTGAGAACACATTTAGTCAGTTTGGG
TTTTATCAATCCTGTTAATGCTTGTCCTTGGAACATCTTTCGCGTATTCACGGTTTGTAGTTGAAAAGTTTACTG
TAAAAAAATCAAAAACAAAAAAATGTATTGTTTTTACAGAATAAATTTATTGGGATGTGTACTGGGAGTAAGATT
TGAGGTTGTAAGCAAACTAAGTTAGTGTAATTTGGCTTCATATATGTAACGTGAGGTATTAATGTAATTCATATA
TTAAAGCAAAAATTGTTCGCAGC

FIGURE 1470

MARPRPREYKAGDLVFAKMKGYPHWPARIDELPEGAVKPPANKYPIFFFGTHETAFLGPKDLFPYKEYKDKFGKS
NKRKGFNEGLWEIENNPGVKFTGYQAIQQQSSSETEGEGGNTADASSEEEGDRVEEDGKGKRKNEKAGSKRKKSY
TSKKSSKQSRKSPGDEDDKDCKEEENKSSSEGGDAGNDTRNTTSDLQKTSEGT

FIGURE 1471A

GCGGCCGCTCCCCCGGAGCGGCTAAAGCGGCGGCGACCGAGGCGAGCAATGGGCACGGCAGTCTCGGCAGAGCAC
AGGCGCTTCACCGCGGCTGCTCGGGCTCCGCGCTGACCTGCCCGGGCGGCCGCCTATTGTCTTTCTCCGCGGCGA
AGGTGAAGAGTTGTCCCAGCTCGGCCCGCGGGGGAGCCCCGGGAGCCGCACGTGTCCTGGGTC**ATG**AAACTTAAT
CCACAGCAAGCTCCCTTATATGGTGATTGTGTTGTTACAGTGCTGCTTGCTGAAGAGGACAAAGCTGAAGATGAT
GTAGTGTTTTACTTGGTATTTTTGGGTTCCACCCTCCGTCACTGTACAAGTACTCGGAAGGTCAGTTCTGATACA
TTGGAGACCATTGCTCCTGGTCATGATTGTTGTGAAACAGTGAAGGTGCAGCTCTGTGCTTCCAAAGAGGGCCTT
CCCGTGTTTGTGGTGGCTGAAGAAGACTTTCATTTCGTCCAGGATGAAGCGTATGATGCAGCTCAATTCCTAGCA
ACCAGTGCTGGAAATCAGCAGGCTTTGAACTTTACCCGTTTTCTTGACCAGTCAGGACCCCCATCTGGGGATGTG
AATTCCCTTGATAAGAAGTTGGTGCTGGCATTCAGGCACCTGAAGCTGCCCACGGAGTGGAATGTATTGGGGACA
GATCAGAGTTTGCATGATGCTGGCCCGCGAGAGACATTGATGCATTTTGCTGTGCGGCTGGGACTGCTGAGGTTG
ACGTGGTTCCTGTTGCAGAAGCCAGGTGGCCGCGGAGCTCTCAGTATCCACAACCAGGAAGGGGCGACGCCTGTG
AGCTTGGCCTTGGAGCGAGGCTATCACAAGCTGCACCAGCTTCTAACCGAGGAGAATGCTGGAGAACCAGACTCC
TGGAGCAGTTTATCCTATGAAATACCGTATGGAGACTGTTCTGTGAGGCATCATCGAGAGTTGGACATCTATACA
TTAACCTCTGAGTCTGATTCACATCATGAACACCCATTTCCTGGAGACGGTTGCACTGGACCAATTTTTAAACTT
ATGAACATCCAACAGCAACTAATGAAAACAAACCTCAAGCAGATGGACAGTCTTATGCCCTTAATGATGACAGCA
CAGGATCCTTCCAGTGCCCCAGAGACAGATGGCCAGTTTCTTCCCTGTGCACCGGAGCCCACGGACCCTCAGCGA
CTTTCTTCTTCTGAAGAGACTGAGAGCACTCAGTGCTGCCCAGGGAGCCCTGTTGCACAGACTGAAAGTCCCTGT
GATTTGTCAAGCATAGTTGAGGAGGAGAATACAGACCGTTCCTGTAGGAAGAAAAATAAAGGCGTGGAAAGAAAA
GGGGAAGAGGTGGAGCCAGCACCTATTGTGGACTCTGGAACTGTATCTGATCAAGACAGCTGCCTTCAGAGCTTG
CCTGATTGTGGAGTAAAGGGCACGGAAGGCCTTTCGTCCTGTGGAAACAGAAATGAAGAAACTGGAACAAAATCT
TCTGGAATGCCCACAGACCAGGAGTCCCTGAGCAGTGGAGATGCTGTGCTTCAGAGAGACTTGGTCATGGAGCCA
GGCACAGCCCAGTATTCCTCTGGAGGTGAACTGGGAGGCATTTCAACAACAAATGTCAGTACCCCAGACACTGCA
GGGGAAATGGAACATGGGCTCATGAACCCAGATGCCACTGTTTGGAAGAATGTGCTTCAGGGAGGGGAAAGTACA
AAGGAAAGATTTGAGAACTCTAATATTGGCACAGCTGGAGCCTCTGACGTGCACGTCACAAGTAAGCCTGTGGAT
AAAATCAGTGTTCCAAACTGTGCCCCTGCTGCCAGTTCCCTGGATGGTAACAAACCTGCTGAGTCTTCACTTGCA
TTTAGTAATGAAGAAACCTCCACTGAAAAAACAGCAGAAACGGAAACTTCACGAAGTCGTGAGGAGAGTGCTGAT
GCTCCAGTAGATCAGAATTCTGTGGTGATTCCAGCTGCTGCAAAAGACAAGATTTCAGATGGATTAGAACCTTAT
ACTCTCTTAGCAGCAGGCATAGGTGAGGCAATGTCACCCTCAGATTTAGCCCTTCTTGGGCTGGAAGAAGATGTA
ATGCCACACCAGAACTCAGAAACAAATTCATCTCATGCTCAAAGCCAAAAGGGCAAATCCTCACCCATTTGTTCT
ACAACTGGAGACGATAAACTTTGTGCAGACTCTGCATGTCAACAGAACACAGTGACTTCTAGTGGCGATTTGGTT
GCAAAACTGTGTGATAACATAGTTAGCGAGTCCGAAAGCACCACAGCAAGGCAACCCAGCTCACAAGATCCACCC
GATGCCTCCCACTGTGAAGACCCACAGGCTCATACAGTCACCTCTGACCCTGTAAGGGATACCCAGGAACGTGCG
GATTTTTGTCCTTTCAAAGTGGTGGATAACAAAGGCCAACGAAAAGATGTGAAACTAGATAAACCTTTAACAAAT
ATGCTTGAGGTGGTTTCACATCCACATCCAGTTGTCCCTAAAATGGAGAAAGAACTGGTGCCAGACCAGGCAGTA
ATATCAGACAGTACTTTCTCTCTGGCAAACAGTCCAGGCAGTGAATCAGTAACCAAGGATGACGCACTTTCTTTT
GTCCCCTCCCAGAAAGAAAAGGGAACAGCAACTCCTGAACTACATACAGCTACAGATTATAGAGATGGCCCAGAT
GGAAATTCGAATGAGCCTGATACGCGGCCACTAGAAGACAGGGCAGTAGGCCTGTCCACATCCTCCACTGCTGCA
GAGCTTCAGCACGGGATGGGGAATACCAGTCTCACAGGACTTGGTGGAGAGCATGAGGGTCCCGCCCCTCCAGCA
ATCCCAGAAGCTCTGAATATCAAGGGGAACACTGACTCTTCCCTGCAAAGTGTGGGTAAGGCCACTTTGGCTTTA
GATTCAGTTTTGACTGAAGAAGGAAAACTTCTGGTGGTTTCAGAAAGCTCTGCAGCTCAGGAACAAGATAAGGAT
AAAGCGGTGACCTGTTCCTCTATTAAGGAAAATGCTCTCTCTTCAGGAACTTTGCAGGAAGAGCAGAGAACACCA
CCTCCTGGACAAGATACTCAACAATTTCATGAAAAATCAATCTCAGCTGACTGTGCCAAGGACAAAGCACTTCAG
CTAAGTAATTCACCGGGTGCATCCTCTGCCTTTCTTAAGGCAGAAACTGAACATAACAAGGAAGTGGCCCCACAA
GTCTCACTGCTGACTCAAGGTGGGGCTGCCCAGAGCCTGGTGCCACCAGGAGCAAGTCTGGCCACAGAGTCAAGG
CAGGAAGCCTTGGGGGCAGAGCACAACAGCTCCGCTCTGTTGCCATGTCTGTTGCCAGATGGGTCTGATGGGTCC
GATGCTCTTAACTGCAGTCAGCCTTCTCCTCTGGATGTTGGAGTGAAGAACACTCAATCCCAGGGAAAAACTAGT
GCCTGTGAGGTGAGTGGAGATGTGACGGTGGATGTTACAGGGGTTAATGCTCTACAAGGTATGGCTGAGCCCAGA
AGAGAGAATATATCACACAACACCCAAGACATCCTGATTCCAAACGTCTTGTTGAGCCAAGAGAAGAATGCCGTT

FIGURE 1471B

CTAGGTTTGCCAGTGGCTCTACAGGACAAAGCTGTGACTGACCCACAGGGAGTTGGAACCCCAGAGATGATACCT
CTTGATTGGGAGAAAGGGAAGCTGGAGGGAGCAGACCACAGCTGTACCATGGGTGACGCTGAGGAAGCCCAAATA
GACGATGAAGCACATCCTGTCCTACTGCAGCCTGTTGCCAAGGAGCTCCCCACAGACATGGAGCTCTCAGCCCAT
GATGATGGGGCCCCAGCTGGTGTGAGGGAAGTCATGCGAGCCCCGCCTTCAGGCAGGGAAAGGAGCACTCCCTCT
CTACCTTGCATGGTCTCTGCCCAGGACGCACCTCTGCCTAAGGGGGCAGACTTGATAGAGGAGGCTGCCAGCCGT
ATAGTGGATGCTGTCATCGAACAAGTCAAGGCCGCTGGAGCACTGCTTACTGAGGGGGAGGCCTGTCACATGTCA
CTGTCCAGCCCTGAGTTGGGTCCTCTCACTAAAGGACTAGAGAGTGCTTTTACAGAAAAAGTGAGTACTTTCCCA
CCTGGGGAGAGCCTACCAATGGGCAGTACTCCTGAGGAAGCCACGGGGAGCCTTGCAGGATGTTTTGCTGGAAGG
GAGGAGCCAGAGAAGATCATTTTACCTGTCCAGGGGCCTGAGCCAGCAGCAGAAATGCCAGACGTGAAAGCTGAA
GATGAAGTGGATTTTAGAGCAAGTTCAATTTCTGAAGAAGTGGCTGTAGGGAGCATAGCTGCTACACTGAAGATG
AAGCAAGGCCCAATGACCCAGGCGATAAACCGAGAAAACTGGTGTACAATAGAGCCATGCCCTGATGCAGCATCT
CTTCTGGCTTCCAAGCAGAGCCCAGAATGTGAGAACTTCCTGGATGTTGGACTGGGCAGAGAGTGTACCTCAAAA
CAAGGTGTACTTAAAAGAGAATCTGGGAGTGATTCTGACCTCTTTCACTCACCCAGTGATGACATGGACAGCATC
ATCTTCCCAAAGCCAGAGGAAGAGCATTTGGCCTGTGATATCACCGGATCCAGTTCATCCACCGATGACACGGCT
TCACTGGACCGACATTCTTCTCATGGCAGTGATGTGTCTCTCTCCCAGATTTTAAAGCCAAACAGGTCAAGAGAT
CGGCAAAGCCTTGATGGATTCTACAGCCATGGGATGGGAGCTGAGGGTCGAGAAAGTGAGAGTGAGCCTGCTGAC
CCAGGCGACGTGGAGGAGGAGGAGATGGACAGTATCACTGAAGTGCCTGCAAACTGCTCTGTCCTAAGGAGCTCC
ATGCGCTCTCTTTCTCCCTTCCGGAGGCACAGCTGGGGGCCTGGGAAAAATGCAGCCAGCGATGCAGAAATGAAC
CACCGGAGTTCAATGCGAGTTCTTGGGGATGTTGTCAGGAGACCTCCCATTCATAGGAGAAGTTTCAGTCTAGAA
GGCTTGACAGGAGGAGCTGGTGTCGGAAACAAGCCATCCTCATCTCTAGAAGTAAGCTCTGCAAATGCCGAAGAG
CTCAGACACCCATTCAGTGGTGAGGAACGGGTTGACTCTTTGGTGTCACTTTCAGAAGAGGATCTGGAGTCAGAC
CAGAGAGAACATAGGATGTTTGATCAGCAGATATGTCACAGATCTAAGCAGCAGGGATTTAATTACTGTACATCA
GCCATTTCCTCTCCATTGACAAAATCCATCTCATTAATGACAATCAGCCATCCTGGATTGGACAATTCACGGCCC
TTCCACAGTACCTTCCACAATACCAGTGCTAATCTGACTGAGAGTATAACAGAAGAGAACTATAATTTCCTGCCA
CATAGCCCCTCCAAGAAAGATTCTGAATGGAAGAGTGGAACAAAAGTCAGTCGTACATTCAGCTACATCAAGAAT
AAAATGTCTAGCAGCAAGAAGAGCAAAGAAAAGGAAAAAGAAAAAGATAAGATTAAGGAGAAGGAGAAAGATTCT
AAAGACAAGGAGAAAGATAAGAAGACTGTCAACGGGCACACTTTCAGTTCCATTCCTGTTGTGGGTCCCATCAGC
TGTAGCCAGTGTATGAAGCCCTTCACCAACAAAGATGCCTATACTTGTGCAAATTGCAGTGCTTTTGTCCACAAA
GGCTGCCGAGAAAGTCTAGCCTCCTGTGCAAAGGTCAAAATGAAGCAGCCCAAAGGGAGCCTTCAGGCACATGAC
ACATCATCACTGCCCACGGTCATTATGAGAAACAAGCCCTCACAGCCCAAGGAGCGTCCTCGGTCCGCAGTCCTC
CTGGTGGATGAAACCGCTACCACCCCAATATTTGCCAATAGACGATCCCAGCAGAGTGTCTCGCTCTCCAAAAGT
GTCTCCATACAGAACATTACTGGAGTTGGCAATGATGAGAACATGTCAAACACCTGGAAATTCCTGTCTCATTCA
ACAGACTCACTAAATAAAATCAGCAAGGTCAATGAGTCAACAGAATCACTTACTGATGAGGGAGTAGGTACAGAC
ATGAATGAAGGACAACTACTGGGAGACTTTGAGATTGAGTCCAAACAGCTGGAAGCAGAGTCTTGGAGTCGGATA
ATAGACAGCAAGTTTCTAAAACAGCAAAAGAAAGATGTGGTCAAACGGCAAGAAGTAATATATGAGTTGATGCAG
ACAGAGTTTCATCATGTCCGCACTCTCAAGATCATGAGTGGTGTGTACAGCCAGGGGATGATGGCGGATCTGCTT
TTTGAGCAGCAGATGGTAGAAAAGCTGTTCCCCTGTTTGGATGAGCTGATCAGTATCCATAGCCAATTCTTCCAG
AGGATTCTGGAGCGGAAGAAGGAGTCTCTGGTGGATAAAAGTGAAAAGAACTTTCTCATCAAGAGGATAGGGGAT
GTGCTTGTAAATCAGTTTTCAGGTGAGAATGCAGAACGTTTAAAGAAGACATATGGCAAGTTTTGTGGGCAACAT
AACCAGTCTGTAAACTACTTCAAAGACCTTTATGCCAAGGATAAGCGTTTTCAAGCCTTTGTAAAGAAGAAGATG
AGCAGTTCAGTTGTTAGAAGGCTTGGAATTCCAGAGTGCATATTGCTTGTAACTCAGCGGATTACCAAGTACCCA
GTTTTATTCCAAAGAATATTGCAGTGTACCAAAGACAATGAAGTGGAGCAGGAAGATCTAGCACAGTCCTTGAGC
CTGGTGAAGGATGTGATTGGAGCTGTAGACAGCAAAGTGGCAAGTTATGAAAAGAAAGTGCGTCTCAATGAGATT
TATACAAAGACAGATAGCAAGTCAATCATGAGGATGAAGAGTGGTCAGATGTTTGCCAAGGAAGATTTGAAACGG
AAGAAGCTTGTACGTGATGGGAGTGTGTTTCTGAAGAATGCAGCAGGAAGGTTGAAAGAGGTTCAAGCAGTTCTT
CTCACTGACATTTTAGTTTTCCTTCAAGAAAAAGACCAGAAGTACATCTTTGCATCATTGGACCAGAAGTCAACA
GTGATCTCTTTAAAGAAGCTGATTGTGAGAGAAGTGGCACATGAGGAGAAAGGTTTATTCCTGATCAGCATGGGG
ATGACAGATCCAGAGATGGTAGAAGTCCATGCCAGCTCCAAAGAGGAACGAAACAGCTGGATTCAGATCATTCAG

FIGURE 1471C

GACACAATCAACACCCTGAACAGAGATGAAGATGAAGGAATTCCTAGTGAGAATGAGGAAGAAAAGAAAATGTTG
GACACCAGAGCCCGAGAATTAAAAGAACAACTTCACCAGAAGGACCAAAAAATCCTACTCTTGTTGGAAGAGAAG
GAGATGATTTTCCGGGACATGGCTGAGTGCAGCACCCCTCTCCCAGAGGATTGCTCCCCAACACATAGCCCTAGA
GTTCTCTTCCGCTCCAACACAGAAGAGGCTCTCAAAGGAGGACCTTTAATGAAAAGTGCAATAAATGAGGTGGAG
ATCCTTCAGGGTTTGGTGAGTGGAAATCTGGGAGGCACACTTGGGCCGACTGTCAGCAGCCCCATTGAGCAAGAT
GTGGTCGGTCCCGTTTCCCTGCCCCGGAGAGCAGAGACCTTTGGAGGATTTGACAGCCATCAGATGAATGCTTCA
AAAGGAGGCGAGAAGGAAGAGGGAGATGATGGCCAAGATCTTAGGAGAACGGAATCAGATAGTGGCCTAAAAAAG
GGTGGAAATGCTAACCTGGTATTTATGCTTAAAAGAAACAGTGAGCAGGTTGTCCAGAGCGTTGTTCATCTCTAC
GAGCTCCTCAGCGCTCTGCAGGGTGTGGTGCTGCAGCAGGACAGCTACATTGAGGACCAGAAACTGGTGCTGAGC
GAGAGGGCGCTCACTCGCAGCTTGTCCCGCCCGAGCTCCCTCATTGAGCAGGAGAAGCAGCGCAGCCTGGAGAAG
CAGCGCCAGGACCTGGCCAACCTGCAGAAGCAGCAGGCCCAGTACCTCGAGGAGAAGCGCAGGCGCGAGCGTGAG
TGGGAAGCTCGTGAGAGGGAGCTGCGGGAGCGGGAGGCCCTCCTGGCCCAGCGCGAGGAGGAGGTGCAGCAGGGG
CAGCAGGACCTGGAAAAGGAGCGGGAGGAGCTCCAGCAGAAGAAGGGCACATACCAGTATGACCTGGAGCGACTG
CGTGCTGCCCAGAAACAGCTTGAGAGGGAACAGGAGCAGCTGCGCCGGGAGGCAGAGCGGCTCAGCCAGCGGCAG
ACAGAACGGGACCTGTGTCAGGTTTCCCATCCACATACCAAGCTGATGAGGATCCCATCGTTCTTCCCCAGTCCT
GAGGAGCCCCCCTCGCCATCTGCACCTTCCATAGCCAAATCAGGGTCATTGGACTCAGAACTTTCAGTGTCCCCA
AAAAGGAACAGCATCTCTCGGACACACAAAGATAAGGGGCCTTTTCACATACTGAGTTCAACCAGCCAGACAAAC
AAAGGACCAGAAGGGCAGAGCCAGGCCCCTGCGTCCACCTCTGCCTCTACCCGCCTGTTTGGGTTAACAAAGCCA
AAGGAAAAGAAGGAGAAAAAAAAGAAGAACAAAACCAGCCGCTCTCAGCCCGGTGATGGTCCCGCGTCAGAAGTA
TCAGCAGAGGGTGAAGAGATCTTCTGCTGACCCTCTTCCTCTCTGCTGAGGCAGCTGCCTCCTGATCCTGGCCAG
CCCACCTCTCCTGCTGTCCCCGCGTGCACAAGTCTCTTACACTGGACGCCCACTGCTCCTCAGCGTCCAGTCCTC
CTGGGCGGCCCCAGGTCCTGGACAATAAGCAACAGATGATATTGAGTGTCGGGTGGGGAAGGAGGCCCAGACTCT
GCTTCGGCCATGATTTGTGACTGCCCAGGACTCTCAGGTTGGGCTGGCCCTACTCAGGATTACACTGAAAGTAAT
GGCCTCGTAAGTACAGGTGATGGTTTTGGACACGTCAGGAATTCCTAAAGGCTGAAAGAGTGTATCCAAGTAAGG
TCTGAACCTCCGACTGCCTTTTATTTGGGGGAACACAAAACCAAACAGCAGATGTTTTGGACTTGATCTGTGTAC
GTACATGGGGACCTGTCTGCATATACACACGGGGAATGCCAGAAGAAGGCCCAGTCTGCACCAGGCGTCTGGTCA
ACTTAGCACAAGGGCAGTGCCTGGACGGACCCGGAGCCCCCGCATATCAGCAGTTCACCCAGTACTCCTCAGAGA
CTGGTTTCCCTCTAAACCCATCCCGGGCACATACCACCCCTGTTTTGCATGTATTTCTCATTTCATTTTAGGGAT
GACAAACATTTGTGAAACCAGTGAGAGAAGGCTTGATGTGTATAAAAGACGTGATGTGCACCACCTCGATCTCGG
TGTTTCAGGCACTAAAGCAACAAAACAACCCATAGTATCTCATTTTGTCATCAGATCCAGAAGAAATATCCTGGT
TTTCCAGCATGTTTACCCACATGTTTTGGGCATGGATAAAGTGAAGAGGCCTACTCACCATTATCCCTGCAGCGT
GACACCTTTTGATTGTCACTGACCACTCAGAAGGGGCCACGGCCTCCTGGCTGTGTTCCTGAGCCCCCGTCGTGC
CTCTCCCAGACAGCAGCTGTCTGGCCCTTGCTGGGTGAGGGCACACCACTGCCAGGGGTCAGCCTCGCACCCAGG
CCAGGCAGAAGCTGTGCTCTGAAGCTAGGACAGCTGGCTGAGAAGTGGGTTCAGGCGAAGGGTGAAGCCATGTGT
AGCAGTTCCTGCCAGTGCAGATCTGGAGAGGAGCTGGCCCGGAAGGCGTGGTTGTGAAAGCGCCCTTCTTATGTT
AGGAGGCCTTGGCAAAATTGGATTTCTTCAAAAATACATGTAAAGGTCTGTTGTTGAATTGTACTCTGCCCCTGG
AAGCAGATACAGATGGCTGCCTGCTGCTCGGCTTTGCTTTTGCTTTTCCCACCGTGTTTTCATCTTTGTTCACTT
GAGGCTTTCCCCAGCTGGTGTGTGCAGGACAGTTCATGGTAATGTTGCCCTCTGAGGCCCCGTACACCAGAAGGG
AGGCCCTGGAAAATTTTGTGCTTCCAACGTGGCCTTCAATTCTTGCTTTTTTGCCCCTCGGAAGCATGGGGCTTT
TGAGCACACTTAAAAAAAAAAACCGGAATTC

FIGURE 1472

MKLNPQQAPLYGDCVVTVLLAEEDKAEDDVVFYLVFLGSTLRHCTSTRKVSSDTLETIAPGHDCCETVKVQLCAS
KEGLPVFVVAEEDFHFVQDEAYDAAQFLATSAGNQQALNFTRFLDQSGPPSGDVNSLDKKLVLAFRHLKLPTEWN
VLGTDQSLHDAGPRETLMHFAVRLGLLRLTWFLLQKPGGRRALSIHNQEGATPVSLALERGYHKLHQLLTEENAG
EPDSWSSLSYEIPYGDCSVRHHRELDIYTLTSESDSHHEHPFPGDGCTGPIFKLMNIQQQLMKTNLKQMDSLMPL
MMTAQDPSSAPETDGQFLPCAPEPTDPQRLSSSEETESTQCCPGSPVAQTESPRDLSSIVEEENTDRSCRKKNKG
VERKGEEVEPAPIVDSGTVSDQDSCLQSLPDCGVKGTEGLSSCGNRNEETGTKSSGMPTDQESLSSGDAVLQRDL
VMEPGTAQYSSGGELGGISTTNVSTPDTAGEMEHGLMNPDATVWKNVLQGGESTKERFENSNIGTAGASDVHVTS
KPVDKISVPNCAPAASSLDGNKPAESSLAFSNEETSTEKTAETETSRSCEESADAPVDQNSVVIPAAAKDKISDG
LEPYTLLAVGIGETMSPPDLALLGLEEDVMPHQNSETNSSHAQSQKGKSSPICSTTGDDKLCADSACQQNTVTSS
GDLVAKLCDNIVSESESTTARQPSSQDPPDASHCEDPQAHTVTSDPVRDTQERADFCPFKVVDNKGQRKDVKLDK
PLTNMLEVVSHPHPVVPKMEKELVPDQAVISDSTFSLANSPGSESVTKDDALSFVPSQKEKGTATPELHTATDYR
DGPDGNSNEPDTRPLEDRAVGLSTSSTAAELQHGMGNTSLTGLGGEHEGPAPPAIPEALNIKGNTDSSLQSVGKA
TLALDSVLTEEGKLLVVSESSAAQEQDKDKAVTCSSIKENALSSGTLQEEQRTPPPGQDTQQFHEKSISADCAKD
KALQLSNSPGASSAFLKAETEHNKEVAPQVSLLTQGGAAQSLVPPGASLATESRQEALGAEHNSSALLPCLLPDG
SDGSDALNCSQPSPLDVGVKNTQSQGKTSACEVSGDVTVDVTGVNALQGMAEPRRENISHNTQDILIPNVLLSQE
KNAVLGLPVALQDKAVTDPQGVGTPEMIPLDWEKGKLEGADHSCTMGDAEEAQIDDEAHPVLLQPVAKELPTDME
LSAHDDGAPAGVREVMRAPPSGRERSTPSLPCMVSAQDAPLPKGADLIEEAASRIVDAVIEQVKAAGALLTEGEA
CHMSLSSPELGPLTKGLESAFTEKVSTFPPGESLPMGSTPEEATGSLAGCFAGREEPEKIILPVQGPEPAAEMPD
VKAEDEVDFRASSISEEVAVGSIAATLKMKQGPMTQAINRENWCTIEPCPDAASLLASKQSPECENFLDVGLGRE
CTSKQGVLKRESGSDSDLFHSPSDDMDSIIFPKPEEEHLACDITGSSSSTDDTASLDRHSSHGSDVSLSQILKPN
RSRDRQSLDGFYSHGMGAEGRESESEPADPGDVEEEEMDSITEVPANCSVLRSSMRSLSPFRRHSWGPGKNAASD
AEMNHRSSMRVLGDVVRRPPIHRRSFSLEGLTGGAGVGNKPSSSLEVSSANAEELRHPFSGEERVDSLVSLSEED
LESDQREHRMFDQQICHRSKQQGFNYCTSAISSPLTKSISLMTISHPGLDNSRPFHSTFHNTSANLTESITEENY
NFLPHSPSKKDSEWKSGTKVSRTFSYIKNKMSSSKKSKEKEKEKDKIKEKEKDSKDKEKDKKTVNGHTFSSIPVV
GPISCSQCMKPFTNKDAYTCANCSAFVHKGCRESLASCAKVKMKQPKGSLQAHDTSSLPTVIMRNKPSQPKERPR
SAVLLVDETATTPIFANRRSQQSVSLSKSVSIQNITGVGNDENMSNTWKFLSHSTDSLNKISKVNESTESLTDEG
VGTDMNEGQLLGDFEIESKQLEAESWSRIIDSKFLKQQKKDVVKRQEVIY

FIGURE 1473A

CTGCGGTCCAGTCTAGGGGGTCTCAGATTGGCGGGGATGGGCAGCAGCGGCAGGTGGCCTTGGCTTTTGCTGCAG
CCGTCAACGACCTATCATCGGGGTCCTGCGTAAGGTCCGGCTGGCTGGGACTTGGCTGTGGGTGGGATGGACTGG
CTGCCGGACCGAGTGCCCTGCAGTTGGTAGGAGTATGAGGCAGAGTGATGCACACCCGGGCGCCCAGCATCGTTC
TAATTGCCGGAGACATTGCCTCAGACTGTGCGCTGCTAGAGGCTGCGTTCCTGAGCAGGAAGCCCGTTTCCTGGG
ATTGGAACTACCCTTCTTGGCCAGCGGGAAGTCCCCAAGGACGGAGTCGAAAGGTCAAATCTTATCTGTCAGTGC
TGTGTGACAGCATCGCAACGGGATCTGCAGAACCTGAACTCGATCCGTAATGCCTCCTGCCTGCCTCTTTCAAG**A**
TGGAGGTGAAACCTGTGGGAGAACCTACTCAAGAGGTGTCTAAATTCAAACTTTCCACCAAGGTAGAAAGCACGG
GACACTGGCTGGTGGAAGATCATGTTCGAATATGGGAAGTTTTAAAGACAGAGGAGAGCTCGATTCAGGACTGGG
GTGAAGAGGTAGAGGAAGGAGCTGTTTACCATGTCACCCTCAAAAGAGTCCAGATTCAACAGGCTGCCAATAAAG
GAGCAAGATGGCTAGGGGTTGAAGGGGACCAGCTGCCTCCAGGACACACAGTCAGTCAATATGAAACCTGTAAGA
TCAGGACCATAAAAGCTGGCACCTTGGAGAAGCTTGTGGAGAACCTGCTGACAGCTTTTGGGGACAATGACTTTA
CCTATATCAGCATCTTTCTTTCAACGTACAGAGGCTTTGCCTCCACTAAAGAAGTGCTGGAACTACTGCTGGACA
GGTATGGAAACCTGACAAGCCCAAACTGTGAAGAAGATGGAAGCCAAAGTTCATCAGAGTCCAAAATGGTGATCA
GGAATGCAATCGCTTCCATACTAAGGGCCTGGCTTGACCAGTGTGCAGAAGACTTCCGAGAGCCCCCTCACTTCC
CTTGCTTACAGAAACTGCTGGATTATCTCACACGGATGATGCCGGGCTCTGACCCAGAAAGAAGAGCACAAAATC
TTCTTGAGCAGTTTCAGAAGCAAGAAGTGGAAACTGACAATGGGCTTCCCAACACGATCTCCTTCAGCCTGGAAG
AGGAAGAGGAACTGGAGGGTGGAGAGTCAGCAGAATTCACGTGCTTCTCAGAAGATCTCGTGGCAGAGCAGCTGA
CCTACATGGATGCACAACTCTTCAAGAAAGTAGTGCCTCACCACTGCCTGGGCTGCATTTGGTCTCGAAGGGATA
AGAAGGAAAACAAACATTTGGCTCCTACGATCCGTGCCACCATCTCTCAGTTTAATACCCTCACCAAATGTGTTG
TCAGCACCATCCTGGGGGGCAAAGAACTCAAAACTCAGCAGAGAGCCAAAATCATTGAGAAGTGGATCAACATCG
CTCATGAATGTAGACTCCTGAAGAATTTTTCCTCCTTGAGGGCCATCGTTTCGGCACTGCAGTCTAATTCCATCT
ATCGGTTAAAAAAGACTTGGGCTGCCGTCCCAAGGGACCGAATGCTGATGTTTGAAGAACTTTCAGATATCTTCT
CAGACCATAATAACCATTTGACCAGCCGAGAACTACTGATGAAGGAAGGAACCTCAAAATTTGCAAACCTGGACA
GCAGTGTGAAAGAAAACCAGAAGCGTACCCAGAGGCGGCTGCAGCTCCAGAAGGACATGGGTGTGATGCAGGGAA
CTGTGCCCTACCTGGGCACCTTCCTGACTGACCTGACCATGCTTGACACTGCCCTTCAGGACTACATCGAGGGTG
GACTGATAAACTTTGAGAAAAGGAGAAGGGAATTTGAAGTGATTGCCCAGATAAAGCTCTTACAGTCTGCCTGCA
ACAGCTATTGCATGACCCCAGACCAAAAGTTCATCCAGTGGTTCCAGAGGCAGCAGCTCCTGACAGAGGAGGAGA
GCTATGCCCTGTCATGTGAGATTGAAGCAGCTGCTGACGCCAGCACCACCTCGCCCAAGCCTCGGAAGAGCATGG
TGAAGAGACTCAGCCTACTGTTTCTAGGGTCTGACATGATCACCAGTCCCACTCCCACCAAAGAGCAGCCCAAGT
CCACTGCCAGCGGGAGCTCTGGTGAAAGCATGGACTCTGTCAGCGTGTCATCCTGCGAGTCGAACCACTCAGAGG
CTGAGGAGGGCTCCATTACTCCCATGGACACCCCTGATGAGCCTCAAAAAAAGCTCTCTGAGTCCTCCTCATCCT
GTTCTTCTATCCATTCCATGGACACAAATTCCTCAGGGATGTCTTCCTTAATCAACCCCCTCTCCTCCCCTCCGT
CCTGCAACAACAACCCCAAAATCCACAAGCGCTCTGTCTCGGTGACGTCCATTACCTCGACTGTGCTGCCTCCTG
TTTACAACCAACAGAATGAAGACACCTGCATAATCCGCATCAGTGTGGAAGACAATAACGGCAACATGTACAAGA
GCATCATGTTGACGAGCCAGGATAAAACCCCCGCTGTGATCCAGAGAGCCATGCTGAAGCACAATCTGGACTCAG
ACCCCGCCGAGGAGTACGAGCTGGTGCAGGTCATCTCGGAGGACAAAGAACTTGTGATTCCAGACTCAGCAAATG
TCTTTTATGCCATGAACAGCCAAGTGAACTTTGACTTCATTTTGCGCAAAAAGAACTCCATGGAAGAACAAGTGA
AACTGCGTAGCCGGACCAGCTTGACGTTGCCCAGGACAGCTAAACGGGGCTGCTGGAGTTACAGACACAGCAAAA
TCACCCTC**TGA**AGGGAGGGMCCAGTGGCCCCTTGTTTGCCAAAGGCAGAGTGGGGCTGAGAAACAGGCTGCGGTG
ATTGCAATTACCATCCGGTGTTCGAGGATCATTGGTGAAGTCAGCAGATATTTATTGAGTTCCTGTGGTGTGCAA
AGCATTATGATAGGCACCGTGGGGAAACTGGAAATGAATTTGACATGAAAAGGATGAACGATTCACTGATTCTCT
TTGACTCATTTGAGACTAAAATGCAGAATTACCAACATTTAAAACATATATATGCACATGTATTTGGTATGCATG
TGTATCTATATAAAAATATATAAGAGGGACTTTATGGGATAGTATGGACTATGGAAAAACAAATTTGCACAATGG
CCTGGGAAGTTGAGGTCACTTTTTACAGGGAAATAGAAGAAACTGAGAACCTAGTCTCGTATATTCTGAGTAAAT
GGAATCAGTCCTGGGAATAGAGAGTGTCCTTTGTGCCAGTATTACAAGAAGCCCAAACTTTATTTTTATAAAGGG
AGAGGATGACTTTCTCAATCAAGTGCCACCAGATAAAAACAACTGCAGAGGCTGGAACTGCCACAGGCTGTATGA
AAGGCCACTTTGGAAAGGGTTTGGATGAGCTGGTGGCCTTCAACCTCTGCCTGCATCTGCCACTTTCTGCTACCC
TAGGGAGGCCAGGAGGAGCTTCGGAGGACCATCGCCCCACTGGTCTAGCCATCATGACACCTCTGGAGGTGTCAA

FIGURE 1473B

GCTCCTGAAACAAGCTCATTTCAGTTTCTGGCAACCCCGTGTATTTCCGTTTTCCCCCTAAAGAACATATCATAA
TCATTGCACAAATAACCATGTTCTTTGGTAATGAAGCCAGAAAAGAAAGCGCAAAAGAATGGTGACTCATTTGGA
CTCTTATCTGTCTTGGAATGTCACTGCTTCATTGCCTTCTCTGATTGCCTTTTGCATGTAAAACTATGTGTCTGG
AGTCTTTTGCCATCTGGATCTTAGTACCTCTTTATTATGTGCAATTTATTCCTCAGGTGTGGAAATTTCTACTGC
AATTGACTGACGTKTGATTATTTTGAGCTTGTGAAAGATTTCTGAACAGTGATTGTCCCGTTAATAGCCCCTCAG
AAGATGTTCCCTGCTGATAACAGCATCCTATTTTACTTACTTTTATAGCATTACTGTGCCTAGTCGTGGGGAAAG
AGATGGGGCTGTATAGATTATCTGAATCATTTGTCTAAGAGGTACATTCTTCCAGATGGAATCAATAACTTTTTT
TTTTCCAGGTTCCCGTGCTTGCTATCACAGTATCATTGTTAAGTGACACTTTTGTCTCTCATAACACCATCACAC
TCTTCCTTCCAAGTCTGAGCTGTGCTGGGGTTTGAACTAAAAGCCATATGTGGAATATTGACATGTGTAAGAAGC
ACTTTCAGAATGTTGTCCTTTTTAAGAAATGATTCTCAAAATACCAGTTTTTATTCCAAAAATTTAGAGAACAAA
CCCGGAATATGAAGTGCAGATTGTAACATGGAGCTATTTTTTTTTCCTAATCCCATAATACAGCTCCTAAAAGTT
GTGTGGGATTTGCGTTGCATAAATAGCCATGTGAATTCCACAAGAAGCACCAGGGAAAGTTTAGAGATTTGCGGC
AATGGACCGAAGAACGGGCCAGGAAGTCCTCCAATTTCCTTTGGTCTTTCCAGGAGATTGGACTACACATTGTAA
AGACTGACTGGGTTTCAACTAGTCAAAAAGCACTTTCTTCTGTTTTCAATCCCTGTTCGATTTGTGCTTCTGTGC
TTGTAGGAGAGATGGCCAGGGTGGCAGCCCTCATGCAGGTTGAAGTATATGTAGCCTCAGCCTGATATTCTTGGT
GCGAAGGTAAAAAAAAAAAAAATAAATAAAACCATTGGCCTGGTTGAGGGCGTGACCACCAAGACATATATGTTG
TGCCCGTGTTCATCCTGTGTATTTATACTGTATATGTAGAGTCTAGATTTATATACTGCAATGTAAAATATATAT
ATATTTACCTTTTTTAAAGACAATGGAAATTCCAAGTAGCTAAAACTTAGCTTCATTTATTTAATGCCACTTTAA
ATGTCTTAAATTTGTTTCCTGGTGGACAGCCGGGTAATGCTTTTAGCTGCTCGCATGCTTGTCTTTCTGCATCTC
CATCATCTGTTTACCTTTTGGTTAAACTAATAAACTAGTTTGGGACTTGGCTGGCATGTGCTGCCAGACCCAAAG
GGAAAAAAAAA

FIGURE 1474

MEVKPVGEPTQEVSKFKLSTKVESTGHWLVEDHVRIWEVLKTEESSIQDWGEEVEEGAVYHVTLKRVQIQQAANK
GARWLGVEGDQLPPGHTVSQYETCKIRTIKAGTLEKLVENLLTAFGDNDFTYISIFLSTYRGFASTKEVLELLLD
RYGNLTSPNCEEDGSQSSSESKMVIRNAIASILRAWLDQCAEDFREPPHFPCLQKLLDYLTRMMPGSDPERRAQN
LLEQFQKQEVETDNGLPNTISFSLEEEEELEGGESAEFTCFSEDLVAEQLTYMDAQLFKKVVPHHCLGCIWSRRD
KKENKHLAPTIRATISQFNTLTKCVVSTILGGKELKTQQRAKIIEKWINIAHECRLLKNFSSLRAIVSALQSNSI
YRLKKTWAAVPRDRMLMFEELSDIFSDHNNHLTSRELLMKEGTSKFANLDSSVKENQKRTQRRLQLQKDMGVMQG
TVPYLGTFLTDLTMLDTALQDYIEGGLINFEKRRREFEVIAQIKLLQSACNSYCMTPDQKFIQWFQRQQLLTEEE
SYALSCEIEAAADASTTSPKPRKSMVKRLSLLFLGSDMITSPTPTKEQPKSTASGSSGESMDSVSVSSCESNHSE
AEEGSITPMDTPDEPQKKLSESSSSCSSIHSMDTNSSGMSSLINPLSSPPSCNNNPKIHKRSVSVTSITSTVLPP
VYNQQNEDTCIIRISVEDNNGNMYKSIMLTSQDKTPAVIQRAMLKHNLDSDPAEEYELVQVISEDKELVIPDSAN
VFYAMNSQVNFDFILRKKNSMEEQVKLRSRTSLTLPRTAKRGCWSYRHSKITL

FIGURE 1475

CTCCACTGACCGTCCCGACG**ATG**CTACGCGCGCCCGGCTGCCTCCTCCGGACCTCCGTAGCGCCTGCCGCGGCCC
TGGCTGCGGCGCTGCTCTCGTCGCTTGCGCGCTGCTCTCTTCTAGAGCCGAGGGACCCGGTGGCCTCGTCGCTCA
GCCCCTATTTCGGCACCAAGACTCGCTACGAGGATGTCAACCCCGTGCTATTGTCGGGCCCCGAGGCTCCGTGGC
GGGACCCTGAGCTGCTGGAGGGGACCTGCACCCCGGTGCAGCTGGTCGCCCTCATTCGCCACGGCACCCGCTACC
CCACGGTCAAACAGATCCGCAAGCTGAGGCAGCTGCACGGGTTGCTGCAGGCCCGCGGGTCCAGGGATGGCGGGG
CTAGTAGTACCGGCAGCCGCGACCTGGGTGCAGCGCTGGCCGACTGGCCTTTGTGGTACGCGGACTGGATGGACG
GGCAGCTAGTAGAAAAGGGACGGCAGGATATGCGACAGCTGGCGCTGCGTCTGGCCTCGCTCTTCCCGGCCCTTT
TCAGCCGTGAGAACTACGGCCGCCTGCGGCTCATCACCAGTTCCAAGCACCGCTGCATGGATAGCAGCGCCGCCT
TCCTGCAGGGGCTGTGGCAGCACTACCACCCTGGCTTGCCGCCGCCGGACGTCGCAGATATGGAGTTTGGACCTC
CAACAGTTAATGATAAACTAATGAGATTTTTTGATCACTGTGAGAAGTTTTTAACTGAAGTAGAAAAAAATGCTA
CAGCTCTTTATCACGTGGAAGCCTTCAAAACTGGACCAGAAATGCAGAACATTTTAAAAAAAGTTGCAGCTACTT
TGCAAGTGCCAGTAAATGATTTAAATGCAGATTTAATTCAAGTAGCCTTTTTCACCTGTTCATTTGACCTGGCAA
TTAAAGGTGTTAAATCTCCTTGGTGTGATGTTTTTGACATAGATGATGCAAAGGTATTAGAATATTTAAATGATC
TGAAACAATATTGGAAAAGAGGATATGGGTATACTATTAACAGTCGATCCAGCTGCACCTTGTTTCAGGATATCT
TTCAGCACTTGGACAAAGCAGTTGAACAGAAACAAAGGTCTCAGCCAATTTCTTCTCCAGTCATCCTCCAGTTTG
GTCATGCAGAGACTCTTCTTCCACTGCTTTCTCTCATGGGCTACTTCAAAGACAAGGAACCCCTAACAGCGTACA
ATTACAAAAAACAAATGCATCGGAAGTTCCGAAGTGGTCTCATTGTACCTTATGCCTCGAACCTGATATTTGTGC
TTTACCACTGTGAAAATGCTAAGACTCCTAAAGAACAATTCCGAGTGCAGATGTTATTAAATGAAAAGGTGTTAC
CTTTGGCTTACTCACAAGAAACTGTTTCATTTTATGAAGATCTGAAGAACCACTACAAGGACATCCTTCAGAGTT
GTCAAACCAGTGAAGAATGTGAATTAGCAAGGGCTAACAGTACATCTGATGAACTA**TGA**GTAACTGAAGAACATT
TTTAATTCTTTAGGAATCTGCAATGAGTGATTACATGCTTGTAATAGGTAGGCAATTCCTTGATTACAGGAAGCT
TTTATATTACTTGAGTATTTCTGTCTTTTCACAGAAAAACATTGGGTTTCTCTCTGGGTTTGGACATGAAATGTA
AGAAAAGATTTTTCACTGGAGCAGCTCTCTTAAGGAGAAACAAATCTATTTAGAGAAACAGCTGGCCCTGCAAAT
GTTTACAGAAATGAAATTCTTCCTACTTATATAAGAAATCTCACACTGAGATAGAATTGTGATTTCATAATAACA
CTTGAAAAGTGCTGGAGTAACAAAATATCTCAGTTGGACCATCCTTAACTTGATTGAACTGTCTAGGAACTTTAC
AGATTGTTCTGCAGTTCTCTCTTCTTTTCCTCAGGTAGGACAGCTCTAGCATTTTCTTAATCAGGAATATTGTGG
TAAGCTGGGAGTATCACTCTGGAAGAAAGTAACATCTCCAGATGAGAATTTGAAACAAGAAACAGAGTGTTGTAA
AAGGACACCTTCACTGAAGCAAGTCGGAAAGTACAATGAAAATAAATATTTTTGGTATTTATTTATGAAATATTT
GAACATTTTTTCAATAATTCCTTTTTACTTCTAGGAAGTCTCAAAAGACCATCTTAAATTATTATATGTTTGGAC
AATTAGCAACAAGTCAGATAGTTAGAATCGAAGTTTTTCAAATCCATTGCTTAGCTAACTTTTTCATTCTGTCAC
TTGGCTTCGATTTTTATATTTTCCTATTATATGAAATGTATCTTTTGGTTGTTTGATTTTTCTTTCTTTCTTTGT
AAATAGTTCTGAGTTCTGTCAAATGCCGTGAAAGTATTTGCTATAATAAAGAAAATTCTTGTGACTTTAAAAAAA
AAAAAAAAAAAA

FIGURE 1476

MLRAPGCLLRTSVAPAAALAAALLSSLARCSLLEPRDPVASSLSPYFGTKTRYEDVNPVLLSGPEAPWRDPELLE
GTCTPVQLVALIRHGTRYPTVKQIRKLRQLHGLLQARGSRDGGASSTGSRDLGAALADWPLWYADWMDGQLVEKG
RQDMRQLALRLASLFPALFSRENYGRLRLITSSKHRCMDSSAAFLQGLWQHYHPGLPPPDVADMEFGPPTVNDKL
MRFFDHCEKFLTEVEKNATALYHVEAFKTGPEMQNILKKVAATLQVPVNDLNADLIQVAFFTCSFDLAIKGVKSP
WCDVFDIDDAKVLEYLNDLKQYWKRGYGYTINSRSSCTLFQDIFQHLDKAVEQKQRSQPISSPVILQFGHAETLL
PLLSLMGYFKDKEPLTAYNYKKQMHRKFRSGLIVPYASNLIFVLYHCENAKTPKEQFRVQMLLNEKVLPLAYSQE
TVSFYEDLKNHYKDILQSCQTSEECELARANSTSDEL

FIGURE 1477

ACTGCCACCTCGGTCGGTCGGTGCTTACTTCGCTGCCAGCTGGTCTGTCGCC**ATG**AACCCGGACCTGCGCAGGGA
GCGGGATTCCGCCAGCTTCAACCCGGAGCTGCTTACACACATCCTGGACGGCAGCCCCGAGAAAACGCGGCGCCG
CCGAGAGATCGAGAACATGATCCTGAACGACCCAGACTTCCAGCATGAGGACTTGAACTTCCTAACTCGCAGCCA
GCGTTATGAGGTGGCTGTCAGGAAAAGTGCCATCATGGTGAAGAAGATGAGGGAGTTTGGCATCGCTGACCCTGA
TGAAATTATGTGGTTTAAAAAACTACATTTGGTCAATTTTGTGGAACCTGTGGGCCTCAATTACTCCATGTTTAT
TCCTACCTTGCTGAATCAGGGCACCACTGCTGAGAAAGAGAAATGGCTGCTTTCATCCAAAGGACTCCAGATAAT
TGGCACCTACGCCCAGACGGAAATGGGCCACGGAACTCACCTTCGAGGCTTGGAAACCACAGCCACGTATGACCC
TGAAACCCAGGAGTTCATTCTCAACAGTCCTACTGTGACCTCCATTAAATGGTGGCCTGGTGGGCTTGGAAAAAC
TTCAAATCATGCAATAGTCCTTGCCCAGCTCATCACTAAGGGGAAATGCTATGGATTACATGCCTTTATCGTACC
TATCCGTGAAATCGGGACCCATAAGCCTTTGCCAGGAATTACCGTTGGTGACATCGGGCCCAAATTTGGTTATGA
TGAGATAGACAATGGCTACCTCAAAATGGACAACCATCGTATTCCCAGAGAAAACATGCTGATGAAGTATGCCCA
GGTGAAGCCTGATGGCACATACGTGAAACCGCTGAGTAACAAGCTGACTTACGGGACCATGGTGTTTGTCAGGTC
CTTCCTTGTGGGAGAAGCTGCTCGGGCTCTGTCTAAGGCGTGCACCATTGCCATCCGATACAGCGCTGTGAGGCA
CCAGTCTGAAATGAAGCCAGGTGAACCAGAACCACAGATTTTGGATTTTCAAACCCAGCAGTATAAACTCTTTCC
ACTCCTGGCCACTGCCTATGCCTTCCAGTTTGTGGGCGCATACATGAAGGAGACCTATCACCGGATTAACGAAGG
CATTGGTCAAGGGGACCTGAGTGAACTGCCTGAGCTTCATGCCCTCACCGCTGGACTGAAGGCTTTCACCTCCTG
GACTGCAAACACTGGCATTGAAGCATGTCGGATGGCTTGTGGTGGGCATGGCTATTCTCATTGCAGTGGTCTTCC
AAATATTTATGTCAATTTCACCCCAAGCTGTACCTTTGAGGGAGAAAACACTGTCATGATGCTCCAGACGGCTAG
GTTCCTGATGAAAAGTTATGATCAGGTGCACTCAGGAAAGTTGGTGTGTGGCATGGTGTCCTATTTGAACGACCT
GCCCAGTCAGCGCATCCAGCCACAGCAGGTAGCAGTCTGGCCAACCATGGTGGATATCAACAGCCCCGAAAGCCT
AACCGAAGCATATAAACTCCGTGCAGCCAGATTAGTAGAAATTGCTGCAAAAAACCTTCAAAAAGAAGTGATTCA
CAGAAAAAGCAAGGAGGTAGCTTGGAACCTAACTTCTGTTGACCTTGTTCGAGCAAGTGAGGCACATTGCCACTA
TGTGGTAGTTAAGCTCTTTTCAGAAAAACTCCTCAAAATTCAAGATAAAGCCATTCAAGCTGTCTTAAGGAGTTT
ATGTCTGCTGTATTCTCTGTATGGAATCAGTCAGAACGCGGGGGATTTCCTTCAGGGGAGCATCATGACAGAGCC
TCAGATTACACAAGTAAACCAGCGTGTAAAGGAGTTACTCACTCTGATTCGCTCAGATGCTGTTGCTTTGGTTGA
TGCATTTGATTTTCAGGATGTGACACTTGGCTCTGTGCTTGGCCGCTATGATGGGAATGTGTATGAAAACTTGTT
TGAGTGGGCTAAGAACTCCCCACTGAACAAAGCAGAGGTCCACGAATCTTACCACAAGCACCTGAAGTCACTGCA
GTCCAAGCTC**TGA**AGTGTCACAAGGACAAGTTTAATCTGCTTCAGAAAGCGCCTGTGTGCAACTCAAATTTTGTG
GAATCTTTTCGAATTCAAATAGCTATAGAGCAAATGATAAATTGACCCCTTTTTATAAATGGAGGGAAAAAATGA
ACAGATTTCAGAGATTAAATGAAAAAAAGCAGATGTGTTTTAAGTGCAATTAACACTGAAAGAGACCTGTTAAAC
CATTCAGAAAAAGCTTAAGAAATGCGATATGACTTCCTTTTGTAATGCTGCTGATCCCAGTAGACTATGACTTTT
GATAATTAGCAGAATTTAACTACTGAGTAGTTGATTATTTTCACATTTTAATTGCTAATCACTGGCTATATAAGT
GTTTTTAAGCAAGGGTATTTTTGAAGTGGTGTAGAACCCTTCCACGCTTTCCTGCTCAGTGTTCTACCAGACAAG
AAAAGGGACTTGGGGAAGGAAACTTATTGGAAACTTGATGCGAATTAGGTTCTTCTTTGCACAAACTCTGCCTGC
TTGCTCTCCCTTGCTGATGGGTTGCAATTCTCAAACTATTCATGCTAGCAATTTTTCCACGGGGGGGCCTTTTTC
CCACGGGGGCCTCTATAGGGGCCCATTTCTCCGGTAAATAGGAATTTCCCCTTTAAGGGGTGCCAGTAGTAGGAG
TATAGGGAACCTCTCAGCTGTGGCACTGTTGTAGCTTTGGAGTCAGAGTGTACTCTGGGCAATCAGATTTCCACA
TATTCTGCATCTTGGATAAGCATTAAAAGTTGGGATACTAATTTGGATAAAAAAATGCACTAGGCAAACTCCAGC
GAGACAGAAAGTATAGGGAAACCTCTCAGCTGTGGCACTGTTGTAGCTTTGGAGTGCAGAGTGTAACTCTGGCGA
CAATCAGATTTCACATATTCTGTCATCTTGGCATAAGCCATTAAAAGCTTGGAGATTACTGTATTTGGCATTAAA
AAAAAATGTCACTTAGGTCAGCACTCCCAGACGTAGCACAGAAAAACCCTTTGACACAAACCATGTGTTCTGATT
TTTGGTTCAGA

FIGURE 1478

MNPDLRRERDSASFNPELLTHILDGSPEKTRRRREIENMILNDPDFQHEDLNFLTRSQRYEVAVRKSAIMVKKMR
EFGIADPDEIMWFKKLHLVNFVEPVGLNYSMFIPTLLNQGTTAEKEKWLLSSKGLQIIGTYAQTEMGHGTHLRGL
ETTATYDPETQEFILNSPTVTSIKWWPGGLGKTSNHAIVLAQLITKGKCYGLHAFIVPIREIGTHKPLPGITVGD
IGPKFGYDEIDNGYLKMDNHRIPRENMLMKYAQVKPDGTYVKPLSNKLTYGTMVFVRSFLVGEAARALSKACTIA
IRYSAVRHQSEMKPGEPEPQILDFQTQQYKLFPLLATAYAFQFVGAYMKETYHRINEGIGQGDLSELPELHALTA
GLKAFTSWTANTGIEACRMACGGHGYSHCSGLPNIYVNFTPSCTFEGENTVMMLQTARFLMKSYDQVHSGKLVCG
MVSYLNDLPSQRIQPQQVAVWPTMVDINSPESLTEAYKLRAARLVEIAAKNLQKEVIHRKSKEVAWNLTSVDLVR
ASEAHCHYVVVKLFSEKLLKIQDKAIQAVLRSLCLLYSLYGISQNAGDFLQGSIMTEPQITQVNQRVKELLTLIR
SDAVALVDAFDFQDVTLGSVLGRYDGNVYENLFEWAKNSPLNKAEVHESYHKHLKSLQSKL

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FIGURE 1479

GTGACGGGGAGGCGGTGCCCGGGGCATCTCCGCGGCGGAACTCAGCCTGTGAGAAGTCACTGCTTTGGGGAGACC
TGATCTGGCTGTGCCAGATGGACACTGAGAAAGAAGTAGAAGACTCAGAATTAGAAGAGGAAC**ATG**GAGCTGATC
CAGGACACCTCCCGCCCGCCACTGGAGTACGTGAAGGGGGTCCCGCTCATCAAGTACTTTGCAGAGGCACTGGGG
CCCCTGCAGAGCTTCCAAGCCCGACCTGATGACCTGCTCATCAACACCTACCCCAAGTCTGGCACCACCTGGGTG
AGCCAGATACTGGACATGATCTACCAGGGCGGCGACCTAGAGAAGTGTAACCGGGCTCCCATCTACGTACGGGTG
CCCTTCCTTGAGGTCAATGATCCAGGGGAACCCTCAGGGCTGGAGACTCTGAAAGACACACCGCCCCCACGGCTC
ATCAAGTCACACCTGCCCCTGGCTCTGCTCCCTCAGACTCTGTTGGATCAGAAGGTCAAGGTGGTCTATGTTGCC
CGAAACCCAAAGGACGTGGCGGTCTCCTACTACCATTTCCACCGTATGGAAAAGGCGCACCCTGAGCCTGGGACC
TGGGACAGCTTCCTGGAAAAGTTCATGGCTGGAGAAGTGTCCTACGGGTCCTGGTACCAGCACGTGCAGGAGTGG
TGGGAGCTGAGCCGCACCCACCCTGTTCTCTACCTCTTCTATGAAGACATGAAGGAGAACCCCAAAAGGGAGATT
CAAAAGATCCTGGAGTTTGTGGGGCGCTCCCTGCCAGAGGAGACCATGGACTTCATGGTTCAGCACACGTCGTTC
AAGGAGATGAAGAAGAACCCTATGACCAACTACACCACCGTCCCCCAGGAGCTCATGGACCACAGCATCTCCCCC
TTCATGAGGAAAGGCATGGCTGGGGACTGGAAGACCACCTTCACCGTGGCGCAGAATGAGCGCTTCGATGCGGAC
TATGCGGAGAAGATGGCAGGCTGCAGCCTCAGCTTCCGCTCTGAGCTG**TGA**GAGGGGCTCCTGGAGTCACTGCAG
AGGGAGTGTGCGAATCTACCCTGACCAATGGGCTCAAGAATAAAGTATGATTTTTGAGTCAGGCACAGTGGCTCA
TGTCTGCAATCCCAGCGATTTGGGAGGTTGAGCTGGTAGGATCACAATAGGCCACGAATTTGAGACCAGCCTGGT
AAAATAGTGAGACCTCATCTCTACAAAGATGTAAAAAAATTAGCCACATGTGCTGGCACTTACCTGTAGTCCCAG
CTACTTGGGAAGCAGAGGCTGGAGGATCATTTCAGCCCAGGAGGTTGTGGATACAGTGAGTTATGACATGCCCAT
TCACTACAGCCTGGATGACAAGCAAGACCCTCCCTCCAAAGAAAATAAAGCTCAATTAAAAT

FIGURE 1480

MELIQDTSRPPLEYVKGVPLIKYFAEALGPLQSFQARPDDLLINTYPKSGTTWVSQILDMIYQGGDLEKCNRAPI
YVRVPFLEVNDPGEPSGLETLKDTPPPRLIKSHLPLALLPQTLLDQKVKVVYVARNPKDVAVSYYHFHRMEKAHP
EPGTWDSFLEKFMAGEVSYGSWYQHVQEWWELSRTHPVLYLFYEDMKENPKREIQKILEFVGRSLPEETMDFMVQ
HTSFKEMKKNPMTNYTTVPQELMDHSISPFMRKGMAGDWKTTFTVAQNERFDADYAEKMAGCSLSFRSEL

FIGURE 1481

GGGGCAGCGCAGGGCAGACGGCGGCAGGAGAAGCAAG**ATG**AATGCAGGCTCAGATCCTGTGGTCATCGTCTCGGC
GGCGCGGACCATCATAGGTTCCTTCAATGGTGCCTTAGCTGCTGTTCCTGTCCAGGACCTGGGCTCCACTGTCAT
CAAAGAAGTCTTGAAGAGGGCCACTGTGGCTCCGGAAGATGTGTCTGAGGTCATCTTTGGACATGTCTTGGCAGC
AGGCTGTGGGCAGAATCCTGTTAGACAAGCCAGTGTGGGTGCAGGAATTCCCTACTCTGTTCCAGCATGGAGCTG
CCAGATGATCTGTGGGTCAGGCCTAAAAGCTGTGTGCCTTGCAGTCCAGTCAATAGGGATAGGAGACTCCAGCAT
TGTGGTTGCAGGAGGCATGGAAAATATGAGCAAGGCTCCTCACTTGGCTTACTTGAGAACAGGAGTAAAGATAGG
TGAGATGCCACTGACTGACAGTATACTCTGTGATGGTCTTACAGATGCATTTCACAACTGTCATATGGGTATTAC
AGCTGAAAATGTAGCCACAAAATGGCAAGTGAGTAGAGAAGATCAGGACAAGGTTGCAGTTCTGTCCCAGAACAG
GACAGAGAATGCACAGAAAGCTGGCCATTTTGACAAAGAGATTGTACCAGTTTTGGTGTCAACTAGAAAAGGTCT
TATTGAAGTTAAAACAGATGAGTTTCCTCGCCATGGGAGCAACATAGAAGCCATGTCCAAGCTAAAGCCTTACTT
TCTTACTGATGGAACGGGAACAGTCACCCCAGCCAATGCTTCAGGAATAAATGATGGTGCTGCAGCTGTTGCTCT
TATGAAGAAGTCAGAAGCTGATAAACGTGGGCTTACACCTTTAGCACGGATAGTTTCCTGGTCCCAAGTGGGTGT
GGAGCCTTCCATTATGGGAATAGGACCAATTCCAGCCATAAAGCAAGCTGTTACAAAAGCAGGTTGGTCACTGGA
AGATGTTGACATATTTGAAATCAATGAAGCCTTTGCAGCTGTCTCTGCTGCAATAGTTAAAGAACTTGGATTAAA
CCCAGAGAAGGTCAATATTGAAGGAGGGGCTATAGCCTTGGGCCACCCTCTTGGAGCATCTGGCTGTCGAATTCT
TGTGACCCTGTTACACACACTGGAGAGAATGGGCAGAAGTCGTGGTGTTGCAGCCCTGTGCATTGGGGGTGGGAT
GGGAATAGCAATGTGTGTTCAGAGAGAA**TGA**CAATGTGTGTTCAGAGAGAATGAATTGCTTAAACTTTGAACAAC
CTCAATTTCTTTTTAAACTAATAAAGTACTAGGTTGCAATATGTGAAATCAGAGGACCAAAGTACAGATGGAAAC
CATTTCCTACATCACAAAAACCCAAGTTTACAGCTTGTACTTTACTTTAATGTGTAATACTCAACTCACGGTACA
AGACAATTGCATTTAACATTGTTATAAATAAAAGGAACATCAGATCAATCATTAAAAAAAAAAAA

FIGURE 1482

MNAGSDPVVIVSAARTIIGSFNGALAAVPVQDLGSTVIKEVLKRATVAPEDVSEVIFGHVLAAGCGQNPVRQASV
GAGIPYSVPAWSCQMICGSGLKAVCLAVQSIGIGDSSIVVAGGMENMSKAPHLAYLRTGVKIGEMPLTDSILCDG
LTDAFHNCHMGITAENVATKWQVSREDQDKVAVLSQNRTENAQKAGHFDKEIVPVLVSTRKGLIEVKTDEFPRHG
SNIEAMSKLKPYFLTDGTGTVTPANASGINDGAAAVALMKKSEADKRGLTPLARIVSWSQVGVEPSIMGIGPIPA
IKQAVTKAGWSLEDVDIFEINEAFAAVSAAIVKELGLNPEKVNIEGGAIALGHPLGASGCRILVTLLHTLERMGR
SRGVAALCIGGGMGIAMCVQRE

FIGURE 1483A

CCGTTCACGCGTTCGGTCCTCCTTGGCTGACTCACCGCCCTCGCCGCCGCACC**ATG**GACGCCCCCAGGCAGGTGG
TCAACTTTGGGCCTGGTCCCGCCAAGCTGCCGCACTCAGTGTTGTTAGAGATACAAAAGGAATTATTAGACTACA
AAGGAGTTGGCATTAGTGTTCTTGAAATGAGTCACAGGTCATCAGATTTTGCCAAGATTATTAACAATACAGAGA
ATCTTGTGCGGGAATTGCTAGCTGTTCCAGACAACTATAAGGTGATTTTTCTGCAAGGAGGTGGGTGCGGCCAGT
TCAGTGCTGTCCCCTTAAACCTCATTGGCTTGAAAGCAGGAAGGTGTGCTGACTATGTGGTGACAGGAGCTTGGT
CAGCTAAGGCCGCAGAAGAAGCCAAGAAGTTTGGGACTATAAATATCGTTCACCCTAAACTTGGGAGTTATACAA
AAATTCCAGATCCAAGCACCTGGAACCTCAACCCAGATGCCTCCTACGTGTATTATTGCGCAAATGAGACGGTGC
ATGGTGTGGAGTTTGACTTTATACCCGATGTCAAGGGAGCAGTACTGGTTTGTGACATGTCCTCAAACTTCCTGT
CCAAGCCAGTGGATGTTTCCAAGTTTGGTGTGATTTTTGCTGGTGCCCAGAAGAATGTTGGCTCTGCTGGGGTCA
CCGTGGTGATTGTCCGTGATGACCTGCTGGGGTTTGCCCTCCGAGAGTGCCCCTCGGTCCTGGAATACAAGGTGC
AGGCTGGAAACAGCTCCTTGTACAACACGCCTCCATGTTTCAGCATCTACGTCATGGGCTTGGTTCTGGAGTGGA
TTAAAAACAATGGAGGTGCCGCGGCCATGGAGAAGCTTAGCTCCATCAAATCTCAAACAATTTATGAGATTATTG
ATAATTCTCAAGGATTCTACGTTTGTCCAGTGGAGCCCCAAAATAGAAGCAAGATGAATATTCCATTCCGCATTG
GCAATGCCAAAGGAGATGATGCTTTAGAAAAAAGATTTCTTGATAAAGCTCTTGAACTCAATATGTTGTCCTTGA
AAGGGCATAGGTCTGTGGGAGGCATCCGGGCCTCTCTGTATAATGCTGTCACAATTGAAGACGTTCAGAAGCTGG
CCGCCTTCATGAAAAAATTTTTGGAGATGCATCAGCTA**TGA**ACACATCCTAACCAGGATATACTCTGTTCTTGAA
CAACATACAAAGTTTAAAGTAACTTGGGGATGGCTACAAAAAGTTAACACAGTATTTTTCTCAAATGAACATGTT
TATTGCAGATTCTTCTTTTTTGAAAGAACAACAGCAAAACATCCACAACTCTGTAAAGCTGGTGGGACCTAATGT
CACCTTAATTCTGACTTGAACTGGAAGCATTTTAAGAAATCTTGTTGCTTTTCTAACAAATTCCCGCGTATTTTG
CCTTTGCTGCTACTTTTTCTAGTTAGATTTCAAACTTGCCTGTGGACTTAATAATGCAAGTTGCGATTAATTATT
TCTGGAGTCATGGGAACACACAGCACAGAGGGTAGGGGGGCCCTCTAGGTGCTGAATCTACACATCTGTGGGGTC
TCCTGGGTTCAGTGGCTGTTGATTCAAGGTCAACATTGACCATTGGAGGAGTGGTTTAAGAGTGCCAGGCGAAGG
GCAAACTGTAGATCGATCTTTATGCTGTTATTACAGGAGAAGTGACATACTTTATATATGTTTATATTAGCAAGG
TCTGTTTTTAATACCATATACTTTATATTTCTATACATTTATATTTCTAATAATACAGTTATCACTGATATATGT
AGACACTTTTAGAATTTATTAAATCCTTGACCTTGTGCATTATAGCATTCCATTAGCAAGAGTTGTACCCCCTCC
CCAGTCTTCGCCTTCCTCTTTTTAAGCTGTTTTATGAAAAAGACCTAGAAGTTCTTGATTCATTTTTACCATTCT
TTCCATAGGTAGAAGAGAAAGTTGATTGGTTGGTTGTTTTTCAATTATGCCATTAAACTAAACATTTCTGTTAAA
TTACCCTATCCTTTGTTCTCTACTGTTTTCTTTGTAATGTATGACTACGAGAGTGATACTTTGCTGAAAAGTCTT
TCCCCTATTGTTTATCTATTGTCAGTATTTTATGTTGAATATGTAAAGAACATTAAAGTCCTAAACACGGTTCTA
AGCTAAGTGAAGGGGAAGATCTGAGAGCGTGCTGTTTGTGGCTGTTGATGCATATTCGTGATGTAACAGGTCCTG
GGGCCTCACTTTACCCCATTTGTAAAATGGGGCTAATGTCACCTGCCTCTTACCTACCTCAGAGGGATTTGGTGA
AGCAAACTGTTAATCTTCGAAAACGACCATTTCACTTCTTGGATATCAAGTGCTAACCCAGTATGTTCTTCTTTT
TTATGTAAGGGACAGCTTTCTCCACAGAGTCCTTTCTGCTGGTGAGGACAGCATTTCTGAGCAGGGCTTTGTTCT
CTATGTGCATTAGGACTTTTATCATGCCCTTGTTCTGTGTGTAGTTACTTGACAGCATCAAATGCCGCCTCTTCC
TAATGTCCTTCAAGTTTTCATGAACTAGCAACCCCACCTTCCACCATGGTTCTGGGCGCCTGATTTTGCTGTGAC
TCCCAGACCCAGCCACTGTTTCTGCCACCCTGTAACAGGCCATTAAAGCTCCCCAGTGTTCAGCCTCCTTCACTC
CCTTGTTTTCCCTGTTGCTATGTGTCACCTGGGCCCTACAGACAGGGGCACACGCTTATGGATGTGTGTACCATT
GAGATGAGAATGGGTAGATGGAACGGAGACCATCAAGCCACACCCCCTTCTTAAAACTGGGGACATGAGCCTGAG
CAGAAAGGGTGAAGAAGAGCCATGGGACACAGAGTTGACCCAGCCAGGGGGAAAGCCCAGCTCTCTTTAAACCAG
CTAAGCCATTCCAGTCTCCTGTGAAGCCAAAAGGGACCAGGAACCGTGCAAAGGAAACTGGAAACTTTTCCCCGC
TGGGTAGAGCATGTTGCTGATACTCTTCTGTTTTCAAGGGAAACAATCACATTGTTTGATTCCAAATGGTAAATG
AACACTCACTATTCTTCAGGCTTCAGTAAATCTTTTTTTCTTCCTTCATATATATATACACAACACACACACACA
TATGTATATCTATACACACATGTGTGTTGTGTATATGCATGTGTGTGTGTGCGTGTGTGTATAGTTTTAGCTCCA
AGCCAAGCAAGTTTGTGTTTGGATAGAGGGGAACTTAACTATTAACTACAAGTTGTATGTCTGTGGTATCTTGAT
TTTCCCATTTCTAAAGATGAATTTCACAAAGCCATAAAGCGTGAAATTAGAGCTGGACTTAAGACTCATTGGCCG
ACCATCCTGTGTCCTGGCCTGGCCCTGCAGTAAGAAGCGTGTCTGGGTCTGGAGAAGGGTGCTTCCGAGAGTGTG
CAGGTGGCCCTTCCCCTTGGAGGCGAGAAGAGAGAATGTGCTGTCTATCTTCCTGGTTTTCAGTCCACAGAGTCG
GTAGACCAGGGGTTACGTGACTGGGGAAAATCTCACATCTCCTTGTCTGAAAACATTTCCCCTGCTGTTCTCTTT

FIGURE 1483B

CTAACATGTTGTGGTAAATCTGTTCAGATACTGCTCATCTGACTGTTTTGTACATGTGACAATTGCCTTAAAACC
TAGCACAGTCCTCAGAAATGAATACCGTGTTTCCACTGGAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1484

MDAPRQVVNFGPGPAKLPHSVLLEIQKELLDYKGVGISVLEMSHRSSDFAKIINNTENLVRELLAVPDNYKVIFL
QGGGCGQFSAVPLNLIGLKAGRCADYVVTGAWSAKAAEEAKKFGTINIVHPKLGSYTKIPDPSIWNLNPDASYVY
YCANETVHGVEFDFIPDVKGAVLVCDMSSNFLSKPVDVSKFGVIFAGAQKNVGSAGVTVVIVRDDLLGFALRECP
SVLEYKVQAGNSSLYNTPPCFSIYVMGLVLEWIKNNGGAAAMEKLSSIKSQTIYEIIDNSQGFYVCPVEPQNRSK
MNIPFRIGNAKGDDALEKRFLDKALELNMLSLKGHRSVGGIRASLYNAVTIEDVQKLAAFMKKFLEMHQL

FIGURE 1485

GCACGAGCC**ATG**GCGGACAACGAGAAACTGGACAACCAACGGCTCAAGAATTTCAAGAACAAAGGCCGCGACTTG
GAGACTATGAGAAGACAACGAAATGAAGTTGTAGTTGAATTAAGGAAGAATAAAAGAGATGAACATCTCTTAAAG
AGAAGGAATGTACCACATGAAGATATCTGTGAAGACTCTGATATAGATGGTGATTATAGAGTGCAAAATACCTCT
CTAGAAGCTATTGTTCAAAATGCTTCAAGTGATAACCAAGGAATTCAATTAAGTGCAGTTCAAGCTGCTAGGAAG
CTTTTGTCCAGTGATCGAAATCCACCAATTGATGACTTAATAAAATCTGGAATATTGCCCATTTTAGTCCATTGT
CTTGAAAGAGATGACAATCCTTCTTTACAGTTTGAAGCTGCATGGGCTTTGACAAACATTGCATCTGGAACTTCT
GAACAAACTCAAGCAGTAGTTCAGTCCAATGCTGTGCCACTTTTCCTGAGGCTTCTCCATTCACCCCATCAGAAT
GTCTGTGAGCAAGCAGTGTGGGCATTGGGAAATATCATAGGTGATGGGCCCCAGTGTAGAGATTATGTCATAAGT
CTTGGAGTTGTGAAACCTTTACTTTCCTTCATAAGTCCATCTATTCCTATAACATTCTTAAGAAATGTTACTTGG
GTTATGGTCAACTTATGTCGCCACAAAGACCCACCACCACCAATGGAAACCATTCAGGAGATTCTTCCAGCCCTT
TGTGTTTTAATTCATCACACAGATGTAAATATACTGGTAGACACAGTCTGGGCCCTCTCTTACCTTACTGATGCT
GGCAATGAACAAATACAGATGGTAATAGACTCTGGAATAGTTCCTCATTTGGTTCCTCTGCTCAGCCACCAGGAA
GTTAAAGTTCAGACTGCTGCACTTAGAGCTGTGGGCAACATTGTTACTGGAACTGATGAGCAAACACAAGTAGTT
TTGAACTGTGATGCTCTTTCACACTTCCCAGCACTCCTGACACATCCCAAAGAGAAAATTAATAAAGAAGCAGTG
TGGTTCCTCTCCAACATCACTGCAGGAAATCAGCAGCAGGTACAGGCAGTAATTGATGCCAATCTTGTACCAATG
ATAATACACCTTTTGGATAAGGGGGATTTTGGCACTCAAAAAGAAGCTGCTTGGGCCATAAGTAACTTAACAATT
AGTGGAAGGAAAGATCAAGTGGCTTACCTTATCCAACAAAATGTTATCCCACCTTTTTGCAACTTGCTGACTGTA
AAAGATGCACAAGTTGTGCAAGTAGTACTCGATGGACTAAGTAATATATTAAAAATGGCTGAAGATGAGGCAGAA
ACCATAGGCAATCTTATAGAAGAATGTGGAGGGCTGGAGAAAATTGAACAACTTCAAAATCATGAAAATGAAGAC
ATCTACAAATTGGCCTATGAGATCATTGATCAGTTCTTCTCTTCAGATGATATTGATGAAGACCCTAGCCTTGTT
CCAGAGGCAATTCAAGGCGGAACATTTGGTTTCAATTCATCTGCCAATGTACCAACAGAAGGGTTCCAGTTT**TAG**

AAAGATGTTGTGGAAGTTAGGTACAATGCAGCACTGAGATATATATATATATATGTGTGTGTGTATATATATATA
TATATACATATATATAAAAAGGTTTGATCCATCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1486

MADNEKLDNQRLKNFKNKGRDLETMRRQRNEVVVELRKNKRDEHLLKRRNVPHEDICEDSDIDGDYRVQNTSLEA
IVQNASSDNQGIQLSAVQAARKLLSSDRNPPIDDLIKSGILPILVHCLERDDNPSLQFEAAWALTNIASGTSEQT
QAVVQSNAVPLFLRLLHSPHQNVCEQAVWALGNIIGDGPQCRDYVISLGVVKPLLSFISPSIPITFLRNVTWVMV
NLCRHKDPPPPMETIQEILPALCVLIHHTDVNILVDTVWALSYLTDAGNEQIQMVIDSGIVPHLVPLLSHQEVKV
QTAALRAVGNIVTGTDEQTQVVLNCDALSHFPALLTHPKEKINKEAVWFLSNITAGNQQQVQAVIDANLVPMIIH
LLDKGDFGTQKEAAWAISNLTISGRKDQVAYLIQQNVIPPFCNLLTVKDAQVVQVVLDGLSNILKMAEDEAETIG
NLIEECGGLEKIEQLQNHENEDIYKLAYEIIDQFFSSDDIDEDPSLVPEAIQGGTFGFNSSANVPTEGFQF

FIGURE 1487A

CTGGGTCCTGTGTGTGCCACAGGGGTGGGGTGTCCAGCGAGCGGTCTCCTCCTCCTGCTAGTGCTGCTGCGGCGT
CCCGCGGCCTCCCCGAGTCGGGCGGGAGGGGAGAGCGGGTGTGGATTTGTCTTGACGGTAATTGTTGCGTTTCCA
CGTCTCGGAGGCCTGCGCGCTGGGTTGCTCCTTCTTCGGGAGCGAGCTGTTCTCAGCGATCCCACTCCCAGCCGG
GGCTCCCCACACACACTGGGCTGCGTGCGTGTGGAGTGGGACCCGCGCACACGCGTGTCTCTGGACAGCTACGGC
GCCGAAAGAACTAAAATTCCAG**ATG**GCAAACTCAATGAATGGCAGAAACCCTGGTGGTCGAGGAGGAAATCCCCG
AAAAGGTCGAATTTTGGGTATTATTGATGCTATTCAGGATGCAGTTGGACCCCCTAAGCAAGCTGCCGCAGATCG
CAGGACCGTGGAGAAGACTTGGAAGCTCATGGACAAAGTGGTAAGACTGTGCCAAAATCCCAAACTTCAGTTGAA
AAATAGCCCACCATATATACTTGATATTTTGCCTGATACATATCAGCATTTACGACTTATATTGAGTAAATATGA
TGACAACCAGAAACTTGCCCAACTCAGTGAGAATGAGTACTTTAAAATCTACATTGATAGCCTTATGAAAAAGTC
AAAACGGGCAATAAGACTCTTTAAAGAAGGCAAGGAGAGAATGTATGAAGAACAGTCACAGGACAGACGAAATCT
CACAAAACTGTCCCTTATCTTCAGTCACATGCTGGCAGAAATCAAAGCAATCTTTCCCAATGGTCAATTCCAGGG
AGATAACTTTCGTATCACAAAAGCAGATGCTGCTGAATTCTGGAGAAAGTTTTTTGGAGACAAAACTATCGTACC
ATGGAAAGTATTCAGACAGTGCCTTCATGAGGTCCACCAGATTAGCTCTAGCCTGGAAGCAATGGCTCTAAAATC
AACAATTGATTTAACTTGCAATGATTACATTTCAGTTTTTGAATTTGATATTTTTACCAGGCTGTTTCAGCCTTG
GGGCTCTATTTTGCGGAATTGGAATTTCTTAGCTGTGACACATCCAGGTTACATGGCATTTCTCACATATGATGA
AGTTAAAGCACGACTACAGAAATATAGCACCAAACCCGGAAGCTATATTTTCCGGTTAAGTTGCACTCGATTGGG
ACAGTGGGCCATTGGCTATGTGACTGGGGATGGGAATATCTTACAGACCATACCTCATAACAAGCCCTTATTTCA
AGCCCTGATTGATGGCAGCAGGGAAGGATTTTATCTTTATCCTGATGGGAGGAGTTATAATCCTGATTTAACTGG
ATTATGTGAACCTACACCTCATGACCATATAAAAGTTACACAGGAACAATATGAATTATATTGTGAAATGGGCTC
CACTTTTCAGCTCTGTAAGATTTGTGCAGAGAATGACAAAGATGTCAAGATTGAGCCTTGTGGGCATTTGATGTG
CACCTCTTGCCTTACGGCATGGCAGGAGTCGGATGGTCAGGGCTGCCCTTTCTGTCGTTGTGAAATAAAAGGAAC
TGAGCCCATAATCGTGGACCCCTTTGATCCAAGAGATGAAGGCTCCAGGTGTTGCAGCATCATTGACCCCTTTGG
CATGCCGATGCTAGACTTGGACGACGATGATGATCGTGAGGAGTCCTTGATGATGAATCGGTTGGCAAACGTCCG
AAAGTGCACTGACAGGCAGAACTCACCAGTCACATCACCAGGATCCTCTCCCCTTGCCCAGAGAAGAAAGCCACA
GCCTGACCCACTCCAGATCCCACATCTAAGCCTGCCACCCGTGCCTCCTCGCCTGGATCTAATTCAGAAAGGCAT
AGTTAGATCTCCCTGTGGCAGCCCAACAGGTTCACCAAAGTCTTCTCCTTGCATGGTGAGAAAACAAGATAAACC
ACTCCCAGCACCACCTCCTCCCTTAAGAGATCCTCCTCCACCGCCACCTGAAAGACCTCCACCAATCCCACCAGA
CAATAGACTGAGTAGACACATCCATCATGTGGAAAGCGTGCCTTCCAGAGACCCGCCAATGCCTCTTGAAGCATG
GTGCCCTCGGGATGTGTTTGGGACTAATCAGCTTGTGGGATGTCGACTCCTAGGGGAGGGCTCTCCAAAACCTGG
AATCACAGCGAGTTCAAATGTCAATGGAAGGCACAGTAGAGTGGGCTCTGACCCAGTGCTTATGCGGAAACACAG
ACGCCATGATTTGCCTTTAGAAGGAGCTAAGGTCTTTTCCAATGGTCACCTTGGAAGTGAAGAATATGATGTTCC
TCCCCGGCTTTCTCCTCCTCCTCCAGTTACCACCCTCCTCCCTAGCATAAAGTGTACTGGTCCGTTAGCAAATTC
TCTTTCAGAGAAAACAAGAGACCCAGTAGAGGAAGATGATGATGAATACAAGATTCCTTCATCCCACCCTGTTTC
CCTGAATTCACAACCATCTCATTGTCATAATGTAAAACCTCCTGTTCGGTCCTGTGATAATGGTCACTGTATGCT
GAATGGAACACATGGTCCATCTTCAGAGAAGAAATCAAACATCCCTGACTTAAGCATATATTTAAAGGGAGATGT
TTTTGATTCAGCCTCTGATCCCGTGCCATTACCACCTGCCAGGCCTCCAACTCGGGACAATCCAAAGCATGGTTC
TTCACTCAACAGGACGCCCTCTGATTATGATCTTCTCATCCCTCCATTAGGTGAAGATGCTTTTGATGCCCTCCC
TCCATCTCTCCCACCTCCCCCACCTCCTGCAAGGCATAGTCTCATTGAACATTCAAAACCTCCTGGCTCCAGTAG
CCGGCCATCCTCAGGACAGGATCTTTTTCTTCTTCCTTCAGATCCCTTTGTTGATCTAGCAAGTGGCCAAGTTCC
TTTGCCTCCTGCTAGAAGGTTACCAGGTGAAAATGTCAAAACTAACAGAACATCACAGGACTATGATCAGCTTCC
TTCATGTTCAGATGGTTCACAGGCACCAGCCAGACCCCCTAAACCACGACCGCGCAGGACTGCACCAGAAATTCA
CCACAGAAAACCCCATGGGCCTGAGGCGGCATTGGAAAATGTCGATGCAAAAATTGCAAAACTCATGGGAGAGGG
TTATGCCTTTGAAGAGGTGAAGAGAGCCTTAGAGATAGCCCAGAATAATGTCGAAGTTGCCCGGAGCATCCTCCG
AGAATTTGCCTTCCCTCCTCCAGTATCCCCACGTCTAAATCTA**TAG**CAGCCAGAACTGTAGACACCAAAATGGAA
AGCAATCGATGTATTCCAAGAGTGTGGAAATAAAGAGAACTGAGATGGAATTCAAGAGAGAAGTGTCTCCTCCTC
GTGTAGCAGCTTGAGAAGAGGCTTGGGAGTGCAGCTTCTCAAAGGAGACCGATGCTTGCTCAGGATGTCGACAGC
TGTGGCTTCCTTGTTTTTGCTAGCCATATTTTTAAATCAGGGTTGAACTGACAAAAATAATTTAAAGACGTTTAC
TTCCCTTGAACTTTGAACCTGTGAAATGCTTTACCTTGTTTACAATTTGGCAAAGTTGCAGTTTGTTCTTGTTTT

FIGURE 1487B

TAGTTTAGTTTTGTTTTGGTGTTTTGATACCTGTACTGTGTTCTTCACAGACCCTTTGTAGCGTGGTCAGGTCTG
CTGTAACATTTCCCACCAACTCTCTTGCTGTCCACATCAACAGCTAAATCATTTATTCATATGGATCTCTACCAT
CCCCATGCCTTGCCCAGGTCCAGTTCCATTTCTCTCATTCACAAGATGCTTTGAAGGTTCTGATTTTCAACTGAT
CAAACTAATGCAAAAAAAAAAAAGTATGTATTCTTCACTACTGAGTTTCTTCTTTGGAAACCATCACTATTGAGAG
ATGGGAAAAACCTGAATGTATAAAGCATTTATTTGTCAATAAACTGCCTTTTGTAAGGGGTTTTCACATAAAAAA
AAAAAAA

FIGURE 1488

MANSMNGRNPGGRGGNPRKGRILGIIDAIQDAVGPPKQAAADRRTVEKTWKLMDKVVRLCQNPKLQLKNSPPYIL
DILPDTYQHLRLILSKYDDNQKLAQLSENEYFKIYIDSLMKKSKRAIRLFKEGKERMYEEQSQDRRNLTKLSLIF
SHMLAEIKAIFPNGQFQGDNFRITKADAAEFWRKFFGDKTIVPWKVFRQCLHEVHQISSSLEAMALKSTIDLTCN
DYISVFEFDIFTRLFQPWGSILRNWNFLAVTHPGYMAFLTYDEVKARLQKYSTKPGSYIFRLSCTRLGQWAIGYV
TGDGNILQTIPHNKPLFQALIDGSREGFYLYPDGRSYNPDLTGLCEPTPHDHIKVTQEQYELYCEMGSTFQLCKI
CAENDKDVKIEPCGHLMCTSCLTAWQESDGQGCPFCRCEIKGTEPIIVDPFDPRDEGSRCCSIIDPFGMPMLDLD
DDDDREESLMMNRLANVRKCTDRQNSPVTSPGSSPLAQRRKPQPDPLQIPHLSLPPVPPRLDLIQKGIVRSPCGS
PTGSPKSSPCMVRKQDKPLPAPPPPLRDPPPPPPERPPPIPPDNRLSRHIHHVESVPSRDPPMPLEAWCPRDVFG
TNQLVGCRLLGEGSPKPGITASSNVNGRHSRVGSDPVLMRKHRRHDLPLEGAKVFSNGHLGSEEYDVPPRLSPPP
PVTTLLPSIKCTGPLANSLSEKTRDPVEEDDDEYKIPSSHPVSLNSQPSHCHNVKPPVRSCDNGHCMLNGTHGPS
SEKKSNIPDLSIYLKGDVFDSASDPVPLPPARPPTRDNPKHGSSLNRTPSDYDLLIPPLGEDAFDALPPSLPPPP
PPARHSLIEHSKPPGSSSRPSSGQDLFLLPSDPFVDLASGQVPLPPARRLPGENVKTNRTSQDYDQLPSCSDGSQ
APARPPKPRPRRTAPEIHHRKPHGPEAALENVDAKIAKLMGEGYAFEEVKRALEIAQNNVEVARSILREFAFPPP
VSPRLNL

FIGURE 1489

AATCCTCAGTCTGGTCTATATTGTTACTTGCCTGTXTCCACTAGAAGGAGTCACCCAGGCATTTAGTGAATGATA
ATCCTAGAAGTTGAGTCTGAGTACATCAGAGTTTGGCATTATTTGCAACATCCCAGGAATGAGCTATAAGACTCC
ATTGCTTTCTGGACTTTAGTGACCAGCTGATCTTCCCTTGGATCCTCCAATAAAGGGGAAAAAATACTTGTCTTA
TGTTGTTTTAGCAAGGGAGTTCAGCCAAGTGACAGGAAAGATTCCCTGGTCTGCATCTAAACATTAGTCAACAGA
AGGAAAAGGCTCTTTTCCTTGGAGATTTTCAAGTTGAAAAAGTACAGCTGCTTGGATGGAGTTTCTCTCATCAGA
ATAGAAATATGCTAGGTGGTCTTCAAGACCTTTTTGAACCTACAGATTCTAAACCTTAGAGGAAGCCAGAATATG
TGATCATACCAGGTGAGGAAAGTTAGGAGATATTCATCTTAAGAGATATCCTATTTGGCAGTCACATGTTACACT
TGAGCAACAATTGTCTAGGCTAGAAATATAGAACCACACAATATTTATCATCATTGGGTCAATTTCTCCCCCTCT
ATCAAGTGAGGAGATTAAGGCTTAAAGAAAGGAAAGGACTTGCCAGCCACCACAGGGCTCATGAGGGGCTTGAAC
CCATGTCGTGTGTCTCTACCACAGCTGACTCTCAGCTGGCTAATGGAGAAAATGTGAGGAATTACCTGTCAAATT
AGATTGAGCTCAGAGTAAATAGATGAGCACATTTATAACTCTAAATTAGACTTTCTATCAAATGGGACCAAACAT
ATGGAAGGGGCTGCTGTCCTGCCTCAATTTAGCCAAGACTTGTCTTGTCTCAAAGCCAAGACTCAGCAGTACATG
GATTCTGAGAAGTCCAGGGTCTGAATTGTTGTCTCTGATTACTGGAAGGACAGGTTAACTGAATGTCTGTGATCA
CTAACAGGTG**ATG**GGCTTTGTGCCCACTCCAGAGATATTGTGGGAGACAAATTCTTTTAACAGCCTGTCCTCCCG
GCATCAGGAGTCATTGAACAATCATGGATTGTTGTGTTTGGGATTTTTTTTTTTTTGGCTTTGTTTTTGGTTTT
TGTGTGTGTGTGTGTGTGCTGCATGCACATGCGTCCAAGACTTACGGGTGGTTTAGGGGAAAGTGCTAGCAACAG
TGTCAATGTCATTGTTAACTATATTTCATATTTGAGGTCTCATTGTTTTCAAATAAACAGTGTTTTCCATGAAAA
AAAAAAAAAAAAAAATTCCTGCGGCCGTCAAGG

FIGURE 1490

MGFVPTPEILWETNSFNSLSSRHQESLNNHGLLCLGFFFFLALFLVFVCVCVCCMHMRPRLTGGLGESASNSVNV
IVNYISYLRSHCFQINSVFHEKKKKKNSCGRQ

FIGURE 1491

GTGGGAGGAGGCACCGGCCGCGCGGCGGGAGGAGGTGCCGGCCGAGCACCGCAGACAGCGCCGGGAAG**ATG**AGCA
CGGAAGGTGGTGGCCGTCGCTGCCAGGCACAAGTGTCCCGCCGCATCTCCTTCAGCGCGAGCCACCGATTGTACA
GTAAATTTCTAAGTGATGAAGAAAACTTGAAACTGTTTGGGAAATGCAACAATCCAAATGGCCATGGGCACAATT
ATAAAGTTGTGGTGACAGTACATGGAGAGATTGACCCTGCTACGGGAATGGTTATGAATCTGGCTGATCTCAAAA
AATATATGGAGGAGGCGATTATGCAGCCCCTTGATCATAAGAATCTGGATATGGATGTGCCATACTTTGCAGATG
TGGTGAGCACGACTGAAAATGTAGCTGTTTATATCTGGGACAACCTCCAGAAAGTTCTTCCTGTAGGAGTTCTTT
ATAAAGTAAAAGTATACGAAACTGACAATAATATTGTGGTTTATAAAGGAGAA**TAG**CTATTGGGGTTAGCATTGC
ACAAAGCCCAGTTTCTTTCTGTGTTTGAAAAAGATTTTGATCCCCTTGGAATATTAAGAGGTCAACACGTGATTG
TTGTACGTACACATTGTGCTCTGGAGTGCCTATTTATTGAAATCATTGTAAGACCTGTTATAAATTTAAGTCTAT
TTAAAACTAAACTTGTAATATACATCCTGAAAATCATTTAGAGAGTCTTTTATTTATAAATTAAAAATCACTTCA
TTTTCACAAAATGTTTTGGTGTGGGATTATTTGAAAGCAAAAGAAATCTAATTTTGTTTTCTCCATTACCTCATT
TTAGTATTAATTTTTACTTGGTATAATATACATGGTTAAAATGCTTATGTGACTTCGAGTAGGTGAATCTTAAAG
AAATAAAATTCAAGTGACCAC

FIGURE 1492

MSTEGGGRRCQAQVSRRISFSASHRLYSKFLSDEENLKLFGKCNNPNGHGHNYKVVVTVHGEIDPATGMVMNLAD
LKKYMEEAIMQPLDHKNLDMDVPYFADVVSTTENVAVYIWDNLQKVLPVGVLYKVKVYETDNNIVVYKGE

FIGURE 1493

GGCCTGGCCCAGTTGCACCACGAGCGCTGCGGACACTCGGGGCGGCAGTCGGTCTGTCAGTCCTCCCGCCAGGTC
CCGCGGCCCGCACCTGCCGCCCGCACCTGCAGCTCCGCACCTGCGGCCAGTGCCTACTGCCCTCTCTTGCCGCCC
GCACCTGCAGCCCCGCACCTGCCGCTTGCACCTGCAGCCCCGCGCTCTACCCGGTTCAAGC**ATG**GCTGACCAGGC
GCCCTTCGACACGGACGTCAACACCCTGACCCGCTTCGTCATGGAGGAGGGCAGGAAGGCCCGCGGCACGGGCGA
GTTGACCCAGCTGCTCAACTCGCTCTGCACAGCAGTCAAAGCCATCTCTTCGGCGGTGCGCAAGGCGGGCATCGC
GCACCTCTATGGCATTGCTGGTTCTACCAACGTGACAGGTGATCAAGTTAAGAAGCTGGACGTCCTCTCCAACGA
CCTGGTTATGAACATGTTAAAGTCATCCTTTGCCACGTGTGTTCTCGTGTCAGAAGAAGATAAACACGCCATCAT
AGTGGAACCGGAGAAAAGGGGTAAATATGTGGTCTGTTTTGATCCCCTTGATGGATCTTCCAACATCGATTGCCT
TGTGTCCGTTGGAACCATTTTTGGCATCTATAGAAAGAAATCAACTGATGAGCCTTCTGAGAAGGATGCTCTGCA
ACCAGGCCGGAACCTGGTGGCAGCCGGCTACGCACTGTATGGCAGTGCCACCATGCTGGTCCTTGCCATGGACTG
TGGGGTCAACTGCTTCATGCTGGACCCGGCCATCGGGGAGTTCATTTTGGTGGACAAGGATGTGAAGATAAAAAA
GAAAGGTAAAATCTACAGCCTTAACGAGGGCTACGCCAGGGACTTTGACCCTGCCGTCACTGAGTACATCCAGAG
GAAGAAGTTCCCCCCAGATAATTCAGCTCCTTATGGGGCCCGGTATGTGGGCTCCATGGTGGCTGATGTTCATCG
CACTCTGGTCTACGGAGGGATATTTCTGTACCCCGCTAACAAGAAGAGCCCCAATGGAAAGCTGAGACTGCTGTA
CGAATGCAACCCCATGGCCTACGTCATGGAGAAGGCTGGGGGAATGGCCACCACTGGGAAGGAGGCCGTGTTAGA
CGTCATTCCCACAGACATTCACCAGAGGGCGCCGGTGATCTTGGGATCCCCCGACGACGTGCTCGAGTTCCTGAA
GGTGTATGAGAAGCACTCTGCCCAG**TGA**GCACCTGCCCTGCCTGCATCCGGAGAATTGCCTCTACCTGGACCTTT
TGTCTCACACAGCAGTACCCTGACCTGCTGTGCACCTTACATTCCTAGAGAGCAGAAATAAAAAGCATGACTATT
TCCACCATCAAATGCTGTAGAATGCTTGGCACTCCCTAACCAAATGCTGTCTCCATAATGCCACTGGTGTTAAGA
TATATTTTGAGTGGATGGAGGAGAAATAAACTTATTCCTCCTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1494

MADQAPFDTDVNTLTRFVMEEGRKARGTGELTQLLNSLCTAVKAISSAVRKAGIAHLYGIAGSTNVTGDQVKKLD
VLSNDLVMNMLKSSFATCVLVSEEDKHAIIVEPEKRGKYVVCFDPLDGSSNIDCLVSVGTIFGIYRKKSTDEPSE
KDALQPGRNLVAAGYALYGSATMLVLAMDCGVNCFMLDPAIGEFILVDKDVKIKKKGKIYSLNEGYARDFDPAVT
EYIQRKKFPPDNSAPYGARYVGSMVADVHRTLVYGGIFLYPANKKSPNGKLRLLYECNPMAYVMEKAGGMATTGK
EAVLDVIPTDIHQRAPVILGSPDDVLEFLKVYEKHSAQ

FIGURE 1495

GGCACGAGGGAGCA**ATG**GAGCTTACCATCTTTATCCTGAGACTGGCCATTTACATCCTGACATTTCCCTTGTACC
TGCTGAACTTTCTGGGCTTGTGGAGCTGGATATGCAAAAAATGGTTCCCCTACTTCTTGGTGAGGTTCACTGTGA
TATACAACGAACAGATGGCAAGCAAGAAGCGGGAGCTCTTCAGTAACCTGCAGGAGTTTGCGGGCCCCTCCGGGA
AACTCTCCCTGCTGGAAGTGGGCTGTGGCACGGGGGCCAACTTCAAGTTCTACCCACCTGGGTGCAGGGTGACCT
GTATTGACCCCAACCCCAACTTTGAGAAGTTTTTGATCAAGAGCATTGCAGAGAACCGACACCTGCAGTTTGAGC
GCTTTGTGGTAGCTGCCGGGGAGAACATGCACCAGGTGGCTGATGGCTCTGTGGATGTGGTGGTCTGCACCCTGG
TGCTGTGCTCTGTGAAGAACCAGGAGCGGATTCTCCGCGAGGTGTGCAGAGTGCTGAGACCGGGAGGGGCTTTCT
ATTTCATGGAGCATGTGGCAGCTGAGTGTTCGACTTGGAATTACTTCTGGCAACAAGTCCTGGATCCTGCCTGGC
ACCTTCTGTTTGATGGGTGCAACCTGACCAGAGAGAGCTGGAAGGCCCTGGAGCGGGCCAGCTTCTCTAAGCTGA
AGCTGCAGCACATCCAGGCCCCACTGTCCTGGGAGTTGGTGCGCCCTCATATCTATGGATATGCTGTGAAA**TAG**T
GTGAGCTGGCAGTTAAGAGCTGAATGGCTCAAAGAATTTAAAGCTTCAGTTTTACATTTAAAATGCTAAGTGGGA
GAAGAGAAACCTTTTTTTTTGGGGGGCGGTTTTTTTGGTTTGTTGTTGGTTTTTTTTTTTTTTTGGCGGGAAGAA
AGAGTTTTGCTCTTGTTGCCCAGGCTGGAGTGCAATGGCGTGGTCTCCGCTCACTGCAACCTCCACCTCGCGGGT
TTAGGCGATTCTTCTGCCTCAGCCTCCCTAGTAGCTGGGATTACAGGTGCCCACCACCATGCCCAGCTAATTTGT
ATTTTTAGTTGAGACAGGGTTTCACTACGTTGGCCAGGCTGGTCTTGAACTCCTGATCTCAGGCAATCCACCCAC
CTCAGCCTCCCAAAGTGCTGGGATGACAGGCGTGAGCAACCGCACCCAGCTTAAGGTTTTTTTGTTTTGTTTTGA
GACGGAGTTTTCGCTCTTGTTGCCCAGGCTGGAGTGCAATGCTGTGATCTCAGCTTACCACAACCTCCACCTCCC
GGGTTCAGGTGATTCACCTGCCTCAGCCTCCTGAGTGGCTGGTATTACAGGCATGCGTCACCACGCCGGCTAATT
TTGTACTTTTAGTAGAGATGGTGTTTCCCCACGTTGGTCAGTCTGGTCTCAAATTCCTGACCTCAGGTGATCTGC
CTGCCTCGGCCTCCCAAAGTGCTGTGATTACAGACGTCAGCCACCATGCCTGGCCTGAAACCTTTTTTAGGTAAA
GTTGAATTCCATCCTTAAAAGTTTCTGTTATATCCTATTTAGCCATTTTCTATTGTCTCCCAAAGAATTCACATC
AAAAAAACAGCTTTGAACTCCCCCTTCAAAGGAAACAGTCGACTTTCATAATTAGCATCTACCATTATCCCCAAA
TCTTATTTTATTCATTGACTTGAAATTTTTTCCAATTGCTTTTTTTTTTTTTTTTTTTAAGGTTAAGAGCAGAGG
TTTACTAGGCCAAAGAAAGAGAATAGCTCTCTGTTGCAGAGAGGGGTCCTGGAGAAATGGGTTACCCCAGTTGTC
TTATTTAAATGGTTACCCATCAGATTTTAATTTTATCTTCTCTTTGAGAGCTTGGTAATAAGAAGCACTTAAATC
ACTCCAAAGAAGACTTTAAAAAGGGAGCAGTGAAAAGGTCTTAATAATTTATTGATTGAATTAAGAAATACTAGC
TAATTAAGAATCTGAGTCTAAACAGCACAGATTTTTTCTTTCTGCTTTTAAATTGTGTTTTAAAAAAAGAGACAG
GGGGCTGGGCGTGGTGGCTCACGCCTGTAATCCTAGCACTTTGGGAGGCCGAGGCGGGTGGATCACGAGGTAGGA
GTTAAAGACCAGCCTGGCCAACATGGCAAAACCCTACTAAAGATACAAAAAAAAAAAAAAAATTGGCCAGGCGTGG
TGGTGGGTGCCTGTAATCCCAGGTACTTGGAAGGCTGAGGCAGGAGAATCTCTTGAACCCAGAAGGCGAAGGTTG
CAGTGAACCGAGATCATGCCATTGTACTCTAGCCTGGGTGACAAGAGCAAGACTCCGTCTCAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1496

MELTIFILRLAIYILTFPLYLLNFLGLWSWICKKWFPYFLVRFTVIYNEQMASKKRELFSNLQEFAGPSGKLSLL
EVGCGTGANFKFYPPGCRVTCIDPNPNFEKFLIKSIAENRHLQFERFVVAAGENMHQVADGSVDVVVCTLVLCSV
KNQERILREVCRVLRPGGAFYFMEHVAAECSTWNYFWQQVLDPAWHLLFDGCNLTRESWKALERASFSKLKLQHI
QAPLSWELVRPHIYGYAVK

FIGURE 1497

AAGCTTGCACGAGGCCGACAGCCTCAGCCGGGCTGCGACTGTCTTGGCAACTGTGTTGCTCTTGTCCTTCGGCAG
CGTGGCCGCTAGTCATATCGAGGATCAAGCAGAACAATTCTTTAGAAGTGGCCATACAAACAACTGGGCTGTTCT
GGTGTGTACATCCCGATTCTGGTTTAATTATCGACATGTTGCAAATACCCTTTCTGTTTATAGAAGTGTCAAGAG
GCTAGGTATTCCTGACAGTCACATTGTCCTAATGCTTGCAGATGATATGGCCTGTAATCCTAGAAATCCCAAACC
AGCTACAGTGTTTAGTCACAAGAATATGGAACTAAATGTGTATGGAGATGATGTGGAAGTGGATTATAGAAGTTA
TGAGGTAACTGTGGAGAATTTTTTACGGGTATTAACTGGGAGGATCCCACCTAGTACTCCTCGGTCAAAACGTCT
TCTTTCTGATGACAGAAGCAATATTCTAATTTATATGACAGGGCATGGTGGAAATGGTTTCTTAAAATTTCAAGA
TTCTGAAGAAATTACCAACATAGAACTCGCGGATGCTTTTGAACAAATGTGGCAGAAAAGACGCTACAATGAGCT
ACTGTTTATTATTGATACTTGCCAAGGAGCATCCATGTATGAACGATTTTATTCTCCTAACATAATGGCTCTAGC
TAGTAGTCAAGTGGGAGAAGATTCACTCTCGCATCAACCTGATCCTGCAATTGGAGTCCATCTTATGGATAGATA
CACATTTTATGTCTTGGAATTTTTGGAAGAAATTAACCCAGCTAGCCAAACTAATATGAATGACCTTTTTCAGGT
ATGTCCCAAAAGTCTGTGTGTGTCTACTCCTGGACATCGCACTGATCTTTTTCAGAGGGATCCTAAAAATGTACT
GATAACTGATTTCTTTGGAAGTGTACGGAAAGTGGAAATTACAACAGAGACTATTAAATTGCAACAGGATTCAGA
AATCATGGAAAGCAGCTATAAGGAAGACCAGATGGATGAGAAACTAATGGAACCTCTGAAATATGCTGAACAACT
TCCTGTAGCTCAGATAATACACCAGAAACCGAAGCTGAAAGACTGGCATCCTCCTGGGGGCTTTATTCTGGGATT
ATGGGCACTTATTATCATGGTTTTCTTCAAAACTTATGGAATTAAGCATATGAAGTTCATTTTT**TAG**ACTTGATG
ATGAATGAAGAATGCATGGAGGACTGCAAACTTGGATAATAATTTATGTCATTATATATTTTTAAAAATGTGTTT
CTCTTGTATGAATTGGAAATAAGTATAAGGAAACTAAATTTGAATCAACTATTAATTTTATAACTTAAAGAAAAA
TAATTGTTAATGCAACTGCTTAATGGCACTAAATATATTCCAGTTTTGTATTTTGTGTATTATAAAAGCGAATGA
GACAGAGATCAGAATACATTGACTGTTTTTGAAAATAGTAATTTCCCCTTATCCCCTTTTCATTTGGAAAAGAAA
CAATTGTGAAGACATTAAATTCTCACTAACAGAA

FIGURE 1498

SLHEADSLSRAATVLATVLLLSFGSVAASHIEDQAEQFFRSGHTNNWAVLVCTSRFWFNYRHVANTLSVYRSVKR
LGIPDSHIVLMLADDMACNPRNPKPATVFSHKNMELNVYGDDVEVDYRSYEVTVENFLRVLTGRIPPSTPRSKRL
LSDDRSNILIYMTGHGGNGFLKFQDSEEITNIELADAFEQMWQKRRYNELLFIIDTCQGASMYERFYSPNIMALA
SSQVGEDSLSHQPDPAIGVHLMDRYTFYVLEFLEEINPASQTNMNDLFQVCPKSLCVSTPGHRTDLFQRDPKNVL
ITDFFGSVRKVEITTETIKLQQDSEIMESSYKEDQMDEKLMEPLKYAEQLPVAQIIHQKPKLKDWHPPGGFILGL
WALIIMVFFKTYGIKHMKFIF

FIGURE 1499A

CCTGGGTCCTCTCGGCGCCAGAGCCGCTCTCCGCATCCCAGGACAGCGGTGCGGCCCTCGGCCGGGGCGCCCACT
CCGCAGCAGCCAGCGAGCCAGCTGCCCCGT**ATG**ACCGCGCCGGGCGCCGCCGGGCGCTGCCCTCCCACGACATGG
CTGGGCTCCCTGCTGTTGTTGGTCTGTCTCCTGGCGAGCAGGAGTATCACCGAGGAGGTGTCGGAGTACTGTAGC
CACATGATTGGGAGTGGACACCTGCAGTCTCTGCAGCGGCTGATTGACAGTCAGATGGAGACCTCGTGCCAAATT
ACATTTGAGTTTGTAGACCAGGAACAGTTGAAAGATCCAGTGTGCTACCTTAAGAAGGCATTTCTCCTGGTACAA
GACATAATGGAGGACACCATGCGCTTCAGAGATAACACCGCCAATCCCATCGCCATTGTGCAGCTGCAGGAACTC
TCTTTGAGGCTGAAGAGCTGCTTCACCAAGGATTATGAAGAGCATGACAAGGCCTGCGTCCGAACTTTCTATGAG
ACACCTCTCCAGTTGCTGGAGAAGGTCAAGAATGTCTTTAATGAAACAAAGAATCTCCTTGACAAGGACTGGAAT
ATTTTCAGCAAGAACTGCAACAACAGCTTTGCTGAATGCTCCAGCCAAGATGTGGTGACCAAGCCTGATTGCAAC
TGCCTGTACCCCAAAGCCATCCCTAGCAGTGACCCGGCCTCTGTCTCCCCTCATCAGCCCCTCGCCCCCTCCATG
GCCCCTGTGGCTGGCTTGACCTGGGAGGACTCTGAGGGAACTGAGGGCAGCTCCCTCTTGCCTGGTGAGCAGCCC
CTGCACACAGTGGATCCAGGCAGTGCCAAGCAGCGGCCACCCAGGAGCACCTGCCAGAGCTTTGAGCCGCCAGAG
ACCCCAGTTGTCAAGGACAGCACCATCGGTGGCTCACCACAGCCTCGCCCCTCTGTCGGGGCCTTCAACCCCGGG
ATGGAGGATATTCTTGACTCTGCAATGGGCACTAATTGGGTCCCAGAAGAAGCCTCTGGAGAGGCCAGTGAGATT
CCCGTACCCCAAGGGACAGAGCTTTCCCCCTCCAGGCCAGGAGGGGGCAGCATGCAGACAGAGCCCGCCAGACCC
AGCAACTTCCTCTCAGCATCTTCTCCACTCCCTGCATCAGCAAAGGGCCAACAGCCGGCAGATGTAACTGCTACA
GCCTTGCCCAGGGTGGGCCCCGTGATGCCCACTGGCCAGGACTGGAATCACACCCCCCAGAAGACAGACCATCCA
TCTGCCCTGCTCAGAGACCCCCCGGAGCCAGGCTCTCCCAGGATCTCATCACTGCGCCCCCAGGCCCTCAGCAAC
CCCTCCACCCTCTCTGCTCAGCCACAGCTTTCCAGAAGCCACTCCTCGGGCAGCGTGCTGCCCCTTGGGGAGCTG
GAGGGCAGGAGGAGCACCAGGGATCGGACGAGCCCCGCAGAGCCAGAAGCAGCACCAGCAAGTGAAGGGGCAGCC
AGGCCCCTGCCCCGTTTTAACTCCGTTCCTTTGACTGACACAGGCCATGAGAGGCAGTCCGAGGGATCCTCCAGC
CCGCAGCTCCAGGAGTCTGTCTTCCACCTGCTGGTGCCCAGTGTCATCCTGGTCTTGCTGGCTGTCGGAGGCCTC
TTGTTCTACAGGTGGAGGCGGCGGAGCCATCAAGAGCCTCAGAGAGCGGATTCTCCCTTGGAGCAACCAGAGGGC
AGCCCCCTGACTCAGGATGACAGACAGGTGGAACTGCCAGTG**TAG**AGGGAATTCTAAGCTGGACGCACAGAACAG
TCTCTTCGTGGGAGGAGACATTATGGGGCGTCCACCACCACCCCTCCCTGGCCATCCTCCTGGAATGTGGTCTGC
CCTCCACCAGAGCTCCTGCCTGCCAGGACTGGACCAGAGCAGCCAGGCTGGGGCCCCTCTGTCTCAACCCGCAGA
CCCTTGACTGAATGAGAGAGGCCAGAGGATGCTCCCCATGCTGCCACTATTTATTGTGAGCCCTGGAGGCTCCCA
TGTGCTTGAGGAAGGCTGGTGAGCCCGGCTCAGGACCCTCTTCCCTCAGGGGCTGCAGCCTCCTCTCACTCCCTT
CCATGCCGGAACCCAGGCCAGGGACCCACCGGCCTGTGGTTTGTGGGAAAGCAGGGTGCACGCTGAGGAGTGAAA
CAACCCTGCACCCAGAGGGCCTGCCTGGTGCCAAGGTATCCCAGCCTGGACAGGCATGGACCTGTCTCCAGACAG
AGGAGCCTGAAGTTCGTGGGGCGGGACAGCCTCGGCCTGATTTCCCGTAAAGGTGTGCAGCCTGAGAGACGGGAA
GAGGAGGCCTCTGCACCTGCTGGTCTGCACTGACAGCCTGAAGGGTCTACACCCTCGGCTCACCTAAGTCCCTGT
GCTGGTTGCCAGGCCCAGAGGGGAGGCCAGCCCTGCCCTCAGGACCTGCCTGACCTGCCAGTGATGCCAAGAGGG
GGATCAAGCACTGGCCTCTGCCCCTCCTCCTTCCAGCACCTGCCAGAGCTTCTCCAGCAGGCCAAGCAGAGGCTC
CCCTCATGAAGGAAGCCATTGCACTGTGAACACTGTACCTGCCTGCTGAACAGCCTCCCCCCGTCCATCCATGAG
CCAGCATCCGTCCGTCCTCCACTCTCCAGCCTCTCCCCAGCCTCCTGCACTGAGCTGGCCTCACCAGTCGACTGA
GGGAGCCCCTCAGCCCTGACCTTCTCCTGACCTGGCCTTTGACTCCCCGGAGTGGAGTGGGGTGGGAGAACCTCC
TGGGCCGCCAGCCAGAGCCGCTCTTTAGGCTGTGTTCTTCGCCCAGGTTTCTGCATCTTCCACTTTGACATTCCC
AAGAGGGAAGGGACTAGTGGGAGAGAGCAAGGGAGGGGAGGGCACAGACAGAGAGCCTACAGGGCGAGCTCTGAC
TGAAGATGGGCCTTTGAAATATAGGTATGCACCTGAGGTTGGGGGAGGGTCTGCACTCCCAAACCCCAGCGCAGT
GTCCTTTCCCTGCTGCCGACAGGAACCTGGGGCTGAGCAGGTTATCCCTGTCAGGAGCCCTGGACTGGGCTGCAT
CTCAGCCCCACCTGCATGGTATCCAGCTCCCATCCACTTCTCACCCTTCTTTCCTCCTGACCTTGGTCAGCAGTG
ATGACCTCCAACTCTCACCCACCCCCTCTACCATCACCTCTAACCAGGCAAGCCAGGGTGGGAGAGCAATCAGGA
GAGCCAGGCCTCAGCTTCCAATGCCTGGAGGGCCTCCACTTTGTGGCCAGCCTGTGGTGCTGGCTCTGAGGCCTA
GGCAACGAGCGACAGGGCTGCCAGTTGCCCCTGGGTTCCTTTGTGCTGCTGTGTGCCTCCTCTCCTGCCGCCCTT
TGTCCTCCGCTAAGAGACCCTGCCCTACCTGGCCGCTGGGCCCCGTGACTTTCCCTTCCTGCCCAGGAAAGTGAG
GGTCGGCTGGCCCCACCTTCCCTGTCCTGATGCCGACAGCTTAGGGAAGGGCACTGAACTTGCATATGGGGCTTA
GCCTTCTAGTCACAGCCTCTATATTTGATGCTAGAAAACACATATTTTTAAATGGAAGAAAAATAAAAAGGCATT

FIGURE 1499B

CCCCCTTCATCCCCCTACCTTAAACATATAATATTTTAAAGGTCAAAAAAGCAATCCAACCCACTGCAGAAGCTC
TTTTTGAGCACTTGGTGGCATCAGAGCAGGAGGAGCCCCAGAGCCACCTCTGGTGTCCCCCAGGCTACCTGCTCA
GGAACCCCTTCTGTTCTCTGAGAACTCAACAGAGGACATTGGCTCACGCACTGTGAGATTTTGTTTTTATACTTG
CAACTGGTGAATTATTTTTTATAAAGTCATTTAAATATCTATTTAAAAGATAGGAAGCTGCTTATATATTTAATA
ATAAAAGAAGTGCACAAGCTGCCGTTGACGTAGCTCGAG

FIGURE 1500

MTAPGAAGRCPPTTWLGSLLLLVCLLASRSITEEVSEYCSHMIGSGHLQSLQRLIDSQMETSCQITFEFVDQEQL
KDPVCYLKKAFLLVQDIMEDTMRFRDNTANPIAIVQLQELSLRLKSCFTKDYEEHDKACVRTFYETPLQLLEKVK
NVFNETKNLLDKDWNIFSKNCNNSFAECSSQDVVTKPDCNCLYPKAIPSSDPASVSPHQPLAPSMAPVAGLTWED
SEGTEGSSLLPGEQPLHTVDPGSAKQRPPRSTCQSFEPPETPVVKDSTIGGSPQPRPSVGAFNPGMEDILDSAMG
TNWVPEEASGEASEIPVPQGTELSPSRPGGGSMQTEPARPSNFLSASSPLPASAKGQQPADVTATALPRVGPVMP
TGQDWNHTPQKTDHPSALLRDPPEPGSPRISSLRPQALSNPSTLSAQPQLSRSHSSGSVLPLGELEGRRSTRDRT
SPAEPEAAPASEGAARPLPRFNSVPLTDTGHERQSEGSSSPQLQESVFHLLVPSVILVLLAVGGLLFYRWRRRSH
QEPQRADSPLEQPEGSPLTQDDRQVELPV

FIGURE 1501A

GGCACGAGGCTGCGCCTCGGGGGTCGGCGTCCAGGCTCGGAGCGCGGCACGGAGACGGCGGCAGCGCTGGACTAG
GTGGCAGGCCCTGCATC**ATG**GAAACTCTTTCTAATGCAAGTGGTACTTTTGCCATACGCCTTTTAAAGATACTGT
GTCAAGATAACCCTTCGCACAACGTGTTCTGTTCTCCTGTGAGCATCTCCTCTGCCCTGGCCATGGTTCTCCTAG
GGGCAAAGGGAAACACCGCAACCCAGATGGCCCAGGCACTGTCTTTAAACACAGAGGAAGACATTCATCGGGCTT
TCCAGTCGCTTCTCACTGAAGTGAACAAGGCTGGCACACAGTACCTGCTGAGAACGGCCAACAGGCTCTTTGGAG
AGAAAACTTGTCAGTTCCTCTCAACGTTTAAGGAATCCTGTCTTCAATTCTACCATGCTGAGCTGAAGGAGCTTT
CCTTTATCAGAGCTGCAGAAGAGTCCAGGAAACACATCAACACCTGGGTCTCAAAAAAGACCGAAGGTAAAATTG
AAGAGTTGTTGCCGGGTAGCTCAATTGATGCAGAAACCAGGCTGGTTCTTGTCAATGCCATCTACTTCAAAGGAA
AGTGGAATGAACCGTTTGACGAAACATACACAAGGGAAATGCCCTTTAAAATAAACCAGGAGGAGCAAAGGCCAG
TGCAGATGATGTATCAGGAGGCCACGTTTAAGCTCGCCCACGTGGGCGAGGTGCGCGCGCAGCTGCTGGAGCTGC
CCTACGCCAGGAAGGAGCTGAGCCTGCTGGTGCTGCTGCCTGACGACGGCGTGGAGCTCAGCACGGTGGAAAAAA
GTCTCACTTTTGAGAAACTCACAGCCTGGACCAAGCCAGACTGTATGAAGAGTACTGAGGTTGAAGTTCTCCTTC
CAAAATTTAAACTACAAGAGGATTATGACATGGAATCTGTGCTTCGGCATTTGGGAATTGTTGATGCCTTCCAAC
AGGGCAAGGCTGACTTGTCGGCAATGTCAGCGGAGAGAGACCTGTGTCTGTCCAAGTTCGTGCACAAGAGTTTTG
TGGAGGTGAATGAAGAAGGCACCGAGGCAGCGGCAGCGTCGAGCTGCTTTGTAGTTGCAGAGTGCTGCATGGAAT
CTGGCCCCAGGTTCTGTGCTGACCACCCTTTCCTTTTCTTCATCAGGCACAACAGAGCCAACAGCATTCTGTTCT
GTGGCAGGTTCTCATCGCCA**TAA**AGGGTGCACTTACCGTGCACTCGGCCATTTCCCTCTTCCTGTGTCCCCAGAT
CCCCACTACAGCTCCAAGAGGATGGGCCTAGAAAGCCAAGTGCAAAGATGAGGGCAGATTCCTTACCTGTCTGCC
CTCATGATTTGCCAGCATGAATTCATGATGCTCCACACTCGCTTATGCTACTTAATCAGAATCTTGAGAAAATAG
ACCATAATGATTCCCTGTTGTATTAAAATTGCAGTCCAAATCCCATAGGATGGCAAGCAAAGTTCTTCTAGAATT
CCACATGCAATTCACTCTGGCGACCCTGTGCTTTCCTGACACTGCGAATACATTCCTTAACCCGCTGCCTCAGTG
GTAATAAATGGTGCTAGATATTGCTACTATTTTATAGATTTCCTGGTGCTTAGCCTTATAAAAAAGGTTGTAAAA
TGTACATTTATATTTTATCTTTTTTTTTTTTTTTTTCTGAGACGCAGTCTGGCTCTCTGTCGCCCAGGCTGGAG
TGCAGTGGCTCGATCTCTGCTCACTGCAAGCTCCGCCTCCCGGGTTCACGCCATTCTCCTGCCTCAGCCTCCCGA
GTAGCTGGGACTACAGGCGCCCGCCACCACGCCCGGCTAATTTTTTGTATTTTTAGTAGAGACGGGGTTTCACCG
TGTTAGCCAGGATGGTGTCGATCTCCTGACCTCGTGATCCACCCGCCTCGGCCTCCCAAAGTGCTGGGATTACAG
GCTTGAGCCACCGCGCCCGGCTATATTTTATCTTTTATCTTTTTCTTTGACATTTACCAATCACCAAGCATGCAC
CAAACACTGCTTTAGGCACTGGGGACACAAAGGGGACAGAGCCATCCTCCTTTGACACCTGGTCTTCAGTTCTGT
GCCCAACGTATATAGTTTTGACAATGACCAGGTTGGACTGTTTAATGTCTTTCAACTTACCACGTAATCCTCTTG
TAGGGATCACATCTTTCTTTATGATATTGTATTTCTCTACCTCTAACAGTAAAAATTCCATTCAACCCTTAAAGC
TCACTTCAAATTCTTCTTTGAGAAGTTTTTCCTTTCTCCGCAACCAGATGTACATATTTGAACTCTCTTTGTACT
TGGAGGGCACTTCTTTCGTGGTAGTTCTTTTATTTTTATTAATCTCTGTATCCTTAGATAGTCCTCCAACAACCA
AAGGTTGGGACTCTGTCTTACATATCTGGGTGCCCCTCATAGTGCAGTAATAAGTAAGTTGATTATATACGAGCT
ATGTAACTTATATTTTTTAATGGTTGGATATCACTGAGTTTTTTTTTTTAAGAATTTTTTTATTGAGGTAAACTT
CACATAACATAAAATTAACTATTTTAAAGTGAGAAGTTCAGTGCCACTTAGTATTGTTAACAATGTTGCATAACC
ACCACCTTTATTTAAAGTTCCAAAAAAAAATGTTCTCCTCTAAAAGGAAACCCCATCCCATTAAGCAGATACTCTC
CATTCCTTCCTTCCTCCAGCCCCCAGCAACCACCAATCTGCTTTCTGTCTCTATGGTTTTATCTATTCTTGCTAT
TTTATATAAATCGAATTGTATGAGACCTTTTGTGTCTGGCTTCTTTCACTTAGTACAAGTTTTTGAGATTTATTT
ACATAGTAGCATGTATCAACACTTCATTTTTATGGCCAAATAAAATTGTATTATGTGTTTATAGCACAATTTATT
TATCCACTCATTCATTGATGGACTTTGGGTTGTTTCTGACTTTTGGCTATTGGGAATAGTGCTGCTATGAATGTT
TGTGTACCTGTATTTGTTTGAATGCCTATTTTGCATTCTCTTGGGTATATATCTAGGAGTGGAACTGCTGGGTCA
TATGTTAATTCTATGTTTAGCTTTTTGAGGAACAGACAAACTGTTTTCCACAGCAGTTGAACCATTCCACATTCC
CACCAGCAATGTATGAGAATTCCAATTTCTGTCCACTTCCTCACCAACACTTATTATTTTCCTTTTCCTTTTTTT
AAAAAAAATAAGTTATGGCCATCTTAGTGGGTGTGAAGTGGTATCTCATTGTGTTTTTTATTTGCATTTCCTATG
TAATGAGCTAGAAACTAAAGTACAAACTAGATGGGACATCCAGTCCCTTTGATAGATAATGCTGAGTAAAAAATG
AGATGAAAGACATTTGTTTGTTTTTAGAACATGAGTGACAGTTTGTTAAAAAGCTTTAGAGGAGGAATGAAAACA
AAGTGAAGTACACTTAGAAAAGGGCCAAGTGGACATCTTGGATGTCAAGTGCCTAGTTCAGTATCTTTTTTTTTT
TTTTTTTTTTTTTTGAGACAGTGCCTCACTCTGTCACCCAGGCTGGAGTGTAGTGGCATGATCTGGGCTCACTGC

FIGURE 1501B

AACCTCCTCCTCCTGGATTCAAGCAATTCTCTTGCTTCAGCCTCCCAAGTAGCTGAGACTACAAGCACCCACCAC
CACACCCGGCTAATTTTGTATTTTTCAGTAGAGACGGGGTTTCGCCACATTGGCCGTGTTGGTCTTGAACTCCTG
GCCTCAAGCAATCCGCCTACCTCAGCCTCCCAAAGTGCTAGGATTACAGGCATAAGCCACTGAGCCCAGCCCTAG
TTCAGTATCTTTTATGTAAATTATAAACATCTGCAACATTATGTATCATATGCAGATACTTATTGCATTTCTTTT
ATTAGTGGTGAAAGTGTTCTATGCATTTATTGGCTCTTGAATTTCCTCATCTATGAATTGTCATTCACACACCTA
CTTTTCTGCTTCGTTTTTACATATGTCTTTGCCTATTAAAGATATTATCCCTCTGTTTTATATTTTCTCTCATTC
TTGTATTGCCTTTTAAATTTTGTTATGATGTTTCATTAATAAACAGTGTTTTGTTTTCCTCTATAAAAAAAAAAA
AAAAA

FIGURE 1502

METLSNASGTFAIRLLKILCQDNPSHNVFCSPVSISSALAMVLLGAKGNTATQMAQALSLNTEEDIHRAFQSLLT
EVNKAGTQYLLRTANRLFGEKTCQFLSTFKESCLQFYHAELKELSFIRAAEESRKHINTWVSKKTEGKIEELLPG
SSIDAETRLVLVNAIYFKGKWNEPFDETYTREMPFKINQEEQRPVQMMYQEATFKLAHVGEVRAQLLELPYARKE
LSLLVLLPDDGVELSTVEKSLTFEKLTAWTKPDCMKSTEVEVLLPKFKLQEDYDMESVLRHLGIVDAFQQGKADL
SAMSAERDLCLSKFVHKSFVEVNEEGTEAAAAASSCFVVAECCMESGPRFCADHPFLFFIRHNRANSILFCGRFSS
P

FIGURE 1503A

GTAGCTGCTTTGCAGGTACATCATGTGACAGTGGAATTATAGAAGATGTGAAGAAAACAACACACACTCCAACAC
TAAAAGCATGATGTAGCTGCTTTGCAGGTAAAAGAAGCAGCTACATC**ATG**CTTTTAGTGTTGGAGTGTGTGTTGT
TTTCTGTGGCTCAGGGGTATTTTAGAATGGACTCTTCTGCAACCCAGTTTCACATAGAGACTCATGAGAACACAT
CAGGACTTTGGTCAATATGGTACCGCAACCATTTTGACCGTAGTGTTGTATTAAATGATGTGTTTCTTTCCAAGG
AGACCAAGCACATGTTAAAGATTCTGAATTTCACTGGCCCTTTATTTCTACCTCCAGGCTGTTGGAATATATTTT
CTTTGAAACTTGCTGTTAAAGACATTGCCATAAATCTATTCACCAATGTATTTTTGACTACAAACATAGGTGCCA
TTTTTGCAATACCTCTACAGATTTATTCAGCACCAACCAAGGAAGGGAGTCTGGGTTTTGAAGTGATAGCACATT
GTGGCATGCATTATTTCATGGGAAAATCAAAAGCAGGAAATCCTAATTGGAATGGGAGCCTTTCTCTGGATCAAT
CTACCTGGAATGTGGATTCTGAACTTGCAAATAAATTGTATGAAAGATGGAAGAAATATAAAAATGGTGACGTCT
GCAAGAGGAATGTTTTGGGAACAACTCGATTTGCTCACTTGAAGAAATCCAAGGAGTCAGAGTCCTTTGTTTTCT
TTTTGCCTCGTTTGATCGCAGAGCCTGGCCTCATGTTAAACTTCAGCGCAACTGCCCTTAGGAGCAGGATGATCA
AGTACTTTGTGGTGCAGAACCCGTCCTCTTGGCCGGTCTCCTTGCAGCTCCTGCCTCTCTCCTTGTACCCTAAAC
CCGAAGCCCTAGTGCACCTGCTCCACAGATGGTTTGGCACTGATATGCAGATGATTAATTTCACAACTGGTGAAT
TCCAGCTCACCGAAGCTTGCCCTTACCTGGGTACGCATTCTGAGGAATCCAGGTTTGGCATCCTCCACTTACATC
TGCAGCCTTTGGAAATGAAAAGGGTTGGCGTAGTTTTCACACCTGCTGACTATGGAAAAGTTACCTCACTCATAC
TAATCCGGAATAACTTGACTGTTATTGACATGATTGGCGTGGAAGGATTTGGAGCAAGAGAGTTATTAAAAGTGG
GTGGAAGACTTCCTGGTGCAGGAGGCTCACTCCGATTTAAGGTGCCCGAGTCCACGCTGATGGACTGCCGTAGAC
AACTGAAAGACAGTAAGCAAATTTTATCTATTACAAAGAACTTTAAAGTTGAGAATATTGGACCTCTTCCTATAA
CTGTTTCGTCTCTGAAAATTAATGGGTATAACTGCCAAGGTTATGGATTCGAGGTGCTGGATTGTCATCAGTTTT
CCCTGGACCCAAACACATCCCGCGATATCAGCATTGTGTTCACTCCAGACTTTACCTCCTCCTGGGTAATTCGGG
ACCTAAGTCTTGTAACCGCAGCGGACCTAGAATTTCGCTTCACTCTCAATGTGACTCTCCCTCATCACCTGTTGC
CCTTGTGTGCAGACGTGGTTCCAGGACCCAGCTGGGAGGAGTCATTTTGGAGGCTCACGGTCTTCTTTGTCAGTT
TGTCCCTGTTGGGTGTGATTTTAATAGCCTTCCAACAAGCACAGTACATTCTCATGGAATTCATGAAAACAAGAC
AGAGGCAAAATGCTAGCTCCTCTTCACAGCAAAACAATGGTCCTATGGATGTAATCAGCCCCCATTCTTACAAAA
GCAATTGCAAGAACTTTCTCGATACATATGGCCCCTCTGATAAAGGCAGGGGGAAGAACTGCCTTCCAGTGAACA
CTCCCCAAAGCAGGATCCAGAATGCTGCAAAGAGGAGCCCAGCCACCTATGGTCATTCTCAGAAGAAGCACAAAT
GCTCAGTGTATTACAGTAAACACAAAACCAGCACAGCTGCGGCCAGCAGCACCAGCACGACTACTGAGGAAAAAC
AGACTTCACCCCTGGGCAGCTCACTGCCTGCTGCTAAAGAGGACATTTGCACTGATGCCATGCGTGAGAACTGGA
TCAGCCTCAGATATGCAAGTGGCATAAATGTCAACCTGCAGAAGAATTTAACCCTTCCCAAAAACTTACTGAATA
AAGAAGAAAACACACTGAAAAACACAATTGTTTTCAGTAATCCTTCTTCAGAATGTAGTATGAAGGAGGGAATAC
AGACATGTATGTTTCCTAAGGAAACTGACATTAAAACTTCAGAGAACACAGCCGAGTTCAAGGAACGGGAGCTCT
GTCCACTGAAGACCTCCAAGAAACTACCTGAAAACCATTTACCAAGAAACTCACCTCAGTACCACCAGCCAGACT
TGCCAGAAATTTCCAGGAAAAATAATGGGAATAACCAGCAAGTACCTGTCAAGAATGAAGTAGATCATTGTGAAA
ATTTGAAGAAGGTGGACACAAAGCCTTCTTCAGAAAAGAAGATTCACAAAACATCTAGAGAAGACATGTTTTCTG
AGAAACAGGACATACCTTTCGTAGAGCAAGAAGATCCTTATAGGAAGAAAAAGCTTCAGGAGAAAAGAGAAGGAA
ATTTACAAAATTTAAATTGGAGTAAAAGTCGAACATGTAGAAAGAACAAGAAAAGGGGTGTTGCTCCAGTCTCAA
GGCCTCCTGAACAGAGTGATCTAAAGCTTGTGTGCAGTGACTTTGAGAGGTCTGAGCTGAGCAGTGACATCAATG
TAAGAAGCTGGTGTATACAGGAAAGCACTAGGGAGGTTTGTAAAGCAGATGCCGAAATTGCAAGCAGTTTACCTG
CTGCCCAGAGAGAGGCAGAAGGTTACTACCAGAAGCCTGAGAAGAAATGTGTGGACAAGTTCTGCTCCGATTCCA
GCTCTGACTGTGGGAGCTCCTCTGGCAGCGTGCGTGCCAGCCGGGGCAGCTGGGGGAGCTGGAGCAGCACCAGCA
GCTCCGACGGGGATAAGAAGCCCATGGTGGACGCCCAGCACTTCCTGCCGGCCGGAGACAGTGTTTCACAAAATG
ATTTTCCTTCTGAAGCTCCCATCTCCTTGAATCTTTCTCATAACATCTGCAATCCCATGACCGTGAATAGTCTCC
CACAATACGCAGAGCCTTCCTGTCCCAGCCTTCCTGCCGGGCCCACAGGTGTTGAAGAAGATAAAGGTCTTTACT
CACCTGGAGACCTGTGGCCCACTCCGCCAGTGTGTGTGACAAGCAGCTTAAACTGCACCCTGGAGAACGGCGTGC
CTTGTGTGATTCAGGAGTCGGCCCCGGTTCATAATAGTTTCATTGATTGGAGTGCAACATGCGAAGGCCAGTTTT
CCAGCGCATACTGTCCATTGGAATTGAACGATTACAATGCCTTTCCAGAAGAAAACATGAACTATGCCAATGGCT
TCCCCTGTCCTGCAGATGTTCAGACAGACTTTATTGATCACAACTCTCAGTCTACCTGGAACACCCCACCCAACA
TGCCTGCTGCCTGGGGACATGCCAGTTTCATCAGCTCTCCGCCCTACCTCACAAGCACCCGAAGCTTGTCTCCAA

FIGURE 1503B

TGTCTGGACTTTTTGGTTCCATCTGGGCCCCGCAAAGCGATGTGTATGAAAATTGCTGCCCCATCAACCCCACCA
CGGAACATTCGACCCACATGGAAAACCAAGCGGTCGTGTGCAAGGAATACTACCCGGGGTTCAACCCGTTTCGCG
CCTATATGAACCTGGACATATGGACTACCACAGCGAATAGGAATGCAAATTTCCCACTGTCTAGAGACTCGAGTT
ACTGTGGGAATGTG**TGA**AAATAATTGGATTTTTAAACAATGTGAATAAAGAGGCTTGTGTTTTGAAAAAAAAAAA
AAAAAA

FIGURE 1504

MLLVLECVLFSVAQGYFRMDSSATQFHIETHENTSGLWSIWYRNHFDRSVVLNDVFLSKETKHMLKILNFTGPLF
LPPGCWNIFSLKLAVKDIAINLFTNVFLTTNIGAIFAIPLQIYSAPTKEGSLGFEVIAHCGMHYFMGKSKAGNPN
WNGSLSLDQSTWNVDSELANKLYERWKKYKNGDVCKRNVLGTTRFAHLKKSKESESFVFFLPRLIAEPGLMLNFS
ATALRSRMIKYFVVQNPSSWPVSLQLLPLSLYPKPEALVHLLHRWFGTDMQMINFTTGEFQLTEACPYLGTHSEE
SRFGILHLHLQPLEMKRVGVVFTPADYGKVTSLILIRNNLTVIDMIGVEGFGARELLKVGGRLPGAGGSLRFKVP
ESTLMDCRRQLKDSKQILSITKNFKVENIGPLPITVSSLKINGYNCQGYGFEVLDCHQFSLDPNTSRDISIVFTP
DFTSSWVIRDLSLVTAADLEFRFTLNVTLPHHLLPLCADVVPGPSWEESFWRLTVFFVSLSLLGVILIAFQQAQY
ILMEFMKTRQRQNASSSSQQNNGPMDVISPHSYKSNCKNFLDTYGPSDKGRGKNCLPVNTPQSRIQNAAKRSPAT
YGHSQKKHKCSVYYSKHKTSTAAASSTSTTTEEKQTSPLGSSLPAAKEDICTDAMRENWISLRYASGINVNLQKN
LTLPKNLLNKEENTLKNTIVFSNPSSECSMKEGIQTCMFPKETDIKTSENTAEFKERELCPLKTSKKLPENHLPR
NSPQYHQPDLPEISRKNNGNNQQVPVKNEVDHCENLKKVDTKPSSEKKIHKTSREDMFSEKQDIPFVEQEDPYRK
KKLQEKREGNLQNLNWSKSRTCRKNKKRGVAPVSRPPEQSDLKLVCSDFERSELSSDINVRSWCIQESTREVCKA
DAEIASSLPAAQREAEGYYQKPEKKCVDKFCSDSSSDCGSSSGSVRASRGSWGSWSSTSSSDGDKKPMVDAQHFL
PAGDSVSQNDFPSEAPISLNLSHNICNPMTVNSLPQYAEPSCPSLPAGPTGVEEDKGLYSPGDLWPTPPVCVTSS
LNCTLENGVPCVIQESAPVHNSFIDWSATCEGQFSSAYCPLELNDYNAFPEENMNYANGFPCPADVQTDFIDHNS
QSTWNTPPNMPAAWGHASFISSPPYLTSTRSLSPMSGLFGSIWAPQSDVYENCCPINPTTEHSTHMENQAVVCKE
YYPGFNPFFRAYMNLDIWTTTANRNANFPLSRDSSYCGNV

FIGURE 1505

GTTTTGCCTGCTAGCATCTCCCTGTAACTCTCCCAATCTTGAGGAGTGATCCCTGTCCCAGCCCCTGGAAAGGGG
CAGGAACGACAAACTCAAAGTCCAGG**ATG**TTCACCATGACAAGAGCCATGGAAGAGGCTCTTTTTCAGCACTTCA
TGCACCAGAAGCTGGGGATCGCCTATGCCATACACAAGCCATTTCCCTTCTTTGAAGGCCTCCTAGACAACTCCA
TCATCACTAAGAGAATGTACATGGAATCTCTGGAAGCCTGTAGAAATTTGATCCCTGTATCCAGAGTGGTGCACA
ACATTCTCACCCAACTGGAGAGGACTTTTAACCTGTCTCTTCTGGTGACATTGTTCAGTCAAATTAACCTGCGTG
AATATCCCAATCTGGTGACGATTTACAGAAGCTTCAAACGTGTTGGTGCTTCCTATGAACGGCAGAGCAGAGACA
CACCAATCCTACTTGAAGCCCCAACTGGCCTAGCAGAAGGAAGCTCCCTCCATACCCCACTGGCGCTGCCCCCAC
CACAACCCCCTCAACCAAGCTGTTCACCCTGTGCGCCAAGAGTCAGTGAGCCTGGAACATCCTCCCAGCAAAGCG
ATGAGATCCTGAGTGAGTCGCCCAGCCCATCTGACCCTGTCCTGCCTCTCCCTGCACTCATCCAGGAAGGAAGAA
GCACTTCAGTGACCAATGACAAGTTAACATCCAAAATGAATGCGGAAGAAGACTCAGAAGAGATGCCCAGCCTCC
TCACTAGCACTGTGCAAGTGGCCAGTGACAACCTGATCCCCCAAATAAGAGATAAAGAAGACCCTCAAGAGATGC
CCCACTCTCCCTTGGGCTCTATGCCAGAGATAAGAGATAATTCTCCAGAACCAAATGACCCAGAAGAGCCCCAGG
AGGTGTCCAGCACACCTTCAGACAAGAAAGGAAAGAAAAGAAAAAGATGTATCTGGTCAACTCCAAAAAGGAGAC
ATAAGAAAAAAAGCCTCCCAAGAGGGACAGCCTCATCTAGACACGGAATCCAAAAGAAGCTCAAAAGGGTGGATC
AGGTTCCTCAAAAGAAAGATGACTCAACTTGTAACTCCACGGTAGAGACAAGGGCCCAAAAGGCGAGAACTGAAT
GTGCCCGAAAGTCGAGATCAGAGGAGATCATTGATGGCACTTCAGAAATGAATGAAGGAAAGAGGTCCCAGAAGA
CGCCTAGTACACCACGAAGGGTCACACAAGGGGCAGCCTCACCTGGGCATGGCATCCAAGAGAAGCTCCAAGTGG
TGGATAAGGTGACTCAAAGGAAAGACGACTCAACCTGGAACTCAGAGGTCATGATGAGGGTCCAAAAGGCAAGAA
CTAAATGTGCCCGAAAGTCCAGATCGAAAGAAAAGAAAAAGGAGAAAGATATCTGTTCAAGCTCAAAAAGGAGAT
TTCAGAAAAATATTCACCGAAGAGGAAAACCCAAAAGTGACACTGTGGATTTTCACTGTTCTAAGCTCCCCGTGA
CCTGTGGTGAGGCGAAAGGGATTTTATATAAGAAGAAAATGAAACACGGATCCTCAGTGAAGTGCATTCGGAATG
AGGATGGAACTTGGTTAACACCAAATGAATTTGAAGTCGAAGGAAAAGGAAGGAACGCAAAGAACTGGAAACGGA
ATATACGTTGTGAAGGAATGACCCTAGGAGAGCTGCTGAAGCGGAAAAACTCGGATGAATGCGAGGTGTGCTGTC
AAGGGGGACAACTTCTCTGCTGCGGTACTTGTCCACGAGTCTTCCATGAGGACTGTCACATCCCCCCTGTGGAAG
CCAAGAGGATGCTGTGGAGTTGCACCTTCTGCAGGATGAAGAGGTCTTCAGGAAGCCAACAGTGCCATCATGTAT
CTAAGACCCTGGAGAGGCAGATGCAGCCTCAGGACCAGCTGAAATGTGAGTTCCTCCTCTTGAAGGCCTACTGTC
ATCCACAAAGCTCCTTTTTTACGGGCATCCCATTTAATATTCGAGATTACGGTGAGCCCTTTCAGGAAGCAATGT
GGTTGGACCTGGTTAAGGAAAGGCTGATTACGGAAATGTACACGGTGGCATGGTTTGTGCGAGACATGCGCCTGA
TGTTTCGCAACCATAAAACATTTTACAAGGCTTCTGACTTTGGCCAGGTAGGACTTGACTTAGAGGCAGAATTTG
AAAAAGATCTCAAAGACGTGCTCGGTTTTCATGAAGCCAATGACGGCGGTTTCTGGACTCTTCCT**TGA**CCCTGTT
CTGTAAAGACTGAAGCATCCCCACCTCAGGATTCAGCTGATGGGACCCTGGCTTGGACTGTTGATTGCCAGTGAG
TCTGGGATGTAATTGGCTGCCCTCAGGACCCAAACCCAGACACTTCATAGGATTATCACACCCTCCATCTTTATT
CTTTCTTTTTACCTTTAAAAGTCTATATCTA

FIGURE 1506

MFTMTRAMEEALFQHFMHQKLGIAYAIHKPFPFFEGLLDNSIITKRMYMESLEACRNLIPVSRVVHNILTQLERT
FNLSLLVTLFSQINLREYPNLVTIYRSFKRVGASYERQSRDTPILLEAPTGLAEGSSLHTPLALPPPQPPQPSCS
PCAPRVSEPGTSSQQSDEILSESPSPSDPVLPLPALIQEGRSTSVTNDKLTSKMNAEEDSEEMPSLLTSTVQVAS
DNLIPQIRDKEDPQEMPHSPLGSMPEIRDNSPEPNDPEEPQEVSSTPSDKKGKKRKRCIWSTPKRRHKKKSLPRG
TASSRHGIQKKLKRVDQVPQKKDDSTCNSTVETRAQKARTECARKSRSEEIIDGTSEMNEGKRSQKTPSTPRRVT
QGAASPGHGIQEKLQVVDKVTQRKDDSTWNSEVMMRVQKARTKCARKSRSKEKKKEKDICSSSKRRFQKNIHRRG
KPKSDTVDFHCSKLPVTCGEAKGILYKKKMKHGSSVKCIRNEDGTWLTPNEFEVEGKGRNAKNWKRNIRCEGMTL
GELLKRKNSDECEVCCQGGQLLCCGTCPRVFHEDCHIPPVEAKRMLWSCTFCRMKRSSGSQQCHHVSKTLERQMQ
PQDQLKCEFLLLKAYCHPQSSFFTGIPFNIRDYGEPFQEAMWLDLVKERLITEMYTVAWFVRDMRLMFRNHKTFY
KASDFGQVGLDLEAEFEKDLKDVLGFHEANDGGFWTLP

FIGURE 1507A

GCCGGGCAGTGGGCAGGTATGGCTGAGGGCGTGTGAGCGCCGAGCGCTAAGGGCCGCCGCCACC**ATG**CCAGGGGG
CGCAGGCGCCGCCAGGCTCTGCTTGCTGGCGTTTGCCCTGCAGCCCCTCCGGCCGCGGGCGGCGCGGGAGCCTGG
ATGGACAAGAGGAAGTGAGGAAGGCAGCCCCAAGCTGCAGCATGAACTTATCATACCTCAGTGGAAGACTTCAGA
AAGCCCCGTGAGAGAAAAGCATCCACTCAAAGCTGAGCTCAGGGTAATGGCTGAGGGGCGAGAACTGATCCTGGA
CCTGGAGAAGAATGAGCAACTTTTTGCTCCTTCCTACACAGAAACCCATTATACTTCAAGTGGTAACCCTCAAAC
CACCACACGGAAATTGGAGGATCACTGCTTTTACCACGGCACGGTGAGGGAGACAGAACTGTCCAGCGTCACGCT
CAGCACTTGCCGAGGAATTAGAGGACTGATTACGGTGAGCAGCAACCTCAGCTACGTCATCGAGCCCCTCCCTGA
CAGCAAGGGCCAACACCTTATTTACAGATCTGAACATCTCAAGCCGCCCCCGGGAAACTGTGGGTTCGAGCACTC
CAAGCCCACCACCAGGGACTGGGCTCTTCAGTTTACACAACAGACCAAGAAGCGACCTCGCAGGATGAAAAGGGA
AGATTTAAACTCCATGAAGTATGTGGAGCTTTACCTCGTGGCTGATTATTTAGAGTTTCAGAAGAATCGACGAGA
CCAGGACGCCACCAAACACAAGCTCATAGAGATCGCCAACTATGTTGATAAGTTTTACCGATCCTTGAACATCCG
GATTGCTCTCGTGGGCTTGGAAGTGTGGACCCACGGGAACATGTGTGAAGTTTCAGAGAATCCATATTCTACCCT
CTGGTCCTTTCTCAGTTGGAGGCGCAAGCTGCTTGCCCAGAAGTACCATGACAACGCCCAATTAATCACGGGCAT
GTCCTTCCACGGCACCACCATCGGCCTGGCCCCCCTCATGGCCATGTGCTCTGTGTACCAGTCTGGAGGAGTCAA
CATGGACCACTCCGAGAATGCCATTGGCGTGGCTGCCACCATGGCCCACGAGATGGGCCACAACTTTGGCATGAC
CCATGATTCTGCAGATTGCTGCTCGGCCAGTGCGGCTGATGGTGGGTGCATCATGGCAGCTGCCACTGGGCACCC
CTTTCCCAAAGTGTTCAATGGATGCAACAGGAGGGAGCTGGACAGGTATCTGCAGTCAGGTGGTGGAATGTGTCT
CTCCAACATGCCAGACACCAGGATGTTGTATGGAGGCCGGAGGTGTGGGAACGGGTATCTGGAAGATGGGGAAGA
GTGTGACTGTGGAGAAGAAGAGGAATGTAACAACCCCTGCTGCAATGCCTCTAATTGTACCCTGAGGCCGGGGGC
GGAGTGTGCTCACGGCTCCTGCTGCCACCAGTGTAAGCTGTTGGCTCCTGGGACCCTGTGCCGCGAGCAGGCCAG
GCAGTGTGACCTCCCGGAGTTCTGTACGGGCAAGTCTCCCCACTGCCCTACCAACTTCTACCAGATGGATGGTAC
CCCCTGTGAGGGCGGCCAGGCCTACTGCTACAACGGCATGTGCCTCACCTACCAGGAGCAGTGCCAGCAGCTGTG
GGGACCCGGAGCCCGACCTGCCCCTGACCTCTGCTTCGAGAAGGTGAATGTGGCAGGAGACACCTTTGGAAACTG
TGGAAAGGACATGAATGGTGAACACAGGAAGTGCAACATGAGAGATGCGAAGTGTGGGAAGATCCAGTGTCAGAG
CTCTGAGGCCCGGCCCCTGGAGTCCAACGCGGTGCCCATTGACACCACTATCATCATGAATGGGAGGCAGATCCA
GTGCCGGGGCACCCACGTCTACCGAGGTCCTGAGGAGGAGGGTGACATGCTGGACCCAGGGCTGGTGATGACTGG
AACCAAGTGTGGCTACAACCATATTTGCTTTGAGGGGCAGTGCAGGAACACCTCCTTCTTTGAAACTGAAGGCTG
TGGGAAGAAGTGCAATGGCCATGGGGTCTGTAACAACAACCAGAACTGCCACTGCCTGCCGGGCTGGGCCCCGCC
CTTCTGCAACACACCGGGCCACGGGGGCAGTATCGACAGTGGGCCTATGCCCCCTGAGAGTGTGGGTCCTGTGGT
AGCTGGAGTGTTGGTGGCCATCTTGGTGCTGGCGGTCCTCATGCTGATGTACTACTGCTGCAGACAGAACAACAA
ACTAGGCCAACTCAAGCCCTCAGCTCTCCCTTCCAAGCTGAGGCAACAGTTCAGTTGTCCCTTCAGGGTTTCTCA
GAACAGCGGGACTGGTCATGCCAACCCAACTTTCAAGCTGCAGACGCCCCAGGGCAAGCGAAAGGTGATCAACAC
TCCGGAAATCCTGCGGAAGCCCTCCCAGCCTCCTCCCCGGCCCCCTCCAGATTATCTGCGTGGTGGGTCCCCACC
TGCACCACTGCCAGCTCACCTGAGCAGGGCTGCTAGGAACTCCCCAGGGCCCGGGTCTCAAATAGAGAGGACGGA
GTCGTCCAGGAGGCCTCCTCCAAGCCGGCCAATTCCCCCCGCACCAAATTGCATCGTTTCCCAGGACTTCTCCAG
GCCTCGGCCGCCCCAGAAGGCACTCCCGGCAAACCCAGTGCCAGGCCGCAGGAGCCTCCCCAGGCCAGGAGGTGC
ATCCCCACTGCGGCCCCCTGGTGCTGGCCCTCAGCAGTCCCGGCCTCTGGCAGCACTTGCCCCAAAGTTTCCAGA
ATACAGATCACAGAGGGCTGGAGGGATGATTAGCTCGAAAATC**TAG**ACCTGTCCAAGGGGCTTCTCCCTTTCCTT
GAGCTCTCTGGACACTGCAGAGGACCCATGACCATGGAACCCTGAAGAAGCATGTCTGGCCGCCTCTGAGCTCCT
CCCACCCTCCTCCAGGAACCTCCACATCTCCAAAAATCTCCCTGTTGACTCAGTGCCTCCTCGGCTTCCTTGGAA
GCCCAGAGGGACTATGATCTGATGGCCTCTAGGTGTTGTTTTGTGCAATATACAGCCCCAGGTAGGGAGGGGAGA
GTATGAGGAGGGTGACTGGCAGCTTCTCCTCCAGACTCCTAGCCCCGAGGTGCTGATGGAGATGCTCAAGGCCAG
CAAGCCCCTCAGGCCAGCACTTCGCTTGCAGAAGCCATCCATTCACTCCTGGGGGTGCAGGGCACGCAAGAGAGCT
TCCCATTGCTTCTGCTCTCCTCAGAGGTCCCGGGCTGGATGGAGGTGGTACTTACCCACCCCTTTTAGCTTTTAG
GGATTAAGGAAGGGTCAAGCCAGCCACTGCTGTGGCCCTGCCCAGGGCTTGGTTGAGGGAACGGCTTCTGGCTGT
ATGGCTGCATGTGACAAGCCACGTCCCCTCCCACCTCTCCCCAAACCCCTGCATCCCTGTATTCACACGGGTCAC
TCTGACTCAGACAGGTACTATTCGTAGGCAGTGTAGACAGCAGGAGGAGCACCGGGCTTGGGCTTCCTCTGAGCC
GTGATGCCAAAGGTTGCGACTCCTGACTCTGGATAATTTTTAGTTGCTCTTTGTTTTCTCTGCCGCACTTTCCTG

FIGURE 1507B

GTGCCCCACGCTTTTCTCTCTTCCTTCCCCTCTCATTCTCCCTCTAATGTGTGGTGCTTTGGTGAGCAAACCCTC
AGCAGTCCTGACCTTCGGGTGACCAGGTGCTTGTGACCTACAAGTCAGAGTCCACTCTCACAGTCGGCCACTGGA
TTTCCCTCACTGGCTCTCAGGAGTGTGACCAGAGTAGACTCGGGGCATGGCCATTGGGGTCATATGTTTATTTTT
CATTGTGTTTTGTGACCTCAGCAGGGTGGGGGTCTTCCTCCTTACTCTAAGCTAAATCTAGGTGAGGTTTCCCCT
TAGGGAGCCCAGCTATTTACAAAGTACACACGAGGGAGCAGGCTGGTCATTGACTTCGGGCTGGACCGTTGCCCT
CTGAGCAGAGAACAGACCCATTTTCTGGGAGCTGCCCGAGATCACTGGAGAAGGCAGCCAGCAGCAGCTGCACTG
GAACAGTCAGAGCAGGGAGCCTCTTCCTCAACCCAGCTTTTTGTCATTCACTTCCTTTTGTTCTCTCTCTGGTCA
CTGCCCTTACCTGACCCTCACAGAAAGAGAGCTCTGAGCAGGTGAGGGGGTCTGCGGTGGCTCCTGTCTTCCCTG
CAGCAGGGAAGGAGGGCCGTGTGGTGCTTTGCTAGATAGGACGGTTTTTGCAAAGCACCTGGAGATGTTTGCTGG
GAGATAGACTCCCACTCCACAAAGGTGCTGGGTGGCTCTCCGGACAGGAGCTGGCCTGACTCTCACTCCTCTGAG
GCTTTCCTGGGGCCTCCTCCCATCCTGCCATGAGCAATTGTTTGCTCTTGAAAACCTCACTGCAAGGCTGAAGCT
GACTTCTGATTCACCACCCCAGGGCCTCCTTATAGTTCTCTGCACACAATAGGTGCTTCTTGGATGTTCTTGGGT
TTGGAAATAAGTGGAAAATACGGGATGTACCCCTGGGGGAAAAGCCTGGGTTGGGTTTAGAAAGATCTCAGGAAA
ATGAGTTTCTCTTCCCTCAGGGTGGCTGTGATACAGGTTCCCCATGTCCTTGCCGTGGGTCATCCTTGCTGTGGG
TCATCCTTGCTGTGGAGATCCATTCCCCACCTTTCCTGTGGCCCAACCTTTTATTTAAATGTGCTACCCTCTGCC
TCAAGGCTTGGTTCCTGGAAAGTAAAGGTGAAAACATCCCCTTTCACCCCTCTGCAAAACAAACAAGCAACATCC
TCAAAACCCAACCCCATGCCTCACAGAGCTTCCTGTGGCTTCTCCAGCCTTTCTCCCTCACATCAGGAGGTAGAT
AGCTCTGAAATGACAGCGCCACAGCCATAGTGACTGCATGAGCCATCTGAACCTGCAGTCCACCCTCCCTGGAAC
CACACCAGAAAGAGACCTGGGTTGTCGTTTTCTTGCTTTTTGTTTTGTTTTGTTTTATTATTTTCATATCACCTC
CATCCCATAAAGTTGTACTGTGAACTGGAAGATGGTGGAATGTTTTGGAATTTGATAGACTTTCGGCAACCAGTT
CTACTAATGCTTCACTCCTGGCTCTGTTCAGGGAAGCTGCCCAGGAAGAAGACTGGCCATTATGCATCCCCTTTT
CTTTCCAGTGCCCAGTATGCTGTTTTTGAGGTGTCAAATACAAATAAATCTGGGCTTAGGGAAGGAGAGACCTTA
TTCCAAAGCATGATTGCAGAAGGGGAAAGGGAATATTGCAAAAGGGAGAGGAAGGGGCCTTATGGGAATAGTGAA
AAGGCTCAGACCGACCGATGGCAAGATCTGCAAGCGTCTCAAAGCCCAGGCAGAAAAGGACTTTTCTTTTATTGG
AAGAAGTAAACATGGCTAGAAAGAACCACGTTCAGGGAATGACGTTGTGCCCAGGGTTTTTTTTTTTTTTTTTT
TTGTCTCCAGGGGAGGGGCTGTTTGCTGGCTCAGGCTGAGGATGGCCCAAAGTCCAGGGTCTGGTGGGGAGGAGG
GAAGCTTAACTCAAGTTTGGGTTAGTGAGTTAGCAAGCTCTTTGTGCAGATGGGGATGTAGGTAAATCTTTTTAA
AAGTGAAATTAACCTCCTGCCAATTTTACAACCCAAGAATTTTTTTTTAAGGGCCTTGGAGCCATCTCTAAAACA
AACCTCAAGGGATTTAGTGCCCTGTCTCCCTGTCTCTAGAAGCCTTAGCCTGGGCACCTGGCTCAATCTTGTAAC
TGCCTGCTAGCCATAGATTCCTTTCAGCCTTGCTGACTTCTCCCTATAAGAGTAAAGCCTTTTTCTGCCCCAGCT
CTGAGACACTTGCAGATCTTAAGGTCTGAGACTTGCTGATTTTCTGGTTGGAGTGTTTTTTTGTATTGCCATAGT
CCCTTCCCCCTGAAGCAATAGCCCCTCCCCACCTCCTGCAATACGCCTTTCCAATCTTTATTGGAAGTCTCTCCC
TGCCTACTTCCTAATTTATTCTTATTTGACAGAGGGTATGGAAGACTTGCAATTTGAAAACTGGGGACCAGTTCC
AAAGTCAGTAATTGTGTTAACCACGTGTATAACAGCTCTGCTGGACACCCAAGAAAGCCATGGGAACACCAACTG
GAAAGGTCCCCTTCCCCAGGGGAGCCTGCGAAGGAGAGGTTCTGTAGAATCCAAGCCCACATTTCCAAAGTCACC
CCCAACGCGTCCTCTCACACCGTCCACTGTGCGTTTGTATGTGTCTGGGATCCAGGGCAATGTGAATTTTCTTTT
TATTTGGGAGATTGTTCACGGAAAACAGATCTTCTTCTCTCTTGTCCACCTATTAATTGTTTACAATATTTGTAC
ATCTATGCAAAATACTTGAATGGGCCATGGTGCCTTTTTTCCTTGTTAGTATTTAATTAAAAATGAATTGTTTGT
CATTTGCAATGTTAAAAAAAAAAAA

FIGURE 1508

MPGGAGAARLCLLAFALQPLRPRAAREPGWTRGSEEGSPKLQHELIIPQWKTSESPVREKHPLKAELRVMAEGRE
LILDLEKNEQLFAPSYTETHYTSSGNPQTTTRKLEDHCFYHGTVRETELSSVTLSTCRGIRGLITVSSNLSYVIE
PLPDSKGQHLIYRSEHLKPPPGNCGFEHSKPTTRDWALQFTQQTKKRPRRMKREDLNSMKYVELYLVADYLEFQK
NRRDQDATKHKLIEIANYVDKFYRSLNIRIALVGLEVWTHGNMCEVSENPYSTLWSFLSWRRKLLAQKYHDNAQL
ITGMSFHGTTIGLAPLMAMCSVYQSGGVNMDHSENAIGVAATMAHEMGHNFGMTHDSADCCSASAADGGCIMAAA
TGHPFPKVFNGCNRRELDRYLQSGGGMCLSNMPDTRMLYGGRRCGNGYLEDGEECDCGEEEECNNPCCNASNCTL
RPGAECAHGSCCHQCKLLAPGTLCREQARQCDLPEFCTGKSPHCPTNFYQMDGTPCEGGQAYCYNGMCLTYQEQC
QQLWGPGARPAPDLCFEKVNVAGDTFGNCGKDMNGEHRKCNMRDAKCGKIQCQSSEARPLESNAVPIDTTIIMNG
RQIQCRGTHVYRGPEEEGDMLDPGLVMTGIKCGYNHICFEGQCRNTSFFETEGCGKKCNGHGVCNNNQNCHCLPG
WAPPFCNTPGHGGSIDSGPMPPESVGPVVAGVLVAILVLAVLMLMYYCCRQNNKLGQLKPSALPSKLRQQFSCPF
RVSQNSGTGHANPTFKLQTPQGKRKVINTPEILRKPSQPPPRPPPDYLRGGSPPAPLPAHLSRAARNSPGPGSQI
ERTESSRRPPPSRPIPPAPNCIVSQDFSRPRPPQKALPANPVPGRRSLPRPGGASPLRPPGAGPQQSRPLAALAP
KFPEYRSQRAGGMISSKI

FIGURE 1509

AGAGCCGGCGCCGTCACCGCCCGCATTGCCGCTCCCAGTCCCGCGCTCGGCACGAC**ATG**AAATCCCCCGACGAGG
TGCTACGCGAGGGCGAGTTGGAGAAGCGCAGCGACAGCCTCTTCCAGCTATGGAAGAAGAAGCGCGGGGTGCTCA
CCTCCGACCGCCTGAGCCTGTTCCCCGCCAGCCCCCGCGCGCGCCCCAAGGAGCTGCGCTTCCACTCCATCCTCA
AGGTGGACTGCGTGGAGCGCACGGGCAAGTACGTGTACTTCACCATCGTCACCACCGACCACAAGGAGATCGACT
TCCGCTGCGCGGGCGAGAGCTGCTGGAACGCGGCCATCGCGCTGGCGCTCATCGATTTCCAGAACCGCCGCGCCC
TGCAGGACTTTCGCAGCCGCCAGGAACGCACCGCACCCGCCGCACCCGCCGAGGACGCCGTGGCTGCCGCGGCCG
CCGCACCCTCCGAGCCCTCGGAGCCCTCCAGGCCATCCCCGCAGCCCAAACCCCGCACGCCA**TGA**GCCCGCCGCG
GGCCATACGCTGGACGAGTCGGACCGAGGCTAGGACGTGGCCGGCGCTCTCCAGCCCTGCAGCAGAAGAACTTCC
CGTGCGCGCGGATCCTCGCTCCGTTGCACGGGCGCCTTAAGTTATTGGACTATCTAATATCTATGTATTTATTTC
GCTGGTTCTTTGTAGTCACATATTTTATAGTCTTAATATCTTGTTTTTGCATCACTGTGCCCATTGCAAATAAAT
CACTTGGCCAGTTTGCTTTTCTACCATCCGGCTGTGGCTCAGTGAGACTCCTGCTGGGAGGGTGGAGGCCCAGGA
ATGGGCGGGCAGGACACCCTCATCCAGTCCTGCGGGGCTGGTGTGAAAGGCGCTGGGAACCGGCTTTGAATGAAT
AAATGAATCGTGT

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FIGURE 1510

MKSPDEVLREGELEKRSDSLFQLWKKKRGVLTSDRLSLFPASPRARPKELRFHSILKVDCVERTGKYVYFTIVTT
DHKEIDFRCAGESCWNAAIALALIDFQNRRALQDFRSRQERTAPAAPAEDAVAAAAAAPSEPSEPSRPSPQPKPR
TP

FIGURE 1511

TGCTTAAAAAAACACAACAGGATTTTCGAAGAATCCTTTCTTAGAAAACAAACAAAAAAACCAAACAAAAACGTA
CTTTCTCCCCACTAGTTTACACCACAGGAAGCGAGAGAGCTGCTGCCACTGCTGCTACCACAGGAAGACACAGCA
GGGAGAAGCCCTAGTGCCTCTGCCGGCTGCCCAGGACCTGGTATCGGCCCACAGACCAAGTCCTCCACAGAGGGC
GAGCCAGGGTGGAGAAGAGCCAGCCCAGTGACCCAAACATCCCCGATAAAACACCCACTGCTTAAGAGGCAGGCT
CGG**ATG**GACTATAGCTTTGATACCACAGCCGAAGACCCTTGGGTTAGGATTTCTGACTGCATCAAAAACTTATTT
AGCCCCATCATGAGTGAGAACCATGGCCACATGCCTCTACAGCCCAATGCCAGCCTGAATGAAGAAGAAGGGACA
CAGGGCCACCCAGATGGGACCCCACCAAAGCTGGACACCGCCAATGGCACTCCCAAAGTTTACAAGTCAGCAGAC
AGCAGCACTGTGAAGAAAGGTCCTCCTGTGGCTCCCAAGCCAGCCTGGTTTCGCCAAAGCTTGAAAGGTTTGAGG
AATCGTGCTTCAGAGCCAAGAGGGCTCCCTGATCCTGCCTTGTCCACCCAGCCAGCACCTGCTTCCAGGGAGCAC
CTAGGATCACACATCCGGGCCTCCTCCTCCTCCTCCTCCATCAGGCAGAGAATCAGCTCCTTTGAAACCTTTGGC
TCCTCTCAACTGCCTGACAAAGGAGCCCAGAGACTGAGCCTCCAGCCCTCCTCTGGGGAGGCAGCAAAACCTCTT
GGGAAGCATGAGGAAGGACGGTTTTCTGGACTCTTGGGGCGAGGGGCTGCACCCACTCTTGTGCCCCAGCAGCCT
GAGCAAGTACTGTCCTCGGGGTCCCCTGCAGCCTCCGAGGCCAGAGACCCAGGTGTGTCTGAGTCCCCTCCCCCA
GGGCGGCAGCCCAATCAGAAAACTTTCCCCCCTGGCCCGGACCCGCTCCTAAGGCTGCTGTCAACACAGGCTGAG
GAATCTCAAGGCCCAGTGCTCAAGATGCCTAGCCAGCGAGCACGGAGCTTCCCCCTGACCAGGTCCCAGTCCTGT
GAGACGAAGCTACTTGACGAAAAGACCAGCAAACTCTATTCTATCAGCAGCCAAGTGTCATCGGCTGTCATGAAA
TCCTTGCTGTGCCTTCCATCTTCTATCTCCTGTGCCCAGACTCCCTGCATCCCCAAGGCAGGGGCATCTCCAACA
TCATCATCCAACGAAGACTCAGCTGCAAATGGTTCTGCTGAAACATCTGCCTTGGACACGGGGTTCTCGCTCAAC
CTTTCAGAGCTGAGAGAATATACAGAGGGTCTCACGGAAGCCAAGGAAGACGATGATGGGGACCACAGTTCCCTT
CAGTCTGGTCAGTCCGTTATCTCCCTGCTGAGCTCAGAAGAATTAAAAAAACTCATCGAGGAGGTGAAGGTTCTG
GATGAAGCAACATTAAAGCAATTAGACGGCATCCATGTCACCATCTTACACAAGGAGGAAGGTGCTGGTCTTGGG
TTCAGCTTGGCAGGAGGAGCAGATCTAGAAAACAAGGTGATTACGGTTCACAGAGTGTTTCCAAATGGGCTGGCC
TCCCAGGAAGGGACTATTCAGAAGGGCAATGAGGTTCTTTCCATCAACGGCAAGTCTCTCAAGGGGACCACGCAC
CATGATGCCTTGGCCATCCTCCGCCAAGCTCGAGAGCCCAGGCAAGCTGTGATTGTCACAAGGAAGCTGACTCCA
GAGGCCATGCCCGACCTCAACTCCTCCACTGACTCTGCAGCCTCAGCCTCTGCAGCCAGTGATGTTTCTGTAGAA
TCTACAGCAGAGGCCACAGTCTGCACGGTGACACTGGAGAAGATGTCGGCAGGGCTGGGCTTCAGCCTGGAAGGA
GGGAAGGGCTCCCTACACGGAGACAAGCCTCTCACCATTAACAGGATTTTCAAAGGAGCAGCCTCAGAACAAAGT
GAGACAGTCCAGCCTGGAGATGAAATCTTGCAGCTGGGTGGCACTGCCATGCAGGGCCTCACACGGTTTGAAGCC
TGGAACATCATCAAGGCACTGCCTGATGGACCTGTCACGATTGTCATCAGGAGAAAAAGCCTCCAGTCCAAGGAA
ACCACAGCTGCTGGAGACTCC**TAG**GCAGGACATGCTGAAGCCAAAGCCAATAACACACAGCTAACACACAGCTCC
CATAACCGCTGATTCTCAGGGTCTCTGCTGCCGCCCCACCCAGATGGGGGAAAGCACAGGTGGGCTTCCCAGTGG
CTGCTGCCCAGGCCCAGACCTTCTAGGACGCCACCCAGCAAAAGGTTGTTCCTAAAATAAGGGCAGAGTCACACT
GGGGCAGCTGATACAAATTGCAGACTGTGTAAAAAGAGAGCTTAATGATAATATTGTGGTGCCACAAATAAAATG
GATTTATTAGAATTCCATATGACATTCATGCCTGGCTTCGCAAAATGTTTCAAGTACTGTAACTGTGTCATGATT
CACCCCCAAACAGTGACATTTATTTTTCTCATGAATCTGCAATGTGGGCAGAGATTGGAATGGGCAGCTCATCTC
TGTCCCACTTGGCATCAGCTGGCGTCATGCAAAGTCATGCAAAGGCTGGGACCACCTGAGATCATTCACTCATAC
ATCTGGCCGTTGATGTTGGCTGGGAACTCACCTGGGGCTGCTGGCCTGAATGCTTATAGGTGGCCTCTCCTTGTG
GCCTGGGCTCCTCACAACATGGTGTCTGGATTCCCAGGATGAGCATCCCAGGATCGCAAGAGCCACGTAGAAGCT
GCATCTTGTTTATACCTTTGCCTTGGAAGTTGCATGGCATCACCTCCACCATACTCCATCAGTTAGAGCTGACAC
AAACCTGCCTGGGTTTAAGGGGAGAGGAAATATTGCTGGGGTCATTTATGAAAAATACAGTTTGTCACATGAAAC
ATTTGCAAAATTGTTTTTGGTTGGATTGGAGAAGTAATCCTAGGGAAGGGTGGTGGAGCCAGTAAATAGAGGAGT
ACAGGTGAAGCACCAAGCTCAAAGCGTGGACAGGTGTGCCGACAGAAGGAACCAGCGTGTATATGAGGGTATCAA
ATAAAATTGCTACTACTTACCTACC

FIGURE 1512

MDYSFDTTAEDPWVRISDCIKNLFSPIMSENHGHMPLQPNASLNEEEGTQGHPDGTPPKLDTANGTPKVYKSADS
STVKKGPPVAPKPAWFRQSLKGLRNRASEPRGLPDPALSTQPAPASREHLGSHIRASSSSSSIRQRISSFETFGS
SQLPDKGAQRLSLQPSSGEAAKPLGKHEEGRFSGLLGRGAAPTLVPQQPEQVLSSGSPAASEARDPGVSESPPPG
RQPNQKTFPPGPDPLLRLLSTQAEESQGPVLKMPSQRARSFPLTRSQSCETKLLDEKTSKLYSISSQVSSAVMKS
LLCLPSSISCAQTPCIPKAGASPTSSSNEDSAANGSAETSALDTGFSLNLSELREYTEGLTEAKEDDDGDHSSLQ
SGQSVISLLSSEELKKLIEEVKVLDEATLKQLDGIHVTILHKEEGAGLGFSLAGGADLENKVITVHRVFPNGLAS
QEGTIQKGNEVLSINGKSLKGTTHHDALAILRQAREPRQAVIVTRKLTPEAMPDLNSSTDSAASASAASDVSVES
TAEATVCTVTLEKMSAGLGFSLEGGKGSLHGDKPLTINRIFKGAASEQSETVQPGDEILQLGGTAMQGLTRFEAW
NIIKALPDGPVTIVIRRKSLQSKETTAAGDS

FIGURE 1513A

CCGGGGTCCCCTTTCACCCAAGTGAGCCAGCTCAGGCTGTCTGCAAAGCCGGAGGTGCGGGCAGCTCCGGGCATT
GCATTGGTGCGGAGGCTTTTATATGCCAGAGAACCCTGAGTGTGCCCCTGACATGACAAGGAGCCGTCGTCGTTA
GGACTACCGACCAGACTCCCGGAAATC**ATG**TTGGTAGGATCCCAGTCTTTTTCGCCTGGAGGGCCCAATGGGATC
ATTAGAAGCCAGTCCTTTGCGGGTTTCAGCGGCCTCCAGGAAAGGCGATCCAGGTGTAACTCCTTCATTGAAAAT
TCCTCCGCTCTCAAGAAGCCTCAGGCCAAACTGAAGAAAATGCACAATTTAGGCCACAAAAACAACAATCCCCCC
AAAGAGCCTCAGCCTAAAAGGGTGGAAGAAGTCTACAGGGCCTTGAAAAATGGACTTGATGAATATCTGGAGGTT
CACCAGACGGAGCTGGACAAGTTGACAGCTCAGTTAAAAGATATGAAAAGAAACTCTCGCCTGGGTGTACTGTAT
GACCTAGACAAGCAAATTAAAACAATTGAAAGATACATGAGACGCCTGGAGTTTCATATAAGTAAGGTAGATGAA
CTCTATGAAGCTTATTGTATCCAGCGACGCCTCCAGGATGGTGCCAGCAAAATGAAGCAAGCCTTCGCAACATCC
CCTGCCAGCAAAGCTGCCCGGGAGAGTCTGACAGAGATCAATCGGAGCTTCAAGGAGTACACAGAGAATATGTGC
ACCATTGAAGTGGAGCTAGAGAATCTGCTGGGAGAATTCTCCATCAAGATGAAAGGTCTGGCTGGCTTTGCACGC
CTCTGTCCTGGAGATCAATATGAAATTTTCATGAAGTATGGCCGGCAGCGGTGGAAACTGAAAGGCAAAATAGAA
GTAAATGGCAAGCAGAGCTGGGATGGAGAAGAAACAGTTTTTCTGCCCCTGATAGTTGGGTTCATCTCCATCAAG
GTCACGGAGCTCAAAGGGCTAGCAACTCACATCCTGGTAGGTAGCGTGACCTGTGAGACCAAAGAGCTGTTTGCA
GCCCGACCTCAGGTAGTGGCTGTCGACATCAATGACCTTGGTACCATCAAACTGAACCTGGAAATCACCTGGTAT
CCATTTGACATGGAGGACATGACCGCATCCTCAGGCGCTGGGAACAAGGCAGCAGCCCTTCAGAGGAGAATGTCC
ATGTACAGCCAGGGTACCCCGGAAACGCCCACCTTCAAAGACCACTCCTTCTTTAGGTGGCTGCATCCTTCCCCA
GACAAGCCCAGGCGGCTGTCTGTCTTGAGTGCCTTGCAAGACACTTTCTTTGCCAAGCTGCACCGCAGCCGCTCC
TTCAGTGACCTGCCCTCCCTCAGGCCGAGTCCCAAGGCCGTGCTAGAGCTCTATTCAAATCTACCTGATGACATC
TTTGAAAATGGAAAGGCAGCCGAGGAGAAAATGCCACTGTCGCTCAGCTTCAGTGACCTGCCCAACGGGGACTGC
GCCCTCACCTCCCACTCAACAGGCTCCCCTTCCAACTCAACAAATCCAGAAATTACCATCACCCCTGCGGAGTTT
AACCTCAGCAGCTTGGCCTCCCAGAATGAGGGTATGGATGACACCAGCTCAGCATCTTCCAGGAACTCCCTGGGA
GAAGGCCAAGAGCCAAAGTCACACCTGAAGGAGGAAGACCCAGAGGAGCCCAGAAAACCTGCCTCGGCCCCATCT
GAGGCTTGCCGCCGACAGTCCTCAGGTGCTGGGGCTGAGCACCTGTTCCTTGAGAATGATGTTGCAGAAGCACTT
CTGCAAGAGTCTGAGGAGGCCTCTGAGCTCAAGCCTGTGGAACTGGACACTTCGGAAGGAAACATCACAAAGCAG
CTGGTCAAGAGGCTCACATCTGCAGAGGTGCCAATGGCCACAGACAGGCTGCTCTCTGAGGGTTCTGTTGGTGGA
GAATCTGAAGGCTGCAGATCCTTTCTAGATGGAAGCTTAGAGGATGCTTTTAATGGGCTTTTACTTGCATTAGAA
CCACATAAAGAGCAGTATAAAGAGTTTCAGGATCTGAACCAAGAAGTCATGAATTTGGATGATATTCTAAAATGC
AAGCCAGCAGTAAGCCGCAGCAGGTCTTCCAGTTTAAGTCTCACAGTTGAAAGTGCTTTAGAAAGCTTTGATTTC
CTGAACACCTCTGATTTTGACGAGGAGGAGGATGGTGATGAGGTTTGTAATGTTGGCGGAGGTGCTGACTCAGTA
TTTTCAGACACTGAGACTGAGAAACACAGTTACAGGTCGGTTCACCCAGAAGCCAGGGGGCATCTCAGTGAAGCG
CTCACTGAAGACACAGGAGTTGGGACCAGTGTGGCAGGAAGTCCTCTCCCACTGACCACAGGCAACGAGAGCCTG
GACATCACCATCGTCAGGCACCTCCAGTACTGCACCCAACTCGTGCAGCAAATTGTTTTCTCAAGCAAAACCCCA
TTTGTGGCAAGAAGTCTCTTAGAGAAGCTTTCTAGGCAGATCCAAGTGATGGAGAAACTCGCAGCTGTCAGTGAT
GAGAACATAGGAAATATCAGTTCTGTTGTGGAAGCCATACCAGAATTTCACAAAAAGCTGTCTTTGCTGTCATTC
TGGACCAAGTGCTGCAGCCCTGTTGGTGTCTACCACAGCCCAGCGGACAGAGTGATGAAGCAGCTGGAGGCCAGC
TTTGCCAGAACTGTCAACAAAGAATATCCAGGACTTGCAGACCCAGTGTTTCGAACCCTGGTGTCCCAAATTCTG
GACCAGGCTGAGCCTCTGCTTTCCTCCAGCCTGTCCTCGGAAGTCGTCACTGTTTTCCAGTATTACAGTTACTTC
ACCAGCCACGGCGTCAGTGACCTGGAGAGTTACCTGAGCCAGCTGGCCAGGCAAGTTTCCATGGTTCAGACTCTG
CAATCACTAAGAGATGAAAAACTGCTACAAACCATGAGTGACCTTGCTCCCAGCAACCTCCTGGCCCAGCAGGAA
GTACTCAGGACTCTGGCTCTGCTATTAACCAGAGAGGACAACGAAGTTAGCGAGGCTGTGACGCTTTACTTGGCA
GCAGCCTCCAAAAATCAGCATTTCAGGGAAAAGGCCTTGCTCTATTACTGTGAAGCACTAACAAAGACAAACCTC
CAGCTCCAGAAAGCAGCTTGCCTGGCTCTGAAAATCCTTGAGGCTACTGAAAGCATTAAAATGCTGGTGACATTG
TGTCAATCTGATACTGAAGAAATCAGAAATGTGGCCTCAGAAACCCTCTTGTCTCTGGGAGAAGATGGGCGGCTG
GCATATGAACAATTGGACAAATTTCCTCGAGACTGTGTTAAAGTCGGAGGTCGTCATGGAACTGAAGTTGCCACA
GCCTTT**TAA**TTACAGATTAACTGCCTAACAGCTGTCTTAATATCTGGCCCTTTTCATCAGGATGGTGCTGTGGTT
TGGGCTGGAAATTGTTTAGAGCCTGAGAGACACGACAACTGAAATAAAAATGTAGGCCAGGTGCAGTGGCTCATG
CCTGTAATCCCAGTACTTTGGGAGGCCAACGCAGGAGAATTGCTTAAGCCCAGGAGGTTCAAGACCAACCTGGGC

FIGURE 1513B

AACATAGCAAGGCCCTGTCTCTACAAAAAAAATAGTTTAATTAGTCGGGCGTGGTGGCATGCACCTGTAGTCCCA
GCTACTTGGGAGGCTAAGGTGGGAGGATTGCTTGAGCCCAGAAGATTCAGGCTGCAGTGAGCCATAATTGCCCCA
CTGCACTCCAGACTGGGTGACAGAGCAAAACCCTGTCTCAAAAAACAAAACAACAACAACAACTAAAAAAACATG
TTATAGAAAGAATTCAGAGTCTCGTTTCACAGTACCTATCTACTTTTCCTTTGGCCAATATAGAATAGGGCTATG
GTATAATTCAAATAGATTACATCGTCGATTGTGTCTAATAATACTCAGTGAAAGAGTCCATCTTATCTTAATATG
TATGAAATTTAAAAATAGCCATCTTTGTACTTTTTTGCAAGTTTCTCTATAAGCTTGAAATAGTCATGTGATACT
TCGACAAACATCATATGCCTTGCAGTTTTTCTCGGTCGTGTTCTCAGGGTTGAGTAGTCCCCTTAGCTACCTAAC
TTTACTTTCAATACAAAGCACAAAAAAGAATACTTCAAATAAAAGTTTGCCTGCAGAACCTGGCAAAATGACCCA
TTATGAGAGTTTAGATGTTTTAATTTTATGTGCTCCCAGCTACTCTGGAGTCTGAGGTGGGAGGATCACTTGAGG
CAGAGGTTGCAGTAAGCTGAGATTACACTACTGCACTCCAGCCCATGTGACAGAGGAATGAGAGCCAGTCTCAAA
AAAAAAAAACAAAAAACTCCCATAATTTATTTTGTTTCTTTTCCCCATCCTGAAAATTCCCAAATCATGTTTCCA
TTATGGAAAAATGATAAGTAAATGACTAAGAACTACATTAAGATTATGCCTATACACTTAAACAAAAAACTCAAA
GCTTATGCTTTTTTTTTTTAATTAATGAGAGCTATTTTTTATGATATTCTTACCATAGGGGTGTTTTGCTGCTAA
GACAAATCAAAACCAAAAGCTGTAGATTCACAAACCTGTGATGCTCTTTGAGGTGGAGGAACCTAGAAGTCAGAG
AAATCCTAATGGAGTAGGAGTGGAGGAACATTTAAAGTGGTCCCTCCTTCTGTAAAAATGACCGTGGGATTAGAA
AGAAGGACATCCTGAGGGGTGGTTACTGCCCCCAGGGAAATCACTCACTGGTAGGATTCCCTGGCCAAATAGTTC
AAACATCAGGTCCCATTATTGCTTCAGTATCAGAGATGCAAGTTCATTAAGCAAAGTACAAGACCATTCAGTAGC
TCTTATTAAAATATCTTTTCTTCCTCTAAAGAGTGTACAAGGTGGGGTATGCCAAGGTATCAAAACAATATATGT
GAGTGTAATTTAAACTGTGGAATATCAACTGTACTATGGACGTGTTTGTATCATTTAGATGTCATTTTAAATATT
TACATTTTAGCAAGACTTTTAAAAAGGACTCATTTCATTTCAAAGTGCAAATTGTTTGCCAGGCTTCTGGCAAAT
GGTTCTTTCAACTGTGAACTTATAGTGTACATATCTGTATATTTATAAATATTATATATATTCATACATCCTTCA
GTTTAAAGGTACATTGTACAGTCTGTAGTTAGGAGGTATAGCCTATAGCTTATGTTAAATGGTTGAAATGGTTCT
TTTTATAGAAAGTCAAACACAGATGTTACAGGATTTTGTGTTTGGTTTGTCATTTTTTTATTTTTTATTTTGACT
ATTGCATGAGTAATTAATTCCAGATCTTTTGTATTCACTTCTGTATTTTATGTTTGGTTGAGGGGTGCTTTTAGT
TGTGTGGCATTTGTATTCATTGATCTTTCAGTCATGTAAGTTAAAATAAAAATTATTTTTGAATTACTAGC

FIGURE 1514

MLVGSQSFSPGGPNGIIRSQSFAGFSGLQERRSRCNSFIENSSALKKPQAKLKKMHNLGHKNNNPPKEPQPKRVE
EVYRALKNGLDEYLEVHQTELDKLTAQLKDMKRNSRLGVLYDLDKQIKTIERYMRRLEFHISKVDELYEAYCIQR
RLQDGASKMKQAFATSPASKAARESLTEINRSFKEYTENMCTIEVELENLLGEFSIKMKGLAGFARLCPGDQYEI
FMKYGRQRWKLKGKIEVNGKQSWDGEETVFLPLIVGFISIKVTELKGLATHILVGSVTCETKELFAARPQVVAVD
INDLGTIKLNLEITWYPFDMEDMTASSGAGNKAAALQRRMSMYSQGTPETPTFKDHSFFRWLHPSPDKPRRLSVL
SALQDTFFAKLHRSRSFSDLPSLRPSPKAVLELYSNLPDDIFENGKAAEEKMPLSLSFSDLPNGDCALTSHSTGS
PSNSTNPEITITPAEFNLSSLASQNEGMDDTSSASSRNSLGEGQEPKSHLKEEDPEEPRKPASAPSEACRRQSSG
AGAEHLFLENDVAEALLQESEEASELKPVELDTSEGNITKQLVKRLTSAEVPMATDRLLSEGSVGGESEGCRSFL
DGSLEDAFNGLLLALEPHKEQYKEFQDLNQEVMNLDDILKCKPAVSRSRSSSLSLTVESALESFDFLNTSDFDEE
EDGDEVCNVGGGADSVFSDTETEKHSYRSVHPEARGHLSEALTEDTGVGTSVAGSPLPLTTGNESLDITIVRHLQ
YCTQLVQQIVFSSKTPFVARSLLEKLSRQIQVMEKLAAVSDENIGNISSVVEAIPEFHKKLSLLSFWTKCCSPVG
VYHSPADRVMKQLEASFARTVNKEYPGLADPVFRTLVSQILDQAEPLLSSSLSSEVVTVFQYYSYFTSHGVSDLE
SYLSQLARQVSMVQTLQSLRDEKLLQTMSDLAPSNLLAQQEVLRTLALLLTREDNEVSEAVTLYLAAASKNQHFR
EKALLYYCEALTKTNLQLQKAACLALKILEATESIKMLVTLCQSDTEEIRNVASETLLSLGEDGRLAYEQLDKFP
RDCVKVGGRHGTEVATAF

FIGURE 1515

AAGCAGTGGTAACAACGCAGAGTACGCGGGAAGCAGTGGTAACAACGCAGAGTACGCGGGAAGCAGTGGTAACAA
CGCAGAGTACGCGGGAAGCAGTGGTAACAACGCAGAGTACGCGGAAAGCAGTGGTAACAACGCAGAGTACGCGGG
GCCAGCGGAAGTGGCTCCTGTAAGGCAGCAAGGTAGCGTGGCCGGCGCCCGAGCTGGGGTTGTGTCCCTGCTGGG
CTGCCGTTCCAGCTGGACTGCCGCC**ATG**GAACTCAGCGCCGAATACCTCCGCGAGAAGCTGCAGCGGGACCTGGA
GGCGGAGCATGTGGAGGTGGAGGACACGACCCTCAACCGTTGCTCCTGTAGCTTCCGAGTCCTGGTGGTGTCGGC
CAAGTTCGAGGGGAAACCGCTGCTTCAGAGACACAGGCTGGTGAACGCGTGCCTAGCAGAAGAGCTCCCGCACAT
CCATGCCTTTGAACAGAAAACCCTGACCCCAGACCAGTGGGCACGTGAGCGACAGAAA**TGA**GGGACTGGGATCTG
CACAGCCATTAAATTATAAATCTGGACG

FIGURE 1516

MELSAEYLREKLQRDLEAEHVEVEDTTLNRCSCSFRVLVVSAKFEGKPLLQRHRLVNACLAEELPHIHAFEQKTL
TPDQWARERQK

FIGURE 1517

ATTTGCTTTCTCTTTTTCCTTTCTTCCGGATGAGAGGCTAAGCCATAATAGAAAGAATGGAGAATTATTGATTGA
CCGTCTTTATTCTGTGGGCTCTGATTCTCCAATGGGAATACCAAGGGATGGTTTTCCATACTGGAACCCAAAGGT
AAAGACACTCAAGGACAGACATTTTTGGCAGAGCATAG**ATG**AAAATGGCAAGTTCCCTGGCTTTCCTTCTGCTCA
ACTTTCATGTCTCCCTCCTCTTGGTCCAGCTGCTCACTCCTTGCTCAGCTCAGTTTTCTGTGCTTGGACCCTCTG
GGCCCATCCTGGCCATGGTGGGTGAAGACGCTGATCTGCCCTGTCACCTGTTCCCGACCATGAGTGCAGAGACCA
TGGAGCTGAAGTGGGTAAGTTCCAGCCTAAGGCAGGTGGTGAACGTGTATGCAGATGGAAAGGAAGTGGAAGACA
GGCAGAGTGCACCGTATCGAGGGAGAACTTCGATTCTGCGGGATGGCATCACTGCAGGGAAGGCTGCTCTCCGAA
TACACAACGTCACAGCCTCTGACAGTGGAAAGTACTTGTGTTATTTCCAAGATGGTGACTTCTATGAAAAAGCCC
TGGTGGAGCTGAAGGTTGCAGCACTGGGTTCTAATCTTCACGTCGAAGTGAAGGGTTATGAGGATGGAGGGATCC
ATCTGGAGTGCAGGTCCACCGGCTGGTACCCCCAACCCCAAATACAGTGGAGCAACGCCAAGGGAGAGAACATCC
CAGCTGTGGAAGCACCTGTGGTTGCAGATGGAGTGGGCCTATATGAAGTAGCAGCATCTGTGATCATGAGAGGCG
GCTCCGGGGAGGGTGTATCCTGCATCATCAGAAATTCCCTCCTCGGCCTGGAAAAGACAGCCAGCATTTCCATCG
CAGACCCCTTCTTCAGGAGCGCCCAGCCCTGGATCGCAGCCCTGGCAGGGACCCTGCCTATCTTGCTGCTGCTTC
TCGCCGGAGCCAGTTACTTCTTGTGGAGACAACAGAAGGAAATAACTGCTCTGTCCAGTGAGATAGAAAGTGAGC
AAGAGATGAAAGAAATGGGATATGCTGCAACAGAGCGGGAAATAAGCCTAAGAGAGAGCCTCCAGGAGGAACTCA
AGAGGAAAAAATCCAGTACT**TGA**CTCGTGGAGAGGAGTCTTCGTCCGATACCAATAAGTCAGCCTGATGCTCTAA
TGGAAAAATGGCCCTCTTCAAGCCTGGTGAGGAAATGCTTCAGATGAGGCTCCACCTTGTTAAATAAATTGGATG
TATGGAAAAATAGACTGCAGAAAAGGGGAACTCATTTAGCTCACGAGTGGTCGAGTGAAGATTGAAAATTAACCT
CTGAGGGCCAGCACAGCAGCTCATGCCTGTAATCCTAGCACTTTGGAAGGCTGAGGAGGGCGGATCACAAGGTCA
GGAGATCAAGACCATCCTGGCTAACACGGTGAAACCCCGTCTCTACTAAAAATACAAAAAATAAAAAATTAGCCG
GGCATGGTGACGGGCACCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAGGAGAATGGCATGAACCCGGAAGGCA
GAGCTTGCAGTGAGCCGAGATCACGCCACTGCACTCCAGCCTGGGAGACAGAGCGAGACTCTGTCTCAAGAAAAA
AAAAAAAAAAAAAAAA

FIGURE 1518

MKMASSLAFLLLNFHVSLLLVQLLTPCSAQFSVLGPSGPILAMVGEDADLPCHLFPTMSAETMELKWVSSSLRQV
VNVYADGKEVEDRQSAPYRGRTSILRDGITAGKAALRIHNVTASDSGKYLCYFQDGDFYEKALVELKVAALGSNL
HVEVKGYEDGGIHLECRSTGWYPQPQIQWSNAKGENIPAVEAPVVADGVGLYEVAASVIMRGGSGEGVSCIIRNS
LLGLEKTASISIADPFFRSAQPWIAALAGTLPILLLLLAGASYFLWRQQKEITALSSEIESEQEMKEMGYAATER
EISLRESLQEELKRKKSST

FIGURE 1519

GGCTCGAGTGCCTGGCGGGCTCTGGCTTCCGCGTCCGCCCCTGCTCCGGCTTCGCCCGCAGCTCCGCGCCCGCGG
GCAACCAAGCCCCCAGCGAAGCCCGCACAGCTCCGGGTGCCAGGACGGGGGGCC**ATG**CCGTGCCGGAGGGAGGAG
GAAGAGGAAGCCGGCGAGGAGGCGGAGGGGGAGGAAGAGGAGGACGACAGCTTCCTCCTGCTGCAGCAGTCGGTG
ACGCTGGGCAGCTCGGGCGAGGTGGACCGGCTGGTGGCCCAGATCGGCGAGACGCTGCAGCTGGACGCGGCGCAG
GACAGCCCGGCCTCGCCGTGCGCGCCCCCGGGGGGTGCCGCTGCGGGCCCCGGGGCCCCTGGCTGCGGCGGTGCCG
GCGGACAAGGCCCGGCCCCCGGCGGTGCCGCTGCTGCTGCCGCCCGCTTCGGCTGAGACGGTGGGCCCGGCGCCC
TCTGGGGCCCTGCGCTGCGCCCTAGGGGACCGCGGCCGCGTGCGCGGACGCGCTGCGCCCTACTGCGTGGCGGAG
GTCGCCGCAGGCCCCAGCGCGCTGCCGGGGCCGTGCCGGCGAGGATGGCTCAGGGACGCGGTCACCTCCCGCCGC
TTGCAGCAGCGCCGATGGACCCAAGCCGGGGCACGCGCCGGCGACGACGACCCGCATCGGCTCCTCCAGCAGCTC
GTGCTCTCGGGAAACCTCATCAAGGAAGCCGTGCGGAGACTCCAACGAGCCGTCGCCGCGGTTGCAGCCACGGGC
CCCGCAAGCGCCCCTGGGCCCGGGGGAGGCCGCAGCGGACCTGACCGCATTGCCCTGCAGCCCTCAGGCTCCTTG
CTC**TGA**CGCAGGCCTCCTGGAGGAGGAAGTGGAGGCCGCTGCGTAGACCCAACAGCGTCCAGTTCCTACTAACTC
TGAGCTGAAGCCGACGTCGCCAGCCTGGGAGCGACCACTTTGGCTGCGGGGAGGCGCGTGGGGAGAGATCTCAAC
CAGAGAAGTTACCAGCCGCGGCGAGGCCGTCGGAGAAAACTTAAGCGTGGAGAAATGTATGCGCCAGGGTGCTTC
CGTGGGGCATGAGAATTTCCCGGGCCATCCAAGCCCAAGGACCTGGGATAAACTGGGAGAACTATGGCAGCTACT
TGCATCGACTTGTACCTCACTTAGCCCTTGGGGGCGTCGTGAGCTTGGATTGTTTAAGGAGGGCTCAGGGGTAGG
AATCGCGATGGCTTTATAACAATACTTGAAAACTAACGACACGCATACATTTTCTTATTTTCTGGTGGAGGAGCT
TAGTAAGTGGTGCTACAATTGCTGTGCAAAGAAATTCCAGAGGGGAGAAGAATGTAAAAGTTTGGTGGTGGGTGG
CTTGGCATTGCCCCTTTTTCCCACCGATTCGGTGGCTGGTGAAGGTGGGAGATGTGAACTCCAATTAAGGGACTG
GAGAGAGGTGAAGAATTTTGCAGGTGGGAGATTTGGATTTGAATGTGGACTTGTAAATGACTTGACCTTGCCATC
TGTGTTCAAGGTCACGGTTTGCTGTGGGGTTCCTGGGAGAGCTTACTCACCCCGGAGTCTTTTCTTTCTCTTGCT
CCAAGAAGAGCCCTGTTGGTGCTTTACCACCGCTTGGAGTCTCCCGAGGACACAAACAGGCAGAGAGGGACGTGT
AGGGAGAGTTCTTTCCTGTTTTCTGTGCTTTCCTTTTTACAGGACTCCCGGAAGGCCACTCATGGCCATGCCAGG
AGCTTTCTCAGAAACAGTCATAAACGATCTCTTGAGTCTCTTTCTTGTCCTCCCAGCTGAGCTTTCTTATTCCAC
CCTTTCTGGTGTCTATAGGAATGCATGAGAGACCCTGGACGTTTTTCTGCTCTCTTCTGGCCCTCCATGGAGCCA
TGGGCCTCGGCCTCGGCGGCTCCTCACCCTCACAATTTATTTCCTCCTCCCGTGCCAGCCCTTCTTTTGTGTCTG
AAACCGGTTTTAAAATGTGACTCTCCCAGAGAAGAAGCCGCTGGCTGTATGAAACTTGACGGCGCTTTTGTAAGG
TGCCACCCCCAAACTTTAAGGTAGCTAAACCAATTTTTAAAAGATTCAATGGCTTGTTCATCCTCCAGATGTAGC
TATTGATGTACACTTCGCAACGGAGTGTCTGAAATTGTGGTGGTCCTGATTTATAGGATTTCAT

FIGURE 1520

MPCRREEEEEAGEEAEGEEEEDDSFLLLQQSVTLGSSGEVDRLVAQIGETLQLDAAQDSPASPCAPPGVPLRAPG
PLAAAVPADKARPPAVPLLLPPASAETVGPAPSGALRCALGDRGRVRGRAAPYCVAEVAAGPSALPGPCRRGWLR
DAVTSRRLQQRRWTQAGARAGDDDPHRLLQQLVLSGNLIKEAVRRLQRAVAAVAATGPASAPGPGGGRSGPDRIA
LQPSGSLL

FIGURE 1521

GCAGAGCACAGCATCGTCGGGACCAGACTCGTCTCAGGCCAGTTGCAGCCTTCTCAGCCAAACGCCGACCAAGGA
AAACTCACTACC**ATG**AGAATTGCAGTGATTTGCTTTTGCCTCCTAGGCATCACCTGTGCCATACCAGTTAAACAG
GCTGATTCTGGAAGTTCTGAGGAAAAGCAGCTTTACAACAAATACCCAGATGCTGTGGCCACATGGCTAAACCCT
GACCCATCTCAGAAGCAGAATCTCCTAGCCCCACAGACCCTTCCAAGTAAGTCCAACGAAAGCCATGACCACATG
GATGATATGGATGATGAAGATGATGATGACCATGTGGACAGCCAGGACTCCATTGACTCGAACGACTCTGATGAT
GTAGATGACACTGATGATTCTCACCAGTCTGATGAGTCTCACCATTCTGATGAATCTGATGAACTGGTCACTGAT
TTTCCCACGGACCTGCCAGCAACCGAAGTTTTCACTCCAGTTGTCCCCACAGTAGACACATATGATGGCCGAGGT
GATAGTGTGGTTTATGGACTGAGGTCAAAATCTAAGAAGTTTCGCAGACCTGACATCCAGTACCCTGATGCTACA
GACGAGGACATCACCTCACACATGGAAAGCGAGGAGTTGAATGGTGCATACAAGGCCATCCCCGTTGCCCAGGAC
CTGAACGCGCCTTCTGATTGGGACAGCCGTGGGAAGGACAGTTATGAAACGAGTCAGCTGGATGACCAGAGTGCT
GAAACCCACAGCCACAAGCAGTCCAGATTATATAAGCGGAAAGCCAATGATGAGAGCAATGAGCATTCCGATGTG
ATTGATAGTCAGGAACTTTCCAAAGTCAGCCGTGAATTCCACAGCCATGAATTTCACAGCCATGAAGATATGCTG
GTTGTAGACCCCAAAAGTAAGGAAGAAGATAAACACCTGAAATTTCGTATTTCTCATGAATTAGATAGTGCATCT
TCTGAGGTCAAT**TAA**AAGGAGAAAAAATACAATTTCTCACTTTGCATTTAGTCAAAAGAAAAAATGCTTTATAGC
AAAATGAAAGAGAACATGAAATGCTTCTTTCTCAGTTTATTGGTTGAATGTGTATCTATTTGAGTCTGGAAATAA
CTAATGTGTTTGATAATTAGTTTAGTTTGTGGCTTCATGGAAACTCCCTGTAAACTAAAAGCTTCAGGGTTATGT
CTATGTTCATTCTATAGAAGAAATGCAAACTATCACTGTATTTTAATATTTGTTATTCTCTCATGAATAGAAATT
TATGTAGAAGCAAACAAAATACTTTTACCCACTTAAAAAGAGAATATAACATTTTATGTCACTATAATCTTTTGT
TTTTTAAGTTAGTGTATATTTTGTTGTGATTATCTTTTTGTGGTGTGAATAAATCTTTTATCTTGAATGTAATAA
GAATTTGGTGGTGTCAATTGCTTATTTGTTTTCCCACGGTTGTCCAGCAATTAATAAAACATAACCTTTTTTACT
GCCTAAAAAAAAAAAAAAAAAAAA

FIGURE 1522

MRIAVICFCLLGITCAIPVKQADSGSSEEKQLYNKYPDAVATWLNPDPSQKQNLLAPQTLPSKSNESHDHMDDMD
DEDDDDHVDSQDSIDSNDSDDVDDTDDSHQSDESHHSDESDELVTDFPTDLPATEVFTPVVPTVDTYDGRGDSVV
YGLRSKSKKFRRPDIQYPDATDEDITSHMESEELNGAYKAIPVAQDLNAPSDWDSRGKDSYETSQLDDQSAETHS
HKQSRLYKRKANDESNEHSDVIDSQELSKVSREFHSHEFHSHEDMLVVDPKSKEEDKHLKFRISHELDSASSEVN

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FIGURE 1523

CGCGAGTGAAGGAAGACGAATGCGTGACCCGACCGGCTGTGGTGTTCCAGTCCCCACTGACCAGTAGGAGCAGCA
GGGCGTCGGCTTGTGAGGTGGCTTTTCCTCGGGGCAACCCAGGAAGGCCCCAAGAGGACA**ATG**GATTCTGGAACT
CGCCCAGTTGGTAGCTGCTGTAGCAGCCCCGCTGGGCTCTCACGGGAGTACAAACTAGTGATGCTGGGTGCTGGT
GGTGTAGGGAAGAGTGCCATGACCATGCAGTTCATCAGCCACCGATTCCCAGAAGATCATGATCCCACCATTGAA
GATGCTTATAAGATCAGGATCCGTATTGATGATGAGCCTGCCAATCTGGACATTTTGGATACAGCTGGACAGGCA
GAGTTTACAGCCATGCGGGACCAGTATATGAGGGCAGGAGAAGGGTTTATCATCTGTTACTCTATCACGGATCGT
CGAAGTTTCCATGAAGTTCGTGAGTTTAAACAGCTTATTTATCGAGTCCGACGTACTGACGATACACCTGTGGTT
CTTGTGGGAAACAAGTCAGACCTCAAACAGCTAAGACAGGTCACCAAGGAAGAAGGATTGGCCTTGGCCCGAGAA
TTCAGCTGTCCCTTTTTTGAGACATCTGCTGCATACCGCTACTATATTGATGATGTTTTCCATGCCCTTGTACGG
GAGATACGTAGGAAAGAAAAGGAGGCAGTACTGGCCATGGAGAAAAAATCTAAGCCCAAAAACAGTGTATGGAAG
AGGCTAAAATCACCATTCCGGAAGAAGAAAGATTCAGTAACT**TGA**AGAGAAGATGTGAAGTGTTTATCTGTGAAC
TGCAGTGCTGTATCAAAGCAGTCCAGTAACCTGCAGTACTGAGTATGGTGCTTGCTCTTTCACTTAACTGATAAG
AGGGACATGCCTACTAGGAGTTTTTAATGATGTGGTATTTAAAGTATTGTCTCTTAGTTAAGTATGATTTATTAA
CCCAGTGGAGCACTGTCTGCTTTTAAATTGTCACATTAGAATTTGTTCTACCAAAAAAAAAA

FIGURE 1524

MDSGTRPVGSCCSSPAGLSREYKLVMLGAGGVGKSAMTMQFISHRFPEDHDPTIEDAYKIRIRIDDEPANLDILD
TAGQAEFTAMRDQYMRAGEGFIICYSITDRRSFHEVREFKQLIYRVRRTDDTPVVLVGNKSDLKQLRQVTKEEGL
ALAREFSCPFFETSAAYRYYIDDVFHALVREIRRKEKEAVLAMEKKSKPKNSVWKRLKSPFRKKKDSVT

FIGURE 1525

ATTGCATTTTTATTCACATACACATTGTTAATGTGGAACAATTTAACACTAATCTCATCAGAGAGCGAGATGAAT
GTGGCAATTGCTCATTTTATTTTGCATATATTAAATTGAGTAGGTTCAGCTCTAACATACCTTAAGAAAAATGCA
TATCGGTGCACTGTATGTATTTCAAAATGCCTTTCCTATGATTGTCATGTCCTCCTTTAAGGCTTTTCCCTCAAA
TTTATTACAAATTTAGTATTTTTAGTACTTGATGACTCTAATTACATGAATGCACCTGGAATGACATTTGTAACA
GAAGACGGTCTGACTTGCTTTCAGTATTCACAAGTTCTTTCCAGTTTCCAAGTCTTTTCCTAGCAGTAATTTAGG
GGAGACAGAGGAGTTTCATGTAAAGAGCATGCAGTTTGGAGTCAGAACCTGGGTATGACTCTGTGGCCTTGATGA
AGCAAGTTACTTAAACTCTTGAGTTTTAGCTTTCTCCTTTACAATGCATGAATGCCTATCCCCCTACAAAACAAA
GATTAAATGTGATGATGTATGCCAAGGTGCTTTGTATATTGTAAAGTGCTATATAATTATAAGATGTTCTAAATT
TTCAAGGATCTAAACCAGGGATTGGCAAACGTTTTTCCAGGGAGTAAATATTTTACGCTTTGCATATATAATTTA
TGGAGGTGTTGAGAGGATAGATTAGACACTTGAAGTACTCAGGATAGTGCCTGGCATGTAGGAAGCACCTGGAAA
ATATTCGCTGTGATTACCATCAGTCCATTTTACCGAGGAAGGAGCCAAGGTCCAGGCCCACTGAAGGACTTGCAT
AACATTACAATAGCAGTGGCAGAACCAGCCATGCTTCTGCAAATCACAACCTCTTTGAGCCTCTGTCACCTGAAC
TGCAAA**ATG**AGTGGGTTAGACAAAATCATCTGTTGGGACCTCCTAGTTCCACGTGCTATCATTCTACTAACTGGC
ACCCTAAGGTTGAAAGTGCTTATCTGCTTTCCAATGTGGCTTCCTTACAGTCTGGAACTGACAATATGCAGGAGC
AGTAAACTGGCAGAAAACCAGGAATCAGAGAAAGAAAATATAATT**TAA**CTTTAAAGATGTAAATTATATATATAG
TATATTATATATATTTTTAAAGCTTTATATGCCTCAAATATCAGGGAAAGGAGCCAAGTCCTTGGTATTTAGTTT
GGTGAATACTTGCATTGAATACATGTCAAGATGTCAAGTCATTTTTGAATGTGTCTCAGGGATTTCTATGCTACA
CATTCTTTTAACAAATCAAGTATTTATGTACACATGTTCAGATTTTTTGACAAAATGATTAAAATAATGAGATGG
AAAATGAAAAAAAATCTATGTCGGGTGCGGAGAAAGAGGTAATGAAATG

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FIGURE 1526

MSGLDKIICWDLLVPRAIILLTGTLRLKVLICFPMWLPYSLELTICRSSKLAENQESEKENII

FIGURE 1527

TGCGACGTGACTGGCTAGCTGCGTGGGTACTGGAACAAGCAAACGAGGCAGCGAGCGAAGGACGGGAGCCGGACC
CTGGGCCCCGTGGAACTCCAGCCTGCGCCACCACGTCACGCACACGCTCGGCGCTGCGATCCGCGCATATAACGA
TATTTGGATTTGACCTGCATTTTGGAATTTATCTACACTTAAA**ATG**CCACCAGCAGTTGGAGGTCCAGTTGGATA
CACCCCCCCAGATGGAGGCTGGGGCTGGGCAGTGGTAATTGGAGCTTTCATTTCCATCGGCTTCTCTTATGCATT
TCCCAAATCAATTACTGTCTTCTTCAAAGAGATTGAAGGTATATTCCATGCCACCACCAGCGAAGTGTCATGGAT
ATCCTCCATAATGTTGGCTGTCATGTATGGTGGAGGTCCTATCAGCAGTATCCTGGTGAATAAATATGGAAGTCG
TATAGTCATGATTGTTGGTGGCTGCTTGTCAGGCTGTGGCTTGATTGCAGCTTCTTTCTGTAACACCGTACAGCA
ACTATACGTCTGTATTGGAGTCATTGGAGGTCTTGGGCTTGCCTTCAACTTGAATCCAGCTCTGACCATGATTGG
CAAGTATTTCTACAAGAGGCGACCATTGGCCAACGGACTGGCCATGGCAGGCAGCCCTGTGTTCCTCTGTACTCT
GGCCCCCCTCAATCAGGTTTTCTTCGGTATCTTTGGATGGAGAGGAAGCTTTCTAATTCTTGGGGGCTTGCTACT
AAACTGCTGTGTTGCTGGAGCCCTCATGCGACCAATCGGGCCCAAGCCAACCAAGGCAGGGAAAGATAAGTCTAA
AGCATCCCTTGAGAAAGCTGGAAAATCTGGTGTGAAAAAAGATCTGCATGATGCAAATACAGATCTTATTGGAAG
ACACCCTAAACAAGAGAAACGATCAGTCTTCCAAACAATTAATCAGTTCCTGGACTTAACCCTATTCACCCACAG
AGGCTTTTTGCTATACCTCTCTGGAAATGTGATCATGTTTTTTGGACTCTTTGCACCTTTGGTGTTTCTTAGTAG
TTATGGGAAGAGTCAGCATTATTCTAGTGAGAAGTCTGCCTTCCTTCTTTCCATTCTGGCTTTTGTTGACATGGT
AGCCCGACCATCTATGGGACTTGTAGCCAACACAAAGCCAATAAGACCTCGAATTCAGTATTTCTTTGCGGCTTC
CGTTGTTGCAAATGGAGTGTGTCATATGCTAGCACCTTTATCCACTACCTATGTTGGATTCTGTGTCTATGCGGG
ATTCTTTGGATTTGCCTTCGGGTGGCTCAGCTCCGTATTGTTTGAAACATTGATGGACCTTGTTGGACCCCAGAG
GTTCTCCAGCGCTGTGGGATTGGTGACCATTGTGGAATGCTGTCCTGTCCTCCTGGGGCCACCACTTTTAGGTCG
GCTCAATGACATGTATGGAGACTACAAATACACATACTGGGCATGTGGCGTCGTCCTAATTATTTCAGGTATCTA
TCTCTTCATTGGCATGGGCATCAATTATCGACTTTTGGCAAAAGAACAGAAAGCAAACGAGCAGAAAAAGGAAAG
TAAAGAGGAAGAGACCAGTATAGATGTTGCTGGGAAGCCAAATGAAGTTACCAAAGCAGCAGAATCTCCGGACCA
GAAAGACACAGAAGGAGGGCCCAAGGAGGAGGAAAGTCCAGTC**TGA**ATCCATGGGGCTGAAGGGTAAATTGAGCA
GTTCATGACCCAGGATATCTGAAAATATTCTACTGGCCTGTAATCTACCAGTGGTGCTCAATGCAAATAGTAGAC
ATTTGTGTGGAAATCATACCAGTTGTTCATTGATGGGATTTTTGTTTGACTCCTTACCAATAGCCTGAATTTGAG
GAGGGAATGATTGGTAGCAAAGGATGGGGGAAAGAAGTAGGTTCTGTTTTGTTTTGTTTTAATCTTAGCTTTTAA
TAGTGTCATAAAGATTATAATATGTGCCTTAAGTTTTAGTCTTTAGAACTCTAGAGAGCCTTAACTTCTTAAACC
ATTTTTGCTGAATTCATCTATTTCGAGTGTTGTGTTAAAAGGAAAAATAACAACTAACTTGTTTGAGGCAAATCT
AAAATTTAAAATTAATCTTGCTTCATTGTTACATGTAATATATTTCAGACATTTTCACTGGAAGATTTATGAACA
GAAATATTGGTTGAAAGTTAGAGATTTTACAAAATGCTGACAAAAATATTTTCCTAGCATCAGTAGATTTCTGGC
ATATGTTTCTGCTAGCTATATATTTAGGAAATTCAAAGCATAAAACTTTGGCAACATCTTGGCTGTTCTAGACAC
AGTGTACTTGTCAACCCCTCTCAGGTACCTTTTCTTGGGATGCTTATTAGAAGCCAAGTAAAGTGCTTAAGGTTT
GTTTTCATTAAATTAGCTATTTCTGCTCCCCTGTTCAAAGATGCATTTTGAGTGTTTATAGATCACTGCCCTTTT
TGAAATCACCTGGTATTATTTTTCTTACTGGAAAAGTTAGTATTAAAATCTACAGAACTACATATTTGTGCCTCC
TTGGTAAATACAACACATCTAATTAAATGTAGACAGATATTTCAAACATCAGCTGAATTCACTTAAGTTTTTCCA
AAACCTCAGTTAAACTGTGAAGCTATTGGAATTTTTTTTTCCTGGAATTTTTCCCCTTTGATTCACAGTGGTCCC
ATTTATATCTGCTTCTAGCTTAGTGCTATGTGTGAGATATGTGTGTGTTTGGTGTTTTTGTTTTTTTTGTTTTTTT
TTTTTTAAGGTTTGCAAATTAAAAAGGGCCAGAAAAATTTGGCACCAGGCAAACGAATAAAGATAGGATTGGGAA
AGAAGTTGCTAAGTGTGCTTAGTTTTAATAAGTAATTCCTTCTCTTTTTTCAGAGAAGGCCTTACAGAAAATTGT
TGTGCTTAGAATTGCTGGATGCATTTTTACCCTCCACACAAACCTAAAAATTTTGTGACCCCTTTCACTTACCTG
AAAAGTAGAGAAATGGATTCAGTATAAGGATAAGGAGGGAAGGTGGACCAGAATGAAAACTGTAAATATTTTTTT
AACCTAATATCACTTAAATCGAGGCAGAAAGATATAGACATTCAATGAATTATATTCAATGCATTTAAAATACCA
CTGTAATTGACAGAGTAAAAGTATAGATACAAAACCTTGTGTAAGAGGCTGACTTTTCCAAATAAACATTTTTTA
AGAAAACATTTCTTCTCCCAAATGTCTATTTTCTTGAGGAAAATATTGCTGTGTCTTCATTTTCATTACCAGGTT
TCATTTTGGGCCTTGCTAAATTGATTGAATTAAATCCTCCAGCTTTTGAACCTTGAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAGAAAAAAAAAAAAAAAAG

FIGURE 1528

MPPAVGGPVGYTPPDGGWGWAVVIGAFISIGFSYAFPKSITVFFKEIEGIFHATTSEVSWISSIMLAVMYGGGPI
SSILVNKYGSRIVMIVGGCLSGCGLIAASFCNTVQQLYVCIGVIGGLGLAFNLNPALTMIGKYFYKRRPLANGLA
MAGSPVFLCTLAPLNQVFFGIFGWRGSFLILGGLLLNCCVAGALMRPIGPKPTKAGKDKSKASLEKAGKSGVKKD
LHDANTDLIGRHPKQEKRSVFQTINQFLDLTLFTHRGFLLYLSGNVIMFFGLFAPLVFLSSYGKSQHYSSEKSAF
LLSILAFVDMVARPSMGLVANTKPIRPRIQYFFAASVVANGVCHMLAPLSTTYVGFCVYAGFFGFAFGWLSSVLF
ETLMDLVGPQRFSSAVGLVTIVECCPVLLGPPLLGRLNDMYGDYKYTYWACGVVLIISGIYLFIGMGINYRLLAK
EQKANEQKKESKEEETSIDVAGKPNEVTKAAESPDQKDTEGGPKEEESPV

FIGURE 1529A

CGCCAG**ATG**GCTGAGAGCTATCAAGGAAAACTCAGGACCATGATGGCTCAGTTTCCCACAGCTATGAATGGAGGG
CCAAACATGTGGGCTATTACCTCTGAAGAACGTACTAAGCATGACAGGCAGTTTGATAACCTCAAACCTTCAGGA
GGTTACATAACAGGTGATCAAGCACGTAATTTTTTCCTACAATCAGGTCTGCCGGCCCCTGTTTTAGCTGAAATA
TGGGCTTTATCAGACCTAAACAAGGATGGGAAGATGGATCAGCAAGAGTTCTCCATAGCTATGAAACTCATCAAA
CTGAAGCTTCAAGGCCAACAGTTGCCTGTGGTTCTCCCTCCTATTATGAAGCAACCCCCTATGTTTTCTCCATTA
ATTTCTGCTCGTTTTGGAATGGGAAGCATGCCCAATCTGTCCATTCCTCAGCCATTGCCTCCAGCTGCACCTATA
ACATCATTGTCTTCTGCGACTTCAGGGACCAACCTTCCTCCCTTAATGATGCCCACTCCCCTAGTGCCTTCTGTT
AGCACATCATCATTACCAAATGGAACCGCCAGTCTCATTCAGCCTTTACCCATTCCTTATTCTTCTTCAACATTG
CCTCATGGGTCATCTTATAGTCTGATGATGGGAGGATTTGGAGGTGCTAGTATACAGAAAGCGCAGTCTCTGATT
GATTTAGGATCTAGTAGCTCAACTTCCTCGACTGCTTCACTCTCAGGGAACTCACCCAAGACTGGGACCTCAGAG
TGGGCAGTTCCTCAGCCTACAAGATTAAAATATCGGCAAAAATTTAATACTCTTGACAAAAGTATGAGTGGATAT
CTCTCAGGTTTTCAAGCTAGAAATGCCCTTCTTCAGTCAAATCTTTCTCAAACTCAGCTGGCTACTATTTGGACT
CTGGCTGACGTTGATGGTGATGGACAGCTAAAAGCAGAAGAGTTTATTCTTGCAATGCACCTTACTGACATGGCC
AAAGCTGGACAGCCATTACCACTGACTTTACCTCCTGAGCTTGTTCCTCCATCTTTCAGAGGAGGAAAGCAAATT
GATTCCATTAATGGAACTCTGCCTTCATATCAGAAAATGCAAGAAGAGGAGCCTCAGAAGAAATTACCAGTTACT
TTTGAGGACAAACGGAAAGCCAACTATGAGCGAGGGAACATGGAGCTGGAAAAGCGACGCCAAGCCTTGATGGAG
CAGCAACAAAGGGAGGCAGAACGTAAAGCCCAGAAAGAAAAGGAAGAGTGGGAACGAAAACAGAGAGAATTACAA
GAACAAGAATGGAAGAAACAACTTGAATTAGAAAAACGCTTAGAGAAGCAACGGGAATTGGAGAGACAACGAGAG
GAAGAAAGGAGAAAAGACATAGAAAGACGAGAGGCAGCAAAACAGGAACTTGAACGACAACGTCGCTTAGAATGG
GAGAGAATTCGGCGACAGGAGCTTCTCAATCAAAAGAATAGAGAACAAGAAGAAATTGTCAGGTTAAACTCTAAA
AAGAAGAATCTTCATCTTGAGTTGGAAGCACTGAATGGCAAACATCAGCAGATCTCAGGCAGACTTCAGGATGTC
CGACTCAAAAAGCAAACTCAAAAGACTGAGCTGGAAGTTCTGGATAAGCAGTGTGACTTGGAAATTATGGAAATC
AAGCAACTTCAACAGGAACTTCAGGAATATCAGAATAAGCTTATCTATCTGGTACCTGAGAAGCAATTATTAAAT
GAAAGAATTAAAAACATGCAGTTCAGTAACACACCTGATTCAGGGGTCAGTTTACTTCATAAAAAATCATTAGAA
AAGGAAGAATTATGCCAAAGACTTAAAGAACAGTTAGATGCTCTTGAAAAAGAAACTGCATCTAAGCTGTCAGAA
ATGGATTCTTTTAACAATCAACTAAAGGAACTGAGAGAAACCTACAACACACAGCAGTTAGCCCTTGAACAGCTT
TATAAGATCAAACGTGACAAGTTGAAGGAAATTGAAAGGAAAAGATTAGAACTAATGCAGAAAAAGAAACTAGAA
GATGAGGCTGCAAGGAAAGCAAAGCAAGGAAAAGAAAACTTATGGAAAGAAAATCTTAGAAAGGAGGAAGAAGAA
AAACAAAAGCGACTCCAGGAAGAAAAAACACAAGAAAAAATTCAAGAAGAGGAACGGAAAGCTGAGGAGAAACAA
CGTAAGGATAAGGATACTTTGAAAGCTGAGGAGAAAAAACGTGAGACAGCTAGTGTTTTGGTGAATTATAGAGCA
TTATACCCCTTTGAAGCAAGGAACCATGATGAGATGAGTTTTAATTCTGGAGATATAATTCAGGTTGATGAAAAA
ACCGTAGGAGAACCTGGTTGGCTTTATGGTAGTTTTCAAGGAAATTTTGGCTGGTTTCCATGCAATTATGTAGAA
AAAATGCCATCAAGTGAAAATGAAAAAGCTGTATCTCCAAAGAAGGCCTTACTTCCTCCTACAGTTTCTTTATCT
GCTACCTCAACTTCCTCTGAACCACTTTCTTCAAATCAACCAGCATCAGTGACTGATTATCAAAATGTATCTTTT
TCAAACCTAACTGTAAATACATCATGGCAGAAAAAATCAGCCTTCACTCGAACTGTGTCCCCTGGATCTGTATCA
CCTATTCATGGACAGGGACAAGTGGTAGAAAACTTAAAAGCACAGGCCCTTTGTTCCTGGACTGCAAAGAAAGAT
AACCACTTGAACTTCTCAAAACATGACATTATTACTGTCTTGGAGCAGCAAGAAAATTGGTGGTTTGGGGAGGTG
CATGGAGGAAGAGGATGGTTTCCCAAATCTTATGTCAAGATCATTCCTGGGAGTGAAGTAAAACGGGAAGAACCA
GAAGCTTTGTATGCAGCTGTAAATAAGAAACCTACCTCGGCAGCCTATTCAGTTGGAGAAGAATATATTGCACTT
TATCCATATTCAAGTGTGGAACCTGGAGATTTGACTTTCACAGAAGGTGAAGAAATATTGGTGACCCAGAAAGAT
GGAGAGTGGTGGACAGGAAGTATTGGAGATAGAAGTGGAATTTTTCCATCAAACTATGTCAAACCAAAGGATCAA
GAGAGTTTTGGGAGTGCTAGCAAGTCTGGAGCATCAAATAAAAAACCTGAGATTGCTCAGGTAACTTCAGCATAT
GTTGCTTCTGGTTCTGAACAACTTAGCCTTGCACCAGGACAGTTAATATTAATTCTAAAGAAAAATACAAGTGGG
TGGTGGCAAGGAGAGTTACAGGCCAGAGGAAAAAAGCGACAGAAAGGATGGTTTCCTGCCAGTCATGTTAAACTT
TTGGGTCCAAGTAGTGAAAGAGCCACACCTGCCTTTCATCCTGTATGTCAGGTGATTGCTATGTATGACTATGCA
GCAAATAATGAAGATGAGCTCAGTTTCTCCAAGGGACAACTCATTAATGTTATGAACAAAGATGATCCTGATTGG
TGGCAAGGAGAGATCAACGGGGTGACTGGTCTCTTTCCTTCAAACTACGTTAAGATGACGACAGACTCAGATCCA
AGTCAACAGTGGTGTGCTGATCTGCAAACCCTGGACACAATGCAGCCAATTGAGAGGAAAAGACAGGGCTATATT

FIGURE 1529B

CATGAGCTGATTCAGACCGAAGAGCGGTACATGGCTGACCTTCAGCTCGTCGTCGAGGTTTTTCAGAAACGCATG
GCAGAGTCAGGCTTTCTCACTGAAGGGGAGATGGCCCTGATTTTTGTTAACTGGAAGGAGCTCATCATGTCCAAC
ACAAAGCTGCTGAAGGCTTTGCGGGTGCGGAAGAAGACCGGGGGCGAGAAGATGCCGGTGCAGATGATTGGGGAC
ATCCTGGCCGCTGAGCTGTCCCACATGCAGGCTTACATCAGGTTCTGCAGCTGCCAGCTTAATGGAGCAGCTCTG
TTACAGCAGAAGACAGATGAAGACACAGATTTCAAAGAATTTTTAAAGAAGCTGGCATCTGACCCGCGGTGTAAA
GGAATGCCCCTCTCCAGCTTCCTGCTGAAACCCATGCAGAGGATCACCCGCTACCCACTGCTCATCAGAAGTATT
CTGGAGAACACCCCGGAGAGCCATGCAGACCATTCCTCCCTAAAGCTGGCCCTCGAGCGGGCAGAGGAGCTGTGC
TCTCAAGTGAATGAGGGAGTTCGGGAGAAGGAAAACTCGGACCGACTGGAGTGGATCCAGGCGCACGTGCAGTGT
GAAGGCCTCGCGGAGCAACTTATTTTCAACTCTCTCACCAACTGCCTGGGGCCCCGGAAGCTCTTACACAGTGGG
AAATTATACAAGACCAAGAGCAACAAGGAACTGCACGGATTCCTCTTCAATGACTTCCTGCTTCTTACCTACATG
GTCAAGCAGTTTGCTGTTTCCTCTGGCTCTGAGAAACTTTTCAGCTCGAAGTCCAATGCTCAATTCAAAATGTAT
AAAACGCCCATTTTCCTGAATGAAGTCTTGGTGAAACTGCCCACAGACCCTTCCAGCGATGAGCCTGTCTTCCAC
ATTTCCCACATTGATCGGGTCTACACCCTCCGAACAGACAACATTAATGAGAGGACCGCCTGGGTGCAGAAGATC
AAGGCGGCGTCTGAGCAGTACATCGACACCGAGAAGAAGCAGCGTGAGAAAGCTTACCAAGCCCGCTCCCAAAAG
ACTTCAGGCATTGGGCGCCTGATGGTGCATGTCATTGAAGCTACAGAATTAAAAGCCTGCAAACCAAATGGAAAG
AGCAACCCATACTGTGAAATCAGCATGGGCTCCCAGAGCTACACCACCAGGACCATCCAGGACACACTCAATCCC
AAGTGGAATTTTAACTGCCAGTTCTTTATTAAGGATCTCTACCAAGACGTGCTGTGTCTCACCCTGTTTGACAGA
GACCAGTTTTCACCAGATGATTTCCTGGGTCGTACTGAAATTCCAGTGGCAAAAATTCGAACAGAACAGGAAAGC
AAAGGCCCTATGACCCGCCGACTGCTGCTGCATGAGGTCCCCACCGGGGAGGTCTGGGTCCGTTTTGACCTGCAG
CTTTTTGAGCAAAAAACTCTCCTG**TAG**GGGTTCTAAAGGACAGCACCAGCGGGACAGCCCACAAGGCTGGGGCTG
GAGAATGAGAGACTGCGCTCTCTTGGGGCTGAGGGAGCACCATGCAGCTTCACCCCTCACAAAGCCATGCACGCT
GGGGGCTCTGTTTTCCTGCACACTAAATAGCTAGCAATCTATGCAAACACCTTTCCCATAAAGAAACCAAACCCC
ATAGTACAGTGCCTTGTCCTAGTGTTCACATGTTCAGCTCTGTTTGTTTAGATGCCAAGGTTTCCATTTTCAGGG
CTATAAAAAGTATTACTTGGAAATGAGGCATCAGACCACCAGATGTTACCGCTCGGTTGAATGTGTCCACCGTGG
AGTGGTTTGGTGACGCTGTAACCATTCCACGCCAGTGACCTCTGCTGGGTCACAGCCACTCAGGAGGGGAAGGGT
CAGGATGAGAGGCTGCAGCCTCGACACTTGGCGCGGCCTGATACTGAAATAGCGTCTACTCGTGCACTGAATAAA
AACAGAAACTTGATCATTTTATTCCTGATTAGATTTTATCACTCTCTGCTAAGACAATATAGTCTGGAGTATAAG
TGGGAAAGCTTGATTTAAATACTGTGAACTCTAATAATGTGGAAAATATTTTTCAACTTTAATTTTCTGAAGTAT
AAATTATTTATGTAAATTCATTGTTTTTGCATATTTCTTAGGACATGCATCTTTAAGCTTTATCATTGCCCATAT
GTACAGAAAGAGAATAAAGACATATGTTTATGGATGAAAAAAAAAAAAAAAAA

FIGURE 1530

MAESYQGKLRTMMAQFPTAMNGGPNMWAITSEERTKHDRQFDNLKPSGGYITGDQARNFFLQSGLPAPVLAEIWA
LSDLNKDGKMDQQEFSIAMKLIKLKLQGQQLPVVLPPIMKQPPMFSPLISARFGMGSMPNLSIPQPLPPAAPITS
LSSATSGTNLPPLMMPTPLVPSVSTSSLPNGTASLIQPLPIPYSSSTLPHGSSYSLMMGGFGGASIQKAQSLIDL
GSSSSTSSTASLSGNSPKTGTSEWAVPQPTRLKYRQKFNTLDKSMSGYLSGFQARNALLQSNLSQTQLATIWTLA
DVDGDGQLKAEEFILAMHLTDMAKAGQPLPLTLPPELVPPSFRGGKQIDSINGTLPSYQKMQEEEPQKKLPVTFE
DKRKANYERGNMELEKRRQALMEQQQREAERKAQKEKEEWERKQRELQEQEWKKQLELEKRLEKQRELERQREEE
RRKDIERREAAKQELERQRRLEWERIRRQELLNQKNREQEEIVRLNSKKKNLHLELEALNGKHQQISGRLQDVRL
KKQTQKTELEVLDKQCDLEIMEIKQLQQELQEYQNKLIYLVPEKQLLNERIKNMQFSNTPDSGVSLLHKKSLEKE
ELCQRLKEQLDALEKETASKLSEMDSFNNQLKELRETYNTQQLALEQLYKIKRDKLKEIERKRLELMQKKKLEDE
AARKAKQGKENLWKENLRKEEEEKQKRLQEEKTQEKIQEEERKAEEKQRKDKDTLKAEEKKRETASVLVNYRALY
PFEARNHDEMSFNSGDIIQVDEKTVGEPGWLYGSFQGNFGWFPCNYVEKMPSSENEKAVSPKKALLPPTVSLSAT
STSSEPLSSNQPASVTDYQNVSFSNLTVNTSWQKKSAFTRTVSPGSVSPIHGQGQVVENLKAQALCSWTAKKDNH
LNFSKHDIITVLEQQENWWFGEVHGGRGWFPKSYVKIIPGSEVKREEPEALYAAVNKKPTSAAYSVGEEYIALYP
YSSVEPGDLTFTEGEEILVTQKDGEWWTGSIGDRSGIFPSNYVKPKDQESFGSASKSGASNKKPEIAQVTSAYVA
SGSEQLSLAPGQLILILKKNTSGWWQGELQARGKKRQKGWFPASHVKLLGPSSERATPAFHPVCQVIAMYDYAAN
NEDELSFSKGQLINVMNKDDPDWWQGEINGVTGLFPSNYVKMTTDSDPSQQWCADLQTLDTMQPIERKRQGYIHE
LIQTEERYMADLQLVVEVFQKRMAESGFLTEGEMALIFVNWKELIMSNTKLLKALRVRKKTGGEKMPVQMIGDIL
AAELSHMQAYIRFCSCQLNGAALLQQKTDEDTDFKEFLKKLASDPRCKGMPLSSFLLKPMQRITRYPLLIRSILE
NTPESHADHSSLKLALERAEELCSQVNEGVREKENSDRLEWIQAHVQCEGLAEQLIFNSLTNCLGPRKLLHSGKL
YKTKSNKELHGFLFNDFLLLTYMVKQFAVSSGSEKLFSSKSNAQFKMYKTPIFLNEVLVKLPTDPSSDEPVFHIS
HIDRVYTLRTDNINERTAWVQKIKAASEQYIDTEKKQREKAYQARSQKTSGIGRLMVHVIEATELKACKPNGKSN
PYCEISMGSQSYTTRTIQDTLNPKWNFNCQFFIKDLYQDVLCLTLFDRDQFSPDDFLGRTEIPVAKIRTEQESKG
PMTRRLLLHEVPTGEVWVRFDLQLFEQKTLL

FIGURE 1531

CCTGTGAACACTATAGCGCTGAGAGAGACAGTCTGAAAGCAGAGGAAGACATCGATCAGTAACACCAAGAGACAC
CAAAGTTGAAAGTTTTGTTTTCTTTCCCTCTGTTTTATTTTTCCCCCGTGTGTCCCTACTATGGTCAGAAAGCCT
GTTGTGTCCACCATCTCCAAAGGAGGTTACCTGCAGGGAAATGTTAACGGGAGGCTGCCTTCCCTGGGCAACAAG
GAGCCACCTGGGCAGGAGAAAGTGCAGCTGAAGAGGAAAGTCACTTTACTGAGGGGAGTCTCCATTATCATTGGC
ACCATCATTGGAGCAGGAATCTTCATCTCTCCTAAGGGCGTGCTCCAGAACACGGGCAGCGTGGGCATGTCTCTG
ACCATCTGGACGGTGTGTGGGGTCCTGTCACTATTTGGAGCTTTGTCTTATGCTGAATTGGGAACAACTATAAAG
AAATCTGGAGGTCATTACACATATATTTTGGAAGTCTTTGGTCCATTACCAGCTTTTGTACGAGTCTGGGTGGAA
CTCCTCATAATACGCCCTGCAGCTACTGCTGTGATATCCCTGGCATTTGGACGCTACATTCTGGAACCATTTTTT
ATTCAATGTGAAATCCCTGAACTTGCGATCAAGCTCATTACAGCTGTGGGCATAACTGTAGTGATGGTCCTAAAT
AGCATGAGTGTCAGCTGGAGCGCCCGGATCCAGATTTTCTTAACCTTTTGCAAGCTCACAGCAATTCTGATAATT
ATAGTCCCTGGAGTTATGCAGCTAATTAAAGGTCAAACGCAGAACTTTAAAGACGCCTTTTCAGGAAGAGATTCA
AGTATTACGCGGTTGCCACTGGCTTTTTATTATGGAATGTATGCATATGCTGGCTGGTTTTACCTCAACTTTGTT
ACTGAAGAAGTAGAAAACCCTGAAAAAACCATTCCCCTTGCAATATGTATATCCATGGCCATTGTCACCATTGGC
TATGTGCTGACAAATGTGGCCTACTTTACGACCATTAATGCTGAGGAGCTGCTGCTTTCAAATGCAGTGGCAGTG
ACCTTTTCTGAGCGGCTACTGGGAAATTTCTCATTAGCAGTTCCGATCTTTGTTGCCCTCTCCTGCTTTGGCTCC
ATGAACGGTGGTGTGTTTGCTGTCTCCAGGTTATTCTATGTTGCGTCTCGAGAGGGTCACCTTCCAGAAATCCTC
TCCATGATTCATGTCCGCAAGCACACTCCTCTACCAGCTGTTATTGTTTTGCACCCTTTGACAATGATAATGCTC
TTCTCTGGAGACCTCGACAGTCTTTTGAATTTCCTCAGTTTTGCCAGGTGGCTTTTTATTGGGCTGGCAGTTGCT
GGGCTGATTTATCTTCGATACAAATGCCCAGATATGCATCGTCCTTTCAAGGTGCCACTGTTCATCCCAGCTTTG
TTTTCCTTCACATGCCTCTTCATGGTTGCCCTTTCCCTCTATTCGGACCCATTTAGTACAGGGATTGGCTTCGTC
ATCACTCTGACTGGAGTCCCTGCGTATTATCTCTTTATTATATGGGACAAGAAACCCAGGTGGTTTAGAATAATG
TCAGGGTTCCTAGCACTGATGCCTGCACAAGCATGTGATATGTGAAATAAAATGGATTCTTCTATAGCTAAATGA
GTTCCCTCTGGGGAGAGTTCTGGTACTGCAATCACAATGCCAGATGGTGTTTATGGGCTATTTGTGTAAGTAAGT
GGTAAGATGCTATGAAGTAAGTGTGTTTGTTTTCATCTTATGGAAACTCTTGATGCATGTGCTTTTGTATGGAAT
AAATTTTGGTGCAATATGATGTCATTCAACTTTGCATTGAATTGAATTTTGGTTGTATTTATATGTATTATACCT
GTCACGCTTCTAGTTGCTTCAACCATTTTATAACCATTTTTGTACATATTTTACTTGAAAATATTTTAAATGGAA
ATTTAAATAAACATTTGATAGTTTACATAATAAAAAAAAAAAAAAAAAA

FIGURE 1532

MVRKPVVSTISKGGYLQGNVNGRLPSLGNKEPPGQEKVQLKRKVTLLRGVSIIIGTIIGAGIFISPKGVLQNTGS
VGMSLTIWTVCGVLSLFGALSYAELGTTIKKSGGHYTYILEVFGPLPAFVRVWVELLIIRPAATAVISLAFGRYI
LEPFFIQCEIPELAIKLITAVGITVVMVLNSMSVSWSARIQIFLTFCKLTAILIIIVPGVMQLIKGQTQNFKDAF
SGRDSSITRLPLAFYYGMYAYAGWFYLNFVTEEVENPEKTIPLAICISMAIVTIGYVLTNVAYFTTINAEELLLS
NAVAVTFSERLLGNFSLAVPIFVALSCFGSMNGGVFAVSRLFYVASREGHLPEILSMIHVRKHTPLPAVIVLHPL
TMIMLFSGDLDSLLNFLSFARWLFIGLAVAGLIYLRYKCPDMHRPFKVPLFIPALFSFTCLFMVALSLYSDPFST
GIGFVITLTGVPAYYLFIIWDKKPRWFRIMSGFLALMPAQACDM

FIGURE 1533

CTCGAGGCCACGAAGGCCCCCGGGGTCAGCAGAGGGGCGCTCACGCTCTCGCCACCCACCTCGCTTTCTCACCCC
GCGCTTCCCGGCCTGGGTTTTTAGTCTTCCTTGGAGCGCTCTCTGGCCTCCGCCTCCGCCAGGGAGCGGAAGGCG
GAGACAGCGAGACTGGCCAGGGGGGAGGAAAGAGGACGCGTGTGGGCAAGGGGGACAACGGG**ATG**TCCACGGGCT
CGGTGAGTGATCCGGAGGAGATGGAGCTTCGGGGGCTGCAGCGGGAGTACCCGGTCCCCGCCTCCAAGAGGCCGC
CCCTCCGCGGCGTAGAGCGCAGCTACGCCTCGCCCAGTGACAACTCGTCGGCAGAGGAGGAGGACCCCGACGGCG
AGGAGGAGCGCTGCGCTCTGGGCACAGCCGGCAGCGCGGAAGGCTGCAAGAGGAAGCGGCCCCGTGTGGCTGGGG
GCGGCGGCGCAGGTGGTAGCGCGGGCGGTGGTGGCAAGAAGCCCCTCCCGGCCAAGGGCTCAGCCGCAGAGTGCA
AGCAGTCGCAGCGGAACGCGGCCAACGCCCGTGAGCGTGCCCGGATGCGCGTGCTGAGCAAAGCCTTCTCCAGGC
TCAAGACCAGCCTGCCCTGGGTGCCCCCCGACACTAAGCTCTCCAAGCTGGACACGCTCCGGCTGGCTTCCAGTT
ACATCGCTCACCTGCGGCAGCTGTTGCAGGAGGACCGCTATGAGAACGGCTACGTGCACCCAGTGAACCTGACAT
GGCCATTCGTGGTCTCGGGAAGACCGGCCTCTGCACCAAAGAAGTTTCCGCAGCCAACAGACTATGTGGAACCAC
CGCTTAAATCGGACTGGAACTCACTTGATGGGATTATTCGT**TAA**ATGCGAGTGTTTGGGGGCCACGGAGAGAAGG
GAGAGCTCGTGAGATGGGAAGAAGTTTCCGCTGGATTCTCCTTGACCCTTCCCCTTGCCCTGGAACTGTGATCGT
GACAGGTGGCGGGTGTGGCTGTCACTGCACAGCGCCCACGGCTACAGCTGCGCCGGATCTGGGCGACCACGTTTT
GCCTCTCCAAAAAGAGCTTCCTTTCGTGACGAGACGCGGACGCAGGTCCACCCTCGGGCCCTAGCTCTGTAGACT
AACTCTCGGCTGCTGCCCCAGCCCGCGCCAGACAGCCCACGGATCCGTTCTCAGCGGAGCCAGATTCATCGCACA
CGTGCGGGACGGTTCCACACAGCCCCGGCCTTTCGCGGTGACACAATGGTTAGGGAACGGTTAGACGCGCTCTAC
ATCCGCTTTAAAGACAGAGGTCTAGACGTGAGATCCGCGTCGGGACAGGGTTTTAAGTGACAAAGAAGGGCGAGT
GGCTTCTCTGGGCCGGGTTCGTACTCCAGCACAGCGCCCTTCTAACGGGCGGGAGGAAGGCCGCTGCTCGCAGGG
CTAGGTGGAGACACACTTCCCAGATCACCGCAGGCGGGTTTTACCCGGAGAGCTCTGGCCGTTCGGCCTCCCTGC
CGGGTGGCTTCTTCAATCCCGTCTCCTTCCCAAGCTCCCGGCTTTTTCTAATCAGGCAGGCGTCTGTCAACCCTC
TCCACTTCTGGGCTGAAGCCTCCCCAAGCCCCGTGCGCCAACCTGTGTGGGGTCTTCTTCGGGCCTCCCTCTCCG
CCCCGCTCCTGCTCCTACCTGCAGCACCCCCAGCTCCGACTCCAGACTCTCTGCATCAGGTCTCCCCACTCCACG
CTCCGGGCGCCCCAACTCCAACACCACGTCCTGCCGCGCAGGTTCTTCCCCGCGCGGAGGAGCGCGCAGGGTGGG
CGGCTTACCATAGCAAGTGATCCTGCGATAGGGAACGCGCCCTTGCCCCGAGGCTGCACTACCACAGGAAATAAC
GGCCTTCGTGGCCTCGAGTTTTTTATGAATAATAAAACGCGCTGTAAAAACCGTGGACGGAAAA

FIGURE 1534

MSTGSVSDPEEMELRGLQREYPVPASKRPPLRGVERSYASPSDNSSAEEEDPDGEEERCALGTAGSAEGCKRKRP
RVAGGGGAGGSAGGGGKKPLPAKGSAAECKQSQRNAANARERARMRVLSKAFSRLKTSLPWVPPDTKLSKLDTLR
LASSYIAHLRQLLQEDRYENGYVHPVNLTWPFVVSGRPASAPKKFPQPTDYVEPPLKSDWNSLDGIIR

FIGURE 1535

GCATATACTGTCATCATCTTGGAAAGAAAAGGCTGAGAACGTAAAACTGAGGACAGAGGAGGAAAGCAGGGTGAC
CCCTGATGTTGCCCTAGAAAATGGAAAACAAAACACAGCAAAACAGAAAAACAGAAGATCTGACTCTGCCTTTAG
CCAGGAAAACAGTTTGGGGGAGTAAAAAGTATTAGGGAAAAGAGTGGGCATTTTGCCTGGAAAAAAGGTTTCTAG
AGCCATCTGGGCTTTCCGGGAACCTGGACCAGACTCTGGCCCAGTAGG**ATG**TCCCCGTGTCCTCCCCAGCAGAGC
AGGAACAGGGTGATACAGCTGTCCACTTCAGAGCTAGGAGAGATGGAACTGACTTGGCAGGAGATCATGTCCATC
ACCGAGCTGCAGGGTCTGAATGCTCCAAGTGAGCCATCATTTGAGCCCCAAGCCCCAGCTCCATACCTTGGACCT
CCACCACCCACAACTTACTGCCCCTGCTCAATCCACCCAGATTCTGGCTTCCCACTTCCTCCACCACCTTATGAG
CTCCCAGCATCCACATCCCATGTCCCAGATCCCCCATACTCCTATGGCAACATGGCCATACCAGTCTCCAAGCCA
CTGAGCCTCTCAGGCCTGCTCAGTGAGCCGCTCCAAGACCCCTTAGCCCTCCTGGACATTGGGCTGCCAGCAGGG
CCACCTAAGCCCCAAGAAGACCCAGAATCCGACTCAGGATTATCCCTCAACTATAGCGATGCTGAATCTCTTGAG
CTGGAGGGGACAGAGGCTGGTCGGCGGCGCAGCGAATATGTAGAGATGTACCCAGTGGAGTACCCCTACTCACTC
ATGCCCAACTCCTTGGCCCACTCCAACTATACCTTGCCAGCTGCTGAGACCCCCTTGGCCTTAGAGCCCTCCTCA
GGCCCTGTGCGGGCTAAGCCCACTGCACGGGGGGAGGCAGGGAGTCGGGATGAACGTCGGGCCTTGGCCATGAAG
ATTCCTTTTCCTACGGACAAGATTGTCAACTTGCCGGTAGATGACTTTAATGAGCTATTGGCAAGGTACCCGCTG
ACAGAGAGCCAGCTAGCGCTAGTCCGGGACATCCGACGACGGGGCAAAAACAAGGTGGCAGCCCAGAACTGCCGC
AAGAGGAAGCTGGAAACCATTGTGCAGCTGGAGCGGGAGCTGGAGCGGCTGACCAATGAACGGGAGCGGCTTCTC
AGGGCCCGCGGGGAGGCAGACCGGACCCTGGAGGTCATGCGCCAACAGCTGACAGAGCTGTACCGTGACATTTTC
CAGCACCTTCGGGATGAATCAGGCAACAGCTACTCTCCTGAAGAGTACGCGCTGCAACAGGCTGCCGATGGGACC
ATCTTCCTTGTGCCCCGGGGGACCAAGATGGAGGCCACAGAC**TGA**GCTGGCCCAGAGGGGTGGAACTGCTGATGG
GATTTCCTTCATTCCCTTCTGATAAAGGTACTCCCCAACCCTGAGTCCCAGAAGGAGCTGAGTTCTCTAGACCAG
AAGAGGATGACAATGGCAACAAGTGTTTGGAAGTTCCAAGGTGTGTTCAAAGAGGCTTGCCTTGAGGGAGGGCTG
GAATCTGTCTTCCCTGACTCGGCTCCTCAGGTCTTTAGCCTCCACCTTGTCTAAGCTTTGGTCTATAAAGTGCGC
TACAGAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1536

MSPCPPQQSRNRVIQLSTSELGEMELTWQEIMSITELQGLNAPSEPSFEPQAPAPYLGPPPPTTYCPCSIHPDSG
FPLPPPPYELPASTSHVPDPPYSYGNMAIPVSKPLSLSGLLSEPLQDPLALLDIGLPAGPPKPQEDPESDSGLSL
NYSDAESLELEGTEAGRRRSEYVEMYPVEYPYSLMPNSLAHSNYTLPAAETPLALEPSSGPVRAKPTARGEAGSR
DERRALAMKIPFPTDKIVNLPVDDFNELLARYPLTESQLALVRDIRRRGKNKVAAQNCRKRKLETIVQLERELER
LTNERERLLRARGEADRTLEVMRQQLTELYRDIFQHLRDESGNSYSPEEYALQQAADGTIFLVPRGTKMEATD

FIGURE 1537

CTTCCTCCCTCCCGCTCGCTTCTTCTCACGCCGGGAGCAGGCTCGCGCCTCGCACCGCTGCCCCGCGAGCAGCTC
CTCTTCTCCCGAGGCGCGCGGGGCGCCCCCGCGAGCCCCGCGGCTGAGACCCCGCAGCCTGGAGGAGGGCTGTCC
GGGGCTTTGGGTTGCACGTTTTCAAAAAATACCTAATGGTGAAAATGAGACA**ATG**ATTCCTGTATTGACATCAAA
AAAAGCAAGTGAATTACCAGTCAGTGAAGTTGCAAGCATTCTCCAAGCTGATCTTCAGAATGGTCTAAACAAATG
TGAAGTTAGTCATAGGCGAGCCTTTCATGGCTGGAATGAGTTTGATATTAGTGAAGATGAGCCACTGTGGAAGAA
GTATATTTCTCAGTTTAAAAATCCCCTTATTATGCTGCTTCTGGCTTCTGCAGTCATCAGTGTTTTAATGCATCA
GTTTGATGATGCCGTCAGTATCACTGTGGCAATACTATTCGTTGTTACAGTTGCCTTTGTTCAGGAATATCGTTC
AGAAAAATCTCTTGAAGAATTGAGTAAACTTGTGCCACCAGAATGCCATTGTGTGCGTGAAGGAAAATTGGAGCA
TACACTTGCCCGAGACTTGGTTCCAGGTGATACAGTTTGCCTTTCTGTTGGGGATAGAGTTCCTGCTGACTTACG
CTTGTTTGAGGCTGTGGATCTTTCCATTGATGAGTCCAGCTTGACAGGTGAGACAACGCCTTGTTCTAAGGTGAC
AGCTCCTCAGCCAGCTGCAACTAATGGAGATCTTGCATCGAGAAGTAACATTGCCTTTATGGGAACACTGGTCAG
ATGTGGCAAAGCAAAGGGTGTTGTCATTGGAACAGGAGAAAATTCTGAATTTGGGGAGGTTTTTAAAATGATGCA
AGCAGAAGAGGCACCAAAAACCCCTCTGCAGAAGAGCATGGACCTCTTAGGAAAACAACTTTCCTTTTACTCCTT
TGGTATAATAGGAATCATCATGTTGGTTGGCTGGTTACTGGGAAAAGATATCCTGGAAATGTTTACTATTAGTGT
AAGTTTGGCTGTAGCAGCAATTCCTGAAGGTCTCCCCATTGTGGTCACAGTGACGCTAGCTCTTGGTGTTATGAG
AATGGTGAAGAAAAGGGCCATTGTGAAAAAGCTGCCTATTGTTGAAACTCTGGGCTGCTGTAATGTGATTTGTTC
AGATAAAACTGGAACACTGACGAAGAATGAAATGACTGTTACTCACATATTTACTTCAGATGGTCTGCATGCTGA
GGTTACTGGAGTTGGCTATAATCAATTTGGGGAAGTGATTGTTGATGGTGATGTTGTTCATGGATTCTATAACCC
AGCTGTTAGCAGAATTGTTGAGGCGGGCTGTGTGTGCAATGATGCTGTAATTAGAAACAATACTCTAATGGGGAA
GCCAACAGAAGGGGCCTTAATTGCTCTTGCAATGAAGATGGGTCTTGATGGACTTCAACAAGACTACATCAGAAA
AGCTGAATACCCTTTTAGCTCTGAGCAAAAGTGGATGGCTGTTAAGTGTGTACACCGAACACAGCAGGACAGACC
AGAGATTTGTTTTATGAAAGGTGCTTACGAACAAGTAATTAAGTACTGTACTACATACCAGAGCAAAGGGCAGAC
CTTGACACTTACTCAGCAGCAGAGAGATGTGTACCAACAAGAGAAGGCACGCATGGGCTCAGCGGGACTCAGAGT
TCTTGCTTTGGCTTCTGGTCCTGAACTGGGACAGCTGACATTTCTTGGCTTGGTGGGAATCATTGATCCACCTAG
AACTGGTGTGAAAGAAGCTGTTACAACACTCATTGCCTCAGGAGTATCAATAAAAATGATTACTGGAGATTCACA
GGAGACTGCAGTTGCAATCGCCAGTCGTCTGGGATTGTATTCCAAAACTTCCCAGTCAGTCTCAGGAGAAGAAAT
AGATGCAATGGATGTTCAGCAGCTTTCACAAATAGTACCAAAGGTTGCAGTATTTTACAGAGCTAGCCCAAGGCA
CAAGATGAAAATTATTAAGTCGCTACAGAAGAACGGTTCAGTTGTAGCCATGACAGGAGATGGAGTAAATGATGC
AGTTGCTCTGAAGGCTGCAGACATTGGAGTTGCGATGGGCCAGACTGGTACAGATGTTTGCAAAGAGGCAGCAGA
CATGATCCTAGTGGATGATGATTTTCAAACCATAATGTCTGCAATCGAAGAGGGTAAAGGGATTTATAATAACAT
TAAAAATTTCGTTAGATTCCAGCTGAGCACGAGTATAGCAGCATTAACTTTAATCTCATTGGCTACATTAATGAA
CTTTCCTAATCCTCTCAATGCCATGCAGATTTTGTGGATCAATATTATTATGGATGGACCCCCAGCTCAGAGCCT
TGGAGTAGAACCAGTGGATAAAGATGTCATTCGTAAACCTCCTCGCAACTGGAAAGACAGCATTTTGACTAAAAA
CTTGATACTTAAAATACTTGTTTCATCAATAATCATTGTTTGTGGGACTTTGTTTGTCTTCTGGCGTGAGCTACG
AGACAATGTGATTACACCTCGAGACACAACAATGACCTTCACATGCTTTGTGTTTTTTGACATGTTCAATGCACT
AAGTTCCAGATCCCAGACCAAGTCTGTGTTTGAGATTGGACTCTGCAGTAATAGAATGTTTTGCTATGCAGTTCT
TGGATCCATCATGGGACAATTACTAGTTATTTACTTTCCTCCGCTTCAGAAGGTTTTTCAGACTGAGAGCCTAAG
CATACTGGATCTGTTGTTTCTTTTGGGTCTCACCTCATCAGTGTGCATAGTGGCAGAAATTATAAAGAAGGTTGA
AAGGAGCAGGGAAAAGATCCAGAAGCATGTCTGGCTCTGGGAGAGGAGTGGACAGCAGCTGGTTGAGATACATCC
CCATCTGGAGACAGGACTGCCACTGACAGAAGATGTGAGCTGTGTC**TAA**GTCCAGTCTTGTGCCCAGCCGTGTCT
GCGCCTTCACTCTTTGGAACTCTGCATACAACATCTTAGCACCATCTTCCTGCAGCTCTTCCTTACCTAAATAAA
GAAACAGCCCAAGGGCAGTATTTCTAAAAGCACTGTAACAGCTTTTCATTTTCTCCACATATACTACAAATTCTA
TAAAGAAAGAAATTAATTTAAAAAAACTAAGATGTTTTTCTCTTCTGGCTTCATAAATGCCTTGCTGTATAAATT
GAAATATTGATACTGAACTGTCTTTTTAATGATGACCTAACTTTATTCAACCCATCGGAATTTACTTTTTCCCTG
AAATAAGATCTTTTCCACTGGTCTACTACCTGACCATAAACATGTCTGCATTTGAATTCTCTAAACCCTAAATCT
GTGTCTATGAAAAATACAAATGACTATTAAATATTATTCTCTTTACTGTTCTCTTTCACCGAAAAAAAAAAAAAA
AAAAAAAA

FIGURE 1538

MIPVLTSKKASELPVSEVASILQADLQNGLNKCEVSHRRAFHGWNEFDISEDEPLWKKYISQFKNPLIMLLLASA
VISVLMHQFDDAVSITVAILFVVTVAFVQEYRSEKSLEELSKLVPPECHCVREGKLEHTLARDLVPGDTVCLSVG
DRVPADLRLFEAVDLSIDESSLTGETTPCSKVTAPQPAATNGDLASRSNIAFMGTLVRCGKAKGVVIGTGENSEF
GEVFKMMQAEEAPKTPLQKSMDLLGKQLSFYSFGIIGIIMLVGWLLGKDILEMFTISVSLAVAAIPEGLPIVVTV
TLALGVMRMVKKRAIVKKLPIVETLGCCNVICSDKTGTLTKNEMTVTHIFTSDGLHAEVTGVGYNQFGEVIVDGD
VVHGFYNPAVSRIVEAGCVCNDAVIRNNTLMGKPTEGALIALAMKMGLDGLQQDYIRKAEYPFSSEQKWMAVKCV
HRTQQDRPEICFMKGAYEQVIKYCTTYQSKGQTLTLTQQQRDVYQQEKARMGSAGLRVLALASGPELGQLTFLGL
VGIIDPPRTGVKEAVTTLIASGVSIKMITGDSQETAVAIASRLGLYSKTSQSVSGEEIDAMDVQQLSQIVPKVAV
FYRASPRHKMKIIKSLQKNGSVVAMTGDGVNDAVALKAADIGVAMGQTGTDVCKEAADMILVDDDFQTIMSAIEE
GKGIYNNIKNFVRFQLSTSIAALTLISLATLMNFPNPLNAMQILWINIIMDGPPAQSLGVEPVDKDVIRKPPRNW
KDSILTKNLILKILVSSIIIVCGTLFVFWRELRDNVITPRDTTMTFTCFVFFDMFNALSSRSQTKSVFEIGLCSN
RMFCYAVLGSIMGQLLVIYFPPLQKVFQTESLSILDLLFLLGLTSSVCIVAEIIKKVERSREKIQKHVWLWERSG
QQLVEIHPHLETGLPLTEDVSCV

FIGURE 1539

GGGAGGAGAGAAAAGCC**ATG**GCCGACAAGGTCCTGAAGGAGAAGAGAAAGCTGTTTATCCGTTCCATGGGTGAAG
GTACAATAAATGGCTTACTGGATGAATTATTACAGACAAGGGTGCTGAACAAGGAAGAGATGGAGAAAGTAAAAC
GTGAAAATGCTACAGTTATGGATAAGACCCGAGCTTTGATTGACTCCGTTATTCCGAAAGGGGCACAGGCATGCC
AAATTTGCATCACATACATTTGTGAAGAAGACAGTTACCTGGCAGGGACGCTGGGACTCTCAGCAGATCAAACAT
CTGGAAATTACCTTAATATGCAAGACTCTCAAGGAGTACTTTCTTCCTTTCCAGCTCCTCAGGCAGTGCAGGACA
ACCCAGCTATGCCCACATCCTCAGGCTCAGAAGGGAATGTCAAGCTTTGCTCCCTAGAAGAAGCTCAAAGGATAT
GGAAACAAAAGTCGGCAGAGATTTATCCAATAATGGACAAGTCAAGCCGCACACGTCTTGCTCTCATTATCTGCA
ATGAAGAATTTGACAGTATTCCTAGAAGAACTGGAGCTGAGGTTGACATCACAGGCATGACAATGCTGCTACAAA
ATCTGGGGTACAGCGTAGATGTGAAAAAAAATCTCACTGCTTCGGACATGACTACAGAGCTGGAGGCATTTGCAC
ACCGCCCAGAGCACAAGACCTCTGACAGCACGTTCCTGGTGTTCATGTCTCATGGTATTCGGGAAGGCATTTGTG
GGAAGAAACACTCTGAGCAAGTCCCAGATATACTACAACTCAATGCAATCTTTAACATGTTGAATACCAAGAACT
GCCCAAGTTTGAAGGACAAACCGAAGGTGATCATCATCCAGGCCTGCCGTGGTGACAGCCCTGGTGTGGTGTGGT
TTAAAGATTCAGTAGGAGTTTCTGGAAACCTATCTTTACCAACTACAGAAGAGTTTGAGGATGATGCTATTAAGA
AAGCCCACATAGAGAAGGATTTTATCGCTTTCTGCTCTTCCACACCAGATAATGTTTCTTGGAGACATCCCACAA
TGGGCTCTGTTTTTATTGGAAGACTCATTGAACATATGCAAGAATATGCCTGTTCCTGTGATGTGGAGGAAATTT
TCCGCAAGGTTCGATTTTCATTTGAGCAGCCAGATGGTAGAGCGCAGATGCCCACCACTGAAAGAGTGACTTTGA
CAAGATGTTTCTACCTCTTCCCAGGACAT**TAA**AATAAGGAAACTGTATGAATGTCTGTGGGCAGGAAGTGAAGAG
ATCGTTCTGTAAAAGGTTTTTGGAATTATGTCTGCTGAATAATAAACTTTTTTTGAAATAATAAATCTGGTAGAA
AAATGAAAAAAAAAAAAAAAAA

FIGURE 1540

MADKVLKEKRKLFIRSMGEGTINGLLDELLQTRVLNKEEMEKVKRENATVMDKTRALIDSVIPKGAQACQICITY
ICEEDSYLAGTLGLSADQTSGNYLNMQDSQGVLSSFPAPQAVQDNPAMPTSSGSEGNVKLCSLEEAQRIWKQKSA
EIYPIMDKSSRTRLALIICNEEFDSIPRRTGAEVDITGMTMLLQNLGYSVDVKKNLTASDMTTELEAFAHRPEHK
TSDSTFLVFMSHGIREGICGKKHSEQVPDILQLNAIFNMLNTKNCPSLKDKPKVIIIQACRGDSPGVVWFKDSVG
VSGNLSLPTTEEFEDDAIKKAHIEKDFIAFCSSTPDNVSWRHPTMGSVFIGRLIEHMQEYACSCDVEEIFRKVRF
SFEQPDGRAQMPTTERVTLTRCFYLFPGH

FIGURE 1541

GCGGGGCTGGCACCCGGGCCGAGGCTCTGATTCTGGGGGGAGGCCGACTCCACCCTGGCTGGAGGAACTGGGTGC
TCCTGCCCGCTGGCCCCTCGCGCGTGAGGATCTATCTCAGGCTAAGAA**ATG**GCATTTCAAAAGGCAGTGAAAGGG
ACGATTCTTGTTGGAGGAGGTGCTCTTGCAACTGTTTTAGGACTTTCTCAGTTTGCTCATTACAGAAGGAAACAA
ATGAACCTGGCCTATGTTAAAGCAGCAGACTGCATTTCAGAACCAGTTAACAGGGAGCCTCCTTCCAGAGAAGCT
CAGCTACTGACTTTGCAAAACACATCTGAATTTGATATCCTTGTTATTGGAGGAGGAGCAACAGGAAGTGGCTGT
GCGCTAGATGCTGTCACCAGAGGACTAAAAACAGCCCTTGTAGAAAGAGATGATTTCTCATCAGGGACCAGCAGC
AGAAGCACTAAATTGATCCATGGTGGTGTGAGATATCTGCAGAAGGCCATCATGAAGTTGGATATTGAGCAGTAT
AGGATGGTAAAAGAAGCCCTTCATGAGCGTGCCAACCTGCTAGAAATTGCTCCCCATTTATCAGCTCCATTGCCT
ATAATGCTTCCAGTTTACAAGTGGTGGCAGTTACCTTACTACTGGGTAGGAATCAAGCTGTATGATTTGGTTGCA
GGAAGCAATTGCCTAAAAAGCAGTTATGTCCTCAGCAAATCAAGAGCCCTTGAACATTTCCCAATGCTCCAGAAG
GACAAACTGGTAGGAGCAATTGTCTACTATGACGGACAACATAACGATGCACGGATGAACCTTGCCATTGCTCTG
ACTGCTGCCAGGTATGGGGCTGCCACAGCCAATTACATGGAGGTAGTGAGCTTGCTCAAGAAGACAGACCCCCAG
ACAGGGAAAGTGCATGTGAGCGGCGCACGGTGCAAGGATGTCCTCACAGGGCAGGAATTTGACGTGAGAGCCAAA
TGTGTTATCAATGCCACGGGACCTTTCACGGACTCTGTGCGCAAAATGGATGATAAAGACGCAGCAGCTATCTGC
CAGCCAAGTGCTGGTGTCCATATTGTGATGCCTGGTTATTACAGCCCAGAGAGCATGGGACTTCTTGACCCAGCG
ACCAGTGATGGGCGAGTTATTTTCTTCTTACCCTGGCAAAAGATGACGATCGCTGGCACTACTGATACTCCAACT
GATGTTACACACCATCCAATTCCTTCAGAAGAAGATATCAACTTCATTTTGAATGAAGTGCGTAATTACCTGAGT
TGTGATGTTGAAGTGAGAAGAGGGGATGTCCTGGCAGCATGGAGTGGAATCCGTCCTCTTGTTACAGACCCCAAA
TCTGCAGATACTCAGTCTATCTCCCGAAATCATGTTGTTGATATCAGTGAGAGTGGCCTTATTACTATAGCAGGT
GGAAAGTGGACAACTTATCGGTCTATGGCAGAAGATACCATAAATGCTGCTGTCAAAACTCATAATTTAAAAGCA
GGACCAAGTAGAACAGTTGGGCTTTTCCTTCAAGGGGGTAAAGATTGGAGCCCCACACTCTACATTAGGCTTGTG
CAGGATTATGGACTTGAAAGCGAGGTGGCACAGCATCTTGCCGCCACCTATGGTGATAAGGCCTTTGAGGTGGCC
AAAATGGCAAGTGTGACTGGCAAAAGGTGGCCTATTGTTGGAGTACATCTTGTGTCAGAATTTCCATATATTGAA
GCAGAGGTGAAATATGGGATTAAGGAGTATGCCTGCACTGCTGTGGATATGATTTCACGTCGTACTCGCCTGGCC
TTTCTAAATGTCCAGGCAGCAGAGGAAGCCCTACCCAGGATTGTTGAACTGATGGGCAGGGAACTGAATTGGGAT
GATTATAAGAAGCAGGAACAACTTGAAACAGCCAGGAAGTTTCTATATTATGAAATGGGCTATAAATCTCGATCA
GAACAGTTAACAGATCGCTCTGAAATTAGCCTACTGCCTTCAGACATTGACAGGTATAAGAAGAGATTTCATAAG
TTTGATGCAGACCAGAAAGGCTTTATTACCATTGTTGATGTTCAGCGTGTATTAGAGAGTATCAATGTCCAAATG
GATGAAAATACACTCCATGAAATTCTAAATGAAGTTGATTTGAATAAAAATGGACAGGTTGAACTCAATGAATTT
TTGCAGCTGATGAGTGCTATTCAAAAAGGAAGGGTATCTGGAAGCCGGCTTGCTATACTAATGAAAACTGCAGAA
GAGAACCTCGACAGAAGAGTTCCAATTCCAGTGGACCGTAGTTGTGGAGGATTG**TGA**GTCTGGGCAGTAAATCCA
CAGCCAACAAACATAGAAACGACAAATCACCATGTAACAACCAGAGATGACTGAAACCACTCTGAAATAATGAAT
GTGGATAGCTGCCTTTTTTAACACTAGAAAACATTCCAAAACTTTAAGGTGTTGGTGTATTTGCCAGCTTTATTT
GCTGTACTTTATTTGTATTTGCCATTCAGTCTAGCTTTTAAGTATATTTTTTTCTTTTTCTCATTTTCAATGCAC
ATTAGTTTTGCATCTGTTTTGTGACCTGTTAGATGTGACACATTCTCTTTTTGTTTATTCCCTTATTC

FIGURE 1542

MAFQKAVKGTILVGGGALATVLGLSQFAHYRRKQMNLAYVKAADCISEPVNREPPSREAQLLTLQNTSEFDILVI
GGGATGSGCALDAVTRGLKTALVERDDFSSGTSSRSTKLIHGGVRYLQKAIMKLDIEQYRMVKEALHERANLLEI
APHLSAPLPIMLPVYKWWQLPYYWVGIKLYDLVAGSNCLKSSYVLSKSRALEHFPMLQKDKLVGAIVYYDGQHND
ARMNLAIALTAARYGAATANYMEVVSLLKKTDPQTGKVHVSGARCKDVLTGQEFDVRAKCVINATGPFTDSVRKM
DDKDAAAICQPSAGVHIVMPGYYSPESMGLLDPATSDGRVIFFLPWQKMTIAGTTDTPTDVTHHPIPSEEDINFI
LNEVRNYLSCDVEVRRGDVLAAWSGIRPLVTDPKSADTQSISRNHVVDISESGLITIAGGKWTTYRSMAEDTINA
AVKTHNLKAGPSRTVGLFLQGGKDWSPTLYIRLVQDYGLESEVAQHLAATYGDKAFEVAKMASVTGKRWPIVGVH
LVSEFPYIEAEVKYGIKEYACTAVDMISRRTRLAFLNVQAAEEALPRIVELMGRELNWDDYKKQEQLETARKFLY
YEMGYKSRSEQLTDRSEISLLPSDIDRYKKRFHKFDADQKGFITIVDVQRVLESINVQMDENTLHEILNEVDLNK
NGQVELNEFLQLMSAIQKGRVSGSRLAILMKTAEENLDRRVPIPVDRSCGGL

FIGURE 1543

AAATGGTGAAAGGGGGGGAGGGGAGAAAAGAAAAAAAAAAAAAGAAAGGGGAAAGGGGGGAAAAATAAGAAAAAG
CGAGACAGAGGCGCTGCCGCGTCCGCTCGCGGGGAAGGCTGGGGTCGGCCGGGTGCTAGGCCGGGGCCGAGGCCG
AGGCCGGGGCGGGATCCAGAGCGGGAGCCGGCGCGGGATCTGGGACTCGGAGCGGGATCCGGAGCGGGACCCAGG
AGCCGGCGCGGGGCC**ATG**GCGAGGCGCGGGCCAGGGTGGCGGCCGCTTCTGCTGCTCGTGCTGCTGGCGGGCGCG
GCGCAGGGCGGCCTCTACTTCCGCCGGGGACAGACCTGCTACCGGCCTCTGCGGGGGGACGGGCTGGCTCCGCTG
GGGCGCACGACATACCCCCGGCCTCATGAGTACCTGTCCCCAGCGGATCTGCCCAAGAGCTGGGACTGGCGCAAT
GTGGATGGTGTCAACTATGCCAGCATCACCCGGAACCAGCACATCCCCCAATACTGCGGCTCCTGCTGGGCCCAC
GCCAGCACCAGCGCTATGGCGGATCGGATCAACATCAAGAGGAAGGGAGCGTGGCCCTCCACCCTCCTGTCCGTG
CAGAACGTCATCGACTGCGGTAACGCTGGCTCCTGTGAAGGGGGTAATGACCTGTCCGTGTGGGACTACGCCCAC
CAGCACGGCATCCCTGACGAGACCTGCAACAACTACCAGGCCAAGGACCAGGAGTGTGACAAGTTTAACCAATGT
GGGACATGCAATGAATTCAAAGAGTGCCACGCCATCCGGAACTACACCCTCTGGAGGGTGGGAGACTACGGCTCC
CTCTCTGGGAGGGAGAAGATGATGGCAGAAATCTACGCAAATGGTCCCATCAGCTGTGGAATAATGGCAACAGAA
AGACTGGCTAACTACACCGGAGGCATCTATGCCGAATACCAGGACACCACATATATAAACCATGTCGTTTCCGTG
GCTGGGTGGGGCATCAGTGATGGGACTGAGTACTGGATTGTCCGGAATTCATGGGGTGAACCATGGGGCGAGAGA
GGCTGGCTGAGGATCGTGACCAGCACCTATAAGGATGGGAAGGGCGCCAGATACAACCTTGCCATCGAGGAGCAC
TGTACATTTGGGGACCCCATCGTT**TAA**GGCCATGTCACTAGAAGCGCAGTTTAAGAAAAGGCATGGTGACCCATG
ACCAGAGGGGATCCTATGGTTATGTGTGCCAGGCTGGCTGGCAGGAACTGGGGTGGCTATCAATATTGGATGGCG
AGGACAGCGTGGTACTGGCTGCGAGTGTTCCTGAGAGTTGAAAGTGGGATGACTTATGACACTTGCACAGCATGC
TCTGCCTCACAATGATGCAGTCAGCCACCTGGTGAAGAAGTGACCTGCAACACAGGAAACGATGGGACCTCAGTC
TTCTTCAGCAGAGGACTTGATATTTTGTATTTGGCAACTGTGGGCAATAATATGGCATTTAAGAGGTGAAAGAGT
TCAGACTTATCACCATTCTTATGTCACTTTAGAATCAAGGG

FIGURE 1544

MARRGPGWRPLLLLVLLAGAAQGGLYFRRGQTCYRPLRGDGLAPLGRTTYPRPHEYLSPADLPKSWDWRNVDGVN
YASITRNQHIPQYCGSCWAHASTSAMADRINIKRKGAWPSTLLSVQNVIDCGNAGSCEGGNDLSVWDYAHQHGIP
DETCNNYQAKDQECDKFNQCGTCNEFKECHAIRNYTLWRVGDYGSLSGREKMMAEIYANGPISCGIMATERLANY
TGGIYAEYQDTTYINHVVSVAGWGISDGTEYWIVRNSWGEPWGERGWLRIVTSTYKDGKGARYNLAIEEHCTFGD
PIV

FIGURE 1545

CGCCGAGATCGGGTGCCCGGG**ATG**AGCCTCATCCGGAAAAAGGGCTTCTACAAGCAGGACGTCAACAAGACCGCC
TGGGAGCTGCCCAAGACCTACGTGTCCCCGACGCACGTCGGCAGCGGGGCCTATGGCTCCGTGTGCTCGGCCATC
GACAAGCGGTCAGGGGAGAAGGTGGCCATCAAGAAGCTGAGCCGACCCTTTCAGTCCGAGATCTTCGCCAAGCGC
GCCTACCGGGAGCTGCTGCTGCTGAAGCACATGCAGCATGAGAACGTCATTGGGCTCCTGGATGTCTTCACCCCA
GCCTCCTCCCTGCGCAACTTCTATGACTTCTACCTGGTGATGCCCTTCATGCAGACGGATCTGCAGAAGATCATG
GGGATGGAGTTCAGTGAGGAGAAGATCCAGTACCTGGTGTATCAGATGCTCAAAGGCCTTAAGTACATCCACTCT
GCTGGGGTCGTGCACAGGGACCTGAAGCCAGGCAACCTGGCTGTGAATGAGGACTGTGAACTGAAGATTCTGGAT
TTTGGGCTGGCGCGACATGCAGACGCCGAGATGACTGGCTACGTGGTGACCCGCTGGTACCGAGCCCCCGAGGTG
ATCCTCAGCTGGATGCACTACAACCAGACAGTGGATATCTGGTCTGTGGGCTGTATCATGGCAGAGATGCTGACA
GGGAAAACTCTGTTCAGGGGGAAAGATTACCTGGACCAGCTGACCCAGATCCTGAAAGTGACCGGGGTGCCTGGC
ACGGAGTTTGTGCAGAAGCTGAACGACAAAGCGGCCAAATCCTACATCCAGTCCCTGCCACAGACCCCCAGGAAG
GATTTCACTCAGCTGTTCCCACGGGCCAGCCCCCAGGCTGCGGACCTGCTGGAGAAGATGCTGGAGCTAGACGTG
GACAAGCGCCTGACGGCCGCGCAGGCCCTCACCCATCCCTTCTTTGAACCCTTCCGGGACCCTGAGGAAGAGACG
GAGGCCCAGCAGCCGTTTGATGATTCCTTAGAACACGAGAAACTCACAGTGGATGAATGGAAGCAGCACATCTAC
AAGGAGATTGTGAACTTCAGCCCCATTGCCCGGAAGGACTCACGGCGCCGGAGTGGCATGAAGCTG**TAG**GGACTC
ATCTTGCATGGCACCGCCGGCCAGACACTGCCCAAGGACCAGTATTTGTCACTACCAAACTCAGCCCTTCTTGGA
ATACAGCCTTTCAAGCAGAGGACAGAAGGGTCCTTCTCCTTATGTGGGAAATGGGCCTAGTAGATGCAGAATTCA
AAGATGTCGGTTGGGAGAAACTAGCTCTGATCCTAACAGGCCACGTTAAACTGCCCATCTGGAGAATCGCCTGCA
GGTGGGGCCCTTTCCTTCCCGCCAGAGTGGGGCTGAGTGGGCGCTGAGCCAGGCCGGGGGCCTATGGCAGTGATG
CTGTGTTGGTTTCCTAGGGATGCTCTAACGAATTACCACAAACCTGGTGGATTGAAACAGCAGAACTTGATTCCC
TTACAGTTCTGGAGGCTGGAAATCTGGGATGGAGGTGTTGGCAGGGCTGTGGTCCCTTTGAAGGCTCTGGGGAAG
AATCCTTCCTTGGCTCTTTTTAGCTTGTGGCGGCAGTGGGCAGTCCGTGGCATTCCCCAGCTTATTGCTGCATCA
CTCCAGTCTCTGTCTCTTCTGTTCTCTCCTCTTTTAACAACAGTCATTGGATTTAGGGCCCACCCTAATCCTGTG
TGATCTTATCTTGATCCTTATTAATTAAACCTGCAAATACTCTAGTTCCAAATAAAAAAAAAAAAAAAA

FIGURE 1546

MSLIRKKGFYKQDVNKTAWELPKTYVSPTHVGSGAYGSVCSAIDKRSGEKVAIKKLSRPFQSEIFAKRAYRELLL
LKHMQHENVIGLLDVFTPASSLRNFYDFYLVMPFMQTDLQKIMGMEFSEEKIQYLVYQMLKGLKYIHSAGVVHRD
LKPGNLAVNEDCELKILDFGLARHADAEMTGYVVTRWYRAPEVILSWMHYNQTVDIWSVGCIMAEMLTGKTLFRG
KDYLDQLTQILKVTGVPGTEFVQKLNDKAAKSYIQSLPQTPRKDFTQLFPRASPQAADLLEKMLELDVDKRLTAA
QALTHPFFEPFRDPEEETEAQQPFDDSLEHEKLTVDEWKQHIYKEIVNFSPIARKDSRRRSGMKL

FIGURE 1547

GGCACGAGGCTGGGACCGGAGTGGGGAGCGCGGCGTGGAGGTGCCACCCGGCGCGGGTGGCGGAGAGATCAGAAG
CCTCTTCCCCAAGCCGAGCCAACCTCAGCGGGGACCCGGGCTCAGGGACGCGGCGGCGGCGGCGGCGACTGCAGT
GGCTGGACG**ATG**GCAGCGTCCGCCGGAGCCGGGGCGGTGATTGCAGCCCCAGACAGCCGGCGCTGGCTGTGGTCG
GTGCTGGCGGCGGCGCTTGGGCTCTTGACAGCTGGAGTATCAGCCTTGGAAGTATATACGCCAAAAGAAATCTTC
GTGGCAAATGGTACACAAGGGAAGCTGACCTGCAAGTTCAAGTCTACTAGTACGACTGGCGGGTTGACCTCAGTC
TCCTGGAGCTTCCAGCCAGAGGGGGCCGACACTACTGTGTCGTTTTTCCACTACTCCCAAGGGCAAGTGTACCTT
GGGAATTATCCACCATTTAAAGACAGAATCAGCTGGGCTGGAGACCTTGACAAGAAAGATGCATCAATCAACATA
GAAAATATGCAGTTTATACACAATGGCACCTATATCTGTGATGTCAAAAACCCTCCTGACATCGTTGTCCAGCCT
GGACACATTAGGCTCTATGTCGTAGAAAAAGAGAATTTGCCTGTGTTTCCAGTTTGGGTAGTGGTGGGCATAGTT
ACTGCTGTGGTCCTAGGTCTCACTCTGCTCATCAGCATGATTCTGGCTGTCCTCTATAGAAGGAAAAACTCTAAA
CGGGATTACACTGGCTGCAGTACATCAGAGAGTTTGTCACCAGTTAAGCAGGCTCCTCGGAAGTCCCCCTCCGAC
ACTGAGGGTCTTGTAAAGAGTCTGCCTTCTGGATCTCACCAGGGCCCAGTCATATATGCACAGTTAGACCACTCC
GGCGGACATCACAGTGACAAGATTAACAAGTCAGAGTCTGTGGTGTATGCGGATATCCGAAAGAAT**TAA**GAGAAT
ACCTAGAACATATCCTCAGCAAGAAACAAAACCAAACTGGACTCTCGTGCAGAAAATGTAGCCCATTACCACATT
TAGCCTTGGAGACCCAGGCAAGGACAAGTACACGTGTACTCACAGAGGGAGAGAAAGATGTGTACAAAGGATATG
TATAAATATTCTATTTAGTCATCCTGATATGAGGAGCCAGTGTTGCATGATGAAAAGATGGTATGATTCTACATA
TGTACCCATTGTCTTGCTGTTTTTGTACTTTCTTTTCAGGTCATTTACAATTGGGAGATTTCAGAAACATTCCTT
TCACCATCATTTAGAAATGGTTTGCCTTAATGGAGACAATAGCAGATCCTGTAGTATTTCCAGTAGACATGGCCT
TTTAATCTAAGGGCTTAAGACTGATTAGTCTTAGCATTTACTGTAGTTGGAGGATGGAGATGCTATGATGGAAGC
ATACCCAGGGTGGCCTTTAGCACAGTATCAGTACCATTTATTTGTCTGCCGCTTTTAAAAAATACCCATTGGCTA
TGCCACTTGAAAACAATTTGAGAAGTTTTTTTGAAGTTTTTCTCACTAAAATATGGGGCAATTGTTAGCCTTACA
TGTTGTGTAGACTTACTTTAAGTTTGCACCCTTGAAATGTGTCATATCAATTTCTGGATTCATAATAGCAAGATT
AGCAAAGGATAAATGCCGAAGGTCACTTCATTCTGGACACAGTTGGATCAATACTGATTAAGTAGAAAATCCAAG
CTTTGCTTGAGAACTTTTGTAACGTGGAGAGTAAAAAGTATCGGTTTTAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAA

FIGURE 1548

MAASAGAGAVIAAPDSRRWLWSVLAAALGLLTAGVSALEVYTPKEIFVANGTQGKLTCKFKSTSTTGGLTSVSWS
FQPEGADTTVSFFHYSQGQVYLGNYPPFKDRISWAGDLDKKDASINIENMQFIHNGTYICDVKNPPDIVVQPGHI
RLYVVEKENLPVFPVWVVVGIVTAVVLGLTLLISMILAVLYRRKNSKRDYTGCSTSESLSPVKQAPRKSPSDTEG
LVKSLPSGSHQGPVIYAQLDHSGGHHSDKINKSESVVYADIRKN

FIGURE 1549

TGCAGCTGTTTTCACTCCGCTGTGACTCAGAGCGCTCCGGGCTGCAGGAGAGGAAGAAATCTTGCATCACC**ATG**G
TGCACTTCTGTGGCCTACTCACCCTCCACCGGGAGCCAGTGCCGCTGAAGAGTATCTCTGTGAGCGTGAACATTT
ACGAGTTTGTGGCTGGTGTGTCTGCAACTTTGAACTACGAGAATGAGGAGAAAGTTCCTTTGGAGGCCTTCTTTG
TGTTCCCCATGGATGAAGACTCTGCTGTTTACAGCTTTGAGGCCTTGGTGGATGGGAAGAAAATTGTAGCAGAAT
TACAAGACAAGATGAAGGCCCGCACCAACTATGAGAAAGCCATCTCCCAGGGCCACCAGGCCTTCTTATTGGAGG
GGGACAGCAGCTCCAGGGATGTCTTCTCTTGCAATGTGGGTAACCTCCAACCTGGGTCGAAGGCGGCAGTCACCC
TGAAGTATGTGCAGGAGCTGCCTCTGGAAGCAGATGGGGCTCTGCGCTTTGTGCTCCCAGCTGTCCTGAATCCTA
GATACCAGTTCTCTGGGTCGTCTAAGGACAGTTGCCTTAATGTGAAGACTCCTATAGTCCCTGTGGAGGACCTGC
CCTACACACTCAGCATGGTCGCCACCATAGATTCCCAGCATGGCATTGAGAAGGTCCAATCCAACTGCCCCTTGA
GTCCTACCGAGTACCTAGGAGAGGACAAGACTTCTGCTCAGGTTTCCCTGGCTGCTGGACACAAGTTTGATCGGG
ACGTGGAACTCCTGATTTACTACAATGAGGTGCATACCCCCAGCGTGGTTTTGGAGATGGGGATGCCTAACATGA
AGCCAGGTCATTTGATGGGAGATCCATCTGCAATGGTGAGTTTCTATCCAAATATCCCAGAAGATCAACCATCAA
ATACCTGTGGAGAGTTTATCTTTCTCATGGACCGCTCGGGAAGTATGCAGAGCCCCATGAGTAGCCAGGATACAT
CTCAGCTGCGAATACAGGCAGCCAAGGAAACACTGATTTTGCTGCTGAAGAGTTTACCTATAGGCTGTTATTTCA
ACATCTATGGATTTGGCTCTTCCTATGAGGCATGCTTTCCGGAGAGTGTGAAGTACACTCAGCAAACAATGGAGG
AGGCTCTGGGGAGAGTGAAGCTTATGCAGGCCGACCTAGGGGGCACTGAAATCTTGGCACCACTCCAGAACATTT
ACAGGGGACCCTCCATCCCAGGCCACCCCCTACAGCTTTTTGTCTTTACAGATGGAGAAGTTACAGACACGTTTA
GTGTAATTAAAGAAGTTAGGATCAACAGACAGAAACACAGG**TAG**GAAGAAAATGTGATTTCCGGGTGATTGGTGC
TGAGTAGTGACACACAGACTCTAGTGCTACATGATGCCGGTGTTGACCTTCCTTCAAGAGGACCAAATGATTTCA
GAATTTAGTTTTAGCAGCTGAAAATTTATTTCTCCCTGTAAACGTTAAAAACAGTTTTCCAAATAACATCAACAA
CACAGCAAAACCATTGTTTCTTATTCTTTCTAAACTACAACGAACACAAGAATTGAATAGTAAGATGTTAATTTT
TTTTACTATAAACATTTTTAGAGAAGTAAAACATGCTGAAAACTACACAAATTATAAGCATACAACTGGACTCAT
TATCACAGTGAATGCACTGTGTGATCGCCACATAGGTAAAAACTGGAATGGTCGTAGGCCTCTCCATCTGTACCC
TTTTCCATCATGTCCTATTCCCTGTCACTACACACTAAAACTTTCCTGACTTACAATACCATGGGTTATTTATGC
TTGTTTTTGAATGAAAATAAATAAGTTATACAGTAAAAAAAAAAAAAAAAA

FIGURE 1550

MVHFCGLLTLHREPVPLKSISVSVNIYEFVAGVSATLNYENEEKVPLEAFFVFPMDEDSAVYSFEALVDGKKIVA
ELQDKMKARTNYEKAISQGHQAFLLEGDSSSRDVFSCNVGNLQPGSKAAVTLKYVQELPLEADGALRFVLPAVLN
PRYQFSGSSKDSCLNVKTPIVPVEDLPYTLSMVATIDSQHGIEKVQSNCPLSPTEYLGEDKTSAQVSLAAGHKFD
RDVELLIYYNEVHTPSVVLEMGMPNMKPGHLMGDPSAMVSFYPNIPEDQPSNTCGEFIFLMDRSGSMQSPMSSQD
TSQLRIQAAKETLILLLKSLPIGCYFNIYGFGSSYEACFPESVKYTQQTMEEALGRVKLMQADLGGTEILAPLQN
IYRGPSIPGHPLQLFVFTDGEVTDTFSVIKEVRINRQKHR

FIGURE 1551A

ATGGCTGGCGGAGCCTGGGGCCGCCTGGCCTGTTACTTGGAGTTCCTGAAGAAGGAGGAGCTGAAGGAGTTCCAG
CTTCTGCTCGCCAATAAAGCGCACTCCAGGAGCTCTTCGGGTGAGACACCCGCTCAGCCAGAGAAGACGAGTGGC
ATGGAGGTGGCCTCGTACCTGGTGGCTCAGTATGGGGAGCAGCGGGCCTGGGACCTAGCCCTCCATACCTGGGAG
CAGATGGGGCTGAGGTCACTGTGCGCCCAAGCCCAGGAAGGGGCAGGCCACTCTCCCTCATTCCCCTACAGCCCA
AGTGAACCCCACCTGGGGTCTCCCAGCCAACCCACCTCCACCGCAGTGCTAATGCCCTGGATCCATGAATTGCCG
GCGGGGTGCACCCAGGGCTCAGAGAGAAGGGTTTTGAGACAGCTGCCTGACACATCTGGACGCCGCTGGAGAGAA
ATCTCTGCCTCACTCCTCTACCAAGCTCTTCCAAGCTCCCCAGACCATGAGTCTCCAAGCCAGGAGTCACCCAAC
GCCCCCACATCCACAGCAGTGCTGGGGAGCTGGGGATCCCCACCTCAGCCCAGCCTAGCACCCAGAGAGCAGGAG
GCTCCTGGGACCCAATGGCCTCTGGATGAAACGTCAGGAATTTACTACACAGAAATCAGAGAAAGAGAGAGAGAG
AAATCAGAGAAAGGCAGGCCCCCATGGGCAGCGGTGGTAGGAACGCCCCCACAGGCGCACACCAGCCTACAGCCC
CACCACCACCCATGGGAGCCTTCTGTGAGAGAGAGCCTCTGTTCCACATGGCCCTGGAAAAATGAGGATTTTAAC
CAAAAATTCACACAGCTGCTACTTCTACAAAGACCTCACCCCAGAAGCCAAGATCCCCTGGTCAAGAGAAGCTGG
CCTGATTATGTGGAGGAGAATCGAGGACATTTAATTGAGATCAGAGACTTATTTGGCCCAGGCCTGGATACCCAA
GAACCTCGCATAGTCATACTGCAGGGGGCTGCTGGAATTGGGAAGTCAACACTGGCCAGGCAGGTGAAGGAAGCC
TGGGGGGAGAGGCCAGCTGTATGGGGACCGCTTCCAGCATGTCTTCTACTTCAGCTGCAGAGAGCTGGCCCAGTCC
AAGGTGGTGAGTCTCGCTGAGCTCATCGGAAAAGATGGGACAGCCACTCCGGCTCCCATTAGACAGATCCTGTCT
AGGCCAGAGCGGCTGCTCTTCATCCTCGATGGTGTAGATGAGCCAGGATGGGTCTTGCAGGAGCCGAGTTCTGAG
CTCTGTCTGCACTGGAGCCAGCCACAGCCGGCGGATGCACTGCTGGGCAGTTTGCTGGGGAAAACTATACTTCCC
GAGGCATCCTTCCTGATCACGGCTCGGACCACAGCTCTGCAGAACCTCATTCCTTCTTTGGAGCAGGCACGTTGG
GTAGAGGTCCTGGGGTTCTCTGAGTCCAGCAGGAAGGAATATTTCTACAGATATTTCACAGATGAAAGGCAAGCA
ATTAGAGCCTTTAGGTTGGTCAAATCAAACAAAGAGCTCTGGGCCCTGTGTCTTGTGCCCTGGGTGTCCTGGCTG
GCCTGCACTTGCCTGATGCAGCAGATGAAGCGGAAGGAAAAACTCACACTGACTTCCAAGACCACCACAACCCTC
TGTCTACATTACCTTGCCCAGGCTCTCCAAGCTCAGCCATTGGGACCCCAGCTCAGAGACCTCTGCTCTCTGGCT
GCTGAGGGCATCTGGCAAAAAAAGACCCTTTTCAGTCCAGATGACCTCAGGAAGCATGGGTTAGATGGGGCCATC
ATCTCCACCTTCTTGAAGATGGGTATTCTTCAAGAGCACCCCATCCCTCTGAGCTACAGCTTCATTCACCTCTGT
TTCCAAGAGTTCTTTGCAGCAATGTCCTATGTCTTGGAGGATGAGAAGGGGAGAGGTAAACATTCTAATTGCATC
ATAGATTTGGAAAAGACGCTAGAAGCATATGGAATACATGGCCTGTTTGGGGCATCAACCACACGTTTCCTATTG
GGCCTGTTAAGTGATGAGGGGGAGAGAGAGATGGAGAACATCTTTCACTGCCGGCTGTCTCAGGGGAGGAACCTG
ATGCAGTGGGTCCCGTCCCTGCAGCTGCTGCTGCAGCCACACTCTCTGGAGTCCCTCCACTGCTTGTACGAGACT
CGGAACAAAACGTTCCTGACACAAGTGATGGCCCATTTCGAAGAAATGGGCATGTGTGTAGAAACAGACATGGAG
CTCTTAGTGTGCACTTTCTGCATTAAATTCAGCCGCCACGTGAAGAAGCTTCAGCTGATTGAGGGCAGGCAGCAC
AGATCAACATGGAGCCCCACCATGGTAGTCCTGTTCAGGTGGGTCCCAGTCACAGATGCCTATTGGCAGATTCTC
TTCTCCGTCCTCAAGGTCACCAGAAACCTGAAGGAGCTGGACCTAAGTGGAAACTCGCTGAGCCACTCTGCAGTG
AAGAGTCTTTGTAAGACCCTGAGACGCCCTCGCTGCCTCCTGGAGACCCTGCGGTTGGCTGGCTGTGGCCTCACA
GCTGAGGACTGCAAGGACCTTGCCTTTGGGCTGAGAGCCAACCAGACCCTGACCGAGCTGGACCTGAGCTTCAAT
GTGCTCACGGATGCTGGAGCCAAACACCTTTGCCAGAGACTGAGACAGCCGAGCTGCAAGCTACAGCGACTGCAG
CTGGTCAGCTGTGGCCTCACGTCTGACTGCTGCCAGGACCTGGCCTCTGTGCTTAGTGCCAGCCCCAGCCTGAAG
GAGCTAGACCTGCAGCAGAACAACCTGGATGACGTTGGCGTGCGACTGCTCTGTGAGGGGCTCAGGCATCCTGCC
TGCAAACTCATACGCCTGGGGCTGGACCAGACAACTCTGAGTGATGAGATGAGGCAGGAACTGAGGGCCCTGGAG
CAGGAGAAACCTCAGCTGCTCATCTTCAGCAGACGGAAACCAAGTGTGATGACCCCTACTGAGGGCCTGGATACG
GGAGAGATGAGTAATAGCACATCCTCACTCAAGCGGCAGAGACTCGGATCAGAGAGGGCGGCTTCCCATGTTGCT
CAGGCTAATCTCAAACTCCTGGACGTGAGCAAGATCTTCCCAATTGCTGAGATTGCAGAGGAAAGCTCCCCAGAG
GTAGTACCGGTGGAACTCTTGTGCGTGCCTTCTCCTGCCTCTCAAGGGGACCTGCATACGAAGCCTTTGGGGACT
GACGATGACTTCTGGGGCCCCACGGGGCCTGTGGCTACTGAGGTAGTTGACAAAGAAAAGAACTTGTACCGAGTT
CACTTCCCTGTAGCTGGCTCCTACCGCTGGCCCAACACGGGTCTCTGCTTTGTGATGAGAGAAGCGGTGACCGTT
GAGATTGAATTCTGTGTGTGGGACCAGTTCCTGGGTGAGATCAACCCACAGCACAGCTGGATGGTGGCAGGGCCT
CTGCTGGACATCAAGGCTGAGCCTGGAGCTGTGGAAGCTGTGCACCTCCCTCACTTTGTGGCTCTCCAAGGGGGC
CATGTGGACACATCCCTGTTCCAAATGGCCCACTTTAAAGAGGAGGGGATGCTCCTGGAGAAGCCAGCCAGGGTG

FIGURE 1551B

GAGCTGCATCACATAGTTCTGGAAAACCCCAGCTTCTCCCCCTTGGGAGTCCTCCTGAAAATGATCCATAATGCC
CTGCGCTTCATTCCCGTCACCTCTGTGGTGTTGCTTTACCACCGCGTCCATCCTGAGGAAGTCACCTTCCACCTC
TACCTGATCCCAAGTGACTGCTCCATTCGGAAGGCCATAGATGATCTAGAAATGAAATTCCAGTTTGTGCGAATC
CACAAGCCACCCCCGCTGACCCCACTTTATATGGGCTGTCGTTACACTGTGTCTGGGTCTGGTTCAGGGATGCTG
GAAATACTCCCCAAGGAACTGGAGCTCTGCTATCGAAGCCCTGGAGAAGACCAGCTGTTCTCGGAGTTCTACGTT
GGCCACTTGGGATCAGGGATCAGGCTGCAAGTGAAAGACAAGAAAGATGAGACTCTGGTGTGGGAGGCCTTGGTG
AAACCAGGAGATCTCATGCCTGCAACTACTCTGATCCCTCCAGCCCGCATAGCCGTACCTTCACCTCTGGATGCC
CCGCAGTTGCTGCACTTTGTGGACCAGTATCGAGAGCAGCTGATAGCCCGAGTGACATCGGTGGAGGTTGTCTTG
GACAAACTGCATGGACAGGTGCTGAGCCAGGAGCAGTACGAGAGGGTGCTGGCTGAGAACACGAGGCCCAGCCAG
ATGCGGAAGCTGTTCAGCTTGAGCCAGTCCTGGGACCGGAAGTGCAAAGATGGACTCTACCAAGCCCTGAAGGAG
ACCCATCCTCACCTCATTATGGAACTCTGGGAGAAGGGCAGCAAAAAGGGACTCCTGCCACTCAGCAGC**TGA**AGT
ATCAACACCAGCCCTTGACCCTTGAGTCCTGGCTTTGGCTGACCCTTCTTTGGGTCTCAGTTTCTTTCTCTGCAA
ACAAGTTGCCATCTGGTTTGCCTTCCAGCACTAAAGTAATGGAACTTTGATGATGCCTTTGCTGGGCATTATGTG
TCCATGCCAGGGATGCCACAGGGGGCCCCAGTCCAGGTGGCCTAACAGCATCTCAGGGAATGTCCATCTGGAGCT
GGCAAGACCCCTGCAGACCTCATAGAGCCTCATCTGGTGGCCACAGCAGCCAAGCCTAGAGCCCTCCGGATCCCA
TCCAGGCGCAAAGAGGAATAGGAGGGACATGGAACCATTTGCCTCTGGCTGTGTCACAGGGTGAGCCCCAAAATT
GGGGTTCAGCGTGGGAGGCCACGTGGATTCTTGGCTTTGTACAGGAAGATCTACAAGAGCAAGCCAACAGAGTAA
AGTGGAAGGAAGTTTATTCAGAAAATAAAGGAGTATCACAGCTCTTTTAGAATTTGTCTAGCAGGCTTTCCAGTT
TTTACCAGAAAACCCCTATAAATTAAAAATTTTTTACTTAAATTTAAGAATTAAAAAAATACAAAAAAGAAAAAA
TGAAAATAAAGGAATAAGAAGTTACCTACTCCAAAAAAAAAAA

FIGURE 1552

MAGGAWGRLACYLEFLKKEELKEFQLLLLANKAHSRSSSGETPAQPEKTSGMEVASYLVAQYGEQRAWDLALHTWE
QMGLRSLCAQAQEGAGHSPSFPYSPSEPHLGSPSQPTSTAVLMPWIHELPAGCTQGSERRVLRQLPDTSGRRWRE
ISASLLYQALPSSPDHESPSQESPNAPTSTAVLGSWGSPPQPSLAPREQEAPGTQWPLDETSGIYYTEIRERERE
KSEKGRPPWAAVVGTPPQAHTSLQPHHHPWEPSVRESLCSTWPWKNEDFNQKFTQLLLLQRPHPRSQDPLVKRSW
PDYVEENRGHLIEIRDLFGPGLDTQEPRIVILQGAAGIGKSTLARQVKEAWGRGQLYGDRFQHVFYFSCRELAQS
KVVSLAELIGKDGTATPAPIRQILSRPERLLFILDGVDEPGWVLQEPSSELCLHWSQPQPADALLGSLLGKTILP
EASFLITARTTALQNLIPSLEQARWVEVLGFSESSRKEYFYRYFTDERQAIRAFRLVKSNKELWALCLVPWVSWL
ACTCLMQQMKRKEKLTLTSKTTTTLCLHYLAQALQAQPLGPQLRDLCSLAAEGIWQKKTLFSPDDLRKHGLDGAI
ISTFLKMGILQEHPIPLSYSFIHLCFQEFFAAMSYVLEDEKGRGKHSNCIIDLEKTLEAYGIHGLFGASTTRFLL
GLLSDEGEREMENIFHCRLSQGRNLMQWVPSLQLLLQPHSLESLHCLYETRNKTFLTQVMAHFEEMGMCVETDME
LLVCTFCIKFSRHVKKLQLIEGRQHRSTWSPTMVVLFRWVPVTDAYWQILFSVLKVTRNLKELDLSGNSLSHSAV
KSLCKTLRRPRCLLETLRLAGCGLTAEDCKDLAFGLRANQTLTELDLSFNVLTDAGAKHLCQRLRQPSCKLQRLQ
LVSCGLTSDCCQDLASVLSASPSLKELDLQQNNLDDVGVRLLCEGLRHPACKLIRLGLDQTTLSDEMRQELRALE
QEKPQLLIFSRRKPSVMTPTEGLDTGEMSNSTSSLKRQRLGSERAASHVAQANLKLLDVSKIFPIAEIAEESSPE
VVPVELLCVPSPASQGDLHTKPLGTDDDFWGPTGPVATEVVDKEKNLYRVHFPVAGSYRWPNTGLCFVMREAVTV
EIEFCVWDQFLGEINPQHSWMVAGPLLDIKAEPGAVEAVHLPHFVALQGGHVDTSLFQMAHFKEEGMLLEKPARV
ELHHIVLENPSFSPLGVLLKMIHNALRFIPVTSVVLLYHRVHPEEVTFHLYLIPSDCSIRKAIDDLEMKFQFVRI
HKPPPLTPLYMGCRYTVSGSGSGMLEILPKELELCYRSPGEDQLFSEFYVGHLGSGIRLQVKDKKDETLVWEALV
KPGDLMPATTLIPPARIAVPSPLDAPQLLHFVDQYREQLIARVTSVEVVLDKLHGQVLSQEQYERVLAENTRPSQ
MRKLFSLSQSWDRKCKDGLYQALKETHPHLIMELWEKGSKKGLLPLSS

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FIGURE 1553

CATTTCATTGGCGTTTGAGTCAGCAAAGAAGTCAAG**ATG**GCCAAAGTTCCAGACATGTTTGAAGACCTGAAGAAC
TGTTACAGTGAAAATGAAGAAGACAGTTCCTCCATTGATCATCTGTCTCTGAATCAGAAATCCTTCTATCATGTA
AGCTATGGCCCACTCCATGAAGGCTGCATGGATCAATCTGTGTCTCTGAGTATCTCTGAAACCTCTAAAACATCC
AAGCTTACCTTCAAGGAGAGCATGGTGGTAGTAGCAACCAACGGGAAGGTTCTGAAGAAGAGACGGTTGAGTTTA
AGCCAATCCATCACTGATGATGACCTGGAGGCCATCGCCAATGACTCAGAGGAAGAAATCATCAAGCCTAGGTCA
GCACCTTTTAGCTTCCTGAGCAATGTGAAATACAACTTTATGAGGATCATCAAATACGAATTCATCCTGAATGAC
GCCCTCAATCAAAGTATAATTCGAGCCAATGATCAGTACCTCACGGCTGCTGCATTACATAATCTGGATGAAGCA
GTGAAATTTGACATGGGTGCTTATAAGTCATCAAAGGATGATGCTAAAATTACCGTGATTCTAAGAATCTCAAAA
ACTCAATTGTATGTGACTGCCCAAGATGAAGACCAACCAGTGCTGCTGAAGGAGATGCCTGAGATACCCAAAACC
ATCACAGGTAGTGAGACCAACCTCCTCTTCTTCTGGGAAACTCACGGCACTAAGAACTATTTCACATCAGTTGCC
CATCCAAACTTGTTTATTGCCACAAAGCAAGACTACTGGGTGTGCTTGGCAGGGGGGCCACCCTCTATCACTGAC
TTTCAGATACTGGAAAACCAGGCG**TAG**GTCTGGAGTCTCACTTGTCTCACTTGTGCAGTGTTGACAGTTCATATG
TACCATGTACATGAAGAAGCTAAATCCTTTACTGTTAGTCATTTGCTGAGCATGTACTGACCCTTGTAATTCTAA
ATGAATGTTTACACTCTTTGTAAGAGTGGAACCAACACTAACATATAATGTTGTTATTTAAAGAACACCCTATAT
TTTGCATAGTACCAATCATTTTAATTATTATTCTTCATAACAATTTTAGGAGGACCAGAGCTACTGACTATGGCT
ACCAAAAAGACTCTACCCATATTACAGATGGGCAAATTAAGGCATAAGAAAACTAAGAAATATGCACAATAGCAG
TTGAAACAAGAAGCCACAGACCTAGGATTTCATGATTTCATTTCAACTGTTTGCCTTCTACTTTTAAGTTGCTGA
TGAACTCTTAATCAAATAGCATAAGTTTCTGGGACCTCAGTTTTATCATTTTCAAAATGGAGGGAATAATACCTA
AGCCTTCCTGCCGCAACAGTTTTTTATGCTAATCAGGGAGGTCATTTTGGTAAAATACTTCTTGAAGCCGAGCCT
CAAGATGAAGGCAAAGCACGAAATGTTATTTTTTAATTATTATTTATATATGTATTTATAAATATATTTAAGATA
ATTATAATATACTATATTTATGGGAACCCCTTCATCCTCTGAGTGTGACCAGGCATCCTCCACAATAGCAGACAG
TGTTTTCTGGGATAAGTAAGTTTGATTTCATTAATACAGGGCATTTTGGTCCAAGTTGTGCTTATCCCATAGCCA
GGAAACTCTGCATTCTAGTACTTGGGAGACCTGTAATCATATAATAAATGTACATTAATTACCTTGAGCCAGTAA
TTGGTCCGATCTTTGACTCTTTTGCCATTAAACTTACCTGGGCATTCTTGTTTCATTCAATTCCACCTGCAATCA
AGTCCTACAAGCTAAAATTAGATGAACTCAACTTTGACAACCATGAGACCACTGTTATCAAAGTTGAGTTCATCT
AATTTTAGCTTGTAGAGACGGGATTTCACCATCTTGGCCGTGCTGGTCTCGAACTTCTGACCTCGTGATCCACCC
GCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCATCGCGCCCGGCCTGGAGTTTCTACTGTGCACCAG
GCACTACCTTTACATGTATTGTTTTATTTAATCCTCAGTCAGCCGTGTTTGGTAGGTGCAGTTAGTATATTTCCA
TTTTCATCTGCGCAAACAGATTCAGGAACTTTGTAATTTACATAAGGTCACATTCATCCTAATTCACAAAATCAA
GATTTCACACCTATTCCTTTTTCTTTCCAGTGCCTGTGCTTTTTCTCTCATACCAAGGAGAAGTAATAAGCCTAA
CGTTTTAAACCTCACAAAAGTACATACAGAAAAGTAAATAGCCTAATTTTGCAACTAATACAAATGGCGCTGTAC
TTCTTTGGTGATGGTAGATTTATAATTTTTGAAGTATGGTAGATTCAAATGAACCACTGAAAAGGCATTTAGTTT
CTTGTCCCAAATAAAAAAAAAAAAAAAAA

FIGURE 1554

MAKVPDMFEDLKNCYSENEEDSSSIDHLSLNQKSFYHVSYGPLHEGCMDQSVSLSISETSKTSKLTFKESMVVVA
TNGKVLKKRRLSLSQSITDDDLEAIANDSEEEIIKPRSAPFSFLSNVKYNFMRIIKYEFILNDALNQSIIRANDQ
YLTAAALHNLDEAVKFDMGAYKSSKDDAKITVILRISKTQLYVTAQDEDQPVLLKEMPEIPKTITGSETNLLFFW
ETHGTKNYFTSVAHPNLFIATKQDYWVCLAGGPPSITDFQILENQA

FIGURE 1555

GCCATTCTCTCACATCCCGTGCGGTCAGGAAGCCCTTCCTGAACTCTGACTTCAGTTCTTGCTGCGGTTTCTGCC
CATTTTTTTCATATCCTCTGACAGCTGCGAGGTCATCTCTGCTCTGGCTTTTCTCCAAGCAGAACAAGTGGGGGC
TCTGGAAAGGTTAAGGGACCTCAGTGGCCACCATTATACTTTGCATCTTTCCTGAGAAGTGAGAGTTGAAAGGGA
AGCAGGAAGGCCCATGGTCAGATTGAAGGAAGGACTTTTTAGTTTCTTTTTTTTTTTTTTGAAATGGAGTCTCGC
TCTGTCATTCAGGCTGGAGTGCAGTGGTGCGATCTCAGCTCACTGCAGCCTCCACTTCCTGGGTTCACATGATTC
TCCTGCCTCAGCCTCCCAAGTAGCTGAGACTACAGGCACATGCCACTACACCCAGCTAACTTTTGTATTTTTAGT
AGAGACGGGGTTTCACCATGTTGGCCAGGCTGGTCTCAAACTGCTAACATCAAGTGATCTGCTCCCCTCAGCCTC
CCAAAGTGCTGGGATTACCGGTATGAACCACCACAACCTGCCAGGAATTTTTAGTTTTTAGCTTTTGCAGGAGAC
TTCAAGGAAAGGAGACATTCCTCTGTCCAGGAAACGGGTAAGGGGACCATTTCTGCATTGCTGGTTTCCCCTCTT
GGCAGGGTGGGCATGAGGCATCACTGTTCCTGCTCCCTCACTCCTGCTCCTCATGCTCAGCCTGCCAGCTCGGCC
TCAACTTTGTGTGTCTAAAGTGGAACTGAATAGTAGCTGTGAGAAGATAGGAAAGAGGTAGTGCCAATCTCCTTG
CCCAGATCATAAATCCAGACTCAGCAGGGTAACCACATGGGCAAGCACAAGGTAGGTGCTTGGGGAAAGGGGAAG
TAATTGGCATTCTGTGTGATACCAAGGAGACCATTTGGATTTTGGCTTCTACCAAAGAGAATGGAGAATTGGTTG
ACCTAAATGGAACCAGTCCCTTTAAGTAAGGGGAGGAAAGGGGGTGCTGGAAGATGGCCCTCTTCCCACCACCTA
GATCATAGCTTGAACTGAAGCCAAGGACAGAGTGCTGCCCCCTTCGGCATTTACTGATGTGCCCTCTTTAAATCA
TGATGTTATCTAACCCAAACCCAGACCCAGGACCTAGTCACAGCTCCAACCTACACTTCCTATTAATCTTAAAAC
AAAGCGAAACAAACACAAAAAGATATCAGCATTGTAGCCTCCAATCTGAGCCCATTTCCCTTCTCTGGCTACCAT
ACCTCCTTCTCCTATATGATACCATTCACTACTTTGTTCAATTATCCAGTCTAGACCTGCATCTTGAGGCCACAC
CCAGCCTTCTCACTCCCCACACCCCTCTTTCCTCTCTCACTGCTCCTTCCTGGTCTCTTCTCATCTGGCCCCACC
TCTAAGGAGTCCTCCTGCCTTCTGGGTTGCCCTGGAAAACAGACTATCCCCCCTCCTAGTGAAGGGAGTGGGTAG
GGGTTTCAGCCCCACCCTCAGGAAGATGCGTCTTCCCTGTCCTCTGCTCTGTGGTACTTCCTCTCTGGCTGATTT
AGCAAACAGCACCTAGACCTGGGGCCAGGCCTTTGGCAGTGGGACAGATCCAGGGATAGGCTACACCACCCTGCC
CTGACCCTGGGATTGGCATCAGCTTCCAACCAGTTCCTGCCAAAGCTTGTAAGTCCTCCCGACGGCC**ATG**AACAC
TACATCTTCTGCAGCACCCCCCTCACTAGGTGTAGAGTTCATCTCTCTGCTGGCTATCATCCTGCTGTCAGTGGC
GCTGGCTGTGGGGCTTCCCGGCAACAGCTTTGTGGTGTGGAGTATCCTGAAAAGGATGCAGAAGCGCTCTGTCAC
TGCCCTGATGGTGCTGAACCTGGCCCTGGCCGACCTGGCCGTATTGCTCACTGCTCCCTTTTTCCTTCACTTCCT
GGCCCAAGGCACCTGGAGTTTTGGACTGGCTGGTTGCCGCCTGTGTCACTATGTCTGCGGAGTCAGCATGTACGC
CAGCGTCCTGCTTATCACGGCCATGAGTCTAGACCGCTCACTGGCGGTGGCCCGCCCCTTTGTGTCCCAGAAGCT
ACGCACCAAGGCGATGGCCCGGCGGGTGCTGGCAGGCATCTGGGTGTTGTCCTTTCTGCTGGCCACACCCGTCCT
CGCGTACCGCACAGTAGTGCCCTGGAAAACGAACATGAGCCTGTGCTTCCCGCGGTACCCCAGCGAAGGGCACCG
GGCCTTCCATCTAATCTTCGAGGCTGTCACGGGCTTCCTGCTGCCCTTCCTGGCTGTGGTGGCCAGCTACTCGGA
CATAGGGCGTCGGCTACAGGCCCGGCGCTTCCGCCGCAGCCGCCGCACCGGCCGCCTGGTGGTGCTCATCATCCT
GACCTTCGCCGCCTTCTGGCTGCCCTACCACGTGGTGAACCTGGCTGAGGCGGGCCGCGCGCTGGCCGGCCAGGC
CGCCGGGTTAGGGCTCGTGGGGAAGCGGCTGAGCCTGGCCCGCAACGTGCTCATCGCACTCGCCTTCCTGAGCAG
CAGCGTGAACCCCGTGCTGTACGCGTGCGCCGGCGGCGGCCTGCTGCGCTCGGCGGGCGTGGGCTTCGTCGCCAA
GCTGCTGGAGGGCACGGGTTCCGAGGCGTCCAGCACGCGCCGCGGGGGCAGCCTGGGCCAGACCGCTAGGAGCGG
CCCCGCCGCTCTGGAGCCCGGCCCTTCCGAGAGCCTCACTGCCTCCAGCCCTCTCAAGTTAAACGAACTGAAC**TA**
GGCCTGGTGGAAGGAGGCGCACTTTCCTCCTGGCAGAATGCTAGCTCTGAGCCAGTTCAGTACCTGGAGGAGGAG
CAGGGGCGTGGAGGGCGTGGAGGGCGTGGGAGCGTGGGAGGCGGGAGTGGAGTGGAAGAAGAGGGAGAGATGGAG
CAAAGTGAGGGCCGAGTGAGAGCGTGCTCCAGCCTGGCTCCCACAGGCAGCTTTAACCATTAAAACTGAAGTCTG
AA

FIGURE 1556

MNTTSSAAPPSLGVEFISLLAIILLSVALAVGLPGNSFVVWSILKRMQKRSVTALMVLNLALADLAVLLTAPFFL
HFLAQGTWSFGLAGCRLCHYVCGVSMYASVLLITAMSLDRSLAVARPFVSQKLRTKAMARRVLAGIWVLSFLLAT
PVLAYRTVVPWKTNMSLCFPRYPSEGHRAFHLIFEAVTGFLLPFLAVVASYSDIGRRLQARRFRRSRRTGRLVVL
IILTFAAFWLPYHVVNLAEAGRALAGQAAGLGLVGKRLSLARNVLIALAFLSSSVNPVLYACAGGGLLRSAGVGF
VAKLLEGTGSEASSTRRGGSLGQTARSGPAALEPGPSESLTASSPLKLNELN

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FIGURE 1557

AGGGAACATCTCGGGGAGCCTGGTTGGAAGCTGCAGGCTTAGTCTGTCGGCTGCGGGTCTCTGACTGCCCTGTGG
GGAGGGTCTTGCCTTAACATCCCTTGCATTTGGCTGCAAAGAAATCTGCTTGGAAGAAGGGGTTACGCTGTTTGG
CCGGGCAGAAACTCCGCTGAGCAGAACTTGCCGCCAGA**ATG**CTCCTCCTGTTGCTGAGTATCATCGTCCTCCACG
TCGCGGTGCTGGTGCTGCTGTTCGTCTCCACGATCGTCAGCCAATGGATCGTGGGCAATGGACACGCAACTGATC
TCTGGCAGAACTGTAGCACCTCTTCCTCAGGAAATGTCCACCACTGTTTCTCATCATCACCAAACGAATGGCTGC
AGTCTGTCCAGGCCACCATGATCCTGTCGATCATCTTCAGCATTCTGTCTCTGTTCCTGTTCTTCTGCCAACTCT
TCACCCTCACCAAGGGGGGCAGGTTTTACATCACTGGAATCTTCCAAATTCTTGCTGGTCTGTGCGTGATGAGTG
CTGCGGCCATCTACACGGTGAGGCACCCGGAGTGGCATCTCAACTCGGATTACTCCTACGGTTTCGCCTACATCC
TGGCCTGGGTGGCCTTCCCCCTGGCCCTTCTCAGCGGTGTCATCTATGTGATCTTGCGGAAACGCGAA**TGA**GGCG
CCCAGACGGTCTGTCTGAGGCTCTGAGCGTACATAGGGAAGGGAGGAAGGGAAACCAGAAAGCAGACAAAGAAAA
AAGAGCTAGCCCAAAATCCCAAACTCAAACCAAACCAAACAGAAAGCAGTGGAGGTGGGGGTTGCTGTTGATTGA
AGATGTATATAATATCTCCGGTTTATAAAACCTATTTATAACACTTTTTACATATATGTACATAGTATTGTTTGC
TTTTTATGTTGACCATCAGCCTCGTGTTGAGCCTTAAAGAAGTAGCTAAGGAACTTTACATGGTAACAGTATAAT
CCAGCTCAGTATTTTTGTTTTGTTTTTTGTTTGTTTGTTTTGTTTTACCCAGAAATAAGATAACTCCATGTCGCC
CCTTCCCTTTCATCTGAAAGAAGATACCTCCCTCCCAGTCCACCTCATTTAGAAAACCAAAGTGTGGGTAGAAAC
CCCAAATGTCCAAAAGCCCTTTTCTGGTGGGTGACCCAGTGCATCCAACAGAAACAGCCGCTGCCCGAACCTGTG
TGAAGCTTTACGCGCACACGGACAAAATGCCCAAACTGGAGCCCTTGCAAAAACACGGCTTGTGGCATTGGCATA
CTTGCCCTTACAGGTGGAGTATCTTCGTCACACATCTAAATGAGAAATCAGTGACAACAAGTCTTTGAAATGGTG
CTATGGATTTACCATTCCTTATTATCACTAATCATCTAAACAACTCACTGGAAATCCAATTAACAATTTTACAAC
ATAAGATAGAATGGAGACCTGAATAATTCTGTGTAATATAAATGGTTTATAACTGCTTTTGTACCTAGCTAGGCT
GCTATTATTACTATAATGAGTAAATCATAAAGCCTTCATCACTCCCACATTTTCCTTACGGTCGGAGCATCAGAA
CAAGCGTCTAGACTCCTTGGGACCGTGAGTTCCTAGAGCTTGGCTGGGTCTAGGCTGTTCTGTGCCTCCAAGGAC
TGTCTGGCAATGACTTGTATTGGCCACCAACTGTAGATGTATATATGGTGCCCTTCTGATGCTAAGACTCCAGAC
CTTTTGTTTTTGCTTTGCATTTTCTGATTTTATACCAACTGTGTGGACTAAGATGCATTAAAATAAACATCAGAG
TAACTC

FIGURE 1558

MLLLLLSIIVLHVAVLVLLFVSTIVSQWIVGNGHATDLWQNCSTSSSGNVHHCFSSSPNEWLQSVQATMILSIIF
SILSLFLFFCQLFTLTKGGRFYITGIFQILAGLCVMSAAAIYTVRHPEWHLNSDYSYGFAYILAWVAFPLALLSG
VIYVILRKRE

FIGURE 1559

AAAAAGCTATTTAGGTGACACTATAGAAGGTACGCCTGCAGGTAACCGGTCCGGAATTCCCGGGTCGACCCACGC
GTCCGGGGGAAGCCACTGCTACCCTCATCAGGAAGGGCAGACACAAGAAGCACCAGTTCTATTTGCTGCTACATC
CCGGCTCTCGCACCGAGGGCTCATCCATCCGCAGAGCAGGGCAGTGGGAGGAGACGCC**ATG**ACCCCCATCGTCAC
AGTCCTGATCTGTCTCGGGCTGAGTCTGGGCCCCAGGACCCGCGTGCAGACAGGGACCATCCCCAAGCCCACCCT
GTGGGCTGAGCCAGACTCTGTGATCACCCAGGGGAGTCCCGTCACCCTCAGTTGTCAGGGGAGCCTTGAAGCCCA
GGAGTACCGTCTATATAGGGAGAAAAAATCAGCATCTTGGATTACACGGATACGACCAGAGCTTGTGAAGAACGG
CCAGTTCCACATCCCATCCATCACCTGGGAACACACAGGGCGATATGGCTGTCAGTATTACAGCCGCGCTCGGTG
GTCTGAGCTCAGTGACCCCCTGGTGCTGGTGATGACAGGAGCCTACCCAAAACCCACCCTCTCAGCCCAGCCCAG
CCCTGTGGTGACCTCAGGAGGAAGGGTGACCCTCCAGTGTGAGTCACAGGTGGCATTTGGCGGCTTCATTCTGTG
TAAGGAAGGAGAAGATGAACACCCACAATGCCTGAACTCCCAGCCCCATGCCCGTGGGTCGTCCCGCGCCATCTT
CTCCGTGGGCCCCGTGAGCCCGAATCGCAGGTGGTCGCACAGGTGCTATGGTTATGACTTGAACTCTCCCTATGT
GTGGTCTTCACCCAGTGATCTCCTGGAGCTCCTGGTCCCAGGTGTTTCTAAGAAGCCATCACTCTCAGTGCAGCC
GGGTCCTGTCATGGCCCCTGGGGAAAGCCTGACCCTCCAGTGTGTCTCTGATGTCGGCTATGACAGATTTGTTCT
GTACAAGGAGGGGGAACGTGACCTTCGCCAGCTCCCTGGCCGGCAGCCCCAGGCTGGGCTCTCCCAGGCCAACTT
CACCCTGGGCCCTGTGAGCCGCTCCTACGGGGGCCAGTACAGATGCTACGGTGCACACAACCTCTCCTCTGAGTG
CTCGGCCCCCAGCGACCCCCTGGACATCCTGATCACAGGACAGATCCGTGGCACACCCTTCATCTCAGTGCAGCC
AGGCCCCACAGTGGCCTCAGGAGAGAACGTGACCCTGCTGTGTCAGTCATGGCGGCAGTTCCACACTTTCCTTCT
GACCAAGGCGGGAGCAGCTGATGCCCCACTCCGTCTAAGATCAATACACGAATATCCTAAGTACCAGGCTGAATT
CCCCATGAGTCCTGTGACCTCAGCCCACGCGGGGACCTACAGGTGCTACGGCTCACTCAACTCCGACCCCTACCT
GCTGTCTCACCCCAGTGAGCCCCTGGAGCTCGTGGTCTCAGGACCCTCCATGGGTTCCAGCCCCCCACCCACCGG
TCCCATCTCCACACCTGGCCCTGAGGACCAGCCCCTCACCCCCACTGGGTCGGATCCCCAAAGTGGTCTGGGAAG
GCACCTGGGGGTTGTGATCGGCATCTTGGTGGCCGTCGTCCTACTGCTCCTCCTCCTCCTCCTCCTCTTCCTCAT
CCTCCGACATCGACGTCAGGGCAAACACTGGACATCGACCCAGAGAAAGGCTGATTTCCAACATCCTGCAGGGGC
TGTGGGGCCAGAGCCCACAGACAGAGGCCTGCAGTGGAGGTCCAGCCCAGCTGCCGACGCCCAGGAAGAAAACCT
CTATGCTGCCGTGAAGGACACACAGCCTGAAGATGGGGTGGAGATGGACACTCGGGCTGCTGCATCTGAAGCCCC
CCAGGATGTGACCTACGCCCAGCTGCACAGCTTGACCCTCAGACGGAAGGCAACTGAGCCTCCTCCATCCCAGGA
AAGGGAACCTCCAGCTGAGCCCAGCATCTACGCCACCCTGGCCATCCAC**TAG**CCCGGAGGGTACGCAGACTCCAC
ACTCAGTAGAAGGAGACTCAGGACTGCTGAAGGCACGGGAGCTGCCCCCAGTGGACACCAATGAACCCCAGTCAG
CCTGGACCCCTAACAAAGACCATGAGGAGATGCTGGGAACTTTGGGACTCACTTGATTCTGCAGTCGAAATAACT
AATATCCCTACATTTTTTAATTAAAGCAACAGACTTCTCAATAATCAATGAGTTAACCGAGAAAACTAAAATCAG
AAGTAAGAATGTGCTTTAAACTGAATCACAATATAAATATTACACATCACACAATGAAATTGAAAAAGTACAAAC
CACAAATGAAAAAAGTAGAAACGAAAAAAAAAAAACTAGGAAATGAATGACGTTGGCTTTCGTATAAGGAATTTAG
AAAAAGAATAACCAATTATTCCAAATGAAGGTGTAAGAAAGGGAATAAGAAGAAGAAGAGTTGCTCATGAGGAAA
AACCAAAACTTGAAAATTCAACAAAGCCAATGAAGCTCATTCTTGAAAATATTAATTACAGTCATAAATCCTAAC
TACATTGAGCAAGAGAAAGAAAGAGCAGGCACGCATTTCCATATGGGAGTGAGCCAGCAGACAGCCCAGCAGATC
CTACACACATTTTCACAAACTAACCCCAGAACAGGCTGCAAACCTATACCAATATACTAGAAAATGCAGATTAAA
TGGATGAAATATTCAAAACTGGAGTTTACATAATGAACGTAAGAGTAATCAGAGAATCTGACTCATTTTAAATGT
GTGTGTATGTGTGTGTATATATATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGAAAAACATTGACTGTAATAAAA
ATGTTCCCATCGTAAAAAAAAAAAAAAAA

FIGURE 1560

MTPIVTVLICLGLSLGPRTRVQTGTIPKPTLWAEPDSVITQGSPVTLSCQGSLEAQEYRLYREKKSASWITRIRP
ELVKNGQFHIPSITWEHTGRYGCQYYSRARWSELSDPLVLVMTGAYPKPTLSAQPSPVVTSGGRVTLQCESQVAF
GGFILCKEGEDEHPQCLNSQPHARGSSRAIFSVGPVSPNRRWSHRCYGYDLNSPYVWSSPSDLLELLVPGVSKKP
SLSVQPGPVMAPGESLTLQCVSDVGYDRFVLYKEGERDLRQLPGRQPQAGLSQANFTLGPVSRSYGGQYRCYGAH
NLSSECSAPSDPLDILITGQIRGTPFISVQPGPTVASGENVTLLCQSWRQFHTFLLTKAGAADAPLRLRSIHEYP
KYQAEFPMSPVTSAHAGTYRCYGSLNSDPYLLSHPSEPLELVVSGPSMGSSPPPTGPISTPGPEDQPLTPTGSDP
QSGLGRHLGVVIGILVAVVLLLLLLLLLFLILRHRRQGKHWTSTQRKADFQHPAGAVGPEPTDRGLQWRSSPAAD
AQEENLYAAVKDTQPEDGVEMDTRAAASEAPQDVTYAQLHSLTLRRKATEPPPSQEREPPAEPSIYATLAIH

FIGURE 1561A

ATCTGCACAGCTGGGGCCCCTGGGAGGAGACGCC**ATG**ATCCCCACCTTCACGGCTCTGCTCTGCCTCGGGCTGAG
TCTGGGCCCCAGGACCGACATGCAGGCAGGGCCCCTCCCCAAACCCACCCTCTGGGCTGAGCCAGGCTCTGTGAT
CAGCTGGGGGAACTCTGTGACCATCTGGTGTCAGGGGACCCTGGAGGCTCGGGAGTACCGTCTGGATAAAGAGGA
AAGCCCAGCACCCTGGGACAGACAGAACCCACTGGAGCCCAAGAACAAGGCCAGATTCTCCATCCCATCCATGAC
AGAGGACTATGCAGGGAGATACCGCTGTTACTATCGCAGCCCTGTAGGCTGGTCACAGCCCAGTGACCCCCTGGA
GCTGGTGATGACAGGAGCCTACAGTAAACCCACCCTTTCAGCCCTGCCGAGTCCTCTTGTGACCTCAGGAAAGAG
CGTGACCCTGCTGTGTCAGTCACGGAGCCCAATGGACACTTTCCTTCTGATCAAGGAGCGGGCAGCCCATCCCCT
ACTGCATCTGAGATCAGAGCACGGAGCTCAGCAGCACCAGGCTGAATTCCCCATGAGTCCTGTGACCTCAGTGCA
CGGGGGGACCTACAGGTGCTTCAGCTCACACGGCTTCTCCCACTACCTGCTGTCACACCCCAGTGACCCCCTGGA
GCTCATAGTCTCAGGATCCTTGGAGGGTCCCAGGCCCTCACCCACAAGGTCCGTCTCAACAGCTGCAGGCCCTGA
GGACCAGCCCCTCATGCCTACAGGGTCAGTCCCCCACAGTGGTCTGAGAAGGCACTGGGAGGTACTGATCGGGGT
CTTGGTGGTCTCCATCCTGCTTCTCTCCCTCCTCCTCTTCCTCCTCCTCCAACACTGGCGTCAGGGAAAACACAG
GACATTGGCCCAGAGACAGGCTGATTTCCAACGTCCTCCAGGGGCTGCCGAGCCAGAGCCCAAGGACGGGGGCCT
ACAGAGGAGGTCCAGCCCAGCTGCTGACGTCCAGGGAGAAAACTTCTGTGCTGCCGTGAAGAACACACAGCCTGA
GGACGGGGTGGAAATGGACACTCGGCAGAGCCCACACGATGAAGACCCCCAGGCAGTGACGTATGCCAAGGTGAA
ACACTCCAGACCTAGGAGAGAAATGGCCTCTCCTCCCTCCCCACTGTCTGGGGAATTCCTGGACACAAAGGACAG
ACAGGCAGAAGAGGACAGACAGATGGACACTGAGGCTGCTGCATCTGAAGCCCCCCAGGATGTGACCTACGCCCG
GCTGCACAGCTTTACCCTCAGACAGAAGGCAACTGAGCCTCCTCCATCCCAGGAAGGGGCCTCTCCAGCTGAGCC
CAGTGTCTATGCCACTCTGGCCATCCAC**TAA**TCCAGGGGGGACCCAGACCCCACAAGCCATGGAGACTCAGGACC
CCAGAAGGCATGGAAGCTGCCTCCAGTAGACATCACTGAACCCCAGCCAGCCCAGACCCCTGACACAGACCACTA
GAAGATTCCGGGAACGTTGGGAGTCACCTGATTCTGCAAAGATAAATAATATCCCTGCATTATCAAAATAAAGTA
GCAGACCTCTCAATTCACAATGAGTTAACTGATAAAACAAAACAGAAGTCAGACAATGTTTTAAATTGAATGATC
ATGTAAATATTACACATCAAACCAATGACATGGGAAAATGGGAGCTTCTAATGAGGACAAACAAAAAATAGAGAA
AAATTAATAAAGTCAAAATGTTTATTCTTGAAAACATTAATGATACATGAATCTTGGCCACAATGAGAAAAATAA
AAATGAAAAAAGAGCAGGCATCCATTTCCATACAGGAACAAAATAGGAGGCAGCACTACAGACCCTACACACAGC
TTTACAGAGGTGAAAGAAAACTGTCAGCAATTCTATGCTGACATAACAGAAAATGTAGATGAGATAGATGAAATA
CGAAAAATTACAGTTTACTTAATGAACATAAGGATAAATAGAAAAACTGAATCATCATACATAAACATATATAAA
ATGCATTGATCCTGTAATCAAAAATGTTCCCACAAAGTAAATGCCACTTCAGCAAGGTTTGTTGGTGGTTTTTTC
AAACTCTTATGCACTCATGAAACACACAGACACACACACACACAAACTTGCATAAATTTTCCCTGAGAATATTTT
GTATATATTTACACAAATACATTTGATCAGACTAGGAACAAGTTGATACCAAAACCTGAAAAGGAAACTACAGAA
TGGGAAAGTCATAGAAGATCTCTCACAGAAATATAAATCCCTTAACAAATATTAACAAGTAAGATTCATGTCTCT
ATAAAATAGACAGTATATCATGACCACACTGGTTTTTTGTTATCCTTTGATTTTGTTTATGAAAAGCAAGGATAG
CTTAATTTTCAAAAACTCAATCAATGTAATTCAGTATTTTAACAAAAGGAATGAAAAATTATCATCTCAATAGAC
AAAGCTTTTGTCTGAGCACCTTTTCATATAGCTGCTGACCATTTGTATGTCTTCTTTTGAGAAATGCCTGTTCAG
CTACTTTGCCCATGTTTCAAGTAGTTTTTGGTTTCTTGCTGTTGCTTTGTTTTAGTTCCTTACATATTTTTGCAT
ATTAACCCTTTATCAGGTATACAGCTTGCAACTATTTTCTCCCATTTCTGAGTTGTCTCTTCATTCTGTTTGCAG
AAGCTGTTTAGAAGCCACACCTTTTGTCTATTTTTGCTTTTGTTGCTTGTGTTTTCAGGGCCATATCCAAAAAAA
CCTTGCCCGGACCAACGTCTTGAAGCTTTTCTCACACCCATTTTTGTATATGGGATAAGGGTTCAATTTCATTCT
TCTTCATATGAATATCCCCAGGATGTGTCATATGCCCAGCTGCACAGCTTACCCTCAAACAGAAAATAATGAAGC
CTTCTTCCTCCCAGGAAAGGGGACGTTCAGCTGAGCCGAGTGTGTATACTGCTCTGGCCATCCACTAGCCCAGGG
AGGACCCAGACCTCCACACTCCATGGAGACTCAGTTCTCCTAGGACCATTTATTCAAAAGGACTGCCCTCTCTTG
TTCTTGGAAACTTTGTTGAGGATCAATTCACCATAAATATGTGTGTTTCCTTCTTTGCTTTCATCCCTGTTGCAC
TGATCACTATACCTGTTTCTATTCCAGTTCCATGATGTCTTCCTGGCTGTAGCTTTGTAGGATATTTGGGGATTC
CATAGTGTGATATCCCCTTCTTCCCTTTGCTCAAGATTGTTTTGGCTATTTGGGGTCCTTTTGTAGTCCCATTCA
AATTTTAGGATTGTTTTTCTATTTCTGTGGAAAACGACCTTGGAATTTTGTTAGGAATTGCATTGAGTCTGCAGG
TATGAACTTTTTTTTAAAGTTCCAGGGCACATGTACAGGACCTGCAGCTTTGTTACATAGGTAGGCTTGTGCCAT
GGTGGTTTGCTGCACCTATCAACCCATTACCTAGTTATTAAGCCCAGCATGCATTAGCTCTTTTTCCTGATGCTC
TCCCTCCCTTCATCATCCGCCCTCCCACTACAAGCCCCAGTGTGTGTTGTTCCCCTCCCTGTGTCCATGTGTTCT

FIGURE 1561B

CATTGTTATACGAACATTTTAACAATGTTAATTCTTGCAGACCATGAACATAAGCTACCTTCCCATTTATATGCG
TCTTGTTCAATTTCATTCATCAATGTTATAAAGATTTTAGTGCAGAAAAAAAAAAAAAAAA

FIGURE 1562

MIPTFTALLCLGLSLGPRTDMQAGPLPKPTLWAEPGSVISWGNSVTIWCQGTLEAREYRLDKEESPAPWDRQNPL
EPKNKARFSIPSMTEDYAGRYRCYYRSPVGWSQPSDPLELVMTGAYSKPTLSALPSPLVTSGKSVTLLCQSRSPM
DTFLLIKERAAHPLLHLRSEHGAQQHQAEFPMSPVTSVHGGTYRCFSSHGFSHYLLSHPSDPLELIVSGSLEGPR
PSPTRSVSTAAGPEDQPLMPTGSVPHSGLRRHWEVLIGVLVVSILLLSLLLFLLLQHWRQGKHRTLAQRQADFQR
PPGAAEPEPKDGGLQRRSSPAADVQGENFCAAVKNTQPEDGVEMDTRQSPHDEDPQAVTYAKVKHSRPRREMASP
PSPLSGEFLDTKDRQAEEDRQMDTEAAASEAPQDVTYARLHSFTLRQKATEPPPSQEGASPAEPSVYATLAIH

FIGURE 1563

GGTTTTCAGGAGCCCGAGCGAGGGCGCCGCTTTTGCGTCCGGGAGGAGCCAACCGTGGCGCAGGCGGCGCGGGGA
GGCGTCCCAGAGTCTCACTCTGCCGCCCAGGCTGGACTGCAGTGACACAATCTCGGCTGACTGCAACCACTGCCT
CCAGGGTTCAAGCGATTCTCTTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGATTGATGTTCATGTTCCTGGCA
CTACTACAAGATTCATACTCCTGATGCTACTGACAACGTGGCTTCTCCACAGTCACCAAACCAGGGATGCTATAC
TGGACTTCCCTACTCTCATCTGCTCCAGCCCCCTGACCTTATAGTTGCCCAGCTTTCCTGGCAATTGACTTTGCC
CATCAATACACAGGATTTAGCATCCAGGGAAGATGTCGGAGCCTCAGATGTTAATTTTCTAATTGAGAATGTTGG
CGCTGTCCGAACCTGGAGACAGGAAAACAAAAAGTCCTTTCTCCTGATTCACCAAAAAATAAAATACTGACTACC
ATCACTGTGATGAGATTCCTATAGTCTCAGGAACTGAAGTCTTTAAACAACCAGGGACCCTCTGCCCCTAGAATA
AGAACATACTAGAAGTCCCTTCTGCTAGGACAACGAGGATC**ATG**GGAGACCACCTGGACCTTCTCCTAGGAGTGG
TGCTCATGGCCGGTCCTGTGTTTGGAATTCCTTCCTGCTCCTTTGATGGCCGAATAGCCTTTTATCGTTTCTGCA
ACCTCACCCAGGTCCCCCAGGTCCTCAACACCACTGAGAGGCTCCTGCTGAGCTTCAACTATATCAGGACAGTCA
CTGCTTCATCCTTCCCCTTTCTGGAACAGCTGCAGCTGCTGGAGCTCGGGAGCCAGTATACCCCCTTGACTATTG
ACAAGGAGGCCTTCAGAAACCTGCCCAACCTTAGAATCTTGGACCTGGGAAGTAGTAAGATATACTTCTTGCATC
CAGATGCTTTTCAGGGACTGTTCCATCTGTTTGAACTTAGACTGTATTTCTGTGGTCTCTCTGATGCTGTATTGA
AAGATGGTTATTTCAGAAATTTAAAGGCTTTAACTCGCTTGGATCTATCCAAAAATCAGATTCGTAGCCTTTACC
TTCATCCTTCATTTGGGAAGTTGAATTCCTTAAAGTCCATAGATTTTTCCTCCAACCAAATATTCCTTGTATGTG
AACATGAGCTCGAGCCCCTACAAGGGAAAACGCTCTCCTTTTTTAGCCTCGCAGCTAATAGCTTGTATAGCAGAG
TCTCAGTGGACTGGGGAAAATGTATGAACCCATTCAGAAACATGGTGCTGGAGATACTAGATGTTTCTGGAAATG
GCTGGACAGTGGACATCACAGGAAACTTTAGCAATGCCATCAGCAAAAGCCAGGCCTTCTCTTTGATTCTTGCCC
ACCACATCATGGGTGCCGGGTTTGGCTTCCATAACATCAAAGATCCTGACCAGAACACATTTGCTGGCCTGGCCA
GAAGTTCAGTGAGACACCTGGATCTTTCACATGGGTTTGTCTTCTCCCTGAACTCACGAGTCTTTGAGACACTCA
AGGATTTGAAGGTTCTGAACCTTGCCTACAACAAGATAAATAAGATTGCAGATGAAGCATTTTACGGACTTGACA
ACCTCCAAGTTCTCAATTTGTCATATAACCTTCTGGGGGAACTTTACAGTTCGAATTTCTATGGACTACCTAAGG
TAGCCTACATTGATTTGCAAAAGAATCACATTGCAATAATTCAAGACCAAACATTCAAATTCCTGGAAAAATTAC
AGACCTTGGATCTCCGAGACAATGCTCTTACAACCATTCATTTTATTCCAAGCATACCCGATATCTTCTTGAGTG
GCAATAAACTAGTGACTTTGCCAAAGATCAACCTTACAGCGAACCTCATCCACTTATCAGAAAACAGGCTAGAAA
ATCTAGATATTCTCTACTTTCTTCTACGGGTACCTCATCTCCAGATTCTCATTTTAAATCAAAATCGCTTCTCCT
CCTGTAGTGGAGATCAAACCCCTTCAGAGAATCCCAGCTTAGAACAGCTTTTCCTTGGAGAAAATATGTTGCAAC
TTGCCTGGGAAACTGAGCTCTGTTGGGATGTTTTTGAGGGACTTTCTCATCTTCAAGTTCTGTATTTGAATCATA
ACTATCTTAATTCCCTTCCACCAGGAGTATTTAGCCATCTGACTGCATTAAGGGGACTAAGCCTCAACTCCAACA
GGCTGACAGTTCTTTCTCACAATGATTTACCTGCTAATTTAGAGATCCTGGACATATCCAGGAACCAGCTCCTAG
CTCCTAATCCTGATGTATTTGTATCACTTAGTGTCTTGGATATAACTCATAACAAGTTCATTTGTGAATGTGAAC
TTAGCACTTTTATCAATTGGCTTAATCACACCAATGTCACTATAGCTGGGCCTCCTGCAGACATATATTGTGTGT
ACCCTGACTCGTTCTCTGGGGTTTCCCTCTTCTCTCTTTCCACGGAAGGTTGTGATGAAGAGGAAGTCTTAAAGT
CCCTAAAGTTCTCCCTTTTCATTGTATGCACTGTCACTCTGACTCTGTTCCTCATGACCATCCTCACAGTCACAA
AGTTCCGGGGCTTCTGTTTTATCTGTTATAAGACAGCCCAGAGACTGGTGTTCAAGGACCATCCCCAGGGCACAG
AACCTGATATGTACAAATATGATGCCTATTTGTGCTTCAGCAGCAAAGACTTCACATGGGTGCAGAATGCTTTGC
TCAAACACCTGGACACTCAATACAGTGACCAAAACAGATTCAACCTGTGCTTTGAAGAAAGAGACTTTGTCCCAG
GAGAAAACCGCATTGCCAATATCCAGGATGCCATCTGGAACAGTAGAAAGATCGTTTGTCTTGTGAGCAGACACT
TCCTTAGAGATGGCTGGTGCCTTGAAGCCTTCAGTTATGCCCAGGGCAGGTGCTTATCTGACCTTAACAGTGCTC
TCATCATGGTGGTGGTTGGGTCCTTGTCCCAGTACCAGTTGATGAAACATCAATCCATCAGAGGCTTTGTACAGA
AACAGCAGTATTTGAGGTGGCCTGAGGATCTCCAGGATGTTGGCTGGTTTCTTCATAAACTCTCTCAACAGATAC
TAAAGAAAGAAAAAGAAAAGAAGAAAGACAATAACATTCCGTTGCAAACTGTAGCAACCATCTCC**TAA**TCAAAGG
AGCAATTTCCAACTTATCTCAAGCCACAAATAACTCTTCACTTTGTATTTGCACCAAGTTATCATTTTGGGGTCC
TCTCTGGAGGTTTTTTTTTCTTTTTGCTACTATGAAAACAACATAAATCTCTCAATTTTCGTATCAAA

FIGURE 1564

MGDHLDLLLGVVLMAGPVFGIPSCSFDGRIAFYRFCNLTQVPQVLNTTERLLLSFNYIRTVTASSFPFLEQLQLL
ELGSQYTPLTIDKEAFRNLPNLRILDLGSSKIYFLHPDAFQGLFHLFELRLYFCGLSDAVLKDGYFRNLKALTRL
DLSKNQIRSLYLHPSFGKLNSLKSIDFSSNQIFLVCEHELEPLQGKTLSFFSLAANSLYSRVSVDWGKCMNPFRN
MVLEILDVSGNGWTVDITGNFSNAISKSQAFSLILAHHIMGAGFGFHNIKDPDQNTFAGLARSSVRHLDLSHGFV
FSLNSRVFETLKDLKVLNLAYNKINKIADEAFYGLDNLQVLNLSYNLLGELYSSNFYGLPKVAYIDLQKNHIAII
QDQTFKFLEKLQTLDLRDNALTTIHFIPSIPDIFLSGNKLVTLPKINLTANLIHLSENRLENLDILYFLLRVPHL
QILILNQNRFSSCSGDQTPSENPSLEQLFLGENMLQLAWETELCWDVFEGLSHLQVLYLNHNYLNSLPPGVFSHL
TALRGLSLNSNRLTVLSHNDLPANLEILDISRNQLLAPNPDVFVSLSVLDITHNKFICECELSTFINWLNHTNVT
IAGPPADIYCVYPDSFSGVSLFSLSTEGCDEEEVLKSLKFSLFIVCTVTLTLFLMTILTVTKFRGFCFICYKTAQ
RLVFKDHPQGTEPDMYKYDAYLCFSSKDFTWVQNALLKHLDTQYSDQNRFNLCFEERDFVPGENRIANIQDAIWN
SRKIVCLVSRHFLRDGWCLEAFSYAQGRCLSDLNSALIMVVVGSLSQYQLMKHQSIRGFVQKQQYLRWPEDLQDV
GWFLHKLSQQILKKEKEKKKDNNIPLQTVATIS

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FIGURE 1565

CGTTGCTGTCGAAATGAAGTGCGCGCTGCGACACCTCCCAGCCCACCGAACTCCGCCGCCATTTCCTCGCTTGGC
CTAACGGTTCGGCCAATCCCAGCGCGCATCAAGAAGGACTGAGGCTCCGCCAATCGGAGGCCGCCGATTTCGACC
CTTCGCCTCGGCCCGGCCCAATCCAGGCCCCGGCCCCGCCGCCCCCGGCCCGCCCCCGCGGTGCCCTCTCTCCTC
CCTCTTTGTGCGTCTCGCGCCGCCGCCGCCCGCCGCGTGAGAGGACGGGCTCCGCGCGCTCCGGCAGCGCATTCG
GGTCCCCTCCCCCCGGGAGGCTTGCGAAGGAGAAGCCGCCGCAGAGGAAAAGCAGGTGCCGGTGCCTGTCCCCGG
GGGCGCC**ATG**GCGACCGGAGCGAACGCCACGCCGTTGGACTTCCCAAGTAAGAAGCGGAAGAGGAGCCGCTGGAA
CCAAGACACAATGGAACAGAAGACAGTGATTCCAGGAATGCCTACAGTTATTCCCCCTGGACTTACTCGAGAACA
AGAAAGAGCTTATATAGGTAAATATACGTTCTGCATCCAAATGCACTTTGAGATTGTTACGATTTATTCTGAGCA
AGATCTGCATTTTTTGAAAGTT**TGA**GATTGTAGTTATCTTTTTTGAGATGAGATACTTTCACGACTTTGGTATCA
TCTGTCAGTTTTTGCCCAGTGAGTTCTGCATTTGCAGCTCCTTGTTTTGGTCTGTTCGTAACTGCAGTGTTCTCC
ATGAGTATCAGGAAGGTAGGGTTTCACTTAGGAGTAAGAACAGTCCCCAGTCCAGCAGCCACCCTTTTCAGCTGC
TGTTCATTGCCAGTTGATGAGGTGAGTGTCATCTGCCTCTCTGGACAGGCCCCAGTGGAGAACACCGCAGGTACT
GTAAACCAAGTACTTTTCACAGCGTGGCCTTTCACCATAATTTTATATTTCTCCCCCTAAAATGTGGTCTTTTAC
TTTTTATAGGTACTTTCTG

FIGURE 1566

MATGANATPLDFPSKKRKRSRWNQDTMEQKTVIPGMPTVIPPGLTREQERAYIGKYTFCIQMHFEIVTIYSEQDL
HFLKV

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FIGURE 1567

AGTTACGTTCGGGGCGTGGCCGGGAGCACGTTGGCTCCGCCCCCTGGCGGCTGCCTCAGCGGCGGCGGCGGCGCA
GGCTCAGAGCAGACCCCGCCCGGCGAGGAGGAGGGAGGGCCGCCAGTGTCGAC**ATG**CTGCTGGAGGAGGTTCGCG
CCGGCGACCGGCTGAGTGGGGCGGCGGCCCGGGGCGACGTGCAGGAGGTGCGCCGCCTTCTGCACCGCGAGCTGG
TGCATCCCGACGCCCTCAACCGCTTCGGCAAGACGGCGCTGCAGGTCATGATGTTTGGCAGCACCGCCATCGCCC
TGGAGCTGCTGAAGCAAGGTGCCAGCCCCAATGTCCAGGACACCTCCGGTACCAGTCCAGTCCATGACGCAGCCC
GCACTGGATTCCTGGACACCCTGAAGGTCCTAGTGGAGCACGGGGCTGATGTCAACGTGCCTGATGGCACCGGGG
CACTTCCAATCCATCTGGCAGTTCAAGAGGGTCACACTGCTGTGGTCAGCTTTCTGGCAGCTGAATCTGATCTCC
ATCGCAGGGACGCCAGGGGTCTCACACCCTTGGAGCTGGCACTGCAGAGAGGGGCTCAGGACCTCGTGGACATCC
TGCAGGGCCACATGGTGGCCCCGCTG**TGA**TCTGGGGTCACCCTCTCCAGCAAGAGAACCCCGTGGGGTTATGTAT
CAGAAGAGAGGGGAAGAAACACTTTCTCTTCTTGTTTCTCCTGCCCACTGCTGCAGTAGGGGAGGAGCACAGTTT
GTGGCTTATAGGTGTTGGTTTTGGGGGTGTGAGTGTTTGGGGGACGTTTCTCATTTGTTTTTCTCACTCCTTTTG
GTGTGTTGGACAGAGAAGGGCTCCTGCAGGCCACAGCCACCTAAACGGTTCAGTTTCTTCTGCGCCTCAGGCTGC
TGGGGCCTCAGACGAGACCCAAGGGCAGAGCATTTAAGAGTGAAGTCATGACCTCCAGGGAGCCTAGAAGCTGGT
GGCCTTGGCCGGCTGTGCTCAGAGACCTGAAGTGTGCACGTTGCTTCAGGCATGGGGGGTGGGGGGAGCGTCCCA
AATCAATAAGAAGGTAGAATGAGTTATGAGTTATTCATATTCTGTTGGAAGCTTGTTTTCCAGTCTCTTGTACAG
CGTTTTAAAAGAAATGGATTCTATTTATTATGCTTTATTGGAAAAAATGTTGTAATAATTTAATGTTTTTACCCA
TTAAATTAAGACTTGTGCATGATCAAAAAAAAAAAAAAAAAA

FIGURE 1568

MLLEEVRAGDRLSGAAARGDVQEVRRLLHRELVHPDALNRFGKTALQVMMFGSTAIALELLKQGASPNVQDTSGT
SPVHDAARTGFLDTLKVLVEHGADVNVPDGTGALPIHLAVQEGHTAVVSFLAAESDLHRRDARGLTPLELALQRG
AQDLVDILQGHMVAPL

FIGURE 1569

GGGCGGATGGAAGGGGCCGGGGCAGCGTCGGGGAAAGGAAGGGCCGGAGGCGCGGCGGCGGGCGGCCGAGAGGGG
CGGCGGCGGCGGCGGCGGCGGGGTTCCCGCGCCGCGGAGCCCGGCCCGAGAGCCGCGTCCACGTTCCTGCCTCCT
GCTCCCGCCGCCCTGGGGCGCCGCC**ATG**ACGCCCGATCTGCTCAACTTCAAGAAGGGATGGATGTCGATCTTGGA
CGAGCCTGGAGAGCCTCCCTCCCCCTCGCTCACCACCACCTCTACTTCGCAGTGGAAGAAACATTGGTTTGTGCT
GACAGATTCAAGTCTCAAATATTACAGAGACTCCACTGCTGAGGAGGCAGATGAGCTGGATGGTGAGATCGACCT
GCGTTCCTGCACGGATGTCACTGAGTACGCGGTGCAGCGCAACTATGGCTTCCAGATCCACACCAAGGATGCTGT
CTATACCTTGTCGGCCATGACCTCAGGCATCCGGCGGAACTGGATCGAGGCTCTGAGAAAGACCGTACGTCCAAC
TTCAGCCCCAGATGTCACCAAGCTCTCGGACTCTAACAAGGAGAACGCGCTGCACAGCTACAGCACCCAGAAGGG
CCCCCTGAAGGCAGGGGAGCAGCGGGCGGGCTCTGAGGTCATCAGCCGGGGTGGCCCTCGGAAGGCGGACGGGCA
GCGTCAGGCCTTGGACTACGTGGAGCTCTCGCCGCTGACCCAGGCTTCCCCGCAGCGGGCCCGCACCCCAGCCCG
CACTCCTGACCGCCTGGCCAAGCAGGAGGAGCTGGAGCGGGACCTGGCCCAGCGCTCCGAGGAGCGGCGCAAGTG
GTTTGAGGCCACAGACAGCAGGACCCCAGAGGTGCCTGCTGGTGAGGGGCCGCGCCGGGGCCTGGGTGCCCCCCT
GACTGAGGACCAGCAAAACCGGCTTAGTGAGGAGATCGAGAAGAAGTGGCAGGAGCTGGAGAAGCTGCCCCTGCG
GGAGAATAAGCGGGTGCCCCTCACTGCCCTGCTCAACCAAAGCCGCGGAGAGCGCCGAGGGCCCCCAAGTGACGG
CCACGAGGCACTGGAGAAGGAGGTTCAGGCTCTTCGGGCCCAGCTGGAGGCGTGGCGTCTCCAAGGGGAGGCTCC
TCAGAGTGCACTGAGATCCCAGGAGGATGGCCACATCCCCCCGGGCTACATCTCACAGGAGGCATGTGAGCGCAG
CCTGGCAGAGATGGAGTCCTCGCACCAGCAGGTGATGGAGGAGCTGCAGCGGCACCACGAGCGGGAGCTGCAGCG
CCTGCAGCAGGAGAAGGAGTGGCTCCTGGCTGAGGAGACGGCAGCCACGGCCTCAGCCATTGAAGCCATGAAGAA
GGCCTACCAGGAAGAGCTGAGCCGAGAGCTGAGCAAAACACGGAGTCTCCAGCAGGGCCCGGATGGCCTCCGGAA
GCAGCACCAGTCAGATGTGGAGGCACTGAAGCGAGAGCTGCAGGTGCTATCGGAGCAGTACTCGCAGAAGTGCCT
GGAGATTGGGGCACTCATGCGGCAGGCTGAGGAGCGCGAGCACACGCTGCGCCGCTGCCAGCAGGAGGGCCAGGA
GCTGCTGCGCCACAACCAGGAGCTGCATGGCCGCCTGTCAGAGGAGATAGACCAGCTGCGCGGCTTCATTGCCTC
GCAGGGCATGGGCAATGGCTGCGGGCGCAGCAACGAGCGGAGTTCCTGCGAGCTAGAGGTGCTGCTTCGCGTAAA
AGAAAACGAACTCCAGTACCTAAAGAAGGAGGTGCAGTGCCTCCGGGACGAGCTCCAGATGATGCAGAAGGACAA
GCGCTTCACCTCGGGAAAGTACCAGGACGTCTATGTGGAGCTGAGCCACATCAAGACACGGTCTGAGCGGGAGAT
CGAGCAGCTGAAGGAGCACCTGCGTCTTGCCATGGCCGCCCTCCAGGAGAAGGAGTCGATGCGCAACAGCCTGGC
TGAG**TAG**AGGTCCCGCCCAGCTGCAGACCCTCCAGGCTGGAGGACCAGCCGCCCTCCTTCCCTCCTGGATGGAAG
TAAAAAGCCAAGCTTTCTCCCCACCCTCTGTGGGCCACACGTGCACTTGCACCCACCACACACACACACACACAC
ACACACACACACACAGACACACAGACACATACGCACACACGTGCACACATGTACACACGGATACACACACACACA
CACACACTGCATATCTGAGCGCGCCCCTCGCACTGGGTCTCACCTTGCACCTTCTTCAGGATTTTATATGTGAAG
AGATTTTTATATAGATTTTTTTCCTTTTTTTCCAAAACACTTTATACTTTAAAAAAAAAAAAAAAAAGCAATTCC
TGGTGGCTGTGTGCCTCCAACCCTGGTCCCCCTCTGTCTCCAGCCACCCTCTGCTTGGGCTTCTGAGCTGGTGGC
CCTGGCCCAGAGGTCTGGCGGAGGCCCAGGCAGCAGCCATGGCGGGGTGTCTCTACAGGGGAGAGGCGGGAGCCT
GCCACCCTCTTCCTGCCCTACCTCCTACTAACACTTCCTGCCCCATTTGGACCCGTACCATGGGGCTCAGGACAG
AGGGAGCTAGCAGCTGGCCTCCATGGCCCCACAGCCTCCTTCGAGGCTGTGCTGGGTGCAGAACCGCCAGAGCCA
CCCAAAAGGTGTTTCTCTTCTGCTCCCTGAACCTCTTAACTTAATAAAACGTTCCAGCAGCT

FIGURE 1570

MTPDLLNFKKGWMSILDEPGEPPSPSLTTTSTSQWKKHWFVLTDSSLKYYRDSTAEEADELDGEIDLRSCTDVTE
YAVQRNYGFQIHTKDAVYTLSAMTSGIRRNWIEALRKTVRPTSAPDVTKLSDSNKENALHSYSTQKGPLKAGEQR
AGSEVISRGGPRKADGQRQALDYVELSPLTQASPQRARTPARTPDRLAKQEELERDLAQRSEERRKWFEATDSRT
PEVPAGEGPRRGLGAPLTEDQQNRLSEEIEKKWQELEKLPLRENKRVPLTALLNQSRGERRGPPSDGHEALEKEV
QALRAQLEAWRLQGEAPQSALRSQEDGHIPPGYISQEACERSLAEMESSHQQVMEELQRHHERELQRLQQEKEWL
LAEETAATASAIEAMKKAYQEELSRELSKTRSLQQGPDGLRKQHQSDVEALKRELQVLSEQYSQKCLEIGALMRQ
AEEREHTLRRCQQEGQELLRHNQELHGRLSEEIDQLRGFIASQGMGNGCGRSNERSSCELEVLLRVKENELQYLK
KEVQCLRDELQMMQKDKRFTSGKYQDVYVELSHIKTRSEREIEQLKEHLRLAMAALQEKESMRNSLAE

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FIGURE 1571

ATGCGGCATTCCAAAAGAACTCACTGTCCTGATTGGGATAGCAGAGAAAGCTGGGGACATGAAAGCTATCGTGGA
AGTCACAAGCGGAAGAGGAGATCTCATAGTAGCACACAAGAGAACAGGCATTGTAAACCACATCACCAGTTTAAA
GAATCTGATTGTCATTATTTAGAAGCAAGGTCCTTGAATGAGCGAGATTATCGGGACCGGAGATACGTTGACGAA
TACAGGAATGACTACTGTGAAGGATATGTTCCTAGACATTATCACAGAGACATTGAAAGCGGGTATCGAATCCAC
TGCAGTAAATCTTCAGTCCGCAGCAGGAGAAGCAGTCCTAAAAGGAAGCGCAATAGACACTGTTCAAGTCATCAG
TCACGTTCGAAGAGCCACCGAAGGAAAAGATCCAGGAGTATAGAGGATGATGAGGAGGGTCACCTGATCTGTCAA
AGTGGAGACGTTCTAAGAGCAAGATATGAAATCGTGGACACTTTGGGTGAAGGAGCCTTTGGCAAAGTTGTAGAG
TGCATTGATCATGGCATGGATGGCATGCATGTAGCAGTGAAAATCGTAAAAAATGTAGGCCGTTACCGTGAAGCA
GCTCGTTCAGAAATCCAAGTATTAGAGCACTTAAATAGTACTGATCCCAATAGTGTCTTCCGATGTGTCCAGATG
CTAGAATGGTTTGATCATCATGGTCATGTTTGTATTGTGTTTGAACTACTGGGACTTAGTACTTACGATTTCATT
AAAGAAAACAGCTTTCTGCCATTTCAAATTGACCACATCAGGCAGATGGCGTATCAGATCTGCCAGTCAATAAAT
TTTTTACATCATAATAAATTAACCCATACAGATCTGAAGCCTGAAAATATTTTGTTTGTGAAGTCTGACTATGTA
GTCAAATATAATTCTAAAATGAAACGTGATGAACGCACACTGAAAAACACAGATATCAAAGTTGTTGACTTTGGA
AGTGCAACGTATGATGATGAACATCACAGTACTTTGGTGTCTACCCGGCACTACAGAGCTCCCGAGGTCATTTTG
GCTTTAGGTTGGTCTCAGCCTTGTGATGTTTGGAGCATAGGTTGCATTCTTATTGAATATTACCTTGGTTTCACA
GTCTTTCAGACTCATGATAGTAAAGAGCACCTGGCAATGATGGAACGAATATTAGGACCCATACCACAACACATG
ATTCAGAAAACAAGAAAACGCAAGTATTTTCACCATAACCAGCTAGATTGGGATGAACACAGTTCTGCTGGTAGA
TATGTTAGGAGACGCTGCAAACCGTTGAAGGAATTTATGCTTTGTCATGATGAAGAACATGAGAAACTGTTTGAC
CTGGTTCGAAGAATGTTAGAATATGATCCAACTCAAAGAATTACCTTGGATGAAGCATTGCAGCATCCTTTCTTT
GACTTATTAAAAAAGAAA**TGA**AATGGGAATCAGTGGTCTTACTATATACTTCTCTAGAAGAGATTACTTAAGACT
GTGTCAGTCAACTAAACATTCTAATATTTTTGTAAACATTAAATTATTTTGTACAGTTAAGXGTAAATATTGTAT
GTTTTGTATCAATAGCATAATTAACTTGTTAAGCAAGTATGGTCTTGATAATGCATTAGAAAAATTAAAATTAAT
TTTTCTTTTTGAAATTACCATTTTTAAAAACCTTTGAAATATCCTTTGTGTCCAGTGATAAATGTGATTGATCTT
GCCTTTTGTACATGGAGGTCACCTCTGAAGTGATTTTTTTTGAGTAAAAGGAAATCTTGACTACTTTAAAAAAAA
AAAAAAAAAAAAA

FIGURE 1572

MRHSKRTHCPDWDSRESWGHESYRGSHKRKRRSHSSTQENRHCKPHHQFKESDCHYLEARSLNERDYRDRRYVDE
YRNDYCEGYVPRHYHRDIESGYRIHCSKSSVRSRRSSPKRKRNRHCSSHQSRSKSHRRKRSRSIEDDEEGHLICQ
SGDVLRARYEIVDTLGEGAFGKVVECIDHGMDGMHVAVKIVKNVGRYREAARSEIQVLEHLNSTDPNSVFRCVQM
LEWFDHHGHVCIVFELLGLSTYDFIKENSFLPFQIDHIRQMAYQICQSINFLHHNKLTHTDLKPENILFVKSDYV
VKYNSKMKRDERTLKNTDIKVVDFGSATYDDEHHSTLVSTRHYRAPEVILALGWSQPCDVWSIGCILIEYYLGFT
VFQTHDSKEHLAMMERILGPIPQHMIQKTRKRKYFHHNQLDWDEHSSAGRYVRRRCKPLKEFMLCHDEEHEKLFD
LVRRMLEYDPTQRITLDEALQHPFFDLLKKK

FIGURE 1573

GCCTCCAGCTGACCTCTGGCTCCTGTCCTCTGGCTCCACCTGCACCGCCCTGCTCTTCCTAAGGGGCCAGGAAGC
CCCCAGAAGCTCTACCATCGACGTGGGTGGTGGCACCCGGCTCACCCTGAGAGCAGAGGGCGTGCAGGGGGCTCA
GTTCTGAGCCCAGCCGGCCCACC**ATG**GCACGGCGGTTCCAGGAGGAGCTGGCCGCCTTCCTCTTCGAGTATGACA
CCCCCCGCATGGTGCTGGTGCGTAATAAGAAGGTGGGCGTTATCTTCCGACTGATCCAGCTGGTGGTCCTGGTCT
ACGTCATCGGGTGGGTGTTTCTCTATGAGAAGGGCTACCAGACCTCGAGCGGCCTCATCAGCAGTGTCTCTGTGA
AACTCAAGGGCCTGGCCGTGACCCAGCTCCCTGGCCTCGGCCCCCAGGTCTGGGATGTGGCTGACTACGTCTTCC
CAGCCCAGGGGGACAACTCCTTCGTGGTCATGACCAATTTCATCGTGACCCCGAAGCAGACTCAAGGCTACTGCG
CAGAGCACCCAGAAGGGGGCATATGCAAGGAAGACAGTGGCTGTACCCCTGGGAAGGCCAAGAGGAAGGCCCAAG
GCATCCGCACGGGCAAGTGTGTGGCCTTCAACGACACTGTGAAGACGTGTGAGATCTTTGGCTGGTGCCCCGTGG
AGGTGGATGACGACATCCCGCGCCCTGCCCTTCTCCGAGAGGCCGAGAACTTCACTCTTTTCATCAAGAACAGCA
TCAGCTTTCCACGCTTCAAGGTCAACAGGCGCAACCTGGTGGAGGAGGTGAATGCTGCCCACATGAAGACCTGCC
TCTTTCACAAGACCCTGCACCCCCTGTGCCCAGTCTTCCAGCTTGGCTACGTGGTGCAAGAGTCAGGCCAGAACT
TCAGCACCCTGGCTGAGAAGGGTGGAGTGGTTGGCATCACCATCGACTGGCACTGTGACCTGGACTGGCACGTAC
GGCACTGCAGACCCATCTATGAGTTCCATGGGCTGTACGAAGAGAAAAATCTCTCCCCAGGCTTCAACTTCAGGT
TTGCCAGGCACTTTGTGGAGAACGGGACCAACTACCGTCACCTCTTCAAGGTGTTTGGGATTCGCTTTGACATCC
TGGTGGACGGCAAGGCCGGGAAGTTTGACATCATCCCTACAATGACCACCATCGGCTCTGGAATTGGCATCTTTG
GGGTGGCCACAGTTCTCTGTGACCTGCTGCTGCTTCACATCCTGCCTAAGAGGCACTACTACAAGCAGAAGAAGT
TCAAATACGCTGAGGACATGGGGCCAGGGGCGGCTGAGCGTGACCTCGCAGCTACCAGCTCCACCCTGGGCCTGC
AGGAGAACATGAGGACATCC**TGA**TGCTCGGGCCCCAACTCCTGACTGGGTGCAGCGTGAGGCTTCAGCCTGGAGC
CCTGGTGGGTCCCAGCCAGGGCAGAGGGGCCTCCCCAGGAAGTCTCCTACCCTCTCAGCCAGGCAGAGAGCAGTT
TGCCAGAAGCTCAGGGTGCATAGTAGGAGAGACCTGTGCAAATCTGAGCTCCGGCTCCGACCCCACACACCCTGA
GGGAGGCCTACCCTAGCCTCAGCCGCTCCTGGTGGGGGAATGGCTGGGGGTTGGGCAGGACCCTCCCACACACCT
GCACCCTAGCTTCGTGCTTCTCTCTCCGGACTCTCATTATCCAACCCGCTGCCTCCATTTCTCTAGATCTGTGCT
CTCCGATGTGGCAGTCAGTAACCATAGGTGACTAAATTAAACTAAAATAAAATAGAATGAAACACAAAATTCAAT
TCCTCGGCTGAACTAGCCACATTTCAACTGCTCAGTAGATACGTGTGGTTAGTGGCTGCCATACTGGACAGCTCG
GGGCATTTTCACTGTCAAAGAAAGTTCTATTAGACAGCCCTGCTTGAGCCCTGTTTCTTCCTGGCTTCGGTTTCC
CTGGGGAACTTATCGACAATGCAAGCTCCTGGGCCCACCCCCAGACCTCCTGAACCAAAAGCTCCAGGGCTGGCC
GTATGATCTGTGTGGATGGCAAACTCCCCAGGCCATTCTGGGACCTAAGTTTAAGAAGTGCCGTCCTCGAACTTT
CTGACTCTAAGCTCCTGAGCGGGAGTCAGACTTAGCCCTGAGCCTGCACTTCCTGTTCAGGTGCAGACACTGAAC
AGGGTCTCAAACACCTTCAGCATGTGTGTTGTGTGCTCACGTGCCACACAGTGTCTCATGCACACAACCCAGTGT
ACACACCACCTACGTGCACACAGCATCCTTCCACACTGTGTATGTGAACAGCTTGGGCCCTGCAAACACAACCAT
CTACACACATCTACACCCCCAAGCACACACACATGGTCCGTGCCATGTCACCTCCATAGGGAAAGGCTTCTCTCC
AAGTGTGCCAGGCCAGGACAGCCCTCCCAGCCATGAATCCTTACTCAGCTACCTCGGGTTGGGGTGGGAGCCCCA
GCCAAATCCTGGGCTCCCTGCCTGTGGCTCAGCCCCAGCTCCCAAGGCCTGCCTGGCTCTGTCTGAACAGAAGGT
CTGGGGGAAGCGAGGGGTGGAGTACAATAAAGGGAATGAGGACAAACAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAA

FIGURE 1574

MARRFQEELAAFLFEYDTPRMVLVRNKKVGVIFRLIQLVVLVYVIGWVFLYEKGYQTSSGLISSVSVKLKGLAVT
QLPGLGPQVWDVADYVFPAQGDNSFVVMTNFIVTPKQTQGYCAEHPEGGICKEDSGCTPGKAKRKAQGIRTGKCV
AFNDTVKTCEIFGWCPVEVDDDIPRPALLREAENFTLFIKNSISFPRFKVNRRNLVEEVNAAHMKTCLFHKTLHP
LCPVFQLGYVVQESGQNFSTLAEKGGVVGITIDWHCDLDWHVRHCRPIYEFHGLYEEKNLSPGFNFRFARHFVEN
GTNYRHLFKVFGIRFDILVDGKAGKFDIIPTMTTIGSGIGIFGVATVLCDLLLLHILPKRHYYKQKKFKYAEDMG
PGAAERDLAATSSTLGLQENMRTS

FIGURE 1575

ATGGAGAGGGGGCTGCCGCTCCTCTGCGCCGTGCTCGCCCTCGTCCTCGCCCCGGCCGGCGCTTTTCGCAACGAT
GAATGTGGCGATACTATAAAAATTGAAAGCCCCGGGTACCTTACATCTCCTGGTTATCCTCATTCTTATCACCCA
AGTGAAAAATGCGAATGGCTGATTCAGGCTCCGGACCCATACCAGAGAATTATGATCAACTTCAACCCTCACTTC
GATTTGGAGGACAGAGACTGCAAGTATGACTACGTGGAAGTCTTCGATGGAGAAAATGAAAATGGACATTTTAGG
GGAAAGTTCTGTGGAAAGATAGCCCCTCCTCCTGTTGTGTCTTCAGGGCCATTTCTTTTTATCAAATTTGTCTCT
GACTACGAAACACATGGTGCAGGATTTTCCATACGTTATGAAATTTTCAAGAGAGGTCCTGAATGTTCCCAGAAC
TACACAACACCTAGTGGAGTGATAAAGTCCCCCGGATTCCCTGAAAAATATCCCAACAGCCTTGAATGCACTTAT
ATTGTCTTTGCGCCAAAGATGTCAGAGATTATCCTGGAATTTGAAAGCTTTGACCTGGAGCCTGACTCAAATCCT
CCAGGGGGGATGTTCTGTCGCTACGACCGGCTAGAAATCTGGGATGGATTCCCTGATGTTGGCCCTCACATTGGG
CGTTACTGTGGACAGAAAACACCAGGTCGAATCCGATCCTCATCGGGCATTCTCTCCATGGTTTTTTACACCGAC
AGCGCGATAGCAAAAGAAGGTTTCTCAGCAAACTACAGTGTCTTGCAGAGCAGTGTCTCAGAAGATTTCAAATGT
ATGGAAGCTCTGGGCATGGAATCAGGAGAAATTCATTCTGACCAGATCACAGCTTCTTCCCAGTATAGCACCAAC
TGGTCTGCAGAGCGCTCCCGCCTGAACTACCCTGAGAATGGGTGGACTCCCGGAGAGGATTCCTACCGAGAGTGG
ATACAGGTAGACTTGGGCCTTCTGCGCTTTGTCACGGCTGTCGGGACACAGGGCGCCATTTCAAAAGAAACCAAG
AAGAAATATTATGTCAAGACTTACAAGATCGACGTTAGCTCCAACGGGGAAGACTGGATCACCATAAAAGAAGGA
AACAAACCTGTTCTCTTTCAGGGAAACACCAACCCCACAGATGTTGTGGTTGCAGTATTCCCCAAACCACTGATA
ACTCGATTTGTCCGAATCAAGCCTGCAACTTGGGAAACTGGCATATCTATGAGATTTGAAGTATACGGTTGCAAG
ATAACAGATTATCCTTGCTCTGGAATGTTGGGTATGGTGTCTGGACTTATTTCTGACTCCCAGATCACATCATCC
AACCAAGGAGACAGAAACTGGATGCCTGAAAACATCCGCCTGGTAACCAGTCGCTCTGGCTGGGCACTTCCACCC
GCACCTCATTCCTACATCAATGAGTGGCTCCAAATAGACCTGGGGGAGGAGAAGATCGTGAGGGGCATCATCATT
CAGGGTGGGAAGCACCGAGAGAACAAGGTGTTCATGAGGAAGTTCAAGATCGGGTACAGCAACAACGGCTCGGAC
TGGAAGATGATCATGGATGACAGCAAACGCAAGGCGAAGTCTTTTGAGGGCAACAACAACTATGATACACCTGAG
CTGCGGACTTTTCCAGCTCTCTCCACGCGATTCATCAGGATCTACCCCGAGAGAGCCACTCATGGCGGACTGGGG
CTCAGAATGGAGCTGCTGGGCTGTGAAGTGGAAGCCCCTACAGCTGGACCGACCACTCCCAACGGGAACTTGGTG
GATGAATGTGATGACGACCAGGCCAACTGCCACAGTGGAACAGGTGATGACTTCCAGCTCACAGGTGGCACCACT
GTGCTGGCCACAGAAAAGCCCACGGTCATAGACAGCACCATACAATCAGAGTTTCCAACATATGGTTTTAACTGT
GAATTTGGCTGGGGCTCTCACAAGACCTTCTGCCACTGGGAACATGACAATCACGTGCAGCTCAAGTGGAGTGTG
TTGACCAGCAAGACGGGACCCATTCAGGATCACACAGGAGATGGCAACTTCATCTATTCCCAAGCTGACGAAAAT
CAGAAGGGCAAAGTGGCTCGCCTGGTGAGCCCTGTGGTTTATTCCCAGAACTCTGCCCACTGCATGACCTTCTGG
TATCACATGTCTGGGTCCCACGTCGGCACACTCAGGGTCAAACTGCGCTACCAGAAGCCAGAGGAGTACGATCAG
CTGGTCTGGATGGCCATTGGACACCAAGGTGACCACTGGAAGGAAGGGCGTGTCTTGCTCCACAAGTCTCTGAAA
CTTTATCAGGTGATTTTCGAGGGCGAAATCGGAAAAGGAAACCTTGGTGGGATTGCTGTGGATGACATTAGTATT
AATAACCACATTTCACAAGAAGATTGTGCAAAACCAGCAGACCTGGATAAAAAGAACCCAGAAATTAAAATTGAT
GAAACAGGGAGCACGCCAGGATACGAAGGTGAAGGAGAAGGTGACAAGAACATCTCCAGGAAGCCAGGCAATGTG
TTGAAGACCTTAGAACCCATCCTCATCACCATCATAGCCATGAGCGCCCTGGGGGTCCTCCTGGGGGCTGTCTGT
GGGGTCGTGCTGTACTGTGCCTGTTGGCATAATGGGATGTCAGAAAGAAACTTGTCTGCCCTGGAGAACTATAAC
TTTGAACTTGTGGATGGTGTGAAGTTGAAAAAAGACAAACTGAATACACAGAGTACTTATTCGGAGGCA**TGA**

FIGURE 1576

MERGLPLLCAVLALVLAPAGAFRNDECGDTIKIESPGYLTSPGYPHSYHPSEKCEWLIQAPDPYQRIMINFNPHF
DLEDRDCKYDYVEVFDGENENGHFRGKFCGKIAPPPVVSSGPFLFIKFVSDYETHGAGFSIRYEIFKRGPECSQN
YTTPSGVIKSPGFPEKYPNSLECTYIVFAPKMSEIILEFESFDLEPDSNPPGGMFCRYDRLEIWDGFPDVGPHIG
RYCGQKTPGRIRSSSGILSMVFYTDSAIAKEGFSANYSVLQSSVSEDFKCMEALGMESGEIHSDQITASSQYSTN
WSAERSRLNYPENGWTPGEDSYREWIQVDLGLLRFVTAVGTQGAISKETKKKYYVKTYKIDVSSNGEDWITIKEG
NKPVLFQGNTNPTDVVVAVFPKPLITRFVRIKPATWETGISMRFEVYGCKITDYPCSGMLGMVSGLISDSQITSS
NQGDRNWMPENIRLVTSRSGWALPPAPHSYINEWLQIDLGEEKIVRGIIIQGGKHRENKVFMRKFKIGYSNNGSD
WKMIMDDSKRKAKSFEGNNNYDTPELRTFPALSTRFIRIYPERATHGGLGLRMELLGCEVEAPTAGPTTPNGNLV
DECDDDQANCHSGTGDDFQLTGGTTVLATEKPTVIDSTIQSEFPTYGFNCEFGWGSHKTFCHWEHDNHVQLKWSV
LTSKTGPIQDHTGDGNFIYSQADENQKGKVARLVSPVVYSQNSAHCMTFWYHMSGSHVGTLRVKLRYQKPEEYDQ
LVWMAIGHQGDHWKEGRVLLHKSLKLYQVIFEGEIGKGNLGGIAVDDISINNHISQEDCAKPADLDKKNPEIKID
ETGSTPGYEGEGEGDKNISRKPGNVLKTLEPILITIIAMSALGVLLGAVCGVVLYCACWHNGMSERNLSALENYN
FELVDGVKLKKDKLNTQSTYSEA

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FIGURE 1577

CTGGCATCCCGAGAAGCCAGGAAGCAGTGAGCCCAGGAGTCCTCGGCCAGCCCTGCCTGCCCACCAGGAGG**ATG**A
AGGTCTCCGTGGCTGCCCTCTCCTGCCTCATGCTTGTTACTGCCCTTGGATCCCAGGCCCGGGTCACAAAAGATG
CAGAGACAGAGTTCATGATGTCAAAGCTTCCATTGGAAAATCCAGTACTTCTGGACAGATTCCATGCTACTAGTG
CTGACTGCTGCATCTCCTACACCCCACGAAGCATCCCGTGTTCACTCCTGGAGAGTTACTTTGAAACGAACAGCG
AGTGCTCCAAGCCGGGTGTCATCTTCCTCACCAAGAAGGGGCGACGTTTCTGTGCCAACCCCAGTGATAAGCAAG
TTCAGGTTTGCATGAGAATGCTGAAGCTGGACACACGGATCAAGACCAGGAAGAAT**TGA**ACTTGTCAAGGTGAAG
GGACACAAGTTGCCAGCCACCAACTTTCTTGCCTCAACTACCTTCCTGAATTATTTTTTTAAGAAGCATTTATTC
TTGTGTTCTGGATTTAGAGCAATTCATCTAATAAACAGTTTCTCACTTTT

FIGURE 1578

MKVSVAALSCLMLVTALGSQARVTKDAETEFMMSKLPLENPVLLDRFHATSADCCISYTPRSIPCSLLESYFETN
SECSKPGVIFLTKKGRRFCANPSDKQVQVCMRMLKLDTRIKTRKN

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FIGURE 1579

CCCAAGCCTTCGGGTAGGGTGCCTTCAGCCGCTACAAGAGCAGAAGCAGTGGGCATTGGATGGAGCTGAGTACAG
GACCATACAGGCTAATTGCACCGGCACAGTGAAATAAGATTTCGCCGCCTATCATCTGCTAACTGCTACGGACTC
AGGCTCAGAAAGGCCTGCGCTTCACCCAGGAATCGGATATAACATCATCTGGGTACCC**ATG**GCCAGCTGTGACTT
CTCCATCCGCACCTACACCTATGCAGACACCCCTGATGATTTCCAGTTGCACAACTTCAGCCTCCCAGAGGAAGA
TACCAAGCTCAAGATACCCCTGATTCACCGAGCCCTGCAGTTGGCCCAGCGTCCCGTTTCACTCCTTGCCAGCCC
CTGGACATCACCCACTCGGCTCAAGACCAGGGGAGCGGGGAATGGGAAGGGGCCACTCAAGGGACAGCCCAGAGA
CATCTACCACCAGACCTGGGCCAGATACATTGTGAAGTTCCTGGATGCCTATGCTGAGCACAAGTTACAGTTCTG
GGCAGTGACAGCTGAAAATGAGCCTTCTGCTGGGCTGTTGAGTGGATACCCCTTCCAGTGCCTGGGCTTCACCCC
TGAACATCAGCGAGACTTCATTGCCCGTGACCTAGGTCCTACCCTTGCCAACGGTACTCACCACAATGTCCGCCT
ACTCATGCTGGATGACCAACGCTTGCTGCTGCCCCACTGGGCAAAGGTGGTACTGACAGACCCAGAAGCAGCTAA
GTATGTTCATGGTATTGCTGTACATTGGTACCTGGACTTTCTGGCTCCAGCCAAAGCCACCCTAAGGGAGACACA
CCACCTGTTCCCCAACACCATGCTCTTTGCCTCAGAGGCCTGTGTGGGTTCCAAGTTCTGGGAGCAGAGTGTGCG
GCTAGGCTCCTGGGATCGAGGGATGCAGTACAGCCACAGCATCATCACAAACCTCCTGTACCATGTGGTCGGCTG
GACCGACTGGAACCCATCATTG**TAG**ACATCACCAAGCACACGTTTTACAAACAGCCCATGTTCTACCACCTTGGC
CACTTCAGCAAGTTCATTCCTGAGGGCTCCCAGAGAGTGGGGCTGGTTGCCAGTCAGAAGAACGACCCGGACGCA
GTGGCACTGATGCATCCCGATGGCTCTGCTGTTGTGGTCGTGCTAAACCGCTCCTCTAAGGATGTGCCTCTTACC
ATCAAGGATCCTGCTGTGGGCTTCCTGGAGACAATCTCACCTGGCTACTCCATTCACACCTACCTGTGGCGTCGC
CAGTGATGGAGCAGATACTCAAGGAGGCACTGGGCTCAGCCTGGGCATTAAAGGGACAGAGTCAGCTCACACGCT
GTCTGTGACTAAAGAGGGCACAACAGGGCCAGCGTGACGTTACAGCGACGTAAGCCCAGGGGCAATGGTTTGGGT
GACTCACTTTCCCCTCTAGGCGGTGCCAGGGGCTGGAGGCCCCTAGAAAAAGATCAGTAAGCCCCAGTGTCCCCC
CAGCCCCCATGCTTATGTGAACATGCGCTGTGTGCTGCTTGCTTTGGAAACTGGGCCTGGGTCCAGGCCTAGGGT
GAGCTCACTGTCCGTACAAACACAAGATCAGGGCTGAGGGTAAGGAAAAGAAGAGACTAGGAAAGCTGGGCCCAA
AACTGGAGACTGTTTGTCTTTCCTGGAGATGCAGAACTGGGCCCGTGGAGCAGCAGTGTCAGCATCAGGGCGGAA
GCCTTAAAGCAGCAGCGGGTGTGCCCAGGCACCCAGATGATTCCTATGGCACCAGCCAGGAAAAATGGCAGCTCT
TAAAGGAGAAAATGTTTGAGCCC

FIGURE 1580

MASCDFSIRTYTYADTPDDFQLHNFSLPEEDTKLKIPLIHRALQLAQRPVSLLASPWTSPTRLKTRGAGNGKGPL
KGQPRDIYHQTWARYIVKFLDAYAEHKLQFWAVTAENEPSAGLLSGYPFQCLGFTPEHQRDFIARDLGPTLANGT
HHNVRLLMLDDQRLLLPHWAKVVLTDPEAAKYVHGIAVHWYLDFLAPAKATLRETHHLFPNTMLFASEACVGSKF
WEQSVRLGSWDRGMQYSHSIITNLLYHVVGWTDWNPSL

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FIGURE 1581

CGCAGCTCAACCTGAGCTACACAGCCAGATGCGAGATGCTTCTCTGCTGATCTGAGTCTGCCTGCAGCATGGACC
TTGGTCTTCCCTGAAGCATCTCCAGGGCTGGAGGGACGACTGCCATGCACCTAGGGCTTATCCATCCGCAGAGCA
GGGCAGTGGGAGGAGACGCT**ATG**ACCCCCATCCTCACGGTCCTGATCTGTCTCGGGCTGAGTCTGGGCCCCCGGA
CCCACGTGCAGGCAGGGACCCTCCCCAAGCCCACACTCTGGGCTGAGCCAGGCTCTGTGATCACCCAGGGGAGTC
CCGTGACCCTCTGGTGTCAGGGGATCCTGGAGACCCAGGAGTACCGTCTGTATAGAGAAAAGAAAACAGCACCCT
GGATTACACGGATCCCACAGGAGATTGTGAAGAAGGGCCAGTTCCCCATCCCGTCCATCACCTGGGAACACACCG
GGCGGTATCGCTGTTTCTACGGTAGCCACACTGCAGGCTGGTCAGAGCCCAGTGACCCCCTGGAGCTGGTGGTGA
CAGGAGCCTACATCAAACCCACCCTCTCGGCTCTACCCAGCCCTGTGGTGACCTCAGGAGGGAACGTGACCCTCC
ATTGTGTCTCACAGGTGGCATTTGGCAGCTTCATTCTGTGTAAGGAAGGAGAAGATGAACACCCACAATGCCTGA
ACTCACAGCCCCGTACCCATGGGTGGTCCCGGGCCATCTTCTCTGTGGGCCCCGTGAGCCCGAGTCGCAGGTGGT
CGTACAGGTGCTATGCTTATGACTCGAACTCTCCCCATGTGTGGTCTCTACCCAGTGATCTCCTGGAGCTCCTGG
TCCCAGGAGCAGCTGAGACCCTCAGCCCACCACAAAACAAGTCCGATTCCAAGGCTGGAGCAGCTAACACCCTCA
GCCCATCACAAAACAAGACTGCCTCACACCCCCAGGATTACACAGTGGAGAATCTCATCCGCATGGGCATAGCTG
GCTTGGTCCTGGTGGTCCTCGGGATTCTGCTATTTGAGGCTCAGCACAGCCAGAGAAGCCTC**TGA**GATGCAGCCG
GGAGGTGAACAGCAGAGAGAAGAATGTACCCTTCAGAGTGGTGGAGCCTTGGGAACAGATCTGATGATGCCAGGA
GGTTCCGGGAGACAATTTAGGGCTGATGCTATCTGGACTGTCTGCCAATCATTTTTAGAGGGAGGAATCAGTGTT
GGATTGCAGAGACATTTTCTGGAGTGATCCATGAAGGACCATTAACATGTGATACCTTTCCTCTCTATTAATGTT
GACTTCCCTTGGTTGGATCCTCTTCTTTCCCCACCCCCAGACAGACATGAGGCTACATCCCACATGGCAGCGTTG
GGTCCACACCTCTGCACATCTGTGTGCTCTGGTCCATGGTGTGTAACACAGTCTTCTTTATTACTCATTGCCATA
CTCCCTGGTGTGCTTTACTGAGCCTCCATCTCTTCAATTCAGAGTTCCAAACGTGCTTCAGTAACTAAATCAATG
GGAGAGTATCGGATTTCAACCAGGAAAAGATAAATCCACCCTGATGCCCTGACACCCTCTCTGAACCCTACGAGC
CCTTCCCTCCTTCTCACATGCTACCTGTGCAGCTTCTCCTTAGATCATTGTGTAACCATCACTGCCATCCTGTTC
CACACATGGTCATCACCCTACACCCATTCAGCAGCCACTCCCCATTCCCTCTTCCCTCCAGCACCTGCTAACCAC
AAATGTGCTTTCTGTCTCTACGGATTTGCCTATTCTGTCTGAAAACATTTCAATCTCCTTTGACCTGTGAGCTCC
TCACTTCGAGACTTCCTGCCTTTCCAGGCAGAACCAAAGTACACCACGTCAAAAGCAATGATAGGCATTTGCAGT
GTGTTGGTGATCCACGAAAGGAAAATCACGGAAGCAGGATAGAAATCCAGCTGCAGACAAGACCTCAGGTCGATG
AATCTTGACAAGCAGTTGAGCTGTTTTTTTCTACTCACCTAGGACAGTCAGGCAGAAGTATGCAAAATGACTGGG
GCTGATTCTTTTCTGAATTGTCGCAAACAGCAAGAGGACTTGAGTCCTAGCATTAAAGAGTTCAACATGTCTAGG
TCCAAGACCACTGTTGTGTTTGAAGGATGTAAAACCCTGCTGCATAGGATGGAATATTTGGAGGGAGGATCCTGA
AAAACATGAGGGATCAAATAGTCCTCAACTTTCTAGGACAAAGGGAGCAGCTATTTGCCATCTACCCTCCAGAAT
AAAGAAATCTTATCATTCACCATCTACCCTCTAGAATAAAGAAATCTTATCATTCGCCATCTACCCTGTAGAATA
AAGAAATCTTATCATTCACCGTCTACCCTCTAGAGTAAACAAATCTTATCATTCACCATCTACCCTCTAGAATAA
AGAAATCTTATCATTCGCCATCTACCCTCTAGAATAAAGAAATCT

FIGURE 1582

MTPILTVLICLGLSLGPRTHVQAGTLPKPTLWAEPGSVITQGSPVTLWCQGILETQEYRLYREKKTAPWITRIPQ
EIVKKGQFPIPSITWEHTGRYRCFYGSHTAGWSEPSDPLELVVTGAYIKPTLSALPSPVVTSGGNVTLHCVSQVA
FGSFILCKEGEDEHPQCLNSQPRTHGWSRAIFSVGPVSPSRRWSYRCYAYDSNSPHVWSLPSDLLELLVPGAAET
LSPPQNKSDSKAGAANTLSPSQNKTASHPQDYTVENLIRMGIAGLVLVVLGILLFEAQHSQRSL

FIGURE 1583

AAGAACTGGCCTGTACATTTTCAAGGAATTCTTGAGAGGTTCTTGGAGAGATTCTGGGAGCCAAACACTCCATTG
GGATCCTAGCTGTTTTAGAGAACAACTTGTA**ATG**GAGCCTTCATCTCTTGAGCTGCCGGCTGACACAGTGCAGCG
CATTGCGGCTGAACTCAAATGCCACCCAACGGATGAGAGGGTGGCTCTCCACCTAGATGAGGAAGATAAGCTGAG
GCACTTCAGGGAGTGCTTTTATATTCCCAAAATACAGGATCTGCCTCCAGTTGATTTATCATTAGTGAATAAAGA
TGAAAATGCCATCTATTTCTTGGGAAATTCTCTTGGCCTTCAACCAAAAATGGTTAAAACATATCTTGAAGAAGA
ACTAGATAAGTGGGCCAAAATAGCAGCCTATGGTCATGAAGTGGGGAAGCGTCCTTGGATTACAGGAGATGAGAG
TATTGTAGGCCTTATGAAGGACATTGTAGGAGCCAATGAGAAAGAAATAGCCCTAATGAATGCTTTGACTGTAAA
TTTACATCTTCTAATGTTATCATTTTTTAAGCCTACGCCAAAACGATATAAAATTCTTCTAGAAGCCAAAGCCTT
CCCTTCTGATCATTATGCTATTGAGTCACAACTACAACTTCACGGACTTAACATTGAAGAAAGTATGCGGATGAT
AAAGCCAAGAGAGGGGGAAGAAACCTTAAGAATAGAGGATATCCTTGAAGTAATTGAGAAGGAAGGAGACTCAAT
TGCAGTGATCCTGTTCAGTGGGGTGCATTTTTACACTGGACAGCACTTTAATATTCCTGCCATCACAAAAGCTGG
ACAAGCGAAGGGTTGTTATGTTGGCTTTGATCTAGCACATGCAGTTGGAAATGTTGAACTCTACTTACATGACTG
GGGAGTTGATTTTGCCTGCTGGTGTTCCTACAAGTATTTAAATGCAGGAGCAGGAGGAATTGCTGGTGCCTTCAT
TCATGAAAAGCATGCCCATACGATTAAACCTGCATTAGTGGGATGGTTTGGCCATGAACTCAGCACCAGATTTAA
GATGGATAACAAACTGCAGTTAATCCCTGGGGTCTGTGGATTCCGAATTTCAAATCCTCCCATTTTGTTGGTCTG
TTCCTTGCATGCTAGTTTAGAGATCTTTAAGCAAGCGACAATGAAGGCATTGCGGAAAAAATCTGTTTTGCTAAC
TGGCTATCTGGAATACCTGATCAAGCATAACTATGGCAAAGATAAAGCAGCAACCAAGAAACCAGTTGTGAACAT
AATTACTCCGTCTCATGTAGAGGAGCGGGGGTGCCAGCTAACAATAACATTTTCTGTTCCAAACAAAGATGTTTT
CCAAGAACTAGAAAAAAGAGGAGTGGTTTGTGACAAGCGGAATCCAAATGGCATTCGAGTGGCTCCAGTTCCTCT
CTATAATTCTTTCCATGATGTTTATAAATTTACCAATCTGCTCACTTCTATACTTGACTCTGCAGAAACAAAAAA
T**TAG**CAGTGTTTTCTAGAACAACTTAAGCAAATTATACTGAAAGCTGCTGTGGTTATTTCAGTATTATTCGATTT
TTAATTATTGAAAGTATGTCACCATTGACCACATGTAACTAACAATAAATAATATACCTTAC

FIGURE 1584

MEPSSLELPADTVQRIAAELKCHPTDERVALHLDEEDKLRHFRECFYIPKIQDLPPVDLSLVNKDENAIYFLGNS
LGLQPKMVKTYLEEELDKWAKIAAYGHEVGKRPWITGDESIVGLMKDIVGANEKEIALMNALTVNLHLLMLSFFK
PTPKRYKILLEAKAFPSDHYAIESQLQLHGLNIEESMRMIKPREGEETLRIEDILEVIEKEGDSIAVILFSGVHF
YTGQHFNIPAITKAGQAKGCYVGFDLAHAVGNVELYLHDWGVDFACWCSYKYLNAGAGGIAGAFIHEKHAHTIKP
ALVGWFGHELSTRFKMDNKLQLIPGVCGFRISNPPILLVCSLHASLEIFKQATMKALRKKSVLLTGYLEYLIKHN
YGKDKAATKKPVVNIITPSHVEERGCQLTITFSVPNKDVFQELEKRGVVCDKRNPNGIRVAPVPLYNSFHDVYKF
TNLLTSILDSAETKN

FIGURE 1585

TTTCCCGAGATCACCAAG**ATG**CTGGGCGCCGAGTGGAGCAAGCTGCAGCCAACGGAAAAGCAGCGGTACCTGGAT
GAGGCCGAGAGAGAGAAGCAGCAGTACATGAAGGAGCTGCGGGCGTACCAGCAGTCTGAAGCCTATAAGATGTGC
ACGGAGAAGATCCAGGAGAAGAAGATCAAGAAAGAAGACTCGAGCTCTGGGCTCATGAACACTCTCCTGAATGGA
CACAAGGGTGGGGACTGCGATGGCTTCTCCACCTTCGATGTTCCCATCTTCACTGAAGAGTTCTTGGACCAAAAC
AAAGCGCGTGAGGCGGAGCTTCGGCGCTTGCGGAAGATGAATGTGGCCTTCGAGGAGCAGAACGCGGTACTGCAG
AGGCAAAACGCAGAGCATGAGCAGCGCGCGCGAGCGTCTGGAGCAGGAGCTGGCGCTGGAGGAGCGGAGGACGCT
GGCGCTGCAGCAGCAGCTCCAGGCCGTGCGCCAGGCGCTCACCGCCAGCTTCGCCTCACTGCCGGTGCCGGGCAC
GGGCGAAACGCCCACGCTGGGCACTCTGGACTTCTACATGGCCCGGCTTCACGGAGCCATCGAGCGCGACCCCGC
CCAGCACGAGAAGCTCATCGTCCGCATCAAGGAAATCCTGGCCCAGGTCGCCAGCGAGCACCTGTGAGGAGTGGG
CGGGCCCACGATGCAGAGGAGAAGCTGTGGGCGCGGCCCTGCCACACCCCACCCCGTGGACGAGAGGCTGGGGGT
CCACCCTTTGGGGCCTGGTCCCATCCTGCACCTTTGGGGGCTCCAGCCCCCCTAAAATTAAATTTCTGCAGCATC
CCTTTAGCTTTCAATCTCCCCAGCCCCCTGAACCCGGAAAAAGCACTCGCTGCGCGATACACCCAGAAGAACCTC
ACAGCCGAGGGTGCCCCTCCTCGGAGGACAGCCACGCGCTACACTGGCTCTCCGGGCCACCCCCAGGACACAGGG
CAGACGAAACCCACCCCCAGCACACGGCAGGACCCCCCAAATTACTCACTACGGGGGGCTGTGCCA**TAG**GCCACA
CAGGAAGCTGCCTTGTGGGGACTTACCTGGGGTGTCCCCCGCATGCCTGTACCCCAGATGGGTGGGGGCCGGCTT
TGCCCATCCTGCTCTCCTCCAGCCGAGGGACCCTGGTGGGGGTGGCTCCTTCTCACTGCTGGATCCGGACTTTTT
AAATAAAAACAAGTAAAATTTGTGTTTTAAAA

FIGURE 1586

MLGAEWSKLQPTEKQRYLDEAEREKQQYMKELRAYQQSEAYKMCTEKIQEKKIKKEDSSSGLMNTLLNGHKGGDC
DGFSTFDVPIFTEEFLDQNKAREAELRRLRKMNVAFEEQNAVLQRQNAEHEQRARASGAGAGAGGAEDAGAAAAA
PGRAPGAHRQLRLTAGAGHGRNAHAGHSGLLHGPASRSHRARPRPAREAHRPHQGNPGPGRQRAPVRSGRAHDAE
EKLWARPCHTPPRGREAGGPPFGAWSHPAPLGAPAPLKLNFCSIPLAFNLPSPLNPEKALAARYTQKNLTAEGAP
PRRTATRYTGSPGHPQDTGQTKPTPSTRQDPPNYSLRGAVP

FIGURE 1587

GGCACGAGGAACAACCTATTTGCAAAGTTGGCGCAAACATTCCTGCCTGACAGGACCATGGACACAGGTTGTAGA
GATAGAGATGGCTCTGGCTGTGCATTCAGCAGATTCTGTAGATAGAATTAATAGGACTTGGATGGGATTGTGGTG
AGAGAAAGTGAAATGAAAGATAAGTTCTAGTTTGGAAGTTTTAACAACTGAATGTTTAAACTCAAATAGACACAA
AATATTGGAAGAGTGGCAGGTTTGGGAGGATGAGACAATCAACTGTTTGGTTGAGCCACGTTAGGTTTGAAATGT
CTACGGGATCCCGTGGGGAGAGGTTATATCAGACTGGAGCACCAGAGAGAGGCCAAGGCTGATAGTTTAGATGAA
AAGAGAGCATGATATTTTAAGCCCTGAGACTGGATAATATCACCTATAGAAAGACTATATAGAGATAAGAGAGGT
GGGGAACAAGTAAAAGCTGCGGGACACTCCTAAATTTAGAGTCAAATTTAGAGCAGAAAATACTAGCAAAGGGGA
CTGAAAAGCGGTGGCCAATTGAGCTTCAAATGCAAGTGAAAGTGTGTTGTGTGTACATTTATCATCTCATGGCAC
AGGAAAAACGTGATTTAAGGAGAAGGAAGCGATCCAATGGGAAGAAGAGATCCAATGGATCCTCTATCACGAAGA
TATTGAGATAAGAACCAATATGGATTTGCACCCACTGCATTTGCAGCCTTGAGGTCATAAGCATCCTCAGGAAAA
TGCACCAGGTGCTGCTGGCAAG**ATG**GAAACCAACTTCTCCACTCCTCTGAATGAATATGAAGAAGTGTCCTATGA
GTCTGCTGGCTACACTGTTCTGCGGATCCTCCCATTGGTGGTGCTTGGGGTCACCTTTGTCCTCGGGGTCCTGGG
CAATGGGCTTGTGATCTGGGTGGCTGGATTCCGGATGACACGCACAGTCACCACCATCTGTTACCTGAACCTGGC
CCTGGCTGACTTTTCTTTCACGGCCACATTACCATTCCTCATTGTCTCCATGGCCATGGGAGAAAAATGGCCTTT
TGGCTGGTTCCTGTGTAAGTTAATTCACATCGTGGTGGACATCAACCTCTTTGGAAGTGTCTTCTTGATTGGTTT
CATTGCACTGGACCGCTGCATTTGTGTCCTGCATCCAGTCTGGGCCCAGAACCACCGCACTGTGAGTCTGGCCAT
GAAGGTGATCGTCGGACCTTGGATTCTTGCTCTAGTCCTTACCTTGCCAGTTTTCCTCTTTTTGACTACAGTAAC
TATTCCAAATGGGGACACATACTGTACTTTCAACTTTGCATCCTGGGGTGGCACCCCTGAGGAGAGGCTGAAGGT
GGCCATTACCATGCTGACAGCCAGAGGGATTATCCGGTTTGTCATTGGCTTTAGCTTGCCGATGTCCATTGTTGC
CATCTGCTATGGGCTCATTGCAGCCAAGATCCACAAAAAGGGCATGATTAAATCCAGCCGTCCCTTACGGGTCCT
CACTGCTGTGGTGGCTTCTTTCTTCATCTGTTGGTTTCCCTTTCAACTGGTTGCCCTTCTGGGCACCGTCTGGCT
CAAAGAGATGTTGTTCTATGGCAAGTACAAAATCATTGACATCCTGGTTAACCCAACGAGCTCCCTGGCCTTCTT
CAACAGCTGCCTCAACCCCATGCTTTACGTCTTTGTGGGCCAAGACTTCCGAGAGAGACTGATCCACTCCCTGCC
CACCAGTCTGGAGAGGGCCCTGTCTGAGGACTCAGCCCCAACTAATGACACGGCTGCCAATTCTGCTTCACCTCC
TGCAGAGACTGAGTTACAGGCAATG**TGA**GGATGGGGTCAGGGATATTTTGAGTTCTGTTCATCCTACCCTAATGC
CAGTTCCAGCTTCATCTACCCTTGAGTCATATTGAGGCATTCAAGGATGCACAGCTCAAGTATTTATTCAGGAAA
AATGCTTTTGTGTCCCTGATTTGGGGCTAAGAAATAGACAGTCAGGCTACTAAAATATTAGTGTTATTTTTTGTT
TTTTGACTTCTGCCTATACCCTGGGGTAAGTGGAGTTGGGAAATACAAGAAGAGAAAGACCAGTGGGGATTTGTA
AGACTTAGATGAGATAGCGCATAATAAGGGGAAGACTTTAAAGTATAAAGTAAAATGTTTGCTGTAGGTTTTTTA
TAGCTATTAAAAAAAATCAGATTATGGAAGTTTTCTTCTATTTTTAGTTTGCTAAGAGTTTTCTGTTTCTTTTTC
TTACATCATGAGTGGACTTTGCATTTTATCAAATGCATTTTCTACATGTATTAAGATGGTCATATTATTCTTCTT
CTTTTATGTAAATCATTATAAATAATGTTCATTAAGTTCTGAATGTTAAACTACTCTTGAATTCCTGGAATAAAC
CACACTTAGTCCTGATGTACTTTAAATATTTATATCTCACAGGAGTTGGTTAGAATTTCTGTGTTTATGTTTATA
TACTGTTATTTCACTTTTTCTACTATCCTTGCTAAGTTTTCATAGAAAATAAGGAACAAAGAGAAACTTGTAATG
GTCTCTGAAAAGGAATTGAGAAGTAATTCCTCTGATTCTGTTTTCTGGTGTTATATCTTTATTAAATATTCAGAA
AAATTC

FIGURE 1588

METNFSTPLNEYEEVSYESAGYTVLRILPLVVLGVTFVLGVLGNGLVIWVAGFRMTRTVTTICYLNLALADFSFT
ATLPFLIVSMAMGEKWPFGWFLCKLIHIVVDINLFGSVFLIGFIALDRCICVLHPVWAQNHRTVSLAMKVIVGPW
ILALVLTLPVFLFLTTVTIPNGDTYCTFNFASWGGTPEERLKVAITMLTARGIIRFVIGFSLPMSIVAICYGLIA
AKIHKKGMIKSSRPLRVLTAVVASFFICWFPFQLVALLGTVWLKEMLFYGKYKIIDILVNPTSSLAFFNSCLNPM
LYVFVGQDFRERLIHSLPTSLERALSEDSAPTNDTAANSASPPAETELQAM

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FIGURE 1589

CGGAGCGAGGCAGCGCGCCCGGCTCCCGCGCC**ATG**GGGCGGCTGGTGGCTGTGGGCTTGCTGGGGATCGCGCTGG
CGCTCCTGGGCGAGAGGCTTCTGGCACTCAGAAATCGACTTAAAGCCTCCAGAGAAGTAGAATCTGTAGACCTTC
CACACTGCCACCTGATTAAAGGAATTGAAGCTGGCTCTGAAGATATTGACATACTTCCCAATGGTCTGGCTTTTT
TTAGTGTGGGTCTAAAATTCCCAGGACTCCACAGCTTTGCACCAGATAAGCCTGGAGGAATACTAATGATGGATC
TAAAAGAAGAAAAACCAAGGGCACGGGAATTAAGAATCAGTCGTGGGTTTGATTTGGCCTCATTCAATCCACATG
GCATCAGCACTTTCATAGACAACGATGACACAGTTTATCTCTTTGTTGTAAACCACCCAGAATTCAAGAATACAG
TGGAAATTTTTAAATTTGAAGAAGCAGAAAATTCTCTGTTGCATCTGAAAACAGTCAAACATGAGCTTCTTCCAA
GTGTGAATGACATCACAGCTGTTGGACCGGCACATTTCTATGCCACAAATGACCACTACTTCTCTGATCCTTTCT
TAAAGTATTTAGAAACATACTTGAACTTACACTGGGCAAATGTTGTTTACTACAGTCCAAATGAAGTTAAAGTGG
TAGCAGAAGGATTTGATTCAGCAAATGGGATCAATATTTCACCTGATGATAAGTATATCTATGTTGCTGACATAT
TGGCTCATGAAATTCATGTTTTGGAAAAACACACTAATATGAATTTAACTCAGTTGAAGGTACTTGAGCTGGATA
CACTGGTGGATAATTTATCTATTGATCCTTCCTCGGGGGACATCTGGGTAGTCTGTCATCCTAATGGCCAGAAGC
TCTTCGTGTATGACCCGAACAATCCTCCCTCGTCAGAGGTTCTCCGCATCCAGAACATTCTATCTGAGAAGCCTA
CAGTGACTACAGTTTATGCCAACAATGGGTCTGTTCTCCAAGGAAGTTCTGTAGCCTCAGTGTATGATGGGAAGC
TGCTCATAGGCACTTTATACCACAGAGCCTTGTATTGTGAACTC**TAA**ATTGTACTTTTGGCATGAAAGTGCGATA
ACTTAACAATTAATTTTCTATGAAATTGCTAATTCTGAGGGAATTTAACCAGCAACATTGACCCAGAAATGTATG
GCATGTGTAGTTAATTTTATTCCAGTAAGGAACGGCCCTTTTAGTTCTTAGAGCACTTTTAACAAAAAAGGAAAA
TGAACAGGTTCTTTAAAATGCCAAGCAAGGGACAGAAAAGAAAGCTGCTTTCGAATAAAGTGAATACATTTTGCA
CAAAGTAAGCCTCACCTTTGCCTTCCAACTGCCAGAACATGGATTCCACTGAAATAGAGTGAATTATATTTCCTT
AAAATGTGAGTGACCTCACTTCTGGCACTGTGACTACTATGGCTGTTTAGAACTACTGATAATAACGTATTTTGA
TGTTTTGTACTTACATCTTTGTTTACCATTAAAAAGTTGGAGTTATATTAAAGACTAACTAAAATCCCAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1590

MGRLVAVGLLGIALALLGERLLALRNRLKASREVESVDLPHCHLIKGIEAGSEDIDILPNGLAFFSVGLKFPGLH
SFAPDKPGGILMMDLKEEKPRARELRISRGFDLASFNPHGISTFIDNDDTVYLFVVNHPEFKNTVEIFKFEEAEN
SLLHLKTVKHELLPSVNDITAVGPAHFYATNDHYFSDPFLKYLETYLNLHWANVVYYSPNEVKVVAEGFDSANGI
NISPDDKYIYVADILAHEIHVLEKHTNMNLTQLKVLELDTLVDNLSIDPSSGDIWVVCHPNGQKLFVYDPNNPPS
SEVLRIQNILSEKPTVTTVYANNGSVLQGSSVASVYDGKLLIGTLYHRALYCEL

FIGURE 1591

CAGTATCCCTCCTGACAAAACTAACAAAAATCCTGTTAGCCAAATAATCAGCCACATTCATATTTACCGTCAAAG
TTTTTATCCTCATTTTACAGCAGTGGAGAGCGATTGCCCCGGGTCCCACGTTAGGAAGAGAGAGAACTGGGATTT
GCACCCAGGCAATCTGGGGACAGAGCTGTGATCACAACTCCATGAGTCAGGGCCGAGCCAGCCCCTTCACCACCA
GCCGGCCGCGCCCCGGGAAGGAAGTTTGTGGCGGAGGAGGTTCGTACGGGAGGAGGGGGAGGCGCCCACGCATCT
GGGGCTGACTCGCTCTTTCGCAAAACGTCTGGGAGGAGTCCCTGGGGCCACAAAACTGCCTCCTTCCTGAGGCCA
GAAGGAGAGAAGACGTGCAGGGACCCCGCGCACAGGAGCTGCCCTCGCGAC**ATG**GGTCACCCGCCGCTGCTGCCG
CTGCTGCTGCTGCTCCACACCTGCGTCCCAGCCTCTTGGGGCCTGCGGTGCATGCAGTGTAAGACCAACGGGGAT
TGCCGTGTGGAAGAGTGCGCCCTGGGACAGGACCTCTGCAGGACCACGATCGTGCGCTTGTGGGAAGAAGGAGAA
GAGCTGGAGCTGGTGGAGAAAAGCTGTACCCACTCAGAGAAGACCAACAGGACCCTGAGCTATCGGACTGGCTTG
AAGATCACCAGCCTTACCGAGGTTGTGTGTGGGTTAGACTTGTGCAACCAGGGCAACTCTGGCCGGGCTGTCACC
TATTCCCGAAGCCGTTACCTCGAATGCATTTCCTGTGGCTCATCAGACATGAGCTGTGAGAGGGGCCGGCACCAG
AGCCTGCAGTGCCGCAGCCCTGAAGAACAGTGCCTGGATGTGGTGACCCACTGGATCCAGGAAGGTGAAGAAGGG
CGTCCAAAGGATGACCGCCACCTCCGTGGCTGTGGCTACCTTCCCGGCTGCCCGGGCTCCAATGGTTTCCACAAC
AACGACACCTTCCACTTCCTGAAATGCTGCAACACCACCAAATGCAACGAGGGCCCAATCCTGGAGCTTGAAAAT
CTGCCGCAGAATGGCCGCCAGTGTTACAGCTGCAAGGGGAACAGCACCCATGGATGCTCCTCTGAAGAGACTTTC
CTCATTGACTGCCGAGGCCCCATGAATCAATGTCTGGTAGCCACCGGCACTCACGAACCGAAAAACCAAAGCTAT
ATGGTAAGAGGCTGTGCAACCGCCTCAATGTGCCAACATGCCCACCTGGGTGACGCCTTCAGCATGAACCACATT
GATGTCTCCTGCTGTACTAAAAGTGGCTGTAACCACCCAGACCTGGATGTCCAGTACCGCAGTGGGGCTGCTCCT
CAGCCTGGCCCTGCCCATCTCAGCCTCACCATCACCCTGCTAATGACTGCCAGACTGTGGGGAGGCACTCTCCTC
TGGACC**TAA**ACCTGAAATCCCCCTCTCTGCCCTGGCTGGATCCGGGGGACCCCTTTGCCCTTCCCTCGGCTCCCA
GCCCTACAGACTTGCTGTGTGACCTCAGGCCAGTGTGCCGACCTCTCTGGGCCTCAGTTTTCCCAGCTATGAAAA
CAGCTATCTCACAAAGTTGTGTGAAGCAGAAGAGAAAAGCTGGAGGAAGGCCGTGGGCAATGGGAGAGCTCTTGT
TATTATTAATATTGTTGCCGCTGTTGTGTTGTTGTTATTAATTAATATTCATATTATTTATTTTATACTTACATA
AAGATTTTGTACCAGTGG

FIGURE 1592

MGHPPLLPLLLLLHTCVPASWGLRCMQCKTNGDCRVEECALGQDLCRTTIVRLWEEGEELELVEKSCTHSEKTNR
TLSYRTGLKITSLTEVVCGLDLCNQGNSGRAVTYSRSRYLECISCGSSDMSCERGRHQSLQCRSPEEQCLDVVTH
WIQEGEEGRPKDDRHLRGCGYLPGCPGSNGFHNNDTFHFLKCCNTTKCNEGPILELENLPQNGRQCYSCKGNSTH
GCSSEETFLIDCRGPMNQCLVATGTHEPKNQSYMVRGCATASMCQHAHLGDAFSMNHIDVSCCTKSGCNHPDLDV
QYRSGAAPQPGPAHLSLTITLLMTARLWGGTLLWT

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FIGURE 1593

GGATCTTAACACCACGCCTTGAGCAAGTCGCAAGAGCGGGAGGACACAGACCAGGAACCGAGAAGGGACAAGCAC
ATGGAAGCCAGCCCAGCATCCGGGCCCAGACACTTGATGGATCCACACATATTCACTTCCAACTTTAACAATGGC
ATTGGAAGGCATAAGACCTACCTGTGCTACGAAGTGGAGCGCCTGGACAATGGCACCTCGGTCAAGATGGACCAG
CACAGGGGCTTTCTACACAACCAGGCTAAGAATCTTCTCTGTGGCTTTTACGGCCGCCATGCGGAGCTGCGCTTC
TTGGACCTGGTTCCTTCTTTGCAGTTGGACCCGGCCCAGATCTACAGGGTCACTTGGTTCATCTCCTGGAGCCCC
TGCTTCTCCTGGGGCTGTGCCGGGGAAGTGCGTGCGTTCCTTCAGGAGAACACACACGTGAGACTGCGCATCTTC
GCTGCCCCGCATCTATGATTACGACCCCCTATATAAGGAGGCGCTGCAAATGCTGCGGGATGCTGGGGCCCAAGTC
TCCATCATGACCTACGATGAATTTAAGCACTGCTGGGACACCTTTGTGGACCACCAGGGATGTCCCTTCCAGCCC
TGGGATGGACTAGATGAGCACAGCCAAGCCCTGAGTGGGAGGCTGCGGGCCATTCTCCAGAATCAGGGAAAC**TGA**

AGGATGGGCCTCAGTCTCTAAGGAAGGCAGAGACCTGGGTTGAGCAGCAGAATAAAAGATCTTCTTCCAAGAAAT
GCAAACAGACCGTTCACCACCATCTCCAGCTGCTCACAGACGCCAGCAAAGCAGTATGCTCCCGATCAAGTAGAT
TTTTAAAAAATCAGAGTGGGCCGGGCGCGGCTGCACGCCTGTAATCCCAGCACTTTGGAGGCCAAGGCGGGTGGA
TCACGAGGTCAGGAGATCGAGACCATCCTGGCTAACACGGTGAAACCCTGTCTCTACTAAAAATACAAAAAATTA
GCCAGGGGTGGTGCGGGCGCCTGTAGTCCCAGCTACTCTGGAGGCTGAGGCAGGAGAGTACGTGAACCCGGGAGG
CAGAGCTTGCGGTGAGCCGAGATTGCGCTACTGCACTCCAGCCTGGGCGACAGXACCAGACTCCATCTCAAAAAA
AAAAAAAACCAGACTGAATTAATTTTAACTGAAAATTTCTCTTATGTTCCAAGGTACACAATAGGTAAGATTATG
CTCAATATTCTCAGAATAATTTTCAATGTATTAATGAAATGAAATGATAATTTGGCTTCATATCTAGACTAACAC
AAAATTAAGAATCTTCCATAATTGCTTTTGCTCAGTAACTGTGTCATGAATTGCAAGAGTTTCCACAAACACT

FIGURE 1594

MEASPASGPRHLMDPHIFTSNFNNGIGRHKTYLCYEVERLDNGTSVKMDQHRGFLHNQAKNLLCGFYGRHAELRF
LDLVPSLQLDPAQIYRVTWFISWSPCFSWGCAGEVRAFLQENTHVRLRIFAARIYDYDPLYKEALQMLRDAGAQV
SIMTYDEFKHCWDTFVDHQGCPFQPWDGLDEHSQALSGRLRAILQNQGN

FIGURE 1595

GGCACGAGGCACAGGCGATTGGTTTTAGTGGTAGGTGTGTGGGGATCTGTTCTGGTCATCTGGATGCTGGTCATC
GGTGTGCAGTATTGATCAGGACCTGCAAACCCAAAAGCTTATGGGAGCTGGCACGTCACAAAAAGAAAAAAACCA
AGCCACAGCCTGGCAGCTCTGATCAGGAAAGTGAGGAACAGCAACAATTCCGGAACATTTTCAAGCAGATAGCAG
GAGATGAC**ATG**GAGATCTGTGCAGATGAGCTCAAGAAGGTCCTTAACACAGTCGTGAACAAACACAAGGACCTGA
AGACACACGGGTTCACACTGGAGTCCTGCCGTAGCATGATTGCGCTCATGGATACAGATGGCTCTGGAAAGCTCA
ACCTGCAGGAGTTCCACCACCTCTGGAACAAGATTAAGGCCTGGCAGAAAATTTTCAAACACTATGACACAGACC
AGTCCGGCACCATCAACAGCTACGAGATGCGAAATGCAGTCAACGACGCAGGATTCCACCTCAACAACCAGCTCT
ATGACATCATTACCATGCGGTACGCAGACAAACACATGAACATCGACTTTGACAGTTTCATCTGCTGCTTCGTTA
GGCTGGAGGGCATGTTCAGAGCTTTTCATGCATTTGACAAGGATGGAGATGGTATCATCAAGCTCAACGTTCTGG
AGTGGCTGCAGCTCACCATGTATGCC**TGA**ACCAGGCTGGCCTCATCCAAAGCCATGCAGGATCACTCAGGATTTC
AGTTTCACCCTCTATTTTCAAAGCCATTTACCTCAAAGGACCCAGCAGCTACACCCCTACAGGCTTCCAGGCACC
TCATCAGTCATGTTCCTCCTCCATTTTACCCCCTACCCATCCTTGATCGGTCATGCCTAGCCTGACCCTTTAGTA
AAGCAATGAGGTAGGAAGAACAAACCCTTGTCCCTTTGCCATGTGGAGGAAAGTGCCTGCCTCTGGTCCGAGCCG
CCTCGGTTCTGAAGCGAGTGCTCCTGCTTACCTTGCTCTAGGCTGTCTGCAGAAGCACCTGCCGGTGGCACTCAG
CACCTCCTTGTGCTAGAGCCCTCCATCACCTTCACGCTGTCCCACCATGGGCCAGGAACCAAACCAGCACTGGGT
TCTACTGCTGTGGGGTAAACTAACTCAGTGGAATAGGGCTGGTTACTTTGGGCTGTCCAACTCATAAGTTTGGCT
GCATTTTGAAAAAAGCTGATCTAAATAAAGGCATGTGTATGGCTGGAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAA

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FIGURE 1596

MEICADELKKVLNTVVNKHKDLKTHGFTLESCRSMIALMDTDGSGKLNLQEFHHLWNKIKAWQKIFKHYDTDQSG
TINSYEMRNAVNDAGFHLNNQLYDIITMRYADKHMNIDFDSFICCFVRLEGMFRAFHAFDKDGDGIIKLNVLEWL
QLTMYA

FIGURE 1597

AACAGGCGTGACGCCAGTTCTAAACTTGAAACAAAACAAAACTTCAAAGTACACCAAAATAGAACCTCCTTAAAG
CATAAATCTCACGGAGGGTCTCGGCCGCCAGTGGAAGGAGCCACCGCCCCCGCCCCGACC**ATG**GCCGAGGAGCTG
GTCTTAGAGAGGTGTGATCTGGAGCTGGAGACCAATGGCCGAGACCACCACACGGCCGACCTGTGCCGGGAGAAG
CTGGTGGTGCGACGGGGCCAGCCCTTCTGGCTGACCCTGCACTTTGAGGGCCGCAACTACCAGGCCAGTGTAGAC
AGTCTCACCTTCAGTGTCGTGACCGGCCCAGCCCCTAGCCAGGAGGCCGGGACCAAGGCCCGTTTTCCACTAAGA
GATGCTGTGGAGGAGGGTGACTGGACAGCCACCGTGGTGGACCAGCAAGACTGCACCCTCTCGCTGCAGCTCACC
ACCCCGGCCAACGCCCCCATCGGCCTGTATCGCCTCAGCCTGGAGGCCTCCACTGGCTACCAGGGATCCAGCTTT
GTGCTGGGCCACTTCATTTTGCTCTTCAACGCCTGGTGCCCAGCGGATGCTGTGTACCTGGACTCGGAAGAGGAG
CGGCAGGAGTATGTCCTCACCCAGCAGGGCTTTATCTACCAGGGCTCGGCCAAGTTCATCAAGAACATACCTTGG
AATTTTGGGCAGTTTCAAGATGGGATCCTAGACATCTGCCTGATCCTTCTAGATGTCAACCCCAAGTTCCTGAAG
AACGCCGGCCGTGACTGCTCCCGGCGCAGCAGCCCCGTCTACGTGGGCCGGGTGGGTAGTGGCATGGTCAACTGC
AACGATGACCAGGGTGTGCTGCTGGGACGCTGGGACAACAACTACGGGGACGGCGTCAGCCCCATGTCCTGGATC
GGCAGCGTGGACATCCTGCGGCGCTGGAAGAACCACGGCTGCCAGCGCGTCAAGTATGGCCAGTGCTGGGTCTTC
GCCGCCGTGGCCTGCACAGTGCTGAGGTGCCTAGGCATCCCTACCCGCGTCGTGACCAACTACAACTCGGCCCAT
GACCAGAACAGCAACCTTCTCATCGAGTACTTCCGCAATGAGTTTGGGGAGATCCAGGGTGACAAGAGCGAGATG
ATCTGGAACTTCCACTGCTGGGTGGAGTCGTGGATGACCAGGCCGGACCTGCAGCCGGGGTACGAGGGCTGGCAG
GCCCTGGACCCAACGCCCCAGGAGAAGAGCGAAGGAACGTACTGCTGTGGCCCAGTTCCAGTTCGTGCCATCAAG
GAGGGCGACCTGAGCACCAAGTACGATGCGCCCTTTGTCTTTGCGGAGGTCAATGCCGACGTGGTAGACTGGATC
CAGCAGGACGATGGGTCTGTGCACAAATCCATCAACCGTTCCCTGATCGTTGGGCTGAAGATCAGCACTAAGAGC
GTGGGCCGAGACGAGCGGGAGGATATCACCCACACCTACAAATACCCAGAGGGGTCCTCAGAGGAGAGGGAGGCC
TTCACAAGGGCGAACCACCTGAACAAACTGGCCGAGAAGGAGGAGACAGGGATGGCCATGCGGATCCGTGTGGGC
CAGAGCATGAACATGGGCAGTGACTTTGACGTCTTTGCCCACATCACCAACAACACCGCTGAGGAGTACGTCTGC
CGCCTCCTGCTCTGTGCCCGCACCGTCAGCTACAATGGGATCTTGGGGCCCGAGTGTGGCACCAAGTACCTGCTC
AACCTAACCCTGGAGCCTTTCTCTGAGAAGAGCGTTCCTCTTTGCATCCTCTATGAGAAATACCGTGACTGCCTT
ACGGAGTCCAACCTCATCAAGGTGCGGGCCCTCCTCGTGGAGCCAGTTATCAACAGCTACCTGCTGGCTGAGAGG
GACCTCTACCTGGAGAATCCAGAAATCAAGATCCGGATCCTTGGGGAGCCCAAGCAGAAACGCAAGCTGGTGGCT
GAGGTGTCCCTGCAGAACCCGCTCCCTGTGGCCCTGGAAGGCTGCACCTTCACTGTGGAGGGGGCCGGCCTGACT
GAGGAGCAGAAGACGGTGGAGATCCCAGACCCCGTGGAGGCAGGGGAGGAAGTTAAGGTGAGAATGGACCTCGTG
CCGCTCCACATGGGCCTCCACAAGCTGGTGGTGAACTTCGAGAGCGACAAGCTGAAGGCTGTGAAGGGCTTCCGG
AATGTCATCATTGGCCCCGCC**TAA**GGGACCCCTGCTCCCAGCCTGCTGAGAGCCCCCACCTTGATCCCAATCCTT
ATCCCAAGCTAGTGAGCAAAATATGCCCCTTATTGGGCCCCAGACCCCAGGGCAGGGTGGGCAGCCTATGGGGGC
TCTCGGAAATGGAATGTGCCCCTGGCCCATCTCAGCCTCCTGAGCCTGTGGGTCCCCACTCACCCCCTTTGCTGT
GAGGAATGCTCTGTGCCAGAAACAGTGGGAGCCCTGACCTGTGCTGACTGGGGCTGGGGTGAGAGAGGAAAGACC
TACATTCCCTCTCCTGCCCAGATGCCCTTTGGAAAGCCATTGACCACCCACCATATTGTTTGATCTACTTCATAG
CTCCTTGGAGCAGGCAAAAAAGGGACAGCATGCCCTTGGCTGGATCAGGAATCCAGCTCCCTAGACTGCATCCCG
TACCTCTTCCCATGACTGCACCCAGCTCCAGGGGCCCTTGGGACACCCAGAGCTGGGTGGGGACAGTGATAGGCC
CAAGGTCCCCTCCACATCCCAGCAGCCCAAGCTTAATAGCCCTCCCCCTCAACCTCACCATTGTGAAGCACCTAC
TATGTGCTGGGTGCCTCCCACACTTGCTGGGGCTCACGGGGCCTCCAACCCATTTAATCACCATGGGAAACTGTT
GTGGGCGCTGCTTCCAGGATAAGGAGACTGAGGCTTAGAGAGAGGAGGCAGCCCCCTCCACACCAGTGGCCTCGT
GGTTATAAGCAAGGCTGGGTAATGTGAAGGCCCAAGAGCAGAGTCTGGGCCTCTGACTCTGAGTCCACTGCTCCA
TTTATAACCCCAGCCTGACCTGAGACTGTCGCAGAGGCTGTCTGGGGCCTTTATCAAAAAAAGACTCAGCCAAGA
CAAGGAGGTAGAGAGGGGACTGGGGGACTGGGAGTCAGAGCCCTGGCTGGGTTCAGGTCCCACGTCTGGCCAGCG
ACTGCCTTCTCCTCTCTGGGCCTTTGTTTCCTTGTTGGTCAGAGGAGTGATTGAACCTGCTCATCTCCAAGGATC
CTCTCCACTCCATGTTTGCAATACACAATTCC

FIGURE 1598

MAEELVLERCDLELETNGRDHHTADLCREKLVVRRGQPFWLTLHFEGRNYQASVDSLTFSVVTGPAPSQEAGTKA
RFPLRDAVEEGDWTATVVDQQDCTLSLQLTTPANAPIGLYRLSLEASTGYQGSSFVLGHFILLFNAWCPADAVYL
DSEEERQEYVLTQQGFIYQGSAKFIKNIPWNFGQFQDGILDICLILLDVNPKFLKNAGRDCSRRSSPVYVGRVGS
GMVNCNDDQGVLLGRWDNNYGDGVSPMSWIGSVDILRRWKNHGCQRVKYGQCWVFAAVACTVLRCLGIPTRVVTN
YNSAHDQNSNLLIEYFRNEFGEIQGDKSEMIWNFHCWVESWMTRPDLQPGYEGWQALDPTPQEKSEGTYCCGPVP
VRAIKEGDLSTKYDAPFVFAEVNADVVDWIQQDDGSVHKSINRSLIVGLKISTKSVGRDEREDITHTYKYPEGSS
EEREAFTRANHLNKLAEKEETGMAMRIRVGQSMNMGSDFDVFAHITNNTAEEYVCRLLLCARTVSYNGILGPECG
TKYLLNLTLEPFSEKSVPLCILYEKYRDCLTESNLIKVRALLVEPVINSYLLAERDLYLENPEIKIRILGEPKQK
RKLVAEVSLQNPLPVALEGCTFTVEGAGLTEEQKTVEIPDPVEAGEEVKVRMDLVPLHMGLHKLVVNFESDKLKA
VKGFRNVIIGPA

FIGURE 1599

TGCGGCCGCACCTGCAGGCGCAGAGTAGGTATGGAAGATCCCTCGAGATCCATTGTGCTCTAAAGCCGCCGGGGG
TCCGTGTCCTGTCTCGGTTGGCCGGACCCGGGCCCGAGCCCGAGCAGTAGCCGGCGCCATGTCGGTGGTGGGCAT
AGACCTGGGCTTCCAGAGCTGCTACGTCGCTGTGGCCCGCGCCGGCGGCATCGAGACTATCGCTAATGAGTATAG
CGACCGCTGCACGCCGGCTTGCATTTCTTTTGGTCCTAAGAATCGTTCAATTGGAGCAGCAGCTAAAAGCCAGGT
AATTTCTAATGCAAAGAACACAGTCCAAGGATTTAAAAGATTCCATGGCCGAGCATTCTCTGATCCATTTGTGGA
GGCAGAAAAATCTAACCTTGCATATGATATTGTGCAGTGGCCTACAGGATTAACAGGTATAAAGGTGACATATAT
GGAGGAAGAGCGAAATTTTACCACTGAGCAAGTGACTGCCATGCTTTTGTCCAAACTGAAGGAGACAGCCGAAAG
TGTTCTTAAGAAGCCTGTAGTTGACTGTGTTGTTTCGGTTCCTTGTTTCTATACTGATGCAGAAAGACGATCAGT
GATGGATGCAACACAGATTGCTGGTCTTAATTGCTTGCGATTAATGAATGAAACCACTGCAGTTGCTCTTGCATA
TGGAATCTATAAGCAGGATCTTCCTCGCTTAGAAGAGAAACCAAGAAATGTAGTTTTTGTAGACATGGGCCACTC
TGCTTATCAAGTTTCTGTATGTGCATTTAATAGAGGAAAACTGAAAGTTCTGGCCACTGCATTTGACACGACATT
GGGAGGTAGAAAATTTGATGAAGTGTTAGTAAATCACTTCTGTGAAGAATTTGGGAAGAAATACAAGCTAGACAT
TAAGTCCAAAATCCGTGCATTATTACGACTCTCTCAGGAGTGTGAGAAACTCAAGAAATTGATGAGTGCAAATGC
TTCAGATCTCCCTTTGAGCATTGAATGTTTTATGAATGATGTTGATGTATCTGGAACTATGAATAGAGGCAAATT
TCTGGAGATGTGCAATGATCTCTTAGCTAGAGTGGAGCCACCACTTCGTAGTGTTTTGGAACAAACCAAGTTAAA
GAAAGAAGATATTTATGCAGTGGAGATAGTTGGTGGTGCTACACGAATCCCTGCGGTAAAAGAGAAGATCAGCAA
ATTTTTCGGTAAAGAACTTAGTACAACATTAAATGCTGATGAAGCTGTCACTCGAGGCTGTGCATTGCAGTGTGC
CATCTTATCGCCTGCTTTCAAAGTCAGAGAATTTTCTATCACTGATGTAGTACCATATCCAATATCTCTGAGATG
GAATTCTCCAGCTGAAGAAGGGTCAAGTGACTGTGAAGTCTTTTCCAAAAATCATGCTGCTCCTTTCTCTAAAGT
TCTTACATTTTATAGAAAGGAACCTTTCACTCTTGAGGCCTACTACAGCTCTCCTCAGGATTTGCCCTATCCAGA
TCCTGCTATAGCTCAGTTTTCAGTTCAGAAAGTCACTCCTCAGTCTGATGGCTCCAGTTCAAAAGTGAAAGTCAA
AGTTCGAGTAAATGTCCATGGCATTTTCAGTGTGTCCAGTGCATCTTTAGTGGAGGTTCACAAGTCTGAGGAAAA
TGAGGAGCCAATGGAAACAGATCAGAATGCAAAGGAGGAAGAGAAGATGCAAGTGGACCAGGAGGAACCACATGT
TGAAGAGCAACAGCAGCAGACACCAGCAGAAAATAAGGCAGAGTCTGAAGAAATGGAGACCTCTCAAGCTGGATC
CAAGGATAAAAAGATGGACCAACCACCCCAATGCCAAGAAGGCAAAAGTGAAGACCAGTACTGTGGACCTGCCAA
TCGAGAATCAGCTATATGGCAGATAGACAGAGAGATGCTCAACTTGTACATTGAAAATGAGGGTAAGATGATCAT
GCAGGATAAACTGGAGAAGGAGCGGAATGATGCTAAGAACGCAGTGGAGG

FIGURE 1600

MSVVGIDLGFQSCYVAVARAGGIETIANEYSDRCTPACISFGPKNRSIGAAAKSQVISNAKNTVQGFKRFHGRAF
SDPFVEAEKSNLAYDIVQWPTGLTGIKVTYMEEERNFTTEQVTAMLLSKLKETAESVLKKPVVDCVVSVPCFYTD
AERRSVMDATQIAGLNCLRLMNETTAVALAYGIYKQDLPRLEEKPRNVVFVDMGHSAYQVSVCAFNRGKLKVLAT
AFDTTLGGRKFDEVLVNHFCEEFGKKYKLDIKSKIRALLRLSQECEKLKKLMSANASDLPLSIECFMNDVDVSGT
MNRGKFLEMCNDLLARVEPPLRSVLEQTKLKKEDIYAVEIVGGATRIPAVKEKISKFFGKELSTTLNADEAVTRG
CALQCAILSPAFKVREFSITDVVPYPISLRWNSPAEEGSSDCEVFSKNHAAPFSKVLTFYRKEPFTLEAYYSSPQ
DLPYPDPAIAQFSVQKVTPQSDGSSSKVKVKVRVNVHGIFSVSSASLVEVHKSEENEEPMETDQNAKEEEKMQVD
QEEPHVEEQQQQTPAENKAESEEMETSQAGSKDKKMDQPPQCQEGKSEDQYCGPANRESAIWQIDREMLNLYIEN
EGKMIMQDKLEKERNDAKNAVEEYVYEMRDKLSGEYEKFVSEDDRNSFTLKLEDTENWLYEDGEDQPKQVYVDKL
AELKNLGQPIKIRFQESEERPNYLKN

FIGURE 1601

GGCACGAGGCTTCCCCGGTGCAGACACCCGGCGAAGCCCACCCGGTTTTCCCAGCGGCATTTCCGATGACAGCTT
CGGGGCTACGTGTCCTGTGCTGTCGGAGACGCACAGGAAGCAAAGTTTGTGAGAAGCCTTGGGGGCGACTTTGCC
TTGGGCACCCGCATTTGTGCGTCTGCGAGGTGCCTCGGTGTGCGCGGAGCTAGTTTCCCAGTTTCCCGGGCCCCT
CCCTTCTCCGAGCCCCTCTAGCGATTTGTTTAGGAAAAGTGATGACATGAACTAGTAGTGGAGAATCGCAGCGCC
GCTCCCCGCCCTGGGGAGGGAGGGGAGCCCCGGAGAGCCTGCCGGTGGGAGCTGGAAGCAGGCTCCCGGCTGAGC
GCCCCAGCCCGAAAGGCAGGGTCTGGGTGCGGGAAGAGGGCTCGGAGCTGCCTTCCTGCTGCCTTGGGGCCGCCC
AGATGAGGGAACAGCCCGATTTGCCTGGTTCTGATTCTCCAGGCTGTCGTGGTTGTGGAATGCAAACGCCAGCAC
ATA**ATG**GAAACAGGACCTGAAGACCCTTCCAGCATGCCAGAGGAAAGTTCCCCCAGGCGGACCCCGCAGAGCATT
CCCTACCAGGACCTCCCTCACCTGGTCAATGCAGACGGACAGTACCTCTTCTGCAGGTACTGGAAACCCACAGGC
ACACCCAAGGCCCTCATCTTTGTGTCCCATGGAGCCGGAGAGCACAGTGGCCGCTATGAAGAGCTGGCTCGGATG
CTGATGGGGCTGGACCTGCTGGTGTTCGCCCACGACCATGTTGGCCACGGACAGAGCGAAGGGGAGAGGATGGTA
GTGTCTGACTTCCACGTTTTCGTCAGGGATGTGTTGCAGCATGTGGATTCCATGCAGAAAGACTACCCTGGGCTT
CCTGTCTTCCTTCTGGGCCACTCCATGGGAGGCGCCATCGCCATCCTCACGGCCGCAGAGAGGCCGGGCCACTTC
GCCGGCATGGTACTCATTTCGCCTCTGGTTCTTGCCAATCCTGAATCTGCAACAACTTTCAAGGTCCTTGCTGCG
AAAGTGCTCAACCTTGTGCTGCCAAACTTGTCCCTCGGGCCCATCGACTCCAGCGTGCTCTCTCGGAATAAGACA
GAGGTCGACATTTATAACTCAGACCCCCTGATCTGCCGGGCAGGGCTGAAGGTGTGCTTCGGCATCCAACTGCTG
AATGCCGTCTCACGGGTGGAGCGCGCCCTCCCCAAGCTGACTGTGCCCTTCCTGCTGCTCCAGGGCTCTGCCGAT
CGCCTATGTGACAGCAAAGGGGCCTACCTGCTCATGGAGTTAGCCAAGAGCCAGGACAAGACTCTCAAGATTTAT
GAAGGTGCCTACCATGTTCTCCACAAGGAGCTTCCTGAAGTCACCAACTCCGTCTTCCATGAAATAAACATGTGG
GTCTCTCAAAGGACAGCCACGGCAGGAACTGCGTCCCCACCC**TGA**ATGCATTGGCCGGTGCCCGGCTCATGGTCT
GGGGGATGCAGGCAGGGGAAGGGCAGAGATGGCTTCTCAGATATGGCTTGCAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAA

FIGURE 1602

METGPEDPSSMPEESSPRRTPQSIPYQDLPHLVNADGQYLFCRYWKPTGTPKALIFVSHGAGEHSGRYEELARML
MGLDLLVFAHDHVGHGQSEGERMVVSDFHVFVRDVLQHVDSMQKDYPGLPVFLLGHSMGGAIAILTAAERPGHFA
GMVLISPLVLANPESATTFKVLAAKVLNLVLPNLSLGPIDSSVLSRNKTEVDIYNSDPLICRAGLKVCFGIQLLN
AVSRVERALPKLTVPFLLLQGSADRLCDSKGAYLLMELAKSQDKTLKIYEGAYHVLHKELPEVTNSVFHEINMWV
SQRTATAGTASPP

FIGURE 1603

GGCACGAGGGACGACTCCACGCTCGCTTGCCCTGATTCTCTCCGCCCTGCACTTTTGCCAGCTGAAGGTCCAGGG
AGAAGAGCAACCTGGCCCACAGCCTGCAGGTGGCCCAGCAGCAGGCCGAGGAGCTGCCGCAGGAGCGGGAGAAGC
TGCAGGTTGCCCAGGAGGAGCTGCAGCGCCAGCGGGACCGGCTGGAGGAAGAGCAGGAAGAGGCGGTGCAGAATG
GCGCACGGGTTCGCCGGGAGCTTGAGCGCAGCCATAGACAACTAGAGCAGCTGGAAGGGAAGCGCTCAGTCCTGG
CCAAGGAGCTGGTGGAGGTGAGGGAGGCGCTGAGCCGCGCCACGCTGCAACGGGAC**ATG**CTGCAGGCCGAGAAGA
CCGAGGTGGCCGAGGCGCTGACCAAGGCTGAGGCTGGCCGCATGGAGCTCGAGCTCTCCGTGACCAAGTTGAGGG
CAGAGGAGGCCTCCCTGCAGGACTCCCTGTCCAAGCTGAGCGCCCTCAATGAGAGCCTTGCTCAGGACAAGTTGG
ATCTGAACTGCCTTGTCACCCAGCTGGAGGAAGAAAAGGCCACGCTGCAGGGCCGGCAGCGGCAGGCGGAGCAGG
AGGCCACAGTGGCGCCGGCAGAGCAGGAGTGGCTGGAGGAGCTGTGGTTGGAGCAGGAGGTGGCACGGCAGGGCC
TGGAGGGCTCCCTA**TGA**GTGGCGGAGCAGGCCCAGGAGGCGCTGGAGCAACAGCTCCCCACACTGCACCATGAGC
TCAGTTGGCTGCAGGAGCAGCTAGCACAGGGGATCATGTTCGGACCCCCAGGCCAGCCCACTGCTGCTCCTTGGC
ACTTTCACGGCCCTGGCGTGTCCCCGTCATAGTCCTTATCAGTCCCTTGTATTTACCTGGTCACCCTCCATCTCT
GAGGGTATGGGGGCCAGATGGCTCTTGCTGCCCTGATGTTTTGGGGGGTCTGCCTGGGCCCCTCCTGGTGTGTCA
CACGCGTCCAGTCCTGGCCCCCTAGGAGGCAGCATGGCGGGAGCTGGAGGCCGAGCGGGCCCAGCTGCAGAGTCA
GCTGCAGCGTGAGCAGGAGGAGCTGCTGGCCCGGCGGAAGGCTGAGAAGGAACAGCTGAGTGAGGAGATTGCTGC
CCTGCAGCAGGAGCATGACGAGGGCCTCCTCCTGGCCGAGAGCGAGAAGCAGCAGGCCTTGTCTCTGAAGGAGTC
TGAGAAGATGGCGCTGTCAGAGAAGTTGATGGGTACACGGCACAGCCTGGCCACCATCTCCCTGGAGATGGAGCG
GCAGAAACCAGATGCCCAGAGCCGGCAGGAGCAGGACCGGGTAGGCCTGCCGTCGTAGGGAGGCTTGCGGAGCAG
GAGCGCCCTCTTTCCACCGAGCTATCCCGCGGTTTCCAGCATCCCATCTGGCGGACTCCTCTTCCTCTCTCTTCT
CCTACTCTGGGTCTTCTATCCTGGTGTTCCTTGAATGCCTATCTTCCTTTTGTGCCTCGGAACCTCTCACGCCTG
CCACAAGTTACTCTTTTCCTTGGTAGTTCTGAACTTTAAATAAGGTAATGCCTGTAAGAATGCCATAAATGCTCA
ATAATTGTCATCTGTTATTATTTTCATCAGTAACATCATCTGAATCATCAGTATTGTCTGCTTTTAACAGCTGCA
TTTTTCATTGTCCAAATATAGTCACATACATTTGACCATTTTATAATTATTGAATAATAAATTCGTTCTGCTATT
TTACAATGAAAAATAATGCTGCAGAGAGCATTTTTGCACATGTATCGTGGCAGATGTAGGCCAGAGGCTCTTCTT
TATCCATCCTATGGCCAACCTATGAATGTATACACGTTTAATGAGATTTTGCCAGCAATCAAAGCCTTCAGGGAA
AATGTCCCTAGCTCTTTACTACATCAGATCAAGGACTCTGGATAATTGGCATAACATCCTGGAATAGCTGAAACA
GAGATATTATTCTCTGCTGTCCTCTGTTGTCTTTGTCTTTTCACGTCTTAATAAAAGTGCTGGTGACAAGAGTGT
AAAAAAAAAAAAAAAAAA

FIGURE 1604

MLQAEKTEVAEALTKAEAGRMELELSVTKLRAEEASLQDSLSKLSALNESLAQDKLDLNCLVTQLEEEKATLQGR
QRQAEQEATVAPAEQEWLEELWLEQEVARQGLEGSL

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FIGURE 1605

GGCACGAGGCCAAGAGCTACGCGGCGGCGGCGGAGCGCAGGCCTCGTGCCGTTACGGCCATCACGGCGGCCGCAG
TGGCGTCCTGGAGCCCTCCTCAGTGCTGAAGCTGCTGAAAG**ATG**GCAGAAGAAGTGGTGGTAGTAGCCAAATTTG
ATTATGTGGCCCAACAAGAACAAGAGTTGGACATCAAGAAGAATGAGAGATTATGGCTTCTGGATGATTCTAAGT
CCTGGTGGCGAGTTCGAAATTCCATGAATAAAACAGGTTTTGTGCCTTCTAACTATGTGGAAAGGAAAAACAGTG
CTCGGAAAGCATCTATTGTGAAAAACCTAAAGGATACCTTAGGCATTGGAAAAGTGAAAAGAAAACCTAGTGTGC
CAGATTCTGCATCTCCTGCTGATGATAGTTTTGTTGACCCAGGGGAACGTCTCTATGACCTCAACATGCCCGCTT
ATGTGAAATTTAACTACATGGCTGAGAGAGAGGATGAATTATCATTGATAAAGGGGACAAAGGTGATCGTCATGG
AGAAATGCAGTGATGGGTGGTGGCGTGGTAGCTACAATGGACAAGTTGGATGGTTCCCTTCAAACTATGTAACTG
AAGAAGGTGACAGTCCTTTGGGTGACCATGTGGGTTCTCTGTCAGAGAAATTAGCAGCAGTCGTCAATAACCTAA
ATACTGGGCAAGTGTTGCATGTGGTACAGGCTCTTTACCCATTCAGCTCATCTAATGATGAAGAACTTAATTTCG
AGAAAGGAGATGTAATGGATGTTATTGAAAAACCTGAAAATGACCCAGAGTGGTGGAAATGCAGGAAGATCAATG
GTATGGTTGGTCTAGTACCAAAAAACTATGTTACCGTTATGCAGAATAATCCATTAACTTCAGGTTTGGAACCAT
CACCTCCACAGTGTGATTACATTAGGCCTTCACTCACTGGAAAGTTTGCTGGCAATCCTTGGTATTATGGCAAAG
TCACCAGGCATCAAGCAGAAATGGCATTAAATGAAAGAGGACATGAAGGGGATTTCCTCATTCGTGATAGTGAAT
CTTCGCCAAATGATTTCTCAGTATCACTAAAAGCACAAGGGAAAAACAAGCATTTTAAAGTCCAACTAAAAGAGA
CTGTCTACTGCATTGGGCAGCGTAAATTCAGCACCATGGAAGAACTTGTAGAACATTACAAAAAGGCACCAATTT
TTACAAGTGAACAAGGAGAAAAATTATATCTTGTCAAGCATTTATCA**TGA**TACTGCTGACCAGAAGTGACTGCTG
TGTAGCTGTAATTTGTCATGTAATTGAAGACTGAGAAAATGTTGGGTCCAGTCGTGCTTGATTGGAAATTGTTGT
TTCTAAATCTATATGAGAATTGACAATAAGTATTTTTATTATAACTCAGCCCATACATATATACTATGTATGCAG
TGCATCTGCATAGAACAGTTCCTTATCCTTGGCCTTCTGTTTTATTGTTTTTTTCTTTGCTGTTTTCCCTTTGCT
TCTAATATTACAGTTTTGTATTTTGTAAACAAAAATCAAATAATGCATATCAGAATCTTTATATGGAAGAAATCC
TTTATTGCCTTTCCTTTGTTTCCTTGTAAAGGCACCCTGTTCTGTTATGGTTTTTCATTATATAAAATTATTATA
TCTATATATGACATATGCTAAAATTTCTTGGAGAGTGTTAATCTTTTCTGTGACTAAATAGCAATAATAAGTGGA
AAATTAGAAATTATTTCCAGGTATTATATTTGTCACAGGCCATTGTAAATACCAAGTATATTGTGTCTGCCATAA
TTTTTAAAAATACATTCATTGTCTTCAGTCATACAGCAAGACACATGAGACATAGATTAGAAAACATGTTGTACA
ATTTTAATTTACAACTGTTGGAAATAAAAATCACTTAATTTTTTTCCAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1606

MAEEVVVVAKFDYVAQQEQELDIKKNERLWLLDDSKSWWRVRNSMNKTGFVPSNYVERKNSARKASIVKNLKDTL
GIGKVKRKPSVPDSASPADDSFVDPGERLYDLNMPAYVKFNYMAEREDELSLIKGTKVIVMEKCSDGWWRGSYNG
QVGWFPSNYVTEEGDSPLGDHVGSLSEKLAAVVNNLNTGQVLHVVQALYPFSSSNDEELNFEKGDVMDVIEKPEN
DPEWWKCRKINGMVGLVPKNYVTVMQNNPLTSGLEPSPPQCDYIRPSLTGKFAGNPWYYGKVTRHQAEMALNERG
HEGDFLIRDSESSPNDFSVSLKAQGKNKHFKVQLKETVYCIGQRKFSTMEELVEHYKKAPIFTSEQGEKLYLVKH
LS

FIGURE 1607

ACCCGGAGCGGGAAG**ATG**GCGGCGGCGCAGGAGGCGGACGGGGCCCGCAGCGCCGTGGTGGCGGCCGGGGGAGGC
AGCTCCGGTCAGGTGACCAGCAATGGCAGCATCGGGAGGGACCCGCCAGCGGAGACCCAGCCTCAGAACCCACCG
GCCCAGCCGGCACCCAATGCCTGGCAGGTCATCAAAGGTGTGCTGTTTAGGATCTTCATCATCTGGGCCATCAGC
AGTTGGTTCCGCCGAGGGCCGGCCCCTCAGGACCAGGCGGGCCCCGGAGGAGCCCCACGCGTCGCCAGCCGCAAC
CTGTTCCCCAAAGACACTTTAATGAACCTGCATGTGTACATCTCAGAGCACGAGCACTTTACAGACTTCAACGCC
ACGTCGGCACTCTTCTGGGAACAGCACGATCTTGTGTATGGCGACTGGACTAGCGGCGAGAACTCAGACGGCTGC
TACGAGCACTTTGCTGAGCTCGATATCCCACAGAGCGTCCAGCAGAACGGCTCCATCTACATCCACGTTTACTTC
ACCAAGAGTGGCTTCCACCCAGACCCCCGGCAGAAGGCCCTGTACCGCCGGCTTGCCACAGTCCACATGTCCCGG
ATGATCAACAAATACAAGCGCAGACGATTTCAGAAAACCAAGAACCTGCTGACAGGAGAGACAGAAGCGGACCCA
GAAATGATCAAGAGGGCTGAGGACTATGGGCCTGTGGAGGTGATCTCCCATTGGCACCCCAACATCACCATCAAC
ATCGTGGACGACCACACGCCGTGGGTGAAGGGCAGTGTGCCCCCTCCCCTGGATCAATATGTGAAGTTCGACGCC
GTGAGCGGTGACTACTATCCCATCATCTACTTCAATGACTACTGGAACCTGCAGAAGGACTACTACCCCATCAAC
GAGAGCCTGGCCAGCCTGCCGCTCCGCGTCTCCTTCTGCCCACTCTCGCTTTGGCGCTGGCAGCTCTATGCTGCC
CAGAGCACCAAGTCGCCCTGGAACTTCCTGGGCGATGAGTTGTACGAGCAGTCAGATGAGGAGCAGGACTCGGTG
AAGGTGGCCCTGCTGGAGACCAACCCCTACCTGCTGGCGCTCACCATCATCGTGTCTATCGTTCACAGTGTCTTC
GAGTTCCTGGCCTTCAAGAATGATATCCAGTTCTGGAACAGCCGGCAGTCCCTGGAGGGCCTGTCCGTGCGCTCC
GTCTTCTTCGGCGTTTTCCAGTCATTCGTGGTCCTCCTCTACATCCTGGACAACGAGACCAACTTCGTGGTCCAG
GTCAGCGTCTTCATTGGGGTCCTCATCGACCTCTGGAAGATCACCAAGGTCATGGACGTCCGGCTGGACCGAGAG
CACAGGGTGGCAGGAATCTTCCCCCGCCTATCCTTCAAGGACAAGTCCACGTATATCGAGTCCTCGACCAAAGTG
TATGATGATATGGCATTCCGGTACCTGTCCTGGATCCTCTTCCCGCTCCTGGGCTGCTATGCCGTCTACAGTCTT
CTGTACCTGGAGCACAAGGGCTGGTACTCCTGGGTGCTCAGCATGCTCTACGGCTTCCTGCTGACCTTCGGCTTC
ATCACCATGACGCCCCAGCTCTTCATCAACTACAAGCTCAAGTCTGTGGCCCACCTTCCCTGGCGCATGCTCACC
TACAAGGCCCTCAACACATTCATCGACGACCTGTTCGCCTTTGTCATCAAGATGCCCGTTATGTACCGGATCGGC
TGCCTGCGGGACGATGTGGTTTTCTTCATCTACCTCTACCAACGGTGGATCTACCGCGTCGACCCCACCCGAGTC
AACGAGTTTGGCATGAGTGGAGAAGACCCCACAGCTGCCGCCCCCGTGGCCGAGGTTCCCACAGCAGCAGGGGCC
CTCACGCCCACACCTGCACCCACCACGACCACCGCCACCAGGGAGGAGGCCTCCACGTCCCTGCCCACCAAGCCC
ACCCAGGGGGCCAGCTCTGCCAGCGAGCCCCAGGAAGCCCCTCCAAAGCCAGCAGAGGACAAGAAAAAGGAT**TAG**

TCGAGACTGGTCCTCACCTGCTCCGGCTCCTGGCGACCACTACCCCTGCGTCCCGGCCCCCTCGCCTCCCCTCCC
TGTCGCCCTTTCCCTGGACAGATCAGGCCGGGGCGGTGGGAGGCCCGCCTCAGGTCAGGGCCCAGCGTGTGACGT
AGGGGCCGGGGCAGGCCAGGGTTTGTTTGTGGAGGCGCTGTCTGTCCCTCTGTCCCTCTGTGTTTCCAGCCATCT
CGCCCTGCCAGCCCAGCACCACTGGGAATCATGGTGAAGCTGATGCAGCGTTGCCGAGGGGGTGGGTTGGGCGGG
GGTGGGGCCGGGCCCCCCTACGGGATGCCCACGGCCGTTCATCATCTTGTCCCTCGTCCCCCTACCACACTCCCC
CTCCTAGACCGCCGCCCTTTAACACAGTCTGGATTTAATAAATTCATATGGGTGTTTAACTTAAACTCAAAAAAA
AAAAAAAAAAA

FIGURE 1608

MAAAQEADGARSAVVAAGGGSSGQVTSNGSIGRDPPAETQPQNPPAQPAPNAWQVIKGVLFRIFIIWAISSWFRR
GPAPQDQAGPGGAPRVASRNLFPKDTLMNLHVYISEHEHFTDFNATSALFWEQHDLVYGDWTSGENSDGCYEHFA
ELDIPQSVQQNGSIYIHVYFTKSGFHPDPRQKALYRRLATVHMSRMINKYKRRRFQKTKNLLTGETEADPEMIKR
AEDYGPVEVISHWHPNITINIVDDHTPWVKGSVPPPLDQYVKFDAVSGDYYPIIYFNDYWNLQKDYYPINESLAS
LPLRVSFCPLSLWRWQLYAAQSTKSPWNFLGDELYEQSDEEQDSVKVALLETNPYLLALTIIVSIVHSVFEFLAF
KNDIQFWNSRQSLEGLSVRSVFFGVFQSFVVLLYILDNETNFVVQVSVFIGVLIDLWKITKVMDVRLDREHRVAG
IFPRLSFKDKSTYIESSTKVYDDMAFRYLSWILFPLLGCYAVYSLLYLEHKGWYSWVLSMLYGFLLTFGFITMTP
QLFINYKLKSVAHLPWRMLTYKALNTFIDDLFAFVIKMPVMYRIGCLRDDVVFFIYLYQRWIYRVDPTRVNEFGM
SGEDPTAAAPVAEVPTAAGALTPTPAPTTTTATREEASTSLPTKPTQGASSASEPQEAPPKPAEDKKKD

FIGURE 1609A

CTTCCTCCCTCCCGCTCGCTTCTTCTCACGCCGGGAGCAGGCTCGCGCCTCGCACCGCTGCCCCGCGAGCAGCTC
CTCTTCTCCCGAGGCGCGCGGGGCGCCCCCGCGAGCCCCGCGGCTGAGACCCCGCAGCCTGGAGGAGGGCTGTCC
GGGGCTTTGGGTTGCACGTTTTCAAAAAATACCTAATGGTGAAAATGAGACA**ATG**ATTCCTGTATTGACATCAAA
AAAAGCAAGTGAATTACCAGTCAGTGAAGTTGCAAGCATTCTCCAAGCTGATCTTCAGAATGGTCTAAACAAATG
TGAAGTTAGTCATAGGCGAGCCTTTCATGGCTGGAATGAGTTTGATATTAGTGAAGATGAGCCACTGTGGAAGAA
GTATATTTCTCAGTTTAAAAATCCCCTTATTATGCTGCTTCTGGCTTCTGCAGTCATCAGTGTTTTAATGCATCA
GTTTGATGATGCCGTCAGTATCACTGTGGCAATACTTATCGTTGTTACAGTTGCCTTTGTTCAGGAATATCGTTC
AGAAAAATCTCTTGAAGAATTGAGTAAACTTGTGCCACCAGAATGCCATTGTGTGCGTGAAGGAAAATTGGAGCA
TACACTTGCCCGAGACTTGGTTCCAGGTGATACAGTTTGCCTTTCTGTTGGGGATAGAGTTCCTGCTGACTTACG
CTTGTTTGAGGCTGTGGATCTTTCCATTGATGAGTCCAGCTTGACAGGTGAGACAACGCCTTGTTCTAAGGTGAC
AGCTCCTCAGCCAGCTGCAACTAATGGAGATCTTGCATCGAGAAGTAACATTGCCTTTATGGGAACACTGGTCAG
ATGTGGCAAAGCAAAGGGTGTTGTCATTGGAACAGGAGAAAATTCTGAATTTGGGGAGGTTTTTAAAATGATGCA
AGCAGAAGAGGCACCAAAAACCCCTCTGCAGAAGAGCATGGACCTCTTAGGAAAACAACTTTCCTTTTACTCCTT
TGGTATAATAGGAATCATCATGTTGGTTGGCTGGTTACTGGGAAAAGATATCCTGGAAATGTTTACTATTAGTGT
AAGTTTGGCTGTAGCAGCAATTCCTGAAGGTCTCCCCATTGTGGTCACAGTGACGCTAGCTCTTGGTGTTATGAG
AATGGTGAAGAAAAGGGCCATTGTGAAAAAGCTGCCTATTGTTGAAACTCTGGGCTGCTGTAATGTGATTTGTTC
AGATAAAACTGGAACACTGACGAAGAATGAAATGACTGTTACTCACATATTTACTTCAGATGGTCTGCATGCTGA
GGTTACTGGAGTTGGCTATAATCAATTTGGGGAAGTGATTGTTGATGGTGATGTTGTTCATGGATTCTATAACCC
AGCTGTTAGCAGAATTGTTGAGGCGGGCTGTGTGTGCAATGATGCTGTAATTAGAAACAATACTCTAATGGGGAA
GCCAACAGAAGGGGCCTTAATTGCTCTTGCAATGAAGATGGGTCTTGATGGACTTCAACAAGACTACATCAGAAA
AGCTGAATACCCTTTTAGCTCTGAGCAAAAGTGGATGGCTGTTAAGTGTGTACACCGAACACAGCAGGACAGACC
AGAGATTTGTTTTATGAAAGGTGCTTACGAACAAGTAATTAAGTACTGTACTACATACCAGAGCAAAGGGCAGAC
CTTGACACTTACTCAGCAGCAGAGAGATGTGTACCAACAAGAGAAGGCACGCATGGGCTCAGCGGGACTCAGAGT
TCTTGCTTTGGCTTCTGGTCCTGAACTGGGACAGCTGACATTTCTTGGCTTGGTGGGAATCATTGATCCACCTAG
AACTGGTGTGAAAGAAGCTGTTACAACACTCATTGCCTCAGGAGTATCAATAAAAATGATTACTGGAGATTCACA
GGAGACTGCAGTTGCAATCGCCAGTCGTCTGGGATTGTATTCCAAAACTTCCCAGTCAGTCTCAGGAGAAGAAAT
AGATGCAATGGATGTTCAGCAGCTTTCACAAATAGTACCAAAGGTTGCAGTATTTTACAGAGCTAGCCCAAGGCA
CAAGATGAAAATTATTAAGTCGCTACAGAAGAACGGTTCAGTTGTAGCCATGACAGGAGATGGAGTAAATGATGC
AGTTGCTCTGAAGGCTGCAGACATTGGAGTTGCGATGGGCCAGACTGGTACAGATGTTTGCAAAGAGGCAGCAGA
CATGATCCTAGTGGATGATGATTTTCAAACCATAATGTCTGCAATCGAAGAGGGTAAAGGGATTTATAATAACAT
TAAAAATTTCGTTAGATTCCAGCTGAGCACGAGTATAGCAGCATTAACTTTAATCTCATTGGCTACATTAATGAA
CTTTCCTAATCCTCTCAATGCCATGCAGATTTTGTGGATCAATATTATTATGGATGGACCCCCAGCTCAGAGCCT
TGGAGTAGAACCAGTGGATAAAGATGTCATTCGTAAACCTCCTCGCAACTGGAAAGACAGCATTTTGACTAAAAA
CTTGATACTTAAAATACTTGTTTCATCAATAATCATTGTTTGTGGGACTTTGTTTGTCTTCTGGCGTGAGCTACG
AGACAATGTGATTACACCTCGAGACACAACAATGACCTTCACATGCTTTGTGTTTTTTGACATGTTCAATGCACT
AAGTTCCAGATCCCAGACCAAGTCTGTGTTTGAGATTGGACTCTGCAGTAATAGAATGTTTTGCTATGCAGTTCT
TGGATCCATCATGGGACAATTACTAGTTATTTACTTTCCTCCGCTTCAGAAGGTTTTTCAGACTGAGAGCCTAAG
CATACTGGATCTGTTGTTTCTTTTGGGTCTCACCTCATCAGTGTGCATAGTGGCAGAAATTATAAAGAAGGTTGA
AAGGAGCAGGGAAAAGATCCAGAAGCATGTTAGTTCGACATCATCATCTTTTCTTGAAGTA**TGA**TGCATATTGCA
TTATTTTATTTGCAAACTAGGAATTGCAGTCTGAGGATCATTTAGAAGGGCAAGTTCAAGAGGATATGAAGATTT
GAGAACTTTTTAACTATTCATTGACTAAAAATGAACATTAATGTTAAAGACTTAAGACTTTAACCTGCTGGCAGT
CCCAAATGAAATTATGCAACTTTGATATCATATTCCTTGATTTAAATTGGCTTTTGTGATTGAGTGAAACTTTAT
AAAGCATATGGTCAGTTATTTAATTAAAAAGGCAAAACCTGAACCACCTTCTGCACTTAAAGAAGTCTACAGTAC
AAATACACTATCTATCTTAGATAGATATATTTTTTTTTATTTTTAAATATTGTACTATTTATGGTGGTGGGGCTT
TCTTACTAATACACAAATAAATTTAATCATTTCAAAGGCATTCTATTTGGTTTAGAAGTTGATTCCCAGGAGTGC
CATATTTCAGCTACTGTATTTCCTTTTTCTTGTAATGTAAGCAGCTCAGATACCATGTGCTATCATTTTTGTATC
AAGTTTTTTGCACAGGATGTGACCACTGTCAGATCACTGTTCTTTTCTTTCTTTTTGTGATTGAAAAGCCTATAC
TACAATTTGAAGTAAATTTTTGTTTTTCTTAGTAAGTGTAAATGGTTGCTTTATTTTTATTTTAAAAAGGTATGT

FIGURE 1609B

CTTTGGTTTGGCAGAATTCATGCAGGGCTATCAAGTGGTGTTCTAGGGTAACAGTGTCCATAATTAACGCTTAGT
CATAGAGTCAAAAACATTTAAGACTGATTGGGTTGAAGTTTATAATAAATTATATTAACATGTCTTCCTTTTTGA
GGTAAAGATATATACTTTGTCAAATATCATTTTGTCATCCTCTAAATATAAATCCAAATACCTCAGCTAAGTAAT
TGTATTTTATTATTTTTACTGTTATGTATGTTTTTAATCATATTTCTTAGGAAGTATAGGCTACTGGACTTAGAA
TAAAAAGTCCCCAAACCCAAACAAATGGTTTATGAACCAGAGTATATGTGGAAGATTCTTTGCTGGTCTTGCTCT
GTGTGCATCTGAAGCTTCTTTGGCCTAGATTTTAGCACAAACCTGAGTATATCTCTTCTACTTTCATCATGTGTT
CTGTACCTTCTTTTTGTTTCATTGGGCATGCTAGGGAAATAGGTGGATTTTGTGTGTAATGCCATCAGTTTTTAT
GAAAGCTTGATGAGGTATAGGTCATTTGTTTTGAGTATGTGGGCCAGAAATTTAAAATTAGAAATTTGTTTTTCT
GTTGAGTATATAAACAAAAATTGGTCCCAATTCTAACAGGTTTAATCCTTCTTGAAGCCAATAAGTTTTATCTTT
TATAATCTGTCAGGATGAACCACTCCTTAGCTTTTATCCAATATTAAACTGCAAGTGTTAGCACTGAAATATTGT
CATTGATAGGGAAAATATCTATTCTTTGAGTCATTGTTACTGAGGCAGTTGAGTGTAAGGAGCTGGCTGCAGTTT
ATTCTACTTAACCCTTTAAGGCTGAATTGTCAAATGTACATTGTTCCATGTCGTTAGATGGAACATGGAAGCCAT
TGTCTAATCAACTCTATCATTAGTGACTTGATGTCTCATACCTTAATTTTGTAATGATTTTTATTCTCTGTTACA
AAGACTTGAAATACGTATTAAATGCACGTTAATGTTTTGCTTTGCATTTTAGGTTCAGATTATGACTTGATTGAA
ATAAATGTGCCTATACATTCATTTGCTTTGTACTATAAAAATAAAAATGATTTCTTAAGTTAAAAAAAAAAAAAA
AAA

FIGURE 1610

MIPVLTSKKASELPVSEVASILQADLQNGLNKCEVSHRRAFHGWNEFDISEDEPLWKKYISQFKNPLIMLLLASA
VISVLMHQFDDAVSITVAILIVVTVAFVQEYRSEKSLEELSKLVPPECHCVREGKLEHTLARDLVPGDTVCLSVG
DRVPADLRLFEAVDLSIDESSLTGETTPCSKVTAPQPAATNGDLASRSNIAFMGTLVRCGKAKGVVIGTGENSEF
GEVFKMMQAEEAPKTPLQKSMDLLGKQLSFYSFGIIGIIMLVGWLLGKDILEMFTISVSLAVAAIPEGLPIVVTV
TLALGVMRMVKKRAIVKKLPIVETLGCCNVICSDKTGTLTKNEMTVTHIFTSDGLHAEVTGVGYNQFGEVIVDGD
VVHGFYNPAVSRIVEAGCVCNDAVIRNNTLMGKPTEGALIALAMKMGLDGLQQDYIRKAEYPFSSEQKWMAVKCV
HRTQQDRPEICFMKGAYEQVIKYCTTYQSKGQTLTLTQQQRDVYQQEKARMGSAGLRVLALASGPELGQLTFLGL
VGIIDPPRTGVKEAVTTLIASGVSIKMITGDSQETAVAIASRLGLYSKTSQSVSGEEIDAMDVQQLSQIVPKVAV
FYRASPRHKMKIIKSLQKNGSVVAMTGDGVNDAVALKAADIGVAMGQTGTDVCKEAADMILVDDDFQTIMSAIEE
GKGIYNNIKNFVRFQLSTSIAALTLISLATLMNFPNPLNAMQILWINIIMDGPPAQSLGVEPVDKDVIRKPPRNW
KDSILTKNLILKILVSSIIIVCGTLFVFWRELRDNVITPRDTTMTFTCFVFFDMFNALSSRSQTKSVFEIGLCSN
RMFCYAVLGSIMGQLLVIYFPPLQKVFQTESLSILDLLFLLGLTSSVCIVAEIIKKVERSREKIQKHVSSTSSSF
LEV

FIGURE 1611

CCTCCTACACCTTCAGCACCCTGCCCAGCTACTCCTGCTGGACCAAAGGGAAGGGTGTTTGTTAGCCCTCTTGCA
AAGAAGTTGGCAGTAGAGAAAGGGATTGATCTTACACAAGTAAAAGGGACAGGACCAGATGGTAGAATCACCAAG
AAGGATATCGACTCTTTTGTGCCTAGTAAAGTTGCTCCTGCTCCGGCAGCTGTTGTGCCTCCCACAGGTCCTGGA
ATGGCACCAGTTCCTACAGGTGTCTTCACAGATATCCCAATCAGCAACATTCGTCGGGTTATTGCACAGCGATTA
ATGCAATCAAAGCAAACCATACCTCATTATTACCTTTCTATCGATGTAAATATGGGAGAAGTTTTGTTGGTACGG
AAAGAACTTAATAAGATATTAGAAGGGAGAAGCAAAATTTCTGTCAATGACTTCATCATAAAACGTTCAGCTTTG
GCATGTTTAAAAGTTCCCGAAGCAAATTCTTCTTGGATGGACACAGTTATAAGACAAAATCATGTTGTTGATGTC
AGTGTTGCGGTCAGTACTCCTGCAGGACTCATCACACCTATTGTGTTTAATGCACATATAAAAGGAGTGGAAACC
ATTGCTAATGATGTTGTTTCTTTAGCAACCAAAGCAAGAGAGGGTAAACTACAGCCACAT

FIGURE 1612A

ATAAAAGGGGGCTGAGGAAATACCGGACACGGTCACCCGTTGCCAGCTCTAGCCTTTAAATTCCCGGCTCGGGGA
CCTCCACGCACCGCGGCTAGCGCCGACAACCAGCTAGCGTGCAAGGCGCCGCGGCTCAGCGCGTACCGGCGGGCT
TCGAAACCGCAGTCCTCCGGCGACCCCGAACTCCGCTCCGGAGCCTCAGCCCCCTGGAAAGTGATCCCGGCATCC
GAGAGCCAAG**ATG**CCGGCCCACTTGCTGCAGGACGATATCTCTAGCTCCTATACCACCACCACCACCATTACAGC
GCCTCCCTCCAGGGTCCTGCAGAATGGAGGAGATAAGTTGGAGACGATGCCCCTCTACTTGGAAGACGACATTCG
CCCTGATATAAAAGATGATATATATGACCCCACCTACAAGGATAAGGAAGGCCCAAGCCCCAAGGTTGAATATGT
CTGGAGAAACATCATCCTTATGTCTCTGCTACACTTGGGAGCCCTGTATGGGATCACTTTGATTCCTACCTGCAA
GTTCTACACCTGGCTTTGGGGGGTATTCTACTATTTTGTCAGTGCCCTGGGCATAACAGCAGGAGCTCATCGTCT
GTGGAGCCACCGCTCTTACAAAGCTCGGCTGCCCCTACGGCTCTTTCTGATCATTGCCAACACAATGGCATTCCA
GAATGATGTCTATGAATGGGCTCGTGACCACCGTGCCCACCACAAGTTTTCAGAAACACATGCTGATCCTCATAA
TTCCCGACGTGGCTTTTTCTTCTCTCACGTGGGTTGGCTGCTTGTGCGCAAACACCCAGCTGTCAAAGAGAAGGG
GAGTACGCTAGACTTGTCTGACCTAGAAGCTGAGAAACTGGTGATGTTCCAGAGGAGGTACTACAAACCTGGCTT
GCTGCTGATGTGCTTCATCCTGCCCACGCTTGTGCCCTGGTATTTCTGGGGTGAAACTTTTCAAAACAGTGTGTT
CGTTGCCACTTTCTTGCGATATGCTGTGGTGCTTAATGCCACCTGGCTGGTGAACAGTGCTGCCCACCTCTTCGG
ATATCGTCCTTATGACAAGAACATTAGCCCCCGGGAGAATATCCTGGTTTCACTTGGAGCTGTGGGTGAGGGCTT
CCACAACTACCACCACTCCTTTCCCTATGACTACTCTGCCAGTGAGTACCGCTGGCACATCAACTTCACCACATT
CTTCATTGATTGCATGGCCGCCCTCGGTCTGGCCTATGACCGGAAGAAAGTCTCCAAGGCCGCCATCTTGGCCAG
GATTAAAAGAACCGGAGATGGAAACTACAAGAGTGGC**TGA**GTTTGGGGTCCCTCAGGTTTCCTTTTTCAAAAACC
AGCCAGGCAGAGGTTTTAATGTCTGTTTATTAACTACTGAATAATGCTACCAGGATGCTAAAGATGATGATGTTA
ACCCATTCCAGTACAGTATTCTTTTAAAATTCAAAAGTATTGAAAGCCAACAACTCTGCCTTTATGATGCTAAGC
TGATATTATTTCTTCTCTTATCCTCTCTCTCTTCTAGGCCCATTGTCCTCCTTTTCACTTTATTGCTATCGCCCT
CCTTTCCCTTATTGCCTCCCAGGCAAGCAGCTGGTCAGTCTTTGCTCAGTGTCCAGCTTCCAAAGCCTAGACAAC
CTTTCTGTAGCCTAAAACGAATGGTCTTTGCTCCAGATAACTCTCTTTCCTTGAGCTGTTGTGAGCTTTGAAGTA
GGTGGCTTGAGCTAGAGATAAAACAGAATCTTCTGGGTAGTCCCCTGTTGATTATCTTCAGCCCAGGCTTTTGCT
AGATGGAATGGAAAAGCAACTTCATTTGACACAAAGCTTCTAAAGCAGGTAAATTGTCGGGGGAGAGAGTTAGCA
TGTATGAATGTAAGGATGAGGGAAGCGAAGCAAGAGGAACCTCTCGCCATGATCAGACATACAGCTGCCTACCTA
ATGAGGACTTCAAGCCCCACCACATAGCATGCTTCCTTTCTCTCCTGGCTCGGGGTAAAAAGTGGCTGCGGTGTT
TGGCAATGCTAATTCAATGCCGCAACATATAGTTGAGGCCGAGGATAAAGAAAAGACATTTTAAGTTTGTAGTAA
AAGTGGTCTCTGCTGGGGAAGGGTTTTCTTTTCTTTTTTTCTTTAATAACAAGGAGATTTCTTAGTTCATATATC
AAGAAGTCTTGAAGTTGGGTGTTTCCAGAATTGGTAAAAACAGCAGCTCATGGAATTTTGAGTATTCCATGAGCT
GCTCATTACAGTTCTTTCCTCTTTCTGCTCTGCCATCTTCAGGATATTGGTTCTTCCCCTCATAGTAATAAGATG
GCTGTGGCATTTCCAAACATCCAAAAAAAGGGAAGGATTTAAGGAGGTGAAGTCGGGTCAAAAATAAAATATATA
TACATATATACATTGCTTAGAACGTTAAACTATTAGAGTATTTCCCTTCCAAAGAGGGATGTTTGGAAAAAACTC
TGAAGGAGAGGAGGAATTAGTTGGGATGCCAATTTCCTCTCCACTGCTGGACATGAGATGGAGAGGCTGAGGGAC
AGGATCTATAGGCAGCTTCTAAGAGCGAACTTCACATAGGAAGGGATCTGAGAACACGTTGCCAGGGGCTTGAGA
AGGTTACTGAGTGAGTTATTGGGAGTCTTAATAAAATAAACTAGATATTAGGTCCATTCATTAATTAGTTCCAGT
TTCTCCTTGAAATGAGTAAAAACTAGAAGGCTTCTCTCCACAGTGTTGTGCCCCTTCACTCATTTTTTTTTGAGG
AGAAGGGGGTCTCTGTTAACATCTAGCCTAAAGTATACAACTGCCTGGGGGGCAGGGTTAGGAATCTCTTCACTA
CCCTGATTCTTGATTCCTGGCTCTACCCTGTCTGTCCCTTTTCTTTGACCAGATCTTTCTCTTCCCTGAACGTTT
TCTTCTTTCCCTGGACAGGCAGCCTCCTTTGTGTGTATTCAGAGGCAGTGATGACTTGCTGTCCAGGCAGCTCCC
TCCTGCACACAGAATGCTCAGGGTCACTGAACCACTGCTTCTCTTTTGAAAGTAGAGCTAGCTGCCACTTTCACG
TGGCCTCCGCAGTGTCTCCACCTACACCCCTGTGCTCCCCTGCCACACTGATGGCTCAAGACAAGGCTGGCAAAC
CCTCCCAGAAACATCTCTGGCCCAGAAAGCCTCTCTCTCCCTCCCTCTCTCATGAGGCACAGCCAAGCCAAGCGC
TCATGTTGAGCCAGTGGGCCAGCCACAGAGCAAAAGAGGGTTTATTTTCAGTCCCCTCTCTCTGGGTCAGAACCA
GAGGGCATGCTGAATGCCCCCTGCTTACTTGGTGAGGGTGCCCCGCCTGAGTCAGTGCTCTCAGCTGGCAGTGCA
ATGCTTGTAGAAGTAGGAGGAAACAGTTCTCACTGGGAAGAAGCAAGGGCAAGAACCCAAGTGCCTCACCTCGAA
AGGAGGCCCTGTTCCCTGGAGTCAGGGTGAACTGCAAAGCTTTGGCTGAGACCTGGGATTTGAGATACCACAAAC
CCTGCTGAACACAGTGTCTGTTCAGCAAACTAACCAGCATTCCCTACAGCCTAGGGCAGACAATAGTATAGAAGT

FIGURE 1612B

CTGGAAAAAAACAAAAACAGAATTTGAGAACCTTGGACCACTCCTGTCCCTGTAGCTCAGTCATCAAAGCAGAAG
TCTGGCTTTGCTCTATTAAGATTGGAAATGTACACTACCAAACACTCAGTCCACTGTTGAGCCCCAGTGCTGGAA
GGGAGGAAGGCCTTTCTTCTGTGTTAATTGCGTAGAGGCTACAGGGGTTAGCCTGGACTAAAGGCATCCTTGTCT
TTTGAGCTATTCACCTCAGTAGAAAAGGATCTAAGGGAAGATCACTGTAGTTTAGTTCTGTTGACCTGTGCACCT
ACCCCTTGGAAATGTCTGCTGGTATTTCTAATTCCACAGGTCATCAGATGCCTGCTTGATAATATATAAACAATA
AAAACAACTTTCACTTCTTCCTATTGTAATCGTGTGCCATGGATCTGATCTGTACCATGACCCTACATAAGGCTG
GATGGCACCTCAGGCTGAGGGCCCCAATGTATGTGTGGCTGTGGGTGTGGGTGGGAGTGTGTCTGCTGAGTAAGG
AACACGATTTTCAAGATTCTAAAGCTCAATTCAAGTGACACATTAATGATAAACTCAGATCTGATCAAGAGTCCG
GATTTCTAACAGTCCCTGCTTTGGGGGGTGTGCTGACAACTTAGCTCAGGTGCCTTACATCTTTTCTAATCACAG
TGTTGCATATGAGCCTGCCCTCACTCCCTCTGCAGAATCCCTTTGCACCTGAGACCCTACTGAAGTGGCTGGTAG
AAAAAGGGGCCTGAGTGGAGGATTATCAGTATCACGATTTGCAGGATTCCCTTCTGGGCTTCATTCTGGAAACTT
TTGTTAGGGCTGCTTTTCTTAAGTGCCCACATTTGATGGAGGGTGGAAATAATTTGAATGTATTTGATTTATAAG
TTTTTTTTTTTTTTTGGGTTAAAAGATGGTTGTAGCATTTAAAATGGAAAATTTTCTCCTTGGTTTGCTAGTATC
TTGGGTGTATTCTCTGTAAGTGTAGCTCAAATAGGTCATCATGAAAGGTTAAAAAAGCGAGGTGGCCATGTTATG
CTGGTGGTTAAGGCCAGGGCCTCTCCAACCACTGTGCCACTGACTTGCTGTGTGACCCTGGGCAAGTCACTTAAC
TATAAGGTGCCTCAGTTTTCCTTCTGTTAAAATGGGGATAATAATACTGACCTACCTCAAAGGGCAGTTTTGAGG
CATGACTAATGCTTTTTAGAAAGCATTTTGGGATCCTTCAGCACAGGAATTCTCAAGACCTGAGTATTTTTTATA
ATAGGAATGTCCACCATGAACTTGATACGTCCGTGTGTCCCAGATGCTGTCATTAGTCTATATGGTTCTCCAAGA
AACTGAATGAATCCATTGGAGAAGCGGTGGATAACTAGCCAGACAAAATTTGAGAATACATAAACAACGCATTGC
CACGGAAACATACAGAGGATGCCTTTTCTGTGATTGGGTGGGATTTTTTCCCTTTTTATGTGGGATATAGTAGTT
ACTTGTGACAAAAATAATTTTGGAATAATTTCTATTAATATCAACTCTGAAGCTAATTGTACTAATCTGAGATTG
TGTTTGTTCATAATAAAAGTGAAGTGAATCTAAAAAAAAAAAAAAA

FIGURE 1613

MPAHLLQDDISSSYTTTTTITAPPSRVLQNGGDKLETMPLYLEDDIRPDIKDDIYDPTYKDKEGPSPKVEYVWRN
IILMSLLHLGALYGITLIPTCKFYTWLWGVFYYFVSALGITAGAHRLWSHRSYKARLPLRLFLIIANTMAFQNDV
YEWARDHRAHHKFSETHADPHNSRRGFFFSHVGWLLVRKHPAVKEKGSTLDLSDLEAEKLVMFQRRYYKPGLLLM
CFILPTLVPWYFWGETFQNSVFVATFLRYAVVLNATWLVNSAAHLFGYRPYDKNISPRENILVSLGAVGEGFHNY
HHSFPYDYSASEYRWHINFTTFFIDCMAALGLAYDRKKVSKAAILARIKRTGDGNYKSG

FIGURE 1614

CGAGCGGCGGCGGAGCAGGCATTTCCAGCAGTGAGGAGACAGCCAGAAGCAAGCTATTGGAGCTGAAGGAACCTG
AGACAGAAGCTAGTCCCCCCTCTGAATTTTACTGATGAAGAAACTGAGGCCACAGAGCTAAAGTGACTTTTCCCA
AGGTCGCCCAGCGAGGACGTGGGACTTCTCAGACGTCAGGAGAGTGATGTGAGGGAGCTGTGTGACCATAGAAAG
TGACGTGTTAAAAACCAGCGCTGCCCTCTTTGAAAGCCAGGGAGCATCATTCATTTAGCCTGCTGAGAAGAAGAA
ACCAAGTGTCCGGGATTCAGACCTCTCTGCGGCCCCAAGTGTTCGTGGTGCTTCCAGAGGCAGGGCT**ATG**CTCAC
ATTCATGGCCTCTGACAGCGAGGAAGAAGTGTGTGATGAGCGGACGTCCCTAATGTCGGCCGAGAGCCCCACGCC
GCGCTCCTGCCAGGAGGGCAGGCAGGGCCCAGAGGATGGAGAGAACACTGCCCAGTGGAGAAGCCAGGAGAACGA
GGAGGACGGTGAGGAGGACCCTGACCGCTATGTCTGTAGTGGGGTTCCCGGGCGGCCGCCAGGCCTGGAGGAAGA
GCTGACCCTCAAATACGGAGCGAAGCACGTGATCATGCTGTTTGTGCCTGTCACTCTGTGCATGATCGTGGTGGT
AGCCACCATCAAGTCTGTGCGCTTCTACACAGAGAAGAATGGACAGCTCATCTACACGACATTCACTGAGGACAC
ACCCTCGGTGGGCCAGCGCCTCCTCAACTCCGTGCTGAACACCCTCATCATGATCAGCGTCATCGTGGTTATGAC
CATCTTCTTGGTGGTGCTCTACAAGTACCGCTGCTACAAGTTCATCCATGGCTGGTTGATCATGTCTTCACTGAT
GCTGCTGTTCCTCTTCACCTATATCTACCTTGGGGAAGTGCTCAAGACCTACAATGTGGCCATGGACTACCCCAC
CCTCTTGCTGACTGTCTGGAACTTCGGGGCAGTGGGCATGGTGTGCATCCACTGGAAGGGCCCTCTGGTGCTGCA
GCAGGCCTACCTCATCATGATCAGTGCGCTCATGGCCCTAGTGTTCATCAAGTACCTCCCAGAGTGGTCCGCGTG
GGTCATCCTGGGCGCCATCTCTGTGTATGATCTCGTGGCTGTGCTGTGTCCCAAAGGGCCTCTGAGAATGCTGGT
AGAAACTGCCCAGGAGAGAAATGAGCCCATATTCCCTGCCCTGATATACTCATCTGCCATGGTGTGGACGGTTGG
CATGGCGAAGCTGGACCCCTCCTCTCAGGGTGCCCTCCAGCTCCCCTACGACCCGGAGATGGAAGAAGACTCCTA
TGACAGTTTTGGGGAGCCTTCATACCCCGAAGTCTTTGAGCCTCCCTTGACTGGCTACCCAGGGGAGGAGCTGGA
GGAAGAGGAGGAAAGGGGCGTGAAGCTTGGCCTCGGGGACTTCATCTTCTACAGTGTGCTGGTGGGCAAGGCGGC
TGCCACGGGCAGCGGGGACTGGAATACCACGCTGGCCTGCTTCGTGGCCATCCTCATTGGCTTGTGTCTGACCCT
CCTGCTGCTTGCTGTGTTCAAGAAGGCGCTGCCCGCCCTCCCCATCTCCATCACGTTCGGGCTCATCTTTTACTT
CTCCACGGACAACCTGGTGCGGCCGTTCATGGACACCCTGGCCTCCCATCAGCTCTACATCTGAGGGACATGGTG
TGCCACAGGCTGCAAGCTGCAGGGAATTTTCATTGGATGCAGTTGTATAGTTTTACACTCTAGTGCCATATATTT
TTAAGACTTTTCTTTCCTTAAAAAATAAAGTACGTGTTTACTTGGTGAGGAGGAGGCAGAACCAGCTCTTTGGTG
CCAGCTGTTTCATCACCAGACTTTGGCTCCCGCTTTGGGGAGCGCCTCGCTTCACGGACAGGAAGCACAGCAGGT
TTATCCAGATGAACTGAGAAGGTCAGATTAGGGCGGGGAGAAGAGCATCCGGCATGAGGGCTGAGATGCGCAAAG
AGTGTGCTCGGGAGTGGCCCCTGGCACCTGGGTGCTCTGGCTGGAGAGGAAAAGCCAGTTCCCTACGAGGAGTGT
TCCCAATGCTTTGTCCATGATGTCCTTGTTATTTTATTGCCTTTAGAAACTGAGTCCTGTTCTTGTTACGGCAGT
CACACTGCTGGGAAGTGGCTTAATAGTAATATCAATAAATAGATGAGTCCTGTTAGAAAAA

FIGURE 1615

MLTFMASDSEEEVCDERTSLMSAESPTPRSCQEGRQGPEDGENTAQWRSQENEEDGEEDPDRYVCSGVPGRPPGL
EEELTLKYGAKHVIMLFVPVTLCMIVVVATIKSVRFYTEKNGQLIYTTFTEDTPSVGQRLLNSVLNTLIMISVIV
VMTIFLVVLYKYRCYKFIHGWLIMSSLMLLFLFTYIYLGEVLKTYNVAMDYPTLLLTVWNFGAVGMVCIHWKGPL
VLQQAYLIMISALMALVFIKYLPEWSAWVILGAISVYDLVAVLCPKGPLRMLVETAQERNEPIFPALIYSSAMVW
TVGMAKLDPSSQGALQLPYDPEMEDSYDSFGEPSYPEVFEPPLTGYPGEELEEEEERGVKLGLGDFIFYSVLVGK
AAATGSGDWNTTLACFVAILIGLCLTLLLLAVFKKALPALPISITFGLIFYFSTDNLVRPFMDTLASHQLYI

FIGURE 1616

AGCCAGAGGGACGAGCTAGCCCGACG**ATG**GCCCAGGGGACATTGATCCGTGTGACCCCAGAGCAGCCCACCCATG
CCGTGTGTGTGCTGGGCACCTTGACTCAGCTTGACATCTGCAGCTCTGCCCCTGAGGACTGCACGTCCTTCAGCA
TCAACGCCTCCCCAGGGGTGGTCGTGGATATTGCCCACAGCCCTCCAGCCAAGAAGAAATCCACAGGTTCCTCCA
CATGGCCCCTGGACCCTGGGGTAGAGGTGACCCTGACGATGAAAGCGGCCAGTGGTAGCACAGGCGACCAGAAGG
TTCAGATTTCATACTACGGACCCAAGACTCCACCAGTCAAAGCTCTACTCTACCTCACCGCGGTGGAAATCTCCC
TGTGCGCAGACATCACCCGCACCGGCAAAGTGAAGCCAACCAGAGCTGTGAAAGATCAGAGGACCTGGACCTGGG
GCCCTTGTGGACAGGGTGCCATCCTGCTGGTGAACTGTGACAGAGACAATCTCGAATCTTCTGCCATGGACTGCG
AGGATGATGAAGTGCTTGACAGCGAAGACCTGCAGGACATGTCGCTGATGACCCTGAGCACGAAGACCCCCAAGG
ACTTCTTCACAAACCATACACTGGTGCTCCACGTGGCCAGGTCTGAGATGGACAAAGTGAGGGTGTTTCAGGCCA
CACGGGGCAAACTGTCCTCCAAGTGCAGCGTAGTCTTGGGTCCCAAGTGGCCCTCTCACTACCTGATGGTCCCCG
GTGGAAAGCACAACATGGACTTCTACGTGGAGGCCCTCGCTTTCCCGGACACCGACTTCCCGGGGCTCATTACCC
TCACCATCTCCCTGCTGGACACGTCCAACCTGGAGCTCCCCGAGGCTGTGGTGTTCCAAGACAGCGTGGTCTTCC
GCGTGGCGCCCTGGATCATGACCCCCAACACCCAGCCCCCGCAGGAGGTGTACGCGTGCAGTATTTTTGAAAATG
AGGACTTCCTGAAGTCAGTGACTACTCTGGCCATGAAAGCCAAGTGCAAGCTGACCATCTGCCCTGAGGAGGAGA
ACATGGATGACCAGTGGATGCAGGATGAAATGGAGATCGGCTACATCCAAGCCCCACACAAAACGCTGCCCGTGG
TCTTCGACTCTCCAAGGAACAGAGGCCTGAAGGAGTTTCCCATCAAACGAGTGATGGGTCCAGATTTTGGCTATG
TAACTCGAGGGCCCCAAACAGGGGGTATCAGTGGACTGGACTCCTTTGGGAACCTGGAAGTGAGCCCCCCAGTCA
CAGTCAGGGGCAAGGAATACCCGCTGGGCAGGATTCTCTTCGGGGACAGCTGTTATCCCAGCAATGACAGCCGGC
AGATGCACCAGGCCCTGCAGGACTTCCTCAGTGCCCAGCAGGTGCAGGCCCCTGTGAAGCTCTATTCTGACTGGC
TGTCCGTGGGCCACGTGGACGAGTTCCTGAGCTTTGTGCCAGCACCCGACAGGAAGGGCTTCCGGCTGCTCCTGG
CCAGCCCCAGGTCCTGCTACAAACTGTTCCAGGAGCAGCAGAATGAGGGCCACGGGGAGGCCCTGCTGTTCGAAG
GGATCAAGAAAAAAAAACAGCAGAAAATAAAGAACATTCTGTCAAACAAGACATTGAGAGAACATAATTCATTTG
TGGAGAGATGCATCGACTGGAACCGCGAGCTGCTGAAGCGGGAGCTGGGCCTGGCCGAGAGTGACATCATTGACA
TCCCGCAGCTCTTCAAGCTCAAAGAGTTCTCTAAGGCGGAAGCTTTTTTCCCCAACATGGTGAACATGCTGGTGC
TAGGGAAGCACCTGGGCATCCCCAAGCCCTTCGGGCCCGTCATCAACGGCCGCTGCTGCCTGGAGGAGAAGGTGT
GTTCCCTGCTGGAGCCACTGGGCCTCCAGTGCACCTTCATCAACGACTTCTTCACCTACCACATCAGGCATGGGG
AGGTGCACTGCGGCACCAACGTGCGCAGAAAGCCCTTCTCCTTCAAGTGGTGGAACATGGTGCCC**TGA**GCCCATC
TTCCCTGGCGTCCTCTCCCTCCTGGCCAGATGTCGCTGGGTCCTCTGCAGTGTGGCAAGCAAGAGCTCTTGTGAA
TATTGTGGCTCCCTGGGGGCGGCCAGCCCTCCCAGCAGTGGCTTGCTTTCTTCTCCTGTGATGTCCCAGTTTCCC
ACTCTGAAGATCCCAACATGGTCCTAGCACTGCACACTCAGTTCTGCTCTAAGAAGCTGCAATAAAGTTTTTTTA
AGTCACTTTGTAC

FIGURE 1617

MAQGTLIRVTPEQPTHAVCVLGTLTQLDICSSAPEDCTSFSINASPGVVVDIAHSPPAKKKSTGSSTWPLDPGVE
VTLTMKAASGSTGDQKVQISYYGPKTPPVKALLYLTAVEISLCADITRTGKVKPTRAVKDQRTWTWGPCGQGAIL
LVNCDRDNLESSAMDCEDDEVLDSEDLQDMSLMTLSTKTPKDFFTNHTLVLHVARSEMDKVRVFQATRGKLSSKC
SVVLGPKWPSHYLMVPGGKHNMDFYVEALAFPDTDFPGLITLTISLLDTSNLELPEAVVFQDSVVFRVAPWIMTP
NTQPPQEVYACSIFENEDFLKSVTTLAMKAKCKLTICPEEENMDDQWMQDEMEIGYIQAPHKTLPVVFDSPRNRG
LKEFPIKRVMGPDFGYVTRGPQTGGISGLDSFGNLEVSPPVTVRGKEYPLGRILFGDSCYPSNDSRQMHQALQDF
LSAQQVQAPVKLYSDWLSVGHVDEFLSFVPAPDRKGFRLLLASPRSCYKLFQEQQNEGHGEALLFEGIKKKKQQK
IKNILSNKTLREHNSFVERCIDWNRELLKRELGLAESDIIDIPQLFKLKEFSKAEAFFPNMVNMLVLGKHLGIPK
PFGPVINGRCCLEEKVCSLLEPLGLQCTFINDFFTYHIRHGEVHCGTNVRRKPFSFKWWNMVP

FIGURE 1618

CCACGCGTCCGGTGCGGACGGGCGCGGACCACCTCCAGGGGCTAAGTG**ATG**GATCTTGTACTCCGTGTTGCAGAT
TACTATTTTTTTACACCATACGTGTATCCAGCCACATGGCCAGAAGATGACATCTTCCGACAAGCTATTAGTCTT
CTGATTGTAACAAATGTTGGTGCTTACATCCTTTATTTCTTCTGTGCAACACTGAGCTATTATTTTGTCTTCGAT
CATGCATTAATGAAACATCCACAATTTTTAAAGAATCAAGTCCGTCGAGAGATTAAGTTTACTGTCCAGGCATTG
CCATGGATAAGTATTCTTACTGTTGCACTGTTCTTGCTGGAGATAAGAGGTTACAGCAAATTACATGATGACCTA
GGAGAGTTTCCATATGGATTGTTTGAACTTGTCGTTAGTATAATATCTTTCCTCTTTTTCACTGACATGTTCATC
TACTGGATTCACAGAGGCCTTCATCATAGACTGGTATATAAGCGCCTACATAAACCTCACCATATTTGGAAGATT
CCTACTCCATTTGCAAGTCATGCTTTTCACCCTATTGATGGCTTTCTTCAGAGTCTACCTTACCATATATACCCT
TTTATCTTTCCATTACACAAGGTGGTTTATTTAAGTCTGTACATCTTGGTTAATATCTGGACAATTTCCATTCAT
GACGGTGATTTTCGTGTCCCCCAAATCTTACAGCCATTTATTAATGGCTCAGCTCATCATACAGACCACCATATG
TTCTTTGACTATAATTATGGACAATATTTCACTTTGTGGGATAGGATTGGCGGCTCATTCAAAAATCCTTCATCC
TTTGAGGGGAAGGGACCGCTCAGTTATGTGAAGGAGATGACAGAGGGAAAGCGCAGCAGCCCTTCAGGAAATGGC
TGTAAGAATGAAAAATTATTCAATGGAGAGTTTACAAAGACTGAA**TAG**ATTATTGCCCAGTTATTCTTAAGTAAG
GACAAAGAAGGAAATATCATCGTATTTCTTTTTTTTAATAAGGAAAAAATAATCTCCATACAGTCAAGATACATA
GTAAATGGTATCATTTGGAAATCAGCATCGTGGGCACTGCTGAGGAATGATCCTAGTGGTAGGTCAGAAGAAGAT
GCTGTGAACACCAGGACTTTAATCTTATGCTTAAAATGCCAGATGTTGTTCGGGCCCCAACTTGTATTTCTAGCA
GCAGATCTGTAGTTTGTATAGCCTCAACAACAATTTTAAATAAGATGGAGAATAAATTATTGAGGGGACTAGGCT
ATATGCATTTGCCTTCATCCACCCATGTTTATTAAGAATCATTGTGCTTAATAATACCAAGACTAAGCACCATAA
CCAAGAAATACTAATGTAAAGATTGTTTCTTGTTTCAGGAATGGTTAATTCTTCAACGTTGGTATGATAATGATA
ACTTGTTTTGACTTGAATAAAGTACTACATCAGTGTGGAAAAAAATTCTGATACATTAGCAGCTATGTAAATGAC
CTAATTGATAGCAGGTGTAATAAGACTATCGTCTTCCTACACATAGGAGGCTCATTCTCTGGACACACTATCACC
TATTACATTTTACTGATTAACAAATAAATTGGAATTTAAAAATATCGATATCACCATGATTTAATCCAGATCTGG
GATTATGTAGCTAAACATTGTGATGATTATTATTTAAAACCATTATTTAATAAGAGTAAAAATATGTGAATCTGG
ATATATTTAAAAAAAGAAATTTGATTGCCCAGATAATATATTAGGCACTACTGATTTTTTAGTTAAATTGATGCA
CTACACTTTTGATGTTTGAAGTTACAACCTGTAATTTTTTTGTAAAGGAAATAATTGCCAAATACCTAGGCCCAT
TGCTGACGATTAGTTCTAAAATCTTATTCCTCCTCTTCTCCCCTCACTTTTCCCTACTTCCTCTGCAAAAAGATT
TAACAAATACATTCATAAGGAAATGTGTGTTGTAACAAATATATTGCAAAAACATAGTTTGTAAAGGCATTCTAT
AAGCTATTTATGTAAAATCAATAAAAGTTGATCATAATTAAACTGTAAAAAAAAAAAAAAAGGCGGC

FIGURE 1619

MDLVLRVADYYFFTPYVYPATWPEDDIFRQAISLLIVTNVGAYILYFFCATLSYYFVFDHALMKHPQFLKNQVRR
EIKFTVQALPWISILTVALFLLEIRGYSKLHDDLGEFPYGLFELVVSIISFLFFTDMFIYWIHRGLHHRLVYKRL
HKPHHIWKIPTPFASHAFHPIDGFLQSLPYHIYPFIFPLHKVVYLSLYILVNIWTISIHDGDFRVPQILQPFING
SAHHTDHHMFFDYNYGQYFTLWDRIGGSFKNPSSFEGKGPLSYVKEMTEGKRSSPSGNGCKNEKLFNGEFTKTE

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FIGURE 1620

TCCTGCTCTGGGGAAGTGGGCACACGTTAAAAGAAATGTTTATTTCAGTCTTCTGAAATAGGGAATTACTCTGGC
TAAAATGTAGCTCCAGAAAGGGAAAGTGGGGCTGTATGAATCCAGGTCCAGTTTGTTGTTTCCTCCAGGATAAGG
CAGCTGTCGGAGGGGAAAATCATCTCCCATTTCTCCACAGGGCAGTCTGAAG**ATG**GCCAATTACACGCTGGCACC
AGAGGATGAATATGATGTCCTCATAGAAGGTGAACTGGAGAGCGATGAGGCAGAGCAATGTGACAAGTATGACGC
CCAGGCACTCTCAGCCCAGCTGGTGCCATCACTCTGCTCTGCTGTGTTTGTGATCGGTGTCCTGGACAATCTCCT
GGTTGTGCTTATCCTGGTAAAATATAAAGGACTCAAACGCGTGGAAAATATCTATCTTCTAAACTTGGCAGTTTC
TAACTTGTGTTTCTTGCTTACCCTGCCCTTCTGGGCTCATGCTGGGGGCGATCCCATGTGTAAAATTCTCATTGG
ACTGTACTTCGTGGGCCTGTACAGTGAGACATTTTTCAATTGCCTTCTGACTGTGCAAAGGTACCTAGTGTTTTT
GCACAAGGGCAACTTTTTCTCAGCCAGGAGGAGGGTGCCCTGTGGCATCATTACAAGTGTCCTGGCATGGGTAAC
AGCCATTCTGGCCACTTTGCCTGAATACGTGGTTTATAAACCTCAGATGGAAGACCAGAAATACAAGTGTGCATT
TAGCAGAACTCCCTTCCTGCCAGCTGATGAGACATTCTGGAAGCATTTTCTGACTTTAAAAATGAACATTTCGGT
TCTTGTCCTCCCCCTATTTATTTTTACATTTCTCTATGTGCAAATGAGAAAAACACTAAGGTTCAGGGAGCAGAG
GTATAGCCTTTTCAAGCTTGTTTTTGCCATAATGGTAGTCTTCCTTCTGATGTGGGCGCCCTACAATATTGCATT
TTTCCTGTCCACTTTCAAAGAACACTTCTCCCTGAGTGACTGCAAGAGCAGCTACAATCTGGACAAAAGTGTTCA
CATCACTAAACTCATCGCCACCACCCACTGCTGCATCAACCCTCTCCTGTATGCGTTTCTTGATGGGACATTTAG
CAAATACCTCTGCCGCTGTTTCCATCTGCGTAGTAACACCCCACTTCAACCCAGGGGGCAGTCTGCACAAGGCAC
ATCGAGGGAAGAACCTGACCATTCCACCGAAGTG**TAA**ACTAGCATCCACCAAATGCAAGAAGAATAAACATGGAT
TTTCATCTTTCTGCATTATTTCATGTAAATTTTCTACACATTTGTATACAAAATCGGATACAGGAAGAAAAGGGA
GAGGTGAGCTAACATTTGCTAAGCACTGAATTTGTCTCAGGCACCGTGCAAGGCTCTTTACAAACGTGAGCTCCT
TCGCCTCCTACCACTTGTCCATAGTGTGGATAGGACTAGTCTCATTTCTCTGAGAAGAAAACTAAGGCGCGGAAA
TTTGTCTAAGATCACATAACTAGGAAGTGGCAGAACTGATTCTCCAGCCCTGGTAGCATTTGCTCAGAGCCTACG
CTTGGTCCAGAACATCAAACTCCAAACCCTGGGGACAAACGACATGAAATAAATGTATTTTAAAACATCT

FIGURE 1621

MANYTLAPEDEYDVLIEGELESDEAEQCDKYDAQALSAQLVPSLCSAVFVIGVLDNLLVVLILVKYKGLKRVENI
YLLNLAVSNLCFLLTLPFWAHAGGDPMCKILIGLYFVGLYSETFFNCLLTVQRYLVFLHKGNFFSARRRVPCGII
TSVLAWVTAILATLPEYVVYKPQMEDQKYKCAFSRTPFLPADETFWKHFLTLKMNISVLVLPLFIFTFLYVQMRK
TLRFREQRYSLFKLVFAIMVVFLLMWAPYNIAFFLSTFKEHFSLSDCKSSYNLDKSVHITKLIATTHCCINPLLY
AFLDGTFSKYLCRCFHLRSNTPLQPRGQSAQGTSREEPDHSTEV

FIGURE 1622

GAAAAGCCGCCGGTATTTCTCCACCTGGCTCTCCTCTACCTCCAGGCAGGCGCACCCGAGGTCCCCCTCCCACCC
CACCTTCTGCCCTCCCGCACACTTGGACCAGTGCTGTTGACCCGGAAGCGGACATTTCTGCAGCTATTCTAAGCA
CACGTCGGCGGAGGGAGCGGGACGTGGCCAGCGGTCAGCGGCGAAGGAGGCAGGCCCTGCGCGGGGATCACGGAA
GCCCTGTGATTCACC**ATG**AAGTTCCAGTACAAGGAGGTCCATCCCTTTGAGTATCGGAAAAAGGAAGGAGAAAAG
ATCCGGAAGAAATATCCGGACAGGGTCCCCTTGATTGTAGAGAAGGCTCCAAAAGCAAGGGTGCCTGATCTGGAC
AGGAGGAAGTACCTAGTGCCCTCCGACCTTACCGATGGCCAGTTCTACCTTTTAATCCGGAAGAGAATCCACCTG
AGACCTGAGGACGCCTTATTCTTCTTTGTCAACAACACTATCCCTCCCACTAGTGCTACCATGGGCCAACTATAT
GAGGACAGTCATGAGGAAGATGATTTTCTGTATGTGGCCTACAGTAATGAGAGTGTCTATGGGAAA**TGA**GTGGTT
GGAAGCCCAGCAGATGGAAGCACCTGGACTTAGGGGTAGGGGAGGGGTGTGTGTGTGACTTGGGGAAAGAGAGGG
CGGCTCCCACCGTGAGGAGACAGAAGGTGAAGACATATAGAAACTTTACACCGCACACACCGTCAACGCATTTTC
ACATGCTCAACTGATATTTTTTGTTGCTTCCTTGGCCCAGGGAGAAAGCATGTCAGGACAGAGCTGTTGGATTGG
CTTTGATAGAGGAATGGGGATGATGTAATTTTATGGCATTCCTGAGATTTAATTTTTGTGCAGTTTCATAGAAAG
GTCGGTCAGGAGGTGGACAAGTTGGGGTCAGAGATGATGGCAGTCCAGCAGCAACTCCCTGTGCTCCCTTCTCTT
TGGGCAGAGATTCTGTTTTTGACAGTTGCACAAGACAGGTAGGGAAAGGGGACTTGTGGTAGTGGGCCATACCTG
GGGACGAAAAGAGACCCACTGTAATTGATGCATCGTGGCCCCCGATCTTCCGTATCCCACACTTCTTTTCTCCCA
TCCCAGTTGCAATCTCACTCACAAACATCACAGTACCACCCCAGGGGCGGCAGTAGACACCAACCCAGAAATTTA
GACAGGGATCTCTTATCTTTGGAAAATAGGGGTTAGGCATGAGGGTGGTTATGATTAAGAAGATAATTTTGTTGT
TAAATAGCATTAAACTGGAATTGACAGAGTGAGTTGAGCATCTCTGTCTAACCTGCTCTTTCTCTCTGGTGCTCC
TCATCTCACCCCTACCTTGGAATTTAATAAGCTTCAGGCATTTCCAATTGCAGACTAAAACCACTTCTACCATCT
CCTCTAGTATTTTCCATGTATCAGGACAGAGATGTCTTATGTAGGGAAGGGGCAGGTATGAAGTGAGGTAGATTA
TCTATACCTCTCACTCATTCAGGATTCTCGCTCCCATGCTGCTGTCCCTTCATTCTCACACTCACAGGAATGCTA
TGTGATGGCCAGCTGCTTCCCTTCTTGGTTATCCACTGCAGCTGCTAGTTAGAAAGGTTTGCAGGGATGACTTTT
AGTAAATCATGGGGATTTTATTGATTTATTATCACTTATAGGATTTTGTGGGGTGGGAGTGGGGAGCAGGAATTG
CACTCAGACATGACATTTCAATTCATCTCTGCAAATGAAAAGGGTTCTTCCTCTTGGGGGAAATCTGTGTGTCAG
TTCTGTCAGCTGCAAGTTCTTGTGTAATGAAGTCAATGCTGTCAGGCCAAG

FIGURE 1623

MKFQYKEVHPFEYRKKEGEKIRKKYPDRVPLIVEKAPKARVPDLDRRKYLVPSDLTDGQFYLLIRKRIHLRPEDA
LFFFVNNTIPPTSATMGQLYEDSHEEDDFLYVAYSNESVYGK

FIGURE 1624A

CCTCTTGCGGCCACAGGCGCGGCGTCCTCGGCGGCGGGCGGCAGCTAGCGGGAGCCGGGACGCCGGTGCAGCCGC
AGCGCGCGGAGGAACCCGGGTGTGCCGGGAGCTGGGCGGCCACGTCCGGACGGGACCGAGACCCCTCGTAGCGCA
TTGCGGCGACCTCGCCTTCCCCGGCCGCGAGCGCGCCGCTGCTTGAAAAGCCGCGGAACCCAAGGACTTTTCTCC
GGTCCGAGCTCGGGGCGCCCCGCAGGCGCACGGTACCCGTGCTGCAGTCGGGCACGCCGCGGCGCCGGGGGCCTC
CGCAGGGCGATGGAGCCGGTCTGCAAGGAAAGTGAGGCGCCGCCGCTGCGTTCTGGAGGAGGGGGGCACAAGGTC
TGGAGACCCCGGGTGGCGGACGGGAGCCCTCCCCCCGCCCCGCCTCCGGGGCACCAGCTCCGGCTCCATTGTTCC
CGCCCGGGCTGGAGGCGCCGAGCACCGAGCGCCGCCGGGAGTCGAGCGCCGGCCGCGGAGCTCTTGCGACCCCGC
CAGGACCCGAACAGAGCCCGGGGGCGGCGGGCCGGAGCCGGGGACGCGGGCACACGCCCGCTCGCACAAGCCACG
GCGGACTCTCCCGAGGCGGAACCTCCACGCCGAGCGAGGGTCAGTTTGAAAAGGAGGATCGAGCTCACTGTGGAG
TATCCATGGAGATGTGGAGCCTTGTCACCAACCTCTAACTGCAGAACTGGG**ATG**TGGAGCTGGAAGTGCCTCCTC
TTCTGGGCTGTGCTGGTCACAGCCACACTCTGCACCGCTAGGCCGTGCCCGACCTTGCCTGAACAAGCCCAGCCC
TGGGGAGCCCCTGTGGAAGTGGAGTCCTTCCTGGTCCACCCGGGTGACCTGCTGCAGTTGCGCTGTCGGCTGCGG
GACGATGTGCAGAGCATCAACTGGCTGCGGGACGGGGTGCAGCTGGCGGAAAGCAACCGCACCCGCATCACAGGG
GAGGAGGTGGAGGTGCAGGACTCCGTGCCCGCAGACTCCGGCCTCTATGCTTGCGTAACCAGCAGCCCCTCGGGC
AGTGACACCACCTACTTCTCCGTCAATGTTTCAGATGCTCTCCCCTCCTCGGAGGATGATGATGATGATGATGAC
TCCTCTTCAGAGGAGAAAGAAACAGATAACACCAAACCAAACCGTATGCCCGTAGCTCCATATTGGACATCCCCA
GAAAAGATGGAAAAGAAATTGCATGCAGTGCCGGCTGCCAAGACAGTGAAGTTCAAATGCCCTTCCAGTGGGACC
CCAAACCCCACACTGCGCTGGTTGAAAAATGGCAAAGAATTCAAACCTGACCACAGAATTGGAGGCTACAAGGTC
CGTTATGCCACCTGGAGCATCATAATGGACTCTGTGGTGCCCTCTGACAAGGGCAACTACACCTGCATTGTGGAG
AATGAGTACGGCAGCATCAACCACACATACCAGCTGGATGTCGTGGAGCGGTCCCCTCACCGGCCCATCCTGCAA
GCAGGGTTGCCCGCCAACAAAACAGTGGCCCTGGGTAGCAACGTGGAGTTCATGTGTAAGGTGTACAGTGACCCG
CAGCCGCACATCCAGTGGCTAAAGCACATCGAGGTGAATGGGAGCAAGATTGGCCCAGACAACCTGCCTTATGCC
CAGATCTTGAAGACTGCTGGAGTTAATACCACCGACAAAGAGATGGAGGTGCTTCACTTAAGAAATGTCTCCTTT
GAGGACGCAGGGGAGTATACGTGCTTGGCGGGTAACTCTATCGGACTCTCCCATCACTCTGCATGGTTGACCGTT
CTGGAAGCCCTGGAAGAGAGGCCGGCAGTGATGACCTCGCCCCTGTACCTGGAGATCATCATCTATTGCACAGGG
GCCTTCCTCATCTCCTGCATGGTGGGGTCGGTCATCGTCTACAAGATGAAGAGTGGTACCAAGAAGAGTGACTTC
CACAGCCAGATGGCTGTGCACAAGCTGGCCAAGAGCATCCCTCTGCGCAGACAGGTAACAGTGTCTGCTGACTCC
AGTGCATCCATGAACTCTGGGGTTCTTCTGGTTCGGCCATCACGGCTCTCCTCCAGTGGGACTCCCATGCTAGCA
GGGGTCTCTGAGTATGAGCTTCCCGAAGACCCTCGCTGGGAGCTGCCTCGGGACAGACTGGTCTTAGGCAAACCC
CTGGGAGAGGGCTGCTTTGGGCAGGTGGTGTTGGCAGAGGCTATCGGGCTGGACAAGGACAAACCCAACCGTGTG
ACCAAAGTGGCTGTGAAGATGTTGAAGTCGGACGCAACAGAGAAAGACTTGTCAGACCTGATCTCAGAAATGGAG
ATGATGAAGATGATCGGGAAGCATAAGAATATCATCAACCTGCTGGGGGCCTGCACGCAGGATGGTCCCTTGTAT
GTCATCGTGGAGTATGCCTCCAAGGGCAACCTGCGGGAGTACCTGCAGGCCCGGAGGCCCCCAGGGCTGGAATAC
TGCTACAACCCCAGCCACAACCCAGAGGAGCAGCTCTCCTCCAAGGACCTGGTGTCCTGCGCCTACCAGGTGGCC
CGAGGCATGGAGTATCTGGCCTCCAAGAAGGTGTGGAACCTGAAGGCTCCCCTGGTGCATACACCGAGACCTGGC
AGCCAGGAATGTCCTGGTGACAGAGGACAATGTGATGAAGATAGCAGACTTTGGCCTCGCACGGGACATTCACCA
CATCGACTACTATAAAAAGACAACCAACGGCCGACTGCCTGTGAAGTGGATGGCACCCGAGGCATTATTTGACCG
GATCTACACCCACCAGAGTGATGTGTGGTCTTTCGGGGTGCTCCTGTGGGAGATCTTCACTCTGGGCGGCTCCCC
ATACCCCGGTGTGCCTGTGGAGGAACTTTTCAAGCTGCTGAAGGAGGGTCACCGCATGGACAAGCCCAGTAACTG
CACCAACGAGCTGTACATGATGATGCGGGACTGCTGGCATGCAGTGCCCTCACAGAGACCCACCTTCAAGCAGCT
GGTGGAAGACCTGGACCGCATCGTGGCCTTGACCTCCAACCAGGAGTACCTGGACCTGTCCATGCCCCTGGACCA
GTACTCCCCCAGCTTTCCCGACACCCGGAGCTCTACGTGCTCCTCAGGGGAGGATTCGGTCTTCTCTCATGAGCC
GCTGCCCGAGGAGCCCTGCCTGCCCCGACACCCAGCCCAGCTTGCCAATGGCGGACTCAAACGCCGCTGACTGCC
ACCCACACGCCCTCCCCAGACTCCACCGTCAGCTGTAACCCTCACCCACAGCCTGCTGGGCCCACCACCTGTCCG
TCCCTGTCCCCTTTCCTGCTGGCAGGAGCCGGCTGCCTACCAGGGGCCTTCCTGTGTGGCCTGCCTTCACCCCAC
TCAGCTCACCTCTCCCTCCACCTCCTCTCCACCTGCTGGTGAGAGGTGCAAAGAGGCAGATCTTTGCTGCCAGCC
ACTTCATCCCCTCCCAGATGTTGGACCAACACCCCTCCCTGCCACAGGCACTGCCTGGAGGGCAGGGAGTGGGAG
CCAATGAACAGGCATGCAAGTGAGAGCTTTCTGAGCTTTCTCCTGTCGGTTTGGTCTGTTTTGCCTTCACCCATA

FIGURE 1624B

AGCCCCTCGCACTCTGGTGGCAGGTGCTTGTCCTCAGGGCTACAGCAGTAGGGAGGTCAGTGCTTCGTGCCTCGA
TTGAAGGTGACCTCTGCCCCAGATAGGTGGTGCCAGTGGCTTATTAATTCCGATACTAGTTTGCTTTGCTGACCA
AATGCCTGGTACCAGAGGATGGTGAGGCGAAGGCCAGGTTGGGGGCAGTGTTGTGCCCTGTCCCAGCCCAAACTG
GGGGCTCTGTATATAGCTATGAAGAAAACACAAAGTGTATAAATCTGAGTATATATTTACATGTCTTTTTAAAAG
GGTCGTTACCAGAGATTTACCCATCGGGTAAGATGCTCCTGGTGGCTGGGAGGCATCAGTTGCTATATATTAAAA
ACAAAAAAGAAAAAAAAGGAAAATGTTTTTAAAAAGGTCATATATTTTTTGCTACTTTTGCTGTTTTATTTTTTT
AAATTATGTTCTAAAC

FIGURE 1625

MWSWKCLLFWAVLVTATLCTARPSPTLPEQAQPWGAPVEVESFLVHPGDLLQLRCRLRDDVQSINWLRDGVQLAE
SNRTRITGEEVEVQDSVPADSGLYACVTSSPSGSDTTYFSVNVSDALPSSEDDDDDDDSSSEEKETDNTKPNRMP
VAPYWTSPEKMEKKLHAVPAAKTVKFKCPSSGTPNPTLRWLKNGKEFKPDHRIGGYKVRYATWSIIMDSVVPSDK
GNYTCIVENEYGSINHTYQLDVVERSPHRPILQAGLPANKTVALGSNVEFMCKVYSDPQPHIQWLKHIEVNGSKI
GPDNLPYVQILKTAGVNTTDKEMEVLHLRNVSFEDAGEYTCLAGNSIGLSHHSAWLTVLEALEERPAVMTSPLYL
EIIIYCTGAFLISCMVGSVIVYKMKSGTKKSDFHSQMAVHKLAKSIPLRRQVTVSADSSASMNSGVLLVRPSRLS
SSGTPMLAGVSEYELPEDPRWELPRDRLVLGKPLGEGCFGQVVLAEAIGLDKDKPNRVTKVAVKMLKSDATEKDL
SDLISEMEMMKMIGKHKNIINLLGACTQDGPLYVIVEYASKGNLREYLQARRPPGLEYCYNPSHNPEEQLSSKDL
VSCAYQVARGMEYLASKKCIHRDLAARNVLVTEDNVMKIADFGLARDIHHIDYYKKTTNGRLPVKWMAPEALFDR
IYTHQSDVWSFGVLLWEIFTLGGSPYPGVPVEELFKLLKEGHRMDKPSNCTNELYMMMRDCWHAVPSQRPTFKQL
VEDLDRIVALTSNQEYLDLSMPLDQYSPSFPDTRSSTCSSGEDSVFSHEPLPEEPCLPRHPAQLANGGLKRR

FIGURE 1626

TCAGAGTCCGGCTCAGGCTCCGGCTGCGGCTCCAGCCCGCG**ATG**CCCCATTCCGTGACCCTGCGCGGGCCTTCGC
CCTGGGGCTTCCGCCTGGTGGGCGGCCGGGACTTCAGCGCGCCCCTCACCATCTCACGGGTCCATGCTGGCAGCA
AGGCTGCATTGGCTGCCCTGTGCCCAGGAGACCTGATCCAGGCCATCAATGGTGAGAGCACAGAGCTCATGACAC
ACCTGGAGGCACAGAACCGCATCAAGGGCTGCCACGATCACCTCACACTGTCTGTGAGCAGGCCTGAGGGCAGGA
GCTGGCCCAGTGCCCCTGATGACAGCAAGGCTCAGGCACACAGGATCCACATCGATCCTGAGATCCAGGACGGCA
GCCCAACAACCAGCAGGCGGCCCTCAGGCACCGGGACTGGGCCAGAAGATGGCAGACCAAGCCTGGGATCTCCAT
ATGGACAACCCCCTCGCTTTCCAGTCCCTCACAATGGCAGCAGCGAGGCCACCCTGCCAGCCCAGATGAGCACCC
TGCATGTGTCTCCACCCCCCAGCGCTGACCCAGCCAGAGGCCTCCCGCGGAGCCGGGACTGCAGAGTCGACCTGG
GCTCCGAGGTGTACAGGATGCTGCGGGAGCCAGCCGAGCCCGTGGCCGCGGAGCCCAAGCAGTCAGGCTCCTTCC
GCTACTTGCAGGGCATGCTAGAGGCCGGCGAGGGCGGGGATTGGCCCGGGCCTGGCGGCCCCCGGAACCTCAAGC
CCACGGCCAGCAAGCTGGGCGCTCCGCTGAGCGGCCTGCAGGGGCTGCCCGAGTGCACGCGCTGCGGCCACGGCA
TCGTGGGCACCATCGTCAAGGCACGGGACAAGCTCTACCATCCCGAGTGCTTCATGTGCAGTGACTGCGGCCTGA
ACCTCAAGCAGCGTGGTTACTTCTTTCTGGACGAGCGGCTCTACTGTGAGAGCCACGCCAAGGCGCGCGTGAAGC
CGCCCGAGGGCTACGACGTGGTGGCGGTGTACCCCAATGCCAAGGTGGAACTCGTC**TGA**GCTGGGACCCTGCTCC
CACGCCTGCTTCTTAAGGTCCCTGCTCGGCCGGTGTAAATATGTTTCACCCTGTCCCTCTAATAAAGCTCCTCTG
CTCCACCTTGAACCTGTCACCTGGCCTGCCACCCTCCTGCGCAGGCCATGCATGGCTCCCGAGTACAGTAGTATC
TGCTTAGGTGCCAGGCATGTCCTAGGCTCTGGGTGCAGTAGTGAGCAGGACGGGTACCATGCTGCCCTGAAGGGG
CCACAGCCTGGGTGGAAGGCAGACCTGAATCACAACGGGCCAGCTCTAGTAATACGAAGGTGAGGTCTGGGATGC
TGCGTGCGGCGCGACGACAGGAGGTATGACCTGGGTGGGGTCAGGGAAAGTCTTAGCTGAGAACTAAGAGATGAG
GGAGGCACAAACTCTGCACGGGGGAACTGTGTGTGCAAAGGTGAGCTGGGGGCGAGAAAGGCCTCTGTGGCCGTC
ATCGGCACTAGCGGGTTGGGGGTGGTGGTGGGGTGCTGGCAGCCTCAGGAGCGATCGCTCCCCTGGAGAGGGTGA
TTGAGTGTGGAGATCACCGGGGCCGCCGCGGGCCGTCTGCACTTCTGTTCCAGGTTTTTCTGGCATTTTCTGTTC
CAGGTTTCTTCCACCCACGAGCACTTTATTCTCCTCCGAGACCCCCTTTTCTTCCCCTTCCTCTCTCCCACCAGG
GGGCGCGCTTAAATTTCCAGACAGAGACCAGAAGGAAGGTTTAGAAAGAAAAGAACACTTGCCCAGGGCAGCTTT
GCCCTCCAAGAGGCTCCCTCCTGTCTCTAAGTCAATTCCACCCCTCCTCGAAGTCCCGGCTTCCACCCCTCTCCT
CAGAGTCCCGGCGTTTACCTCGTGGTGTGTTTGCCTTGGGCCTTTCATGCCCCGGCTGCACACATCGTCTGTGAA
TTGTGGCTGTTCACTCCCGAGGATGTGTCCTAGACTCCGGGTCGCGTGGATCTACCCTCTAGTTTACTTGCTCGG
GAGAAGAAACTGACTCGTTTTATTTAGTGCCTATTTAGCGAGCCCAGAGTAACGTACATTTGTGCTGTTTTCAAT
TTTGTGCTATCGCAAATCACAAAAAAACTGTTATCAATTCACATTCATCATCAGCACGAGACCCATTTCCTTGTG
CTCCTGCCAGCTCAGGATATTATGTTTCTTTTTTCATTTTTGCCAGTCTGTTAAGTAAAATGTCATATGCGTTTG
TTTTAA

FIGURE 1627

MPHSVTLRGPSPWGFRLVGGRDFSAPLTISRVHAGSKAALAALCPGDLIQAINGESTELMTHLEAQNRIKGCHDH
LTLSVSRPEGRSWPSAPDDSKAQAHRIHIDPEIQDGSPTTSRRPSGTGTGPEDGRPSLGSPYGQPPRFPVPHNGS
SEATLPAQMSTLHVSPPPSADPARGLPRSRDCRVDLGSEVYRMLREPAEPVAAEPKQSGSFRYLQGMLEAGEGGD
WPGPGGPRNLKPTASKLGAPLSGLQGLPECTRCGHGIVGTIVKARDKLYHPECFMCSDCGLNLKQRGYFFLDERL
YCESHAKARVKPPEGYDVVAVYPNAKVELV

FIGURE 1628

GCTAACCAGGCCAGTGACAGAA**ATG**GATTCGAAATACCAGTGTGTGAAGCTGAATGATGGTCACTTCATGCCTGT
CCTGGGATTTGGCACCTATGCGCCTGCAGAGGTTCCTAAAAGTAAAGCTCTAGAGGCCGTCAAATTGGCAATAGA
AGCCGGGTTCCACCATATTGATTCTGCACATGTTTACAATAATGAGGAGCAGGTTGGACTGGCCATCCGAAGCAA
GATTGCAGATGGCAGTGTGAAGAGAGAAGACATATTCTACACTTCAAAGCTTTGGAGCAATTCCCATCGACCAGA
GTTGGTCCGACCAGCCTTGGAAAGGTCACTGAAAAATCTTCAATTGGACTATGTTGACCTCTATCTTATTCATTT
TCCAGTGTCTGTAAAGCCAGGTGAGGAAGTGATCCCAAAAGATGAAAATGGAAAAATACTATTTGACACAGTGGA
TCTCTGTGCCACATGGGAGGCCATGGAGAAGTGTAAAGATGCAGGATTGGCCAAGTCCATCGGGGGTGTCCAACTT
CAACCACAGGCTGCTGGAGATGATCCTCAACAAGCCAGGGCTCAAGTACAAGCCTGTCTGCAACCAGGTGGAATG
TCATCCTTACTTCAACCAGAGAAAACTGCTGGATTTCTGCAAGTCAAAAGACATTGTTCTGGTTGCCTATAGTGC
TCTGGGATCCCATCGAGAAGAACCATGGGTGGACCCGAACTCCCCGGTGCTCTTGGAGGACCCAGTCCTTTGTGC
CTTGGCAAAAAAGCACAAGCGAACCCCAGCCCTGATTGCCCTGCGCTACCAGCTGCAGCGTGGGGTTGTGGTCCT
GGCCAAGAGCTACAATGAGCAGCGCATCAGACAGAACGTGCAGGTGTTTGAATTCCAGTTGACTTCAGAGGAGAT
GAAAGCCATAGATGGCCTAAACAGAAATGTGCGATATTTGACCCTTGATATTTTTGCTGGCCCCCCTAATTATCC
ATTTTCTGATGAATAT**TAA**CATGGAGGGCATTGCATGAGGTCTGCCAGAAGGCCCTGCGTGTGGATGGTGACACA
GAGGATGGCTCTATGCTGGTGACTGGACACATCGCCTCTGGTTAAATCTCTCCTGCTTGGCGACTTCAGTAAGCT
ACAGCTAAGCCCATCGGCCGGAAAAGAAAGACAATAATTTTGTTTTTCATTTTGAAAAAATTAAATGCTCTCTCC
TAAAGATTCTTCACCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAATTAAAAAAAAAAAAAAA
AAAAAAAAAAAAAA

FIGURE 1629

MDSKYQCVKLNDGHFMPVLGFGTYAPAEVPKSKALEAVKLAIEAGFHHIDSAHVYNNEEQVGLAIRSKIADGSVK
REDIFYTSKLWSNSHRPELVRPALERSLKNLQLDYVDLYLIHFPVSVKPGEEVIPKDENGKILFDTVDLCATWEA
MEKCKDAGLAKSIGVSNFNHRLLEMILNKPGLKYKPVCNQVECHPYFNQRKLLDFCKSKDIVLVAYSALGSHREE
PWVDPNSPVLLEDPVLCALAKKHKRTPALIALRYQLQRGVVVLAKSYNEQRIRQNVQVFEFQLTSEEMKAIDGLN
RNVRYLTLDIFAGPPNYPFSDEY

FIGURE 1630

CACCTCGCTGCTCCAGCCTCTGGGGCGCATTCCAACCTTCCAGCCTGCGACCTGCGGAGAAAAAAAATTACTTAT
TTTCTTGCCCCATACATACCTTGAGGCGAGCAAAAAAATTAAATTTTAACC**ATG**AGGGAAATCGTGCACATCCAG
GCTGGTCAGTGTGGCAACCAGATCGGTGCCAAGTTCTGGGAGGTGATCAGTGATGAACATGGCATCGACCCCACC
GGCACCTACCACGGGGACAGCGACCTGCAGCTGGACCGCATCTCTGTGTACTACAATGAAGCCACAGGTGGCAAA
TATGTTCCTCGTGCCATCCTGGTGGATCTAGAACCTGGGACCATGGACTCTGTTCGCTCAGGTCCTTTTGGCCAG
ATCTTTAGACCAGACAACTTTGTATTTGGTCAGTCTGGGGCAGGTAACAACTGGGCCAAAGGCCACTACACAGAG
GGCGCCGAGCTGGTTGATTCTGTCCTGGATGTGGTACGGAAGGAGGCAGAGAGCTGTGACTGCCTGCAGGGCTTC
CAGCTGACCCACTCACTGGGCGGGGGCACAGGCTCTGGAATGGGCACTCTCCTTATCAGCAAGATCCGAGAAGAA
TACCCTGATCGCATCATGAATACCTTCAGTGTGGTGCCTTCACCCAAAGTGTCTGACACCGTGGTCGAGCCCTAC
AATGCCACCCTCTCCGTCCATCAGTTGGTAGAGAATACTGATGAGACCTATTGCATTGACAACGAGGCCCTCTAT
GATATCTGCTTCCGCACTCTGAAGCTGACCACACCAACCTACGGGGATCTGAACCACCTTGTCTCAGCCACCATG
AGTGGTGTCACCACCTGCCTCCGTTTCCCTGGCCAGCTCAATGCTGACCTCCGCAAGTTGGCAGTCAACATGGTC
CCCTTCCCACGTCTCCATTTCTTTATGCCTGGCTTTGCCCCTCTCACCAGCCGTGGAAGCCAGCAGTATCGAGCT
CTCACAGTGCCGGAACTCACCCAGCAGGTCTTCGATGCCAAGAACATGATGGCTGCCTGTGACCCCCGCCACGGC
CGATACCTCACCGTGGCTGCTGTCTTCCGTGGTCGGATGTCCATGAAGGAGGTCGATGAGCAGATGCTTAACGTG
CAGAACAAGAACAGCAGCTACTTTGTGGAATGGATCCCCAACAATGTCAAGACAGCCGTCTGTGACATCCCACCT
CGTGGCCTCAAGATGGCAGTCACCTTCATTGGCAATAGCACAGCCATCCAGGAGCTCTTCAAGCGCATCTCGGAG
CAGTTCACTGCCATGTTCCGCCGGAAGGCCTTCCTCCACTGGTACACAGGCGAGGGCATGGACGAGATGGAGTTC
ACCGAGGCTGAGAGCAACATGAACGACCTCGTCTCTGAGTATCAGCAGTACCAGGATGCCACCGCAGAAGAGGAG
GAGGATTTCGGTGAGGAGGCCGAAGAGGAGGCC**TAA**GGCAGAGCCCCCATCACCTCAGGCTTCTCAGTTCCCTTA
GCCGTCTTACTCAACTGCCCCTTTCCTCTCCCTCAGAATTTGTGTTTGCTGCCTCTATCTTGTTTTTTGTTTTTT
CTTCTGGGGGGGGTCTAGAACAGTGCCTGGCACATAGTAGGCGCTCAATAAATACTTGTTTGTTGAATGTCTCCT
CTCTCTTTCCACTCTGGGAAACCTAGGTTTCTGCCATTCTGGGTGACCCTGTATTTCTTTCTGGTGCCCATTCCA
TTTGTCCAGTTAATACTTCCTCTTAAAAATCTCCAAGAAGCTGGGTCTCCAGATCCCATTTAGAACCAACCAGGT
GCTGAAAACACATGTAGATAATGGCCATCATCCTAAGCCCAAAGTAGAAAATGGTAGAAGGTAGTGGGTAGAAGT
CACTATATAAGGAAGGGGATGGGATTTTCCATTCTAAAAGTTTTGGAGAGGGAAATCCAGGCTATTAAAGTCACT
AAATTTCTAAGTATGTCCATTTCCCATCTCAGCTTCAAGGGAGGTGTCAGCAGTATTATCTCCACTTTCAATCTC
CCTCCAAGCTCTACTCTGGAGGAGTCTGTCCCACTCTGTCAAGTGGAATCCTTCCCTTTCCAACTCTACCTCCCT
CACTCAGCTCCTTTCCCCTGATCAGAGAAAGGGATCAAGGGGGTTGGGAGGGGGGAAAGAGACCAGCCTTGGTCC
CTAAGCCTCCAGAAACGTCTTCTTAATCCCCACCTTTTCTTACTCCCAAAAAAGAATGAACACCCCTGACTCTGG
AGTGGTGTATACTGCCACATCAGTGTTTGAGTCAGTCCCCAGAGGAGAGGGGAACCCTCCTCCATCTTTTTTGCA
ACATCTCATTTCTTCCTTTTGCTGTTGCTTCCCCCCTCACACACTTGGTTTTGTTCTATCCTACATTTGAGATTT
CTATTTTATGTTGAACTTGCTGCTTTTTTTCATATTGAAAAGATGACATCGCCCCAAGAGCCAAAAATAAATGGG
AATTGAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1631

MREIVHIQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLDRISVYYNEATGGKYVPRAILVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKEAESCDCLQGFQLTHSLGGGTGSGMGTL
LISKIREEYPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTTPTYGDL
NHLVSATMSGVTTCLRFPGQLNADLRKLAVNMVPFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQVFDAKNMM
AACDPRHGRYLTVAAVFRGRMSMKEVDEQMLNVQNKNSSYFVEWIPNNVKTAVCDIPPRGLKMAVTFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEEEDFGEEAEEEA

FIGURE 1632A

ATGGCGAGCGACTCCCCGGCTCGAAGCCTGGATGAAATAGATCTCTCGGCTCTGAGGGACCCTGCAGGGATCTTT
GAATTGGTGGAACTTGTTGGAAATGGAACATACGGGCAAGTTTATAAGGGTCGTCATGTCAAAACGGGCCAGCTT
GCAGCCATCAAGGTTATGGATGTCACAGGGGATGAAGAGGAAGAAATCAAACAAGAAATTAACATGTTGAAGAAA
TATTCTCATCACCGGAATATTGCTACATACTATGGTGCTTTTATCAAAAAGAACCCACCAGGCATGGATGACCAA
CTTTGGTTGGTGATGGAGTTTTGTGGTGCTGGCTCTGTCACCGACCTGATCAAGAACACAAAAGGTAACACGTTG
AAAGAGGAGTGGATTGCATACATCTGCAGGGAAATCTTACGGGGGCTGAGTCACCTGCACCAGCATAAAGTGATT
CATCGAGATATTAAAGGGCAAAATGTCTTGCTGACTGAAAATGCAGAAGTTAAACTAGTGGACTTTGGAGTCAGT
GCTCAGCTTGATCGAACAGTGGGCAGGAGGAATACTTTCATTGGAACTCCCTACTGGATGGCACCAGAAGTTATT
GCCTGTGATGAAAACCCAGATGCCACATATGATTTCAAGAGTGACTTGTGGTCTTTGGGTATCACCGCCATTGAA
ATGGCAGAAGGTGCTCCCCCTCTCTGTGACATGCACCCCATGAGAGCTCTCTTCCTCATCCCCCGGAATCCAGCG
CCTCGGCTGAAGTCTAAGAAGTGGTCAAAAAAATTCCAGTCATTTATTGAGAGCTGCTTGGTAAAGAATCACAGC
CAGCGACCAGCAACAGAACAATTGATGAAGCATCCATTTATACGAGACCAACCTAATGAGCGACAGGTCCGCATT
CAACTCAAGGACCATATTGATAGAACAAAGAAGAAGCGAGGAGAAAAAGATGAGACAGAGTATGAGTACAGTGGA
AGTGAGGAAGAAGAGGAGGAGAATGACTCAGGAGAGCCCAGCTCCATCCTGAATCTGCCAGGGGAGTCGACGCTG
CGGAGGGACTTTCTGAGGCTGCAGCTGGCCAACAAGGAGCGTTCTGAGGCCCTACGGAGGCAGCAGCTGGAGCAG
CAGCAGCGGGAGAATGAGGAGCACAAGCGGCAGCTGCTGGCCGAGCGTCAGAAGCGCATCGAGGAGCAGAAAGAG
CAGAGGCGGCGGCTGGAGGAGCAACAAAGGCGAGAGAAGGAGCTGCGGAAGCAGCAGGAGAGGGAGCAGCGCCGG
CACTATGAGGAGCAGATGCGCCGGGAGGAGGAGAGGAGGCGTGCGGAGCATGAACAGGAATACATCAGGCGACAG
TTAGAGGAGGAGCAGAGACAGTTAGAGATCTTGCAGCAGCAGCTACTGCATGAACAAGCTCTACTTCTGGAATAT
AAGCGCAAACAATTGGAAGAACAGAGACAAGCAGAAAGACTGCAGAGGCAGCTAAAGCAAGAAAGAGACTACTTA
GTTTCCCTTCAGCATCAGCGGCAGGAGCAGAGGCCTGTGGAGAAGAAGCCACTGTACCATTACAAAGAAGGAATG
AGTCCTAGTGAGAAGCCAGCATGGGCCAAGGAGGTAGAAGAACGGTCAAGGCTCAACCGGCAAAGTTCCCCTGCC
ATGCCTCACAAGGTTGCCAACAGGATATCTGACCCCAACCTGCCCCCAAGGTCGGAGTCCTTCAGCATTAGTGGA
GTTCAGCCTGCTCGAACACCCCCCATGCTCAGACCAGTCGATCCCCAGATCCCACATCTGGTAGCTGTAAAATCC
CAGGGACCTGCCTTGACCGCCTCCCAGTCAGTGCACGAGCAGCCCACAAAGGGCCTCTCTGGGTTTCAGGAGGCT
CTGAACGTGACCTCCCACCGCGTGGAGATGCCACGCCAGAACTCAGATCCCACCTCGGAAAATCCTCCTCTCCCC
ACTCGCATTGAAAAGTTTGACCGAAGCTCTTGGTTACGACAGGAAGAAGACATTCCACCAAAGGTGCCTCAAAGA
ACAACTTCTATATCCCCAGCATTAGCCAGAAAGAATTCTCCTGGGAATGGTAGTGCTCTGGGACCCAGACTAGGA
TCTCAACCCATCAGAGCAAGCAACCCTGATCTCCGGAGAACTGAGCCCATCTTGGAGAGCCCCTTGCAGAGGACC
AGCAGTGGCAGTTCCTCCAGCTCCAGCACCCCTAGCTCCCAGCCCAGCTCCCAAGGAGGCTCCCAGCCTGGATCA
CAAGCAGGATCCAGTGAACGCACCAGAGTTCGAGCCAACAGTAAGTCAGAAGGATCACCTGTGCTTCCCCATGAG
CCTGCCAAGGTGAAACCAGAAGAATCCAGGGACATTACCCGGCCCAGTCGACCAGCTAGCTACAAAAAAGCTATA
GATGAGGATCTGACGGCATTAGCCAAAGAACTAAGAGAACTCCGGATTGAAGAAACAAACCGCCCAATGAAGAAG
GTGACTGATTACTCCTCCTCCAGTGAGGAGTCAGAAAGTAGCGAGGAAGAGGAGGAAGATGGAGAGAGCGAGACC
CATGATGGGACAGTGGCTGTCAGCGACATACCCAGACTGATACCAACAGGAGCTCCAGGCAGCAACGAGCAGTAC
AATGTGGGAATGGTGGGGACGCATGGGCTGGAGACCTCTCATGCGGACAGTTTCAGCGGCAGTATTTCAAGAGAA
GGAACCTTGATGATTAGAGAGACGTCTGGAGAGAAGAAGCGATCTGGCCACAGTGACAGCAATGGCTTTGCTGGC
CACATCAACCTCCCTGACCTGGTGCAGCAGAGCCATTCTCCAGCTGGAACCCCGACTGAGGGACTGGGGCGCGTC
TCAACCCATTCCCAGGAGATGGACTCTGGGACTGAATATGGCATGGGGAGCAGCACCAAAGCCTCCTTCACCCCC
TTTGTGGACCCCAGAGTATACCAGACGTCTCCCACTGATGAAGATGAAGAGGATGAGGAATCATCAGCCGCAGCT
CTGTTTACTAGCGAACTTCTTAGGCAAGAACAGGCCAAACTCAATGAAGCAAGAAAGATTTCGGTGGTAAATGTA
AACCCAACCAACATTCGGCCTCATAGCGACACACCAGAAATCAGAAAATACAAGAAACGATTCAACTCAGAAATA
CTTTGTGCAGCTCTGTGGGGTGTAAACCTTCTGGTGGGGACTGAAAATGGCCTGATGCTTTTGGACCGAAGTGGG
CAAGGCAAAGTCTATAATCTGATCAACCGGAGGCGATTTCAGCAGATGGATGTGCTAGAGGGACTGAATGTCCTT
GTGACAATTTCAGGAAAGAAGAATAAGCTACGAGTTTACTATCTTTCATGGTTAAGAAACAGAATACTACATAAT
GACCCAGAAGTAGAAAAGAAACAAGGCTGGATCACTGTTGGGGACTTGGAAGGCTGTATACATTATAAAGTTGTT
AAATATGAAAGGATCAAATTTTTGGTGATTGCCTTAAAGAATGCTGTGGAAATATATGCTTGGGCTCCTAAACCG
TATCATAAATTCATGGCATTTAAGTCTTTTGCAGATCTCCAGCACAAGCCTCTGCTAGTTGATCTCACGGTAGAA

FIGURE 1632B

GAAGGTCAAAGATTAAAGGTTATTTTTGGTTCACACACTGGTTTCCATGTAATTGATGTTGATTCAGGAAACTCT
TATGATATCTACATACCATCTCATATTCAGGGCAATATCACTCCTCATGCTATTGTCATCTTGCCTAAAACAGAT
GGAATGGAAATGCTTGTTTGCTATGAGGATGAGGGGGTGTATGTAAACACCTATGGCCGGATAACTAAGGATGTG
GTGCTCCAATGGGGAGAAATGCCCACGTCTGTGGCCTACATTCATTCCAATCAGATAATGGGCTGGGGCGAGAAA
GCTATTGAGATCCGGTCAGTGGAAACAGGACATTTGGATGGAGTATTTATGCATAAGCGAGCTCAAAGGTTAAAG
TTTCTATGTGAAAGAAATGATAAGGTATTTTTTGCATCCGTGCGATCTGGAGGAAGTAGCCAAGTGTTTTTCATG
ACCCTCAACAGAAATTCCATGATGAACTGG**TAA**

FIGURE 1633

MASDSPARSLDEIDLSALRDPAGIFELVELVGNGTYGQVYKGRHVKTGQLAAIKVMDVTGDEEEEIKQEINMLKK
YSHHRNIATYYGAFIKKNPPGMDDQLWLVMEFCGAGSVTDLIKNTKGNTLKEEWIAYICREILRGLSHLHQHKVI
HRDIKGQNVLLTENAEVKLVDFGVSAQLDRTVGRRNTFIGTPYWMAPEVIACDENPDATYDFKSDLWSLGITAIE
MAEGAPPLCDMHPMRALFLIPRNPAPRLKSKKWSKKFQSFIESCLVKNHSQRPATEQLMKHPFIRDQPNERQVRI
QLKDHIDRTKKKRGEKDETEYEYSGSEEEEEENDSGEPSSILNLPGESTLRRDFLRLQLANKERSEALRRQQLEQ
QQRENEEHKRQLLAERQKRIEEQKEQRRRLEEQQRREKELRKQQEREQRRHYEEQMRREEERRRAEHEQEYIRRQ
LEEEQRQLEILQQQLLHEQALLLEYKRKQLEEQRQAERLQRQLKQERDYLVSLQHQRQEQRPVEKKPLYHYKEGM
SPSEKPAWAKEVEERSRLNRQSSPAMPHKVANRISDPNLPPRSESFSISGVQPARTPPMLRPVDPQIPHLVAVKS
QGPALTASQSVHEQPTKGLSGFQEALNVTSHRVEMPRQNSDPTSENPPLPTRIEKFDRSSWLRQEEDIPPKVPQR
TTSISPALARKNSPGNGSALGPRLGSQPIRASNPDLRRTEPILESPLQRTSSGSSSSSSTPSSQPSSQGGSQPGS
QAGSSERTRVRANSKSEGSPVLPHEPAKVKPEESRDITRPSRPASYKKAIDEDLTALAKELRELRIEETNRPMKK
VTDYSSSSEESESSEEEEEDGESETHDGTVAVSDIPRLIPTGAPGSNEQYNVGMVGTHGLETSHADSFSGSISRE
GTLMIRETSGEKKRSGHSDSNGFAGHINLPDLVQQSHSPAGTPTEGLGRVSTHSQEMDSGTEYGMGSSTKASFTP
FVDPRVYQTSPTDEDEEDEESSAAALFTSELLRQEQAKLNEARKISVVNVNPTNIRPHSDTPEIRKYKKRFNSEI
LCAALWGVNLLVGTENGLMLLDRSGQGKVYNLINRRRFQQMDVLEGLNVLVTISGKKNKLRVYYLSWLRNRILHN
DPEVEKKQGWITVGDLEGCIHYKVVKYERIKFLVIALKNAVEIYAWAPKPYHKFMAFKSFADLQHKPLLVDLTVE
EGQRLKVIFGSHTGFHVIDVDSGNSYDIYIPSHIQGNITPHAIVILPKTDGMEMLVCYEDEGVYVNTYGRITKDV
VLQWGEMPTSVAYIHSNQIMGWGEKAIEIRSVETGHLDGVFMHKRAQRLKFLCERNDKVFFASVRSGGSSQVFFM
TLNRNSMMNW

FIGURE 1634

ATGGATATGTTTCCTCTCACCTGGGTTTTCTTAGCCCTCTACTTTTCAAGACACCAAGTGAGAGGCCAACCAGAC
CCACCGTGCGGAGGTCGTTTGAATTCCAAAGATGCTGGCTATATCACCTCTCCCGGTTACCCCCAGGACTACCCC
TCCCACCAGAACTGCGAGTGGATTGTTTACGCCCCCGAACCCAACCAGAAGATTGTCCTCAACTTCAACCCTCAC
TTTGAAATCGAGAAGCACGACTGCAAGTATGACTTTATCGAGATTCGGGATGGGGACAGTGAATCCGCAGACCTC
CTGGGCAAACACTGTGGGAACATCGCCCCGCCCACCATCATCTCCTCGGGCTCCATGCTCTACATCAAGTTCACC
TCCGACTACGCCCGGCAGGGGGCAGGCTTCTCTCTGCGCTACGAGATCTTCAAGACAGGCTCTGAAGATTGCTCA
AAAAACTTCACAAGCCCCAACGGGACCATCGAATCTCCTGGGTTTCCTGAGAAGTATCCACACAACTTGGACTGC
ACCTTTACCATCCTGGCCAAACCCAAGATGGAGATCATCCTGCAGTTCCTGATCTTTGACCTGGAGCATGACCCT
TTGCAGGTGGGAGAGGGGGACTGCAAGTACGATTGGCTGGACATCTGGGATGGCATTCCACATGTTGGCCCCCTG
ATTGGCAAGTACTGTGGGACCAAAACACCCTCTGAACTTCGTTCATCGACGGGGATCCTCTCCCTGACCTTTCAC
ACGGACATGGCGGTGGCCAAGGATGGCTTCTCTGCGCGTTACTACCTGGTCCACCAAGAGCCACTAGAGAACTTT
CAGTGCAATGTTCCTCTGGGCATGGAGTCTGGCCGGATTGCTAATGAACAGATCAGTGCCTCATCTACCTACTCT
GATGGGAGGTGGACCCCTCAACAAAGCCGGCTCCATGGTGATGACAATGGCTGGACCCCCAACTTGGATTCCAAC
AAGGAGTATCTCCAGGTGGACCTGCGCTTTTTAACCATGCTCACGGCCATCGCAACACAGGGAGCGATTTCCAGG
GAAACACAGAATGGCTACTACGTCAAATCCTACAAGCTGGAAGTCAGCACTAATGGAGAGGACTGGATGGTGTAC
CGGCATGGCAAAAACCACAAGGTATTTCAAGCCAACAACGATGCAACTGAGGTGGTTCTGAACAAGCTCCACGCT
CCACTGCTGACAAGGTTTGTTAGAATCCGCCCTCAGACCTGGCACTCAGGTATCGCCCTCCGGCTGGAGCTCTTC
GGCTGCCGGGTCACAGATGCTCCCTGCTCCAACATGCTGGGGATGCTCTCAGGCCTCATTGCAGACTCCCAGATC
TCCGCCTCTTCCACCCAGGAATACCTCTGGAGCCCCAGTGCAGCCCGCCTGGTCAGCAGCCGCTCGGGCTGGTTC
CCTCGAATCCCTCAGGCCCAGCCCGGTGAGGAGTGGCTTCAGGTAGATCTGGGAACACCCAAGACAGTGAAAGGT
GTCATCATCCAGGGAGCCCGCGGAGGAGACAGTATCACTGCTGTGGAAGCCAGAGCATTTGTGCGCAAGTTCAAA
GTCTCCTACAGCCTAAACGGCAAGGACTGGGAATACATTCAGGACCCCAGGACCCAGCAGCCAAAGCTGTTCGAA
GGGAACATGCACTATGACACCCCTGACATCCGAAGGTTTGACCCCATTCCGGCACAGTATGTGCGGGTATACCCG
GAGAGGTGGTCGCCGGCGGGGATTGGGATGCGGCTGGAGGTGCTGGGCTGTGACTGGACAGACTCCAAGCCCACG
GTAAAAACGCTGGGACCCACTGTGAAGAGCGAAGAGACAACCACCCCCTACCCCACCGAAGAGGAGGCCACAGAG
TGTGGGGAGAACTGCAGCTTTGAGGATGACAAAGATTTGCAGCTCCCTTCGGGATTCAATTGCAACTTCGATTTC
CTCGAGGAGCCCTGTGGTTGGATGTATGACCATGCCAAGTGGCTCCGGACCACCTGGGCCAGCAGCTCCAGCCCA
AACGACCGGACGTTTCCAGATGACAGGAATTTCTTGCGGCTGCAGAGTGACAGCCAGAGAGAGGGCCAGTATGCC
CGGCTCATCAGCCCCCCTGTCCACCTGCCCCGAAGCCCGGTGTGCATGGAGTTCCAGTACCAGGCCACGGGCGGC
CGCGGGGTGGCGCTGCAGGTGGTGCGGGAAGCCAGCCAGGAGAGCAAGTTGCTGTGGGTCATCCGTGAGGACCAG
GGCGGCGAGTGGAAGCACGGGCGGATCATCCTGCCCAGCTACGACATGGAGTACCAGATTGTGTTCGAGGGAGTG
ATAGGGAAAGGACGTTCCGGAGAGATTGCCATTGATGACATTCGGATAAGCACTGATGTCCCACTGGAGAACTGC
ATGGAACCCATCTCGGCTTTTGCAGTGGACATCCCAGAAATACATGAGAGAGAAGGATATGAAGATGAAATTGAT
GATGAATACGAGGTGGACTGGAGCAATTCTTCTTCTGCAACCTCAGGGTCTGGCGCCCCCTCGACCGACAAAGAA
AAGAGCTGGCTGTACACCCTGGATCCCATCCTCATCACCATCATCGCCATGAGCTCACTGGGCGTCCTCCTGGGG
GCCACCTGTGCAGGCCTCCTGCTCTACTGCACCTGTTCCTACTCGGGCCTGAGCTCCCGAAGCTGCACCACACTG
GAGAACTACAACTTCGAGCTCTACGATGGCCTTAAGCACAAGGTCAAGATGAACCACCAAAAGTGCTGCTCCGAG
GCA**TGA**

FIGURE 1635

MDMFPLTWVFLALYFSRHQVRGQPDPPCGGRLNSKDAGYITSPGYPQDYPSHQNCEWIVYAPEPNQKIVLNFNPH
FEIEKHDCKYDFIEIRDGDSESADLLGKHCGNIAPPTIISSGSMLYIKFTSDYARQGAGFSLRYEIFKTGSEDCS
KNFTSPNGTIESPGFPEKYPHNLDCTFTILAKPKMEIILQFLIFDLEHDPLQVGEGDCKYDWLDIWDGIPHVGPL
IGKYCGTKTPSELRSSTGILSLTFHTDMAVAKDGFSARYYLVHQEPLENFQCNVPLGMESGRIANEQISASSTYS
DGRWTPQQSRLHGDDNGWTPNLDSNKEYLQVDLRFLTMLTAIATQGAISRETQNGYYVKSYKLEVSTNGEDWMVY
RHGKNHKVFQANNDATEVVLNKLHAPLLTRFVRIRPQTWHSGIALRLELFGCRVTDAPCSNMLGMLSGLIADSQI
SASSTQEYLWSPSAARLVSSRSGWFPRIPQAQPGEEWLQVDLGTPKTVKGVIIQGARGGDSITAVEARAFVRKFK
VSYSLNGKDWEYIQDPRTQQPKLFEGNMHYDTPDIRRFDPIPAQYVRVYPERWSPAGIGMRLEVLGCDWTDSKPT
VKTLGPTVKSEETTTPYPTEEEATECGENCSFEDDKDLQLPSGFNCNFDFLEEPCGWMYDHAKWLRTTWASSSSP
NDRTFPDDRNFLRLQSDSQREGQYARLISPPVHLPRSPVCMEFQYQATGGRGVALQVVREASQESKLLWVIREDQ
GGEWKHGRIILPSYDMEYQIVFEGVIGKGRSGEIAIDDIRISTDVPLENCMEPISAFAVDIPEIHEREGYEDEID
DEYEVDWSNSSSATSGSGAPSTDKEKSWLYTLDPILITIIAMSSLGVLLGATCAGLLLYCTCSYSGLSSRSCTTL
ENYNFELYDGLKHKVKMNHQKCCSEA

FIGURE 1636

GTGCGGGTTTCGGTTGGAGGACTCGTTGGGGAGGTGGCCTGCGCTTGTAGAGACTGCATCCCCGAGACGATGGCG
GAGGGAGATAATCGCAGCACCAACCTGCTGGCTGCAGAGACTGCAAGTCTGGAAGAACAGCTGCAAGGATGGGGA
GAAGTGATGCTGATGGCTGATAAAGTCCTCCGATGGGAAAGAGCCTGGTTTCCACCTGCCATCATGGGTGTGGTT
TCTTTGGTGTTTCTGATTATCTACTATCTAGATCCATCTGTTCTGTCCGGCGTTTCCTGTTTTGTTATGTTTTTG
TGCTTGGCTGACTACCTTGTTCCCATTCTAGCGCCTAGAATTTTTGGCTCCAATAAATGGACCACTGAACAACAG
CAAAGATTCCATGAAATTTGCAGCAATCTAGTAAAAACTCGACGCAGAGCTGTGGGTTGGTGGAAACGCCTCTTC
ACACTAAAGGAAGAAAAACCTAAGATGTACTTCATGACCATGATCGTTTCCCTTGCTGCGGTTGCTTGGGTGGGA
CAACAAGTCCACAACCTGCTTCTCACCTACCTGATAGTGACTTCCTTACTATTGCTTCCTGGACTAAACCAACAT
GGAATCATTTTGAAGTACATTGGAATGGCCAAGAGGGAGATAAACAAACTTCTCAAACAAAAAGAAAAGAAAAAC
GAA**TGA**TTCATCTGCTTTAATCAGTGTGATTAATGCAGCACCCATTGCCCCGGGAACCGTTTCTGCTGTACTATC
TGGATACTAAAATGTTACGGAAGTAGCTCTTTGTTCTCCCTCACTCTGCCCTTAGTTAATAGAAATTCAGACTCG
CCAAGTAAGGCTTCGTGCATAGTGTCTTCATGTCGCGTATAGTTGAGCGCGTTCTTAGCAGTTGGCTTCATGGAC
AACTCATTAGTGTTTTGACTTTTCTTACCCAGCGTTAATTGAATTCTTGCTTTTAGACAACTTCCTTTTTGTAGT
GGTGAACCTTGCCCTTTAGTACAGTTCAAGTGAATCTGGATAATTGTTCATCTTTGCTTTAGCTTAGATACCATG
TAGTGGTCTGTGGCTACAGGAAGCTGGTTCTGTCTGCTTCCACAGTCTGCTTAAAAAACTGTCTGACTTCGTGAA
TATAGAGACCAAGTTTACCACTTCTGATGAAGAGACCAATTAAGATTCATTCCTCATTCTGTTTCTTTCCAGTGG
GAGAAGAGTCCCCATGAAATAAGATGAAACTGATTCCATGCACTAGTACATGTAGGCTTCTCCCTTGTGCAAAGC
TTAGCAATTTGTAGGAAACTTTGATCTTTTTGTCCAAGAAAAGGAATGTCTGACAGGCTTAAGCTTTCGTCCCCT
TGCACTTAGACTCGAAGTTAGTAAATCCTTAAAGGCTTTTTAATAGCAGACTTCCAAAAGATTGCATTTAGGATT
TCTAGCATGCTTTTAATTTCAGATTTTCAGCTGACATTAGCTATAGTATACAGTAGGTTAAGACTCATGTCTATG
ACTTTCACTCTAAGACTGGCAAAAGGACAGCAGTCTTCTATGTTTAGTCAATATTCATTTCAGTAGAAGATAATC
TTATCTAATTTTTGAGACCAGAATAAGCCTTTTAAGGTAAACCTCAAAATTATCATTTTATGGTAATACTGACCA
TTTTAGTCCCCTAGGTTTGACATGGGAGATAGTGACTACACTGGTGTCTGACTTTTTTCCTAGAGATTTCTCCCT
GAAAAATACAAGGGCTGTTGGTGAGAGCAGACTTGAGGTGATGATAGTTGGCCTCTGGTCTACAAAGATTTCATA
ACTCCTTGGAAAGCTTCTTATAATCATTCTTAACTTCTTGGTAGCTAGAAATTTAGAGTAGTTGAAATCTTTAGG
AATGTACTTCTGAGGGCCAAAAAATGTGACTGACGGGAACAATTCTTAAACTGATTAACTAGCTGTAATATAGTT
TTGTGAATTTATTGCACTGATGTTGTACCTTGTGGTATATCTGTCCCTATTAAATAAGTGTTGTTTTCTCCTCTT
TAATATTGCTGTGAACAGTGGTGCCCATTGTAGCATATGTTTGATTTTTTTTTATTATTTCATAAGAAAACTACG
TTAATTTTACCTTACTTTCATTGTAAATAAGCCTGTCTTCCTATCTGGATTTTTTGTGTGCATACATATTCTACT
GATTAACTACTTTTGCAGTTTTAATCCTGTATTATTTCTTCTACTTTGTTTTGTGTAAAAGGGGAAAAAATAAAA
AAAGCTGGAATCTTCATGTCTC

FIGURE 1637

VRVSVGGLVGEVACACRDCIPETMAEGDNRSTNLLAAETASLEEQLQGWGEVMLMADKVLRWERAWFPPAIMGVV
SLVFLIIYYLDPSVLSGVSCFVMFLCLADYLVPILAPRIFGSNKWTTEQQQRFHEICSNLVKTRRRAVGWWKRLF
TLKEEKPKMYFMTMIVSLAAVAWVGQQVHNLLLTYLIVTSLLLLPGLNQHGIILKYIGMAKREINKLLKQKEKKN
E

FIGURE 1638

CAGTTGCTTCAGCGTCCCGGTGTGGCTGTGCCGTTGGTCCTGTGCGGTCACTTAGCCAAG**ATG**CCTGAGGAAACC
CAGACCCAAGACCAACCGATGGAGGAGGAGGAGGTTGAGACGTTCGCCTTTCAGGCAGAAATTGCCCAGTTGATG
TCATTGATCATCAATACTTTCTACTCGAACAAAGAGATCTTTCTGAGAGAGCTCATTTCAAATTCATCAGATGCA
TTGGACAAAATCCGGTATGAAAGCTTGACAGATCCCAGTAAATTAGACTCTGGGAAAGAGCTGCATATTAACCTT
ATACCGAACAAACAAGATCGAACTCTCACTATTGTGGATACTGGAATTGGAATGACCAAGGCTGACTTGATCAAT
AACCTTGGTACTATCGCCAAGTCTGGGACCAAAGCGTTCATGGAAGCTTTGCAGGCTGGTGCAGATATCTCTATG
ATTGGCCAGTTCGGTGTTGGTTTTTATTCTGCTTATTTGGTTGCTGAGAAAGTAACTGTGATCACCAAACATAAC
GATGATGAGCAGTACGCTTGGGAGTCCTCAGCAGGGGGATCATTCACAGTGAGGACAGACACAGGTGAACCTATG
GGTCGTGGAACAAAAGTTATCCTACACCTGAAAGAAGACCAAACTGAGTACTTGGAGGAACGAAGAATAAAGGAG
ATTGTGAAGAAACATTCTCAGTTTATTGGATATCCCATTACTCTTTTTGTGGAGAAGGAACGTGATAAAGAAGTA
AGCGATGATGAGGCTGAAGAAAAGGAAGACAAAGAAGAAGAAAAAAGAAAAAGAAGAGAAAGAGTCGGAAGACAAA
CCTGAAATTGAAGATGTTGGTTCTGATGAGGAAGAAGAAAAGAAGGATGGTGACAAGAAGAAGAAGAAGAAGATT
AAGGAAAAGTACATCGATCAAGAAGAGCTCAACAAAACAAAGCCCATCTGGACCAGAAATCCCGACGATATTACT
AATGAGGAGTACGGAGAATTCTATAAGAGCTTGACCAATGACTGGGAAGATCACTTGGCAGTGAAGCATTTTTCA
GTTGAAGGACAGTTGGAATTCAGAGCCCTTCTATTTGTCCCACGACGTGCTCCTTTTGATCTGTTTGAAAACAGA
AAGAAAAAGAACAACATCAAATTGTATGTACGCAGAGTTTTCATCATGGATAACTGTGAGGAGCTAATCCCTGAA
TATCTGAACTTCATTAGAGGGGTGGTAGACTCGGAGGATCTCCCTCTAAACATATCCCGTGAGATGTTGCAACAA
AGCAAAATTTTGAAAGTTATCAGGAAGAATTTGGTCAAAAAATGCTTAGAACTCTTTACTGAACTGGCGGAAGAT
AAAGAGAACTACAAGAAATTCTATGAGCAGTTCTCTAAAAACATAAAGCTTGGAATACACGAAGACTCTCAAAAT
CGGAAGAAGCTTTCAGAGCTGTTAAGGTACTACACATCTGCCTCTGGTGATGAGATGGTTTCTCTCAAGGACTAC
TGCACCAGAATGAAGGAGAACCAGAAACATATCTATTATATCACAGGTGAGACCAAGGACCAGGTAGCTAACTCA
GCCTTTGTGGAACGTCTTCGGAAACATGGCTTAGAAGTGATCTATATGATTGAGCCCATTGATGAGTACTGTGTC
CAACAGCTGAAGGAATTTGAGGGGAAGACTTTAGTGTCAGTCACCAAAGAAGGCCTGGAACTTCCAGAGGATGAA
GAAGAGAAAAAGAAGCAGGAAGAGAAAAAAACAAAGTTTGAGAACCTCTGCAAAATCATGAAAGACATATTGGAG
AAAAAAGTTGAAAAGGTGGTTGTGTCAAACCGATTGGTGACATCTCCATGCTGTATTGTCACAAGCACATATGGC
TGGACAGCAAACATGGAGAGAATCATGAAAGCTCAAGCCCTAAGAGACAACTCAACAATGGGTTACATGGCAGCA
AAGAAACACCTGGAGATAAACCCTGACCATTCCATTATTGAGACCTTAAGGCAAAAGGCAGAGGCTGATAAGAAC
GACAAGTCTGTGAAGGATCTGGTCATCTTGCTTTATGAAACTGCGCTCCTGTCTTCTGGCTTCAGTCTGGAAGAT
CCCCAGACACATGCTAACAGGATCTACAGGATGATCAAACTTGGTCTGGGTATTGATGAAGATGACCCTACTGCT
GATGATACCAGTGCTGCTGTAACTGAAGAAATGCCACCCCTTGAAGGAGATGACGACACATCACGCATGGAAGAA
GTAGAC**TAA**

FIGURE 1639

MPEETQTQDQPMEEEEVETFAFQAEIAQLMSLIINTFYSNKEIFLRELISNSSDALDKIRYESLTDPSKLDSGKE
LHINLIPNKQDRTLTIVDTGIGMTKADLINNLGTIAKSGTKAFMEALQAGADISMIGQFGVGFYSAYLVAEKVTV
ITKHNDDEQYAWESSAGGSFTVRTDTGEPMGRGTKVILHLKEDQTEYLEERRIKEIVKKHSQFIGYPITLFVEKE
RDKEVSDDEAEEKEDKEEEKEKEEKESEDKPEIEDVGSDEEEEKKDGDKKKKKKIKEKYIDQEELNKTKPIWTRN
PDDITNEEYGEFYKSLTNDWEDHLAVKHFSVEGQLEFRALLFVPRRAPFDLFENRKKKNNIKLYVRRVFIMDNCE
ELIPEYLNFIRGVVDSEDLPLNISREMLQQSKILKVIRKNLVKKCLELFTELAEDKENYKKFYEQFSKNIKLGIH
EDSQNRKKLSELLRYYTSASGDEMVSLKDYCTRMKENQKHIYYITGETKDQVANSAFVERLRKHGLEVIYMIEPI
DEYCVQQLKEFEGKTLVSVTKEGLELPEDEEEKKKQEEKKTKFENLCKIMKDILEKKVEKVVVSNRLVTSPCCIV
TSTYGWTANMERIMKAQALRDNSTMGYMAAKKHLEINPDHSIIETLRQKAEADKNDKSVKDLVILLYETALLSSG
FSLEDPQTHANRIYRMIKLGLGIDEDDPTADDTSAAVTEEMPPLEGDDDTSRMEEVD

FIGURE 1640

GTGCGGTTGGGAACGCGGAGCGGACGGATTCGATTCAACGGGGTTCCGGACCGCGCTGCGCTATGGAGCAGGTCA
ATGAGCTGAAGGAGAAAGGCAACAAGGCCCTGAGCGTGGGTAACATCGATGATGCCTTACAGTGCTACTCCGAAG
CTATTAAGCTGGATCCCCACAACCACGTGCTGTACAGCAACCGTTCTGCTGCCTATGCCAAGAAAGGAGACTACC
AGAAGGCTTATGAGGATGGCTGCAAGACTGTCGACCTAAAGCCTGACTGGGGCAAGGGCTATTCACGAAAAGCAG
CAGCTCTAGAGTTCTTAAACCGCTTTGAAGAAGCCAAGCGAACCTATGAGGAGGGCTTAAAACACGAGGCAAATA
ACCCTCAACTGAAAGAGGGTTTACAGAATATGGAGGCCAGGTTGGCAGAGAGAAAATTCATGAACCCTTTCAACA
TGCCTAATCTGTATCAGAAGTTGGAGAGTGATCCCAGGACAAGGACACTACTCAGTGATCCTACCTACCGGGAGC
TGATAGAGCAGCTACGAAACAAGCCTTCTGACCTGGGCACGAAACTACAAGATCCCCGGATCATGACCACTCTCA
GCGTCCTCCTTGGGGTCGATCTGGGCAGTATGGATGAGGAGGAAGAGATTGCAACACCTCCACCACCACCCCCTC
CCAAAAAGGAGACCAAGCCAGAGCCAATGGAAGAAGATCTTCCAGAGAATAAGAAGCAGGCACTGAAAGAAAAAG
AGCTGGGGAACGATGCCTACAAGAAGAAAGACTTTGACACAGCCTTGAAGCATTACGACAAAGCCAAGGAGCTGG
ACCCCACTAACATGACTTACATTACCAATCAAGCAGCGGTATACTTTGAAAAGGGCGACTACAATAAGTGCCGGG
AGCTTTGTGAGAAGGCCATTGAAGTGGGGAGAGAAAACCGAGAAGACTATCGACAGATTGCCAAAGCATATGCTC
GAATTGGCAACTCCTACTTCAAAGAAGAAAAGTACAAGGATGCCATCCATTTCTATAACAAGTCTCTGGCAGAGC
ACCGAACCCCAGATGTGCTCAAGAAATGCCAGCAGGCAGAGAAAATCCTGAAGGAGCAAGAGCGGCTGGCCTACA
TAAACCCCGACCTGGCTTTGGAGGAGAAGAACAAAGGCAACGAGTGTTTTCAGAAAGGGGACTATCCCCAGGCCA
TGAAGCATTATACAGAAGCCATCAAAAGGAACCCGAAAGATGCCAAATTATACAGCAATCGAGCTGCCTGCTACA
CCAAACTCCTGGAGTTCCAGCTGGCACTCAAGGACTGTGAGGAATGTATCCAGCTGGAGCCGACCTTCATCAAGG
GTTATACACGGAAAGCCGCTGCGCTGGAAGCGATGAAGGACTACACCAAAGCCATGGATGTGTACCAGAAGGCGC
TAGACCTGGACTCCAGCTGTAAGGAGGCGGCAGACGGCTACCAGCGCTGTATGATGGCGCAGTACAACCGGCACG
ACAGCCCCGAAGATGTGAAGCGACGAGCCATGGCCGACCCTGAGGTGCAGCAGATCATGAGTGACCCAGCCATGC
GCCTTATCCTGGAACAGATGCAGAAGGACCCCCAGGCACTCAGCGAACACTTAAAGAATCCTGTAATAGCACAGA
AGATCCAGAAGCTGATGGATGTGGGTCTGATTGCAATTCGGTGATGACTTGTTCATCCCCCCTTCCCTTCGCCCT
CATGTGGAAAGAGGAGCTGGGACCGCGGCGAGCAGCACGGAGCGGAAGGGAGAGCAGGGGAGAGAAGGCCTCATC
TCTCTATATTTATACATAACCCCGGGGAAGACACAGAGACTCGTACCTGCGCTGTTTGTGCCGCCGCTGCCTCTG
GGCCCTCCCAGCACACGCATGGTCTCTTCACCGCTGCCCTCGAGTTCCATGTCTCTTTCCCCTGCCCCTAGTTGC
TGTCTCGGCTGCTCTCCCATAGTTGGTTTTTTTTTATTTGGGGCAGTGGGCATGTTATGGGGAGGGGAGGGGGT
TCTTCCAGCCTCAGGTCCCAGCTGTCTCACGTTGTTTATTCTGCGTCCCCTTCTCCAATAAAACAAGCCAGTTGG
GCGTGGTTATAAC

FIGURE 1641

MEQVNELKEKGNKALSVGNIDDALQCYSEAIKLDPHNHVLYSNRSAAYAKKGDYQKAYEDGCKTVDLKPDWGKGY
SRKAAALEFLNRFEEAKRTYEEGLKHEANNPQLKEGLQNMEARLAERKFMNPFNMPNLYQKLESDPRTRTLLSDP
TYRELIEQLRNKPSDLGTKLQDPRIMTTLSVLLGVDLGSMDEEEEIATPPPPPPPKKETKPEPMEEDLPENKKQA
LKEKELGNDAYKKKDFDTALKHYDKAKELDPTNMTYITNQAAVYFEKGDYNKCRELCEKAIEVGRENREDYRQIA
KAYARIGNSYFKEEKYKDAIHFYNKSLAEHRTPDVLKKCQQAEKILKEQERLAYINPDLALEEKNKGNECFQKGD
YPQAMKHYTEAIKRNPKDAKLYSNRAACYTKLLEFQLALKDCEECIQLEPTFIKGYTRKAAALEAMKDYTKAMDV
YQKALDLDSSCKEAADGYQRCMMAQYNRHDSPEDVKRRAMADPEVQQIMSDPAMRLILEQMQKDPQALSEHLKNP
VIAQKIQKLMDVGLIAIR

FIGURE 1642

AAGCAGTCTCAAGCCTGCCGCAGGGAGAAG**ATG**GCGGTCGCCGTGAGAACTTTGCAGGAACAGCTGGAAAAGGCC
AAAGAGAGTCTTAAGAACGTGGATGAGAACATTCGCAAGCTCACCGGGCGGGACCCGAATGATGTGAGGCCCATC
CAAGCCAGATTGCTGGCCCTTTCTGGTCCTGGTGGAGGTAGAGGACGTGGTAGTTTATTGCTGAGGCGTGGATTC
TCAGATAGTGGAGGACCCCCAGCCAAACAGAGAGACCTTGAAGGGGCAGTCAGTAGGCTGGGCGGGGAGCGTCGG
ACCAGAAGAGAATCACGCCAGGAAAGCGACCCGGAGGATGATGATGTTAAAAAGCCAGCATTGCAGTCTTCAGTT
GTAGCTACCTCCAAAGAGCGCACACGTAGAGACCTTATCCAGGATCAAAATATGGATGAAAAGGGAAAGCAAAGG
AACCGACGAATATTTGGCTTATTGATGGGCACTCTTCAGAAATTTAAACAAGAATCCACTGTTGCTACTGAAAGG
CAAAACAGGCGCCAGGAAATTGAACAAAAACTTGAAGTGCAGGCGGAAGAAGAAAGAAAGCAGGTTGAAAATGAA
AGGAGAGAACTGTTTGAAGAGAGGCGTGCTAAACAGACAGAACTGCGGCTTTTAGAACAGAAGGTTGAGCTTGCG
CAGCTGCAAGAAGAATGGAATGAACATAATGCCAAAATAATTAAATATATAAGAACTAAGACAAAGCCCCATTTG
TTTTATATTCCCGGAAGAATGTGTCCAGCTACCCAAAAACTAATAGAAGAGTCACAGAGAAAAATGAACGCTTTA
TTTGATGGTAGACGCATCGAATTTGCAGAACAAATAAATAAAATGGAGGCTAGGCCTAGAAGACAATCAATGAAG
GAAAAAGAGCATCAGGTGGTGCGTAATGAAGAACACAAGGCGGAACAAGAAGAGGGTAAGGTGGCTCAGCGAGAG
GAAGAGTTGGTGGAGACAGGTAACCAGCACAATGATGTTGAAATAGAGGAAGCAGGAGAGGAAGAGGAAAAGGAA
ATAGGGATTGTTCATAGTGATGCAGAGAAAGAGCAGGAGGAGGAGGAACAAAAACAGGAAATGGAGGTTAAGATG
GAGGAGGAAACTGAGGTAAGGGAAAGTGAGAAGCAGCAGGATAGTCAGCCTGAAGAAGTTATGGATGTGCTAGAG
ATGGTTGAGAATGTCAAACATGTAATTGCTGACCAGGAGGTAATGGAAACTAATCGAGTTGAAAGTGTAGAACCT
TCAGAAAATGAAGCTAGCAAAGAATTGGAACCAGAAATGGAATTTGAAATTGAGCCAGATAAAGAATGTAAATCC
CTTTCTCCTGGGAAAGAGAATGTCAGTGCTTTAGACATGGAAAAGGAGTCTGACGAAAAAGAAGAAAAAGAATCT
GAGCCCCAACCTGAGCCTGTGGCTCAACCTCAGGCTCAGTCTCAGCCCCAGCTCCAGCTTCAATCCCAGTCCGAG
CCACAGCCTCAGCTACAACCTGAGCCTGCTCAACCTCAGCTTCAGTCTCAGCCCCAGCTTCAGCTTCAATCCCAG
TGCCATGCAGTACTCCAGTCCCATCCTCCCTCTCAACCTGAGGATTTGTCATTAGCTGTTTTACAGCCAACACCC
CAAGTTACTCAGGAGCATGGGCATTTTCTACCTGAGAGGAAGGATTTTCCTGTAGAGTCTGTAAAACTGACTGAG
GTACCAGTAGACCCAGTCTTGACAGTACATCCAGAGAGCGAGAGCGAAACCAATACTAGGAGCAGGAGTAGAGGT
CGAACTAGAAATAGAACCACCAAGAGTAGAAGTCGAAGCAGTAGCAGTAGCAGTTCTAGTAGCAGTTCAACCAGT
AGCAGCAGTGGAAGTAGTTCCAGCAGTGGAAGTAGTAGCAGTCGCAGTAGTTCCAGTAGCAGCTCCAGTACAAGT
GGCAGCAGCAGCAGAGATAGCAGCAGCAGCACTAGTAGTAGTAGTGAGAGTAGAAGTCGGAGTAGGGGCCGGGGA
CATAATAGAGATAGAAAGCACAGAAGGAGCGTGGATCGGAAGAGAAGGGATACTTCAGGACTAGAAAGAAGTCAC
AAATCTTCAAAAGGTGGTAGTAGTAGAGATACAAAAGGATCAAAGGATAAGAATTCCCGGTCCGACAGAAAGAGG
TCTATATCAGAGAGTAGTCGATCAGGCAAAAGATCTTCAAGAAGTGAAAGAGACCGAAAATCAGACAGGAAAGAC
AAAAGGCGT**TAA**TGGAAGAAGCCAGGCTTTCTTAGCCATTCTTTGCAGCAGAAGATTTCTTGATGAAAAAGGATT
ACCTTTCCTTGTAAAGAGGATGCTGCCTTAAGAATTGCATGTTGTAAAAAATCTTTTTGGAAGATACAGACTGTT
TGTTTACCAGACATTCTTGTACTTTTTGCATAATTTTGTAAGAGTTATTTATCAAAATTATGTGAGGTTCCAAAA
TATGTAAAAATGATAATAATAAAAAAAGATTAACATCCCTTGTCATCTTTTTTAAATATCCTATACTCTTCAGTA
AGAATCTGTATATTTTAATAGGCAAATCTTTAAGTCTGTTCCCTTCAATTCTGTATCATACATTGCT

FIGURE 1643

MAVAVRTLQEQLEKAKESLKNVDENIRKLTGRDPNDVRPIQARLLALSGPGGGRGRGSLLLRRGFSDSGGPPAKQ
RDLEGAVSRLGGERRTRRESRQESDPEDDDVKKPALQSSVVATSKERTRRDLIQDQNMDEKGKQRNRRIFGLLMG
TLQKFKQESTVATERQNRRQEIEQKLEVQAEEERKQVENERRELFEERRAKQTELRLLEQKVELAQLQEEWNEHN
AKIIKYIRTKTKPHLFYIPGRMCPATQKLIEESQRKMNALFDGRRIEFAEQINKMEARPRRQSMKEKEHQVVRNE
EHKAEQEEGKVAQREEELVETGNQHNDVEIEEAGEEEEKEIGIVHSDAEKEQEEEEQKQEMEVKMEEETEVRESE
KQQDSQPEEVMDVLEMVENVKHVIADQEVMETNRVESVEPSENEASKELEPEMEFEIEPDKECKSLSPGKENVSA
LDMEKESDEKEEKESEPQPEPVAQPQAQSQPQLQLQSQSEPQPQLQPEPAQPQLQSQPQLQLQSQCHAVLQSHPP
SQPEDLSLAVLQPTPQVTQEHGHFLPERKDFPVESVKLTEVPVDPVLTVHPESESETNTRSRSRGRTRNRTTKSR
SRSSSSSSSSSSTSSSSGSSSSSGSSSSRSSSSSSSSTSGSSSRDSSSSTSSSSESRSRSRGRGHNRDRKHRRS
VDRKRRDTSGLERSHKSSKGGSSRDTKGSKDKNSRSDRKRSISESSRSGKRSSRSERDRKSDRKDKRR

FIGURE 1644

GCCGCTCGCTCGGCTCCGCTCCCTGGCTCGGCTCCCTGCCTCCGCGTCGCAGCCCCCGCCGTAGCCGCCTCCGAG
CCCGCCGCCACATCCTCTGAGAAG**ATG**GCTGTGCCACCCACGTATGCCGATCTTGGCAAATCTGCCAGGGATGTC
TTCACCAAGGGCTATGGATTTGGCTTAATAAAGCTTGATTTGAAAACAAAATCTGAGAATGGATTGGAATTTACA
AGCTCAGGCTCAGCCAACACTGAGACCACCAAAGTGACGGGCAGTCTGGAAACCAAGTACAGATGGACTGAGTAC
GGCCTGACGTTTACAGAGAAATGGAATACCGACAATACACTAGGCACCGAGATTACTGTGGAAGATCAGCTTGCA
CGTGGACTGAAGCTGACCTTCGATTCATCCTTCTCACCTAACACTGGGAAAAAAAATGCTAAAATCAAGACAGGG
TACAAGCGGGAGCACATTAACCTGGGCTGCGACATGGATTTCGACATTGCTGGGCCTTCCATCCGGGGTGCTCTG
GTGCTAGGTTACGAGGGCTGGCTGGCCGGCTACCAGATGAATTTTGAGACTGCAAAATCCCGAGTGACCCAGAGC
AACTTTGCAGTTGGCTACAAGACTGATGAATTCCAGCTTCACACTAATGTGAATGACGGGACAGAGTTTGGCGGC
TCCATTTACCAGAAAGTGAACAAGAAGTTGGAGACCGCTGTCAATCTTGCCTGGACAGCAGGAAACAGTAACACG
CGCTTCGGAATAGCAGCCAAGTATCAGATTGACCCTGACGCCTGCTTCTCGGCTAAAGTGAACAACTCCAGCCTG
ATAGGTTTAGGATACACTCAGACTCTAAAGCCAGGTATTAAACTGACACTGTCAGCTCTTCTGGATGGCAAGAAC
GTCAATGCTGGTGGCCACAAGCTTGGTCTAGGACTGGAATTTCAAGCA**TAA**ATGAATACTGTACAATTGTTTAAT
TTTAAACTATTTTGCAGCATAGCTACCTTCAGAATTTAGTGTATCTTTTAATGTTGTATGTCTGGGATGCAAGTA
TTGCTAAATATGTTAGCCCTCCAGGTTAAAGTTGATTCAGCTTTAAGATGTTACCCTTCCAGAGGTACAGAAGAA
ACCTATTTCCAAAAAAAGGTCCTTTCAGTGGTAGACTCGGGGAGAACTTGGTGGCCCCTTTGAGATGCCAGGTTTC
TTTTTTATCTAGAAATGGCTGCAAGTGGAAGCGGATAATATGTAGGCACTTTGTAAATTCATATTGAGTAAATGA
ATGAAATTGTGATTTCCTGAGAATCGAACCTTGGTTCCCTAACCCTAATTGATGAGAGGCTCGCTGCTTGATGGT
GTGTACAAACTCACCTGAATGGGACTTTTTTAGACAGATCTTCATGACCTGTTCCCACCCCAGTTCATCATCATC
TCTTTTACACCAAAAGGTCTGCAGGGTGTGGTAACTGTTTCTTTTGTGCCATTTTGGGGTGGAGAAGGTGGATGT
GATGAAGCCAATAATTCAGGACTTATTCCTTCTTGTGTTGTGTTTTTTTTTGGCCCTTGCACCAGAGTATGAAAT
AGCTTCCAGGAGCTCCAGCTATAAGCTTGGAAGTGTCTGTGTGATTGTAATCACATGGTGACAACACTCAGAATC
TAAATTGGACTTCTGTTGTATTCTCACCACTCAATTTGTTTTTTAGCAGTTTAATGGGTACATTTTAGAGTCTTC
CATTTTGTTGGAATTAGATCCTCCCCTTCAAATGCTGTAATTAACAACACTTAAAAAACTTGAATAAAATATTGA
AACCTC

FIGURE 1645

MAVPPTYADLGKSARDVFTKGYGFGLIKLDLKTKSENGLEFTSSGSANTETTKVTGSLETKYRWTEYGLTFTEKW
NTDNTLGTEITVEDQLARGLKLTFDSSFSPNTGKKNAKIKTGYKREHINLGCDMDFDIAGPSIRGALVLGYEGWL
AGYQMNFETAKSRVTQSNFAVGYKTDEFQLHTNVNDGTEFGGSIYQKVNKKLETAVNLAWTAGNSNTRFGIAAKY
QIDPDACFSAKVNNSSLIGLGYTQTLKPGIKLTLSALLDGKNVNAGGHKLGLGLEFQA

FIGURE 1646

GGCACGAGGGGGAAGCAGGGGTAGCGGAGCC**ATG**GGGGACGCTCCCAGCCCTGAAGAGAAACTGCACCTTATCAC
CCGGAACCTGCAGGAGGTTCTGGGGGGAAGAGAAGCTGAAGGAGATACTGAAGGAGCGGGAACTTAAAATTTACTG
GGGAACGGCAACCACGGGCAAACCACATGTGGCTTACTTTGTGCCCATGTCAAAGATTGCAGACTTCTTAAAGGC
AGGGTGTGAGGTAACAATTCTGTTTGCGGACCTCCACGCATACCTGGATAACATGAAAGCCCCATGGGAACTTCT
AGAACTCCGAGTCAGTTACTATGAGAATGTGATCAAAGCAATGCTGGAGAGCATTGGTGTGCCCTTGGAGAAGCT
CAAGTTCATCAAAGGCACTGATTACCAGCTCAGCAAAGAGTACACACTAGATGTGTACAGACTCTCCTCCGTGGT
CACACAGCACGATTCCAAGAAGGCTGGAGCTGAGGTGGTAAAGCAGGTGGAGCACCCTTTGCTGAGTGGCCTCTT
ATACCCCGGACTGCAGGCTTTGGATGAAGAGTATTTAAAAGTAGATGCCCAATTTGGAGGCATTGATCAGAGAAA
GATTTTCACCTTTGCAGAGAAGTACCTCCCTGCACTTGGCTATTCAAAACGGGTCCATCTGATGAATCCTATGGT
TCCAGGATTAACAGGCAGCAAAATGAGCTCTTCAGAAGAGGAGTCCAAGATTGATCTCCTTGATCGGAAGGAGGA
TGTGAAGAAAAAACTGAAGAAGGCCTTCTGTGAGCCAGGAAATGTGGAGAACAATGGGGTTCTGTCCTTCATCAA
GCATGTCCTTTTTCCCCTTAAGTCCGAGTTTGTGATCCTACGAGATGAGAAATGGGGTGGAAACAAAACCTACAC
AGCTTACGTGGACCTGGAAAAGGACTTTGCTGCTGAGGTTGTACATCCTGGAGACCTGAAGAATTCTGTTGAAGT
CGCACTGAACAAGTTGCTGGATCCAATCCGGGAAAAGTTTAATACCCCTGCCCTGAAAAAACTGGCCAGCGCTGC
CTACCCAGATCCCTCAAAGCAGAAGCCAATGGCCAAAGGCCCTGCCAAGAATTCAGAACCAGAGGAGGTCATCCC
ATCCCGGCTGGATATCCGTGTGGGGAAAATCATCACTGTGGAGAAGCACCCAGATGCAGACAGCCTGTATGTAGA
GAAGATTGACGTGGGGGAAGCTGAACCACGGACTGTGGTGAGCGGCCTGGTACAGTTCGTGCCCAAGGAGGAACT
GCAGGACAGGCTGGTAGTGGTGCTGTGCAACCTGAAACCCCAGAAGATGAGAGGAGTCGAGTCCCAAGGCATGCT
TCTGTGTGCTTCTATAGAAGGGATAAACCGCCAGGTTGAACCTCTGGACCCTCCGGCAGGCTCTGCTCCTGGTGA
GCACGTGTTTGTGAAGGGCTATGAAAAGGGCCAACCAGATGAGGAGCTCAAGCCCAAGAAGAAAGTCTTCGAGAA
GTTGCAGGCTGACTTCAAAATTTCTGAGGAGTGCATCGCACAGTGGAAGCAAACCAACTTCATGACCAAGCTGGG
CTCCATTTCCTGTAAATCGCTGAAAGGGGGGAACATTAGC**TAG**CCAGCCCAGCATCTTCCCCCCTTCTTCCACCA
CTGAGTCATCTGCTGTCTCTTCAGTCTGCTCCATCCATCACCCATTTACCCATCTCTCAGGACACGGAAGCAGCG
GGTTTGGACTCTTTATTCGGTGCAGAACTCGGCAAGGGGCAGCTTACCCTCCCCAGAACCCAGGATCATCCTGTC
TGGCTGCAGTGAGAGACCAACCCCTAACAAGGGCTGGGCCACAGCAGGGAGTCCAGCCCTACCTTCTTCCCTTGG
CAGCTGGAGAAATCTGGTTTCAATATAACTCATTTAAAAATTTATGCCACAGTCCTTATAATTGGAAAAATACTG
GTGCCCAGGTTTTCTTGGAGTTATCCAAGCAGCTGCGCCCCTAGCTGGGATCTGGTACCTGGACTAGGCTAATTA
CAGCTTCTCCCCAACAGGAAACTGTGGGATTTGAAAAGGAAAGGGAAGGGAAAACAGAGAACCTAGTGGTCTACC
AAGTGGTTGGCAACTTTCCCAATGTCTGCTTACTCTGAGGCTTGGCACTGGGGGCCAGGGCCTGCCCCAGGGCTC
CTGGAATTTCCCTTGATCCAGCTAGGCTGGGACACTCCCTAAATCAGCTGCGTGTTGTTAGCATCAGGCAGAATG
AATGGCAGAGAGTGATTCTGTCTTCATAGAGGGTGGGGTACTTCTCCATAAGGCATCTCAGTCAAATCCCCATCA
CTGTCATAAATTCAAATAAAATGTCTGAACAAGGGAAAAAAAAAAAAAAAAAA

FIGURE 1647

MGDAPSPEEKLHLITRNLQEVLGEEKLKEILKERELKIYWGTATTGKPHVAYFVPMSKIADFLKAGCEVTILFAD
LHAYLDNMKAPWELLELRVSYYENVIKAMLESIGVPLEKLKFIKGTDYQLSKEYTLDVYRLSSVVTQHDSKKAGA
EVVKQVEHPLLSGLLYPGLQALDEEYLKVDAQFGGIDQRKIFTFAEKYLPALGYSKRVHLMNPMVPGLTGSKMSS
SEEESKIDLLDRKEDVKKKLKKAFCEPGNVENNGVLSFIKHVLFPLKSEFVILRDEKWGGNKTYTAYVDLEKDFA
AEVVHPGDLKNSVEVALNKLLDPIREKFNTPALKKLASAAYPDPSKQKPMAKGPAKNSEPEEVIPSRLDIRVGKI
ITVEKHPDADSLYVEKIDVGEAEPRTVVSGLVQFVPKEELQDRLVVVLCNLKPQKMRGVESQGMLLCASIEGINR
QVEPLDPPAGSAPGEHVFVKGYEKGQPDEELKPKKKVFEKLQADFKISEECIAQWKQTNFMTKLGSISCKSLKGG
NIS

FIGURE 1648A

GCGGCGGCGCGAGGCAGTATGGTTTGAAGTGGTGAACATGGATTTTTCTCGGCTTCACATGTACAGTCCTCCCCA
GTGTGTGCCGGAGAACACGGGCTACACGTATGCGCTCAGTTCCAGCTATTCTTCAGATGCTCTGGATTTTGAGAC
GGAGCACAAATTGGACCCTGTATTTGATTCTCCACGGATGTCCCGCCGTAGTTTGCGCCTGGCCACGACAGCATG
CACCCTGGGGGATGGTGAGGCTGTGGGTGCCGACAGCGGCACCAGCAGCGCTGTCTCCCTGAAGAACCGAGCGGC
CAGAACAACAAAACAGCGCAGAAGCACAAACAAATCAGCTTTTAGTATCAACCACGTGTCAAGGCAGGTCACGTC
CTCTGGCGTCAGCTACGGCGGCACTGTCAGCCTGCAGGATGCTGTGACTCGACGGCCTCCTGTATTGGACGAGTC
TTGGATTCGTGAACAGACCACAGTGGACCACTTCTGGGGTCTTGATGATGATGGTGATCTTAAAGGTGGAAATAA
AGCTGCCATTCAGGGAAACGGGGATGTGGGAGTCGCCGCCGCCACCGCGCACAACGGCTTCTCCTGCAGCAACTG
CAGCATGCTGTCCGAGCGCAAGGACGTGCTCACGGCGCACCCCGCGGCCCCCGGGCCCGTGTCGAGAGTTTATTC
TAGGGACAGGAATCAAAAATGCGACGACTGTAAGGGCAAGAGGCACCTCGACGCGCACCCCGGTCGGGCAGGGAC
CCTCTGGCACATCTGGGCATGTGCAGGTTACTTCTTGCTGCAGATTCTGCGCAGGATCGGAGCTGTGGGCCAGGC
TGTGTCCAGGACGGCGTGGTCGGCCCTTTGGCTGGCCGTGGTTGCTCCAGGGAAGGCAGCCTCTGGAGTGTTCTG
GTGGCTGGGGATTGGATGGTACCAGTTTGTTACTTTGATTTCTTGGCTGAATGTGTTTCTTCTTACCAGGTGCCT
TCGAAACATCTGCAAGTTTTTAGTCTTGCTCATCCCACTCTTCCTTTTACTAGCAGGTCTCTCCTTACGGGGCCA
GGGCAATTTCTTTTCGTTCTTGCCCGTGTTGAACTGGGCAAGCATGCATAGAACACAGCGGGTGGATGACCCCCA
GGACGTGTTTAAACCCACGACTTCTCGCCTGAAGCAGCCTCTGCAGGGTGACAGTGAGGCTTTTCCGTGGCATTG
GATGAGTGGCGTGGAGCAGCAGGTGGCCTCTCTGTCTGGACAGTGCCACCACCATGGTGAGAATCTCCGAGAGCT
GACCACTTTGCTACAGAAGCTGCAGGCTCGGGTGGACCAGATGGAAGGCGGCGCTGCCGGGCCGTCAGCTTCGGT
CAGAGACGCTGTGGGACAGCCCCCGAGGGAGACTGACTTTATGGCCTTTCACCAAGAACATGAAGTGCGTATGTC
ACACTTGGAAGATATTCTGGGAAAACTGAGAGAAAAATCTGAGGCCATCCAGAAGGAACTAGAACAGACCAAGCA
AAAAACAATCAGTGCGGTTGGTGAGCAGCTCCTGCCCACAGTCGAGCACCTCCAGCTGGAGCTGGATCAGCTAAA
GTCAGAGCTGTCCAGCTGGCGACACGTGAAGACCGGCTGTGAGACAGTGGATGCCGTACAAGAAAGAGTGGACGT
GCAAGTCAGAGAAATGGTGAAACTCCTGTTTTCCGAAGATCAGCAAGGCGGTTCTCTGGAACAGCTGCTGCAGAG
GTTCTCATCACAGTTTGTGAGCAAAGGCGACTTGCAGACGATGCTGCGAGACCTGCAGCTGCAGATCCTGCGGAA
CGTCACCCACCACGTTTCCGTGACCAAGCAGCTCCCAACCTCAGAAGCCGTGGTGTCTGCTGTGAGCGAGGCGGG
GGCGTCTGGAATAACAGAGGCGCAAGCACGTGCCATCGTGAACAGCGCCTTGAAGCTGTATTCCCAAGATAAGAC
CGGGATGGTGGACTTTGCTCTGGAATCTGGTGGTGGCAGCATCTTGAGTACTCGCTGTTCTGAAACTTACGAAAC
CAAAACGGCGCTGATGAGTCTGTTTGGGATCCCGCTGTGGTACTTCTCGCAGTCCCCGCGCGTGGTCATCCAGCC
TGACATTTACCCCGGTAACTGCTGGGCATTTAAAGGCTCCCAGGGGTACCTGGTGGTGAGGCTCTCCATGATGAT
CCACCCAGCCGCCTTCACTCTGGAGCACATCCCTAAGACGCTGTCGCCAACAGGCAACATCAGCAGCGCCCCCAA
GGACTTCGCCGTCTATGGATTAGAAAATGAGTATCAGGAAGAAGGGCAGCTTCTGGGACAGTTCACGTATGATCA
GGATGGGGAGTCGCTCCAGATGTTCCAGGCCCTGAAAAGACCCGACGACACAGCTTTCCAAATAGTGGAACTTCG
GATTTTTTCTAACTGGGGCCATCCTGAGTATACCTGTCTGTATCGGTTCAGAGTTCATGGCGAACCTGTCAAGTG
AAGACACTACTCATTATTTTTGTACATTTTTGTATATACTGGGACAGCGTGAAACACTGGAATCCTTCATGGACG
AGGGCATATACAATGATGGGACAGTGCCACACTCCTTCAATAAACGTGGCTGCTGGCCAGAGGACGTGAGCGTGT
GACGGGCGCCTTGGCGCCACCTGTTGGGTGCTCACTGCCTCTGCAGGTGCAGAGGGGTCAGCAGCAGGAGAAGCG
TGTTGAACACGTGGCTCTCAGACACTCCTTGTTTTTAACGGGAAGCTCTTTGCATTTGCATTTCCTCAACAAAGG
AGCAAAGCAGAGGAAGCTGAGAGTCTGGCGTGTTCTTGACGCTTTGGTCTTCAGCCTTGCACTGGCTCTTCTAAA
GGACTTTTGGAGGGCAGATAATTTCATCTGTTAAATCCAACACACATTTCTTTCAGGGAAAAACAATGTCACCAA
ATTTTCAGAGTTCTAAACTCCTTTCCTTCAAGCCGGAATTTTCCTTTTTTCAGCACCAGTAGGTACTAAGTCTCC
AGATGGGGAAATAACTAAAATGTGTTTTTCTGCTTTGTTCGCTCTTACTTCTGAGGAAGGTTTCCAGTCAGGACT
CGCTGTACCAATATCCATGGAGGAATATGGGAGCGTTTCGCTCTCCTTGTAGGCTGAAGTCAGTCTGACTTGAAG
GGGCCTGGTTTGGATCTAAGCAAACACCCAGATGGGGTTCTCTGGTCTCAGCAAGGCTTTTCCTGTTGGGAGTCA
CAGTAAACAGAAACCCAAAAATCTCATCTTGGGTGTTTTCAGGGCTTGTTTTGAGTTTTGCTGAATAGGGAGCGC
AAGACGCCCTGAGCCTCCCTCTCACTGGTGGTGATAAGAGGAGCCGTCTGGTGTGTCAGGGTCACGAACCCGTTA
CATTTCAGGACGATCCTTTTTCCTTCAGCAGCATTTCTTACTGGCTGTGGCTGGAATCTGCCTTTTATCACAGCT
GTCACCATTCTCACGTGATTCTTGTGAGACTCTTTTTGGTTATAATTACTATTTAATATTTAGACTATTTTACTG
AGCAGACTTTATAAATGAGATATCTACAAGGCACTTAAAGTGTTACAGATGTTTTACCTTAAGAATTATTTAAGT

FIGURE 1648B

TGTGTTGGGTTAAGACAGTTTTCAGTGTACCGTAAATGTTGTGTTTTCAGAAAAAGACAAAACGATGGTGCTGAC
TGGTTTTCTGTATATTGCACAACAGTCCTCAAATACACTGATGTATGAAACTATTCATACATCAAGCAGCATTTT
TTTCACTCTCCTTAGAATTGGAACTATGCAGTTAAGGCAGATAAAATGTACAGATGTTTCATATATTACAGGTTA
CATATATAAATCAAAATTTCCTATATAAAACTGATTTGGGATTTGGGGTGGAAATATTTTGAATATTAATTTATT
TTTAAAGATGCAAGATAGGACTTTGTGCAATGTATTTTTGTAAATGCTTTTCAAAATATCTGTCTTTGGTAGTGC
TTCTGCTGCTGCCACCAAATTGATAAGATGCTATTAAGAGGTTTAAATAAAGAGTTTTAATTTTTAAAAGGG

FIGURE 1649

ACTGCTCTCAGTGAGAAGCGCACGCTGGAGGGCGAGCTGCATGATCTGCGGGGCCAGGTGGCCAAGCTTGAGGCA
GCCCTAGGTGAGGCCAAGAAGCAACTTCAGGATGAGATGCTGCGGCGGGTGGATGCTGAGAACAGGCTGCAGACC
ATGAAGGAGGAACTGGACTTCCAGAAGAACATCTACAGTGAGGAGCTGCGTGAGACCAAGCGCCGTCATGAGACC
CGACTGGTGGAGATTGACAATGGGAAGCAGCGTGAGTTTGAGAGCCGGCTGGCGGATGCGCTGCAGGAACTGCGG
GCCCAGCATGAGGACCAGGTGGAGCAGTATAAGAAGGAGCTGGAGAAGACTTATTCTGCCAAGCTGGACAATGCC
AGGCAGTCTGCTGAGAGGAACAGCAACCTGGTGGGGGCTGCCCACGAGGAGCTGCAGCAGTCGCGCATCCGCATC
GACAGCCTCTCTGCCCAGCTCAGCCAGCTCCAGAAGCAGCTGGCAGCCAAGGAGGCGAAGCTTCGAGACCTGGAG
GACTCACTGGCCCGTGAGCGGGACACCAGCCGGCGGCTGCTGGCGGAAAAGGAGCGGGAGATGGCCGAGATGCGG
GCAAGGATGCAGCAGCAGCTGGACGAGTACCAGGAGCTTCTGGACATCAAGCTGGCCCTGGACATGGAGATCCAC
GCCTACCGCAAGCTCTTGGAGGGCGAGGAGGAGAGGCTACGCCTGTCCCCCAGCCCTACCTCGCAGCGCAGCCGT
GGCCGTGCTTCCTCTCACTCATCCCAGACACAGGGTGGGGGCAGCGTCACCAAAAAGCGCAAACTGGAGTCCACT
GAGAGCCGCAGCAGCTTCTCACAGCACGCACGCACTAGCGGGCGCGTGGCCGTGGAGGAGGTGGATGAGGAGGGC
AAGTTTGTCCGGCTGCGCAACAAGTCCAATGAGGACCAGTCCATGGGCAATTGGCAGATCAAGCGCCAGAATGGA
GATGATCCCTTGCTGACTTACCGGTTCCCACCAAAGTTCACCCTGAAGGCTGGGCAGGTGGTGACGATCTGGGCT
GCAGGAGCTGGGGCCACCCACAGCCCCCCTACCGACCTGGTGTGGAAGGCACAGAACACCTGGGGCTGCGGGAAC
AGCCTGCGTACGGCTCTCATCAACTCCACTGGGGAAGAAGTGGCCATGCGCAAGCTGGTGCGCTCAGTGACTGTG
GTTGAGGACGACGAGGATGAGGATGGAGATGACCTGCTCCATCACCACCACGGCTCCCACTGCAGCAGCTCGGGG
GACCCCGCTGAGTACAACCTGCGCTCGCGCACCGTGCTGTGCGGGACCTGCGGGCAGCCTGCCGACAAGGCATCT
GCCAGCGGCTCAGGAGCCCAGGTGGGCGGACCCATCTCCTCTGGCTCTTCTGCCTCCAGTGTCACGGTCACTCGC
AGCTACCGCAGTGTGGGGGGCAGTGGGGGTGGCAGCTTCGGGGACAATCTGGTCACCCGCTCCTACCTCCTGGGC
AACTCCAGCCCCCGAACCCAGAGCCCCCAGAACTGCAGCATCATGTAATCTGGGACCTGCCAGGCAGGGGTGGGG
GTGGAGGCTTCCTGCGTCCTCCTCACCTCATGCCCACCCCCTGCCCTGCACGTCATGGGAGGGGGCTTGAAGCCA
AAGAAAAATAACCCTTTGGTTTTTTTCTTCTGTATTTTTTTTTCTAAGAGAAGTTATTTTCTACAGTGGTTTTAT
ACTGAAGGAAAAACACAAGCAAAAAAAAAAAAAAAGCATCTATCTCATCTATCTCAATCCTAATTTCTCCTCCCT
TCCTTTTCCCTGCTTCCAGGAAACTCCACATCTGCCTTAAAACCAAAGAGGGCTTCCTCTAGAAGCCAAGGGAAA
GGGGTGCTTTTATAGAGGCTAGCTTCTGCTTTTCTGCCCTGGCTGCTGCCCCACCCCGGGGACCCTGTGACATGG
TGCCTGAGAGGCAGGCATAGAGGCTTCTCCGCCAGCCTCCTCTGGACGGCAGGCTCACTGCCAGGCCAGCCTCCG
AGAGGGAGAGAGAGAGAGAGAGGACAGCTTGAGCCGGGCCCCTGGCTTGGCCTGCTGTGATTCCACTACACCTGG
CTGAGGTTCCTCTGCCTGCCCCGCCCCCAGTCCCCACCCCTGCCCCCAGCCCCGGGGTGAGTCCATTCTCCCAGG
TACCAGCTGCGCTTGCTTTTCTGTATTTTATTTAGACAAGAGATGGGAATGAGGTGGGAGGTGGAAGAAGGGAGA
AGAAAGGTGAGTTTGAGCTGCCTTCCCTAGCTTTAGACCCTGGGTGGGCTCTGTGCAGTCACTGGAGGTTGAAGC
CAAGTGGGGTGCTGGGAGGAGGGAGAGGGAGGTCACTGGAAAGGGGAGAGCCTGCTGCACCCACCGTGGAGGAGG
AAGGCAAGAGGGGGTGGAGGGGTGTGGCAGTTGGTTTTGGCAAACGCTTAAAGAGCCCTTGCCTCCCCATTTCCC
ATCTGCACCCCTTCTCTCCTCCCCAAATCAATACACTAGTTGTTTCT

FIGURE 1650A

CACTCTGGCTGGGAGCAGAAGGCAGCCTCGGTCTCTGGGCGGCGGCGGCGGCCCTCTCTGCCCTGGCCGCGCTGT
GTGGTGACCGCAGGCCCGAGAC**ATG**AGGGCGGCCCGTGCTCTGCTGCCCCTGCTGCTGCAGGCCTGCTGGACAGC
CGCGCAGGATGAGCCGGAGACCCCGAGGGCCGTGGCCTTCCAGGACTGCCCCGTGGACCTGTTCTTTGTGCTGGA
CACCTCTGAGAGCGTGGCCCTGAGGCTGAAGCCCTACGGGGCCCTCGTGGACAAAGTCAAGTCCTTCACCAAGCG
CTTCATCGACAACCTGAGGGACAGGTACTACCGCTGTGACCGAAACCTGGTGTGGAACGCAGGCGCGCTGCACTA
CAGTGACGAGGTGGAGATCATCCAAGGCCTCACGCGCATGCCTGGCGGCCGCGACGCACTCAAAAGCAGCGTGGA
CGCGGTCAAGTACTTTGGGAAGGGCACCTACACCGACTGCGCTATCAAGAAGGGGCTGGAGCAGCTCCTCGTGGG
GGGCTCCCACCTGAAGGAGAATAAGTACCTGATTGTGGTGACCGACGGGCACCCCCTGGAGGGCTACAAGGAACC
CTGTGGGGGGCTGGAGGATGCTGTGAACGAGGCCAAGCACCTGGGCGTCAAAGTCTTCTCGGTGGCCATCACACC
CGACCACCTGGAGCCGCGTCTGAGCATCATCGCCACGGACCACACGTACCGGCGCAACTTCACGGCGGCTGACTG
GGGCCAGAGCCGCGACGCAGAGGAGGCCATCAGCCAGACCATCGACACCATCGTGGACATGATCAAAAATAACGT
TGAGCAAGTGTGCTGCTCCTTCGAATGCCAGCCTGCAAGAGGACCTCCGGGCCTCCGGGGCGACCCCGGCTTTGA
GGGAGAACGAGGCAAGCCGGGGCTCCCAGGAGAGAAGGGAGAAGCCGGAGATCCTGGAAGACCCGGGGACCTCGG
ACCTGTTGGGTACCAGGGAATGAAGGGAGAAAAAGGGAGCCGTGGGGAGAAGGGCTCCAGGGGACCAAAGGGCTA
CAAGGGAGAGAAGGGCAAGCGTGGCATCGACGGGGTGGACGGCGTGAAGGGGGAGATGGGGTACCCAGGCCTGCC
AGGCTGCAAGGGCTCGCCGGGTTTTGACGGCATTCAAGGACCCCCTGGCCCCAAGGGAGACCCCGGCGCCTTTGG
ACTGAAAGGAGAAAAGGGCGAGCCTGGAGCTGACGGGGAGGCCGGGAGACCAGGAGCTCGGGGACCATCTGGAGA
CGAGGGGCCAGCCGGAGAGCCTGGGCCCCCCGGAGAGAAAGGAGAGGCGGGCGACGAGGGGAACCCAGGACCTGA
CGGTGCCCCCGGGGAGCGGGGTGGCCCTGGAGAGAGAGGACCACGGGGGACCCCAGGCCCGCGGGGACCAAGAGG
AGACCCTGGTGAAGCTGGCCCGCAGGGTGATCAGGGAAGAGAAGGGCCCGTTGGTGTCCCTGGAGACCCGGGCGA
GGCTGGCCCTATCGGACCTAAAGGCTACCGAGGCGATGAGGGTCCCCCAGGGTCCGAGGGTGCCAGAGGAGCCCC
AGGACCTGCCGGACCCCCTGGAGACCCGGGGCTGATGGGAGAAAGGGGAGAAGACGGCCCCGCTGGAAATGGCAC
CGAGGGCTTCCCCGGCTTCCCCGGGTATCCCGGGAACAGGGGCGCTCCCGGGATAAACGGCACGAAGGGCTACCC
CGGCCTCAAGGGGGACGAGGGAGAAGCCGGGGACCCCGGAGACGATAACAACGACATTGCACCCCGAGGAGTCAA
AGGAGCAAAGGGGTACCGGGGTCCCGAGGGCCCCCAGGGACCCCCAGGACACCAAGGACCGCCTGGGCCGGACGA
ATGCGAGATTTTGGACATCATCATGAAAATGTGCTCTTGCTGTGAATGCAAGTGCGGCCCCATCGACCTCCTGTT
CGTGCTGGACAGCTCAGAGAGCATTGGCCTGCAGAACTTCGAGATTGCCAAGGACTTCGTCGTCAAGGTCATCGA
CCGGCTGAGCCGGGACGAGCTGGTCAAGTTCGAGCCAGGGCAGTCGTACGCGGGTGTGGTGCAGTACAGCCACAG
CCAGATGCAGGAGCACGTGAGCCTGCGCAGCCCCAGCATCCGGAACGTGCAGGAGCTCAAGGAAGCCATCAAGAG
CCTGCAGTGGATGGCGGGCGGCACCTTCACGGGGGAGGCCCTGCAGTACACGCGGGACCAGCTGCTGCCGCCCAG
CCCGAACAACCGCATCGCCCTGGTCATCACTGACGGGCGCTCAGACACTCAGAGGGACACCACACCGCTCAACGT
GCTCTGCAGCCCCGGCATCCAGGTGGTCTCCGTGGGCATCAAAGACGTGTTTGACTTCATCCCAGGCTCAGACCA
GCTCAATGTCATTTCTTGCCAAGGCCTGGCACCATCCCAGGGCCGGCCCGGCCTCTCGCTGGTCAAGGAGAACTA
TGCAGAGCTGCTGGAGGATGCCTTCCTGAAGAATGTCACCGCCCAGATCTGCATAGACAAGAAGTGTCCAGATTA
CACCTGCCCCATCACGTTCTCCTCCCCGGCTGACATCACCATCCTGCTGGACGGCTCCGCCAGCGTGGGCAGCCA
CAACTTTGACACCACCAAGCGCTTCGCCAAGCGCCTGGCCGAGCGCTTCCTCACAGCGGGCAGGACGGACCCCGC
CCACGACGTGCGGGTGGCGGTGGTGCAGTACAGCGGCACGGGCCAGCAGCGCCCAGAGCGGGCGTCGCTGCAGTT
CCTGCAGAACTACACGGCCCTGGCCAGTGCCGTCGATGCCATGGACTTTATCAACGACGCCACCGACGTCAACGA
TGCCCTGGGCTATGTGACCCGCTTCTACCGCGAGGCCTCGTCCGGCGCTGCCAAGAAGAGGCTGCTGCTCTTCTC
AGATGGCAACTCGCAGGGCGCCACGCCCGCTGCCATCGAGAAGGCCGTGCAGGAAGCCCAGCGGGCAGGCATCGA
GATCTTCGTGGTGGTCGTGGGCCGCCAGGTGAATGAGCCCCACATCCGCGTCCTGGTCACCGGCAAGACGGCCGA
GTACGACGTGGCCTACGGCGAGAGCCACCTGTTCCGTGTCCCCAGCTACCAGGCCCTGCTCCGCGGTGTCTTCCA
CCAGACAGTCTCCAGGAAGGTGGCGCTGGGC**TAG**CCCACCCTGCACGCCGGCACCAAACCCTGTCCTCCCACCCC
TCCCCACTCATCACTAAACAGAGCCCAAGCTTGGAAAGCCAGGACACAACGCTGCTGCCTGCTTTGTGCAGGGTC
CTCCGGGGCTCAGCCCTGAGTTGGCATCACCTGCGCAGGGCCCTCTGGGGCTCAGCTCTGAGCTAGTGTCACCTG
CACAGGGCCCTCTGAGGCTCAGCCCTGAGCTGGCGTCACCTGTGCAGGGCCCTCTGGGGCTCAGCCCTGAGCTGG
CCTCACCTGGGTTCCCCACCCCGGGCTCTCCTGCCCTGCCCTCCTGCCCGCCCTCCCTCCTGCCTGCGCAGCTCC
TTCCCTAGGCACCTCTGTGCTGCATCCCACCAGCCTGAGCAAGACGCCTCTCGGGGCCTGTGCCGCACTAGCCTC

FIGURE 1650B

CCTCTCCTCTGTCCCCATAGCTGGTTTTTCCCACCAATCCTCACCTAACAGTTACTTTACAATTAAACTCAAAGC
AAGCTCTTCTCCTCAGCTTGGGGCAGCCATTGGCCTCTGTCTCGTTTTGGGAAACCAAGGTCAGGAGGCCGTTGC
AGACATAAATCTCGGCGACTCGGCCCCGTCTCCTGAGGGTCCTGCTGGTGACCGGCCTGGACCTTGGCCCTACAG
CCCTGGAGGCCGCTGCTGACCAGCACTGACCCCGACCTCAGAGAGTACTCGCAGGGGCGCTGGCTGCACTCAAGA
CCCTCGAGATTAACGGTGCTAACCCCGTCTGCTCCTCCCTCCCGCAGAGACTGGGGCCTGGACTGGACATGAGAG
CCCCTTGGTGCCACAGAGGGCTGTGTCTTACTAGAAACAACGCAAACCTCTCCTTCCTCAGAATAGTGATGTGTT
CGACGTTTTATCAAAGGCCCCCTTTCTATGTTCATGTTAGTTTTGCTCCTTCTGTGTTTTTTTCTGAACCATATC
CATGTTGCTGACTTTTCCAAATAAAGGTTTTCACTCCTC

FIGURE 1651

MRAARALLPLLLQACWTAAQDEPETPRAVAFQDCPVDLFFVLDTSESVALRLKPYGALVDKVKSFTKRFIDNLRD
RYYRCDRNLVWNAGALHYSDEVEIIQGLTRMPGGRDALKSSVDAVKYFGKGTYTDCAIKKGLEQLLVGGSHLKEN
KYLIVVTDGHPLEGYKEPCGGLEDAVNEAKHLGVKVFSVAITPDHLEPRLSIIATDHTYRRNFTAADWGQSRDAE
EAISQTIDTIVDMIKNNVEQVCCSFECQPARGPPGLRGDPGFEGERGKPGLPGEKGEAGDPGRPGDLGPVGYQGM
KGEKGSRGEKGSRGPKGYKGEKGKRGIDGVDGVKGEMGYPGLPGCKGSPGFDGIQGPPGPKGDPGAFGLKGEKGE
PGADGEAGRPGARGPSGDEGPAGEPGPPGEKGEAGDEGNPGPDGAPGERGGPGERGPRGTPGPRGPRGDPGEAGP
QGDQGREGPVGVPGDPGEAGPIGPKGYRGDEGPPGSEGARGAPGPAGPPGDPGLMGERGEDGPAGNGTEGFPGFP
GYPGNRGAPGINGTKGYPGLKGDEGEAGDPGDDNNDIAPRGVKGAKGYRGPEGPQGPPGHQGPPGPDECEILDII
MKMCSCCECKCGPIDLLFVLDSSESIGLQNFEIAKDFVVKVIDRLSRDELVKFEPGQSYAGVVQYSHSQMQEHVS
LRSPSIRNVQELKEAIKSLQWMAGGTFTGEALQYTRDQLLPPSPNNRIALVITDGRSDTQRDTTPLNVLCSPGIQ
VVSVGIKDVFDFIPGSDQLNVISCQGLAPSQGRPGLSLVKENYAELLEDAFLKNVTAQICIDKKCPDYTCPITFS
SPADITILLDGSASVGSHNFDTTKRFAKRLAERFLTAGRTDPAHDVRVAVVQYSGTGQQRPERASLQFLQNYTAL
ASAVDAMDFINDATDVNDALGYVTRFYREASSGAAKKRLLLFSDGNSQGATPAAIEKAVQEAQRAGIEIFVVVVG
RQVNEPHIRVLVTGKTAEYDVAYGESHLFRVPSYQALLRGVFHQTVSRKVALG

FIGURE 1652

TTTAAATGTCATCATCATAGTCTTTTAATATTTTACATAAAAAACTGTATACACAGCTTATAGAACTTTTATGTA
AACATCATAAGCTCACCATTTTGTCATTTGTCAGTTTATTTAAAAAATAAAAAACAAGACAACAATTTAGTAGAA
GTACCACTGGGAGGGTGGGGAGGGGAAAAAAGGATATACAGGGGCAGGTGTATTCTCTGTACAGAGGTGCAGAGA
AAATTTCACATAGCTTTAGAGAATGCCTTGTGGAAAAAAAAAAAAAATAGGCCCCAATACTTGTTACTGCCCTTTA
TCAAAACTGTGTGCATGACCTGCACAAATAAAATCACAAAACAGTGTTGCCACATTCTTCAAGGAAACAAAGCAA
AATTTAGTGGGTTTCTTTTCCCTCTCCTTGTTAAAAGTCATTTTTTAAAAACATCAGAAGTAGATGAGGTTACAG
CGTACAAGTGTGGTCAGAATGCTACTGTCGTATGC

FIGURE 1653

GGCGCGCGGCGAGCTGAGGGTGGCGGCGGTCGAC**ATG**TTCCAGGTCCCGGATAGCGAGGGCGGCCGCGCCGGCTC
CAGGGCCATGAAGCCCCCAGGAGGAGAATCGAGCAATCTTTTTGGAAGTCCAGAAGAAGCCACTCCTTCCAGCAG
GCCTAATAGGATGGCATCTAATATTTTTGGACCAACAGAAGAACCTCAGAACATACCCAAGAGGACAAATCCCCC
AGGGGGTAAAGGAAGTGGTATCTTTGACGAATCAACCCCCGTGCAGACTCGACAGCACCTGAACCCACCTGGAGG
GAAGACCAGCGACATTTTTGGGTCTCCGGTCACTGCCACTTCACGCTTGGCACACCCAAACAAACCCAAGGATCA
TGTTTTCTTATGTGAAGGAGAAGAACCAAAATCGGATCTTAAAGCTGCAAGGAGCATCCCGGCTGGAGCAGAGCC
AGGTGAGAAAGGCAGCGCCAGAAAAGCAGGCCCCGCCAAGGAGCAGGAGCCCATGCCCACAGTCGACAGCCATGA
GCCCCGGCTGGGGCCGCGGCCTCGCTCTCACAACAAGGTCCTGAACCCACCGGGAGGCAAATCCAGCATCTCCTT
CTAC**TAA**GAGAAGCCACTGCTCCACCCGGAGCCAGACCAGAAACTCAAGAGATAGGGTAGCCATGTTTTCATTTC
CTTTTGCCCAAATGAGCGGGGTGGGAAGAGGGTTAGTCTTATGTGAGCCTGGCTGCTCAGCGTCTCCTGGCCGTC
ATGACAGCTGCTTGGAGACCCGTGCCTTCCAGATGGCTGGGAGATGCCTCTGTGGGGATGAAATGGGGCACCCCT
GGCCATCACTCATGTGTAGTCCAGGTTTGAGAGGAACTGGAAGGGGGGTGAGGGTGGGGAGGTGGGGCAGGGCAT
GGTCCTTGGATCAACAGCCCGCCAGCTGATTGGATGTCTAGGAATGACTGAAAGAAACCAAAACAGCCTGTCCAC
TGCTGCTGTGGGATGGAGGAGGCGTAAGCAGAAACACTAACAGTATATTGACCTCTTAGCAGAACCGCTTCCATT
CTGGAGATCACGGCTGCTAAATCCAGCATCCCCACTTCATTTTACCCCCAGCATATTGTTCTGTAGTCTTTTCTT
GAAACATCTTGATTGCTTTTCCTCGGCAGCTTTCAAAAAACCAAATAATAATAGTTATCCGTCTTCTACTTCATG
GAAGATTGTTTTGGTGCCCTGACCCTCTGAAGTGCCCAGTTCCTGCCATCTGAAACCTCGGCCTGATCTGATCTC
ATGTTGGAATCTGCCTGTCTTTCACACAGGGCTGGTCTTGGTCCTTTACATGCCAGTTTTGCTTGTGAATTCTTG
CTTTTTTCCTCTCATCAGCCTTAAGTTTAGGCGTTTGTTGTTCTCCAGTGATGTAGACAGTTCCCTTCACAAGTC
ACAGTTCTTCCCATAAATGAGGCCCGCTGACCTCTGCGGGACTTTAAAAATCTATTCAGATATTTCCGAGTAAGT
GGCTTGTTTAAATTCTTCCTGTGTCTTTCTTTATTCCTTAATTGGTTGGTGGAAAGAAGAGATGCTTGGGAACCT
TGGGTTCTTAGGTTTGGATTCTTTAATAATATCTAAAAAGCTAAATTTTAAATACCAGCTTTACATAAATGATTG
TTGACTCTGGTCTGTTTCTGACACCTTTCCAGAAAAAAGTCAATTGTTCAGGTACACCAAAGAGGAAGAAGAGCT
GTGGAGGCCACCCTCTACAAAGCTTTATAGAACTTCTGGATCTAACTCACAAACAAGCTTCCAGAAGAGACTAGA
GACCTTAGGCCAGGAGATGAAGGAGTTCAGTAGCAAAGTCACACCTGTCCAATTCCCTGAGCTTTGCTCACTCAG
CTAATGGGATGGCAAAGGTGGTGGTGCTTTCATCTTCAGGCAGAAGCCTCTGCCCATCCCCCTCAAGGGCTGCAG
GCCCAGTTCTCATGCTGCCCTTGGGTGGGCATCTGTTAACAGAGGAGAACGTCTGGGTGGCGGCAGCAGCTTTGC
TCTGAGTGCCTACAAAGCTAATGCTTGGTGCTAGAAACATCATCATTATTAAACTTCAGAAAAGCAGCAGCCATG
TTCAGTCAGGCTCATGCTGCCTCACTGCTTAAGTGCCTGCAGGAGCCGCCTGCCAAGCTCCCCTTCCTACACCTG
GCACACTGGGGTCTGCACAAGGCTTTGTCAACCAAAGACAGCTTCCCCCTTTTGATTGCCTGTAGACTTTGGAGC
CAAGAAACACTCTGTGTGACTCTACACACACTTCAGGTGGTTTGTGCTTCAAAGTCATTGATGCAACTTGAAAGG
AAACAGTTTAATGGTGGAAATGAACTACCATTTATAACTTCTGTTTTTTTATTGAGAAAATGATTCACGAATTCC
AAATCAGATTGCCAGGAAGAAATAGGACGTGACGGTACTGGGCCCTGTGATTCTCCCAGCCCTTGCAGTCCGCTA
GGTGAGAGGAAAAGCTCTTTACTTCCGCCCCTGGCAGGGACTTCTGGGTTATGGGAGAAACCAGAGATGGGAATG
AGGAAAATATGAACTACAGCAGAAGCCCCTGGGCAGCTGTGATGGAGCCCCTGACATTACTCTTCTTGCATCTGT
CCTGCCTTCTTTCCCTCTGCGAGGCAGTGGGGTGGGATTCAGAGTGCTTAGTCTGCTCACTGGGAGAAGAAGAGT
TCCTGCGCATGCAAGCCCTGCTGTGTGGCTGTCGTTTACATTTGGGAGGTGTCCTGTATGTCTGTACGTTGGGGA
CTGCCTGTATTTGGAAGATTTAAAAACCTAGCATCCTGTTCTCACCCTCTAAGCTGCATTGAGAAATGACTCGTC
TCTGTATTTGTATTAAGCCTTAACACTTTTCTTAAGTGCATTCGGTGCCAACATTTTTTAGAGCTGTACCAAAAC
AAAAAGCCTGTACTCACATCACAATGTCATTTTGATAGGAGCGTTTTGTTATTTTTACAAGGCAGAATGGGGTGT
AACAGTTGAATTAAACTAGCAATCACGTGCTCAGAGCTTT

FIGURE 1654

MFQVPDSEGGRAGSRAMKPPGGESSNLFGSPEEATPSSRPNRMASNIFGPTEEPQNIPKRTNPPGGKGSGIFDES
TPVQTRQHLNPPGGKTSDIFGSPVTATSRLAHPNKPKDHVFLCEGEEPKSDLKAARSIPAGAEPGEKGSARKAGP
AKEQEPMPTVDSHEPRLGPRPRSHNKVLNPPGGKSSISFY

FIGURE 1655

GTTTTACGCTGCCGCCGGCATCCGCTCGGACGCGGCCACGTTGTCTTGCGCGCTTTGCCCGCCTGGCCCTGGGAC
TCTGACCCTCGGCTACCCTTTCCTGCCCCACTAGCGTGGCCGCGAGCCTCGGTGAGCCGGCCGTATTCCCGCTCT
CGCTTAGGGGGCACAGGCGCAGGCATCGGCCCGGCCACTCCAAGCCTTCGGTGCGCGGGCGCGTCTGGGATACGG
GCCCGGGAGGCGCCGCCCTCCGTCCGCCCGGTGCCTCTCAGGAACAGCGAACCGGAGAGAGCGCCGGAGAGTTGG
GCTCAGTGCGGAGCTCGGCGCCGGGGCCCATGCCCGTGCGCCCCCGCAGGCCGGCGCC**ATG**GCCTCCGGGAGTGT
GGCCGAGTGCCTGCAGCAGGAGACCACCTGCCCCGTGTGCCTGCAGTACTTCGCAGAGCCCATGATGCTCGACTG
CGGCCATAACATCTGTTGCGCGTGCCTCGCCCGCTGCTGGGGCACGGCAGAGACTAACGTGTCGTGCCCGCAGTG
CCGGGAGACCTTCCCGCAGAGGCACATGCGGCCCAACCGGCACCTGGCCAACGTGACCCAACTGGTAAAGCAGCT
GCGCACCGAGCGGCCGTCGGGGCCCGGCGGCGAGATGGGCGTGTGCGAGAAGCACCGCGAGCCCCTGAAGCTGTA
CTGCGAGGAGGACCAGATGCCCATCTGCGTGGTGTGCGACCGCTCCCGCGAGCACCGCGGCCACAGCGTGCTGCC
GCTCGAGGAGGCGGTGGAGGGCTTCAAGGAGCAAATCCAGAACCAGCTCGACCATTTAAAAAGAGTGAAAGATTT
AAAGAAGAGACGTCGGGCCCAGGGGGAACAGGCACGAGCTGAACTCTTGAGCCTAACCCAGATGGAGAGGGAGAA
GATTGTTTGGGAGTTTGAGCAGCTGTATCACTCCTTAAAGGAGCATGAGTATCGCCTCCTGGCCCGCCTTGAGGA
GCTAGACTTGGCCATCTACAATAGCATCAATGGTGCCATCACCCAGTTCTCTTGCAACATCTCCCACCTCAGCAG
CCTGATCGCTCAGCTAGAAGAGAAGCAGCAGCAGCCCACCAGGGAGCTCCTGCAGGACATTGGGGACACATTGAG
CAGGGCTGAAAGAATCAGGATTCCTGAACCTTGGATCACACCTCCAGATTTGCAAGAGAAAATCCACATTTTTGC
CCAAAAATGTCTATTCTTGACGGAGAGTCTAAAGCAGTTCACAGAAAAAATGCAGTCAGATATGGAGAAAATCCA
AGAATTAAGAGAGGCTCAGTTATACTCAGTGGACGTGACTCTGGACCCAGACACGGCCTACCCCAGCCTGATCCT
CTCTGATAATCTGCGGCAAGTGCGGTACAGTTACCTCCAACAGGACCTGCCTGACAACCCCGAGAGGTTCAATCT
GTTTCCCTGTGTCTTGGGCTCTCCATGCTTCATCGCCGGGAGACATTATTGGGAGGTAGAGGTGGGAGATAAAGC
CAAGTGGACCATAGGTGTCTGTGAAGACTCAGTGTGCAGAAAAGGTGGAGTAACCTCAGCCCCCCAGAATGGATT
CTGGGCAGTGTCTTTGTGGTATGGGAAAGAATATTGGGCTCTTACCTCCCCAATGACTGCCCTACCCCTGCGGAC
CCCGCTCCAGCGGGTGGGGATTTTCTTGGACTATGATGCTGGTGAGGTCTCCTTCTACAACGTGACAGAGAGGTG
TCACACCTTCACTTTCTCTCATGCTACCTTTTGTGGGCCTGTCCGGCCCTACTTCAGTCTGAGTTACTCGGGAGG
GAAAAGTGCAGCTCCTCTGATCATCTGCCCCATGAGTGGGATAGATGGGTTTTCTGGCCATGTTGGGAATCATGG
TCATTCCATGGAGACCTCCCCT**TGA**GGAGGTGAATTCAGGCCAAAAGGGCTGTTGGCTGTAATCCTACGCCAGGC
ACAAGGCATCTTGTTGCCTTGCCACGTCCTGTCACAGCTGGGTATCCTTACCATGTTCCACGCCCTTGCAGTGGG
AGACAGGATGTCCATGTTCTCTACCATCCTTTTCCTTCCCATGCAGATTGTGAAATGTAATGAGATGTATCAAGA
CATCCTAGAAATAAAAACCAGATGTCCACCTCCAGTGTTTCATACTTTCTGGTTTTACACATCGCTGGAGGGATA
AAGAGTATGGATAATCTTTGGATTTGGAGAGCCGTTCAAGATACTTCCAGCTTCTTGGCTCAGCCTGGCTTCCTC
TGGTTCAGCCCCACATAATGATTATGGCTATTTGCTGTCATTTCTGGGCTAGGGCTCCTTTCTAACAACCTAGAC
TGGAATAAGGCCCTGTCAGCATGGCTCCCTTTATCCCAGTTTTCCGTCTGGGAACAGTACCTCTGCCCCTGATTC
CCAATGTGCCATAGTTTTATTAACTCCATTAAAGAAGCCTGTATGTGTTTTGGTTAGTTACAGTTATTTTACAAT
AATGGTGGGTAATGGCCCCACCTCTGTTATGAGATAATGTTCTAATCAATGTCTCTGCCTTTGTATCTTTTCTGA
GGGCTTTGTCTGTTCTCTTCATTCTAATGAAAGGTGTATTCTAGTGCTGGGTGCATATCATCCAGGATAATATTC
TGCCCAACTCCATCCTCTGTTACTAGATCCCTTACCAGTCACATTTGTGGACTGGTGGCCAGTCGTATACCATCC
CTGGAAGGATTCTGGGACAATATTCCAGGGATTCATTGACTTCTTGGCTCCTTTTCTCCATTTCCTTTGGGGGAA
GGGGGAATTGACCATGCTTAAGTGCATCCTATCAAGGGGCAGCTCCGTCCCCATGGCCATTGGATCATGAGACAC
TCGAAGTCAGAAGGCTGGGGCAGATCACTTCAAGCAAGCCCCCATGATGGTTCTCAGTCCTGCTTCTCTGTGGGT
ACGTGCCCCTCTGTTTAAAAATAAACTGAATATGGATGTTTAAAAAAAAAAAAAAAAAA

FIGURE 1656

MASGSVAECLQQETTCPVCLQYFAEPMMLDCGHNICCACLARCWGTAETNVSCPQCRETFPQRHMRPNRHLANVT
QLVKQLRTERPSGPGGEMGVCEKHREPLKLYCEEDQMPICVVCDRSREHRGHSVLPLEEAVEGFKEQIQNQLDHL
KRVKDLKKRRRAQGEQARAELLSLTQMEREKIVWEFEQLYHSLKEHEYRLLARLEELDLAIYNSINGAITQFSCN
ISHLSSLIAQLEEKQQQPTRELLQDIGDTLSRAERIRIPEPWITPPDLQEKIHIFAQKCLFLTESLKQFTEKMQS
DMEKIQELREAQLYSVDVTLDPDTAYPSLILSDNLRQVRYSYLQQDLPDNPERFNLFPCVLGSPCFIAGRHYWEV
EVGDKAKWTIGVCEDSVCRKGGVTSAPQNGFWAVSLWYGKEYWALTSPMTALPLRTPLQRVGIFLDYDAGEVSFY
NVTERCHTFTFSHATFCGPVRPYFSLSYSGGKSAAPLIICPMSGIDGFSGHVGNHGHSMETSP

FIGURE 1657

CGAGGATTCAGCAGCCTCCCCCTTGAGCCCCCTCGCTTCCCGACGTTCCGTTCCCCCCTGCCCGCCTTCTCCCGC
CACCGCCGCCGCCGCCTTCCGCAGGCCGTTTCCACCGAGGAAAAGGAATCGTATCGT**ATG**TCCGCTATCCAGAAC
CTCCACTCTTTCGACCCCTTTGCTGATGCAAGTAAGGGTGATGACCTGCTTCCTGCTGGCACTGAGGATTATGTC
CATATAAGAATTCAACAGAGAAACGGCAGGAAGACCCTTACTACTGTCCAAGGGATCGCTGATGATTACGATAAA
AAGAAACTAGTGAAGCCGTTTAAGAAAAAGTTTGCCTGCAATGGTACTGTAATTGAGCATCCGGAATATGGAGAA
GTAATTCAGCTACAGGGTGACCAACGCAAGAACATATGCCAGTTCCTCGTAGAGATTGGACTGGCTAAGGACGAT
CAGCTGAAGGTTCATGGGTTT**TAA**GTGCTTGTGGCTCACTGAAGCTTAAGTGAGGATTTCCTTGCAATGAGTAGA
ATTTCCCTTCTCTCCCTTGTCACAGGTTTAAAAACCTCACAGCTTGTATAATGTAACCATTTGGGGTCCGCTTTT
AACTTGGACTAGTGTAACTCCTTCATGCAATAAACTGAAAAGAGCCATGCTGTCTAGTCTTGAAGTCCCTCATTT
AAACAGAGGTCAAGCAATAGGCGCCTGGCAGTGTCAAGCCTGAAACCAAGCAATACCGTCATGTTTCAGCCAAGC
CCAGAGCCCTAAGATTACAAACAACTATGGCCGGAACCTCCTCAGCTCTCCCTCTGCAGAGTTCCCTACCCTAAG
AGAATGTTACCACCTGAACAGTCCTCGGTGAATCTGAGAGGAGAGGATGGGGTAAGGCAGAAGCACCAGCTGTAC
TACTAGAAGGGAGCTTTTGGTGGTAGATCCCCTGGTGTCTCCAACCTGACTAGGTGGACAGAGCTCAAAGAGGCC
CTCTTACCGCTAGCGAGGTGATAGGACATCTGGCTTGCACAAAGGTCTGTTCGACCAGACATATCCTAGCTAAGG
GATGTCCAAACATCAGAATGTGAGGCCAACCTTCTATCAGAGTTAAACTTTTGACAAGGGAACAAATCTCAAACT
GATCCATCAGTCATGTAGCTAGCTGTAGAGCTTGCAACTTAATAGCAGCAGCTGCCCAATGCCATGTGAAGTAAC
AAACTGGTTTTTGGTTTTTTTTTCCCCTTCAGTTTTAATGTTATGTGTAATGTATTTAAACCCTTATTTAAATAA
AACTTGTTTTCAGAAATAAAAAAAAAAAAAAAAAA

FIGURE 1658

MSAIQNLHSFDPFADASKGDDLLPAGTEDYVHIRIQQRNGRKTLTTVQGIADDYDKKKLVKPFKKKFACNGTVIE
HPEYGEVIQLQGDQRKNICQFLVEIGLAKDDQLKVHGF

FIGURE 1659

GAGCAGTGCGGTGGCTGCCGGAGAGCCAACACCACGGATCGGCCCCACGCCTTCCAGGTCATTCTCTCCGACCGG
CCCTGCCTGGAGCTAAGTGCCGAGAGCGAGGCCGAGATGGCCGAGTGGATGCAGCATCTCTGCCAGGCTGTGTCC
AAAGGGGTCATCCCCCAGGGCGTAGCTCCCAGCCCCTGCATACCCTGCTGCCTGGTCCTCACGGATGACCGCCTC
TTTACGTGCCATGAGGATTGCCAGACCAGCTTCTTCCGCTCTTTGGGCACAGCCAAGCTGGGCGACATCAGCGCC
GTCTCCACCGAGCCGGGCAAGGAGTACTGCGTCTTGGAGTTCTCCCAGGACAGCCAGCAGCTCCTCCCGCCCTGG
GTCATCTACCTGAGCTGCACTTCTGAACTGGACCGATTGCTGTCTGCACTGAACTCTGGGTGGAAAACCATCTAT
CAGGTGGACCTCCCCCACACGGCGATCCAGGAAGCCTCCAACAAGAAGAAATTCGAGGATGCCTTGAGCCTCATC
CACAGCGCCTGGCAGCGGAGCGACAGTCTCTGCCGCGGCCGAGCCTCCCGAGACCCCTGGTGCTGAGGCAGAGCT
GGTTGGCGTCCCTGGTGGGCAGGAAAGGAAGGCACGCCAGCCGGCAGGCACACTGTCACGGCTGTTGTCATGCTG
TCGGGAGCCTACAGTCCACCCCTGCCCTGGGCGGCAGAACCACCGAGTGTGGCTTAAGACAGGGTCCCTCCACTC
CAGGGATCCAGATCAGGTGCCCGGCACCCCTGGGCATCCTGCCCGACAGGTAGCGAATGGAGGTCGCTGGGGGCA
GAGGGTCCGAGCCCCGTGGGCTCTGCGGATGCACGCCCTCCTCCCGGGCCTCCGCCTCAGTCTGCAGAATTTCTG
CCGAGTGGCACCGAGAACACCATCCATCTAAGGACGAACAAAAGAACCAGGAGGGCGGGACCCCCCTCTTCCTCT
CCTGGGTTGGGGGCTGGGGCCCTGAGTGCCCAGCCATCCTTGTTCGTGTTTGAACACTCTCCTGGCCACGTGGGG
AAGCGGGAACACGGGGTGTCTGCGCATGTTTCCTCCTCCTAGCTCCATCACTGCGCACACAGCTGCCTGCCTCGC
CAGATGCAGGGGGGCGGGCAGCCCTCCCTGGCTGCCAGGAGGCTCTGCATGCCCACAGTCCTGCCCTGCCTCTCC
CCTCAACCCGGCAGTGCCTGTAGCACCGAGGAGCAAAGGGGGTGGATGGGGGGCTTGGAGAAGGGCGGAGCCCAC
CAGCCTGGCATCCATGTTGACATCTTCTGACTGTCCCCTGCTTGGCTGGAGCCAGGCCCTTCCCTAGAGTTTCGT
CAAGAGCCTCCTGGGGAAGGGGTCAGGTGGTTTGGGTTTTGTTTTTTAAAATAAAATAGACATGTTATATTGCCA
AAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1660A

GGCTGGCGGCGGTAGCTGTCGCCCGCTTGGTTGCGTGACCGCGGGGTCCGCGTCCGCTCCCTCCACCCTTCGCCC
TTCGCCCTTCGCCTCGTCCCGGCCTCCGCGGCCCAGCAACGGCCGTCATGGTGCCGTCGGCGCTCCCTGCGCGGC
CCCGCTGAGCCTCGGTGCGGCGGCGAGCGCGGTCGAGATCGCCATGCCTACCCGAGTATGCTGCTGCTGTTCCGC
TTTGCGTCCTCGCTACAAACGCCTGGTGGACAACATATTCCCTGAAGATCCAAAAGATGGCCTTGTGAAAACTGA
TATGGAGAAATTGACATTTTATGCAGTATCTGCTCCAGAGAAACTGGATCGAATTGGTTCTTACCTGGCAGAAAG
GTTGAGCAGGGATGTTGTCAGACATCGTTCTGGGTATGTTTTGATTGCTATGGAGGCACTGGACCAACTTCTCAT
GGCTTGCCATTCTCAAAGCATTAAGCCATTTGTAGAAAGCTTTCTTCATATGGTGGCAAAGCTGCTGGAATCGGG
GGAACCAAAGCTTCAAGTTCTTGGAACAAATTCTTTTGTCAAATTTGCAAATATTGAAGAAGACACACCATCCTA
TCACAGACGTTATGACTTTTTTGTGTCTCGATTCAGTGCCATGTGCCATTCCTGTCATAGTGATCCAGAAATACG
AACAGAGATACGAATTGCTGGAATTAGAGGTATTCAAGGTGTGGTTCGCAAAACAGTCAACGATGAACTTCGGGC
CACCATTTGGGAACCTCAGCATATGGATAAGATTGTTCCATCCCTCCTGTTTAACATGCAAAAGATAGAAGAAGT
TGACAGTCGCATAGGCCCTCCTTCTTCTCCTTCTGCAACTGACAAAGAAGAGAATCCTGCTGTGCTGGCTGAAAA
CTGTTTCAGAGAACTGCTGGGTCGAGCAACTTTTGGGAATATGAATAATGCTGTTAGACCAGTTTTTGCGCATTT
AGATCATCACAAACTGTGGGATCCCAATGAATTTGCAGTTCACTGCTTTAAAATTATAATGTATTCCATTCAGGC
TCAGTATTCTCACCATGTGATCCAGGAGATTCTAGGACACCTTGATGCTCGTAAAAAAGATGCTCCCCGGGTTCG
AGCAGGTATTATTCAGGTTCTGTTAGAGGCTGTTGCCATTGCTGCTAAAGGTTCCATAGGTCCGACAGTGCTGGA
AGTCTTCAATACCCTTTTGAAACATCTGCGTCTCAGCGTTGAATTCGAAGCAAATGATTTACAGGGGGGATCTGT
AGGCAGTGTCAACTTAAATACAAGTTCCAAAGACAATGATGAGAAGATTGTGCAGAATGCTATCATCCAAACAAT
AGGATTTTTTGGAAGTAACCTACCAGATTATCAGAGGTCAGAAATCATGATGTTCATTATGGGGAAAGTACCTGT
CTTTGGAACATCTACCCATACTTTGGATATCAGTCAACTAGGGGATTTGGGAACCAGGAGAATTCAGATAATGTT
GCTGAGATCTTTGCTTATGGTGACCTCTGGATATAAAGCGAAGACGATTGTTACTGCACTGCCAGGGTCTTTCCT
GGATCCTTTGTTATCACCATCTCTCATGGAGGACTACGAACTGAGACAGTTGGTCTTGGAAGTAATGCATAATCT
CATGGATCGTCATGACAATAGGGCAAAGCTTCGAGGGATCAGAATAATACCGGATGTAGCTGACCTAAAGATAAA
AAGAGAAAAAATTTGCAGACAAGACACAAGTTTCATGAAAAAGAATGGGCAACAGCTGTATCGGCACATATATTT
GGGTTGTAAAGAGGAAGACAACGTTCAGAAAAACTATGAACTACTTTATACTTCTCTTGCTCTTATAACTATTGA
ACTGGCTAATGAAGAAGTAGTTATTGATCTCATTCGACTGGCCATTGCTTTACAGGACAGTGCAATTATCAATGA
GGATAATTTGCCAATGTTCCATCGTTGTGGAATCATGGCACTGGTTGCAGCATACCTCAACTTTGTAAGTCAGAT
GATAGCTGTCCCTGCATTTTGCCAGCATGTTAGCAAGGTTATTGAAATTCGAACTATGGAAGCCCCTTATTTTCT
ACCAGAGCATATCTTCAGAGATAAGTGCATGCTTCCAAAATCTTTAGAGAAGCATGAAAAAGATTTGTACTTTCT
GACCAACAAGATTGCAGAGTCGCTAGGTGGAAGTGGATATAGTGTTGAGAGATTGTCAGTTCCGTATGTACCACA
AGTAACAGATGAAGATCGACTTTCTAGAAGAAAAAGCATTGTGGACACCGTATCCATTCAGGTGGATATTTTATC
CAACAATGTTCCTTCTGATGATGTGGTTAGTAACACTGAAGAAATCACTTTTGAAGCATTGAAGAAAGCAATTGA
TACCAGTGGAATGGAAGAACAGGAAAAGGAAAAGAGGCGTCTTGTGATAGAGAAATTTCAGAAAGCACCTTTTGA
AGAAATAGCAGCACAGTGTGAATCCAAAGCAAATTTGCTTCATGATAGACTTGCCCAAATATTGGAACTCACCAT
ACGTCCTCCTCCCAGTCCATCAGGAACACTGACCATTACTTCTGGGCATGCCCAATACCAATCTGTCCCAGTCTA
TGAGATGAAGTTTCCAGATCTGTGTGTGTAC**TGA**TCGGCGCATGAAGACCTCAGCATATGATTTGTAAAGCCTAA
AAATTAAGGCCAAGCTGAGCTTTCAGGGTTTACTTAATGTGTATTAACATACTTCTTGAAAATAATGATGGAACA
TATCTTTAACCAAATGTTTGGCATACCATATTAGAAGTTTTGGAGCTATATATAATTTCGAGTACTTTCAAAGAT
AGATTTATGCCATGTTAATTTGCTTTGAGGTTCCTGTTGCCTTTTTAAGTTGAACATGTTTTGGTTTCACTTTAT
TCCACTGTTAAGTAGTATGTTTTAAACTTTTCACAAATGTAATGTTTTTTAAAAAGTAAGCCTTCAGAGGATTGA
AACTGTATAAATTGTTTATCTCTTAAACATCTACACAGCCGCTTAGATGTAGAATTTTTGTTGTTGTTTTCTGCA
AAGGCAGATACATTTAAATATATTCCTAGTCCTGGGGCTGCAAAACTGTTCGGTGGCTTTTTGTCCCCATGCTTT
AGATAAGCTGGGATAGGCACCTTGCTATTCAGTTACTATAATAATATGTGATAGGCATTCCTCATCTTCTTCACA
ATAATAGGACATCTGTTGAATAGCATTCCTCGAATATAACCCTAAAAACGCCATACTTTAAATTGTCTGGTTCTT
GTAATATTGTGTTTCCTGCCAAGAGTTTGACCATTCTGCTTGAGAAGTGTAGAGCTTACTCTTGGAGTACCAAAC
TGTGCAATATTTTTACATCATAAGATGTATTAGTTTACAGGCTGTGCTTTGAAATTATAGTAGTATTTTGCTGTG
GCTCCATTAATTAAATGAGATATATATTTAGTGCAGAAAAAAGACATTTAAAACAGCTATTAGTTCACCTGTGAA
GAGTCTGTACATTTTGATTTCTATTAAGAGCACATTTATTTACATTTGTATATTATTTTAAATCCTCATAGTCAA

FIGURE 1660B

AAAATTCTCCAGATGGACTTTTAATTTGTAAGATTTGAACTGTGACTTGTATACATCTGTTTAGAATCAATTATA
TTTGAAAAGCTGCCTGTGTTTTAACAGTCAAGTGTGCTAAAGTTTGTCAATTTAAGCTGCTTTTGATTTCAGCTA
CCAAGATTACAGGTGCACTCTACACATAACACTGACAGACCCATAACATTACATACATCTTAGTGAATTCTATCA
CATGGTAAAATGAACAGCTTTCTTTGTAACTCATAAAATTCTCTTAGGACATTTTTATAAAGTCACCTGTTTATA
GTTCTATCTTTTCAGATTCCATTTCTTTTTACATAAAACAGCATACATATCAAAAACTGTAGCCTAGAATACAGT
TTAATTTTTGGCTTTTGTTTTTGTTTAAAAAATTGCAGTGAAGAATGGGATGTTTGTGTTTATGGCTATTTGGGC
ACCTTTAGTAGAAACAGACAAAAGTAAGGAAACGATAATAGGACAAGCATACTTGAAAATTTCTGAATACTTAAA
CAAAAGCGCAACATCTTGAAAACCAGTCTAGTCATTGAAACCTATGAAATGACACTGAAAGATCCTGGGCTGCTT
CTTAAATAAGTAGATCAGCAAGACTTGTTTCAGAGTGACAGTGGAGTCGTTACCGCTGGAGGACTAAAGGGCCCT
GTGGCAGCTGTCACTGGAACTTTGCCTCTTGATCAGGAAAAATGCTTCACCAGTCCGTAAAGCCAAGTTGTATTT
TTTTTATTGCCCTTTTTTCCTTCTGTATTTTTAAAGAAGGATGTTAATTTTTGACTATATATTTTAAAAAAATCT
AAGCAGGGGGACATGCAAAAACAATCATCATCCACTTGGATGTCATTTTATAGATTAACACTGTGTGCTTTTGTA
TGGAAAAAATATATATAATTTAATAGTATAAAAAATAAAATATATATTCATTTGCACTTACGTGAAACACAAACT
TTGCTCTACAAAATTTCGTGTTTCTTAGTGATTTTAAAATGCATGTATTGCATGTAAAGGAAAACCATTACAATT
AATGTTTATCACACCTTTATCTTGGTCTTTGTTGATTTGGGTTTTGTTGGGGTTTTTGTTACTGTTTTTAAATTA
CAGTAGGCTTCTATATATCCTGGATTTCTGAACTGGTCTTGTTGACAAGGATTCCCAAGAAATGGATCTTTTCAC
TGGCTGACTCTCCCATATCTGCAAGAGATTCTGCAGGAACTGGGTGTGCACACGGTGTTGTAGCCAGTTCAGGTA
CTGAATATTTAGGATTTGGTGAAGTTCACTGTATTGCTATATTTTTGTAGATAAATAAAACTCAATAAATTGTTA
ATCATTCTCTTTTTGCTGTATAGAATTGCTTATATCACTCTTTCTTTCATGACATTGGTTAACATTTAAATGTTC
CTCCTGTACTTGTGTTGTCTGTGACCGCTTATAGAGTTTTATTGTTATTGGTGTTTACCTGAATACCTATGCGTA
CACACACACATATTTCCTTAATACTTCTGAACTCATTATCTTTTAGAATAATAATACTACTACACTTTACCAGCA
ATTAACTTCTCCCTACCCAAAATGTTTTTCTTCCTGTCTGAAAATGGAACTAATTTGTCTTATTCGTGCTTATAT
CTGTATTAAATGCAATAAAGTTAGTTTTTGAAATGT

FIGURE 1661

AGGGSCRPLGCVTAGSASAPSTLRPSPFASSRPPRPSNGRHGAVGAPCAAPLSLGAAASAVEIAMPTRVCCCCSA
LRPRYKRLVDNIFPEDPKDGLVKTDMEKLTFYAVSAPEKLDRIGSYLAERLSRDVVRHRSGYVLIAMEALDQLLM
ACHSQSIKPFVESFLHMVAKLLESGEPKLQVLGTNSFVKFANIEEDTPSYHRRYDFFVSRFSAMCHSCHSDPEIR
TEIRIAGIRGIQGVVRKTVNDELRATIWEPQHMDKIVPSLLFNMQKIEEVDSRIGPPSSPSATDKEENPAVLAEN
CFRELLGRATFGNMNNAVRPVFAHLDHHKLWDPNEFAVHCFKIIMYSIQAQYSHHVIQEILGHLDARKKDAPRVR
AGIIQVLLEAVAIAAKGSIGPTVLEVFNTLLKHLRLSVEFEANDLQGGSVGSVNLNTSSKDNDEKIVQNAIIQTI
GFFGSNLPDYQRSEIMMFIMGKVPVFGTSTHTLDISQLGDLGTRRIQIMLLRSLLMVTSGYKAKTIVTALPGSFL
DPLLSPSLMEDYELRQLVLEVMHNLMDRHDNRAKLRGIRIIPDVADLKIKREKICRQDTSFMKKNGQQLYRHIYL
GCKEEDNVQKNYELLYTSLALITIELANEEVVIDLIRLAIALQDSAIINEDNLPMFHRCGIMALVAAYLNFVSQM
IAVPAFCQHVSKVIEIRTMEAPYFLPEHIFRDKCMLPKSLEKHEKDLYFLTNKIAESLGGSGYSVERLSVPYVPQ
VTDEDRLSRRKSIVDTVSIQVDILSNNVPSDDVVSNTEEITFEALKKAIDTSGMEEQEKEKRRLVIEKFQKAPFE
EIAAQCESKANLLHDRLAQILELTIRPPPSPSGTLTITSGHAQYQSVPVYEMKFPDLCVY

FIGURE 1662

GGCAGGAGGGAGGGAGCCAGAGGAAAAGAAGAGGAGGAGAAGGAGGAGGACCCGGGGAGGGAGGCGCGGCGCGGG
AGGAGGAGGGGCGCAGCCGCGGAGCCAGTGGCCCCGCTTGGACGCGCTGCTCTCCAGATACCCCCGGAGCTCCAG
CCGCGCGGATCGCGCGCTCCCGCCGCTCTGCCCCTAAACTTCTGCCGTAGCTCCCTTTCAAGCCAGCGAATTTAT
TCCTTAAAACCAGAAACTGAACCTCGGCACGGGAAAGGAGTCCGCGGAGGAGCAAAACCACAGCAGAGCAAGAAG
AGCTTCAGAGAGCAGCCTTCCCGGAGCACCAACTCCGTGTCGGGAGTGCAGAAACCAACAAGTGAGAGGGCGCCG
CGTTCCCGGGGCGCAGCTGCGGGCGGCGGGAGCAGGCGCAGGAGGAGGAAGCGAGCGCCCCCGAGCCCCGAGCCC
GAGTCCCCGAGCCTGAGCCGCAATCGCTGCGGTACTCTGCTCCGGATTCGTGTGCGCGGGCTCGCCGAGCGCTGG
GCAGGAGGCTTCGTTTTGCCCTGGTTGCAAGCAGCGGCTGGGAGCAGCCGGTCCCTGGGGAATATGCGGCGCGCG
TGGATCCTGCTCACCTTGGGCTTGGTGGCCTGCGTGTCGGCGGAGTCGAGAGCAGAGCTGACATCTGATAAAGAC
ATGTACCTTGACAACAGCTCCATTGAAGAAGCTTCAGGAGTGTATCCTATTGATGACGATGACTACGCTTCTGCG
TCTGGCTCGGGAGCTGATGAGGATGTAGAGAGTCCAGAGCTGACAACAACTCGACCACTTCCAAAGATACTGTTG
ACTAGTGCTGCTCCAAAAGTGGAAACCACGACGCTGAATATACAGAACAAGATACCTGCTCAGACAAAGTCACCT
GAAGAAACTGATAAAGAGAAAGTTCACCTCTCTGACTCAGAAAGGAAAATGGACCCAGCCGAAGAGGATACAAAT
GTGTATACTGAGAAACACTCAGACAGTCTGTTTAAACGGACAGAAGTCCTAGCAGCTGTCATTGCTGGTGGAGTT
ATTGGCTTTCTCTTTGCAATTTTTCTTATCCTGCTGTTGGTGTATCGCATGAGAAAGAAGGATGAAGGAAGCTAT
GACCTTGGAGAACGCAAACCATCCAGTGCTGCTTATCAGAAGGCACCTACTAAGGAGTTTTATGCG**TAA**AACTCC
AACTTAGTGTCTCTATTTATGAGATCACTGAACTTTTCAAAATAAAGCTTTTGCATAGAATAATGAAGATCTTTG
TTTTTTGTTTTCATTAAAGGACCATTCTGGCACTTTAATGATAAAATCCCATTGTATTTAAAACATTTCATGTAT
TTCTTTAGAACAACATAAAATTAAAATTTAACATCTGCAGTGTTCTGTGAATAGCAGTGGCAAAATATTATGTTA
TGAAAACCCTCGATGTTCATGGAATTGGTTTAAACTTTTATGCGCAAATACAAAATGATTGTCTTTTTCCTATGA
CTCAAAGATGAAAGCTGTTTCATTTGTGTCAGCATGTCTCAGATTGACCTTACCAAGTTGGTCTTACTTTGTTAA
TTTATCTGTTGTCCCCTTCCTCTCCTCTGCCCTCCCTTCTTGTGCCCTTAAAACCAAACCCTATGCCTTTTGTAG
CTGTCATGGTGCAATTTGTCTTTGGAAAATTCAGATAATGGTAATTTAGTGTATATGTGATTTTCAAATATGTAA
ACTTTAACTTCCACTTTGTATAAATTTTTAAGTGTCAGACTATCCATTTTACACTTGCTTTATTTTTCATTACCT
GTAGCTTTGGGCAGATTTGCAACAGCAAATTAATGTGTAAAATTGGATTATTACTACAAAACCGTTTAGTCATAT
CTATCTAATCAGATCTTCTTTTGGGAGGATTTGATGTAAGTTACTGACAAGCCTCAGCAAACCCAAAGATGTTAA
CAGTATTTTAAGAAGTTGCTGCAGATTCCTTTGGCCACTGTATTTGTTAATTTCTTGCAATTTGAAGGTACGAGT
AGAGGTTTAAAGAAAAATCAGTTTTTGTTCTTAAAAATGCATTTAAGTTGTAAACGTCTTTTTAAGCCTTTGAAG
TGCCTCTGATTCTATGTAACTTGTTGCAGACTGGTGTTAATGAGTATATGTAACAGTTTAAAAAAAAAGTTGGTA
TTTTATAAGCACAGACAATTCTAATGGTAACTTTTGTAGTCTTATGAATAGACATAAATTGTAATTTGGGAACAT
AAAAACTACTGAATAAATCATGTGGCCTAATATTGAAAATGTCACTGTTATAAATTTTGTACATTTTTGATCAAA
TGTACATCTCCCCTTTGCTAACGGCCGTCTGCTCTCAGGTTGACGTGGGTTTGATTTCTAAGTGTTTCACAGTGT
CTGTAAATCAAGACCAAAGAGCCTGTCGATGAGACTGTTTATTACCAGATTCACTTCTGAATTGGCCAGAGGAAA
TCTGAATGTATTATCCTGTGTGTGTCTAGGTAGAGATATTGGAAGGCTGCCAGGGGATTTCGAAGTTTGCAACCT
TTATAGGATAACTGATGGCAATATTAAGACAGACGCCTGCTTTTGCAAATAACTTACAAGACTGTAAATTCCAAA
GATCTGAATGGGGCTTTCCTGATGTTGGTATCTAAGGCTTAGGCCTATAGATTGATTTACCTTTGGAATTGTGCT
CCAAATGTCTACTGAAGCTTAACCGAAGAACTAATAAATGGACTACAGTAGCTCACGTTACAGGGAACCACCCTA
GGCAGGGAGGCTCTGTGTGTTAAAATGAGGGTCTCACTGCTTTAGGATTGAAGTGGCTGGAAAGAGTGATGCCTG
GGGAAGGAGATGGAGTTATGAGGGTACTGTGGCTGGTACTTTCTGTACTAAACATTTCCTTTTTCTATTTTACCA
CTAATTTTCTTTTAAACTGTGAGCCGTCCAAGTCAGAAGAAGACAGCAAAAAAAGCAACTTTTCCAACATACAAT
TTACTTTTAATAAAGTATGAATATTTCATTTTGAGAACATTCCCTGGAATTGCCACATAATTCATTAAAAACATT
TTTTTAAGCAACACTTGGAACAGTGTTTACTTTAAATCCTTAATGGCCTTAATTAATTCTCAGATTCCTGCCCCA
TCACTTACAGAACCAATTCACTTTAGAGTGACTAAAAGGAAACGATAGCCTAGCTTTCTAAAGCCACGCTGTGTC
CCTCAATTACAGAGGGTAGGAATGGGTATACCTCTAACTGTGCAAAGCAGAGTGAAATTCAATTCATAGAATAAC
AACTGCTGGGAATATCCGTGCCAGGAAAAGAAAAATTTCTGGCAAATATTTTGTCACTGCTGTAAAGCAAAATAT
TTGTGAAAGTGCCAAAATAAAGTCTGTCATGCCAAAAGT

FIGURE 1663

GRREGARGKEEEEKEEDPGREARRGRRRGAAAEPVAPLGRAALQIPPELQPRGSRAPAALPLNFCRSSLSSQRIY
SLKPETEPRHGKGVRGGAKPQQSKKSFREQPSRSTNSVSGVQKPTSERAPRSRGAAAGGGSRRRRRKRAPPSPEP
ESPSLSRNRCGTLLRIRVRGLAERWAGGFVLPWLQAAAGSSRSLGNMRRAWILLTLGLVACVSAESRAELTSDKD
MYLDNSSIEEASGVYPIDDDDYASASGSGADEDVESPELTTTRPLPKILLTSAAPKVETTTLNIQNKIPAQTKSP
EETDKEKVHLSDSERKMDPAEEDTNVYTEKHSDSLFKRTEVLAAVIAGGVIGFLFAIFLILLLVYRMRKKDEGSY
DLGERKPSSAAYQKAPTKEFYA

FIGURE 1664

CTTTTTATTTATGAGACAGCTGGAGTGCTGATTGTTAATAGTGAATATCCGGCAGAAAGGAAACAAGCCTTAATG
AGGAATCTGTTGACTCCACTAATGGAGAAGTTTAAAATTCTGTTAGAAAAGTTGATGCTGGCACAAGACGAAGAA
AGGCAAGCCTCTCTAGCAGACTGTCTTAACCATGCTGTTGGATTTGCAAGTCGAACCAGTAAAGCTTTCAGCAAC
AAACAGACTGTGAAACAATGTGGCTGTTCCGAAGTTTATCTGGACTGTTTACAGACATTCTTGCCAGCCCTCAGT
TGTCCCTTACAAAAGGATATTCTCAGAAGTGGAGTCCGTACTTTCCTTCATCGAATGATTATTTGCCTGGAGGAA
GAAGTTCTTCCGTTCATTCCATCTGCTTCAGAACATATGCTCAAAGATTGTGAAGCAAAAGATCTCCAGGAGTTC
ATTCCTCTTATCAACCAGATTACGGCCAAATTCAAGATACAGGTATCCCCGTTTTTACAACAGATGTTCATGCCC
CTGCTTCATGCAATTTTTGAAGTGCTGCTCCGGCCAGCAGAAGAAAATGACCAGTCTGCTGCTTTAGAGAAGCAG
ATGTTGCGGAGGAGTTACTTTGCTTTCCTGCAAACAGTCACAGGCAGTGGGATGAGCGAAGTTATAGCAAATCAA
GGTGCAGAGAATGTAGAAAGAGTGTTGGTTACTGTTATCCAAGGAGCAGTTGAATATCCAGATCCAATTGCACAG
AAAACATGTTTTATCATCCTCTCAAAGTTGGTAGAACTCTGGGGAGGTAAAGATGGACCAGTGGGATTTGCTGAT
TTTGTTTATAAGCACATTGTCCCCGCATGTTTCCTAGCACCTTTAAAACAAACCTTTGACCTGGCAGATGCACAA
ACAGTATTGGCTTTATCTGAGTGTGCAGTGACACTGAAAACAATTCATCTCAAACGGGGCCCAGAATGTGTTCAG
TATCTTCAACAAGAATACCTGCCCTCCTTGCAAGTAGCTCCAGAAATAATTCAGGAGTTTTGTCAAGCGCTTCAG
CAGCCTGATGCTAAAGTTTTTAAAAATTACTTAAAGGTGTTCTTCCAGAGAGCAAAGCCCTGAGGACTGGATTTC
CCTGTGCCTACTTCATGATCATGAATTCCAGTTAATTTATAAAGAGGCGATTTTTGTGTGCCATTCACACTGGTC
TTTTTCACATTGTTTTGAGCTTATTGCAGTATATGTTTTGGGATTTTTCTGTAAAATGGGTGTAATTTTCCTAAT
ACAGGTATGTAACAACAAAAGAAGTTGCCTGCATGCCGGTCCAAATTGTTCTGTATAAAGATGCTCTTAAAAGAC
ACAAGAGTTATCCTAGAACCTTAATTCTTTTTTATTTGAAATTTTAAGTCAAGTCCTTTATAAAGACCATAGCAG
TGGAAAACAGTGTACTTTTTAAAAAATTGCTGAATATAAAATCTTTGAGAATTTTCTTTATGTGTGAAGACACAA
AGTATGGGGGAAGACAGCAATCAAAACTAACTTTTTGTAGATAGCCATTTCATTTCTTTAAACTGTTTCAACGCC
AATATGTATTCTACAAAAGAGAATGGTTTTAGGCTCCAGTGTTATACTTTTTTTTATATATATATATAAAAATAA
ACTTTACGTAGTGAAAAAAAAAAAAAA

FIGURE 1665

GGGGAGTAGGTCGGGAAGTTCTAGTAGTGGTAGTTCCAGTAGCAATAGCAGAACTAGTAGTACTAGTAGTACTGT
CTCTAGCTCTTCATACAGTTCTAGCTCAGGTAGTAGTCGTACTTCTTCTCGGTCTTCTTCTCCTAAAAGGAAAAA
GAGACACAGTAGGAGTAGATCTCCAACAATCAAAGCTAGACGTAGCAGGAGTAGAAGCTATTCTCGCAGAATTAA
AATAGAGAGCAATAGGGCTAGGGTAAAGATTAGAGATAGAAGGAGATCTAATAGAAATAGCATTGAAAGAGAAAG
ACGACGAAATCGGAGTCCTTCCCGAGAGAGACGTAGAAGTAGAAGTCGCTCAAGGGATAGACGAACCAATCGTGC
CAGTCGCAGTAGGAGTCGAGATAGGCGTAAAATTGATGATCAACGTGGAAATCTTAGTGGGAACAGTCATAAGCA
TAAAGGTGAGGCTAAAGAACGAGAGAGGAAAAAGGAGAGGAGTCGAAGTATAGATAAAGATAGGAAAAAGAAAGA
CAAAGAAAGGGAACGTGAACAGGATAAAAGAAAAGAGAAACAAAAAAGGGAAGAAAAAGATTTTAAGTTCAGTAG
TCAGGATGATAGATTAAAAAGGAAACGAGAAAGTGAAAGAACATTTTCTAGGAGTGGTTCTATATCTGTTAAAAT
CATAAGACATGATTCTAGACAGGATAGTAAGAAAAGTACTACCAAAGATAGTAAAAAACATTCAGGCTCTGATTC
TAGTGGAAGGAGCAGTTCTGAGTCTCCAGGAAGTAGCAAAGAAAAGAAGGCTAAGAAGCCTAAACATAGTCGATC
GCGATCCGTGGAGAAATCTCAAAGGTCTGGTAAGAAGGCAAGCCGCAAACACAAGTCTAAGTCCCGATCAAGGTA
GTATACTTTTTAAAGTATTTTGTCTGATTTTTAAAAAAAATTGACTGAATTTATTCAAAGTTGAAAGTGTCCTTT
CTCTCTCTCTTTAATAAACTCAGTTTGGTACTTGATAAATAATCATAGTCTTAAATGTTAGAAATCCTATATAAT
ATTATTTATTTAAAATTGCAGATTTTTAATTTAAAATACATTTTTATTTTTAAATTTTGTCTTTTCCCTTTTTTT
TCAGATCAACAACCCCTCCCCGTCGTAAACGCTGAGGAATGATGTGGCAAGAATGCCATGATGTTCTTTAAAAAA
ATTCCATGAGTTTTAAGGGCTTGTCTCATTATAGAGGCACATTGTGGCTGTGTAGGTGAAACCAGAATCTTTTTT
TTTTAATCTGTAAATAGGTGTACTTTTTCCAATGCTGCTCCAAGTTACTTAATAGGATTTCTTTGTATTACGTTT
TTTTCAAAAAATATAGTGCATAATAAGACTATAAACATGCCATTCTCTTTCAGCTGTAATGTTCTTAAAATTATT
CTTGAATGTACTGTGATGTCAATAAAGCTCTTTAGTTCATTTTTGTTAAACTCTTGCACCTTAATTTTATGGTTT
TAATCTAAGGAACGTACTTTTATAAAAAGGCAGCTGGAATTTTGTATAACAGGTTTTAAAGGTACCTTCTCTCAC
CTCCCCCAAAGAAAATGGTTTTTACTTAATAGTTTGTCAAAGTTTGTAAATTGTACCCATGGACTTTTGCCAGAT
TCCAACTTTAAGGGTATGAAAGAGGGCTAGAAATAGACCTTTACTTTTCATTTGGAAGTATTTGACAACTTTCTA
AACTTTTCTTCCTATTTTGGGGATTTTCAAGTAATATATTCTCTGTGTGTATAACGTGTGGTTCACTCCTGTAAA
ATGAAATTGCTGGAATCAATCAAGCCAGTGCACCAGTAGAGTTATTTGTAAGGAACGATTGTGTTTGACAGTAAT
AGTCAAGTCTGGAACTATATTCTACAGTCACCCACTTCTGTTTTAGAAGCATTTTGAAACACTTTTTGGGGTTAT
AGAAATAAGACTCATGATTCAATATATTTATTTATATTTTTAAAGTATAATATGACCTCAAATCAATGGAGGAAT
GCTGTATTATGCAGGTTTGTGTCAATTTCATGACATTAAAATTGTCTGATTTTGTCCGTTTCTTAAAATTATGAT
TAGTGAGTGGTCTAACAGTTTAAGGCATTGATAACTTACAAGTAGAGTGGGGCTCTCAAAGCATTTTAACTCAGT
TGCTTTAGGGTCCATTTTTTTATGTAATCACTTACTCAGTGATAAATGAATCTCTGAAAACAAATGCTTTTACAT
TTTAATTTAAAAAGAAAACAGGTGCAGGCCACAGAAAAGTTTTAAAGTATGCCTTCTTACCAGCAATAGTTCATT
TTAAAAATCATGCCAGATTTTTGCCAAGATCAGTGTTTCCTCAACATGAAGATAGAAATAGATTTGTATAGTGTG
CTCTTGTACCTCTACATAGATTATTATATAATTTTGAGCAGTTACACATTTATCTAAAGGAAATAAATCAACTGT
GAATAAATGCATGTTTACCAAAATGGCTGTTTACAGTGCATTCAGTTCTGATATTTATAAAGATGACATTTCACA
GAATAACTTTAAAATAGTTTGAAATTCTATATAGTTTAGACATCGATCACATCTGGAGACAAAATAAAATGTGCA
ATATTTTTTATGTAGGCGAGCTAACACAGTGTACCTAATTGCAGAATTATCTGATTAATTTGTAATAGATAAGTT
GTATAACATTTTCATATCTTAAAATGTTTTTTAGATCAATCTTGAAGTGAAATATTTTCAAAATAAAATTCTACA
GAAAAAAAAAAAAAAAAAAA

FIGURE 1666A

AGGCCACATTGCAGTTGGGCAGCAAGGGCTTGGTAGTGTGAAGGACCCAAGTAACTGTGGGATGCCTCTGACCCC
TCCCACCTCTCCAGAACAGGCTATCCTAGGTGAGAGTGGAGGTATGCAGAGTGCTGCCAGTCACCTGGTTTCCCA
AGATGGAGGGATGATAACGATGCACAGTCCAAAGAGATCGGGGAAGATTCCTCCAAAACTCCACAATCATATGGT
CCATCGAGTCTGGAAGGAATGCATCCTCAACAGAACCCAGTCCAAGAGGAGCCAAATGTCAACTCCAACTCTTGA
AGAAGAGCCTGCTAGCAATCCTGCTACTTGGGATTTTGTGGATCCAACCCAAAGAGTCAGCTGTTCTTGTTCCAG
GCATAAGCTTTTAAAACGTTGTGCAGTCGGGCCCAATCGACCTCCCACAGTATCTCAACCAGGGTTCAGTGCAGG
ACCATCATCATCTTCATCTTTACCACCTCCTGCTTCTTCTAAGCACAAAACAGCAGAAAGACAGGAAAAAGGAGA
CAAGCTGCAAAAGAGACCCTTAATACCATTTCACCATAGGCCCTCTGTGGCCGAAGAATTATGCATGGAGCAAGA
TACACCAGGACAGAAACTAGGGTTGGCAGGGATAGACTCCTCCTTAGAGGTGTCTAGCAGTAGGAAATATGATAA
GCAAATGGCCGTGCCTTCCAGAAATACAAGCAAGCAAATGAATCTGAATCCTATGGATTCACCTCATTCCCCTAT
ATCCCCTCTGCCACCAACACTCAGCCCTCAGCCACGAGGTCAGGAAACAGAGAGTTTGGACCCACCATCGGTCCC
TGTGAATCCAGCCCTTTATGGAAATGGACTAGAACTCCAGCAGTTGTCTACTCTGGATGACAGAACTGTCCTCGT
AGGCCAAAGACTGCCTCTCATGGCAGAGGTCAGCGAGACAGCCTTATATTGTGGGATTAGGCCCTCGAACCCGGA
GTCATCAGAAAAGTGGTGGCATAGTTATCGTCTCCCACCCAGTGATGATGCTGAGTTCAGGCCTCCAGAGCTCCA
GGGTGAGAGATGTGATGCCAAAATGGAGGTAAACTCAGAGAGCACTGCATTGCAAAGACTCTTAGCACAACCTAA
CAAACGGTTTAAAATCTGGCAAGACAAACAGCCCCAGTTGCAGCCACTCCACTTCCTTGACCCATTGCCTCTATC
ACAACAACCTGGAGACAGTTTGGGAGAAGTGAATGACCCATATACCTTTGAAGATGGTGACATAAAATACATCTT
TACAGCCAACAAGAAATGCAAACAAGGGACGGAGAAAGATTCCCTGAAAAAGAATAAGTCAGAGGATGGATTTGG
TACCAAGGATGTCACTACACCAGGTCATTCCACGCCGGTGCCTGATGGGAAAAATGCCATGTCTATTTTCAGTTC
TGCTACTAAAACAGATGTCCGGCAGGATAATGCTGCTGGCAGAGCTGGCTCCAGTAGCCTTACACAGGTAACAGA
TTTGGCACCTTCCCTGCATGACTTAGACAACATCTTTGATAATTCTGATGACGACGAACTTGGGGCTGTATCACC
TGCTCTGCGCTCATCAAAAATGCCTGCAGTTGGGACAGAAGACCGACCTCTTGGGAAGGATGGAAGAGCTGCTGT
TCCTTATCCACCAACAGTTGCAGACTTGCAAAGGATGTTTCCCACTCCACCATCTTTGGAACAGCATCCTGCATT
TTCTCCTGTGATGAATTATAAAGATGGGATCAGCTCAGAGACAGTGACAGCATTAGGCATGATGGAGAGCCCTAT
GGTCAGTATGGTTTCAACACAACTCACAGAATTCAAAATGGAAGTGGAAGATGGATTAGGAAGTCCCAAGCCCGA
GGAAATTAAGGACTTTTCATATGTGCACAAAGTTCCATCCTTTCAACCTTTTGTGGGATCCTCCATGTTTGCTCC
ACTGAAGATGTTGCCGAGCCATTGTTTGCTACCTCTGAAGATACCTGATGCCTGTCTGTTTCGGCCTTCATGGGC
AATTCCTCCTAAAATTGAACAACTGCCCATGCCCCCTGCAGCCACTTTCATTAGAGATGGCTACAATAACGTGCC
TAGTGTTGGGAGCCTAGCAGATCCAGACTATCTGAACACACCACAGATGAACACACCCGTGACGTTGAACAGCGC
TGCCCCAGCCAGCAATAGTGGGGCAGGAGTCCTACCATCTCCAGCAACCCCTCGCTTCTCTGTCCCCACACCACG
AACCCCCAGGACCCCAAGAACTCCCAGAGGTGGGGGCACTGCCAGTGGTCAAGGGTCTGTTAAGTATGATAGCAC
CGATCAAGGATCACCAGCCTCCACCCCCTCTACTACACGGCCCCTCAACTCTGTGGAGCCCGCCACCATGCAGCC
AATTCCCGAAGCCCACAGCCTCTATGTTACCCTGATTCTCTCCGATTCCGTGATGAATATCTTTAAAGACAGAAA
CTTTGACAGCTGTTGCATCTGTGCCTGCAACATGAACATCAAAGGGGCGGATGTCGGGCTTTACATCCCCGATTC
TTCCAATGAGGACCAGTACCGCTGTACCTGTGGGTTTAGTGCGATTATGAACCGCAAACTTGGCTACAATTCAGG
ACTCTTCCTTGAAGATGAGTTGGATATTTTTGGGAAGAATTCTGATATTGGTCAGGCTGCAGAGAGGCGCTTAAT
GATGTGTCAGTCCACCTTCCTTCCTCAGGTGGAAGGAACCAAAAAACCCCAGGAGCCACCCATAAGCCTTCTCCT
CCTCCTCCAGAATCAACACACACAACCTTTTGCTTCACTGAATTTCCTGGACTACATTTCCTCTAACAATCGCCA
AACTCTTCCCTGTGTAAGCTGGAGTTATGACCGGGTGCAAGCAGATAATAATGATTACTGGACGGAATGCTTTAA
TGCGTTGGAGCAGGGGCGGCAGTATGTGGATAACCCCACTGGTGGAAAAGTGGACGAAGCTCTGGTGAGAAGTGC
CACTGTGCACTCTTGGCCTCACAGCAATGTGCTGGACATCAGCATGCTCTCCTCCCAGGATGTGGTTCGTATGCT
GTTGTCCCTGCAGCCCTTTCTCCAAGATGCCATCCAAAAGAAGCGCACGGGCAGGACCTGGGAGAACATCCAGCA
TGTGCAGGGACCACTCACTTGGCAGCAGTTCCATAAAATGGCAGGACGGGGAACCTACGGTTCGGAAGAATCTCC
TGAGCCGTTGCCCATCCCCACTCTGCTGGTAGGCTATGACAAGGATTTCCTCACCATCTCGCCATTCTCCTTGCC
GTTTTGGGAGAGGCTCTTGTTGGACCCATATGGGGGCCACCGTGATGTTGCCTATATTGTGGTGTGTCCAGAAAA
TGAGGCCTTGCTCGAAGGAGCCAAAACTTTCTTCAGGGACTTGAGTGCTGTATACGAGATGTGTAGGCTTGGGCA
GCACAAGCCCATCTGCAAAGTGCTACGTGACGGGATCATGCGCGTGGGAAAAACTGTGGCACAGAAGCTGACAGA
TGAGCTTGTGAGTGAGTGGTTTAACCAGCCTTGGAGCGGCGAGGAGAATGACAATCATTCCAGACTCAAACTTTA

FIGURE 1666B

TGCGCAAGTTTGCCGCCATCACCTAGCACCTTATTTAGCCACTCTGCAGCTTGATAGCAGCCTATTGATACCACC
TAAATACCAGACCCCACCAGCAGCAGCACAGGGACAAGCTACGCCAGGGAATGCTGGGCCCTTAGCTCCAAATGG
ATCAGCAGCTCCCCCAGCTGGCAGTGCATTTAATCCCACCTCGAATAGTAGTTCTACAAATCCTGCAGCAAGTAG
TTCTGCATCTGGTTCCTCTGTGCCACCGGTCTCATCGTCTGCCTCTGCTCCTGGTATTAGCCAGATAAGCACTAC
CTCTTCTTCAGGATTCAGTGGTAGTGTTGGAGGGCAGAACCCCAGCACTGGGGGCATTTCTGCGGATAGAACGCA
AGGGAACATAGGCTGTGGTGGAGACACTGACCCTGGGCAGAGCTCTTCTCAGCCCTCACAGGATGGACAAGAGAG
TGTTACAGAAAGGGAGAGAATAGGAATTCCCACGGAGCCTGACTCTGCAGACAGCCATGCCCACCCTCCAGCTGT
TGTCATTTACATGGTGGACCCGTTCACGTATGCTGCAGAGGAGGACTCCACTTCTGGGAACTTTTGGCTGTTGAG
CTTGATGCGCTGCTACACAGAAATGCTGGATAATTTACCTGAGCATATGAGAAATTCTTTCATTCTCCAGATTGT
GCCTTGCCAGTACATGCTGCAGACAATGAAGGATGAGCAAGTTTTCTACATTCAATACTTGAAGTCCATGGCATT
TTCAGTGTACTGCCAGTGCAGGCGACCACTGCCTACACAGATCCACATTAAATCCCTCACGGGATTTGGGCCTGC
AGCCAGCATTGAGATGACCCTCAAGAACCCTGAGCGGCCCAGCCCAATCCAGCTTTACTCCCCTCCCTTTATATT
GGCCCCAATCAAAGACAAGCAGACAGAGCTGGGAGAGACGTTTGGTGAGGCGAGCCAGAAATACAATGTGCTCTT
CGTGGGCTATTGTCTGTCTCACGACCAGCGCTGGCTTTTGGCTTCCTGCACTGACCTCCATGGGGAATTATTAGA
GACCTGCGTTGTAAATATTGCTTTACCAAACAGGTCACGGAGGAGTAAAGTATCTGCACGTAAAATTGGACTACA
GAAGTTATGGGAGTGGTGCATAGGGATTGTCCAAATGACATCTCTACCCTGGAGAGTTGTAATCGGGCGACTTGG
GCGTCTTGGCCATGGGGAGCTTAAAGATTGGAGTATCCTCCTTGGAGAATGTTCACTACAGACAATCAGCAAAAA
GCTCAAGGATGTGTGCCGGATGTGTGGAATCTCTGCCGCAGACTCTCCTTCTATCCTTAGTGCCTGCCTGGTTGC
CATGGAGCCCCAGGGGTCCTTTGTAGTGATGCCAGATGCTGTCACAATGGGCTCTGTTTTTGGCCGAAGTACTGC
ACTGAACATGCAGTCATCTCAGCTCAACACCCCTCAAGATGCTTCTTGTACACACATCTTGGTGTTCCCAACATC
ATCAACCATCCAGGTGGCTCCAGCCAACTACCCCAATGAAGATGGGTTTAGCCCCAACAATGATGATATGTTTGT
TGACCTTCCATTCCCAGATGATATGGACAATGATATTGGCATATTAATGACTGGGAACCTCCATTCCTCTCCCAA
CTCTTCCCCAGTACCCTCCCCAGGCTCTCCTTCTGGAATTGGTGTGGGCTCTCACTTCCAGCATAGTCGGAGCCA
GGGTGAGCGTCTTCTTTCTAGAGAAGCACCAGAGGAGCTAAAGCAGCAGCCCCTGGCCCTTGGGTATTTTGTATC
AACTGCCAAAGCTGAGAATCTTCCCCAGTGGTTTTGGTCATCGTGTCCCCAGGCTCAAAACCAGTGCCCTCTCTT
CTTAAAGGCTTCGCTGCATCACCACATTTCAGTAGCACAGACAGACGAACTTCTGCCTGCCAGGAATTCTCAGCG
GGTTCCACACCCTCTTGACTCCAAAACCACGTCGGATGTTTTAAGGTTTGTTTTGGAGCAGTACAACGCTCTGTC
CTGGCTCACGTGCAATCCGGCCACCCAGGACCGTACTTCCTGCCTTCCCGTCCACTTTGTGGTGCTCACTCAGTT
GTACAATGCCATCATGAATATACTT**TAA**TTGGAAAAGCACTTGTTCTCTCTGGCTCAGTTCCTTCTCCCTGCAAC
CTCAGTCCAAGGAACCTGCTACACTCTGCAAATAACCCACATCCTTTTCTTCAGACCACTCTCCACAGTCCTGCA
CTGTGATTCCTTCTCAGCAGGCACATGTCAATTCTGCAGTGTTCATTACCAGAGTGACTCCTTGACACTTCTCTC
ATGGACCTGGAAACTTCCATAAGTGGTGACTTTCAGCCAGTGCGGTGGTGTGTGTAGCCCCAACCACTGGTCCCC
AGGAAGTGGTGGTGGTTGATGGCTTTTCAGCGGGAAACAGAAGAGACAGTGTCCTTTTGCACAAGAGTCTGTGTT
TTCAGCCTCTGTATACAATTGAGGGCAGTCTAGCCCTTTGGATGAAATCCTCTTAGTTACTGGTGTATGGCCTGT
GGGTTACCTGAACTCCATAATCGGGGACTTTTTAAAAATAAGAACCAGCTCAAGTACATGGTTTCATACTGGGGT
TTCTGTCTCCCTAGTGTTCCCATCCAGATTAGCATGAGTGCTTTGGTTGACTTCAAACCTGTGTGTCAATGCAGA
AGGTCTGGAGACAGCTTCATTTTGTTTATTTATTTTAATTTGTTTTGTCATATGGTTTTTGTGACTTTATTTTTT
TAATTCACAAGGACCAGGTACAGTAGCTGAAACCCAATTCAGATCCACCATAGGATTCTTTGACTACATACCTCT
GTCCTAGAAGCCGGAAAAGGAGTAAAAACACATTGGGGAGATCATGCCTAAAAGTAATATATTCAAAACCACCCA
GCAGTAGGTTTTGTTAACAACAAACTGGATTTTAAAAGTTCTGCCATGTTAAGTGGCCAGCATTTCATGAAGGAT
AACATTTTTATACAGAAGGCAGTCAAGCTCAACTCAGAGCCATGGAGGCAAGTACCTTAATTAGTTTTATATAGT
CACAACGGAAATATATTTTCTAGTGAATTCTTATTGGAAGCCAGGTCTCTCCTCTCATTAGATCAAAAGGGACTT
ATGTACATACAACAATTGAAAGTGTTTGCTCATGAAATCAGTTATAAATATGGTGAATTTTTTCTGGACCATAGG
AATATTATTTCAAAGAAATATTACAACTTAACCATTAAATTAGTACTTGAAGTTGAGCCTTTGTGGTGGGACTTT
TTAAAAAAATGCCTTTTTAAAGCATTAATGGCTAATTGAAGTATTTTATGACTCCTCATTCCTGGCCCAGAGGGT
TGTCTTTGAAACCCTGTTTCTAACCCTTGTGTTGTGTGTTTCTGTCTGAGGACAGTGGGTGTGTACTGGCCTCCC
GGGAGCCACTGTGACCAGGCCTTTGAGCTCTTGTCATCTGTGGAGAGAATCATGCAAATTTTAAAAGTTCTTCCA
AGAGACTTCCATGTCCTGGTTATTAACAAAAAAGGAAAAATGTAATAATTGATATGATTTTGTAAAAGTATTTTT

FIGURE 1666C

CTTGAAATAATCTAAAGTTTAAAACATTATATTAAAAAAAAAAGTTGTGTGGTGGGAATGTGAAAGCAGAGAAAT
AACTTGTAAATGGATAATTTTGTTCTCTGTACCACCAGTTGAAGGGGGGGGTTGACTTTCGCAATGTATAGGATAA
AAAATCTGATATATCAAACCATTTGTATCTAATGTGTACAGTGTAAAATTGACTTTAAAAATATTGCAGTGCTAT
TTTTTCTTAATCAGAAAGGAAAATTCTCAAGGCCTTTTGAAGAGCATAAGAAGATGAAGATTGTAAACTTGTATA
AAATTATCTTGGTGAGAAGACAAATTGTAAAGTAGATATTTGTAATCTTTTACCACTTTGGGGTTGCTTTTTTCC
CGGAATTCATCAGAACTTTGAATTTTTTTTTTAAATGGGCTGTTTTTAATGCAGGGGCTTTTCTTCCCTAGAAAC
CCAATTCTAAGCAGAAAAAGAAAAAAAACACAAAAAATAAAAAACCCCTACAAAAAAACTTTAAAAAAAATGGCA
GCAAAGGGTAGTTTTCATCTGGTGTCTTTTATTTAAGTTTTTTAAGTTAAGAAAAGCTGGTGACATATTTATACG
TTTTTGTGCAAAAATAAATGAATGGCAATAGATTTTAAAAAATCTTATTATGTACTTCTGTGTGAAAAAGTCTGT
ATAATATTTCCCTTAAATATGCATTATTTTACTTGTGAGTTTTTTACTGAATTAATCTGAAATGTACAAGCCCTG
GATTTGCTACAGAGTGAGAAGTTATTTTATTTTTTTTTATTTTTAATTTTGGAAATTCTGCAGAAATCAGAACTC
TTACCATGGTTTGAACAAAAAAAGGGGAAATGGGGAGGGGAAAAGGGTGGGATTGTCCAGCATGCTTGTATGTAT
ATTTCAGAACCTTTTTTAAATGTAAAAGCTGTACATTTCTGGGAAGTTCTGAATTTCTTTTGTTTCCTTTTTTCC
TTCAAGCATTTTGCAGTGAGCTTCTTTTATATATAGCAAACAATTTGAAAGAATACAAAAATATGTGAAGTTCAT
TTAAAAAAATAACTACAGTATAGCGCTGGTACAGTACACTAAAAGACTTTGATAAAAAGAAACAATAATAAAAGG
CCTCCATTTTAAATGTCATTCATATATACCTTGTGGATGAGAGCTATATACTTTTACACACTTTTTTAGAGGAAT
AAATTATTGAATTACTGAAAAAAAAAAAAAAAA

FIGURE 1667

GHIAVGQQGLGSVKDPSNCGMPLTPPTSPEQAILGESGGMQSAASHLVSQDGGMITMHSPKRSGKIPPKLHNHMV
HRVWKECILNRTQSKRSQMSTPTLEEEPASNPATWDFVDPTQRVSCSCSRHKLLKRCAVGPNRPPTVSQPGFSAG
PSSSSSLPPPASSKHKTAERQEKGDKLQKRPLIPFHHRPSVAEELCMEQDTPGQKLGLAGIDSSLEVSSSRKYDK
QMAVPSRNTSKQMNLNPMDSPHSPISPLPPTLSPQPRGQETESLDPPSVPVNPALYGNGLELQQLSTLDDRTVLV
GQRLPLMAEVSETALYCGIRPSNPESSEKWWHSYRLPPSDDAEFRPPELQGERCDAKMEVNSESTALQRLLAQPN
KRFKIWQDKQPQLQPLHFLDPLPLSQQPGDSLGEVNDPYTFEDGDIKYIFTANKKCKQGTEKDSLKKNKSEDGFG
TKDVTTPGHSTPVPDGKNAMSIFSSATKTDVRQDNAAGRAGSSSLTQVTDLAPSLHDLDNIFDNSDDDELGAVSP
ALRSSKMPAVGTEDRPLGKDGRAAVPYPPTVADLQRMFPTPPSLEQHPAFSPVMNYKDGISSETVTALGMMESPM
VSMVSTQLTEFKMEVEDGLGSPKPEEIKDFSYVHKVPSFQPFVGSSMFAPLKMLPSHCLLPLKIPDACLFRPSWA
IPPKIEQLPMPPAATFIRDGYNNVPSVGSLADPDYLNTPQMNTPVTLNSAAPASNSGAGVLPSPATPRFSVPTPR
TPRTPRTPRGGGTASGQGSVKYDSTDQGSPASTPSTTRPLNSVEPATMQPIPEAHSLYVTLILSDSVMNIFKDRN
FDSCCICACNMNIKGADVGLYIPDSSNEDQYRCTCGFSAIMNRKLGYNSGLFLEDELDIFGKNSDIGQAAERRLM
MCQSTFLPQVEGTKKPQEPPISLLLLLQNQHTQPFASLNFLDYISSNNRQTLPCVSWSYDRVQADNNDYWTECFN
ALEQGRQYVDNPTGGKVDEALVRSATVHSWPHSNVLDISMLSSQDVVRMLLSLQPFLQDAIQKKRTGRTWENIQH
VQGPLTWQQFHKMAGRGTYGSEESPEPLPIPTLLVGYDKDFLTISPFSLPFWERLLLDPYGGHRDVAYIVVCPEN
EALLEGAKTFFRDLSAVYEMCRLGQHKPICKVLRDGIMRVGKTVAQKLTDELVSEWFNQPWSGEENDNHSRLKLY
AQVCRHHLAPYLATLQLDSSLLIPPKYQTPPAAAQGQATPGNAGPLAPNGSAAPPAGSAFNPTSNSSSTNPAASS
SASGSSVPPVSSSASAPGISQISTTSSSGFSGSVGGQNPSTGGISADRTQGNIGCGGDTDPGQSSSQPSQDGQES
VTERERIGIPTEPDSADSHAHPPAVVIYMVDPFTYAAEEDSTSGNFWLLSLMRCYTEMLDNLPEHMRNSFILQIV
PCQYMLQTMKDEQVFYIQYLKSMAFSVYCQCRRPLPTQIHIKSLTGFGPAASIEMTLKNPERPSPIQLYSPPFIL
APIKDKQTELGETFGEASQKYNVLFVGYCLSHDQRWLLASCTDLHGELLETCVVNIALPNRSRRSKVSARKIGLQ
KLWEWCIGIVQMTSLPWRVVIGRLGRLGHGELKDWSILLGECSLQTISKKLKDVCRMCGISAADSPSILSACLVA
MEPQGSFVVMPDAVTMGSVFGRSTALNMQSSQLNTPQDASCTHILVFPTSSTIQVAPANYPNEDGFSPNNDDMFV
DLPFPDDMDNDIGILMTGNLHSSPNSSPVPSPGSPSGIGVGSHFQHSRSQGERLLSREAPEELKQQPLALGYFVS
TAKAENLPQWFWSSCPQAQNQCPLFLKASLHHHISVAQTDELLPARNSQRVPHPLDSKTTSDVLRFVLEQYNALS
WLTCNPATQDRTSCLPVHFVVLTQLYNAIMNIL

FIGURE 1668A

GAAGAAGTCCCGGGCGGTACCCGGCCGTAGGCCCATCCTGCAACTCTCTCCGCCGGGTCCTCGGGGCAGCACGCC
GGGCCGGGACCCGGAGCCGGAACCCGACACTGAGCCGGACTCAACCGCGGCGGTCCCCAGCCAGCCCGCCCCGTC
GGCGGCGACGACCACCGCGGTGACTGCCGCCGCGGCCTCGGACGACTCGCCTTCAGAAGATGAACAGGAAGCGGT
GCAGGAGGTTCCTAGAGTTGTTCAGAATCCTCCAAAACCAGTCATGACCACTAGACCCACAGCTGTTAAAGCAAC
AGGCGGTCTATGCTTGCTTGGTGCTTATGCTGACAGTGATGACGATGACAATGATGTTTCCGAAAAACTAGCACA
ATCCAAAGAGACAAATGGAAACCAGTCAACTGATATTGATAGTACATTGGCCAACTTCCTAGCGGAGATCGATGC
CATAACAGCTCCTCAGCCTGCAGCTCCTGTAGGAGCTTCTGCTCCACCTCCAACTCCACCTCGACCAGAGCCAAA
GGAAGCAGCAACATCTACCCTTTCTTCTTCTACTTCAAATGGAACAGACTCCACCCAAACATCTGGTTGGCAATA
TGATACTCAGTGTTCACTGGCAGGAGTCGGAATTGAGATGGGCGATTGGCAGGAAGTCTGGGATGAGAACACGGG
ATGTTATTATTATTGGAATACACAAACAAATGAAGTGACTTGGGAGTTACCCCAATATCTTGCCACACAGGTACA
GGGATTACAGCATTACCAGCCCAGTTCTGTGCCAGGTGCTGAAACTAGTTTTGTGGTAAATACAGACATATATTC
TAAGGAGAAAACGATTTCTGTTTCCAGTAGTAAAAGTGGACCAGTCATAGCCAAGCGAGAAGTTAAAAAGGAAGT
AAATGAAGGAATTCAGGCTCTCTCAAATAGTGAGGAGGAGAAGAAAGGGGTGGCAGCATCGCTGCTTGCTCCTTT
ATTGCCTGAGGGAATAAAAGAAGAAGAAGAGAGATGGAGAAGAAAAGTAATTTGTAAAGAGGAGCCAGTTTCAGA
AGTAAAAGAAACAAGTACAACAGTAGAAGAAGCAACAACAATAGTAAAGCCACAGGAAATTATGTTGGACAATAT
AGAAGACCCTTCTCAGGAGGATCTTTGCAGTGTTGTCCAATCTGGAGAAAGTGAGGAGGAAGAGGAACAAGATAC
CCTTGAACTGGAGCTAGTTTTGGAAAGGAAAAAAGCAGAGTTGCGAGCCTTGGAGGAAGGAGATGGTAGTGTGTC
AGGGTCTAGTCCACGTTCTGATATCAGCCAGCCAGCATCTCAAGATGGAATGCGTAGGCTTATGTCTAAAAGAGG
AAAATGGAAGATGTTTGTTCGAGCTACCAGTCCAGAATCTACCAGTAGGAGTTCTAGTAAAACTGGACGAGATAC
TCCAGAAAATGGAGAAACTGCAATTGGTGCTGAAAATTCAGAAAAAATAGATGAGAATTCAGATAAAGAGATGGA
AGTAGAAGAATCTCCAGAGAAAATAAAAGTACAGACAACACCAAAAGTAGAAGAAGAACAGGATTTGAAATTTCA
GATTGGAGAACTGGCAAATACCCTGACAAGTAAATTCGAGTTTCTAGGCATTAATAGACAATCCATCTCCAACTT
TCATGTGCTGCTCTTACAGACTGAGACTCGAATTGCAGACTGGCGGGAAGGGGCTCTTAATGGAAACTACCTTAA
ACGAAAACTTCAGGATGCAGCAGAACAACTAAAACAGTATGAAATAAACGCCACTCCTAAAGGCTGGTCCTGCCA
CTGGGACAGGGATCATAGACGGTATTTCTATGTAAACGAACAGTCGGGCGAGTCTCAGTGGGAGTTTCCAGATGG
TGAAGAGGAAGAAGAAGAAAGCCAAGCACAAGAAAATAGAGATGAGACTCTTGCCAAACAGACCTTGAAAGACAA
AACTGGCACTGATTCAAATTCAACAGAATCCTCTGAAACTTCCACAGGTTCTCTTTGTAAAGAATCCTTTTCTGG
TCAAGTTTCTTCTTCATCACTCATGCCACTTACTCCATTCTGGACCCTCCTTCAGTCAAATGTTCCTGTGCTTCA
ACCTCCATTACCCTTGGAAATGCCACCACCCCCACCTCCACCTCCAGAATCACCTCCACCCCCTCCTCCACCACC
TCCTCCTGCGGAAGATGGTGAGATCCAGGAGGTAGAGATGGAGGATGAGGGAAGTGAGGAGCCCCCTGCCCCAGG
AACAGAGGAAGATACCCCTTTGAAACCTTCAGCACAAACCACAGTTGTAACTAGCCAGAGTTCAGTTGATTCCAC
CATCTCTAGTTCTTCTTCCACTAAAGGAATAAAGAGGAAAGCTACAGAAATTAGCACTGCAGTGGTTCAGAGGTC
AGCTACCATTGGCAGTTCTCCAGTTCTCTATAGCCAGTCAGCTATAGCTACAGGTCACCAGGCAGCAGGGATTGG
AAACCAGGCAACAGGAATTGGACATCAGACAATACCAGTTAGCCTTCCAGCAGCAGGAATGGGTCATCAGGCCAG
AGGAATGAGCCTGCAGTCAAATTACCTTGGACTAGCGGCAGCACCTGCAATTATGAGTTATGCAGAATGTTCTGT
CCCAATTGGAGTGACTGCTCCCTCATTGCAGCCAGTTCAGGCCCGAGGTGCTGTGCCTACCGCTACCATTATAGA
ACCACCACCACCACCTCCTCCTCCTCCTCCTCCACCACCACCAGCTCCCAAAATGCCACCACCTGAAAAGACAAA
AAAAGGAAGGAAAGACAAGGCAAAGAAGAGTAAGACCAAAATGCCATCTTTGGTAAAAAAGTGGCAGAGTATCCA
GCGTGAGTTAGATGAAGAGGACAATTCTAGTTCCAGTGAAGAGGATCGGGAATCAACTGCACAGAAGCGAATTGA
AGAGTGGAAACAGCAGCAGCTGGTTAGTGGCATGGCAGAGAGAAATGCTAATTTTGAAGCCCTTCCTGAGGATTG
GAGAGCAAGGCTGAAGAGAAGGAAAATGGCTCCAAACACA**TAG**TTTTTAAGTTTTTAAAACTTTTTTGTATTATT
GTTTGTTTTGTGTTCAGTTCAAAGTCTTAACCAGTTTTATTGTCAAATAAACTATAAATGTTATGGGGGAGATCT
TATAAATTTCCTGGGCAAGAGTGTATGCATACAAAGTTTTCACTTTTGTGAAATGTAATTTTTCTGTTTTTGCAA
AGGGATGAGGTGATTGGAATTGCTTTGACCATGCTGCCTTTATTCTCAAACTGGCAAACTTAGCATGTTAGGTGT
ATTAACCTCATCAGTCTTGAAGAACATGTGGCTCATGAGTATAACACTTCTGTAGAGGACTCCCTGACAAAAGTG
AAGAATTAACTTCTCCTCCAGAACAAGTGCAATTCAGAAGGCAGCTCTGCATTCTACCTTGCTTGACTGGAATTG
TCTGAAGCTTTTTCTGGCCTCTTTTCTCTAGTCGGCCACCCCTGAAGTGCTGAGGTCTAAGTGGTTTACCTCGTG
CTGATAGATGGCCACACTCTTTAGAGTAGTTCTCATAAGTTCTAGAACTGGTAGCTCGGTCGTTTCGCACACTAG

FIGURE 1668B

GTGGCATACAGGCAGCAGCAGGTGTTCATATCCTTGATTTTGAGAATTTCCCCTCAAGTATGTGGCAGTAAATAC
AACAAGACACTCTATGTATTAATGTCTCCATTGTCTTAACCCTGTTCCAAAACAAAATTCACCTCCTTTCTTTAT
GTGAATGTATTCTCCATAAAATTCCAGTATTTAAAAAGCAGTTTACTGTTCTGTACTTTCTGTTGTATCACAATC
AGGTAAAAGTCACTTTAAACTGAGGAAACGGCAAATTGTGTTTTAAAGCTCTTTGTATTTCTCCAGTTTCTGACC
TTGTAAATTTGTATATATGCACTAATAAAGCTTTTTTTATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1669

KKSRAVPGRRPILQLSPPGPRGSTPGRDPEPEPDTEPDSTAAVPSQPAPSAATTTAVTAAAASDDSPSEDEQEAV
QEVPRVVQNPPKPVMTTRPTAVKATGGLCLLGAYADSDDDDNDVSEKLAQSKETNGNQSTDIDSTLANFLAEIDA
ITAPQPAAPVGASAPPPTPPRPEPKEAATSTLSSSTSNGTDSTQTSGWQYDTQCSLAGVGIEMGDWQEVWDENTG
CYYYWNTQTNEVTWELPQYLATQVQGLQHYQPSSVPGAETSFVVNTDIYSKEKTISVSSSKSGPVIAKREVKKEV
NEGIQALSNSEEEKKGVAASLLAPLLPEGIKEEEERWRRKVICKEEPVSEVKETSTTVEEATTIVKPQEIMLDNI
EDPSQEDLCSVVQSGESEEEEEQDTLELELVLERKKAELRALEEGDGSVSGSSPRSDISQPASQDGMRRLMSKRG
KWKMFVRATSPESTSRSSSKTGRDTPENGETAIGAENSEKIDENSDKEMEVEESPEKIKVQTTPKVEEEQDLKFQ
IGELANTLTSKFEFLGINRQSISNFHVLLLQTETRIADWREGALNGNYLKRKLQDAAEQLKQYEINATPKGWSCH
WDRDHRRYFYVNEQSGESQWEFPDGEEEEEESQAQENRDETLAKQTLKDKTGTDSNSTESSETSTGSLCKESFSG
QVSSSSLMPLTPFWTLLQSNVPVLQPPLPLEMPPPPPPPPESPPPPPPPPPPAEDGEIQEVEMEDEGSEEPPAPG
TEEDTPLKPSAQTTVVTSQSSVDSTISSSSSTKGIKRKATEISTAVVQRSATIGSSPVLYSQSAIATGHQAAGIG
NQATGIGHQTIPVSLPAAGMGHQARGMSLQSNYLGLAAAPAIMSYAECSVPIGVTAPSLQPVQARGAVPTATIIE
PPPPPPPPPPPPPPAPKMPPPEKTKKGRKDKAKKSKTKMPSLVKKWQSIQRELDEEDNSSSSEEDRESTAQKRIE
EWKQQQLVSGMAERNANFEALPEDWRARLKRRKMAPNT

FIGURE 1670

TTTCCTTGTCCAATAAGGTATTTAATATTCACTTAGGGACTATTAGATGTCCCATTTCTCTTCTCTTTCATTTCT
CTTATCTCTTCTCACCCCAGTGTAACGAATCGCTACAGGTTTTTACCAAAATGCTGCAGCAGTAGTTGGAAATGA
GTTATTTTGCATTACTAAAGTGTTCAATCACATTATCACGGGTCACATTTGTATATAACCAGGAGATGGCCAAAT
AACATCTACTGCAGTGATTTTGCAAATTCAGCATAGTCAATGTATCCATCATTGTTCTTGGCATCATCTCTCAAA
ACACCATCTATTATGTTAATCAGTTCATCTTCACTCATTAGTGGTGCCTGTTCACTCCCTTCCTCCTTATGGACA
TGAGTGATGGCTGTGGAGAGTTCTAAGCCATCAAGCAAATTATTGCCATCATAATCATGCATTTTGAAGTAATGG
AGCTGCAATTCTTGTGGCGACATCTCCGCCTCTGGTTTGTTGATGACACCTTCTAGATGCTCCATGATATGCTCT
TGGTCGTGCACTGTGTTCTTATCCAGGCCCATGCTGCCGGGTTGGGA

FIGURE 1671A

GGGAACTCCTTCCTCAGCCTCTCGTCAGCGCCGCTTCTCCTGGTTTCTCTTGCAGATGCTGCTGCTAGGGGTGGT
GGGAGCAGCCGTGGGACGCGTGGCCGGGAGCGGGGGTGACAGCCTGGGATTCCGGGGGCTTCTCTTCCTTGTCCT
CCTCCTCTCCTCTCTATTCCCAGTGTGGCCGTGGCTGACACTAAAGACTTTGTAGCCATCAACCCGAGTGCAGTT
TCGATGGAAA**ATG**AAGGTTGCACGTTTTCAAAAAATACCTAATGGTGAAAATGAGACAATGATTCCTGTATTGAC
ATCAAAAAAAGCAAGTGAATTACCAGTCAGTGAAGTTGCAAGCATTCTCCAAGCTGATCTTCAGAATGGTCTAAA
CAAATGTGAAGTTAGTCATAGGCGAGCCTTTCATGGCTGGAATAAGTTTGATATTAGTGAAGATGAGCCACTGTG
GAAGAAGTATATTTCTCAGTTTAAAAATCCCCTTATTATGCTGCTTCTGGCTTCTGCAGTCATCAGTGTTTTAAT
GCATCAGTTTGATGATGCCGTCAGTATCACTGTGGCAATACTTATCGTTGTTACAGTTGCCTTTGTTCAGGAATA
TCGTTCAGAAAAATCTCTTGAAGAATTGAGTAAACTTGTGCCACCAGAATGCCATTGTGTGCGTGAAGGAAAATT
GGAGCATACACTTGCCCGAGACTTGGTTCCAGGTGATACAGTTTGCCTTTCTGTTGGGGATAGAGTTCCTGCTGA
CTTACGCTTGTTTGAGGCTGTGGATCTTTCCATTGATGAGTCCAGCTTGACAGGTGAGACAACGCCTTGTTCTAA
GGTGACAGCTCCTCAGCCAGCTGCAACTAATGGAGATCTTGCATCGAGAAGTAACATTGCCTTTATGGGAACACT
GGTCAGATGTGGCAAAGCAAAGGGTGTTGTCATTGGAACAGGAGAAAATTCTGAATTTGGGGAGGTTTTTAAAAT
GATGCAAGCAGAAGAGGCACCAAAAACCCCTCTGCAGAAGAGCATGGACCTCTTAGGAAAACAACTTTCCTTTTA
CTCCTTTGGTATAATAGGAATCATCATGTTGGTTGGCTGGTTACTGGGAAAAGATATCCTGGAAATGTTTACTAT
TAGTGTAAGTTTGGCTGTAGCAGCAATTCCTGAAGGTCTCCCCATTGTGGTCACAGTGACGCTAGCTCTTGGTGT
TATGAGAATGGTGAAGAAAAGGGCCATTGTGAAAAAGCTGCCTATTGTTGAAACTCTGGGCTGCTGTAATGTGAT
TTGTTCAGATAAAACTGGAACACTGACGAAGAATGAAATGACTGTTACTCACATATTTACTTCAGATGGTCTGCA
TACTGAGGTTACTGGAGTTGGCTATAATCAATTTGGGGAAGTGATTGTTGATGGTGATGTTGTTCATGGATTCTA
TAACCCAGCTGTTAGCAGAATTGTTGAGGCGGGCTGTGTGTGCAATGATGCTGTAATTAGAAACAATACTCTAAT
GGGGAAGCCAACAGAAGGGGCCTTAATTGCTCTTGCAATGAAGATGGGTCTTGATGGACTTCAACAAGACTACAT
CAGAAAAGCTGAATACCCTTTTAGCTCTGAGCAAAAGTGGATGGCTGTTAAGTGTGTACACCGAACACAGCAGGA
CAGACCAGAGATTTGTTTTATGAAAGGTGCTTACGAACAAGTAATTAAGTACTGTACTACATACCAGAGCAAAGG
GCAGACCTTGACACTTACTCAGCAGCAGAGAGATGTGTACCAACAAGAGAAGGCACGCATGGGCTCAGCGGGACT
CAGAGTTCTTGCTTTGGCTTCTGGTCCTGAACTGGGACAGCTGACATTTCTTGGCTTGGTGGGAATCATTGATCC
ACCTAGAACTGGTGTGAAAGAAGCTGTTACAACACTCATTGCCTCAGGAGTATCAATAAAAATGATTACTGGAGA
TTCACAGGAGACTGCAGTTGCAATCGCCAGTCGTCTGGGATTGTATTCCAAAACTTCCCAGTCAGTCTCAGGAGA
AGAAATAGATGCAATGGATGTTCAGCAGCTTTCACAAATAGTACCAAAGGTTGCAGTATTTTACAGAGCTAGCCC
AAGGCACAAGATGAAAATTATTAAGTCGCTACAGAAGAACGGTTCAGTTGTAGCCATGACAGGAGATGGAGTAAA
TGATGCAGTTGCTCTGAAGGCTGCAGACATTGGAGTTGCGATGGGCCAGACTGGTACAGATGTTTGCAAAGAGGC
AGCAGACATGATCCTAGTGGATGATGATTTTCAAACCATAATGTCTGCAATCGAAGAGGGTAAAGGGATTTATAA
TAACATTAAAAATTTCGTTAGATTCCAGCTGAGCACGAGTATAGCAGCATTAACTTTAATCTCATTGGCTACATT
AATGAACTTTCCTAATCCTCTCAATGCCATGCAGATTTTGTGGATCAATATTATTATGGATGGACCCCCAGCTCA
GAGCCTTGGAGTAGAACCAGTGGATAAAGATGTCATTCGTAAACCTCCTCGCAACTGGAAAGACAGCATTTTGAC
TAAAAACTTGATACTTAAAATACTTGTTTCATCAATAATCATTGTTTGTGGGACTTTGTTTGTCTTCTGGCGTGA
GCTACGAGACAATGTGATTACACCTCGAGACACAACAATGACCTTCACATGCTTTGTGTTTTTTGACATGTTCAA
TGCACTAAGTTCCAGATCCCAGACCAAGTCTGTGTTTGAGATTGGACTCTGCAGTAATAGAATGTTTTGCTATGC
AGTTCTTGGATCCATCATGGGACAATTACTAGTTATTTACTTTCCTCCGCTTCAGAAGGTTTTTCAGACTGAGAG
CCTAAGCATACTGGATCTGTTGTTTCTTTTGGGTCTCACCTCATCAGTGTGCATAGTGGCAGAAATTATAAAGAA
GGTTGAAAGGAGCAGGGAAAAGATCCAGAAGCATGTTAGTTCGACATCATCATCTTTTCTTGAAGTA**TGA**TGCAT
ATTGCATTATTTTATTTGCAAACTAGGAATTGCAGTCTGAGGATCATTTAGAAGGGCAAGTTCAAGAGGATATGA
AGATTTGAGAACTTTTTAACTATTCATTGACTAAAAATGAACATTAATGTTAAAGACTTAAGACTTTAACCTGCT
GGCAGTCCCAAATGAAATTATGCAACTTTGATATCATATTCCTTGATTTAAATTGGCTTTTGTGATTGAGTGAAA
CTTTATAAAGCATATGGTCAGTTATTTAATTAAAAAGGCAAAACCTGAACCACCTTCTGCACTTAAAGAAGTCTA
ACAGTACAAATACACTATCTATCTTAGATAGATATATTTTTTTTTATTTTTAAATATTGTACTATTTATGGTGGT
GGGGCTTTCTTACTAATACACAAATAAATTTAATCATTTCAAAGGCATTCTATTTGGTTTAGAAGTTGATTCCCA
GGAGTGCCATATTTCAGCTACTGTATTTCCTTTTTCTTGTAATGTAAGCAGCTCAGATACCATGTGCTATCATTT
TTGTATCAAGTTTTTTGCACAGGATGTGACCACTGTCAGATCACTGTTCTTTTCTTTCTTTTTGTGATTGAAAAG

FIGURE 1671B

CCTATACTACAATTTGAAGTAAATTTTTGTTTTTCTT

FIGURE 1672

MKVARFQKIPNGENETMIPVLTSKKASELPVSEVASILQADLQNGLNKCEVSHRRAFHGWNKFDISEDEPLWKKY
ISQFKNPLIMLLLASAVISVLMHQFDDAVSITVAILIVVTVAFVQEYRSEKSLEELSKLVPPECHCVREGKLEHT
LARDLVPGDTVCLSVGDRVPADLRLFEAVDLSIDESSLTGETTPCSKVTAPQPAATNGDLASRSNIAFMGTLVRC
GKAKGVVIGTGENSEFGEVFKMMQAEEAPKTPLQKSMDLLGKQLSFYSFGIIGIIMLVGWLLGKDILEMFTISVS
LAVAAIPEGLPIVVTVTLALGVMRMVKKRAIVKKLPIVETLGCCNVICSDKTGTLTKNEMTVTHIFTSDGLHTEV
TGVGYNQFGEVIVDGDVVHGFYNPAVSRIVEAGCVCNDAVIRNNTLMGKPTEGALIALAMKMGLDGLQQDYIRKA
EYPFSSEQKWMAVKCVHRTQQDRPEICFMKGAYEQVIKYCTTYQSKGQTLTLTQQQRDVYQQEKARMGSAGLRVL
ALASGPELGQLTFLGLVGIIDPPRTGVKEAVTTLIASGVSIKMITGDSQETAVAIASRLGLYSKTSQSVSGEEID
AMDVQQLSQIVPKVAVFYRASPRHKMKIIKSLQKNGSVVAMTGDGVNDAVALKAADIGVAMGQTGTDVCKEAADM
ILVDDDFQTIMSAIEEGKGIYNNIKNFVRFQLSTSIAALTLISLATLMNFPNPLNAMQILWINIIMDGPPAQSLG
VEPVDKDVIRKPPRNWKDSILTKNLILKILVSSIIIVCGTLFVFWRELRDNVITPRDTTMTFTCFVFFDMFNALS
SRSQTKSVFEIGLCSNRMFCYAVLGSIMGQLLVIYFPPLQKVFQTESLSILDLLFLLGLTSSVCIVAEIIKKVER
SREKIQKHVSSTSSSFLEV

FIGURE 1673

GCTCGGAGCCCGGAGCGTGCCTCGGCGGCCTGTCGGTTTTCACC**ATG**GAGCAGCTGAGCTCAGCAAACACCCGCT
TCGCCTTGGACCTGTTCCTGGCGTTGAGTGAGAACAATCCGGCTGGAAACATCTTCATCTCTCCCTTCAGCATTT
CATCTGCTATGGCCATGGTTTTTCTGGGGACCAGAGGTAACACGGCAGCACAGCTGTCCAAGACTTTCCATTTCA
ACACGGTTGAAGAGGTTCATTCAAGATTCCAGAGTCTGAATGCTGATATCAACAAACGTGGAGCGTCTTATATTC
TGAAACTTGCTAATAGATTATATGGAGAGAAAACTTACAATTTCCTTCCTGAGTTCTTGGTTTCGACTCAGAAAA
CATATGGTGCTGACCTGGCCAGTGTGGATTTTCAGCATGCCTCTGAAGATGCAAGGAAGACCATAAACCAGTGGG
TCAAAGGACAGACAGAAGGAAAAATTCCGGAACTGTTGGCTTCGGGCATGGTTGATAACATGACCAAACTTGTGC
TAGTAAATGCCATCTATTTCAAGGGAAACTGGAAGGATAAATTCATGAAAGAAGCCACGACGAATGCACCATTCA
GATTGAATAAGAAAGACAGAAAAACTGTGAAAATGATGTATCAGAAGAAAAAATTTGCATATGGCTACATCGAGG
ACCTTAAGTGCCGTGTGCTGGAACTGCCTTACCAAGGCGAGGAGCTCAGCATGGTCATCCTGCTGCCGGATGACA
TTGAGGACGAGTCCACGGGCCTGAAGAAGATTGAGGAACAGTTGACTTTGGAAAAGTTGCATGAGTGGACTAAAC
CTGAGAATCTCGATTTCATTGAAGTTAATGTCAGCTTGCCCAGGTTCAAACTGGAAGAGAGTTACACTCTCAACT
CCGACCTCGCCCGCCTAGGTGTGCAGGATCTCTTTAACAGTAGCAAGGCTGATCTGTCTGGCATGTCAGGAGCCA
GAGATATTTTTATATCAAAAATTGTCCACAAGTCATTTGTGGAAGTGAATGAAGAGGGAACAGAGGCGGCAGCTG
CCACAGCAGGCATCGCAACTTTCTGCATGTTGATGCCCGAAGAAAATTTCACTGCCGACCATCCATTCCTTTTCT
TTATTCGGCATAATTCCTCAGGTAGCATCCTATTCTTGGGGAGATTTTCTTCCCCT**TAG**AAGAAAGAGACTGTAG
CAATACAAAAATCAAGCTTAGTGCTTTATTACCTGAGTTTTTAATAGAGCCAATATGTCTTATATCTTTACCAAT
AAAACCACTGTCCAGAAAAAAAAAAAAAAAAAAA

FIGURE 1674

MEQLSSANTRFALDLFLALSENNPAGNIFISPFSISSAMAMVFLGTRGNTAAQLSKTFHFNTVEEVHSRFQSLNA
DINKRGASYILKLANRLYGEKTYNFLPEFLVSTQKTYGADLASVDFQHASEDARKTINQWVKGQTEGKIPELLAS
GMVDNMTKLVLVNAIYFKGNWKDKFMKEATTNAPFRLNKKDRKTVKMMYQKKKFAYGYIEDLKCRVLELPYQGEE
LSMVILLPDDIEDESTGLKKIEEQLTLEKLHEWTKPENLDFIEVNVSLPRFKLEESYTLNSDLARLGVQDLFNSS
KADLSGMSGARDIFISKIVHKSFVEVNEEGTEAAAATAGIATFCMLMPEENFTADHPFLFFIRHNSSGSILFLGR
FSSP

FIGURE 1675A

GCCGCGTGCGTCCTGCCCGGAGCCGGCGGGACATGCCCGGAGCGCGCGCTGGAGCGGCGCGAGGAGGAGGCGAAC
GTGGTGCTCACCGGGACGGTGGAGGAGATCCTCAACGTGGACCCGGTGCAGCACACGTACTCCTGCAAGGTTCGG
GTCTGGCGGTACTTGAAGGGCAAAGACCTGGTGGCCCGGGAGAGCCTGCTGGACGGCGGCAACAAGGTGGTGATC
AGCGGCTTTGGAGACCCCCTCATCTGTGACAACCAGGTGTCCACTGGGGACACCAGGATCTTCTTTGTGAACCCT
GCACCCCCATACCTGTGGCCAGCCCACAAGAACGAGCTGATGCTCAACTCCAGCCTCATGCGGATCACCCTGCGG
AACCTGGAGGAGGTGGAGTTCTGTGTGGAAGATAAACCCGGGACCCACTTCACTCCAGTGCCTCCGACGCCTCCT
GATGCGTGCCGGGGAATGCTGTGCGGCTTCGGCGCCGTGTGCGAGCCCAACGCGGAGGGGCCGGGCCGGGCGTCC
TGCGTCTGCAAGAAGAGCCCGTGCCCCAGCGTGGTGGCGCCTGTGTGTGGGTCGGACGCCTCCACCTACAGCAAC
GAATGCGAGCTGCAGCGGGCGCAGTGCAGCCAGCAGCGCCGCATCCGCCTGCTCAGCCGCGGGCCGTGCGGCTCG
CGGGACCCCTGCTCCAACGTGACCTGCAGCTTCGGCAGCACCTGTGCGCGCTCGGCCGACGGGCTGACGGCCTCG
TGCCTGTGCCCCGCGACCTGCCGTGGCGCCCCCGAGGGGACCGTCTGCGGCAGCGACGGCGCCGACTACCCCGGC
GAGTGCCAGCTCCTGCGCCGCGCCTGCGCCCGCCAGGAGAATGTCTTCAAGAAGTTCGACGGCCCTTGTGACCCC
TGTCAGGGCGCCCTCCCTGACCCGAGCCGCAGCTGCCGTGTGAACCCGCGCACGCGGCGCCCTGAGATGCGCCTA
CGGCCCGAGAGCTGCCCTGCCCGGCAGGCGCCAGTGTGTGGGGACGACGGAGTCACCTACGAAAACGACTGTGTC
ATGGGCCGATCGGGGGCCGCCCGGGGTCTCCTCCTGCAGAAAGTGCGCTCCGGCCAGTGCCAGGGTCGAGACCAG
TGCCCGGAGCCCTGCCGGTTCAATGCCGTGTGCCTGTCCCGCCGTGGCCGTCCCCGCTGCTCCTGCGACCGCGTC
ACCTGTGACGGGGCCTACAGGCCCGTGTGTGCCCAGGACGGGCGCACGTATGACAGTGATTGCTGGCGGCAGCAG
GCTGAGTGCCGGCAGCAGCGTGCCATCCCCAGCAAGCACCAGGGCCCGTGTGACCAGGCCCCGTCCCCATGCCTC
GGGGTGCAGTGTGCATTTGGGGCGACGTGTGCTGTGAAGAACGGGCAGGCAGCGTGTGAATGCCTGCAGGCGTGC
TCGAGCCTCTACGATCCTGTGTGCGGCAGCGACGGCGTCACATACGGCAGCGCGTGCGAGCTGGAGGCCACGGCC
TGTACCCTCGGGCGGGAGATCCAGGTGGCGCGCAAAGGACCCTGTGACCGCTGCGGGCAGTGCCGCTTTGGAGCC
CTGTGCGAGGCCGAGACCGGGCGCTGCGTGTGCCCCTCTGAATGCGTGGCTTTGGCCCAGCCCGTGTGTGGCTCC
GACGGGCACACGTACCCCAGCGAGTGCATGCTGCACGTGCACGCCTGCACACACCAGATCAGCCTGCACGTGGCC
TCAGCTGGACCCTGCGAGACCTGTGGAGATGCCGTGTGTGCTTTTGGGGCTGTGTGCTCCGCAGGGCAGTGTGTG
TGTCCCCGGTGTGAGCACCCCCCGCCCGGCCCCGTGTGTGGCAGCGACGGTGTCACCTACGGCAGTGCCTGCGAG
CTACGGGAAGCCGCCTGCCTCCAGCAGACACAGATCGAGGAGGCCCGGGCAGGGCCGTGCGAGCAGGCCGAGTGC
GGTTCCGGAGGCTCTGGCTCTGGGGAGGACGGTGACTGTGAGCAGGAGCTGTGCCGGCAGCGCGGTGGCATCTGG
GACGAGGACTCGGAGGACGGGCCGTGTGTCTGTGACTTCAGCTGCCAGAGTGTCCCAGGCAGCCCGGTGTGCGGC
TCAGATGGGGTCACCTACAGCACCGAGTGTGAGCTGAAGAAGGCCAGGTGTGAGTCACAGCGAGGGCTCTACGTA
GCGGCCCAGGGAGCCTGCCGAGGCCCCACCTTCGCCCCGCTGCCGCCTGTGGCCCCCTTACACTGTGCCCAGACG
CCCTACGGCTGCTGCCAGGACAATATCACCGCAGCCCGGGGCGTGGGCCTGGCTGGCTGCCCCAGTGCCTGCCAG
TGCAACCCCCATGGCTCTTACGGCGGCACCTGTGACCCAGCCACAGGCCAGTGCTCCTGCCGCCCAGGTGTGGGG
GGCCTCAGGTGTGACCGCTGTGAGCCTGGCTTCTGGAACTTTCGAGGCATCGTCACCGATGGCCGGAGTGGCTGT
ACACCCTGCAGCTGTGATCCCCAAGGCGCCGTGCGGGATGACTGTGAGCAGATGACGGGGCTGTGCTCGTGTAAG
CCCGGGGTGGCTGGACCCAAGTGTGGGCAGTGTCCAGACGGCCGTGCCCTGGGCCCCGCGGGCTGTGAAGCTGAC
GCTTCTGCGCCTGCGACCTGTGCGGAGATGCGCTGTGAGTTCGGTGCGCGGTGCGTGGAGGAGTCTGGCTCAGCC
CACTGTGTCTGCCCGATGCTCACCTGTCCAGAGGCCAACGCTACCAAGGTCTGTGGGTCAGATGGAGTCACATAC
GGCAACGAGTGTCAGCTGAAGACCATCGCCTGCCGCCAGGGCCTGCAAATCTCTATCCAGAGCCTGGGCCCGTGC
CAGGAGGCTGTTGCTCCCAGCACTCACCCGACATCTGCCTCCGTGACTGTGACCACCCCAGGGCTCCTCCTGAGC
CAGGCACTGCCGGCCCCCCCCGGCGCCCTCCCCCTGGCTCCCAGCAGTACCGCACACAGCCAGACCACCCCTCCG
CCCTCATCGCGACCTCGGACCACTGCCAGCGTCCCCAGGACCACCGTGTGGCCCGTGCTGACGGTGCCCCCCACG
GCACCCTCCCCTGCACCCAGCCTGGTGGCGTCCGCCTTTGGTGAATCTGGCAGCACTGATGGAAGCAGCGATGAG
GAACTGAGCGGGGACCAGGAGGCCAGTGGGGGTGGCTCTGGGGGGCTCGAGCCCTTGGAGGGCAGCAGCGTGGCC
ACCCCTGGGCCACCTGTCGAGAGGGCTTCCTGCTACAACTCCGCGTTGGGCTGCTGCTCTGATGGGAAGACGCCC
TCGCTGGACGCAGAGGGCTCCAACTGCCCCGCCACCAAGGTGTTCCAGGGCGTCCTGGAGCTGGAGGGCGTCGAG
GGCCAGGAGCTGTTCTACACGCCCGAGATGGCTGACCCCAAGTCAGAACTGTTCGGGGAGACAGCCAGGAGCATT
GAGAGCACCCTGGACGACCTCTTCCGGAATTCAGACGTCAAGAAGGATTTCCGGAGTGTCCGCTTGCGGGACCTG
GGGCCCGGCAAATCCGTCCGCGCCATTGTGGATGTGCACTTTGACCCCACCACAGCCTTCAGGGCACCCGACGTG

FIGURE 1675B

GCCCGGGCCCTGCTCCGGCAGATCCAGGTGTCCAGGCGCCGGTCCTTGGGGGTGAGGCGGCCGCTGCAGGAGCAC
GTGCGATTTATGGACTTTGACTGGTTTCCTGCGTTTATCACGGGGGCCACGTCAGGAGCCATTGCTGCGGGAGCC
ACGGCCAGAGCCACCACTGCATCGCGCCTGCCGTCCTCTGCTGTGACCCCTCGGGCCCCGCACCCCAGTCACACA
AGCCAGCCCGTTGCCAAGACCACGGCAGCCCCCACCACACGTCGGCCCCCCACCACTGCCCCCAGCCGTGTGCCC
GGACGTCGGCCCCCGGCCCCCCAGCAGCCTCCAAAGCCCTGTGACTCACAGCCCTGCTTCCACGGGGGGACCTGC
CAGGACTGGGCATTGGGCGGGGGCTTCACCTGCAGCTGCCCGGCAGGCAGGGGAGGCGCCGTCTGTGAGAAGGTG
CTTGGCGCCCCTGTGCCGGCCTTCGAGGGCCGCTCCTTCCTGGCCTTCCCCACCCTCCGCGCCTACCACACGCTG
CGCCTGGCACTGGAATTCCGGGCGCTGGAGCCTCAGGGGCTGCTGCTGTACAATGGCAACGCCCGGGGCAAGGAC
TTCCTGGCATTGGCGCTGCTAGATGGCCGCGTGCAGCTCAGGTTTGACACAGGTTCGGGGCCGGCGGTGCTGACC
AGTGCCGTGCCGGTAGAGCCGGGCCAGTGGCACCGCCTGGAGCTGTCCCGGCACTGGCGCCGGGGCACCCTCTCG
GTGGATGGTGAGACCCCTGTTCTGGGCGAGAGTCCCAGTGGCACCGACGGCCTCAACCTGGACACAGACCTCTTT
GTGGGCGGCGTACCCGAGGACCAGGCTGCCGTGGCGCTGGAGCGGACCTTCGTGGGCGCCGGCCTGAGGGGGTGC
ATCCGTTTGCTGGACGTCAACAACCAGCGCCTGGAGCTTGGCATTGGGCCGGGGGCTGCCACCCGAGGCTCTGGC
GTGGGCGAGTGCGGGGACCACCCCTGCCTGCCCAACCCCTGCCATGGCGGGGCCCCATGCCAGAACCTGGAGGCT
GGAAGGTTCCATTGCCAGTGCCCGCCCGGCCGCGTCGGACCAACCTGTGCCGATGAGAAGAGCCCCTGCCAGCCC
AACCCCTGCCATGGGGCGGCGCCCTGCCGTGTGCTGCCCGAGGGTGGTGCTCAGTGCGAGTGCCCCCTGGGGCGT
GAGGGCACCTTCTGCCAGACAGCCTCGGGGCAGGACGGCTCTGGGCCCTTCCTGGCTGACTTCAACGGCTTCTCC
CACCTGGAGCTGAGAGGCCTGCACACCTTTGCACGGGACCTGGGGGAGAAGATGGCGCTGGAGGTCGTGTTCCTG
GCACGAGGCCCCAGCGGCCTCCTGCTCTACAACGGGCAGAAGACGGACGGCAAGGGGGACTTCGTGTCGCTGGCA
CTGCGGGACCGCCGCCTGGAGTTCCGCTACGACCTGGGCAAGGGGGCAGCGGTCATCAGGAGCAGGGAGCCAGTC
ACCCTGGGAGCCTGGACCAGGGTCTCACTGGAGCGAAACGGCCGCAAGGGTGCCCTGCGTGTGGGCGACGGCCCC
CGTGTGTTGGGGGAGTCCCCGGTTCCGCACACCGTCCTCAACCTGAAGGAGCCGCTCTACGTAGGGGGCGCTCCC
GACTTCAGCAAGCTGGCCCGTGCTGCTGCCGTGTCCTCTGGCTTCGACGGTGCCATCCAGCTGGTCTCCCTCGGA
GGCCGCCAGCTGCTGACCCCGGAGCACGTGCTGCGGCAGGTGGACGTCACGTCCTTTGCAGGTCACCCCTGCACC
CGGGCCTCAGGCCACCCCTGCCTCAATGGGGCCTCCTGCGTCCCGAGGGAGGCTGCCTATGTGTGCCTGTGTCCC
GGGGGATTCTCAGGACCGCACTGCGAGAAGGGGCTGGTGGAGAAGTCAGCGGGGGACGTGGATACCTTGGCCTTT
GACGGGCGGACCTTTGTCGAGTACCTCAACGCTGTGACCGAGAGCGAGAAGGCACTGCAGAGCAACCACTTTGAA
CTGAGCCTGCGCACTGAGGCCACGCAGGGGCTGGTGCTCTGGAGTGGCAAGGCCACGGAGCGGGCAGACTATGTG
GCACTGGCCATTGTGGACGGGCACCTGCAACTGAGCTACAACCTGGGCTCCCAGCCCGTGGTGCTGCGTTCCACC
GTGCCCGTCAACACCAACCGCTGGTTGCGGGTCGTGGCACATAGGGAGCAGAGGGAAGGTTCCCTGCAGGTGGGC
AATGAGGCCCCTGTGACCGGCTCCTCCCCGCTGGGCGCCACGCAGCTGGACACTGATGGAGCCCTGTGGCTTGGG
GGCCTGCCGGAGCTGCCCGTGGGCCCAGCACTGCCCAAGGCCTACGGCACAGGCTTTGTGGGCTGCTTGCGGGAT
GTGGTGGTGGGCCGGCACCCGCTGCACCTGCTGGAGGACGCCGTCACCAAGCCAGAGCTGCGGCCCTGCCCCACC
CCATGAGCTGGCACCAGAGCCCCGCGCCCGCTGTAATTATTTTCTATTTTTGTAAACTTGTTGCTTTTTGATATG
ATTTTCTTGCCTGAGTGTTGGCCGGAGGGACTGCTGGCCCGGCCTCCCTTCCGTCCAGGCAGCCGTGCTGCAGAC
AGACCTAGTGCTGAGGGATGGACAGGCGAGGTGGCAGCGTGGAGGGCTCGGCGTGGATGGCAGCCTCAGGACACA
CACCCCTGCCTCAAGGTGCTGAGCCCCCGCCTTGCACTGCGCCTGCCCCACGGTGTCCCCGCCGGGAAGCAGCCC
CGGCTCCTGAATCACCCTCGCTCCGTCAGGCGGGACTCGTGTCCCAAAAAGGAAGGGGCTGCTGAGGTCTGATGG
GGCCCTTCCTCCGGGTGACCCCACAGGGCCTTTCCAAGCCCCTATTTGAGCTGCTCCTTCCTGTGTGTGCTCTGG
ACCCTGCCTCGGCCTCCTGCGCCAATACTGTGACTTCCAAACAATGTTACTGCTGGGCACAGCTCTGCGTTGCTC
CCGTGCTGCCTGCGCCAGCCCCAGGCTGCTGAGGAGCAGAGGCCAGACCAGGGCCGATCTGGGTGTCCTGACCCT
CAGCTGGCCCTGCCCAGCCACCCTGGACATGACCGTATCCCTCTGCCACACCCCAGGCCCTGCGAGGGGCTATCG
AGAGGAGCTCACTGTGGGATGGGGTTGACCTCTGCCGCCTGCCTGGGTATCTGGGCCTGGCCATGGCTGTGTTCT
TCATGTGTTGATTTTATTTGACCCCTGGAGTGGTGGGTCTCATCTTTCCCATCTCGCCTGAGAGCGGCTGAGGGC
TGCCTCACTGCAAATCCTCCCCACAGCGTCAGTGAAAGTCGTCCTTGTCTCAGAATGACCAGGGGCCAGCCAGTG
TCTGACCAAGGTCAAGGGGCAGGTGCAGAGGTGGCAGGGATGGCTCCGAAGCCAGAA

FIGURE 1676

AACVLPGAGGTCPERALERREEEANVVLTGTVEEILNVDPVQHTYSCKVRVWRYLKGKDLVARESLLDGGNKVVI
SGFGDPLICDNQVSTGDTRIFFVNPAPPYLWPAHKNELMLNSSLMRITLRNLEEVEFCVEDKPGTHFTPVPPTPP
DACRGMLCGFGAVCEPNAEGPGRASCVCKKSPCPSVVAPVCGSDASTYSNECELQRAQCSQQRRIRLLSRGPCGS
RDPCSNVTCSFGSTCARSADGLTASCLCPATCRGAPEGTVCGSDGADYPGECQLLRRACARQENVFKKFDGPCDP
CQGALPDPSRSCRVNPRTRRPEMRLRPESCPARQAPVCGDDGVTYENDCVMGRSGAARGLLLQKVRSGQCQGRDQ
CPEPCRFNAVCLSRRGRPRCSCDRVTCDGAYRPVCAQDGRTYDSDCWRQQAECRQQRAIPSKHQGPCDQAPSPCL
GVQCAFGATCAVKNGQAACECLQACSSLYDPVCGSDGVTYGSACELEATACTLGREIQVARKGPCDRCGQCRFGA
LCEAETGRCVCPSECVALAQPVCGSDGHTYPSECMLHVHACTHQISLHVASAGPCETCGDAVCAFGAVCSAGQCV
CPRCEHPPPGPVCGSDGVTYGSACELREAACLQQTQIEEARAGPCEQAECGSGGSGSGEDGDCEQELCRQRGGIW
DEDSEDGPCVCDFSCQSVPGSPVCGSDGVTYSTECELKKARCESQRGLYVAAQGACRGPTFAPLPPVAPLHCAQT
PYGCCQDNITAARGVGLAGCPSACQCNPHGSYGGTCDPATGQCSCRPGVGGLRCDRCEPGFWNFRGIVTDGRSGC
TPCSCDPQGAVRDDCEQMTGLCSCKPGVAGPKCGQCPDGRALGPAGCEADASAPATCAEMRCEFGARCVEESGSA
HCVCPMLTCPEANATKVCGSDGVTYGNECQLKTIACRQGLQISIQSLGPCQEAVAPSTHPTSASVTVTTPGLLLS
QALPAPPGALPLAPSSTAHSQTTPPPSSRPRTTASVPRTTVWPVLTVPPTAPSPAPSLVASAFGESGSTDGSSDE
ELSGDQEASGGGSGGLEPLEGSSVATPGPPVERASCYNSALGCCSDGKTPSLDAEGSNCPATKVFQGVLELEGVE
GQELFYTPEMADPKSELFGETARSIESTLDDLFRNSDVKKDFRSVRLRDLGPGKSVRAIVDVHFDPTTAFRAPDV
ARALLRQIQVSRRRSLGVRRPLQEHVRFMDFDWFPAFITGATSGAIAAGATARATTASRLPSSAVTPRAPHPSHT
SQPVAKTTAAPTTRRPPTTAPSRVPGRRPPAPQQPPKPCDSQPCFHGGTCQDWALGGGFTCSCPAGRGGAVCEKV
LGAPVPAFEGRSFLAFPTLRAYHTLRLALEFRALEPQGLLLYNGNARGKDFLALALLDGRVQLRFDTGSGPAVLT
SAVPVEPGQWHRLELSRHWRRGTLSVDGETPVLGESPSGTDGLNLDTDLFVGGVPEDQAAVALERTFVGAGLRGC
IRLLDVNNQRLELGIGPGAATRGSGVGECGDHPCLPNPCHGGAPCQNLEAGRFHCQCPPGRVGPTCADEKSPCQP
NPCHGAAPCRVLPEGGAQCECPLGREGTFCQTASGQDGSGPFLADFNGFSHLELRGLHTFARDLGEKMALEVVFL
ARGPSGLLLYNGQKTDGKGDFVSLALRDRRLEFRYDLGKGAAVIRSREPVTLGAWTRVSLERNGRKGALRVGDGP
RVLGESPVPHTVLNLKEPLYVGGAPDFSKLARAAAVSSGFDGAIQLVSLGGRQLLTPEHVLRQVDVTSFAGHPCT
RASGHPCLNGASCVPREAAYVCLCPGGFSGPHCEKGLVEKSAGDVDTLAFDGRTFVEYLNAVTESEKALQSNHFE
LSLRTEATQGLVLWSGKATERADYVALAIVDGHLQLSYNLGSQPVVLRSTVPVNTNRWLRVVAHREQREGSLQVG
NEAPVTGSSPLGATQLDTDGALWLGGLPELPVGPALPKAYGTGFVGCLRD

FIGURE 1677

GGCTTACAGGAGGGCAGCTCTGCAGTTGGGAGGGGCACCGTCCGGAGGAGACCAGGCCTCTACACACCCCCCACT
CTACTTATCATCCCTGCTCACACACCCTTGTCCAAGGCTTTATGCATCGGATTTATTTTCCAAATCAAGAGGAC
AGTGATAGATGCATTTTCCCCAGGCTGTCTCAGAAAGGTCGCTAAATGTATACTGTTGTCAGAATTGCTGAGATC
TCCCCCCACTTTTGGTTTTTGCAGCAGTAAAAACTCTTTCCACTGTGACTTATTTTCTCTCTCAGGCAGCCAGCC
ACCTGGTCCCTTGTGCTGACTCTAGCACAGTGGCCAGGATCCAATACGAGTCCAGGGGTGACCGCAGGATGGTGG
GGGCAGCGGGCTTCTCCACCTACCCCAGCCACCAAGGCCCTGACGCACTGCCTCCTGCACCTTCAGCACATCCCT
GTGCACAGCTGGAAGGGTGCATGGCCCGCTCACCTTTGTTCAGATGGGTGGAAACGCTGATGATACCAGCTCCTC
CCTGCCGTGCCCCTGCCACGGAGCAGGCATTGTGAACTGGCTGGTGTTTGCAGTCCCACGTGGCATGGCCTCCAG
CCCAACCCACAGTGGAGACTGGAGACAGGGCAATGAGTCTGGTCGGGGGCACGTGGACATGCCCCATAGGGGCCC
CACCCAGACTTAACAGGCAAGGTCCTGGGCATTGCGCGACGCAGGACTCAATGCTAAAGCAAGCCTGCCTGGCTC
TGTGCCAGGGCCCCTCTTCTGATTTACACATCCCATTTTTACACAGACCCTTCCTTCTTAATAAAGGCTGACAGT
TCTGTTGGCAGCCAAGAACCCACACCATGAAGACAGGGAGTGAGGGGCCTTTGTGCCCAACTCCAGCACAGCTGC
GTTCTGGGGTGTGTGAGAGGCATGTTCGTGTCTGTGCGCTGGTGGTCTCGTGAGACAGTTCCGAGGACGGGGAAA
TTGCAGGGTGGTGGGGGCGTGAGGCTTATATGTGGAACTGATGCAGAGTTCGCCTGCAGACGGATCTGGATATAC
ACTATGTATAATTGTTACGTGTAATTTAAAATATATCTGTTTGCCATCGTCATGAGAAGATTATATGTAAGGCTC
TGAAGGGAGAGGGAGATGTACATTCTGCCAGGCTCCTGGGGACCTTATCCGAGTC**ATG**AAATTGATGACTGTTGA
TCCAGTGGTGCAAGAAGCTACACTCCATGTGTCATCACGCTTA**TGA**CTCCTAATGTATTTTTAAGGCAAAAAATG
TCAGCCGACTCCATCTTCACCCCTCGATTCCTCGAGTCCAGCCTTTCTGTGCCAGTGCTTCACTGAGCCACAACG
CTCTCGCCATCGGGACCCGGCTGGGCCTGGAGTCTCGGGGCACAGTTGCCATGGAGCCCTCCTGGGTCATTCTAC
AAATGTGCTGAGTGCCAGCTGAAAACCCCACAGGAGATGGAGTACCTTGGCCAAGCTTAAAGAGAAGATTTTCTC
AGGGTATTTATTAGTGTGTCCAGCAGGGTCAGGAAGCAGGATGGAAAGATGCATTCAGACTGTTAATTTATTAAC
AAGGCAAATGATTTTGTGTTTCTTGATGACAGACTATTAAGTTTGGGACTTATTTTCCCATTTGAGAAGTTATAA
TATATATTTAAGATGATAAGTTTCCTGCTTAAGTTGTGCCTTTCAGCTTCAATGAGTTTAAGGAGCACTAAGGGT
AATGATACCAATGAGGGTTGGTTTATTATCAAACCTGAATAGCTGTGGTTTCTCCAGTAAATATTTTCTTCTACT
GAACATGGAGCCATTATTAAGAGTTGTGTGTTTTTTATTATGTACATTTGTATATTTTTTTGCTTGTTTGATGTT
CTATTTTTCTAATAGTTTTCTTTTAGTTTCTTAAAGTTGTGATACTAGATTTAGATTCTGATGCTAACTGCAAAT
CAGGTTGGTCTCTGCTGGGTCTCTCCTGCTTTTATTTTACTTTAAGGACAAGTGTAGTTGTCGTCCACCACCTTT
CAAAAAATGTGAAACTGCCCTGCCTCCCCTTTTTGCTGACAACACTGTGTACATTGACCACTTCCTACCATACTT
TATGTTGTAAAATCAAACTCTTTTGTGGTACATTATCTCATGCTTCTGCAAATTCGAATAAATTCTATGGCTTCC
AAAAAAAAAAAAAAA

FIGURE 1678

MKLMTVDPVVQEATLHVSSRL

FIGURE 1679

GCGTCACCACAGAGGCAAGACAAGGGTCCATATCGCGGCATCCGGCTCCCGCCCGTCTTCAGGAGAGAAAGAAAA
AATAAAATATACTTGGGGAAGTTGTACCTGCCAGAATTAGTAAGAGCTTTCTTTAAGAAGACATTTGTCAAACTC
AACAAATTGAAGGTTAACACCTTAAGAGTTGTAGTTACTGACCAGAAAT**ATG**GACAGACTTCTTAGACTTGGAGG
AGGTATGCCTGGACTGGGCCAGGGGCCACCTACAGATGCTCCTGCAGTGGACACAGCAGAACAAGTCTATATCTC
TTCCCTGGCACTGTTAAAAATGTTAAAACATGGCCGTGCTGGAGTTCCAATGGAAGTTATGGGTTTGATGCTTGG
AGAATTTGTTGATGATTATACCGTCAGAGTGATTGATGTGTTTGCTATGCCACAGTCAGGAACAGGTGTCAGTGT
GGAGGCAGTTGATCCAGTGTTCCAAGCTAAAATGTTGGATATGTTGAAGCAGACAGGAAGGCCGGAGATGGTTGT
TGGTTGGTATCACAGTCACCCTGGCTTTGGTTGTTGGCTTTCTGGTGTGGATATCAACACTCAGCAGAGCTTTGA
AGCCTTGTCGGAGAGAGCTGTGGCAGTGGTTGTGGATCCCATTCAGAGTGTAAAAGGAAAGGTTGTTATTGATGC
CTTCAGATTGATCAATGCTAATATGATGGTCTTAGGACATGAACCAAGACAAACAACTTCGAATCTGGGTCACTT
AAACAAGCCATCTATCCAGGCATTAATTCATGGACTAAACAGACATTATTACTCCATTACTATTAACTATCGGAA
AAATGAACTGGAACAGAAGATGTTGCTAAATTTGCATAAGAAGAGTTGGATGGAAGGTTTGACACTTCAGGACTA
CAGTGAACATTGTAAACACAATGAATCAGTGGTAAAAGAGATGTTGGAATTAGCCAAGAATTACAATAAGGCTGT
AGAAGAAGAAGATAAGATGACACCTGAACAGCTGGCAATAAAGAATGTTGGCAAGCAGGACCCCAAACGTCATTT
GGAGGAACATGTGGATGTACTTATGACCTCAAATATTGTCCAGTGTTTAGCAGCTATGTTGGATACTGTCGTATT
TAAA**TAA**

FIGURE 1680

MDRLLRLGGGMPGLGQGPPTDAPAVDTAEQVYISSLALLKMLKHGRAGVPMEVMGLMLGEFVDDYTVRVIDVFAM
PQSGTGVSVEAVDPVFQAKMLDMLKQTGRPEMVVGWYHSHPGFGCWLSGVDINTQQSFEALSERAVAVVVDPIQS
VKGKVVIDAFRLINANMMVLGHEPRQTTSNLGHLNKPSIQALIHGLNRHYYSITINYRKNELEQKMLLNLHKKSW
MEGLTLQDYSEHCKHNESVVKEMLELAKNYNKAVEEEDKMTPEQLAIKNVGKQDPKRHLEEHVDVLMTSNIVQCL
AAMLDTVVFK

FIGURE 1681A

AAAATACTTGCCCTTTGGAAAAAAATCATTCTGGCGTCCACATTCAGACTGGTTTAGAGGAGAGTAATACTGAAG
ACATGCCCCCCCCGAATCAAGGTAGCAATTGCGGAGATGAAAAGAAATGAGTCCAAAAGATGCTTAAATGTGACCA
TTGAACAGGATTTGACTCATTGGATATGAGGCCATGGAGCAGTGTCTGGCTAGGTGGATGGATGTTGGTGCTGTT
TAGTTAAATAGGAAACTGGAAGAGAAGCAGGCTTGCAAGAATGGTAATATTTTGGACGTGTAACTTGTCTGGCAA
GATGTTGAAGAGGTAAAGGAGGCAGCACAGCATCATGGGCCTTGGAGGCAGAAGCCGCTTTGATTTACTCAGAAC
ACCAAATCAGTCTCCATTTTCTTGACTCAGACTACACCCAAGAGATTGCTTCCTTCCCTGTGCTTCCTGGCCACT
TGCTACTCTAGCTAGGAAGATCTGCCTCCCTTAGCTGAAGTCTAAGATGTGTAGCTTATTGATGCCTCTCCTCTT
CTTGTTCTGCTGTTGCTGAATATAATGGGGATGCCAGGGCAGACATACCATTCAACTTGAATCTTCCTTACCCAC
TTTGTATAGTCTTACATGTCATTGATACCTTGTTTTCTGGTACGCCTAAAAGGAGTAGAACTTCAAGTGGTATTT
AAAAGCTTTAAGAAAAGTCAAATTTTTACTTTTTTCTTCCCATCTGAGGCATGGATTTATTTTCTTTTTAAAGAA
ATCCAAATTTTTAAAAGAAGGGATCTTATTTTTAAAACGAAGATCGATAATATCTACTATGTACTAAATGTCATT
CTTTAAAAGTTGTTCCCTCATAATTTAGTAAATTACTTCCTTTTTTAAAAAAAGGAAAGAAAGAGTGTTTGTCTT
ACAGGCTAACATCACAAACAATAAGTTTCTTCTCATCCATCTCCATTTATAAACTAGTGTGACTGTCTTCTGAGC
ACAGTATTAAACCTGGACAGGGAGAGGGAGGGTGTTAGAGAATGAGAGGGAAAGAGAGAGAATACCTACATATAA
GGTGACCCTAAAGAAAAGCCTTTCACCCTTCGGAAGATCTTTTCATTTTCATTTTTCTTTTTTCAAACACCAACT
TGTACCAGAGGGAAGATCTTTTTTTAAAAGCGTTTCACTAAAATTTGTAAGGAAATAATGAGCTAGATAAAATAT
TACAGTGTTTATTTAATGAATTTACTCATATTTAAAATAATATCTAAAAAGAGTAATTTAGGAATATTGAGGCAA
TGAGACTTGAAGGTTATAAATAGTGGCAGTGAGAAAAGGAATATTATAGATAAGCTGTTGAAAAGAAAAGATGCT
AAGTTTTCTAGTGCTTCCTTCTGTTTCCAAGGGATTATAGAAATCGGAGTTTGTTTGACCTGTTTCACAGGCATC
TCCTTTGTGGACTCATTGTGTCTCTTCCTTAGGCTAATAGTCACCATTTATCATGGACGGTTGTCATGAGTGTTG
AAGCACACTTAACCTGCTTCGTCAGAGGGTACTTGGCATCACCGGTGCACAGCTGGTGTCCTAGCAGGAGACTAA
CTAGCTGACACACCGTGCTTTGTTAGCCTAATAATCTTATTTGTTAAAACTTGCCATTTGTTGGATTTTTCTATT
TTACCCCATTATAAACTTCTTATTGAGATCAGATGACTTCTGAATAGCATTTGCTGTATTTTTCCAAGGTAAAGA
ATATCTTTTTCAGATTTTTCTTTCTTTCTTTA**ATG**TCAGAAATAGAAGAAATCTTTTCTACCGACCTTGTGCCAG
GAGATGTCATGGTCATTCCATTAAATGGGACAATAATGCCTTGTGATGCTGTGCTTATTAATGGTACCTGCATTG
TAAACGAAAGCATGTTAACAGGAGAAAGTGTTCCAGTGACAAAGACTAATTTGCCAAATCCTTCAGTGGATGTGA
AAGGAATAGGAGATCAATTATATAATCCGGAAACACATAAACGACATACTTTGTTTTGTGGGACAACTGTTATTC
AGACTCGTTTCTACACTGGAGAACTCGTCAAAGCCATAGTTGTTAGAACAGGATTTAGTACTTCCAAAGGACAGC
TTGTTCGTTCCATATTGTATCCCAAACCAACTGATTTTAAACTCTACAGAGATGCCTACTTGTTTCTACTATGTC
TTGTGGCAGTTGCTGGCATTGGGTTTATCTACACTATTATTAATAGCATTTTAAATGAGGTACAAGTTGGGGTCA
TAATTATCGAGTCTCTTGATATTATCACAATTACTGTGCCCCCTGCACTTCCTGCTGCAATGACTGCTGGTATTG
TGTATGCTCAGAGAAGACTGAAAAAAATCGGTATTTTCTGTATCAGTCCTCAAAGAATAAATATTTGTGGACAGC
TCAATCTTGTTTGCTTTGACAAGACTGGAACTCTAACTGAAGATGGTTTAGATCTTTGGGGGATTCAACGAGTGG
AAAATGCACGATTTCTTTCACCAGAAGAAAATGTGTGCAATGAGATGTTGGTAAAATCCCAGTTTGTTGCTTGTA
TGGCTACTTGTCATTCACTTACAAAAATTGAAGGAGTGCTCTCTGGTGATCCACTTGATCTGAAAATGTTTGAGG
CTATTGGATGGATTCTGGAAGAAGCAACTGAAGAAGAAACAGCACTTCATAATCGAATTATGCCCACAGTGGTTC
GTCCTCCCAAACAACTGCTTCCTGAATCTACCCCTGCAGGAAACCAAGAAATGGAGCTGTTTGAACTTCCAGCTA
CTTATGAGATAGGAATTGTTCGCCAGTTCCCATTTTCTTCTGCTTTGCAACGTATGAGTGTGGTTGCCAGGGTGC
TGGGGGATAGGAAAATGGACGCCTACATGAAAGGAGCGCCCGAGGCCATTGCCGGTCTCTGTAAACCTGAAACAG
TTCCTGTCGATTTTCAAAACGTTTTGGAAGACTTCACTAAACAGGGCTTCCGTGTGATTGCTCTTGCACACAGAA
AATTGGAGTCAAAACTGACATGGCATAAAGTACAGAATATTAGCAGAGATGCAATTGAGAACAACATGGATTTTA
TGGGATTAATTATAATGCAGAACAAATTAAAGCAAGAACCCCCTGCAGTACTTGAAGATTTGCATAAAGCCAACA
TTCGCACCGTCATGGTCACAGGTGACAGTATGTTGACTGCTGTCTCTGTGGCCAGAGATTGTGGAATGATTCTAC
CTCAGGATAAAGTGATTATTGCTGAAGCATTACCTCCAAAGGATGGGAAAGTTGCCAAAATAAATTGGCATTATG
CAGACTCCCTCACGCAGTGCAGTCATCCATCAGCAATTGACCCAGAGGCTATTCCGGTTAAATTGGTCCATGATA
GCTTAGAGGATCTTCAAATGACTCGTTATCATTTTGCAATGAATGGAAAATCATTCTCAGTGATACTGGAGCATT
TTCAAGACCTTGTTCCTAAGTTGATGTTGCATGGCACCGTGTTTGCCCGTATGGCACCTGATCAGAAGACACAGT
TGATAGAAGCATTGCAAAATGTTGATTATTTTGTTGGGATGTGTGGTGATGGCGCAAATGATTGTGGTGCTTTGA

FIGURE 1681B

AGAGGGCACACGGAGGCATTTCCTTATCGGAGCTCGAAGCTTCAGTGGCATCTCCCTTTACCTCTAAGACTCCTA
GTATTTCCTGTGTGCCAAACCTTATCAGGGAAGGCCGTGCTGCTTTAATAACTTCCTCCTGTGAATTAGCACTAT
TTTCTATAGTTACTTATTCTCTGGATCATTTTATAATTTCCATATTAATTTCAAGTATGCTCGTGTTATTCTTCA
GTGATTTCCACAATTGTGCATTTTATTCTTTGGTT**TAA**GTACTGAAGCATATAATGAAAGTAATTGCTAAGTAGC
AGCTTAAAAATTCAATTATCCGATTGTATTTAACATCTTTAAGAGCATGATCATAAAGAGCTATTTTTGACACCC
CCCCCCCACTTTTTTAACATTTAGAGTTAGTAAGGGTTTTATATCTCTTCTGTCCATATTGTTTTCAAAGGAATG
AGGTGTTTAGGTGGCTGGAAAAGCATTTGTAGGAAGTTAGATTTGAATATAGACAAGGTGGGTTATTCACGTTGA
GAATGTTATTTGAAGAATGCCTGTGAAGCCAGGTGTGGGTTCTACTCAGTGCCATAGATAGACTGAGTCTTCTCT
CGTAGGTTACCATTACATAGTAATTTTGATTCTGAATTTCACATTAAATTATTTGAGTTTATACAGACCTAAATT
TTAAAATCTGTACATATATTATTTTGATGTATTAAGATGAATATTGCTGATTTAAATTTTATTTATGCACATACT
TAAAGGACAGAAATGTCTGGGAAAGTAATTGTTAAATAATGATATGTAACTTTTTAACTTTTTAAATAAATAACA
AGATTTTTAATGTGTGTCTCCCTCAGGGTTGTTTAAAGTTTTTTTTCTCCCTCAAGTATAAATAGTGGTAACTAT
ATGTTTTGTATCTTCTAGCACCAACTGCTGTAAAGCAATGCTGCAAATAATGCTTGAATACAAGTGGCTAAGCCA
ACAACAGAATAAATACTTTTATAGTAGTTTTATAATCCTGAAATTCGAAAGCTTTCCCAATTGCACTTGCATCTA
AACAAAACTGTTGCAGTTTTTACTCTATTTATTTTGTTCCCCATGTTTATGAAAGTCCTGCACAGTTTCAAAGGC
ATGGTAAATAATATATCAATGTTTATGTAGTCTGTTACAGAAACAGCTATAGATAACATTATCCAGTGAAGAGCA
AAATTCAAGCTTTAGAAAATATTCATGCATGCAATTTTGACATATCTAAAAATAGGTTTTTGTATATTTATGGTG
GGAGGTGGTTGGGAACTTTTAACAAAATGGGGTGTTAATTTTTGTACAGTCTGTGGGCATTTACACATTTTTAAT
GTATTAAAATTTGGTAATTATGTGTACATTAAATTAATAAAAGTTACTTCTAGTTATGATTTGTGAATTCCCTAA
GACCTTGGATTTTTTTAAGTAACTTTATATCAGAAATGATACTGCATCTTTATATTTTTAAAATTGTATTGCTGC
TCAAGAATGGTACCCTCTTGTCAAAAAGGCATACATTCATAATTGTACATTCAGCATTGTAAATAATCTTATGAA
ACCTTTTTTGATTGAAGCTATTCAAAATAAAAATTTTAATGAATGAAATAA

FIGURE 1682

MSEIEEIFSTDLVPGDVMVIPLNGTIMPCDAVLINGTCIVNESMLTGESVPVTKTNLPNPSVDVKGIGDQLYNPE
THKRHTLFCGTTVIQTRFYTGELVKAIVVRTGFSTSKGQLVRSILYPKPTDFKLYRDAYLFLLCLVAVAGIGFIY
TIINSILNEVQVGVIIIESLDIITITVPPALPAAMTAGIVYAQRRLKKIGIFCISPQRINICGQLNLVCFDKTGT
LTEDGLDLWGIQRVENARFLSPEENVCNEMLVKSQFVACMATCHSLTKIEGVLSGDPLDLKMFEAIGWILEEATE
EETALHNRIMPTVVRPPKQLLPESTPAGNQEMELFELPATYEIGIVRQFPFSSALQRMSVVARVLGDRKMDAYMK
GAPEAIAGLCKPETVPVDFQNVLEDFTKQGFRVIALAHRKLESKLTWHKVQNISRDAIENNMDFMGLIIMQNKLK
QEPPAVLEDLHKANIRTVMVTGDSMLTAVSVARDCGMILPQDKVIIAEALPPKDGKVAKINWHYADSLTQCSHPS
AIDPEAIPVKLVHDSLEDLQMTRYHFAMNGKSFSVILEHFQDLVPKLMLHGTVFARMAPDQKTQLIEALQNVDYF
VGMCGDGANDCGALKRAHGGISLSELEASVASPFTSKTPSISCVPNLIREGRAALITSSCELALFSIVTYSLDHF
IISILISSMLVLFFSDFHNCAFYSLV

FIGURE 1683A

AACACTTACTAAATGGAATAAGTTTGCACCGGTTAATTAAATATCTTTTTTGTAAGTATTCACAGTTCATGGCCC
GGGCAGTGGCTCCTGGAAGAGGAACAAGTGTGGGAAAAGGGAGAGGAAGCCGGAGCTAAATGACAGGATGCAGGC
GACTTGAGACACAAAAAGAGAAGCGTTCCTCTCGGATCCAGGCATTGCCTCGCTGCTTTCTTTTCTCCAAGACGG
GCTGAGGATTGTACAGCTCTAGGCGGAGTTGGGGCTCTTCGGATCGCTTAGATTCTCCTCTTTGCTGCATTTCCC
CCCACGTCCTCGTTCTCCCGCGTCTGCCTGCGGACCCGGAGAAGGGAGA**ATG**GAGAGGGGGCTGCCGCTCCTCTG
CGCCGTGCTCGCCCTCGTCCTCGCCCCGGCCGGCGCTTTTCGCAACGATAAATGTGGCGATACTATAAAAATTGA
AAGCCCCGGGTACCTTACATCTCCTGGTTATCCTCATTCTTATCACCCAAGTGAAAAATGCGAATGGCTGATTCA
GGCTCCGGACCCATACCAGAGAATTATGATCAACTTCAACCCTCACTTCGATTTGGAGGACAGAGACTGCAAGTA
TGACTACGTGGAAGTCTTCGATGGAGAAAATGAAAATGGACATTTTAGGGGAAAGTTCTGTGGAAAGATAGCCCC
TCCTCCTGTTGTGTCTTCAGGGCCATTTCTTTTTATCAAATTTGTCTCTGACTACGAAACACATGGTGCAGGATT
TTCCATACGTTATGAAATTTTCAAGAGAGGTCCTGAATGTTCCCAGAACTACACAACACCTAGTGGAGTGATAAA
GTCCCCCGGATTCCCTGAAAAATATCCCAACAGCCTTGAATGCACTTATATTGTCTTTGCGCCAAAGATGTCAGA
GATTATCCTGGAATTTGAAAGCTTTGACCTGGAGCCTGACTCAAATCCTCCAGGGGGGATGTTCTGTCGCTACGA
CCGGCTAGAAATCTGGGATGGATTCCCTGATGTTGGCCCTCACATTGGGCGTTACTGTGGACAGAAAACACCAGG
TCGAATCCGATCCTCATCGGGCATTCTCTCCATGGTTTTTTACACCGACAGCGCGATAGCAAAAGAAGGTTTCTC
AGCAAACTACAGTGTCTTGCAGAGCAGTGTCTCAGAAGATTTCAAATGTATGGAAGCTCTGGGCATGGAATCAGG
AGAAATTCATTCTGACCAGATCACAGCTTCTTCCCAGTATAGCACCAACTGGTCTGCAGAGCGCTCCCGCCTGAA
CTACCCTGAGAATGGGTGGACTCCCGGAGAGGATTCCTACCGAGAGTGGATACAGGTAGACTTGGGCCTTCTGCG
CTTTGTCACGGCTGTCGGGACACAGGGCGCCATTTCAAAAGAAACCAAGAAGAAATATTATGTCAAGACTTACAA
GATCGACGTTAGCTCCAACGGGGAAGACTGGATCACCATAAAAGAAGGAAACAAACCTGTTCTCTTTCAGGGAAA
CACCAACCCCACAGATGTTGTGGTTGCAGTATTCCCCAAACCACTGATAACTCGATTTGTCCGAATCAAGCCTGC
AACTTGGGAAACTGGCATATCTATGAGATTTGAAGTATACGGTTGCAAGATAACAGATTATCCTTGCTCTGGAAT
GTTGGGTATGGTGTCTGGACTTATTTCTGACTCCCAGATCACATCATCCAACCAAGGGGACAGAAACTGGATGCC
TGAAAACATCCGCCTGGTAACCAGTCGCTCTGGCTGGGCACTTCCACCCGCACCTCATTCCTACATCAATGAGTG
GCTCCAAATAGACCTGGGGGAGGAGAAGATCGTGAGGGGCATCATCATTCAGGGTGGGAAGCACCGAGAGAACAA
GGTGTTCATGAGGAAGTTCAAGATCGGGTACAGCAACAACGGCTCGGACTGGAAGATGATCATGGATGACAGCAA
ACGCAAGGCGAAGTCTTTTGAGGGCAACAACAACTATGATACACCTGAGCTGCGGACTTTTCCAGCTCTCTCCAC
GCGATTCATCAGGATCTACCCCGAGAGAGCCACTCATGGCGGACTGGGGCTCAGAATGGAGCTGCTGGGCTGTGA
AGTGGAAGCCCCTACAGCTGGACCGACCACTCCCAACGGGAACTTGGTGGATGAATGTGATGACGACCAGGCCAA
CTGCCACAGTGGAACAGGTGATGACTTCCAGCTCACAGGTGGCACCACTGTGCTGGCCACAGAAAAGCCCACGGT
CATAGACAGCACCATACAATCAGAGTTTCCAACATATGGTTTTAACTGTGAATTTGGCTGGGGCTCTCACAAGAC
CTTCTGCCACTGGGAACATGACAATCACGTGCAGCTCAAGTGGAGTGTGTTGACCAGCAAGACGGGACCCATTCA
GGATCACACAGGAGATGGCAACTTCATCTATTCCCAAGCTGACGAAAATCAGAAGGGCAAAGTGGCTCGCCTGGT
GAGCCCTGTGGTTTATTCCCAGAACTCTGCCCACTGCATGACCTTCTGGTATCACATGTCTGGGTCCCACGTCGG
CACACTCAGGGTCAAACTGCGCTACCAGAAGCCAGAGGAGTACGATCAGCTGGTCTGGATGGCCATTGGACACCA
AGGTGACCACTGGAAGGAAGGGCGTGTCTTGCTCCACAAGTCTCTGAAACTTTATCAGGTGATTTTCGAGGGCGA
AATCGGAAAAGGAAACCTTGGTGGGATTGCTGTGGATGACATTAGTATTAATAACCACATTTCACAAGAAGATTG
TGCAAAACCAGCAGACCTGGATAAAAAGAACCCAGAAATTAAAATTGATGAAACAGGGAGCACGCCAGGATACGA
AGGTGAAGGAGAAGGTGACAAGAACATCTCCAGGAAGCCAGGCAATGTGTTGAAGACCTTAGACCCCATCCTCAT
CACCATCATAGCCATGAGTGCCCTGGGGGTCCTCCTGGGGGCTGTCTGTGGGGTCGTGCTGTACTGTGCCTGTTG
GCATAATGGGATGTCAGAAAGAAACTTGTCTGCCCTGGAGAACTATAACTTTGAACTTGTGGATGGTGTGAAGTT
GAAAAAAGACAAACTGAATACACAGAGTACTTATTCGGAGGCA**TGA**AGGCAGACAGAGATGAAAAGACAGTCAAA
GGACGGAAGTGGAAGGACGGGAGTGAGCTGGGGAGCTGTTGATCTTTCACTATACAGGCTGGGAAGTGTGTTGAT
GACCACTGAGCCAGGCTTTTCTCAGGAGCTTCAATGAGTATGGCCGACAGACATGGACAAGGAGCTGTGTTCACC
ATCGGACTCATGTGCAGTCAGCTTTTTTCCTGTTGGTTTCATTTGAATAATCAGATGCTGGTGTTGAGACCAAGT
ATGATTGACATAATCATTCATTTCGACCCCTCCTGCCCCTCTCTCTCTCTCTCCTCTCCCCTTTGTGGATTCTTT
TTGGAAACTGAGCGAAATCCAAGATGCTGGCACCAAGCGTATTCCGTGTGGCCCTTTGGATGGACATGCTACCTG
AAACCCAGTGCCCAGAATATACTAGAATCACCGCATTTCAGTGGACTCCTGAAGTTGTACTTGTGTATAATTGCC

FIGURE 1683B

CGCGTCGTGCATAGGCAAAGAAGGATTAGGCTGTTTTCTTTTTAAAGTACTGTAGCCTCAGTACTGGTGTAGTGT
GTCAGCTCTGTTTACGAAGCAATACTGTCCAGTTTTCTTGCTGTTTTTCCGGTGTTGTACTAAACCTCGTGCTTG
TGAACTCCATACAGAAAACGGTGCCATCCCTGAACACGGCTGGCCACTGGGTATACTGCTGACAACCGCAACAAC
AAAAACACAAATCCTTGGCACTGGCTAGTCTATGTCCTCTCAAGTGCCTTTTTGTTTGTACTGGTTCATTGTGTT
ACATTAACGACCCACTCTGCTTCTTGCTGGTGAAAGCCCTGCTCTTTAATCAAACTCTGGTGGCCCACTGACTAA
GAAGAAAGTTTATTTTCGTGTGAGATGCCAGCCCCTCCGGGCAGGCAAGGGCTCTGAAGATTTGGCAACGTGGCT
TAATTGTTCTGCTTTTTCTGTAGTTCAATTTCATGTTTCTTGACCCTTTTGTATAAAGCTACAATATTCTCTCTT
ATTGTTCTTTCATATGGAATGTATTTTCAAATGTAAACTCTCTTCTCTTTCTCTCTCCTATCTCTCTGTCTTTTT
TCTCTCTTAGAATTGGAGGATTTGCCATTGTCCAGGAAAGAAACTTGCAGCTTTAACCTGCTGGGAATGGCAAAC
GATTTTACTAGACTTTATGTTTAAAAATAAATAAATAAGGGAAATTCCTAACTTTGCCCTCCAAAGTCTAACTTT
GGTTTTCTTGTTAACTGGTTAAAGTGACAGTATCTTTTTTCCTTATCTATTCTATTCAAAATGACCTTTGATAGA
AATGTTGGCATTTAGTAGAAATAGTGATAAGTTGAGGAAAGAAATAATACAAATTGGCTTTCAAGTGAGACCCAA
AGGAAGAACTGGATAAAATCTTCCAAATCCAAAAGCATGAGATTTTTCTATCCAAATATGCAAAAATGACCCAAG
AGAACTTTCTTATTTTGCTACTGAGTCACACAAGGGAAGTGGAAGGAAGAACAGTTAATTTAAGAATGAAACTAT
AAATCCTGATGCCTGGGGGTCAAGTATTTTAAGATAAGAGGGGGAAAAACACATAAAGTCAAACAAATGTTTTAA
AAATTCATAACAGCAACCTTGAAAAAATAGACTTAAATGAATGCTTCTAGAAACTTCCAGCGGCTCACAAAGAAT
AAGCCTGCCTTAGGGCTGGCAACATCTAAGCCTCTAACAGCACAGGGAAGCAAATATCTTACCAGGCAGCCTATG
AATTAACCCAAAGAAGCTTTGGTTGGTTTTGGTGGATTTTTATCATGCCATGTTGGACATGAGATTTTTTAGATC
TTCCTTCCCACATTGCTAGACGTCTCACTCAAAGACATTTGTTGGGAGTCACATTTGCATCATAGACGAGACAGT
CCATTCATCTTAGTTAAATTGGATTGAGAATGCCTTTTGTTTCCAGGAAAATATTGATCACCATGAAAGAAGAAT
AGTTTTTTGTCCCCAGAGACATTCATTTAGTTGATATAATCCTACCAGAAGGAAAGCACTAAGAAACACTCGTTT
GTTGTTTTTAAAGGCAACAGACTTAAAGTTGTCCTCAGCCAAGGAAAAATGATACTGCAACTTTAAAATTTAAAG
TATCTTGCACTGATAAATATATTTAAAAATTGTATGTTTATAAAGTTATTAATTTGTAAAGGCAGTGTTACAAAA
TGTTCAGTTTATATTGTTTTAGATTGTTTTGTAATTTTTAAAGGTGTAAAATAACATATTTTTTCTTTATGGAAA
TCTAAAACTTTCTGTAGTAAAATGTTTTCATTTTACTGGTATATTATTGCTTCATGTTTTGTACCATCATAAGAT
TTTGTGCAGATTTTTTTTTACAGAAATTATTA

FIGURE 1684

MERGLPLLCAVLALVLAPAGAFRNDKCGDTIKIESPGYLTSPGYPHSYHPSEKCEWLIQAPDPYQRIMINFNPHF
DLEDRDCKYDYVEVFDGENENGHFRGKFCGKIAPPPVVSSGPFLFIKFVSDYETHGAGFSIRYEIFKRGPECSQN
YTTPSGVIKSPGFPEKYPNSLECTYIVFAPKMSEIILEFESFDLEPDSNPPGGMFCRYDRLEIWDGFPDVGPHIG
RYCGQKTPGRIRSSSGILSMVFYTDSAIAKEGFSANYSVLQSSVSEDFKCMEALGMESGEIHSDQITASSQYSTN
WSAERSRLNYPENGWTPGEDSYREWIQVDLGLLRFVTAVGTQGAISKETKKKYYVKTYKIDVSSNGEDWITIKEG
NKPVLFQGNTNPTDVVVAVFPKPLITRFVRIKPATWETGISMRFEVYGCKITDYPCSGMLGMVSGLISDSQITSS
NQGDRNWMPENIRLVTSRSGWALPPAPHSYINEWLQIDLGEEKIVRGIIIQGGKHRENKVFMRKFKIGYSNNGSD
WKMIMDDSKRKAKSFEGNNNYDTPELRTFPALSTRFIRIYPERATHGGLGLRMELLGCEVEAPTAGPTTPNGNLV
DECDDDQANCHSGTGDDFQLTGGTTVLATEKPTVIDSTIQSEFPTYGFNCEFGWGSHKTFCHWEHDNHVQLKWSV
LTSKTGPIQDHTGDGNFIYSQADENQKGKVARLVSPVVYSQNSAHCMTFWYHMSGSHVGTLRVKLRYQKPEEYDQ
LVWMAIGHQGDHWKEGRVLLHKSLKLYQVIFEGEIGKGNLGGIAVDDISINNHISQEDCAKPADLDKKNPEIKID
ETGSTPGYEGEGEGDKNISRKPGNVLKTLDPILITIIAMSALGVLLGAVCGVVLYCACWHNGMSERNLSALENYN
FELVDGVKLKKDKLNTQSTYSEA

FIGURE 1685A

ATTTATGCTCTCAGCCTTGTGTTGTCAATTTGGAAGCAGTTGTTTCATCTGAGTTCAGAAGTAGCATTCCCGTGT
ACAAAAAAAGGTGGAAGAATGAGAAACATCTTCACACCAGCAGGACACAAATAGTACATGTGAAATTTCCAAGCA
TTATGGTTTACAGAGATGATTATTTCATCAGACATTCCATCTCTGTATCTGCAGTGATAGTACGCGCCTGGATTA
CTCACAAATACAGTGGCAGAGACTGGAATGTTAAATGGGAGGAAAACTTGCTCCATGCTGTAGCAAAGAATTATA
CCCTCCTGCAGACCATCCCGCCTTTTGAACGCCCTTTCAAAGATCATCAAGTGTGCCTTGAGTGGAACATGGGTT
ATATTTGGAACCTTCGGGCAAACAGGATTCCACAGTGTCCTCTGGAAAATGATGTGGTTGCCCTGCTTGGCTTTC
CTTATGCCTCCAGTGGAGAAAACACAGGCATTGTCAAGAAGTTCCCGAGGTTTCGGAACCGAGAGCTGGAGGCCA
CTCGACGCCAGAGGATGGATTACCCAGTGTTTACTGTTTCATTGTGGCTTTATTTACTCCATTATTGCAAGGCCA
ACCTCTGTGGGATTCTGTACTTTGTTGACTCTAATGAGATGTACGGCACACCTTCTGTATTTCTTACGGAAGAGG
GCTATTTGCATATTCAGATGCATCTTGTCAAAGGGGAAGACCTTGCTGTAAAAACTAAATTCATCATACCTTTGA
AGGAGTGGTTTCGACTGGATATCTCTTTTAACGGAGGCCAGATAGTAGTAACCACTAGCATTGGACAGGATTTGA
AAAGCTACCACAATCAGACCATTAGCTTCCGGGAGGATTTCCATTATAATGACACAGCTGGGTACTTCATTATTG
GAGGGAGCAGGTATGTGGCTGGCATTGAAGGGTTTTTTGGACCCCTGAAGTACTATCGCCTTCGCAGTCTGCACC
CCGCCCAGATTTTTAATCCCCTCCTTGAGAAGCAACTTGCTGAACAAATCAAGTTATATTATGAAAGGTGTGCTG
AGGTTCAAGAAATAGTATCTGTGTATGCATCTGCAGCAAAGCACGGGGGCGAGAGACAAGAAGCATGCCACCTCC
ACAACTCCTACCTGGACCTCCAGCGCAGGTATGGGAGACCCTCGATGTGCAGAGCCTTCCCCTGGGAGAAGGAGC
TGAAAGACAAACACCCCAGCTTGTTCCAGGCATTGCTGGAGATGGATCTGCTGACCGTGCCAAGGAACCAAAATG
AATCTGTATCAGAAATCGGTGGGAAGATATTTGAGAAGGCTGTAAAGAGACTCTCTAGCATTGATGGTCTTCACC
AAATTAGCTCTATCGTCCCCTTTCTGACGGATTCCAGCTGCTGTGGATACCATAAAGCATCCTACTACCTTGCAG
TCTTTTATGAGACTGGATTAAATGTTCCTCGGGATCAGCTGCAGGGCATGTTGTATAGTTTGGTTGGAGGCCAGG
GGAGTGAGAGGCTGTCTTCAATGAATCTTGGGTATAAACACTACCAGGGTATTGACAACTACCCCCTGGACTGGG
AACTGTCGTATGCCTACTACAGCAACATTGCCACCAAGACACCCCTTGACCAGCACACACTGCAAGGAGATCAGG
CATATGTTGAAACAATTAGACTAAAAGATGATGAAATACTCAAGGTACAAACCAAAGAAGATGGAGATGTCTTTA
TGTGGTTGAAGCATGAAGCTACCCGAGGCAATGCAGCAGCTCAGCAACGATTGGCCCAGATGCTGTTCTGGGGGC
AGCAAGGTGTGGCCAAGAATCCCGAAGCAGCAATTGAGTGGTACGCCAAGGGCGCCCTGGAGACGGAGGATCCTG
CGTTAATCTATGACTATGCCATTGTGCTATTCAAGGGTCAAGGAGTAAAAAAGAACAGACGGCTTGCCTTAGAGC
TGATGAAGAAAGCAGCTTCCAAGGGATTGCATCAGGCAGTCAATGGCCTGGGATGGTATTACCACAAATTCAAGA
AAAATTACGCCAAAGCAGCAAAGTACTGGTTAAAAGCAGAAGAAATGGGGAACCCAGATGCGTCATACAATCTTG
GAGTCCTGCATTTGGATGGCATCTTCCCTGGAGTTCCTGGAAGGAATCAAACTTTAGCTGGTGAATATTTCCATA
AGGCTGCGCAAGGTGGACACATGGAAGGGACCTTGTGGTGTTCTCTCTACTATATCACAGGCAACCTGGAGACAT
TCCCTAGAGATCCTGAGAAAGCTGTTGTATGGGCAAAACATGTAGCTGAGAAAAATGGCTACTTGGGCCATGTCA
TCCGCAAAGGCCTCAATGCCTACCTGGAAGGTTCATGGCATGAAGCTTTGCTGTATTATGTTTTAGCAGCAGAAA
CTGGAATTGAAGTGTCACAGACAAATTTAGCACACATCTGTGAGGAGAGGCCAGACCTGGCCAGGAGATACTTGG
GTGTTAACTGTGTTTGGAGATACTATAATTTCTCTGTTTTTCAAATCGATGCTCCTTCCTTTGCATATTTGAAGA
TGGGAGACCTTTACTACTATGGCCACCAAAACCAGTCACAAGACCTGGAGTTGTCTGTGCAGATGTACGCCCAAG
CCGCCCTGGATGGAGACTCCCAGGGATTTTTTAACCTGGCCCTGCTAATCGAGGAAGGTACGATAATCCCACACC
ATATCTTGGATTTCTTGGAAATTGACTCAACTCTCCATTCTAATAACATCTCCATTCTCCAGGAACTGTACGAAA
GGTGCTGGAGCCACAGTAACGAGGAGTCCTTCAGCCCCTGCTCCTTGGCCTGGCTTTACCTGCACTTGCGGCTTC
TCTGGGGTGCTATCCTGCACTCAGCCCTGATCTACTTTCTGGGAACCTTTCTGCTATCCATATTGATCGCCTGGA
CTGTGCAGTATTTCCAGTCTGTCTCAGCAAGCGATCCCCCTCCAAGACCATCCCAGGCCTCCCCAGACACTGCCA
CGTCCACTGCAAGTCCAGCTGTGACTCCAGCTGCAGATGCCTCTGACCAAGACCAGCCCACAGTAACTAATAACC
CGGAGCCACGTGGG**TGA**ACTGTGCACTCCAGTTCTCTCCAGATGAGAGAGAATCTTTTCAACAGCTGGTATTGGG
AAGCTGGGGCCAGGGCATGATCCTGATAAACACCTTAAATGTCTTGTCAACTGGATGCAAATTTTGCAATTGGTG
TCATTTTTTTTAAAGTCAAATTACAAGGAAGTACCCAGATCAGGCAGTGGTAATACCAAAGGTCATCAAACACAT
ACAAGGAACATCTTGATCATAGGGCATGTGGGGAAGTTTACTGGGCCATCACAGACTTTTGTTCTAGTGATTGTA
TGTATTAGGAGTCATAGCATGCCCTACGGCAGATCTGGATTCTTATACACTAAGATGTGTCTTAAGAATCACAGT
GCGTGCTTCATCCCTTTATTGAAGAACAGAAAATTATGACTACTCTACAAGGTGGATAATATTTTGGTACCTGTG
CTTGCCACAGCCCTGTTCCTCAAAGCTGAATTGATAGATTTCTCTTTGACTTCCAAGACCTAGCAGTTATAAGGC

FIGURE 1685B

ACCTTGAAATAAATTGTTTGTGCCTGGAAATGCAGGGAGGGCAATAGCTTTGTAAATTGGTTTACATTTTTCTCC
TTGAATTTTTCTAGGGTCCTAGTGCTTCCGAATCATTTAATGGCATTGTCGGATATCTTTTACATTTCAATTGCA
ATCCATGAAATTACATTTAGAAGATTCTTAGTACTTAACTGTAGTCTTCTCCATGAATTACACGTTAGAATAGAC
TGGCAGCAACGGAATATGCAGCAAGTAAGCCTCTAGCTTATAGTTTCATCCCTACCCCTCATGCCTGCGTGAGTC
TGTACAGGGATATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTTAGAGAGGAAGAGGAAGAGCAGAATGTC
TGTATACTACATGCTGCTAAGGTAGTGAATAAATCAGTAATGCAATATTGTGGGTCCAAACTACTCTTTGCACTA
CTTTATTTACAGTAGTAAATAAAATTATTTTTATAC

FIGURE 1686

LCSQPCVVNLEAVVSSEFRSSIPVYKKRWKNEKHLHTSRTQIVHVKFPSIMVYRDDYFIRHSISVSAVIVRAWIT
HKYSGRDWNVKWEENLLHAVAKNYTLLQTIPPFERPFKDHQVCLEWNMGYIWNLRANRIPQCPLENDVVALLGFP
YASSGENTGIVKKFPRFRNRELEATRRQRMDYPVFTVSLWLYLLHYCKANLCGILYFVDSNEMYGTPSVFLTEEG
YLHIQMHLVKGEDLAVKTKFIIPLKEWFRLDISFNGGQIVVTTSIGQDLKSYHNQTISFREDFHYNDTAGYFIIG
GSRYVAGIEGFFGPLKYYRLRSLHPAQIFNPLLEKQLAEQIKLYYERCAEVQEIVSVYASAAKHGGERQEACHLH
NSYLDLQRRYGRPSMCRAFPWEKELKDKHPSLFQALLEMDLLTVPRNQNESVSEIGGKIFEKAVKRLSSIDGLHQ
ISSIVPFLTDSSCCGYHKASYYLAVFYETGLNVPRDQLQGMLYSLVGGQGSERLSSMNLGYKHYQGIDNYPLDWE
LSYAYYSNIATKTPLDQHTLQGDQAYVETIRLKDDEILKVQTKEDGDVFMWLKHEATRGNAAAQQRLAQMLFWGQ
QGVAKNPEAAIEWYAKGALETEDPALIYDYAIVLFKGQGVKKNRRLALELMKKAASKGLHQAVNGLGWYYHKFKK
NYAKAAKYWLKAEEMGNPDASYNLGVLHLDGIFPGVPGRNQTLAGEYFHKAAQGGHMEGTLWCSLYYITGNLETF
PRDPEKAVVWAKHVAEKNGYLGHVIRKGLNAYLEGSWHEALLYYVLAAETGIEVSQTNLAHICEERPDLARRYLG
VNCVWRYYNFSVFQIDAPSFAYLKMGDLYYYGHQNQSQDLELSVQMYAQAALDGDSQGFFNLALLIEEGTIIPHH
ILDFLEIDSTLHSNNISILQELYERCWSHSNEESFSPCSLAWLYLHLRLLWGAILHSALIYFLGTFLLSILIAWT
VQYFQSVSASDPPPRPSQASPDTATSTASPAVTPAADASDQDQPTVTNNPEPRG

FIGURE 1687

GGAGGAGGAAGCAAGCGAGGGGGCTGGTTCCTGAGCTTCGCAATTCCTGTGTCGCCTTCTGGGCTCCCAGCCTGC
CGGGTCGCATGATCCCTCCGGCCGGAGCTGGTTTTTTTGCCAGCCACCGCGAGGCCGGCTGAGTTACCGGCATCC
CCGCAGCCACCTCCTCTCCCGACCTGTGATACAAAAGATCTTCCGGGGGCTGCACCTGCCTGCCTTTGCCTAAGG
CGGATTTGAATCTCTTTCTCTCCCTTCAGAATCTTATCTTGGCTTTGGATCTTAGAAGAGAATCACTAACCAGAG
ACGAGACTCAGTGAGTGAGCAGGTGTTTTGGACAATGGACTGGTTGAGCCCATCCCTATTATAAAA**ATG**TCTCAG
AGCAACCGGGAGCTGGTGGTTGACTTTCTCTCCTACAAGCTTTCCCAGAAAGGATACAGCTGGAGTCAGTTTAGT
GATGTGGAAGAGAACAGGACTGAGGCCCCAGAAGGGACTGAATCGGAGATGGAGACCCCCAGTGCCATCAATGGC
AACCCATCCTGGCACCTGGCAGACAGCCCCGCGGTGAATGGAGCCACTGGCCACAGCAGCAGTTTGGATGCCCGG
GAGGTGATCCCCATGGCAGCAGTAAAGCAAGCGCTGAGGGAGGCAGGCGACGAGTTTGAACTGCGGTACCGGCGG
GCATTCAGTGACCTGACATCCCAGCTCCACATCACCCCAGGGACAGCATATCAGAGCTTTGAACAGGTAGTGAAT
GAACTCTTCCGGGATGGGGTAAACTGGGGTCGCATTGTGGCCTTTTTCTCCTTCGGCGGGGCACTGTGCGTGGAA
AGCGTAGACAAGGAGATGCAGGTATTGGTGAGTCGGATCGCAGCTTGGATGGCCACTTACCTGAATGACCACCTA
GAGCCTTGGATCCAGGAGAACGGCGGCTGGGATACTTTTGTGGAACTCTATGGGAACAATGCAGCAGCCGAGAGC
CGAAAGGGCCAGGAACGCTTCAACCGCTGGTTCCTGACGGGCATGACTGTGGCCGGCGTGGTTCTGCTGGGCTCA
CTCTTCAGTCGGAAA**TGA**CCAGACACTGACCATCCACTCTACCCTCCCACCCCCTTCTCTGCTCCACCACATCCT
CCGTCCAGCCGCCATTGCCACCAGGAGAACCACTACATGCAGCCCATGCCCACCTGCCCATCACAGGGTTGGGCC
CAGATCTGGTCCCTTGCAGCTAGTTTTCTAGAATTTATCACACTTCTGTGAGACCCCCACACCTCAGTTCCCTTG
GCCTCAGAATTCACAAAATTTCCACAAAATCTGTCCAAAGGAGGCTGGCAGGTATGGAAGGGTTTGTGGCTGGGG
GCAGGAGGGCCCTACCTGATTGGTGCAACCCTTACCCCTTAGCCTCCCTGAAAATGTTTTTCTGCCAGGGAGCTT
GAAAGTTTTCAGAACCTCTTCCCCAGAAAGGAGACTAGATTGCCTTTGTTTTGATGTTTGTGGCCTCAGAATTGA
TCATTTTCCCCCCACTCTCCCCACACTAACCTGGGTTCCCTTTCCTTCCATCCCTACCCCCTAAGAGCCATTTAG
GGGCCACTTTTGACTAGGGATTCAGGCTGCTTGGGATAAAGATGCAAGGACCAGGACTCCCTCCTCACCTCTGGA
CTGGCTAGAGTCCTCACTCCCAGTCCAAATGTCCTCCAGAAGCCTCTGGCTAGAGGCCAGCCCCACCCAGGAGGG
AGGGGGCTATAGCTACAGGAAGCACCCCATGCCAAAGCTAGGGTGGCCCTTGCAGTTCAGCACCACCCTAGTCCC
TTCCCCTCCCTGGCTCCCATGACCATACTGAGGGACCAACTGGGCCCAAGACAGATGCCCCAGAGCTGTTTATGG
CCTCAGCTGCCTCACTTCCTACAAGAGCAGCCTGTGGCATCTTTGCCTTGGGCTGCTCCTCATGGTGGGTTCAGG
GGACTCAGCCCTGAGGTGAAAGGGAGCTATCAGGAACAGCTATGGGAGCCCCAGGGTCTTCCCTACCTCAGGCAG
GAAGGGCAGGAAGGAGAGCCTGCTGCATGGGGTGGGGTAGGGCTGACTAGAAGGGCCAGTCCTGCCTGGCCAGGC
AGATCTGTGCCCCATGCCTGTCCAGCCTGGGCAGCCAGGCTGCCAAGGCCAGAGTGGCCTGGCCAGGAGCTCTTC
AGGCCTCCCTCTCTCTTCTGCTCCACCCTTGGCCTGTCTCATCCCCAGGGGTCCCAGCCACCCCGGGCTCTCTGC
TGTACATATTTGAGACTAGTTTTTATTCCTTGTGAAGATGATATACTATTTTTGTTAAGCGTGTCTGTATTTATG
TGTGAGGAGCTGCTGGCTTGCAGTGCGCGTGCACGTGGAGAGCTGGTGCCCGGAGATTGGACGGCCTGATGCTCC
CTCCCCTGCCCTGGTCCAGGGAAGCTGGCCGAGGGTCCTGGCTCCTGAGGGGCATCTGCCCCTCCCCCAACCCCC
ACCCCACACTTGTTCCAGCTCTTTGAAATAGTCTGTGTGAAGGTGAAAGTGCAGTTCAGTAATAAACTGTGTTTA
CTCAGTGAAAAAAAAAAAAAAAAA

FIGURE 1688

MSQSNRELVVDFLSYKLSQKGYSWSQFSDVEENRTEAPEGTESEMETPSAINGNPSWHLADSPAVNGATGHSSSL
DAREVIPMAAVKQALREAGDEFELRYRRAFSDLTSQLHITPGTAYQSFEQVVNELFRDGVNWGRIVAFFSFGGAL
CVESVDKEMQVLVSRIAAWMATYLNDHLEPWIQENGGWDTFVELYGNNAAAESRKGQERFNRWFLTGMTVAGVVL
LGSLFSRK

FIGURE 1689A

TTCGCCGTTTGAATTGCTGCGGGCCCGGGCCCTCACCTCACCTGAGGTCCGGCCGCCCAGGGGTGCGCT**ATG**CCG
TCGGGAGGTGACCAGTCGCCACCGCCCCCGCCTCCCCCTCCGGCGGCGGCAGCCTCGGATGAGGAGGAGGAGGAC
GACGGCGAGGCGGAAGACGCCGCGCCGTCTGCCGAGTCGCCCACCCCTCAGATCCAGCAGCGGTTCGACGAGCTG
TGCAGCCGCCTCAACATGGACGAGGCGGCGCGGCCCGAGGCCTGGGACAGCTACCGCAGCATGAGCGAAAGCTAC
ACGCTGGAGGGAAATGATCTTCATTGGTTAGCATGTGCCTTATATGTGGCTTGCAGAAAATCTGTTCCAACTGTA
AGCAAAGGGACAGTGGAAGGAAACTATGTATCTTTAACTAGAATCCTGAAATGTTCAGAGCAGAGCTTAATCGAA
TTTTTTAATAAGATGAAGAAGTGGGAAGACATGGCAAATCTACCCCCACATTTCAGAGAACGTACTGAGAGATTA
GAAAGAAACTTCACTGTTTCTGCTGTAATTTTTAAGAAATATGAACCCATTTTTCAGGACATCTTTAAATACCCT
CAAGAGGAGCAACCTCGTCAGCAGCGAGGAAGGAAACAGCGGCGACAGCCCTGTACTGTGTCTGAAATTTTCCAT
TTTTGTTGGGTGCTTTTTATATATGCAAAAGGTAATTTCCCCATGATTAGTGATGATTTGGTCAATTCTTATCAC
CTGCTGCTGTGTGCTTTGGACTTAGTTTATGGAAATGCACTTCAGTGTTCTAATCGTAAAGAACTTGTGAACCCT
AATTTTAAAGGCTTATCTGAAGATTTTCATGCTAAAGATTCTAAACCTTCCTCTGACCCCCCTTGTATCATTGAG
AAACTGTGTTCCTTACATGATGGCCTAGTTTTGGAAGCAAAGGGGATAAAGGAACATTTCTGGAAACCCTATATT
AGGAAACTTTATGAAAAAAAGCTCCTTAAGGGAAAAGAAGAAAATCTCACTGGGTTTCTAGAACCTGGGAACTTT
GGAGAGAGTTTTAAAGCCATCAATAAGGCCTATGAGGAGTATGTTTTATCTGTTGGGAATTTAGATGAGCGGATA
TTTCTTGGAGAGGATGCTGAGGAGGAAATTGGGACTCTCTCAAGGTGTCTGAACGCTGGTTCAGGAACAGAGACT
GCTGAAAGGGTGCAGATGAAAAACATCTTACAGCAGCATTTTGACAAGTCCAAAGCACTTAGAATCTCCACACCA
CTAACTGGTGTTAGGTACATTAAGGAGAATAGCCCTTGTGTGACTCCAGTTTCTACAGCTACGCATAGCTTGAGT
CGTCTTCACACCATGCTGACAGGCCTCAGGAATGCACCAAGTGAGAAACTGGAACAGATTCTCAGGACATGTTCC
AGAGATCCAACCCAGGCTATTGCTAACAGACTGAAAGAAATGTTTGAAATATATTCTCAGCATTTCCAGCCAGAC
GAGGATTTCAGTAATTGTGCTAAAGAAATTGCCAGCAAACATTTTCGTTTTGCGGAGATGCTTTACTATAAAGTA
TTAGAATCTGTTATTGAGCAGGAACAAAAAAGACTAGGAGACATGGATTTATCTGGTATTCTGGAACAAGATGCA
TTCCACAGATCTCTCTTGGCCTGCTGCCTTGAGGTCGTCACTTTTTCTTATAAGCCTCCTGGGAATTTTCCATTT
ATTACTGAAATATTTGATGTGCCTCTTTATCATTTTTATAAGGTGATAGAAGTATTCATTAGAGCAGAAGATGGC
CTTTGTAGAGAGGTGGTAAAACACCTTAATCAGATTGAAGAACAGATCTTAGATCATTTGGCATGGAAACCAGAG
TCTCCACTCTGGGAAAAAATTAGAGACAATGAAAACAGAGTTCCTACATGTGAAGAGGTCATGCCACCTCAGAAC
CTGGAAAGGGCAGATGAAATTTGCATTGCTGGCTCCCCTTTGACTCCCAGAAGGGTGACTGAAGTTCGTGCTGAT
ACTGGAGGACTTGGAAGGAGCATAACATCTCCAACCACATTATACGATAGGTACAGCTCCCCACCAGCCAGCACT
ACCAGAAGGCGGCTATTTGTTGAGAATGATAGCCCCTCTGATGGAGGGACGCCTGGGCGCATGCCCCCACAGCCC
CTAGTCAATGCTGTCCCTGTGCAGAATGTATCTGGGGAGACTGTTTCTGTCACACCAGTTCCTGGACAGACTTTG
GTCACCATGGCAACCGCCACTGTCACAGCCAACAATGGGCAAACGGTAACCATTCCTGTGCAAGGTATTGCCAAT
GAAAATGGAGGGATAACATTCTTCCCTGTCCAAGTCAATGTTGGGGGGCAGGCACAAGCTGTGACAGGCTCCATC
CAGCCCCTCAGTGCTCAGGCCCTGGCTGGAAGTCTGAGCTCTCAACAGGTGACAGGAACAACTTTGCAAGTCCCT
GGTCAAGTGGCCATTCAACAGATTTCCCCAGGTGGCCAACAGCAGAAGCAAGGCCAGTCTGTAACCAGCAGTAGT
AATAGACCCAGGAAGACCAGCTCTTTATCGCTTTTCTTTAGAAAGGTATACCATTTAGCAGCTGTCCGCCTTCGG
GATCTCTGTGCCAAACTAGATATTTCAGATGAATTGAGGAAAAAAATCTGGACCTGCTTTGAATTCTCCATAATT
CAGTGTCCTGAACTTATGATGGACAGACATCTGGACCAGTTATTAATGTGTGCCATTTATGTGATGGCAAAGGTC
ACAAAAGAAGATAAGTCCTTCCAGAACATTATGCGTTGTTATAGGACTCAGCCGCAGGCCCGGAGCCAGGTGTAT
AGAAGTGTTTTGATAAAAGGGAAAAGAAAAAGAAGAAATTCTGGCAGCAGTGATAGCAGAAGCCATCAGAATTCT
CCAACAGAACTAAACAAAGATAGAACCAGTAGAGACTCCAGTCCAGTTATGAGGTCAAGCAGCACCTTGCCAGTT
CCACAGCCCAGCAGTGCTCCTCCCACACCTACTCGCCTCACAGGTGCCAACAGTGACATGGAAGAAGAGGAGAGG
GGAGACCTCATTCAGTTCTACAACAACATCTACATCAAACAGATTAAGACATTTGCCATGAAGTACTCACAGGCA
AATATGGATGCTCCTCCACTCTCTCCCTATCCATTTGTAAGAACAGGCTCCCCTCGCCGAATACAGTTGTCTCAA
AATCATCCTGTCTACATTTCCCCACATAAAAATGAAACAATGCTTTCTCCTCGAGAAAAGATTTTCTATTACTTC
AGCAACAGTCCTTCAAAGAGACTGAGAGAAATTAATAGTATGATACGCACAGGAGAAACTCCTACTAAAAAGAGA
GGAATTCTTTTGGAAGATGGAAGTGAATCACCTGCAAAAAGAATTTGCCCAGAAAATCATTCTGCCTTATTACGC
CGTCTCCAAGATGTAGCTAATGACCGTGGTTCCCAC**TGA**GGTTAGTCTCTTGTATTAAACTCTTCACAAAATCTG
TTTAGCAGCAGCCTTTAATGCATCTAGATTATGGAGCTTTTTTCCTTAATCCAGCTGATGAGTTACAGCCTGTTA

FIGURE 1689B

GTAACATGAGGGGACATTTTGGTGAGAAATGGGACTTAACTCCTTCCAGTGTCCTTAGAACATTTTAATTCATCC
CAACTGTCTTTTTTTCCCTACCACTCAGTGATTACTGTCAAGGCTGCTTACAATCCAAACTTGGGTTTTTGGCTC
TGGCAAAGCTTTTAGAAATACTGCAAGAAATGATGTGTACCCAACGTGAGCATAGGAGGCTTCTGTTGACGTCTC
CAACAGAAGAACTGTGTTTCAAGTTCAATCCTACCTGTTTTGTGGTCAGCTGTAGTCCTCATAAAAAGCAAAACA
AAAATTAGGTATTTTGTCCTAAAACACCTGGTAGGAGTGTGTGATTTTTTGCATTCCTGACAAAGGAGAGCACAC
CCAGGTTTGGAGGTCCTAGGTCATTAGCCCTCGTCTCCCGTTCCCTTTGTGCACATCTTCCCTCTCCCCATTCGG
TGTGGTGCAGTGTGAAAAGTCCTTGATTGTTCGGGTGTGCAATGTCTGAGTGAACCTGTATAAGTGGAGGCACTT
TAGGGCTGTAAAATGCATGATTTTGTAACCCAGATTTTGCTGTATATTTGTGATAGCACTTTCTACAATGTGAAC
TTTATTAAATACAAAACTTCCAGGCTAAACATCCAATATTTTCTTTAATGCTTTTATATTTTTTTAAAATGTTAA
AACCCCTATAGCCACCTTTTGGGAATGTTTTAAATTCTCCAGTTTTTTGTTATATAGGGATCAACCAGCTAAGAA
AAGATTTTAAGTCAAGTTGAATTGAGGGGATTAATATGAAAACTTATGACCTCTTCCTTTAGGAGGGAGTTATCT
AAAAGAAATGTCTATTAAGGTGATATATTTAAAAATATTTTTGGGTGTTCCTGGCAGTTTAAAAAAATTGGTTGG
AGAATTTAGGTTTTTATTAGTACCATAGTACCATTTATACAAATTAGAAAATGTTATTTAACAGCTGAATTATCT
ATACATATCTTTATTAATCACTATTGTTCCAGCAGTTTTCAAGTCAAATTAATAATCTTATTAGGGAGAAAATTC
AATTGTAAATTGAATCAGTATAAACAAAGTTACTAGGTAACTTCATATTGCTGAGAGAAATATGGAACTTACATT
GTTCAATTAGAATAGTGTTCTCCCCAAATATTTATAAAACTTCTCAAGATACTGCTACGTGTAATTTTATATGAA
GATAAGTGTATTTTTCAATAAAGCATTTATAAATTAAAAAAAAAAAAAAAAAA

FIGURE 1690

MPSGGDQSPPPPPPPPAAAASDEEEEDDGEAEDAAPSAESPTPQIQQRFDELCSRLNMDEAARPEAWDSYRSMSE
SYTLEGNDLHWLACALYVACRKSVPTVSKGTVEGNYVSLTRILKCSEQSLIEFFNKMKKWEDMANLPPHFRERTE
RLERNFTVSAVIFKKYEPIFQDIFKYPQEEQPRQQRGRKQRRQPCTVSEIFHFCWVLFIYAKGNFPMISDDLVNS
YHLLLCALDLVYGNALQCSNRKELVNPNFKGLSEDFHAKDSKPSSDPPCIIEKLCSLHDGLVLEAKGIKEHFWKP
YIRKLYEKKLLKGKEENLTGFLEPGNFGESFKAINKAYEEYVLSVGNLDERIFLGEDAEEEIGTLSRCLNAGSGT
ETAERVQMKNILQQHFDKSKALRISTPLTGVRYIKENSPCVTPVSTATHSLSRLHTMLTGLRNAPSEKLEQILRT
CSRDPTQAIANRLKEMFEIYSQHFQPDEDFSNCAKEIASKHFRFAEMLYYKVLESVIEQEQKRLGDMDLSGILEQ
DAFHRSLLACCLEVVTFSYKPPGNFPFITEIFDVPLYHFYKVIEVFIRAEDGLCREVVKHLNQIEEQILDHLAWK
PESPLWEKIRDNENRVPTCEEVMPPQNLERADEICIAGSPLTPRRVTEVRADTGGLGRSITSPTTLYDRYSSPPA
STTRRRLFVENDSPSDGGTPGRMPPQPLVNAVPVQNVSGETVSVTPVPGQTLVTMATATVTANNGQTVTIPVQGI
ANENGGITFFPVQVNVGGQAQAVTGSIQPLSAQALAGSLSSQQVTGTTLQVPGQVAIQQISPGGQQQKQGQSVTS
SSNRPRKTSSLSLFFRKVYHLAAVRLRDLCAKLDISDELRKKIWTCFEFSIIQCPELMMDRHLDQLLMCAIYVMA
KVTKEDKSFQNIMRCYRTQPQARSQVYRSVLIKGKRKRRNSGSSDSRSHQNSPTELNKDRTSRDSSPVMRSSSTL
PVPQPSSAPPTPTRLTGANSDMEEEERGDLIQFYNNIYIKQIKTFAMKYSQANMDAPPLSPYPFVRTGSPRRIQL
SQNHPVYISPHKNETMLSPREKIFYYFSNSPSKRLREINSMIRTGETPTKKRGILLEDGSESPAKRICPENHSAL
LRRLQDVANDRGSH

FIGURE 1691

TGGGCAATTAACCAAGCCATAGCCAATGAATATGAAGTCCGGAGAAAGCTGCTAATAAAACGTTTGGATGTCACT
GTACAATCCTTTGGCTGGTCTGACAGAGCTAAGAGCCAGACAGAAAAATTAGCCAAGGTTTACCAGCCGAAACGT
TCAGTCTTATCCCCTAAAACTACTATTTCTGTTGCCCATCTTTTGGCTGCAAGGCAGGACTTGTCAAAGATTTTA
AGGACAAGCAGCGGCTCTATAAGAGAAAAGACTGCCTGTGCCATCAATAAGGTGTTGATGGGCAGGGTGCCTGAC
AGAGGTGGTAGACCCAATGAAATCGAACCTCCACCCCCAGAGATGCCACCGTGGCAGAAGAGGCAAGATGGCCCC
CAGCAGCAAACAGGAGGCCGAGTAGGAGGGAGAGGTGGCTATGAACATTCCTCATACGGAGGACGAGGAGGTCAT
GAACAAGGAGGCGGGAGAGGTGGACGTGGTGGCTATGACCATGGTGGCCGAGGGGGAGGAAGAGGAAATAAGCAT
CAAGGAGGCTGGACAGATGGAGGGAGTGGTGGAGGAGGTGGCTACCAAGATGGTGGTTATCGAGATTCAGGTTTC
CAGCCAGGTGGCTATCATGGTGGCCACAGCAGTGGTGGCTATCAAGGCGGAGGTTATGGTGGCTTCCAAACATCT
TCTTCATATACAGGAAGTGGATACCAGGGTGGTGGCTACCAGCAGGACAATAGATACCAAGATGGCGGGCACCAT
GGTGATCGTGGTGGTGGTCGTGGTGGGCGAGGTGGTCGTGGAGGCCGAGGTGGTCGTGCAGGCCAGGGAGGAGGC
TGGGGAGGAAGAGGGAGCCAGAATTATCACCAAGGGGGTCAATTTGAACAGCATTTCCAGCATGGAGGTTATCAG
TATAATCATTCTGGATTTGGACAGGGAAGACATTACACTAGT**TGA**GGCTACCGAACTTTACATTTTGCTAGAGCT
CAAGTAATAGAAACTTAGTTTCAGAATCCTGAATTCAGCACCTATTTTGAATTAATGTGAGACCACAGGTGGCAG
GCAGATTCCTGCTTGGCATAAGCATTTGTAGGTCTTCATTCAATTCTGTTAGATTTTTTTATTGGACTTACATAA
TGCCGTTTATTTGAGAAACACATAACATCTCTCCTTCCTATGAAAAATTTTTTAAAAGGTGGTTAAAATTGCCTT
TAATTGCCCAGTAGACTAATTCCACAGTCAGAACATGCAAACTTTTTTGAAGAAATTACTTGAATAAGTAGTTTT
CATGTTTTCAATATGCAGTTTTGAAAATGAGGATTCACCTAGACTTTTTTAGATTTACTACTAGGAAACCTTCCT
CATATGAATAACCATTTATATGTGTTTTGCTTAAAGTATTCCAATGCCTATTTTCCAAGCACAGTTCTGCCCCCC
GGTTGACTTTTATGCCACGTGTGCTTCATGATGGAACTTTTAGGTCAGTTCCTATTAAATGAGCTCTTCTGCAGA
TAGCACATTCAGTAGCCTTATTTTGTTGATGGAATACTGTATCATATGCTCAACTCTGAAAACCTTGAACACGGC
CAAAATCCATAAAGATTATAAAAGCAAACTAAGTTGTGAAGCTATAGTACATGTAGGCATTTAGTTAAGTATAGC
AATTCAAACTGACCTGCATCCATCCAAAACAAATTCCTCCTTCAACCTTATTTTTACTTGAAATTTGCTAGAAGA
AATAGCAAACCGAAATTTGTTTTATGCATGAGTTAATACCACTGGCTCAGCAAATACAAGTTAGTTTGCTTTAAG
CAGGTAACTTTTTTTGTAATGGAAGAAATGCACTACAAAGTTAAGACAGATTTTTGCTAAGTGCAGGAGGCCCTT
TATTATTGCTGCAGAAAACAAAAGCCTGGCTGAGTTGATGTTTTACATTCTCCCTTACTGAAATCTACATGACAT
GATGCTTCTTGCTGGGTTTTTGTACATGTAAACATTGTCAAGCTGTGAAAGAAAATGGCTGGAGGTGTGCTTTGT
GTGAAAGGTGAGCAATAAAGTATCTGTTAAGTTCAAAAAAAAAAAAAAAAAAA

FIGURE 1692

WAINQAIANEYEVRRKLLIKRLDVTVQSFGWSDRAKSQTEKLAKVYQPKRSVLSPKTTISVAHLLAARQDLSKIL
RTSSGSIREKTACAINKVLMGRVPDRGGRPNEIEPPPPEMPPWQKRQDGPQQQTGGRVGGRGGYEHSSYGGRGGH
EQGGGRGGRGGYDHGGRGGGRGNKHQGGWTDGGSGGGGGYQDGGYRDSGFQPGGYHGGHSSGGYQGGGYGGFQTS
SSYTGSGYQGGGYQQDNRYQDGGHHGDRGGGRGGRGGRGGRGGRAGQGGGWGGRGSQNYHQGGQFEQHFQHGGYQ
YNHSGFGQGRHYTS

FIGURE 1693A

AAACCCTGTTCTTGGGTGGGTGTGGGTATAATACTAAGTTGAGATGATATCATTTACGGGGGAAGGCGCTTTGTG
AAGTAGGCCTTATTTCTCTTGTCCTTTCGTACAGGGAGGAATTTGAAGTAGATAGAAACCGACCTGGATTACTCC
GGTCTGAACTCAGATCACGTAGGACTTTAATCGTTGAACAAACGAACCTTTAATAGCGGCTGCACCATTGGGATG
TCCTGATCCAACATCGAGGTCGTAAACCCTATTGTTGATATGGACTCTAGAATAGGATTGCGCTGTTATCCCTAG
GGTAACTTGTTCCGTTGGTCAAGTTATTGGATCAATTGAGTATAGTAGTTCGCTCTGACTGGTGAAGTCTTAGCA
TGTACTGCTCGGAGGTTGGGTTCTGCTCCGAGGTCGCCCCAACCGAAATTTTTAATXCAGGTTTGGTAGTTTAGG
GCCTGTGGGTTTGTTAGGTACTGTTTGCATTAATAAATTAAAGCTCCATAGGGTCTTCTCGTCTTGCTGTGTCAT
GCCCGCCTCTTCACGGGCAGGTCAATTTCACTGGTTAAAAGTAAGAGACAGCTGTACCCTCGTGGAGCCATTCAT
ACAGGTCCCTAGTTAAGGAACAAGTGATTATGCTACCTTTGCACGGTTAGGGTACCGCGGCCGTTAAACATGTGT
CACTGGGCAGGCGGTGCCCCTAATACTGGTGATGCTAGAGGTGATGTTTTTGGTAAACAGGCGGGGTAAGATTTG
CCGAGTTCCTTTTACTTTTTTTAACCTTTCCTTATGAGCATGCCTGTGTTGGGTTGACAGTGAGGGTAATAATGA
CTTGTTGGTTGATTGTAGATAXTGGGCTGTTAATTGTCAGTTCAGTGTTTTAATCTGACGCAGGCTTATGCGGAG
GAGXATGTTTTCATGTTACTTATACTAACATTAGTTCTTCTATAGGGTGATAGATTGGTCCAATTGGGTGTGAGG
AGTTCAGTTATATGTTTGGGATTTTTTAGGTAGTGGGTGTTGAGCTTGAACGCTTTCTTAATTGGTGGCTGCTTT
TAGGCCTACTATGGGTGTTAAATTTTTTACTCTCTCTACAAGGTTTTTTCCTAGTGTCCAAAGAGCTGTTCCTCT
TTGGACTAATAGTTAAATTTACAAGGGGATTTAGAGGGTTCTGTGGGCAAATTTAAAGTTGAACTAAGATTCTAT
CTTGGACAACCAGCTATCACCAGGCTCGGTAGGTTTGTCGCCTCTACCTATAAATCTTCCCACTATTTTGCTAAA
AGAGCACACCCGTCTATGTACGGAATTCCGGGAAGAACTTAAGCGACAATCTTGAACACCCCTTCTCATGTGATG
TGAAATGAAACCATTTGGAAAAGTTTCTTCTAGCCAGTAATAGATTTTTTXTTTAATTGCTCTGCCTTGTGCCGA
GAGATGTTCTTTTAAGATGAATCTTTTGATGTCTGATACCACCAAATATAGGTGGTAGGGAGAGTTGGAGGCTGG
CCCTTTGAGCAGGCCATTAGCTTACTTGCTGGGCATTTCCGATAGCTTATTGCCTACCCTTTTGCTGGAAACAAG
CTGATTTGAAAAACCAAATCTATGXAGACTGCAGCTAAGGATTTTATCGGTAGACXTAAGAGCTTTTGTCCTTGT
GGATATTTTAGTGGAACCACATCAGTCTCAATACTGTCATTTTACACTGACTCAGAGCAGCTGACTTCATTCCTT
GCCACGATATATATTTAAGGCAGGCATTGTAACAGACATAAAGACAACTTATCTGTTTCAGCAGGAAGGATTCAG
TTTATGAACTCTCAGACCAGATCATGTTGAACAAGGAGACTTTGATGTGTGTCATGAGGAAACTCATTCTTTACT
TCCCAGTCAATTTAAAGGCCAGCTATCCTGAGCTACTCGAATGAATGCACTGGTTAAACATTGGAAATAGTTTGT
TTATATCCTTGTCTCTCTCTAGGCCAATTGTGATTACATGACTCGACTCTACATCTCGTCAAACAAGGCCTAGGT
CTGGTTGCTGTAGACTGCTCGCCCTCAACAAATAAAATCTGGTTGACTAGCCTCCTTGTATATACAACTATTATT
TGTTAAGAAGAAATTATCGTCAATTTTCTACTACCTTCCAATTGTCAGCTCTTTTTTTCCTCTCTGGTTTTTCCT
ACACTTTACAGAAAAAGACATTGATCTATACTGCCATTCCCTCTAATCCTGCCATACTCAGTCAAAAGGAATGAC
TTAAGATGAAGATGATCATCTGCTCGAGTCAAAATATACATTGTATATAAGAATTGGTGATTAGAAAAGCAAAAA
ACCTAAAACTTAAATCTAGGAGTCTGTATACTGTCTCCATGTCTCCATGCCTCAGATCTCATCTAAATCTTTGAA
CAGCACCATTCAACCAATCTGAGGCCTTGACTTGCTTGTAAGATGATTCTCAGAGATCGGCTGAGTTAAAAAAGA
TGACGACTTGATTACCAAAGAAAGTAGGGCCAACTTTGACAAATCTGGCTCTGCTGACCCTGTCACTCCCAGATG
TAGCATAGACTCCTAAACAGAACCTCAAGTCTGATTGAGGATAAGGCCTTCTCCTGAGCTGAAAGTTCTTTGGCA
GATGAGCAAGAAACTGAAAGCTGATGTACCTGACTGGCTCTGTAAGATCAGAAAACTGTATCCAGAATAAGCCCT
ATGGATTAACCCCTGAGTACCCAGAGTAAAAACTAATTTACAGAACTTCCTTATTGATCTGCTGGTTCTTCCAGA
TCATATTCTGGCTATTGGTATGGCTGGCCTTTCTGAAGGTACCCTGCTTGTCTATTTTCCTGACTCAGCTCTTGC
CTGCCTTTTTCACATGTTGCTGCAATTAGACTCACCGTGAGGACTACAGTCAATTTCAGTCTATCTTGTGCCCAA
TACAACAAGGATTTTTAATAGTAACAACCCACACCTCACCCACTAGGACTCAATGTTCACAACAGGAAGGACCAT
TGCTGCATACTCCTTGACCAGCAACTTTTTTGAAGATATTTTTAAGTGCAGAGTAGGCCTCTATTCCTGTATGTA
ATTGTTCATTTTCAGCACCTGGAACCTCATCTATCGGGTCTGGAAGGAATACAGCAGTTCGAAAGCCGCGTCCAT
TTCTCTCCTTCAGTAGTGCAGAAATGAGTCCGATTCACCAGTACACACAGAACTGTACCAGTTCAACCTAGCAAA
AGAAGAAAAGTTTCCACTGTACTTAAAATTTACAGCTGACTCAAATTGCCTCACAGAATTACTTGATGTAGAAGG
CTAGTCGTCTTACTTCGGATCAGCAGGACAGTTGGGCTCTCAGACTCATGACCACTGAGTTTGCTTGTGTTGAAA
CTGTGGTTTCATCCAACATATGCTATTGGACATGATTATTATTCCATTCAAATGGATTACAGACTTCTTGAGGAC
AGGACAAACTTATCTCTCATGGTGTTTTTTTAGAATACTTTTATAACCAAGGAAGAAACCATGCCAGCTGTTACC
ATTCAACTTCTTAAGCAGAGATTAAGCTTTTTCATATCTGTTCTTATCCTGGACATCAGTAGTTTTTAATTGCCC

FIGURE 1693B

AGCATCCGTTCCATCTTGTAACAACTCCCTGATGTTTCTTAAAACCACCTCTTCCTATTTTCAGTCTGTGGTTTG
GACAGTCTGACCCAACCTTGAGCTTTGTGGGTGAACATGTAATTCAGACCTCATCAATCAGCAAATCCATCTGAA
CTGTGGAGGAGAAGCTCTCTTTACTGAGGGTGCTTTAGCTTTGTAGGATGAAAACCTCAAACTAACAGGGCCTAC
CATGTAGAGAATGAAGCCAGTGCAGGGGAAAGCAGAGCCAAAATATGGAGAGACTTGAATCCTGATGACAGCGTT
TGTGCCCCTGG

FIGURE 1694

GACCCGGGAGAAGGAGGGCCAAG**ATG**GCGGAAGCGGAGGAGTCTCCAGGAGACCCGGGGACAGCATCGCCCAGGC
CCCTGTTTGCAGGCCTTTCAGATATATCCATCTCACAAGACATCCCCGTAGAAGGAGAAATCACCATTCCTATGA
GATCTCGCATCCGGGAGTTTGACAGCTCCACATTAAATGAATCTGTTCGCAATACCATCATGCGTGATCTAAAAG
CTGTTGGGAAAAAATTCATGCATGTTTTGTACCCAAGGAAAAGTAATACTCTTTTGAGAGATTGGGATTTGTGGG
GCCCTTTGATCCTTTGTGTGACACTCGCATTAATGCTGCAAAGAGACTCTGCAGATAGTGAAAAAGATGGAGGGC
CCCAATTTGCAGAGGTGTTTGTCATTGTCTGGTTTGGTGCAGTTACCATCACCCTCAACTCAAAACTTCTTGGAG
GGAACATATCTTTTTTTCAGAGCCTCTGTGTGCTGGGTTACTGTATACTTCCCTTGACAGTAGCAATGCTGATTT
GCCGGCTGGTACTTTTGGCTGATCCAGGACCTGTAAACTTCATGGTTCGGCTTTTTGTGGTGATTGTGATGTTTG
CCTGGTCTATAGTTGCCTCCACAGCTCTCCTTGCTGATAGCCAGCCTCCAAACCGCAGAGCCCTAGCTGTTTATC
CTGTTTTCCTGTTTTACTTTGTCATCAGTTGGATGATTCTCACCTTTACTCCTCAG**TAA**ATCAGGAATGGGAAAT
TAAAAACCAGTGAATTGAAAGCACATCTGAAAGATGCAATTCACCATGGAGCTTTGTCTCTGGCCCTTATTTGTC
TAATTTTGGAGGTATTTGATAACTGAGTAGGTGAGGAGATTAAAAGGGAGCCATATAGCACTGTCACCCCTTATT
TGAGGAACTGATGTTTGAAAGGCTGTTCTTTTCTCTCTTAATGTCATTTCTTTAAAAATACATGTGCATACTACA
CACAGTATATAATGCCTCCTTAAGGCATGATGGAGTCACCGTGGTCCATTTGGGTGACAACCAGTGACTTGGGAA
GCACATAGATACATCTTACAAGTTGAATAGAGTTGATAACTATTTTCAGTTTTGAGAATACCAGTTCAGGTGCAG
CTCTTAAACACATTGCCTTATGACTATTAGAATATGCCTCTCTTTTCATAAATAAAAATACATGGTCTAAAAAAA
AAAAAAAAA

FIGURE 1695

MAEAEESPGDPGTASPRPLFAGLSDISISQDIPVEGEITIPMRSRIREFDSSTLNESVRNTIMRDLKAVGKKFMH
VLYPRKSNTLLRDWDLWGPLILCVTLALMLQRDSADSEKDGGPQFAEVFVIVWFGAVTITLNSKLLGGNISFFQS
LCVLGYCILPLTVAMLICRLVLLADPGPVNFMVRLFVVIVMFAWSIVASTALLADSQPPNRRALAVYPVFLFYFV
ISWMILTFTPQ

FIGURE 1696

CGCCGAGGTATCACCTGGCACCACCCGCACCCTCACCCCGTGTCTCCATGCCCTGCCTCTGCTCCCCACACCCCT
CACCTCAAGCTGTCCCCTCACCTCACGCTTGGCTGTCTCCTGATCCTCAGCCTCTCCCAGGTACCCCAGACTCTG
TAGGAGAGTGCCCGAGGGCGGAGGGCCAGCC**ATG**CTGACCTTCCTTCCCTCCCCCCAGGAGCTGTTCACCCGCTC
ACTGGCTGAGAGCGAGCTCCGTAGTGCCCCGTATGAGTTCCCCGAGGAGAGCCCCATTGAACAGCTGGAGGAGCG
GCGGCAGCGGCTGGAGCGGCAGATCAGCCAGGATGTCAAGCTGGAGCCAGACATCCTGCTTCGGGCCAAGCAAGA
TTTCCTGAAGACGGACAGTGACTCGGACCTACAGCTCTACAAGGAACAGGGTGAGGGGCAGGGTGACGGGAGCCT
GCGGGAGCGTGATGTGCTGGAACGGGAGTTTCAGCGGGTCACCATCTCTGGGGAGGAGAAGTGTGGGGTGCCGTT
CACAGACCTGCTGGATGCAGCCAAGAGTGTGGTGCGGGCGCTCTTCATCCGGGAGAAGTACATGGCCCTGTCCCT
GCAGAGCTTCTGCCCCACCACCCGCCGCTACCTGCAGCAGCTGGCTGAAAAGCCTCTGGAGACCCGGACCTATGA
ACAGGGCCCCGACACCCCTGTGTCTGCTGATGCCCCGGTGCACCCCCCTGCGCTGGAGCAGCACCCGTATGAGCA
CTGTGAGCCAAGCACCATGCCTGGGGACCTGGGCTTGGGTCTGCGCATGGTGCGGGGTGTGGTGCACGTCTACAC
CCGCAGGGAACCCGACGAGCATTGCTCAGAGGTGGAGCTGCCATACCCTGACCTGCAGGAATTTGTGGCTGACGT
CAATGTGCTGATGGCCCTGATTATCAATGGCCCCATAAAGTCATTCTGCTACCGCCGGCTGCAGTACCTGAGCTC
CAAGTTCCAGATGCATGTGCTACTCAATGAGATGAAGGAGCTGGCCGCCCAGAAGAAAGTGCCACACCGAGATTT
CTACAACATCCGCAAGGTGGACACCCACATCCATGCCTCGTCCTGCATGAACCAGAAGCATCTGCTGCGCTTCAT
CAAGCGGGCAATGAAGCGGCACCTGGAGGAGATCGTGCACGTGGAGCAGGGCCGTGAACAGACGCTGCGGGAGGT
CTTTGAGAGCATGAATCTCACGGCCTACGACCTGAGTGTGGACACGCTGGATGTGCATGCGGACAGGAACACTTT
CCATCGCTTTGACAAGTTTAATGCCAAATACAACCCTATTGGGGAGTCCGTCCTCCGAGAGATCTTCATCAAGAC
GGACAACAGGGTATCTGGGAAGTACTTTGCTCACATCATCAAGGAGGTGATGTCAGACCTGGAGGAGAGCAAATA
CCAGAATGCAGAGCTGCGGCTCTCCATTTACGGGCGCTCGAGGGATGAGTGGGACAAGCTGGCGCGCTGGGCCGT
CATGCACCGCGTGCACTCCCCCAACGTGCGCTGGCTGGTGCAGGTGCCCCGCCTCTTTGATGTGTACCGTACCAA
GGGCCAGCTGGCCAACTTCCAGGAGATGCTGGAGAACATCTTCCTGCCACTGTTCGAGGCCACTGTGCACCCTGC
CAGCCACCCGGAACTGCATCTCTTCTTAGAGCACGTGGATGGTTTTGACAGCGTGGATGATGAGTCCAAGCCTGA
AAACCATGTCTTCAACCTGGAGAGCCCCCTGCCTGAGGCGTGGGTGGAGGAGGACAACCCACCCTATGCCTACTA
CCTGTACTACACCTTTGCCAACATGGCCATGTTGAACCACCTGCGCAGGCAGAGGGGCTTCCACACGTTTGTGCT
GAGGCCACACTGTGGGGAGGCTGGGCCCATCCACCACCTGGTGTCAGCCTTCATGCTGGCTGAGAACATTTCCCA
CGGGCTCCTTCTGCGCAAGGCCCCCGTCCTGCAGTACCTGTACTACCTGGCCCAGATCGGCATCGCCATGTCTCC
GCTCAGCAACAACAGCCTCTTCCTCAGCTATCACCGGAATCCGCTACCGGAGTACCTGTCCCGCGGCCTCATGGT
CTCCCTGTCCACTGATGATCCCTTGCAGTTCCACTTCACCAAGGAGCCGCTGATGGAGGAGTACAGCATCGCCAC
CCAGGTGTGGAAGCTCAGCTCCTGCGATATGTGTGAGCTGGCCCGCAACAGCGTGCTCATGAGCGGCTTCTCGCA
CAAGGTAAAGAGCCACTGGCTGGGACCCAACTATACCAAGGAAGGCCCTGAGGGGAATGACATCCGCCGGACCAA
TGTGCCAGACATCCGCGTGGGCTACCGCTACGAGACCCTGTGCCAGGAGCTGGCGCTCATCACGCAGGCAGTCCA
GAGTGAGATGCTGGAGACCATTCCAGAGGAGGCGGGTATCACCATGAGCCCAGGGCCTCAA**TGA**GCCTGGTCCAT
GAAGTGCCCACCACATCGCAGCACTTTTACCACGTTTTGTCCTCAGACCCCGCCCATGCTGTGTGGTCTCTGCAT
GTCTCCATTCTTCTCTGTCTCTGTCTTGCATGTCTCCTACCATGTCACTGTCCCTGGGCCACCCAGTGAAAGCAA
AGCCTGGGAATCTGCTCATTGTTGTTTGGGCTCAGGTATTGAGCCTGATGGCCCAGGTATTGAGGGCCTCCCCTG
CTGGTGGCCCTGTCCTGGGATCCTCAGAAGCCTGACTGTCCTATGGGCTTCTCCAGTGTCCACAGGGGCTTGGGA
TGGTTGTGGGGGGCTGGCCCCTCTAGCCTTTCCGGTCCTTCCTGGGCAAATCTAAGCCTTGGCCAGGGCGAAGTT
TAGGCCCCTGTCTTGTTCATGTAGCCGAGGGGCAGGCGGGGGACCTCTACACCTCTGCTGTGGGCACGGGGCTGC
TGAGGGTCTGTGGAACTCCAGCAGCTCTGCACTGGGTAGAGCTGGGCCTAGAGCTCAGTCACAGGCCTGGGCTTC
CTGGCCTGAGTGGGTAGACGCAGGCGGCAGAGGTGCTGGACCACATCTCCGCCAAGTCACTGCCCAGCAGCCTTC
TCCGTCCTGTCCCCAGCCCACGTGCTCCTTGGGTGTCAGCTTCCTGTGCCTCTGTGGGAGAGGCAGCTGCCTTGT
GTTATGTCTGGGGCCACAGTTGCTGCAAAGTCCTGGATCTGCCACTCAACCCCGGGAGTGGTGTTCCCAGTGTGG
CTCCCAGAGCTTTGACCAGATTGTGATCCCAGCTGGCCCCTATGTTGTGTTCTGGACTGAGGCCTTTGCTGTGAA
CTGCAGTGTTTCATACGAACCATCTTTCCTAGTGCATGAGAAATAAAGATTATTTAAGT

FIGURE 1697

MLTFLPSPQELFTRSLAESELRSAPYEFPEESPIEQLEERRQRLERQISQDVKLEPDILLRAKQDFLKTDSDSDL
QLYKEQGEGQGDGSLRERDVLEREFQRVTISGEEKCGVPFTDLLDAAKSVVRALFIREKYMALSLQSFCPTTRRY
LQQLAEKPLETRTYEQGPDTPVSADAPVHPPALEQHPYEHCEPSTMPGDLGLGLRMVRGVVHVYTRREPDEHCSE
VELPYPDLQEFVADVNVLMALIINGPIKSFCYRRLQYLSSKFQMHVLLNEMKELAAQKKVPHRDFYNIRKVDTHI
HASSCMNQKHLLRFIKRAMKRHLEEIVHVEQGREQTLREVFESMNLTAYDLSVDTLDVHADRNTFHRFDKFNAKY
NPIGESVLREIFIKTDNRVSGKYFAHIIKEVMSDLEESKYQNAELRLSIYGRSRDEWDKLARWAVMHRVHSPNVR
WLVQVPRLFDVYRTKGQLANFQEMLENIFLPLFEATVHPASHPELHLFLEHVDGFDSVDDESKPENHVFNLESPL
PEAWVEEDNPPYAYYLYYTFANMAMLNHLRRQRGFHTFVLRPHCGEAGPIHHLVSAFMLAENISHGLLLRKAPVL
QYLYYLAQIGIAMSPLSNNSLFLSYHRNPLPEYLSRGLMVSLSTDDPLQFHFTKEPLMEEYSIATQVWKLSSCDM
CELARNSVLMSGFSHKVKSHWLGPNYTKEGPEGNDIRRTNVPDIRVGYRYETLCQELALITQAVQSEMLETIPEE
AGITMSPGPQ

FIGURE 1698A

ATGGAGGGCCTGGCTGGCTATGTATACAAGGCGGCCAGCGAGGGCAAGGTGCTGACTCTGGCCGCCTTGCTTCTC
AACCGGTCTGAAAGCGACATCCGCTATCTGCTTGGCTATGTCAGCCAGCAGGGAGGGCAGCGCTCCACGCCCCTC
ATCATCGCAGCCCGCAATGGACACGCAAAGGTGGTACGCTTGCTCTTAGAACATTACCGGGTGCAGACTCAGCAG
ACTGGCACCGTCCGCTTCGACGGGTATGTCATTGATGGTGCCACTGCTCTTTGGTGTGCAGCTGGAGCAGGACAT
TTTGAAGTTGTTAAACTTCTAGTCAGCCATGGAGCCAACGTGAACCATACCACAGTAACTAATTCAACCCCCCTG
CGGGCAGCATGCTTTGATGGCAGACTGGACATTGTGAAATACTTGGTTGAAAATAATGCCAACATCAGCATTGCC
AACAAATATGACAACACCTGCCTAATGATTGCGGCATATAAGGGACACACTGATGTGGTCAGATACCTTTTAGAA
CAACGTGCTGATCCCAATGCCAAAGCACATTGTGGAGCCACAGCATTGCACTTTGCAGCTGAAGCTGGGCACATA
GATATTGTGAAAGAGCTGATAAAATGGCGTGCTGCTATAGTAGTGAATGGCCATGGGATGACGCCATTGAAAGTA
GCTGCCGAAAGCTGTAAAGCTGATGTCGTAGAACTGTTACTCTCTCATGCTGATTGCGACCGAAGAAGTCGGATT
GAAGCTTTGGAACTCTTGGGTGCCTCCTTTGCAAATGACCGTGAGAACTATGACATCATAAAGACATACCACTAT
CTATATTTAGCCATGTTAGAGAGGTTCCAAGATGGTGATAACATTCTCGAAAAAGAGGTTCTTCCACCAATCCAT
GCTTATGGGAATAGAACTGAATGTAGAAATCCTCAGGAACTGGAGTCCATTCGGCAAGACAGAGATGCTCTTCAT
ATGGAAGGCCTTATAGTTCGGGAACGGATTTTAGGTGCTGACAATATTGATGTTTCTCATCCCATCATTTACAGA
GGAGCTGTTTATGCGGATAATATGGAATTTGAGCAGTGTATCAAGTTGTGGCTTCATGCCCTGCACCTCAGACAA
AAAGGTAACAGGAACACCCACAAGGATCTTCTTCGATTTGCTCAAGTTTTCTCACAAATGATACATTTGAATGAA
ACTGTGAAGGCCCCAGACATAGAATGTGTTTTGAGATGCAGTGTTTTGGAAATAGAACAAAGTATGAACAGAGTG
AAAAATATTTCAGATGCTGATGTCCACAATGCTATGGACAATTATGAATGTAATCTCTATACCTTTCTGTATTTA
GTGTGCATCTCTACCAAAACACAGTGCAGCGAAGAAGATCAGTGCAAAATTAACAAGCAGATCTACAACCTGATT
CACCTTGATCCCAGAACTCGTGAAGGTTTCACCTTGCTGCATCTGGCTGTCAACTCCAATACTCCAGTTGATGAT
TTCCACACCAATGACGTCTGCAGCTTTCCAAATGCACTTGTCACAAAGCTCCTGCTGGACTGTGGTGCTGAGGTG
AATGCCGTGGACAATGAGGGAAACAGTGCCCTTCATATTATCGTTCAGTACAACAGGCCCATCAGTGATTTTTTG
ACCTTGCACTCCATCATCATTAGCCTAGTTGAAGCCGGAGCTCACACTGACATGACGAATAAACAGAATAAGACT
CCGCTAGACAAAAGTACAACTGGGGTATCTGAAATACTGCTTAAAACTCAAATGAAGATGAGTCTCAAGTGCCTG
GCTGCCCGAGCAGTTCGGGCTAATGACATTAACTACCAAGACCAGATCCCCAGAACTCTTGAAGAGTTTGTTGGA
TTTCATTAAGTGACTGGATATGTAAAGTCGTTTAATGTGGTGCTAAAAAGTAAAGGACTTTTAATCACAGACAGT
AGAATTATGTGTTCATAAATTCTGCTTTTCTTTCCACTACCCTTCCTCCCATCCCATCCTTCCTTAGTTCTGTAT
TTGTTTTTCTTGCCTCATGGTAATTGATTTCAGACAGACTTTAACAAAACCACATTGTTTTGGTGTAACTATAAG
GTATTTGCATATTGGTTACCTATTTGTCTTTCTTTTTTTTAAAGGAACAGATATAAAATGTTTTGTTTATGTAAC
AAGGGACATTTATAATTTCAAGTTGATAATGTTTTAAACAGCTGCTTACAAAAGTATTTCTGTTAAGCCTATGTC
AGCATGTTATCCATGCAGCAGTTTTGAGGATTTTATGAAGAAAAAGAGCTAAAAAGGAACATTAAGAGGAATGGG
ATATCCAGGTGTTCTGCACATGCCAAACTGCTGTAGATAGTTTACACTCTTCCATTATTTATACGGAGTGATGCA
GCACATTTTAGCATTCAGGAGGATTTTTAAAAAATAGCTGCAGATTAATCTGGAAAATGTGCTAATTTAATAATA
GTTACAAATTTATAAATTTAAATCCATTTGAAATTGTTGCATTATGCTGGGTAGTATATACAAAATGGTTATCAT
CTTAAACCAACTTTTCAGAGAATCTTGATGGACTCTGCCTTTAGGCTTGAATTCTTCAAAGTCTATTTTAATGAA
ATTTATCTAAATTGCAGCAGTCTATTTGATTCAGCTCATAGACATGTAAAAATTATGAATGCTGTTTTCTTATGA
AACAAATTGTCACAGTGTAGTTATACATTCTATTTTTGTCCCCTTTTCCCTTTTTCTCCTGTATCTTTTAAAATT
TGGAAACTACTTTTCCAGAAGGCATTATTTATGCCTCCCTAATAAGGTATTTTACTTATGACAGATGAAAAGGAA
CCAGGATATGTTTGAATTTTTTCACTTTCTTAGTCTGTGACAAGAAGTAGAAATATCACTAGTGTGGTATAGGAA
CTTACATGTTTTTTTATGATGAAAATAATTCTCAATGCCACTTGAAAGGTAATTGTGTCTGAGAGCTGCAAATTTT
TCAACCACAAAATGTCACTTATTCCTACAGGCTATACAGAGGTCTTTATGGTTTTTTTGTTTTGTTTTAATGGCA
ACATTGTAACTGTCAAACTAAAAGGGTATTCTGTGATTATCTTTTAAGCATTACAGAAATTCAAGTGAAAGTTAT
ATGCTTATTTCTATTGATGTTAAAAATGATAATGAAAGCAAAATTAGCTGTATCTGTAATTTTCTCTCTAGTGCC
AAATGAATGCCTTAGCTACTCATAGTGCATGGTACTGTAAGTGAAGACCTGTAGCTTTTTTTTTTTCTTTAATGA
AAAGCATTATAATGATGTAGCAGCATCAGATATAAACTTAAAAAAAAAGGTTTCAATTAACATTTTATATATGGA
TAATGCTTTGTAAAGTGTAAGAGAAAGGTTGCAGTTGGATCAGTATAAAACAATGACCAAGCCAAAATCAGCACC
CTAGGGCCTTAAATAAAATAGAGATACCCCACAAAATGAAATATTTTGAAGGATGGGAGGGGACAGAAGGGGGGA
CTATCCCCCAAGGATGCAAGATACTTTTTACAGTTGCTATCATTATACTTTGTCTTCTTGCTTCAGTTAGGAAGG

FIGURE 1698B

TTTTGATGGTAAATTCTGTCATGGTAATAGATACCTATTTTCCTAACCTGAGATTTTACAAGGAAGGTTTTTAGG
TTGGCTTAAATGGAGGTATTTATTTGAGTGAGCCCTAATTTGAAAATTACCAGACTTGATCCTCCTGGTATGAAT
CAAGGAAATACTGTACCTTGCTCTTAGCAACTCTCAGTGGCCTGAAAGAGAAAATGCACTTCTTCAAGGTGAGTG
AATCATGCTTTTTCCACAGTTCAGATCAGACCCTTTATTTTTCAAACTACAAGGCCTGCTTATTGGACAGTCTAA
GGAATAGCTTTGATACTTGGTATTCAGTTGGTTCCATTATTAATGTATATTATTTTTATTTAAACATCAAAACTT
AAAATATCAGATAATGTTGCATGTTTTAAAAACACATTTCATCCCTTTGGCTACCCAGGACCAGCACTATTTAAG
ACACTGCTTATTTATAAAATGAGAATAATGATTATATGTACATATTCAGACATCAAAATTTAATGACATTCTATT
TTGAGAAGGGAAGACAATGCTGAAGAAAGTAAAACTGTTGATTGAAATGCTGACAGGGTGGAGAACGAATTTGAA
GACAGTGGAATAAACTATGAACTATGCTAATGGTAATTAGATTTTTTGTTTGTTTAGTATAGTGGTAAATTGTGT
AGTATCTTGCTGAGAATCTAATTCTATCTTGTAAAATCAATCCAAATGTGTATTGTGAAACACCTGTATAAAATC
ATTTTTGAAATAAGTGATCTACATGCCTGTTTTTTTAAAATGTTTTTGGTAGAATTGTTTGAAAATATGTTTAGC
CAGACCCTTCCCCAACTTAATTTTTTTTTAAAAAAGGAAAATAGGTAAGAAAATGATAGTTCTATATCTCAGCCC
TCTGTGAACTCTAGGCTGTCTCCATTTTGCAGCCACTTTGGTCATTTGATGTTTACTATTGGTATACTTATGCTT
TGAATTGTAAATCTTCATTGATGGTATTACAGATTCAACCAAAACTTCTCTGTCCTGTTCAGTAATTGTTATATA
AATCTGGATGAGCTAGGGAGGCCCAGGTGGATGTTTTCATTCGCAAATCATGAGAAACTTAAGTGGGTTTTATGC
ACTTGATAGAGTTGGCAAAATTGAACTATGAAGTTAACTATTTAACTCAAGGAATGGGCGGCAAACCCATCCCCT
CGATTGATAAAGAAGGGGAACATTTTTACATTAGAACTGACACTGAAAACATAGCTTTTTCAGTCCACCCTGGTT
GCTCTAGTAGCCCACAGCCCAATCACGTTAAGGTTCTTTGCTGTGGGAATTTTAAATAAACCAAACCCCAAAGCA
GACCATCTGTAAGCTTTGGTCTGCTTGTTTCTGAGAAGGGTTTTATTTCATTATACTAATAGTGGACTAATAATT
GGTAATTGTGAGAACTTAGGTATGATAACATTGTTTGAAGTAAAATATGATTTGGGGGCAGCAGCTTTCTAAATA
CCAACTCTGTTTGACAAATGTTTTGAAAATTAAAATTTCAAGTGAGCAACACCCTGTTAAGAGTTTTCACTATAG
TTGAGGCAGCTACTTTATGAATAAGACCACTTTGGGTTATTTAAGCAGAAGCGTTTCTTTTTTTTTTTTGGAATG
GGGTGGGATGAGGAGTGAGTTGCCAGACCTTTGATTAGTTTGCTGGTTTAGAAACAGCCAGTGGCTGAATTAGTG
AGTAAATGAATGAAAGTATAAAGGACTTGTTTTTTATGATAGATTTTCTGTAAGAATCTTAAATGTTCCTTTTCA
AATTAGATGTGTTGATGCACACATGACTATTCTGTTTTTCTCACTGACTATATAACATTAAAAAGGGGTTAAAGA
AAACAAAACTCTGCCTTTTGTGCTATGAAATATTTTTAGTCCAGAGGTTTTAAGCTGTGTGTCCATTCCTACTCT
GAAAATGCATAGCTTTGTTCTGGATGTCATCTCTTGAAAGTAGAAAACTCCTATGTGTTTATCACATTGCAGGGC
TTTCTTATGTATTTCTGGCAGACTTGCCCAAATCTTTAGATGGGCTGGGTTATACAGCATGCCCTCCCCCAAATA
AGGGATCTGAAATAAATACTACACTATTGATAGTGGAGATATATTAATTTTTAAAACTGTAAAGTAAATGTGGTC
TCTAGGTTTGTGGTGTGTACCTTTGTGTTAATGTGTAGGGAAGAGACAGTGACTTGATGGTTATGGGGAGTGTAT
CTTGATGTGTGTATAGGGGTAAGTATTGCTAAATTATTTACAGCTTTTATTCAGGGTGAGTCATGTGATGAATGG
CCTAATCAGAAAAGTGAAGGAGCGAAGATGCAAGCTTGCCAAATGATGAAATGAACAAGATTTTGTATCTATTTT
TTATCAGGTGTTGTAAAATTTGTGCATGGCTTTTTGTTGTTGTTGCTTAGTAACTGGTAGAGGAGAAAAGATGAG
GAAAGAAACTCAGCTTTCCTCACAGTCTTTTCAAAGGTACACAGTTGGGGAGTAAAATCTGACTGGCCTAATCGA
TGGAAAAGACCCTGTCCTTTTCACCCCATCCTGCAATCCTCCGTGCAGAGGAACTACACTGTTGTATTCTAGTAA
TTCACTGTGATTTATAACAAACCGGTGATGTCATTCTATTGTGCACTTTTGTCAAACCATTTATGTGACTTTAAT
AAACATAGTAAACTTGCTGACTGCACCAGAGGTCCATTAGTGATTTATATATTGCATGACATTTTCTATTTGAGT
TTGACATGTAGAGTCATTTTTAGTTTCATGGCAATTGACAGTCCTAATAACTCAGCTAATTTGAAACTAACAATC
TTGCTGTGTAAAAGGAAAAAATGGTGTTTGTGTTCAGTAAATGTTTG

FIGURE 1699A

GGTGAACAGCTCAAATCCATTTTTTACATCACAGACCAAAGCCAATGGGAATCCTGCTTGTTCGGCCCAGTTGCA
GCATGTCTCGCCACCCATTTTTCCAGCTCATTTAGCAAGTGTGTCAACTCCATTGTTGTCCTCAATGGAAAGTGT
CATAAATCCAAATATAACTTCTCAGGATAAAAATGAACAAGGTGGTATGTTATGTTCCCAAATGGAAAATTTACC
TAGTACTGCCTTGCCAGCACAAATGGAAGATCTAACCAAAACAGTTCTGCCTTTGAATATTGACAGTGGCTCAGA
TCCTTTCCTTCCTTTACCTGCAGAAAGTAGTTCAATGTCTCTCTTCCCTTCACCAGCAGATAGTGGGACTAATTC
TGTTTTTTCCCAACTGGAAAATAATACAAATCATTATTCCTCACAGATTGAAGGAAACACTAATTCCTCCTTTCT
AAAGGGGGGTAATGGTGAAAATGCAGTTTTTCCTTCACAAGTGAATGTTGCAAATAACTTCAGTAGCACCAATGC
CCAACAGTCTGCACCTGAAAAAGTTAAAAAAGACCGTGGGCGGGGCCCAAATGGGAAGGAAAGAAAACCTAAGCA
CAACAAAAGGGCTAAATGGCCTGCAATTATCAGAGATGGGAAATTTATCTGTAGCAGGTGTTACAGGGCTTTTAC
TAATCCCAGATCACTGGGTGGGCACTTATCCAAGCGATCTTACTGTAAACCACTGGATGGAGCCGAAATTGCTCA
AGAACTTCTACAGAGTAATGGACAGCCTTCTCTTCTTGCCAGCATGATTCTCTCCACAAATGCAGTAAATTTGCA
GCAGCCACAACAATCTACCTTCAATCCAGAAGCATGTTTTAAAGATCCATCATTTCTACAGCTTCTTGCTGAAAA
TCGCTCGCCAGCATTTTTACCAAATACATTTCCTCGATCTGGTGTGACTAACTTTAATACCAGTGTCAGTCAAGA
AGGTAGTGAAATTATTAAACAGGCTTTGGAAACTGCTGGCATTCCCAGTACATTTGAGGGTGCCGAAATGCTTTC
TCATGTTTCAACAGGTTGTGTCTCTGATGCATCACAAGTAAATGCAACGGTGATGCCAAATCCAACTGTACCACC
CCTGTTGCACACTGTATGCCATCCAAACACCTTGCTGACCAACCAGAATAGGACGTCAAACTCCAAAACTTCCTC
CATTGAGGAATGTAGCAGCTTGCCTGTTTTTCCAACGAATGACTTACTACTGAAGACTGTTGAAAATGGTTTGTG
CTCTAGTTCATTTCCTAATTCTGGTGGGCCATCACAAAATTTTACCAGTAACAGTTCTCGTGTTTCTGTTATAAG
TGGTCCTCAGAACACAAGATCCAGTCATTTAAATAAAAAGGGAAACAGTGCTTCTAAGAGAAGAAAGAAAGTTGC
TCCTCCACTAATTGCACCTAACGCTTCCCAAAACTTGGTAACAAGTGACTTAACAACAATGGGACTCATAGCAAA
GAGTGTTGAAATCCCAACTACTAACCTTCATTCAAATGTAATTCCAACTTGTGAACCTCAGAGTTTGGTGGAAAA
TCTAACACAGAAATTAAATAATGTTAACAATCAGTTATTTATGACTGATGTAAAAGAGAATTTCAAAACCAGTCT
TGAGTCCCATACAGTGTTAGCCCCTTTAACATTAAAAACTGAAAATGGTGATTCCCAAATGATGGCTTTGAATTC
ATGCACAACTTCAGTAAATTCTGATTTGCAGATTTCTGAAGACAATGTTATACAAAACTTTGAAAAGACTCTTGA
AATTATTAAAACTGCTATGAATTCTCAAATACTTGAGGTAAAAAGTGGATCTCAGGGTGCTGGTGAAACTTCACA
AAATGCTCAAATAAATTATAACATTCAGCTTCCTTCAGTAAACACTGTGCAAAATAACAAATTACCCGATTCTTC
TCCGTTTTCCTCCTTTATAAGTGTCATGCCAACAAAAAGTAACATTCCTCAGTCTGAAGTATCACATAAGGAGGA
TCAAATACAGGAAATTTTAGAAGGCTTACAGAAATTAAAATTAGAAAATGACCTATCCACTCCAGCATCCCAATG
TGTACTGATAAATACATCAGTGACACTGACTCCCACGCCTGTTAAATCAACTGCAGATATCACAGTTATTCAGCC
AGTTTCTGAAATGATAAACATTCAATTTAATGACAAAGTTAATAAACCCTTTGTGTGTCAAAACCAAGGCTGTAA
CTACAGTGCTATGACAAAGGATGCACTATTTAAGCACTATGGTAAAATTCATCAATACACTCCAGAAATGATTCT
TGAAATTAAGAAGAATCAATTGAAATTTGCTCCCTTTAAATGTGTAGTACCTACATGTACAAAAACATTTACAAG
AAATTCTAACCTCCGGGCACACTGTCAGTTGGTGCATCATTTTACAACTGAAGAAATGGTAAAGTTAAAAATTAA
AAGGCCTTATGGAAGAAAATCTCAGAGTGAAAATGTGCCGGCCTCACGAAGTACACAAGTGAAAAAACAGCTAGC
TATGACAGAGGAAAATAAAAAGGAATCTCAGCCTGCTTTAGAATTGAGAGCAGAGACCCAAAATACCCACAGTAA
TGTAGCAGTGATCCCAGAAAAACAACTTATAGAAAAAAAAAGTCCTGACAAAACAGAAAGTTCTTTACAAGTGAT
TACAGTTACTTCAGAACAATGTAATACAAATGCACTCACAAACACACAAACCAAAGGACGGAAGATTAGGAGGCA
TAAAAAAGAAAAGGAGGAGAAAAAACGAAAGAAGCCAGTTTCCCAATCCCTTGAGTTTCCAACAAGATACAGTCC
TTACAGACCTTATCGATGTGTTCACCAGGGATGCTTTGCTGCCTTTACGATACAGCAAAATTTGATTCTCCATTA
CCAGGCTGTACACAAATCAGATCTACCTGCATTTTCAGCAGAGGTCGAAGAGGAAAGTGAAGCTGGTAAAGAAAG
TGAAGAAACTGAAACTAAACAAACTTTGAAAGAATTTCGATGTCAGGTAAGTGACTGTTCTCGAATTTTCCAAGC
AATTACTGGCCTAATACAACACTACATGAAACTTCATGAAATGACTCCTGAAGAAATTGAAAGTATGACTGCTTC
AGTGGATGTTGGGAAGTTTCCATGTGACCAGTTAGAGTGTAAATCTTCATTTACTACATATTTGAACTATGTTGT
TCATCTAGAGGCAGACCACGGGATTGGACTAAGGGCAAGTAAAACAGAAGAAGATGGTGTATACAAATGTGATTG
TGAAGGCTGTGACCGTATATATGCAACCCGGTCGAATCTCCTCCGACACATTTTTAATAAGCATAATGACAAACA
TAAGGCTCATTTGATTCGTCCAAGAAGATTAACACCAGGCCAGGAAAATATGTCAAGCAAGGCAAACCAAGAAAA
ATCAAAGTCTAAACATCGGGGGACGAAGCACAGCAGATGTGGAAAGGAAGGAATAAAAATGCCCAAGACCAAACG
AAAGAAAAAAAATAATTTAGAAAACAAGAATGCAAAGATTGTGCAGATTGAAGAAAATAAGCCTTATTCTCTGAA

FIGURE 1699B

ACGTGGGAAGCATGTATATTCTATAAAGGCTAGAAATGATGCCCTGTCTGAGTGTACAAGCAGATTTGTAACCCA
GTATCCATGTATGATAAAGGGATGTACTTCAGTTGTTACAAGTGAAAGCAATATAATTAGACATTATAAGTGCCA
TAAATTATCTAAGGCATTTACATCACAACACCGAAATCTTCTTATTGTATTCAAACGGTGTTGCAACTCACAAGT
AAAGGAAACGTCTGAGCAAGAAGGTGCTAAGAATGATGTGAAAGATTCTGACACGTGTGTATCAGAGAGCAATGA
TAATTCAAGAACAACAGCTACAGTTTCACAAAAGGAAGTTGAAAAAAATGAAAAAGATGAAATGGATGAACTAAC
AGAATTGTTTATTACAAAATTAATAAATGAAGATAGCACAAGTGTAGAGACCCAAGCTAATACTTCTTCAAATGT
AAGTAATGATTTTCAGGAAGATAACCTCTGCCAGTCAGAAAGACAAAAAGCAAGTAATTTGAAGAGAGTTAATAA
GGAAAAAAATGTCTCACAAAATAAAAAAAGGAAAGTTGAAAAAGCTGAACCAGCATCAGCAGCTGAGTTAAGTAG
CGTGCGTAAAGAAGAAGAAACTGCTGTTGCCATTCAAACCATTGAGGAGCATCCTGCATCTTTTGACTGGAGCTC
TTTTAAGCCAATGGGATTTGAAGTATCATTTCTGAAGTTTCTTGAGGAGTCTGCAGTGAAGCAGAAGAAAAATAC
TGACAAAGACCATCCGAATACTGGAAACAAAAAAGGATCCCATTCAAATTCAAGAAAAAATATTGATAAGACTGC
TGTGACTAGTGGAAATCATGTATGTCCTTGTAAAGAAAGCGAAACGTTTGTACAGTTTGCCAATCCATCACAGCT
TCAGTGCAGTGATAATGTAAAAATTGTTTTAGACAAGAATCTTAAAGATTGCACTGAGCTTGTCTTAAAGCAACT
TCAGGAAATGAAACCTACCGTCAGTCTGAAAAAACTTGAAGTACATTCAAATGATCCAGATATGTCTGTTATGAA
AGATATCAGTATAGGTAAAGCCACAGGCAGAGGTCAGTAC**TGA**TAATTAATGTAGTATAAATACATCATTTACCA
TTTTATTTTAAATAGGAAGCCATCAAGCATGCTAGAATTGTGAAACTTTCATTATATTTTTTTGTTGTTGACATG
AATTAACCTGGCCAAAAACAAAAAAGAAAAAAAAAACATGACATTTGTCATGTAAAACTTTTTTTTATCCCTATG
GGACTTGAGGAACAGAATCAGTACTTCAGTTATTGTAAATAGTGAGCTAAACCTCAAATTTCTATCACCCAGTTG
CCCTTTTCATGAACTAAACAATTATCTGTGTGATTGGTATGTTTCACCAGGTCACTGCTCATGTATAACAGTACT
CTTTATTTGTAGATACCTTTTTTGTATATATTTATTATTGTAAATCATGTGCTGCCACCAGCAGTCTGTAAGTCT
AAACTATTAAATGACACATTTATATTTGGAATTTTAATTTTTAACTAAGCGATCAAGTTTTTTAAATTGTTCTTT
TATTGTTTTAAATTAAGAACTTTTTGAACTAAAACCAGAAACTCTGCCATAGTTCATTGATTTTTACATGAAACA
TTTATTTACAAGATGATATCAAGATTACTTTTCACAAAATAGGCACATTATATCAACACTTTGCTCTGCTTTGTA
AATTTGCCATCCAGGATTTTGGGGTGGTATTCATGTGAAATTAAAGCAGATTCTCTAGCAGTTTCCTATAGCTAC
AGTTTTTTTTTTTCATTGCTTCTAATTGGATATAGTTACTATGAGTCCATGAAATACAATGGAAATGTGAATAAA
GAATTTACTACATTGAAGATTTTAAACATTTGGTATTAAAAAAAAATCCTTTGTGAATGTGATAGAAAACTAGTA
GTGTGGAGCAGTGTAAATATTTGAGGTGGTGATTTGTGAAGTAGCCCAGTATTGCCTTAAATAAAATCACATTTC
ATTTCTTGTTTTATACATGTGATCTTATAAAGATTTTTTGTTTTGTTTTGTTTTCCATTTTCTGAGATTTATAGA
TTGGTGTATAGCTTTAAACTGTATAAAGTTTTGTGGAAAGATTTTTTTAAACATTTTTATAAATCTTAAAATTGA
TATCATCAAAGTGAGCCCATCTTGTGTTTATAAAATACAAGAGTCCTTAACATTTATAATTACATAGATAAAACA
CTTTCTATAAGGAAGTTGGATGTTTTGATTTTACTGTTTATAGATGTTAGATTGTACAGATTTGTCTGTATTTCT
CACCATATCTAATGATACTTTTTTCATTAGATTGGTCTTCAAGAACAGTATTAGTTATAATTATTTTGGTTATTC
AGTATATAGTTAGCTCTTACAGTTTAGCTTTATTCACCATATTTATACTGTGGATTCACAGCGAGAGGTAGAGGT
TATTCCAGGAGAGTTGATGACCTTCATTTAAAGTCCAACTAAAATCAGTAGTAGAAACATAAGAAAACATCTTTG
CAATATTTACTTTTGTTTCTGTTTGCCGTAAATAGTAACATTGTTTTTTTTTATTTTGTGTTTGTTATAAAACAG
TTGCATTCACAATATTATTGGCCTGAGATATTGATGATATTGTGATGGTATGAAAATGTGTACATTCCCTGTGCA
ACATCAGATTTGCAGGAAAAATGAAGCACTTACTGAAATCGCTGGTACTCTGAATAAATAAGCATGGTCAAGGAG
TGAACTATTTTCTTTTGGAAATTTCTTTTTAATTTTTATTATTAAAGTATTTTATTTTTAGGGCCTTTTGGGTTT
TATTGAATAGTTCATTTCACCTGTTTAAGACTTACTACCAATAAGCATAAAACCTGACACGTTAAAATCCCTGCC
CTTTGGTGAGCCCACTGTTATTTATTAAAATAAAAGTTATTTTATGGGTGATT

FIGURE 1700

VNSSNPFFTSQTKANGNPACSAQLQHVSPPIFPAHLASVSTPLLSSMESVINPNITSQDKNEQGGMLCSQMENLP
STALPAQMEDLTKTVLPLNIDSGSDPFLPLPAESSSMSLFPSPADSGTNSVFSQLENNTNHYSSQIEGNTNSSFL
KGGNGENAVFPSQVNVANNFSSTNAQQSAPEKVKKDRGRGPNGKERKPKHNKRAKWPAIIRDGKFICSRCYRAFT
NPRSLGGHLSKRSYCKPLDGAEIAQELLQSNGQPSLLASMILSTNAVNLQQPQQSTFNPEACFKDPSFLQLLAEN
RSPAFLPNTFPRSGVTNFNTSVSQEGSEIIKQALETAGIPSTFEGAEMLSHVSTGCVSDASQVNATVMPNPTVPP
LLHTVCHPNTLLTNQNRTSNSKTSSIEECSSLPVFPTNDLLLKTVENGLCSSSFPNSGGPSQNFTSNSSRVSVIS
GPQNTRSSHLNKKGNSASKRRKKVAPPLIAPNASQNLVTSDLTTMGLIAKSVEIPTTNLHSNVIPTCEPQSLVEN
LTQKLNNVNNQLFMTDVKENFKTSLESHTVLAPLTLKTENGDSQMMALNSCTTSVNSDLQISEDNVIQNFEKTLE
IIKTAMNSQILEVKSGSQGAGETSQNAQINYNIQLPSVNTVQNNKLPDSSPFSSFISVMPTKSNIPQSEVSHKED
QIQEILEGLQKLKLENDLSTPASQCVLINTSVTLTPTPVKSTADITVIQPVSEMINIQFNDKVNKPFVCQNQGCN
YSAMTKDALFKHYGKIHQYTPEMILEIKKNQLKFAPFKCVVPTCTKTFTRNSNLRAHCQLVHHFTTEEMVKLKIK
RPYGRKSQSENVPASRSTQVKKQLAMTEENKKESQPALELRAETQNTHSNVAVIPEKQLIEKKSPDKTESSLQVI
TVTSEQCNTNALTNTQTKGRKIRRHKKEKEEKKRKKPVSQSLEFPTRYSPYRPYRCVHQGCFAAFTIQQNLILHY
QAVHKSDLPAFSAEVEEESEAGKESEETETKQTLKEFRCQVSDCSRIFQAITGLIQHYMKLHEMTPEEIESMTAS
VDVGKFPCDQLECKSSFTTYLNYVVHLEADHGIGLRASKTEEDGVYKCDCEGCDRIYATRSNLLRHIFNKHNDKH
KAHLIRPRRLTPGQENMSSKANQEKSKSKHRGTKHSRCGKEGIKMPKTKRKKKNNLENKNAKIVQIEENKPYSLK
RGKHVYSIKARNDALSECTSRFVTQYPCMIKGCTSVVTSESNIIRHYKCHKLSKAFTSQHRNLLIVFKRCCNSQV
KETSEQEGAKNDVKDSDTCVSESNDNSRTTATVSQKEVEKNEKDEMDELTELFITKLINEDSTSVETQANTSSNV
SNDFQEDNLCQSERQKASNLKRVNKEKNVSQNKKRKVEKAEPASAAELSSVRKEEETAVAIQTIEEHPASFDWSS
FKPMGFEVSFLKFLEESAVKQKKNTDKDHPNTGNKKGSHSNSRKNIDKTAVTSGNHVCPCKESETFVQFANPSQL
QCSDNVKIVLDKNLKDCTELVLKQLQEMKPTVSLKKLEVHSNDPDMSVMKDISIGKATGRGQY

FIGURE 1701A

CGCCGCTCTGAGTCCAGCCTCCTACTGAGAACAGTCCCTCCCTTGTGCGGGTCGCACGGCTAGCCGCAGGTTCGG
CCACGTCAAATCCATTTTCTAAAAAAGCAGGGAGCAGAGCTCTCTCTTCGCCGCCGACGCAGAAAGGAGCTGGGG
AGGAAAAAGCTGCTGCCTTTTGCGCTGGAGATTCGTGGGCAAGGCTTCTCATTTTCCCAGGCTGCTTCCCCTCCC
GGGTGAGGAGCGTCCTGAGACTAAGGAAAGAGCCTGGAAAATGGAGCAGACCTGGACGAGAGATTATTTTGCAGA
GGATGATGGGGAGATGGTACCCAGAACGAGTCACACAGCAGCTTTTCTTAGTGACACTAAAGATCGAGGCCCTCC
AGTGCAGTCACAGATCTGGAGAAGTGGTGAAAAGGTCCCGTTTGTGCAGACATATTCCTTGAGAGCATTTGAGAA
ACCCCCTCAGGTACAGACCCAGGCTCTTCGAGACTTTGAGAAGCACCTCAATGACCTGAAGAAGGAGAACTTCAG
CCTCAAGCTGCGCATCTACTTCCTGGAGGAGCGCATGCAACAGAAGTATGAGGCCAGCCGGGAGGACATCTACAA
GCGGAACATTGAGCTGAAGGTTGAAGTGGAGAGCTTGAAACGAGAACTCCAGGACAAGAAACAGCATCTGGATAA
AACATGGGCTGATGTGGAGAATCTCAACAGTCAGAATGAAGCTGAGCTCCGACGCCAGTTTGAGGAGCGACAGCA
GGAGACGGAGCATGTTTATGAGCTCTTGGAGAATAAGATCCAGCTTCTGCAGGAGGAATCCAGGCTAGCAAAGAA
TGAAGCTGCGCGGATGGCAGCTCTGGTGGAAGCAGAGAAGGAGTGTAACCTGGAGCTCTCAGAGAAACTGAAGGG
AGTCACCAAAAACTGGGAAGATGTACCAGGAGACCAGGTCAAGCCCGACCAATACACTGAGGCCCTGGCCCAGAG
GGACAAGAGAATTGAAGAACTGAATCAGAGCCTGGCTGCCCAGGAGAGGCTTGTAGAACAGCTATCTCGGGAGAA
ACAACAACTGCTACATCTGTTGGAGGAGCCAACTAGCATGGAAGTGCAGCCCATGACTGAAGAGTTGCTGAAACA
ACAAAAGCTGAATTCACATGAGACCACTATAACTCAGCAGTCTGTATCTGATTCCCACTTGGCAGAACTCCAGGA
AAAAATCCAGCAAACAGAGGCCACCAACAAGATTCTTCAAGAGAAACTTAATGAAATGAGCTATGAACTAAAGTG
TGCTCAGGAGTCGTCTCAAAAGCAAGATGGTACAATTCAGAACCTCAAGGAAACTCTGAAAAGCAGGGAACGTGA
GACTGAGGAGTTGTACCAGGTAATTGAAGGTCAAAATGACACAATGGCAAAGCTTCGAGAAATGCTGCACCAAAG
CCAGCTTGGACAACTTCACAGCTCAGAGGGTACTTCTCCAGCTCAGCAACAGGTAGCTCTGCTTGATCTTCAGAG
TGCTTTATTCTGCAGCCAACTTGAAATACAGAAGCTCCAGAGGGTGGTACGACAGAAAGAGCGCCAACTGGCTGA
TGCCAAACAATGTGTGCAATTTGTAGAGGCTGCAGCACACGAGAGTGAACAGCAGAAAGAGGCTTCTTGGAAACA
TAACCAGGAATTGCGAAAAGCCTTGCAGCAGCTACAAGAAGAATTGCAGAATAAGAGCCAACAGCTTCGTGCCTG
GGAGGCTGAAAAATACAATGAGATTCGAACCCAGGAACAAAACATCCAGCACCTAAACCATAGTCTGAGTCACAA
GGAGCAGTTGCTTCAGGAATTTCGGGAGCTCCTACAGTATCGAGATAACTCAGACAAAACCCTTGAAGCAAATGA
AATGTTGCTTGAGAAACTTCGCCAGCGAATACATGATAAAGCTGTTGCTCTGGAGCGGGCTATAGATGAAAAATT
CTCTGCTCTAGAAGAGAAAGAAAAAGAACTGCGCCAGCTTCGTCTTGCTGTGAGAGAGCGAGATCATGACTTAGA
GAGACTGCGCGATGTCCTCTCCTCCAATGAAGCTACTATGCAAAGTATGGAGAGTCTCCTGAGGGCCAAAGGCCT
GGAAGTGGAACAGTTATCTACTACCTGTCAAAACCTCCAGTGGCTGAAAGAAGAAATGGAAACCAAATTTAGCCG
TTGGCAGAAGGAACAAGAGAGTATCATTCAGCAGTTACAGACGTCTCTTCATGATAGGAACAAAGAAGTGGAGGA
TCTTAGTGCAACACTGCTCTGCAAACTTGGACCAGGGCAGAGTGAGATAGCAGAGGAGCTGTGCCAGCGTCTACA
GCGAAAGGAAAGGATGCTGCAGGACCTTCTAAGTGATCGAAATAAACAAGTGCTGGAACATGAAATGGAGATTCA
AGGCCTGCTTCAGTCTGTGAGCACCAGGGAGCAGGAAAGCCAAGCTGCTGCAGAGAAGTTGGTGCAAGCCTTAAT
GGAAAGAAATTCAGAATTACAGGCCCTGCGCCAATATTTAGGAGGGAGAGACTCCCTGATGTCCCAAGCACCCAT
CTCTAACCAACAAGCTGAAGTTACCCCCACTGGCCGTCTTGGAAAACAGACTGATCAAGGTTCAATGCAGATACC
TTCCAGAGATGATAGCACTTCATTGACTGCCAAAGAGGATGTCAGCATACCCAGATCCACATTAGGAGATTTGGA
CACAGTTGCAGGGCTGGAAAAAGAACTGAGTAATGCCAAAGAGGAACTTGAACTCATGGCTAAAAAAGAAAGAGA
AAGTCAGATGGAACTTTCTGCTCTACAGTCCATGATGGCTGTGCAGGAAGAAGAGCTGCAGGTGCAGGCTGCTGA
TATGGAGTCTCTGACCAGGAACATACAGATTAAAGAAGATCTCATAAAGGACCTGCAAATGCAACTGGTTGATCC
TGAAGACATACCAGCTATGGAACGCCTGACCCAGGAAGTCTTACTTCTTCGGGAAAAAGTTGCTTCAGTAGAATC
CCAGGGTCAAGAAATTTCAGGAAACCGAAGACAACAGTTGCTGCTGATGCTAGAAGGACTAGTAGATGAACGGAG
TCGGCTCAATGAGGCCTTACAAGCAGAGAGACAGCTCTATAGCAGTCTGGTGAAGTTCCATGCCCATCCAGAGAG
CTCTGAGAGAGACCGAACTCTGCAGGTGGAACTGGAAGGGGCTCAGGTGTTACGCAGTCGGCTAGAAGAAGTTCT
TGGAAGAAGCTTGGAGCGCTTAAACAGGCTGGAGACCCTGGCCGCCATTGGAGGTGCAGCTGCAGGGGATGACAC
CGAAGATACAAGCACTGAGTTCACTGACAGTATTGAGGAGGAGGCTGCACACCATAGTCACCAGCAACTTGTCAA
GGTGGCTTTGGAGAAAAGTCTGGCAACTGTGGAGACCCAGAACCCATCTTTTTCCCCTCCTTCTCCGATGGGAGG
GGACAGTAACAGGTGTCTTCAGGAAGAAATGCTCCACCTGAGGGCTGAGTTCCACCAGCACTTAGAAGAGAAGAG
GAAAGCTGAGGAGGAACTGAAGGAGCTAAAGGCTCAAATTGAGGAAGCAGGATTCTCCTCAGTGTCCCACATCAG

FIGURE 1701B

GAACACCATGCTGAGCCTTTGCCTTGAGAATGCGGAGCTGAAAGAGCAGATGGGAGAAGCAATGTCTGATGGATG
GGAGATCGAGGAAGACAAGGAGAAGGGCGAGTTGGATAACCAGTCCCAGCCTCGTGACCCTGGGCCTCAGTCAGC
GTTTAGCCTACCAGGGTCCACCCAGCACCTGCGCTCCCAGCTGTCACAATGCAAACAACGCTATCAAGATCTCCA
GGAGAAGCTGCTGCTATCAGAAGCCACTGTCTTTGCTCAGGCTAACGAGCTGGAGAAATACAGAGTTATGCTTAC
AGGTGAATCCTTGGTGAAGCAGGACAGCAAGCAGATCCAGGTGGACCTCCAGGACCTGGGCTATGAGACTTGTGG
CCGAAGCGAGAATGAGGCTGAACGGGAGGAAACCACCAGTCCTGAGTGTGAGGAGCACAACAGCCTCAAGGAAAT
GGTCCTGATGGAGGGGCTGTGCTCTGAGCAGGGACGCCGGGGCTCAACACTGGCTAGTTCCTCTGAGAGGAAGCC
CTTGGAGAACCAGCTAGGGAAGCAGGAAGAGTTCCGGGTATATGGAAAGTCAGAAAACATCTTGGTCCTACGAAA
GGACATCAAAGATCTGAAGGCCCAGCTGCAGAATGCCAACAAGGTCATTCAAAACCTCAAGAGCCGGGTCCGGTC
CCTCTCAGTTACAAGTGATTATTCGTCTAGTCTGGAAAGACCCCGGAAGCTGAGAGCTGTTGGCACCTTGGAGGG
GTCTTCACCTCATAGTGTCCCTGATGAGGATGAGGGGTGGCTGTCTGATGGCACTGGGGCTTTCTACTCTCCAGG
GCTTCAGGCCAAAAAGGACCTGGAGAGTCTCATCCAGAGAGTATCCCAGCTGGAGGCCCAGCTCCCAAAAAATGG
ACTAGAAGAGAAGCTGGCTGAGGAGCTGAGATCAGCCTCGTGGCCTGGGAAATATGATTCCCTGATTCAGGATCA
GGCCCGGGAACTGTCTTACCTACGGCAAAAAATACGAGAAGGGAGAGGTATTTGTTATCTTATCACCCGGCATGC
AAAAGATACAGTAAAATCTTTTGAGGATCTCCTAAGGAGCAATGACATTGACTACTACCTGGGACAGAGCTTCCG
GGAGCAACTCGCCCAGGGAAGCCAGCTGACAGAGAGGCTCACCAGCAAACTCAGCACCAAGGATCATAAAAGTGA
GAAAGATCAAGCTGGACTTGAGCCACTGGCCCTCAGGCTCAGCAGGGAGCTGCAGGAGAAGGAGAAAGTGATTGA
AGTCCTGCAGGCCAAGCTGGATGCTCGGTCCCTCACACCCTCCAGCAGCCATGCCTTGTCTGACTCCCACCGCTC
TCCCAGCAGCACCTCTTTCCTGTCTGATGAACTGGAAGCCTGCTCTGACATGGACATAGTCAGCGAGTACACACA
CTATGAAGAGAAGAAAGCTTCTCCCAGTCACTCAGATTCCATCCATCATTCGAGTCATTCTGCTGTGTTGTCTTC
TAAACCATCATCAACCAGTGCATCTCAGGGGGCTAAGGCCGAATCCAACAGCAACCCCATCAGCTTGCCAACTCC
CCAGAATACCCCCAAGGAGGCCAACCAGGCCCATTCAGGTGCCAGCACTGTTCCTCCTGCTTCCACAGCTACATT
GCTGAGCAACGACTTGGAAGCCGACTCTTCCTACTACCTCAACTCTGCCCAGCCTCACTCTCCTCCAAGGGGCAC
CATAGAACTGGGAAGAATCCTAGAGCCTGGGTACCTGGGCAGCAGTGGCAAGTGGGATGTGATGAGGCCTCAGAA
AGGGAGTGTATCTGGGGACCTATCCTCAGGCTCCTCTGTGTACCAGCTTAACTCCAAACCCACAGGGGCTGACCT
GCTGGAAGAGCATCTTGGTGAAATCCGGAACCTGCGCCAGCGCCTGGAGGAATCCATCTGCATCAATGACCGCCT
ACGGGAGCAACTGGAACACCGGCTGACCTCTACTGCTCGTGGAAGGGGATCCACTTCTAACTTCTACAGTCAGGG
CCTGGAGTCCATACCTCAGCTCTGCAATGAGAACAGAGTCCTCAGGGAAGACAATCGAAGACTTCAGGCTCAACT
GAGTCATGTTTCCAGAGAGCACTCCCAGGAAACAGAAAGCCTGAGGGAGGCTCTGCTGTCCTCTCGATCCCACCT
TCAAGAGCTGGAAAAGGAGCTGGAGCACCAGAAGGTGGAAAGGCAGCAGCTTTTGGAAGACTTGAGGGAGAAGCA
GCAAGAGGTCTTGCATTTCAGGGAGGAACGTCTTTCCCTCCAGGAAAACGACTCCAGACTGCAGCACAAGCTGGT
TCTCCTGCAGCAACAGTGTGAAGAGAAACAGCAGCTCTTTGAGTCCCTCCAGTCAGAGCTACAAATCTACGAGGC
ACTTTATGGCAATTCCAAGAAGGGGCTGAAAGCTTACAGCCTGGATGCCTGTCACCAAATCCCTTTGAGCAGTGA
CCTGAGCCACCTGGTGGCAGAGGTACGAGCTCTGAGAGGGCAGCTGGAGCAGAGCATTCAGGGGAACAATTGTCT
GCGACTGCAGCTGCAACAGCAGCTGGAGAGCGGTGCTGGCAAAGCCAGCCTCAGCCCCTCCTCCATTAACCAGAA
CTTCCCAGCCAGCACTGACCCTGGAAACAAGCAGCTGCTCCTCCAAGATTCAGCTGTGTCCCCTCCAGTCCGGGA
TGTTGGTATGAATTCCCCAGCTCTGGTCTTCCCCAGCTCTGCTTCCTCTACTCCTGGCTCAGAAACGCCCATAAT
CAACAGAGCAAATGGCTTGGGTTTGGATACTTCTCCAGTAATGAAGACCCCTCCCAAGCTAGAGGGTGATGCTAC
TGATGGCTCCTTTGCCAATAAGCATGGCCGCCATGTCATTGGCCACATTGATGACTACAGTGCCCTAAGACAGCA
GATTGCGGAGGGCAAGCTGCTGGTCAAAAAGATAGTGTCTCTTGTGAGATCAGCGTGCAGCTTCCCTGGCCTTGA
AGCCCAAGGCACAGAGGTGCTAGGCAGCAAAGGTATTCATGAGCTTCGGAGCAGCACCAGTGCCCTGCACCATGC
CCTAGAGGAGTCAGCTTCCCTCCTCACCATGTTCTGGAGAGCGGCCCTGCCAAGCACCCACATCCCTGTGCTGCC
TGGCAAAGTGGGAGAATCAACAGAAAGGGAACTTCTGGAACTGAGAACCAAAGTATCCAAACAGGAGCGACTCCT
TCAGAGCACAACTGAGCATCTGAAGAACGCCAACCAGCAGAAGGAGAGCATGGAGCAGTTCATTGTCAGCCAGCT
AACCAGAACACATGATGTTTTAAAGAAGGCAAGGACTAACTTAGAGGTGAAATCCCTAAGGGCTCTGCCATGTAC
TCCAGCCTTGTGACCCTTGCCTTCCAGGAACCATGCAAGAAGCGCAGCCACCAGAAGTCCTTAAAACAGCAGGAA
AGGTGGGCCTGTCCCCCTTTTGTGCAGCTACCTATCTGCTGAGGAGCATCTGGGCCTCATTCCTCCAAGTCCACG
GGAGGGTCCAGAAGAGGGAGTCAGAGATGTATCCTGGTGGAGCTGGGAGAAAGGCAGAAAGCCTTTCTGACGGCT

FIGURE 1701C

ATGGAATACGATTAGCCAAGGTCCACTTGGCCCAGCACTAAGAAAAAGATGCGTAGTTTGCACAGAAGGTTTTGT
GATCCTGCCTCTCAACAGCCCCAGCAGCTTGGGAACTAGCAAGAGCACATTTCTTGCCTCATCAGCTGTCCTGAG
ATGGAAAACTCAGTGAATATAGGACCCTGATTCCGATGAAAGGGGCACGTGGTCCCAATGCTGGAGCTCCTCTGG
CAGGTTCTAAAAGCACACTACTGAGCAGCGGTGCCCTGCCGGACACTGCTGGCGGGGGCTCAGTGAGCACTACTC
ACAGATCCACACCTGACCCTGTTGGGTCGAGTCAGGCTGGGCCTTGGTCTGCACTGTAGCACCTGTGTTCTTTGA
GTTCACATCATGAATGTGGTGACTTCCCAGATACCATCTCAGGCTTAACCTAGCACATCCTATTTCTTTTCTTCT
ATGATATCCAAATTGGACTGACCTCACTTCAAAGTTGCTGTCCCATTTTGTCACCCTATCTTATCTCGGGGAAAT
TGCAGACTGATGGCCAGACCAACTCTGTTGAAATTCTTGCATAGAGCAAACCTGTGCTCATTTTTAAGTGGCATG
GGAGAGGCCCCAAGCCTAGTAAAGCCTAGTCTGTGTCTTCACAGTGCTGGTAGAATGTGTTTGTGTGTATAAATA
TATGATATAGATTTATATATGTTGCTAACGCCATATATTGAAGGCCAACATAACTGGTGGACAGGGTGGGTGACA
GAAAATGAAAGTCTTTTTGGTGATTGTTAAAGCAAAATGTGTATAAAGAAATAAATAGTTTTTCTTTC

FIGURE 1702A

TGCCATGCTGCTGCACGGACAGGATGTGATCACTGTGTCCAATGGAGGCCGAATCATGCGTTCCTGGGAGACTAA
CATCGGGGGCCTGAACTGGGAGATAACCCTGGACAGTGGCAGTTTCCAGGCACTTGGGCTGGTTGGCCTGCAGGA
GTCTGTAAGGTACATCGCAGTCCTGAAGAAGACTACACTTGCCCTCCATCACCTCTCCAGTGGGCACCTCAAGTG
GGTGGAACATCTCCCAGAAAGTGACAGCATCCACTACCAGATGGTGTATTCTTACGGCTCTGGGGTGGTGTGGGC
CCTCGGAGTTGTTCCCTTCAGCCATGTGAACATTGTCAAGTTTAATGTGGAAGATGGAGAGATTGTTCAGCAGGT
TAGGGTTTCAACTCCGTGGCTGCAGCACCTGTCTGGAGCCTGTGGTGTGGTGGATGAGGCTGTCCTGGTGTGTCC
TGACCCGAGCTCACGTTCCCTCCAAACTTTGGCTCTGGAGACGGAATGGGAGTTGAGACAGATCCCACTGCAGTC
TCTCGACTTAGAATTTGGAAGTGGATTCCAACCCCGGGTCCTGCCTACCCAGCCCAACCCAGTGGACGCTTCCCG
GGCCCAGTTCTTCCTGCACTTGTCCCCAAGCCACTATGCTCTGCTGCAGTACCATTATGGAACGCTGAGTTTGCT
TAAAAACTTCCCACAGACTGCCCTAGTGAGCTTTGCCACCACTGGGGAGAAGACGGTGGCTGCAGTCATGGCCTG
TCGGAATGAAGTGCAGAAAAGTAGCAGTTCTGAAGATGGGTCAATGGGGAGCTTTTCGGAGAAGTCTAGTTCAAA
GGACTCTCTGGCTTGCTTCAATCAGACCTACACCATTAACCTATACCTCGTGGAGACAGGTCGGCGGCTGCTGGA
CACCACGATAACATTTAGCCTGGAACAGAGCGGCACTCGGCCTGAGCGGCTGTATATCCAGGTGTTCTTGAAGAA
GGATGACTCAGTGGGCTACCGGGCTTTGGTGCAGACAGAGGATCATCTGCTACTTTTCCTGCAGCAGTTGGCAGG
GAAGGTGGTGCTGTGGAGCCGTGAGGAGTCCCTGGCAGAAGTGGTGTGCCTAGAGATGGTGGACCTCCCCCTGAC
TGGGGCACAGGCCGAGCTGGAAGGAGAATTTGGCAAAAAGGCAGATGGCTTGCTGGGGATGTTCCTGAAACGCCT
CTCGTCTCAGCTTATCCTGCTGCAAGCATGGACTTCCCACCTCTGGAAAATGTTTTATGATGCTCGGAAGCCCCG
GAGTCAGATTAAGAATGAGATCAACATTGACACCCTGGCCAGAGATGAATTCAACCTCCAGAAGATGATGGTGAT
GGTAACAGCCTCAGGCAAGCTTTTTGGCATTGAGAGCAGCTCTGGCACCATCCTGTGGAAACAGTATCTACCCAA
TGTCAAGCCAGACTCCTCCTTTAAACTGATGGTCCAGAGAACTACTGCTCATTTCCCCCATCCCCCACAGTGCAC
CCTGCTGGTGAAGGACAAGGAGTCGGGAATGAGTTCTCTGTATGTCTTCAATCCCATTTTTGGGAAGTGGAGTCA
GGTAGCTCCCCCAGTGCTGAAGCGCCCCATCTTGCAGTCCTTGCTTCTCCCAGTCATGGATCAAGACTACGCCAA
GGTGTTGCTGTTGATAGATGATGAATACAAGGTCACAGCTTTTCCAGCCACTCGGAATGTCTTGCGACAGCTACA
TGAGCTTGCCCCTTCCATCTTCTTCTATTTGGTGGATGCAGAGCAGGGACGGCTGTGTGGATATCGGCTTCGAAA
GGATCTCACCACTGAGCTGAGTTGGGAGCTGACCATTCCCCCAGAAGTACAGCGGATCGTCAAGGTGAAGGGGAA
ACGCAGCAGTGAGCACGTTCATTCCCAGGGCCGTGTGATGGGGGACCGCAGTGTGCTCTACAAGAGCCTGAACCC
CAACCTGCTGGCCGTGGTGACAGAGAGCACAGACGCGCACCATGAGCGCACCTTTATTGGCATCTTCCTCATTGA
TGGCGTCACTGGGCGTATCATTCACTCCTCTGTGCAGAAGAAAGCCAAAGGCCCTGTCCATATCGTGCATTCAGA
GAACTGGGTGGTGTACCAGTACTGGAACACCAAGGCTCGGCGCAACGAGTTTACCGTACTGGAGCTCTATGAGGG
CACTGAGCAATACAACGCCACCGCCTTCAGCTCCCTGGACCGCCCCCAGCTGCCCCAGGTCCTCCAGCAGTCCTA
TATCTTCCCGTCCTCCATCAGTGCCATGGAGGCCACCATCACCGAACGGGGCATCACCAGCCGACACCTGCTGAT
TGGACTACCTTCTGGAGCAATTCTTTCCCTTCCTAAGGCTTTGCTGGATCCCCGCCGCCCCGAGATCCCAACAGA
ACAAAGCAGAGAGGAGAACTTAATCCCGTATTCTCCAGATGTACAGATACACGCAGAGCGATTCATCAACTATAA
CCAGACAGTTTCTCGAATGCGAGGTATCTACACAGCTCCCTCGGGTCTGGAGTCCACTTGTTTGGTTGTGGCCTA
TGGTTTGGACATTTACCAAACTCGAGTCTACCCATCCAAGCAGTTTGACGTTCTGAAGGATGACTATGACTACGT
GTTAATCAGCAGCGTCCTCTTTGGCCTGGTTTTTGCCACCATGATCACTAAGAGACTGGCACAGGTGAAGCTCCT
GAATCGGGCCTGGCGA**TAA**AGAACAAAGACTGTGCCTAAAAGTGGAGAGCCAGGGGAGTGTGGGTCAGATAAGCA
GCTACAGCTGCAGTTTGGTGGATTGGTGGAGTATGTGTGTGTGTCAGTGCTCAGCTAAGAACTGTAGGGAAGATG
GATGACCTTCACGCAGAACTCCTTTTGGGATATACATGATGCAGAAAGGATCCTACATGGAGAGAGACAGAACTC
TCTCAGCTGACACTCTCAGAGATTCCTGATGGGCTTTCTCTTGAAGTCCAAAGGCGTCTGCATTGTTTCCTTTCT
TTGCCCATCCATGAATGTTCTGTTTTGTTTTTTTTAATAAGAATTCCGGCTGATTTTTGTGAGGCCTGTTTAAAT
TGACTTTACTTTGCCTTTTGTGTTTCTCAATTTTATCTAGAAATCTTTCTGACTTTTTCCATCTCTTGCTTCAAA
GTAAGAGGGGAACTCTCCTTGCCGACTCCACCTTATAGGTACATTTGGTGTTTTGCACTGGGAAGAAATAGGATC
CATCCTTAGCTGAGGCTTGAGGACTGATCCAGCCTCTCATGGCTTCCCTCCAAAGTAACTTAGGGTTGAGGGATC
TATATGTGATGTCAAAACTTACTTTAAACCTCTAGTTTCGTGCTGTCATTTATTAGGCTGGGCCACCAAATCTTT
GTTTCAATTTATCAGAAGCCAAGTGCATACTAGCGTCTTGTTTGTTGCCCATTGCCTATACTTTTCACCTGAGAT
GTGTGAGTTGGGGCCTTTTAAAAACTACTGAATTGTCTGAGCCTTGAAGACATTTCCAGGGAGAAGAGATAATCT
CTCATTTCACCCACAGGCTGGTCTAATCATAACCTAGTTAAAGATGTCCTTGTTTAAGAACCCCATTATTTATTT

FIGURE 1702B

TTAGTTTTTAATATAAATTAACATGTGGGTCATTATATTTCTCCTTAAATGAGGAAATTTTAAATTTTATTGATC
TAACCTTTGAAGCTTTAAAAAAGGAGAAAGAGGGTAGGGGTGGGAAACTGGCATACTGTGTGTATAGCACTGCCG
ATTGGCTAGGCCACTGTGTCTCTGCTACAAATTAAAGAAATCCTAAAAGTTTTCCTTGGTCATAGAGTTGGGGAA
TGACAGAATTTTTCTTTGTTGTGAAATGTATGTACAGAGTAGACCATCTCTAGCCCTGTGGTGAAAGAGGTACAC
TCGAATGTTTGCATAAAGCAAGTGACAAATGACACTGTTTAAGTCCTCTTTTGTGTCTTAGAAGATCATTTTGAG
GCTATTTTCACATTAGAGGGGATAAAAGCAGTGAAGACATGGAGTAAGTGTATTTTATTTTAGTAAGGAAAGGTC
AGTTTAATCATATATGGGTTGGTTAGGTTATCTAAAAATTTGTCATCTTTCTATGGTCATATGCTGATGGTAGAT
TATGGCAGAGAAGGAAGAGGAAATGACAACCATTTTATTAATTGTCAGTTTGATATTGAGTGACTGAATGTCTAA
GAATCTCCAGAAAAAAACAGGCATCTATCATCCTGACCCAAGGCATATTTTAACATAACCTGGGAGAAGAGAGTT
AAGTACAAGTTAAAAAAAATTCTGCCCTAGTTTTGAGAAAGCCTGGCTGGAATTCTGACTGTCTTACATACATAT
GTGCAAGGTTAGCCTGCAAGATTCTAGTTTTTATTTACCAGTGTGCCAGAATCTGAAACAAGCTACTGGGAGGGA
AGGTATTTGTCCTTTAGTAAAATTCCCTGTATTTCAGCTGTAATCAAAGTTACCTCAAAGCAGGTGCTTTTTTTT
TTTTTGAGACCCTGGCTCAAAAACAAAAACAAAAACTAGTTTGTTTTAGTATTCATTAATTACGTATATGAGCAC
TGGTAGTCTAGTGTTTGTTCTTGTATACAGTGTTTTCTTAAATGAGATGATGCTATTTAATTCTGTTACTTGTTT
TTTCAACTAATGGATCTTTTAAAGTTTTTTATTTAAATTTTTTGTGGGTACATATTAGGTACATATACTTATGGG
GTACATGAGATGTTTTTATAAAGGCTCAGCTAATGTATCTTGAATATCATGTATTCATAAAGATGACTGAAATAG
TTTCTGGAACAAAGTCTGATAGAAAAAATACTCAATTCCTAATTTAAGTGTTAGAGACTTTAATGTAAGCTATCT
AATCTGAACTAGTTTCATTATTTGTGTGTGGGTACATGTTATGTGCTCCGTAAGGCATCTTTCAATTTGAAAATT
TCATAATTGTAATTTCACTGCCTTTATAAATTGCTTTTTTTTGGAGGCAGGGTCTCTGTCACCCAGGCTGGAGAG
CAGTGGCACAGTCATAGCTCACTGCAGCCTCGAACACCTGGGCTGAAGTGATCCTCCCTCCTTAGCCTCCCAAAG
TGCCGGGATTACAGGCATGAGCTACTGCACCTGGCCCATAAATTGTCATACTTTTAAAGAGCCTATTACACAAAG
TATCATCAGAATCATCCCAAGACTCATTTCCTGATTCCTAATTATTTAAAATTTTGCTTTTAGGCGAGGCATGGT
GGCTCAAGCCTATGGTCCCAGCACTTTGGGAGGCCAAGGCAGGCAGATCATTTGAGGTCAGGAGTTTGGGACCAG
CCTGGCCAACATGGTGAAACCTGAAACCCCATCTCTACCAAAAAAATGGAAAAATTTAGCCAGGTGTGGTGGTGC
ATGCCTGTAATCCCAGCCTCCCGAGTAGCTGGGGCTCAGGCGTGCGCCACCATGCCCGGCTAATTTTTGTATATT
TATGGAAATGCCAAGAGATAGTTCAATCTGCCTCTCTGGCAAGCCATGGACACCAGGTCTGACAAACTCTCTTAC
TCCTTAAGACAAATGCTCACCTGATCAATATGGGGAAATAAGCTGCATGGTACCATAATTTCTATTCTAAAAGGG
AAAAGTATCTCTTTGGTATTGCTTTGGAAAACATTCTTTATAACTATCTTGCTATTTAAAAATTGACAATTATCC
TTCCATAATTAAAACAGGTAGACAAC

FIGURE 1703

AMLLHGQDVITVSNGGRIMRSWETNIGGLNWEITLDSGSFQALGLVGLQESVRYIAVLKKTTLALHHLSSGHLKW
VEHLPESDSIHYQMVYSYGSGVVWALGVVPFSHVNIVKFNVEDGEIVQQVRVSTPWLQHLSGACGVVDEAVLVCP
DPSSRSLQTLALETEWELRQIPLQSLDLEFGSGFQPRVLPTQPNPVDASRAQFFLHLSPSHYALLQYHYGTLSLL
KNFPQTALVSFATTGEKTVAAVMACRNEVQKSSSSEDGSMGSFSEKSSSKDSLACFNQTYTINLYLVETGRRLLD
TTITFSLEQSGTRPERLYIQVFLKKDDSVGYRALVQTEDHLLLFLQQLAGKVVLWSREESLAEVVCLEMVDLPLT
GAQAELEGEFGKKADGLLGMFLKRLSSQLILLQAWTSHLWKMFYDARKPRSQIKNEINIDTLARDEFNLQKMMVM
VTASGKLFGIESSSGTILWKQYLPNVKPDSSFKLMVQRTTAHFPHPPQCTLLVKDKESGMSSLYVFNPIFGKWSQ
VAPPVLKRPILQSLLLPVMDQDYAKVLLLIDDEYKVTAFPATRNVLRQLHELAPSIFFYLVDAEQGRLCGYRLRK
DLTTELSWELTIPPEVQRIVKVKGKRSSEHVHSQGRVMGDRSVLYKSLNPNLLAVVTESTDAHHERTFIGIFLID
GVTGRIIHSSVQKKAKGPVHIVHSENWVVYQYWNTKARRNEFTVLELYEGTEQYNATAFSSLDRPQLPQVLQQSY
IFPSSISAMEATITERGITSRHLLIGLPSGAILSLPKALLDPRRPEIPTEQSREENLIPYSPDVQIHAERFINYN
QTVSRMRGIYTAPSGLESTCLVVAYGLDIYQTRVYPSKQFDVLKDDYDYVLISSVLFGLVFATMITKRLAQVKLL
NRAWR

FIGURE 1704A

GGCCCATGGAGCTGCGTCACCTGCTGCGCCCCCGGCCAGGATTGGACTCGGAACCAGGCGGAGCTGAGGCTGGAA
AGGCCCGACACGCAGGTGCTGTCATCCGCACATTATCAGGCATGGCCAGGCACCAGGGTCCTGCACGTGCTCTGC
GCTACTTTGACCTCACGCCCAGCATGGCGGGCATCATGGTACCCCCTGTACAGCGATGGCCAGGGCCTGGCTTCA
CCTTTCATGCCTGGCTCTGTCTGCACCCTATGGATACAGCACCTACCCCTGCCCCCACCCGACCACTCCAGCGAA
AGCAGCTGTACAGCTTCTTTACCAGCAGCGGCTCAGGGTTTGAGGCCTTCTTCACGGCGGCCGGGACCCTGGTGG
TGGCTGTGTGCACACGGAAGGAGTATTTGACCATGAGTTTGCCCGAAGTGTCCTTTGCCGACTCTGCCTGGCACT
GCGTGGCTATCGTCCATGTGCCTGGGCGCCGGCCCTTCAGCCAGAACCTGGTCCATGTCTACAAAGACGGCCATC
TGGTCAAGACAGCACCCCTTCGCTGCCCCTCCCTCAGTGAGCCTTTCTCCTCCTGCTGTATCGGCTCCGCTGGAT
ACCGCACAACGACCACCACCACAGGGCTGCCCACACCACCAGTCCCCGCCACCCTGGCCTACACTCACCCCGCCC
TCACCCGCTCCCAGTCAGTCCCAGCCTCCACAGGGCTTGGCTGGGGGTCCGGGCTGGTGGCCCCCCTGCAGGAGG
GCAGCATCGACTCTACCCTCGCAGGCACCCAGGACACTCGGTGGGGCAGCCCCACATCCCTGGAGGGTGAGCTGG
GGGCTGTGGCCATCTTTCACGAAGCCCTGCAGGCGACGGCTCTGAGGACCCTGTGCACCCTGGGGCCCAATGAGA
CGGCACCCTTCAAGCCTGAGGGGGAGCTGCATGAGCTCAGCACCAGGCTGCTCCTCCATTACTCACCTCAGGCTT
GTAAGAACAACATCTGCCTGGACCTGTCCCCCAGTCATGGGCTTGATGGGCGCCTGACGGGCCACAGAGTGGAGA
CCTGGGATGTGAAGGATGTGGTGAACTGCGTTGGGGGTATGGGTGCCCTGCTGCCCCTGCTGGAGCGAGTAGCTG
CACAGCCCAAAGAGGCTGAAGCAGGTCCAGCTGAAACGCATGACCTCGTGGGTCCTGAACTGACCTCTGGTCACA
ACACCCAGGGCCTGGTTCTCCCATTGGGTAAATCTTCAGAGGAACGGATGGAGAGGAACGCAGTGGCTGCTTTTC
TGCTGATGCTGCGGAACTTCCTTCAGGGTCACATGGTGAACCAAGAGAGCCTGGTGCAGTGCCAGGGGCCTGCCA
TCATCGGGGCCCTCCTGCGAAAGGTCCCAAGCTGGGCCATGGACATGAACGTGCTCATGTCCGCCCAGCTGCTGA
TGGAGCAGGTGGCAGCTGAGGGCAGCGGGCCCCTCCTGTACCTACTCTACCAGCATTTGCTCTTCAACTTTCACC
TCTGGACCCTCAGTGACTTCGCCGTGCGCCTCGGTCACATCCAGTACATGTCCAGCATAGTTCGGGAGCACAGAC
AGAAGCTGCGGAAGAAGTACGGCGTCCAGTTTATCTTGGATGCTCTGCGCACCCACTACAGCCCGCAGCGGGAGC
GCCCCCTGGCTGCTGACGACCTACGCACCGTGCAGACCTCCCTCCTGGGCCTGGCGAGGGAGTTCCTGGTGCGGA
GTCTCTCAGCAGATGACGTGCAGGTCACGCAGACCATGCTGAGCTTTTTGGCGGCCACAGGCGATGACGGTCAGA
TCCTGCGCAGACTGCAGCAGAATGAGCGGCTACCTGAGCGGAGCCGCCAGCGCCTCCGGCTGCGGGAGTGTGGTC
TCCAGGGTCTGGTTGCCTGCTTGCCTGAGGGGACTGTTTCCCCCCAGCTCTGCCAGGGCCTCTACAAGCTGTTCC
TGGGGGCAGGATCAGGCAACACTGCTGGTGGTGGCGGCAGCAGTGGGACTCTTACTCCAGCCAGCCAGCCCGGCA
CTCCTTCGCCACTGGATGGGCCGCGGCCCTTTCCTGCTGCTCCTGGCCGCCACAGCTCCAGTCTCTCCAATGTGC
TGGAGGACGGCAGCCTCCCGGAGCCCACCATTAGCGGGGATGATACCTCGAACACCAGCAACCCACAGCAAACCT
CTGAGGAAGAGTTGTGCAATCTGCTCACCAACGTGCTGTTCTCGGTGACGTGGCGTGGCGTGGAAGGCAGCGATG
AGGCTGCCTGGCGGGAGCGTGGCCAGGTTTTCTCAGTGCTCACCCAGCTGGGGGCCTCAGCCACACTTGTGCGCC
CACCAGACTGCATCAAGCGCAGCCTCCTGGAGATGATGCTGGAGTCAGCCCTGACCGACATCAAAGAGGCCCCCG
TGGGGGTCCTGGCCAGCCTCACCCAGCAAGCGCTTTGGCTGCTGCGTCTGCTGCAGGACTTCCTGTGTGCTGAAG
GCCATGGTAACCAGGAACTGTGGAGTGAGAAGCTCTTTGAAGGTGTATGCAGCCTACTTGATCGCCTGGGAGCCT
GGCCCCACCTGGCCAACGGCACAGCTGATCTCCGTGAGATGGCGCAGATTGGCCTACGGCTTGTACTTGGCTACA
TCCTGCTGGAAGACCCACAGCTGCATGCCCAGGCCTACGTGAGATTGCACATGCTGCTACAGACTGCAGTGCCAG
CCCGCCGCGAGGAGGCCTGCTATGTGCTCTCCAAGCTGGAGGCTGCACTGGGGCGGGTGCTGAACACCTCTTCCT
TGGAGTCAGCCACTGATGAGGCAGGGTCCCCACTTGCAGCTGCAGCAGCTGCAGCAGCTGCAGAGCGCTGCTCCT
GGCTGGTACCACTGGTGCGCACGCTGCTAGACCGTGCCTATGAGCCGCTGGGGCTGCAGTGGGGACTGCCCTCCC
TGCCACCCACCAATGGCAGCCCCACCTTCTTTGAAGACTTCCAGGCTTTTTGTGCCACACCCGAATGGCGCCACT
TCATCGACAAACAGGTACAGCCAACCATGTCCCAGTTCGAAATGGACACGTATGCTAAGAGCCACGACCTTATGT
CAGGTTTCTGGAATGCCTGCTATGACATGCTTATGAGCAGTGGGCAGCGGCGCCAGTGGGAGCGCGCCCAGAGTC
GTCGGGCCTTCCAGGAGCTGGTGCTGGAACCTGCGCAGAGGCGGGCGCGCCTGGAGGGGCTACGCTACACGGCAG
TGCTGAAGCAGCAGGCAACGCAGCACTCCATGGCCCTGCTGCACTGGGGGGCGCTGTGGCGCCAGCTCGCCAGCC
CATGTGGGGCCTGGGCGCTGAGGGACACTCCCATCCCCCGCTGGAAACTGTCCAGCGCCGAGACATATTCACGCA
TGCGTCTGAAGCTGGTGCCCAACCATCACTTCGACCCTCACCTGGAAGCCAGCGCTCTCCGAGACAATCTGGGTG
AGGTTCCCCTGACACCCACCGAGGAGGCCTCACTGCCTCTGGCAGTGACCAAAGAGGCCAAAGTGAGCACCCCAC
CCGAGTTGCTGCAGGAGGACCAGCTCGGCGAGGACGAGCTGGCTGAGCTGGAGACCCCGATGGAGGCAGCAGAAC

FIGURE 1704B

TGGATGAGCAGCGTGAGAAGCTGGTGCTGTCGGCCGAGTGCCAGCTGGTGACGGTAGTGGCCGTGGTCCCAGGGC
TGCTGGAGGTCACCACACAGAATGTATACTTCTACGATGGCAGCACTGAGCGCGTGGAAACCGAGGAGGGCATCG
GCTATGATTTCCGGCGCCCACTGGCCCAGCTGCGTGAGGTCCACCTGCGGCGTTTCAACCTGCGCCGTTCAGCAC
TTGAGCTCTTCTTTATCGATCAGGCCAACTACTTCCTCAACTTCCCATGCAAGGTGGGCACGACCCCAGTCTCAT
CTCCTAGCCAGACTCCCAGACCCCAGCCTGGCCCCATCCCACCCCATACCCAGGTACGGAACCAGGTGTACTCGT
GGCTCCTGCGCCTACGGCCCCCCTCTCAAGGCTACCTAAGCAGCCGCTCCCCCCAGGAGATGCTGCGTGCCTCAG
GCCTTACCCAGAAATGGGTACAGCGTGAGATATCCAACTTCGAGTACTTGATGCAACTCAACACCATTGCGGGGC
GGACCTACAATGACCTGTCTCAGTACCCTGTGTTCCCCTGGGTCCTGCAGGACTACGTGTCCCCAACCCTGGACC
TCAGCAACCCAGCCGTCTTCCGGGACCTGTCTAAGCCCATCGGTGTGGTGAACCCCAAGCATGCCCAGCTCGTGA
GGGAGAAGTATGAAAGCTTTGAGGACCCAGCAGGGACCATTGACAAGTTCCACTATGGCACCCACTACTCCAATG
CAGCAGGCGTGATGCACTACCTCATCCGCGTGGAGCCCTTCACCTCCCTGCACGTCCAGCTGCAAAGTGGCCGCT
TTGACTGCTCCGACCGGCAGTTCCACTCGGTGGCGGCAGCCTGGCAGGCACGCCTGGAGAGCCCTGCCGATGTGA
AGGAGCTCATCCCGGAATTCTTCTACTTTCCTGACTTCCTGGAGAACCAGAACGGTTTTGACCTGGGCTGTCTCC
AGCTGACCAACGAGAAGGTAGGCGATGTGGTGCTACCCCCGTGGGCCAGCTCTCCTGAGGACTTCATCCAGCAGC
ACCGCCAGGCTCTGGAGTCGGAGTATGTGTCTGCACACCTACACGAGTGGATCGACCTCATCTTTGGCTACAAGC
AGCGGGGGCCAGCCGCCGAGGAGGCCCTCAATGTCTTCTATTACTGCACCTATGAGGGGGCTGTAGACCTGGACC
ATGTGACAGATGAGCGGGAACGGAAGGCTCTGGAGGGCATTATCAGCAACTTTGGGCAGACTCCCTGTCAGCTGC
TGAAGGAGCCACATCCAACTCGGCTCTCAGCTGAGGAAGCAGCCCATCGCCTTGCACGCCTGGACACTAACTCAC
CTAGCATCTTCCAGCACCTGGACGAACTCAAGGCATTCTTCGCAGAGGTTGTCAGTGATGGTGTACCCCTGGTGC
TAGCCCTGGTCCCCCACCGGCAGCCCCACTCCTTCATCACCCAGGGTTCCCCAGACCTGTTGGTGACTGTGAGTG
CCAGTGGGCTGCTGGGCACCCACAGCTGGTTGCCCTATGACCGCAACATAAGCAACTACTTCAGCTTCAGCAAAG
ACCCCACCATGGGCAGCCACAAGACGCAGCGACTGCTGAGTGGCCCGTGGGTGCCAGGCAGTGGTGTGAGTGGAC
AAGCACTGGCAGTGGCCCCGGATGGAAAGCTGCTATTCAGCGGTGGCCACTGGGATGGCAGCCTGCGGGTGACTG
CACTACCCCGTGGCAAGCTGTTGAGCCAGCTCAGCTGCCACCTTGATGTAGTAACCTGCCTTGCACTGGACACCT
GTGGCATCTACCTCATCTCAGGCTCCCGGGACACCACGTGCATGGTGTGGCGGCTCCTGCATCAGGGTGGTCTGT
CAGTAGGCCTGGCACCAAAGCCTGTGCAGGTCCTGTATGGGCATGGGGCTGCAGTGAGCTGTGTGGCCATCAGCA
CTGAACTTGACATGGCTGTGTCTGGATCTGAGGATGGAACTGTGATCATACACACTGTACGCCGCGGACAGTTTG
TAGCGGCACTACGGCCTCTGGGTGCCACATTCCCTGGACCTATTTTCCACCTGGCATTGGGGTCCGAAGGCCAGA
TTGTGGTACAGAGCTCAGCGTGGGAACGTCCTGGGGCCCAGGTCACCTACTCCTTGCACCTGTATTCAGTCAATG
GGAAGTTGCGGGCTTCACTGCCCCTGGCAGAGCAGCCTACAGCCCTGACGGTGACAGAGGACTTTGTGTTGCTGG
GCACCGCCCAGTGCGCCCTGCACATCCTCCAACTAAACACACTGCTCCCGGCCGCGCCTCCCTTGCCCATGAAGG
TGGCCATCCGCAGCGTGGCCGTGACCAAGGAGCGCAGCCACGTGCTGGTGGGCCTGGAGGATGGCAAGCTCATCG
TGGTGGTCGCGGGGCAGCCCTCTGAGGTGCGCAGCAGCCAGTTCGCGCGGAAGCTGTGGCGGTCCTCGCGGCGCA
TCTCCCAGGTGTCCTCGGGAGAGACGGAATACAACCCTACTGAGGCGCGCTGAACCTGGCCAGTCCGGCTGCTCG
GGCCCCGCCCCCGGCAGGCCTGGCCCGGGAGGCCCCGCCCAGAAGTCGGCGGGAACACCCCGGGGTGGGCAGCCC
AGGGGGGTGAGCGGGGCCCACCCTGCCCAGCTCAGGGATTGGCGGGCGATGTTACCCCCTCAGGGATTGGCGGGC
GGAAGTCCCGCCCCTCGCCGGCTGAGGGGCCGCCCTGAGGGCCAGCACTGGCGTCTGCGGCCGC

FIGURE 1705

NQESLVQCQGPAIIGALLRKVPSWAMDMNVLMSAQLLMEQVAAEGSGPLLYLLYQHLLFNFHLWTLSDFAVRLGH
IQYMSSIVREHRQKLRKKYGVQFILDALRTHYSPQRERPLAADDLRTVQTSLLGLAREFLVRSLSADDVQVTQTM
LSFLAATGDDGQAVGALDLLLALLHGSLVQESLAVFLLEPGNLEVLLALLVRPGSLPLLPDRVCKILRRLQQNER
LPERSRQRLRLRECGLQGLVACLPEGTVSPQLCQGLYKLFLGADCLNLSDLLAVVQLSLQADLSVRLDICRQLFH
LIYGQPDVVRLLARQAGWQDVLTRLYVLEAATAGSPPPSSPESPTSPKPAPPKPPTESPAEPSDVFLPSEAPCPD
PDGFYHALSPFCTPFDLGLERSSVGSGNTAGGGGSSGTLTPASQPGTPSPLDGPRPFPAAPGRHSSSLSNVLEDG
SLPEPTISGDDTSNTSNPQQTSEEELCNLLTNVLFSVTWRGVEGSDEAAWRERGQVFSVLTQLGASATLVRPPDC
IKRSLLEMMLESALTDIKEAPVGVLASLTQQALWLLRLLQDFLCAEGHGNQELWSEKLFEGVCSLLDRLGAWPHL
ANGTADLREMAQIGLRLVLGYILLEDPQLHAQAYVRLHMLLQTAVPARREEACYVLSKLEAALGRVLNTSSLESA
TDEAGSPLAAAAAAAAAAERCSWLVPLVRTLLDRAYEPLGLQWGLPSLPPTNGSPTFFEDFQAFCATPEWRHFIDK
QVQPTMSQFEMDTYAKSHDLMSGFWNACYDMLMSSGQRRQWERAQSRRAFQELVLEPAQRRARLEGLRYTAVLKQ
QATQHSMALLHWGALWRQLASPCGAWALRDTPIPRWKLSSAETYSRMRLKLVPNHHFDPHLEASALRDNLGEVPL
TPTEEASLPLAVTKEAKVSTPPELLQEDQLGEDELAELETPMEAAELDEQREKLVLSAECQLVTVVAVVPGLLEV
TTQNVYFYDGSTERVETEEGIGYDFRRPLAQLREVHLRRFNLRRSALELFFIDQANYFLNFPCKVGTTPVSSPSQ
TPRPQPGPIPPHTQVRNQVYSWLLRLRPPSQGYLSSRSPQEMLRASGLTQKWVQREISNFEYLMQLNTIAGRTYN
DLSQYPVV

FIGURE 1706

CAAACATTGAGGAAAGCCAGGCAGTAGAGGCCGCTATGGCGAACGTTCCGTGGGCAGAGGTCTGCGAGAAATTCC
AGGCGGCGCTCGCTCTGTCGCGGGTGGAACTGCATAAAAATCCGGAGAAGGAACCATACAAGTCCAAATACAGCG
CCCGGGCGCTACTGGAAGAGGTCAAGGCGCTGCTCGGCCCTGCGCCTGAGGACGAGGATGAGCGGCCTGAGGCCG
AGGACAGCCCGGGTGCCGGTGACCACGCCCTGGGGCTGCCGGCTGAGGTGGTGGAGCCCGAGGGGCCCGTCGCCC
AGCGAGCGGTGAGGCTGGCAGTCATCGAGTTCCACCTCGGGGTGAACCACATCGACACGGAGGAGCTGTCGGCGG
GGGAGGAGCACCTGGTGAAATGCCTGCGGCTGCTGCGCAGGTACCGGCTCTCGCACGACTGCATCTCTCTCTGCA
TCCAGGCGCAGAATAACCTGGGTATCTTGTGGTCTGAAAGAGAAGAAATTGAAACTGCACAGGCTTACCTAGAGT
CATCAGAAGCACTATATAATCAGTATATGAAAGAGGTTGGGAGTCCTCCTCTTGATCCTACTGAGCGTTTTCTTC
CTGAAGAAGAGAAACTTACTGAACAAGAGAGATCAAAAAGATTTGAAAAGGTTTATACTCATAACCTATATTACC
TAGCTCAAGTCTACCAGCATCTGGAAATGTTTGAGAAGGCTGCTCACTATTGCCATAGTACACTAAAACGCCAGC
TTGAGCACAATGCCTACCATCCTATAGAGTGGGCTATCAATGCTGCTACCTTGTCACAGTTTTACATCAATAAGC
TATGCTTTATGGAGGCCAGGCACTGTTTATCAGCTGCTAATGTCATTTTTGGTCAAACTGGAAAGATCTCAGCCA
CAGAAGACACTCCTGAAGCTGAAGGAGAAGTGCCAGAGCTTTATCATCAAAGAAAGGGGGAAATAGCAAGGTGCT
GGATCAAATACTGTTTGACTCTCATGCAGAATGCCCAACTCTCCATGCAGGACAACATAGGAGAGCTTGATCTTG
ATAAACAGTCTGAACTTAGAGCTTTAAGGAAAAAAGAACTAGATGAGGAGGAAAGCATTCGGAAAAAAGCTGTGC
AGTTTGGAACCGGTGAACTGTGTGATGCCATCTCTGCAGTAGAAGAGAAAGTGAGCTACTTGAGACCTTTAGATT
TTGAAGAAGCCAGAGAACTTTTCTTATTGGGTCAGCACTATGTCTTTGAGGCAAAAGAGTTCTTTCAGATTGATG
GTTATGTCACTGACCATATTGAAGTTGTCCAAGACCACAGTGCTCTGTTTAAGGTGCTTGCATTCTTTGAAACTG
ACATGGAGAGACGGTGCAAGATGCATAAACGCAGAATAGCCATGCTAGAGCCCCTAACTGTAGACCTGAATCCAC
AGTATTATCTGTTGGTCAACAGACAGATCCAGTTTGAAATTGCACATGCTTACTATGATATGATGGATTTGAAGG
TTGCCATTGCTGACAGGCTAAGGGATCCTGATTCACACATTGTAAAAAAAATAAATAATCTTAATAAGTCAGCAC
TGAAGTACTACCAGCTCTTCTTAGACTCCCTGAGAGACCCAAATAAAGTATTCCCTGAGCATATAGGGGAAGATG
TTCTTCGCCCTGCCATGTTAGCTAAGTTTCGAGTTGCCCGTCTCTATGGCAAAATCATTACTGCAGATCCCAAGA
AAGAGCTGGAAAATTTGGCAACATCATTGGAACATTACAAATTTATTGTTGATTACTGTGAAAAGCATCCTGAGG
CCGCCCAGGAAATAGAAGTTGAGCTAGAACTTAGTAAAGAGATGGTTAGTCTTCTCCCAACAAAAATGGAGAGAT
TCAGAACCAAGATGGCCCTGACTTAATCCTTGTTTTTAAAGAAAGGAAATGTGCAATATTGAAGTGATCTTTTTC
CCTAGTCAGACAGGCCCAATTCCATTGTGATGTTTACCTTTATAGCCAGGTGAGTGCAGTTTGAACTTGAGATAC
AGTCAACTGAGTGTTTGCTAGGATCCTAAGGAACATAAAGTTAATTAAAAACTTACACCTAATTATGTAAATTGC
CTTGTTAAAGACATGTGATTTGTATTTTAGATGCTTGTTTCCTATTAAAATACAGACATTTCTACCCTCAGTTTC
TAAATGTAGACTATTTGTTGGCTAGTACTTGATAGATTCCTTGTAAGAAAAAATGCTGGGTAATGTACCTGGTAA
CAAGCCTGTTAATATATTAAGATTGAAAAAGTAACTTCTATAGTTACTCCTTCTAAAATATTTGACTTCCTACAT
TCCCCCCACCCAAAATCTTTCCCTTTTGAAAATACTAAAAACTAAGTTATGTTATTATAAAGTGTAAAATGGTTT
GTCTTAATTATAGGAGAAAAAGGCCTTGTTAGAAATAAAATAAACTGACTTATTTCACTAATG

FIGURE 1707A

CCAGTTTCCACTTTTGAGAAGCAGGATGTTGAATGTGAGTAATGACACAACAGGCCTATAAAATGCGGACTAACC
CTCGGATGACTCATCCGGTACAATGCAGCTACTATTTGTCAAGGAGACTGAACTCATACTATGGGGGAAACCACT
TCTCAGGCAGCCAGCTGGTTCTCAGGTCAGCAAGAGACGATCCATTTTTATCGGAAGCTTTATAGTAGCAATAAT
GCTAATACCCAGCACTCGGGCTCCACAATGTAGAGGAA**ATG**GCATCGCCTGGCAGTGACAGCTATATTGTGCGTG
TCAAGGCTGTGGTTATGACCAGAGATGACTCCAGCGGGGGATGGTTCCCACAGGAAGGAGGCGGGATCAGTCGCG
TCGGGGTCTGTAAGGTCATGCACCCCGAAGGCAATGGACGAAGCGGCTTTCTCATCCATGGTGAACGACAGAAAG
ACAAACTGGTGGTATTGGAATGCTATGTAAGAAAGGACTTGGTCTACACCAAAGCCAATCCAACGTTTCATCACT
GGAAGGTCGATAATAGGAAGTTTGGACTTACTTTCCAAAGCCCTGCTGATGCCCGAGCCTTTGACAGGGGAGTAA
GGAAAGCAATCGAAGACCTTATAGAAGGTTCAACAACGTCATCTTCCACCATCCATAATGAAGCTGAGCTTGGCG
ATGATGACGTTTTTACAACAGCTACAGACAGTTCTTCTAATTCCTCTCAGAAGAGAGAGCAACCTACTCGGACAA
TCTCCTCTCCCACATCCTGTGAGCACCGGAGGATTTATACCCTGGGCCACCTCCACGACTCATACCCCACAGACC
ACTATCACCTCGATCAGCCGATGCCAAGGCCCTACCGCCAGGTGAGCTTCCCGGACGACGACGAGGAGATCGTGC
GCATCAACCCCCGGGAGAAGATCTGGATGACGGGGTACGAGGATTACCGGCACGCACCCGTCAGGGGCAAGTACC
CGGACCCCTCGGAGGACGCGGACTCCTCCTACGTGCGCTTCGCCAAGGGCGAGGTCCCCAAGCATGACTACAACT
ACCCCTACGTGGACTCCTCAGACTTTGGCCTAGGCGAGGACCCCAAAGGCCGCGGGGGCAGCGTGATCAAGACGC
AGCCCTCCCGGGGCAAGTCGCGGCGGCGGAAGGAGGACGGAGAGCGCTCGCGGTGCGTGTACTGCAGGGACATGT
TCAACCACGAGGAGAACCGCCGGGGCCACTGCCAGGACGCGCCCGACTCCGTGAGAACTTGCATCCGCCGGGTGA
GCTGCATGTGGTGCGCGGACAGCATGCTCTATCACTGTATGTCGGACCCCGAGGGAGACTATACAGACCCTTGCT
CGTGCGATACTAGCGACGAGAAGTTTTGCCTCCGGTGGATGGCTCTTATTGCCTTGTCTTTCCTGGCCCCCTGTA
TGTGCTGTTACCTGCCCCTTCGGGCCTGCTACCACTGCGGAGTGATGTGCAGGTGCTGTGGCGGGAAGCACAAAG
CGGCCGCG**TGA**CTCAGTTTCCCTCCCTTCTCCCTCCATCCGCAGCCACAGGGGAACTCGTCTCTTACATACTCTC
ATCTTCTCCCCCGCTCCCTTCCACTCCAAGGAGCGAGGAGGGCAAGCGGCCTCCCAGCTCCCTGGTACCTCGAGG
CACCATTCCAGCCAGGGACGCTGCCGGGTAGACTCTCCACTCCCCCTGCCGCCCACACTGCAGCAGCCACATCCA
TACACACACGCTCGCACAGTGTTCTGAGGAAGGAACCTTCGCCACAGACTCCTGTACTATTAACAATCTGTAACC
AAGCTAACTGTCTCATCCATGTGTTGATTTCCTGTTTCCTCCTCCCCCGCCTCTTCCAGTTCAAAGGAGTCTGCA
ATTGGAACTGCTGATTTTCGGTGGGTTTTGTAGTTGATTTTTCCAAGAGCGTCGAAGACTCTCTTTCTCTTGGTT
CACCTTGCCTGTCGCTAGCAAGCATCTGGTTCAGCGGAAATGGGATGTGAGAATGATGAAACCCGACAGAAGTAT
CTCAGCCTGCAGTCAGTTATTATGTATAGGAGGTGAGCTAGTTAACAAACTTGTACCACAAAACAATATCGCTTT
AACTTTTCTAAAGCCAAATTTCCCATGTAAGCTGCAGTTTCTATCTTTAGCCCATCATCATTTTCTGCCCCCCCA
AAATCTGTTGAAATGATTCACTGATGCAAAACATTCACCCGTAATAGACTGAGAATTGAGCCTTAACTTCAGATT
AACTTGTGAGAATCAGGAAAATTCCTTCAACTGCATTGCATCCTCTTGGACCAGGGCTAGAATGGGGATTTCAGG
TTTCTATGAGCCTCCCCATTACCCCTAAAGTAGAACATTTTTTAAATTGTGTTGCCACCACTTCTAAAAATTTAG
CAATATTAGAATAGGATACTAGTGAAGTAAGAAATTTTGCTTGTTGTTTTGCAAACCAAATAGTTTCCTCAAACA
CAAATCAGTGTTCCCACGAACAAGTTCCAGTTGAGAAACACTAAGGTTATGGTGAATAAAACCATAGGGAGCTTC
TTCCCCCCAACCCCTGGCTATTTTATATTAATGGGGAGAGGGGATTTTTAAATGTCATAAATTTGAAGAGTGGTG
GGTTGCATTTTCTTCATGGGTTTATGTTTTCGTTTCATTTTGGACTCAATTTCACATCACCAAATTCCTCATTTA
TACTTGGGGAAAAAACAAGGCCATATGTAAAAACCCTTCCAATGCCTAAGTGTCTTTCTCCTGCAACTCCAAACC
CAGACTCGCCACTTTGGGTGCACAGGTGGTTAGGTCAGCCAACTGGTTCTGCCTGTCGCCTTGCCACGGAGGAGG
CTTCTAATTAGCTGGAAAAGAGTATTTTTCTAATACGTTGCAAGGATTAGCCAAATCTTCTTATTGAAGAAAGAA
GAAAAGTGAAGAGTGGTTACCTATACCTAGCATAGTACAATCAGAACCTCGTGGAGACCACCGGGGACAGGCTTG
CGGACGCCGGCTGTTCTTCCCGCCACGATCTTTCTGTGGTAGCGGCCAGCAGAAGACATGGCCTGCTCCCCACTC
CCTTTCCCCACTCCTTCTTTATTGCACACAGGACACCAGTCTTCAAGGAAAGGGACTTTTTTCCAGTCTGCCAAT
CATATTGGGAAAGTGCTAGCTGTGCTCACCTTCATGGGGCTGTTTCCAGCTCGTCCACAAGCTCATCGATTTTCT
TTAGTAGATTACCGGTGTAAATACCCAGTGTGCTTATGAGTCAGTTAGTAGACGTCTTCATTCATTGGAGTAACT
GGTTTAGGCTTTCCAGTTTGGAAAAGGAGCAGAGAGCTGTCCATCTGGATTGATGGAAGAAAAGAGAACCTCATC
CATGCCTGGAGAACATCTAGAAAACCTTCAGCCAGCCTCCAGTGCTGTCGAGAGACCACCTTCCCCCGACCCGGA
GGCACTTCCTTGGGGTCTTTCTCTAGGGTCTCTTCTCTACAAAGCACAACACTAATGTTCGTTTCCTTAGACCTC
AGTTCAAGTGCCCCTATTTATTTCAATAAGAACGCACATATCCCAGCTGTTTTTTGTTTGTCACCTCTATTTAGT

FIGURE 1707B

TGTTACCTGTTTCTCTCTTCTTTCACCCCTTGTCCTTTTCCACCCTTTTAAGAGTTACGCTAGCAGATCTTACTC
CACGTATACTTTTTGGTTTGTGAAGGCATCGGTTAAGGGCACAAAGACAGCCATGGGGACATTTATGTAAATACG
TCTCTAATTGCCACACTGCAGCTGAACAGTGTGTAGTATTTTCCCAGTCAGCTTTGCCATACTGACGTCAATCAT
TTGAGAGAAATTATTCAGATTTTATTTTTGTATCTGTGGTAACAAAACATTAACCAAAAGATTTTCTGTCCAGAA
GCCTCCCCGACCCCCCAAGCTATTTGCTCACATTAACAAATTAAAGTGCCTGAAGCATAATTCATTCTTTACCTG
TATACTAAAAACCCTGTTGTATTGATTTTTTTATAATAAGCCTTTTTACCTCTGTGTAAAAAATATATATACAAG
TGTATGATGTACATTTTAGTTCTTAACTTTTTTTTTATGGTTTCTAATATGTATGACCAATGTAGCCATTGCTTTA
AAATGTACCGTGTAAATATAAACACATCCTATCAGAAAAGAAAAAATCNAGAACGAA

FIGURE 1708

MASPGSDSYIVRVKAVVMTRDDSSGGWFPQEGGGISRVGVCKVMHPEGNGRSGFLIHGERQKDKLVVLECYVRKD
LVYTKANPTFHHWKVDNRKFGLTFQSPADARAFDRGVRKAIEDLIEGSTTSSSTIHNEAELGDDDVFTTATDSSS
NSSQKREQPTRTISSPTSCEHRRIYTLGHLHDSYPTDHYHLDQPMPRPYRQVSFPDDDEEIVRINPREKIWMTGY
EDYRHAPVRGKYPDPSEDADSSYVRFAKGEVPKHDYNYPYVDSSDFGLGEDPKGRGGSVIKTQPSRGKSRRRKED
GERSRCVYCRDMFNHEENRRGHCQDAPDSVRTCIRRVSCMWCADSMLYHCMSDPEGDYTDPCSCDTSDEKFCLRW
MALIALSFLAPCMCCYLPLRACYHCGVMCRCCGGKHKAAA

FIGURE 1709

GGGGGTATTTCCTGAAAGATGCTAATCTATTTGCCAAACTTGGTCTTGAATGTACTGGGGGCTTCAAGGTATGGG
TATATTTTTCTTGTGTCCTTGCAGTTAGCCCCCATGTCTTATGTGTGTCCTGAAAAAATAAGAGCCTGCCCAAGA
CTTTGGGCCTCTTGACAGAATTAACCACTTTTATACATCTGAGTTCTCTTGGTAAGTTCTTTAGCAGTGTTCAAA
GTCTACTAGCTCGCATTAGTTTCTGTTGCTGCCAACAGATCTGAACTAATGCTAACAGATCCCCCTGAGGGATTC
TTGATGGGCTGAGCAGCTGGCTGGAGCTAGTACTGACTGACATTCATTGTGATGAGGGCAGCTTTCTGGTACAGG
ATTCTAAGCTCTATGTTTTCTATACATTTTCATCTGTACTTGCACCTCACTTTACACAAGAGGAAACTATGCAAA
GTTAGCTGGATCGCTCAAGGTCACTTAGGTGAGTTGGCAAGTCCATGCTTCCCACTCAGCTCCTCAGGTCAGCAA
GTCTACTTCTCTGCCTATTTTGTATACTCTCTTTAATATGTGCCTAGCTTTGGAAAGTCTAGAATGGGTCCCTGG
TGCCTTTTTACTTTGAAGAAATCAGTTTCTGCCTCTTTTTGGAAAAGAAAACAAAGTGCAATTGTTTTTTACTGG
AAAGTTACCCAATAGCATGAGGTGAACAGGACGTAGTTAGGCCTTCCTGTAAACAGAAAATCATATCAAAACACT
ATCTTCCCATCTGTTTCTCAATGCCTGCTACTTCTTGTAGATATTTCATTTCAGGAGAGCAGCAGTTAAACCCGT
GGATTTTGTAGTTAGGAACCTGGGTTCAAACCCTCTTCCACTAATTGGCTATGTCTCTGGACAAGTTTTTTTTTT
TTTTTTTTTTTAAACCCTTTCTGAACTTTCACTTTCTATGTCTACCTCAAAGAATTGTTGTGAGGCTTGAGATAA
TGCATTTGTAAAGGGTCTGCCAGATAGGAAGATGCTAGTTATGGATTTACAAGGTTGTTAAGGCTGTAAGAGTCT
AAAACCTACAGTGAATCACAATGCATTTACCCCCACTGACTTGGACATAAGTGAAAACTAGCCAGAAGTCTCTTT
TTCAAATTACTTACAGGTTATTCAATATAAAATTTTTGTAATGGATAATCTTATTTATCTAAACTAAAGCTTCCT
GTTTATACACACTCCTGTTATTCTGGGATAAGATAAATGACCACAGCACCTTAATTTCTAGGTGGGTGCCTGTGA
TGGTTCATTGTAGGTAAGGACATTTTCTCTTTTTCAGCAGCTGTGTAGGTCCAGAGCCTCTGGGAGAGGAGGGGG
GTAGCATGCACCCAGCAGGGGACTGAACTGGGAAACTCAAGGTTCTTTTTACTGTGGGGTAGTGAGCTGCCTTTC
TGTGATCGGTTTCCCTAGGG**ATG**TTGCTGTTCCCCTCCTTGCTATTCGCAGCTACATACAACGTGGCCAACCCCA
GTAGGCTGATCCTATATATGATCAGTGCTGGTGCTGACTCTCAA**TAG**CCCCACCCAAGCTGGCTATAGGTTTACA
GATACATTAATTAGGCAACCTAAAATATTGATGCTGGTGTTGGTGTGACATAATGCTATGGCCAGAACTGAAACT
TAGAGTTATAATTCATGTATTAGGGTTCTCCAGAGGGACAGAATTAGTAGGATATATGTATATATGAAAGGGAGG
TTATTAGGGAGAACTGGCTCCCACAGTTAGAAGGCGAAGTCGCACAATAGGCCGTCTGCAAGCTGGGTTAGAGAG
AAGCCAGTAGTGGCTCAGCCTGAGTTCAAAAACCTCAAAACTGGGGAAGCTGACAGTGCAGCCAGCCTTCAGTCT
GTGGCCAAAGGCCCAAGAGCCCCTGGCAACCAACCCACTGGTGCAAGTCCTAGATTCCAAAGGCTGAAGATCCTG
GAGTCTGATGTCCAAGAGCAGGAAGAGTGGAAGAAAGCCAGAAGACTCAGCAAACAAGGTAGACAGAGTCTACCA
CCACAGTGGCCATACCAAAGAGGCTACCGATTCCTTCCTGCTACCTGGATCCCTGAAGTTGCCCTGGTCTCTGCA
CCTTCTAAACCTAGTTCTTAAGAGCTTTCCATTACATGAGCTGTCTCAAAGCCCTCCAATAAATTCTCAGTGTAA
GCTTCAAAAAAAAAAAAAAAAAA

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FIGURE 1710

MLLFPSLLFAATYNVANPSRLILYMISAGADSQ

FIGURE 1711A

ATGTGATGA

FIGURE 1712

PQRSAGCSGTAGCAAGDAPAGAMAPAMQPAEIQFAQRLASSEKGIRDRAVKKLRQYISVKTQRETGGFSQEELLQ
EELANTIAQLVHAVNNSAAQHLFIQTFWQTMNREWKGIDRLRLDKYYMLIRLVLRQSFEVLKRNGWEESRIKVFL
DVLMKEVLCPESQSPNGVRFHFIDIYLDELSKVGGKELLADQNLKFIDPFCKIAAKTKDHTLVQTIARGVFEAIV
DQSPFVPEETMEEQKTKVGDGDLSAEEIPENEVSLRRAVSKKKTALGKNHSRKDGLSDERGRDDCGTFEDTGPLL
QFDYKAVADRLLEMTSRKNTPHFNRKRLSKLIKKFQDLSEGSSISQLSFAEDISADEDDQILSQGKHKKKGNKLL
EKTNLEKEKGSRVFCVEEEDSESSLQKRRRKKKKKHHLQPENPGPGGAAPSLEQNRGREPEASGPKALKARVAEP
GAEATSSTGEESGSEHPPAVPMHNKRKRPRKKSPRAHREMLESAVLPPEDMSQSGPSGSHPQGPRGSPTGGAQLL
KRKRKLGVVPVNGSGLSTPAWPPLQQEGPPTGPAEGANSHTTLPQRRRLQKKKAGPGSLELCGLPSQKTASLKKR
KKMRVMSNLVEHNGVLESEAGQPQALGSSGTCSSLKKQKLRAESDFVKFDTPFLPKPLFFRRAKSSTATHPPGPA
VQLNKTPSSSKKVTFGLNRNMTAEFKKTDKSILVSPTGPSRVAFDPEQKPLHGVLKTPTSSPASSPLVAKKPLTT
TPRRRPRAMDFF

FIGURE 1713A

GTCGCCAGCAACCGAGCGGGGCCCGGCCCGAGCGGGGCCTGGGGGTGCGACGCCGAGGGCGGGGGAGAGCGCGCC
GCTGCTCCCGGACCGGGCCGCGCACGCCGCCTCAGGAACCATCACTGTTGCTGGAGGCACCTGACAAATCCTAGC
GAATTTTTGGAGCATCTCCACCCAGGAACCTCGCCATCCAGAAGTGTGCTTCCCGCACAGCTGCAGCCATGGGGT
CTGAGGACCACGGCGCCCAGAACCCCAGCTGTAAAATCATGACGTTTCGCCCAACCATGGAAGAATTTAAAGACT
TCAACAAATACGTGGCCTACATAGAGTCGCAGGGAGCCCACCGGGCGGGCCTGGCCAAGATCATCCCCCCGAAGG
AGTGGAAGCCGCGGCAGACGTATGATGACATCGACGACGTGGTGATCCCGGCGCCCATCCAGCAGGTGGTGACGG
GCCAGTCGGGCCTCTTCACGCAGTACAATATCCAGAAGAAGGCCATGACAGTGGGCGAGTACCGCCGCCTGGCCA
ACAGCGAGAAGTACTGTACCCCGCGGCACCAGGACTTTGACGACCTTGAACGCAAATACTGGAAGAACCTCACCT
TTGTCTCCCCGATCTACGGGGCTGACATCAGCGGCTCTTTGTATGATGACGACGTGGCCCAGTGGAACATCGGGA
GCCTCCGGACCATCCTGGACATGGTGGAGCGCGAGTGCGGCACCATCATCGAGGGCGTGAACACGCCCTACCTGT
ACTTCGGCATGTGGAAGACCACCTTCGCCTGGCACACCGAGGACATGGACCTGTACAGCATCAACTACCTGCACT
TTGGGGAGCCTAAGTCCTGGTACGCCATCCCACCAGAGCACGGCAAGCGCCTGGAGCGGCTGGCCATCGGCTTCT
TCCCCGGGAGCTCGCAGGGCTGCGACGCCTTCCTGCGGCATAAGATGACCCTCATCTCGCCCATCATCCTGAAGA
AGTACGGGATCCCCTTCAGCCGGATCACGCAGGAGGCCGGGGAATTCATGATCACATTTCCCTACGGCTACCACG
CCGGCTTCAATCACGGGTTCAACTGCGCAGAATCTACCAACTTCGCCACCCTGCGGTGGATTGACTACGGCAAAG
TGGCCACTCAGTGCACGTGCCGGAAGGACATGGTCAAGATCTCCATGGACGTGTTCGTGCGCATCCTGCAGCCCG
AGCGCTACGAGCTGTGGAAGCAGGGCAAGGACCTCACGGTGCTGGACCACACGCGGCCCACGGCGCTCACCAGCC
CCGAGCTGAGCTCCTGGAGTGCGTCCCGGGCCTCGCTGAAGGCCAAGCTCCTCCGCAGGTCTCACCGGAAACGGA
GCCAGCCCAAGAAGCCGAAGCCCGAAGACCCCAAGTTCCCTGGGGAGGGTACGGCTGGGGCAGCGCTCCTAGAGG
AGGCTGGGGGCAGCGTGAAGGAGGAGGCTGGGCCGGAGGTTGACCCCGAGGAGGAGGAGGAGGAGCCGCAGCCAC
TGCCACACGGCCGGGAGGCCGAGGGCGCAGAAGAGGACGGGAGGGGCAAGCTGCGGCCAACCAAGGCCAAGAGCG
AGCGGAAGAAGAAGAGCTTCGGCCTGCTGCCCCCACAGCTGCCGCCCCCGCCTGCTCACTTCCCCTCAGAGGAGG
CGCTGTGGCTGCCATCCCCACTGGAGCCCCCGGTGCTGGGCCCAGGCCCTGCAGCCATGGAGGAGAGCCCCCTGC
CGGCACCCCTTAATGTCGTGCCCCCTGAGGTGCCCAGTGAGGAGCTAGAGGCCAAGCCTCGGCCCATCATCCCCA
TGCTGTACGTGGTGCCGCGGCCGGGCAAGGCAGCCTTCAACCAGGAGCACGTGTCCTGCCAGCAGGCCTTTGAGC
ACTTTGCCCAGAAGGGTCCGACCTGGAAGGAACCAGTTTCCCCCATGGAGCTGACGGGGCCAGAGGACGGTGCAG
CCAGCAGTGGGGCAGGTCGCATGGAGACCAAAGCCCGGGCCGGAGAGGGGCAGGCACCGTCCACATTTTCCAAAT
TGAAGATGGAGATCAAGAAGAGCCGGCGCCATCCCCTGGGCCGGCCGCCCACCCGGTCCCCACTGTCGGTGGTGA
AGCAGGAGGCCTCAAGTGACGAGGAGGCATCCCCTTTCTCCGGGGAGGAAGATGTGAGTGACCCGGACGCCTTGA
GGCCGCTGCTGTCTCTGCAGTGGAAGAACAGGGCGGCCAGCTTCCAGGCCGAGAGGAAGTTCAACGCAGCGGCTG
CGCGCACGGAGCCCTACTGCGCCATCTGCACGCTCTTCTACCCCTACTGCCAGGCCCTACAGACTGAGAAGGAGG
CACCCATAGCCTCCCTCGGAGAGGGCTGCCCGGCCACATTACCCTCCAAAAGCCGTCAGAAGACCCGACCGCTCA
TCCCTGAGATGTGCTTCACCTCTGGCGGTGAGAACACGGAGCCGCTGCCTGCCAACTCCTACATCGGCGACGACG
GGACCAGCCCCCTGATCGCCTGCGGCAAGTGCTGCCTGCAGGTCCATGCCAGTTGCTATGGCATCCGTCCCGAGC
TGGTCAATGAAGGCTGGACGTGTTCCCGGTGCGCGGCCCACGCCTGGACTGCGGAGTGCTGCCTGTGCAACCTGC
GAGGAGGTGCGCTGCAGATGACCACCGATAGGAGGTGGATCCACGTGATCTGTGCCATCGCAGTCCCCGAGGCGC
GCTTCCTGAACGTGATTGAGCGCCACCCTGTGGACATCAGCGCCATCCCCGAGCAGCGGTGGAAGCTGAAATGCG
TGTACTGCCGGAAGCGGATGAAGAAGGTGTCAGGTGCCTGTATCCAGTGCTCCTACGAGCACTGCTCCACGTCCT
TCCACGTGACCTGCGCCCACGCCGCAGGCGTGCTCATGGAGCCGGACGACTGGCCCTATGTGGTCTCCATCACCT
GCCTCAAGCACAAGTCGGGGGGTCACGCTGTCCAACTCCTGAGGGCCGTGTCCCTAGGCCAGGTGGTCATCACCA
AGAACCGCAACGGGCTGTACTACCGCTGTCGCGTCATCGGTGCCGCCTCGCAGACCTGCTACGAAGTGAACTTCG
ACGATGGCTCCTACAGCGACAACCTGTACCCTGAGAGCATCACGAGTAGGGACTGTGTCCAGCTGGGACCCCCTT
CCGAGGGGGAGCTGGTGGAGCTCCGGTGGACTGACGGCAACCTCTACAAGGCCAAGTTCATCTCCTCCGTCACCA
GCCACATCTACCAGGTGGAGTTTGAGGACGGGTCCCAGCTGACGGTGAAGCGTGGGGACATCTTCACCCTGGAGG
AGGAGCTGCCCAAGAGGGTCCGCTCTCGGCTGTCACTGAGCACGGGGGCACCGCAGGAGCCCGCCTTCTCGGGGG
AGGAGGCCAAGGCCGCCAAGCGCCCGCGTGTGGGCACCCCGCTTGCCACGGAGGACTCCGGGCGGAGCCAGGACT
ACGTGGCCTTCGTGGAGAGCCTCCTGCAGGTGCAGGGCCGGCCCGGAGCCCCCTTC**TAG**GACAGCTGGCCGCTCA
GGCGACCCTCAGCCCGGCGGGGAGGCCATGGCATGCCCCGGGCGTTCGCTTGCTGTGAATTCCTGTCCTCGTGTC

FIGURE 1713B

CCCGACCCCCGAGAGGCCACCTCCAAGCCGCGGGTGCCCCCTAGGGCGACAGGAGCCAGCGGGACGCCGCACGCG
GCCCCAGACTCAGGGAGCAGGGCCAGGCGGGCTCGGGGGCCGGCCAGGGGAGCACCCCACTCAACTACTCAGAAT
TTTAAACCATGTAAGCTCTCTTCTTCTCGAAAAGGTGCTACTGCAATGCCCTACTGAGCAACCTTTGAGATTGTC
ACTTCTGTACATAAACCACCTTTGTGAGGCTCTTTCTATAAATACATATTGTTTAAAAAAAAGCAAGAAAAAAAG
GAAAACAAAGGAAAATATCCCCAAAGTTGTTTTCTAGATTTGTGGCTTTAAGAAAAAACAAAACAAAACAAACAC
ATTGTTTTTCTCAGAACCAGGATTCTCTGAGAGGTCAGAGCATCTCGCTGTTTTTTTGTTGTTGTTTTAAAATAT
TATGATTTGGCTACAGACCAGGCAGGGAAAGAGACCCGGTAATTGGAGGGTGAGCCTCGGGGGGGGGGCAGGACG
CCCCGGTTTCGGCACAGCCCGGTCACTCACGGCCTCGCTCTCGCCTCACCCCGGCTCCTGGGCTTTGATGGTCTG
GTGCCAGTGCCTGTGCCCACTCTGTGCCTGCTGGGAGGAGGCCCAGGCTCTCTGGTGGCCGCCCCTGTGCACCTG
GCCAGGGGAAGCCCGGGGGTCTGGGGCCTCCCTCCGTCTGCGCCCACCTTTGCAGAATAAACTCTCTCCTGGGGT
TTGTCTATCTTTGTTTCTCTCACCCGAGAGAAACGCAGGTGTTCCAGAGGCTTCCTTGCAGACAAAGCACCCCTG
CACCTCCCATGGCTCAGGATGAGGGAGGCCCCCAGGCCCTTCTGGTTGGTAGTGAGTGTGGACAGCTTCCCAGCT
CTTCGGGTACAACCCTGAGCAGGTCGGGGGACACAGGGCCGAGGCAGGCCTTCGGGGCCCCTTTCGCCTGCTTCC
GGGCAGGGACGAGGCCTGGTGTCCTCGCTCCACCCACCCACGCTGCTGTCACCTGAGGGGAATCTGCTTCTTAGG
AGTGGGTTGAGCTGATAGAGAAAAAACGGCCTTCAGCCCAGGCTGGGAAGCGCCTTCTCCAGGTGCCTCTCCCTC
ACCAGCTCTGCACCCCTCTGGGGAGCCTTCCCCACCTTAGCTGTCTCCTGCCCCAGGGAGGGATGGAGGAGATAA
TTTGCTTATATTAAAAACAAAAAATGGCTGAGGCAGGAGTTTGGGACCAGCCTGGGCTATATAGCAAGACCCCAT
CACTACAAATTTTTTACAAATTAGCTAGGTGTGGTGGTGCGCACCTGTGGTCCCAGCTACTCGGGAGGCTGTGGT
GGGAGGATTGCTTGAGTCCAGGAGGTTGAGGCTGCAGTCAGCTCAGATTGCACCACTGCACTCCAGCCTGGGCAA
CAGAGCGAGACCCTGTCTCCAAAAAAAAAAAAAAAGCAATGTTTATATTATAAAAGAGTGTCCTAACAGTCCCCG
GGCTAGAGAGGACTAAGGAAAACAGAGAGAGTGTTACGCAGGAGCAAGCCTTTCATTTCCTTGGTGGGGGAGGGG
GGCGGTTGCCCTGGAGAGGGCCGGGGTCGGGGAGGTTGGGGGGTGTCAGCCAAAACGTGGAGGTGTCCCTCTGCA
CGCAGCCCTCGCCCGGCGTGGCGCTGACACTGTATTCTTATGTTGTTTGAAAATGCTATTTATATTGTAAAGAAG
CGGGCGGGTGCCCCTGCTGCCCTTGTCCCTTGGGGGTCACACCCATCCCCTGGTGGGCTCCTGGGCGGCCTGCGC
AGATGGGCCACAGAAGGGCAGGCCGGAGCTGCACACTCTCCCCACGAAGGTATCTCTGTGTCTTACTCTGTGCAA
AGACGCGGCAAAACCCAGTGCCCTGGTTTTTCCCCACCCGAGATGAAGGATACGCTGTATTTTTTGCCTAATGTC
CCTGCCTCTAGGTTCATAATGAATTAAAGGTTCATGAACGCTGCG

FIGURE 1714

RIFGASPPRNLAIQKCASRTAAAMGSEDHGAQNPSCKIMTFRPTMEEFKDFNKYVAYIESQGAHRAGLAKIIPPK
EWKPRQTYDDIDDVVIPAPIQQVVTGQSGLFTQYNIQKKAMTVGEYRRLANSEKYCTPRHQDFDDLERKYWKNLT
FVSPIYGADISGSLYDDDVAQWNIGSLRTILDMVERECGTIIEGVNTPYLYFGMWKTTFAWHTEDMDLYSINYLH
FGEPKSWYAIPPEHGKRLERLAIGFFPGSSQGCDAFLRHKMTLISPIILKKYGIPFSRITQEAGEFMITFPYGYH
AGFNHGFNCAESTNFATLRWIDYGKVATQCTCRKDMVKISMDVFVRILQPERYELWKQGKDLTVLDHTRPTALTS
PELSSWSASRASLKAKLLRRSHRKRSQPKKPKPEDPKFPGEGTAGAALLEEAGGSVKEEAGPEVDPEEEEEEPQP
LPHGREAEGAEEDGRGKLRPTKAKSERKKKSFGLLPPQLPPPPAHFPSEEALWLPSPLEPPVLGPGPAAMEESPL
PAPLNVVPPEVPSEELEAKPRPIIPMLYVVPRPGKAAFNQEHVSCQQAFEHFAQKGPTWKEPVSPMELTGPEDGA
ASSGAGRMETKARAGEGQAPSTFSKLKMEIKKSRRHPLGRPPTRSPLSVVKQEASSDEEASPFSGEEDVSDPDAL
RPLLSLQWKNRAASFQAERKFNAAAARTEPYCAICTLFYPYCQALQTEKEAPIASLGEGCPATLPSKSRQKTRPL
IPEMCFTSGGENTEPLPANSYIGDDGTSPLIACGKCCLQVHASCYGIRPELVNEGWTCSRCAAHAWTAECCLCNL
RGGALQMTTDRRWIHVICAIAVPEARFLNVIERHPVDISAIPEQRWKLKCVYCRKRMKKVSGACIQCSYEHCSTS
FHVTCAHAAGVLMEPDDWPYVVSITCLKHKSGGHAVQLLRAVSLGQVVITKNRNGLYYRCRVIGAASQTCYEVNF
DDGSYSDNLYPESITSRDCVQLGPPSEGELVELRWTDGNLYKAKFISSVTSHIYQVEFEDGSQLTVKRGDIFTLE
EELPKRVRSRLSLSTGAPQEPAFSGEEAKAAKRPRVGTPLATEDSGRSQDYVAFVESLLQVQGRPGAPF

FIGURE 1715A

CGGCACCGTCGTAGGTGCGGGCCGCATGAATGGAGCGCCGGGCGTAAGGCAAAGCCTGGCACCGTCTGCGCGGCC
GCTATCTGCTCCCGGAGCGTGAGTGCGGGGTGTGGGGCGTGCGCGTGCGCGCTCAGAGGGGGCTCAAGGCGAGCG
CGCCGGGCAGTTGCGGGCGCGTGGCTGCTGAGGTTGGCGGCGGTGCCGCGCGCCCGACGGGCCGGTGGTTGCGGG
GCCTCCCGCCTCGACCCGGGCTGGGGGCAGCCGTGGCGGGCGCCGGGGACCGCAAGGGGCGGAGGAAAGGAGGGG
GCCGGTCCCGGCACGCAGAGGAGCAGCCGACC**ATG**CCCCGAGACAACATGGCCTCCTTGATCCAACGGATCGCCC
GCCAGGCTTGCCTCACCTTCCGGGGCAGCGGGGGCGGCCGCGGCGCTTCCGATCGCGACGCGGCTTCTGGCGCGG
AGGCGCCGATGCAGCCGGGCTTCCCCGAGAACCTGAGCAAGCTGAAGAGCCTCCTGACCCAGCTCCGCGCCGAGG
ACTTGAACATCGCCCCGCGCAAGGCCACACTGCAGCCGCTGCCGCCCAACCTGCCGCCAGTCACCTACATGCACA
TCTACGAGACGGACGGCTTCAGCCTGGGCGTGTTCCTGCTCAAGAGCGGCACGTCCATCCCGCTGCACGACCACC
CGGGCATGCACGGCATGCTCAAGGTGCTGTACGGCACCGTGCGCATCAGCTGCATGGACAAGCTAGACGCGGGCG
GCGGGCAACGGCCGCGGGCCTTGCCGCCCGAGCAGCAGTTCGAGCCGCCGCTGCAGCCCCGGGAGCGAGAAGCCG
TGCGGCCGGGCGTGCTGCGTTCGCGGGCCGAGTACACCGAGGCCAGCGGCCCCTGCATCCTCACACCGCACCGGG
ACAACCTGCACCAGATCGACGCCGTGGAAGGGCCTGCCGCCTTCCTGGACATCCTGGCCCCGCCCTACGACCCGG
ACGATGGCCGGGACTGCCACTATTACCGGGTGCTGGAGCCGGTCAGGCCCAAGGAGGCCTCCAGCTCGGCCTGTG
ACCTGCCTCGAGAGGTGTGGCTCCTGGAGACCCCACAGGCCGATGACTTCTGGTGCGAGGGAGAACCCTATCCAG
GTCCCAAGGTCTTCCCT**TGA**AGCCACTGGCGCCCAGGAGCGGTGGGCCGAAGACGTGCCCTACCCTACCACAAGG
GCTGTGTCTCTACCCCCTAGCCTGGGCGTTGGATCTACTGGAATGAGCAGCAGCCGCTTCCTCGGCAGCCTTGGG
AAGCACGGGCGACTGGACAGCAGCCGCCGGGCACGGTTATGGGGGCGGGGTGGGCGGGGAGGCTAGATTGTTTCC
TGGTACTGTCACTGCCACTGGGGCTTTGATTTGGAGGAATGGGGCAGGGGACTATCTGAAGCGCTTCCATCCTAA
AGCCATAATGAAAATATCTTCCTCTCTTCCCCATTCTATACAAAATACTAAGTGGTTTTCTTGCTCCCACTCCCT
ACCCCTTAGTTAAATAGGGTTTATTTTCCACTCATGCCCTTATGCCTTTTTTTCTTATAGTTTTTTAACTTATTG
ACTGTGCATGACCCAGTGGTTTGAATTGTTTTTAGTTCAAGTCATTGGTAAAAACTAGGTTTAAGGAGATGAGCT
ACTGTTTAAAGTGAGCTGGCCTGCCTAATTAATTCCTTGTGAAAACTAAATGATTTTTTCAGTTTGGGGATCATT
CTCACAACATAACTATGCATGTAGAGGACAAGATTTATTTTCTTTTCTCCCTTTGCCCAGTAGCCACATCTGGTT
TACTCAGGCAGCATCTACTAAGAAATTCAGCACCTGCATATCTCTGTGACATGGTCACTTAGAGCTTATCTTCCC
TATGAATCTCCAGATCTGTGAGTCGAGCAGATTTCATGTTGCAGATTCACCTTTAATGCAAAGACTGTATTATCC
TCACATGACTTTTTTTCTTGTCTTACTGTACCTTAAAAGGTGATAGAGTAATTCTGTATTTTCTAACGGGAAGAT
TCAAAGGAGCTGAATGTGTTATGCTTCCAAACAACTGAATGTAAAACACTCCTAGCCAGTTGTTGCATTCCCTAT
ATTTATTTACTTCCAATATTTTACTGTAAAAGTAGGGAGAAATATTATGTTGATAGTTGTTTCATATTCTCTCAG
GAACTTTAATGTTCCCGACTCGGGTGATTCCAGCTGTGTTGCTGGCAGTGTTGTCTCAACCCTCTCCCTAAAATG
ACTGAGCCCTGGGTTCATCTAATGTGGTTTTCCTTAGGAAGAGATAGAAGGCACAGAAGATCACAGCTAGAGAAT
TGAGAATTAACTATACTACTAGCCATTTTAGGGCACCAAAACTTGGGATTAAACACTTCCTACTTCCCACTCCCA
ACTCCTGAAATGAAGTCTTGCTATCTGTGACTAGTTTTATTTTTGTGCTTTTAATAGTCCGAGCAGTCTTACCTT
GTTTACACATGTATTGACACCATTTGCTTCAGGCCATGGAGCACTGTTTCTCCCTTTTTACTATTTATAGGATTC
CGTTTTTTCACAAGACTTTTAATAAAAAGAAATTGTAGAAATAAACACATTAAAATTTGCCCAGCTGTCGTCTAA
GCCCTCTTGATTGACTTGCCCAAGTGGCAATAGAGTTCTAATATCTATAATAAAGGGAGATTTGCTATTATTAGT
GGAATGTTGACCCCGTATGTAGAGAAACAGTACGTGCCTTTGCCTCTTTATGCACACAGAGACCCAGGGTGAGGG
AGTATTTGTTCCCAGTTTTTAAGATAGTATAAAAAAGCAAATACTTGGTGAGTGATTTAAAAATAAAACCAAAAC
AAAACACAAAAAGATATTCCACAGGACATGCCACTTTATTATAAAACCTGACACAGGCATAGTACCAAGTATTTC
CTGCATTGTTGCTAAAATTGTTTTATTGTAGCTCCACATTCTGGTGTAGTTTAAAATGCCTTTGGGGGCAGTTTG
AAGCAGTTCTTCATGCCACTTAGTTTGAAAATAAAATTCTAGATATGCAAATGATTTTCTTAGAAAACTTCACAA
AATAAAAGATCTTGTTTTTTTTTCCATAGCACAGTAATGAATGTGGTTATCAATCACATACTTTTTTGGATTATA
TTGTAGCAAAAAGTTGATTAGCTTACCAAGATTATTAATAGCAATGTATGTGTTATAATACAACTTAGTACATTA
AAGCTACGAAAACTCATCCTGGCTGTAGGATAGTAATAAAGGAAGAATTATGACTTCATTATGAAAAAAAGAAGT
TTTAAAGTTTTCAATTACGAGCAATTTGGAAGAAAAAACCTAAGGTGCTTTTCAAAAGAGTAACTGAAATTGTTG
CAGGCCAAAACAGCAATATGATATCTCAGATTTAGTTCAATAAGAACAGTGAAACTTTTGGTTCACTAATAAATT
CTGAGTAAATTAGTGGTGAAGACAAAATATAACTTGTTTTAGTGAGCCACTGAGGAAAGAATATGCTTATTACAA
AGACAAAATGTGGTGCAGAAACTATCTTGCACCTGTGTGCATAAACTGTTAGTCGTGACTGACTTGGTGTGTTGC

FIGURE 1715B

TATTGTGTTTCTATATACTCCGTCCAATATAGATAATGTTTTAATAACAACTGTGGGATAAAAGTTATCTTCCCC
TTGGAAAGACTAATGAGCACAATGATATTAATCACTTTTATGGTGAATAATAAATGCAATAATTGCCTCATGGGT
GAGAAATTGTCTGTCC

FIGURE 1716

MPRDNMASLIQRIARQACLTFRGSGGGRGASDRDAASGAEAPMQPGFPENLSKLKSLLTQLRAEDLNIAPRKATL
QPLPPNLPPVTYMHIYETDGFSLGVFLLKSGTSIPLHDHPGMHGMLKVLYGTVRISCMDKLDAGGGQRPRALPPE
QQFEPPLQPREREAVRPGVLRSRAEYTEASGPCILTPHRDNLHQIDAVEGPAAFLDILAPPYDPDDGRDCHYYRV
LEPVRPKEASSSACDLPREVWLLETPQADDFWCEGEPYPGPKVFP

FIGURE 1717

GGGGGAGAGGGGGCTCAAGGCGAGCGCGCCGGGCAGTTGCGGGCGCGTGGCTGCTGAGGTTGGCGGCGGTGCCGC
GCGCCCGACGGGCCGGTGGTTGCGGGGCCTCCCGCCTCGACCCGGGCTGGGGGCAGCCGTGGCGGCCGCCGGGGA
CCGCAAGGGGCGGAGGAAAGGAGGGGGCCGGTCCCGGCACGCAGAGGAGCAGCCGACCATGCCCCGAGACAACAT
GGCCTCCTTGATCCAACGGATCGCCCGCCAGGCTTGCCTCACCTTCCGGGGCAGCTGGGGCGGCCGCGGCGCTTC
CGATCGCGACGCGGCTTCTGGCGCGGAGGCGCCG**ATG**CAGCCGGGCTTCCCCGAGAACCTGAGCAAGCTGAAGAG
CCTCCTGACCCAGCTCCGCGCCGAGGACTTGAACATCGCCCCGCGCAAGGCCACACTGCAGCCGCTGCCGCCCAA
CCTGCCGCCAGTCACCTACATGCACATCTACGAGACGGACGGCTTCAGCCTGGGCGTGTTCCTGCTCAAGAGCGG
CACGTCCATCCCGCTGCACGACCACCCGGGCATGCACGGCATGCTCAAGGTGCTGTACGGCACCGTGCGCATCAG
CTGCATGGACAAGCTAGACGCGGGCGGCGGGCAACGGCCGCGGGCCTTGCCGCCCGAGCAGCAGTTCGAGCCGCC
GCTGCAGCCCCGGGAGCGAGAAGCCGTGCGGCCGGGCGTGCTGCGTTCGCGGGCCGAGTACACCGAGGCCAGCGG
CCCCTGCATCCTCACACCGCACCGGGACAACCTGCACCAGATCGACGCCGTGGAAGGGCCTGCCGCCTTCCTGGA
CATCCTGGCCCCGCCCTACGACCCGGACGATGGCCGGGACTGCCACTATTACCGGGTGCTGGAGCCGGTCAGGCC
CAAGGAGGCCTCCAGCTCGGCCTGTGACCTGCCTCGAGAGGTGTGGCTCCTGGAGACCCCACAGGCCGATGACTT
CTGGTGCGAGGGAGAACCCTATCCAGGTCCCAAGGTCTTCCCT**TGA**AGCCACTGGCGCCCAGGAGCGGTGGGCCG
AAGACGTGCCCTACCCTACCACAAGGGCTGTGTCTCTACCCCCTAGCCTGGGCGTTGGATCTACTGGAATGAGCA
GCAGCCGCTTCCTCGGCAGCCTTGGGAAGCACGGGCGACTGGACAGCAGCCGCCGGGCACGGTTATGGGGGCGGG
GTGGGCGGGGAGGCTAGATTGTTTCCTGGTACTGTCACTGCCACTGGGGCTTTGATTTGGAGGAATGGGGCAGGG
GACTATCTGAAGCGCTTCCATCCTAAAGCCATAATGAAAATATCTTCCTCTCTTCCCCATTCTATACAAAATACT
AAGTGGTTTTCTTGCTCCCACTCCCTACCCCTTAGTTAAATAGGGTTTATTTTCCACTCATGCCCTTATGCCTTT
TTTTCTTATAGTTTTTTAACTTATTGACTGTGCATGACCCAGTGGTTTGAATTGTTTTTAGTTCAAGTCATTGGT
AAAAACTAGGTTTAAGGAGATGAGCTACTGTTTAAAGTGAGCTGGCCTGCCTAATTAATTCCTTGTGAAAACTAA
ATGATTTTTTCAGTTTGGGGATCATTCTCACAACATAACTATGCATGTAGAGGACAAGATTTATTTTCTTTCCTC
CCTTTGCCCAGTAGCCACATCTGGTTTACTCAGGCAGCATCTACTAAGAAATTCAGCACCTGCATATCTCTGTGA
CATGGTCACTTAGAGCTTATCTTCCCTATGAATCTCCAGATCTGTGAGTCGAGCAGATTTCATGTTGCAGATTCA
CCTTTAATGCAAAGACTGTATTATCCTCACATGACTTTTTTTCTTGTCTTACTGTACCTTAAAAGGTGATAGAGT
AATTCTGTATTTTCTAACGGGAAGATTCAAAGGAGCTGAATGTGTTATGCTTCCAAACAACTGAATGTAAAACAC
TCCTAGCCAGTTGTTGCATTCCCTATATTTATTTACTTCCAATATTTTACTGTAAAAGTAGGGAGAAATATTATG
TTGATAGTTGTTTCATATTCTCTCAGGAACTTTAATGTTCCCGACTCGGGTGATTCCAGCTGTGTTGCTGGCAGT
GTTGTCTCAACCCTCTCCCTAAAATGACTGAGCCCTGGGTTCATCTAATGTGGTTTTCCTTAGGAAGAGATAGAA
GGCACAGAAGATCACAGCTAGAGAATTGAGAATTAACTATACTACTAGCCATTTTAGGGCACCAAAACTTGGGAT
TAAACACTTCCTACTTCCCACTCCCAACTCCTGAAATGAAGTCTTGCTATCTGTGACTAGTTTTATTTTTGTGCT
TTTAATAGTCCGAGCAGTCTTACCTTGTTTACACATGTATTGACACCATTTGCTTCAGGCCATGGAGCACTGTTT
CTCCCTTTTTTACTATTTATAGGATTCCGTTTTTTCACAAGACTTTTAATAAAAAGAAATTGTAGAAATAAACAC
ATTAAAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1718

MQPGFPENLSKLKSLLTQLRAEDLNIAPRKATLQPLPPNLPPVTYMHIYETDGFSLGVFLLKSGTSIPLHDHPGM
HGMLKVLYGTVRISCMDKLDAGGGQRPRALPPEQQFEPPLQPREREAVRPGVLRSRAEYTEASGPCILTPHRDNL
HQIDAVEGPAAFLDILAPPYDPDDGRDCHYYRVLEPVRPKEASSSACDLPREVWLLETPQADDFWCEGEPYPGPK
VFP

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FIGURE 1719

CCGGTAGCGGGTGTGGGGGCGCGAGCAGCGCAGGGCGGCCTCTCCCCCACCCCTCAGCCCGGGCCCGGGCTCGGT
CCCCCCTCTCCCTCCGCTTCGCACTCCCGTCGGGTACGGGAAGGTCCAAGCCGCTGCCGGGTGCCCGAGGGCCGT
CGTGGCCGCCGTCGCCACGGGTCCCAATGGAGCCGCCGAATCTCTATCCGGTGAAGCTCTACGTGTACGACCTGT
CCAAAGGCCTGGCCCGGCGGCTCAGCCCCATCATGCTGGGGAAACAACTGGAAGGCATCTGGCACACATCCATAG
TTGTGCACAAGGATGAGTTCTTCTTCGGCAGTGGTGGTATCTCCAGCTGCCCCCCGGGAGGGACATTGCTTGGGC
CTCCAGACTCTGTGGTTGATGTGGGGAGTACAGAAGTCACAGAAGAAATCTTTCTGGAGTACCTCTCCTCCCTGG
GGGAGTCCCTGTTCCGAGGTGAGGCCTACAACCTCTTTGAACACAATTGTAACACCTTCAGCAACGAAGTGGCAC
AGTTCCTGACTGGGCGGAAGATTCCTTCTTACATCACAGACCTGCCCTCTGAAGTTCTCTCCACGCCCTTTGGAC
AGGCACTTCGGCCCCTCCTGGACTCCATTCAGATCCAGCCTCCAGGAGGGAGCTCCGTGGGCAGACCCAACGGCC
AGAGC**TAA**CAGGACTGCCTGGGACCGCCCTGCCTCACCAGGGCTTTTCCTTTTTAAACAAAACAAACCCTACCAG
ATTTCTATTTTATAATTTTACATCAGAGCTAACAACCAGGGGACGGCTTTTTAAATTTCCCAGGGAAGGAGACCG
TCAGGCCGCATGTAGACAATGCTGCTAAGAAACAGAACAAAATGCCACCCCTTCTAATAGTATTATACTAATTTA
TTAAAAAAAAAAAAAAAAAAA

FIGURE 1720

GSGCGGASSAGRPLPHPSARARARSPLSLRFALPSGTGRSKPLPGARGPSWPPSPRVPMEPPNLYPVKLYVYDLS
KGLARRLSPIMLGKQLEGIWHTSIVVHKDEFFFGSGGISSCPPGGTLLGPPDSVVDVGSTEVTEEIFLEYLSSLG
ESLFRGEAYNLFEHNCNTFSNEVAQFLTGRKIPSYITDLPSEVLSTPFGQALRPLLDSIQIQPPGGSSVGRPNGQ
S

FIGURE 1721

GAGCGCGCGGGCGCTACTAGCCGCGGGGGCCAGGCGCCTGGCTTCTTACTGCGGCTTCATACTGAGGGCCCAGCC
GAGGCGGCGCGGGTGCAGGAGCAGGACTTACGGCAGTGGGGGCTGACAGGGATTCACCTACGCTCTTACCAGCTG
GAGGGAGTAAACTGGCTCGCCCAGCGCTTCCATTGTCAGAATGGCTGTATCCTGGGAGATGAGATGGGCCTGGGG
AAGACCTGCCAGACTATTGCTCTCTTCATTTATTTGGCAGGAAGATTAAATGATGAAGGGCCATTTCTGATTCTT
TGTCCCTTGTCTGTTTTGAGCAACTGGAAAGAAGAAATGCAGAGATTTGCTCCAGGTCTTTCCTGTGTAACATAT
GCAGGCGACAAGGAGGAAAGAGCCTGCCTTCAGCAAGACCTGAAACAGGAGTCACGTTTTCATGTGCTACTGACT
ACCTATGAGATTTGCTTGAAAGATGCATCATTTCTAAAATCATTCCCTTGGAGTGTTCTTGTTGTGGATGAAGCT
CACAGGTTGAAAAACCAAAGCTCCCTGCTGCATAAGACCTTGTCAGAGTTCTCAGTAGTCTTCAGTCTCCTGTTG
ACCGGAACTCCCATCCAGAACAGCCTCCAAGAGCTCTACTCCCTCCTCAGTTTTGTGGAGCCTGATCTCTTTTCC
AAGGAAGAGGTGGGAGATTTTATTCAACGCTACCAGGATATTGAGAAAGAATCTGAGTCAGCAAGTGAACTGCAC
AAACTCTTGCAGCCATTTCTGCTGAGGCGAGTGAAAGCTGAGGTAGCTACAGAGCTTCCCAAGAAGACAGAAGTA
GTGATATACCATGGCATGTCAGCATTGCAGAAGAAATACTACAAGGCCATTTTGATGAAAGACCTAGATGCATTT
GAAAATGAGACGGCAAAGAAAGTTAAACTACAGAACATTTTGTCCCAGCTTCGAAAGTGTGTGGATCACCCATAT
TTGTTTGATGGTGTGGAGCCGGAGCCTTTTGAAGTTGGAGACCACCTGACTGAGGCTAGTGGGAAGCTTCACCTG
CTGGATAAGCTACTAGCATTCCTGTATTCTGGGGGCCATCGGGTTTTACTTTTCTCCCAAATGACCCAGATGTTG
GATATTCTCCAAGACTATATGGATTACAGAGGCTACAGCTATGAGCGTGTGGATGGTTCTGTGAGAGGAGAAGAG
AGACACTTGGCCATTAAGAACTTTGGACAGCAGCCCATTTTCGTTTTTCTCCTGAGTACTAGGGCAGGTGGAGTT
GGCATGAACTTAACAGCAGCAGATACTGTGATTTTTGTTGACAGTGACTTTAATCCTCAGAATGACTTGCAAGCA
GCTGCCAGGGCTCATCGCATTGGCCAAAACAAGTCTGTTAAAGTTATTCGGCTGATTGGTCGAGACACTGTGGAA
GAAATAGTCTATAGGAAAGCAGCCTCCAAACTGCAGCTCACCAACATGATCATAGAAGGAGGCCATTTTACTCTG
GGAGCCCAAAAACCCGCTGCCGATGCTGACCTCCAGTTGAGTGAGATACTCAAATTTGGTTTGGATAAACTGCTG
GCCTCTGAGGGGAGCACCATGGATGAAATAGACCTGGAGTCCATCCTGGGAGAAACAAAAGATGGCCAGTGGGTC
TCTGATGCCTTGCCTGCAGCAGAAGGAGGGAGCAGAGATCAAGAGGAAGGAAAAAATCATATGTACTTATTTGAA
GGTAAAGATTATTCTAAAGAGCCCAGTAAGGAAGACAGAAAATCATTTGAACAACTGGTAAACCTTCAGAAAACC
CTTTTGGAGAAAGCTAGTCAAGAGGGCCGATCACTCCGAAATAAAGGCAGTGTTCTCATCCCAGGCCTTGTGGAG
GGATCTACCAAAAGGAAGCGGGTTCTGAGTCCAGAAGAGCTGGAGGACAGACAGAAGAAAAGACAAGAAGCAGCT
GCCAAGAGAAGGAGACTCATAGAGGAGAAGAAGAGGCAAAAGGAAGAGGCTGAACATAAGAAAAAGATGGCCTGG
TGGGAATCCAACAATTACCAGTCCTTCTGCCTGCCCTCTGAGGAGAGCGAGCCAGAGGACCTTGAGAATGGGGAA
GAGAGCTCTGCTGAGCTGGATTACCAAGACCCAGATGCTACTTCCCTCAAGTACGTTAGTGGTGATGTCACCCAC
CCTCAGGCTGGGGCCGAGGATGCTCTCATTGTGCACTGCGTAGATGACTGTGGCCACTGGGGCAGAGGTGGTTTA
TTTACAGCTCTGGAAAAGCGATCCGCTGAGCCAAGAAAAATATATGAGCTGGCTGGGAAAATGAAAGACCTGAGT
TTGGGAGGTGTCCTTTTATTTCCTGTTGATGATAAAGAATCAAGAAACAAAGGGCAAGATTTGTTGGCCTTGATT
GTGGCTCAGCATCGTGATCGTTCCAATGTCCTGTCTGGCATTAAGATGGCAGCCCTAGAAGAGGGCCTGAAGAAG
ATATTTTTAGCAGCAAAAAAGAAGAAAGCAAGTGTTCATCTTCCACGTATTGGACATGCCACGAAAGGTTTTAAC
TGGTATGGTACTGAGCGACTTATTCGGAAACATCTGGCTGCAAGAGGCATCCCAACTTACATATATTATTTTCCT
AGAAGCAAGTCTGCTGTCCTTCATTCACAGTCTTCATCTTCCTCCTCAAGACAGCTGGTGCCT**TAA**GAATTGGCC
CAGCCTCAGATCCTGTCTTTAGCAACCAGCTAATATTTACCCAGAGGTACTGCAATAGAGTATTTCAAAATGGAA
TCAGGATCTGGTGGGCCTCAGAAATTGTCTCTTTTCTGAGTTTCAGTTTGGTTCTCCTGGATGTTTTGCTCTGTT
TTGGTACCTGTAATATAGGGAAACACAACTTTTTTTGGGAAAGCCCTTTGACCCCAGCTTGCTAGTTGCATAATA
ATAAATTTTCTGTTCCTAATGGTAAAAAAAAAAAAAAAAAAAAA

FIGURE 1722

ERAGATSRGGQAPGFLLRLHTEGPAEAARVQEQDLRQWGLTGIHLRSYQLEGVNWLAQRFHCQNGCILGDEMGLG
KTCQTIALFIYLAGRLNDEGPFLILCPLSVLSNWKEEMQRFAPGLSCVTYAGDKEERACLQQDLKQESRFHVLLT
TYEICLKDASFLKSFPWSVLVVDEAHRLKNQSSLLHKTLSEFSVVFSLLLTGTPIQNSLQELYSLLSFVEPDLFS
KEEVGDFIQRYQDIEKESESASELHKLLQPFLLRRVKAEVATELPKKTEVVIYHGMSALQKKYYKAILMKDLDAF
ENETAKKVKLQNILSQLRKCVDHPYLFDGVEPEPFEVGDHLTEASGKLHLLDKLLAFLYSGGHRVLLFSQMTQML
DILQDYMDYRGYSYERVDGSVRGEERHLAIKNFGQQPIFVFLLSTRAGGVGMNLTAADTVIFVDSDFNPQNDLQA
AARAHRIGQNKSVKVIRLIGRDTVEEIVYRKAASKLQLTNMIIEGGHFTLGAQKPAADADLQLSEILKFGLDKLL
ASEGSTMDEIDLESILGETKDGQWVSDALPAAEGGSRDQEEGKNHMYLFEGKDYSKEPSKEDRKSFEQLVNLQKT
LLEKASQEGRSLRNKGSVLIPGLVEGSTKRKRVLSPEELEDRQKKRQEAAAKRRRLIEEKKRQKEEAEHKKKMAW
WESNNYQSFCLPSEESEPEDLENGEESSAELDYQDPDATSLKYVSGDVTHPQAGAEDALIVHCVDDCGHWGRGGL
FTALEKRSAEPRKIYELAGKMKDLSLGGVLLFPVDDKESRNKGQDLLALIVAQHRDRSNVLSGIKMAALEEGLKK
IFLAAKKKKASVHLPRIGHATKGFNWYGTERLIRKHLAARGIPTYIYYFPRSKSAVLHSQSSSSSSRQLVP

FIGURE 1723

GGCACGAGGCTACCCTTTGCTGCCTTAAACTTGCTTTTCTAGATCCTGATACTGGTAAACTGACTGGCGGATCAT
TTACCATGAAATACCATGATATGCCTGACGTTATAGATTTCCTAGTCTTGAGACAACAATTTGATGATGCAAAAT
ACAGGCGATGGAATATAGGTGACCGCTTCAGGTCTGTCATAGATGATGCCTGGTGGTTTGGAACAATCGAAAGCC
AGGAACCTCTTCAACCTGAGTACCCTGATAGTCTGTTTCAATGCTACAATGTTTGCTGGGACAATGGAGATACAG
AAAAG**ATG**AGTCCTTGGGATATGGAGCTTATACCTAATAATGCTGTATTTCCTGAAGAACTAGGTACCAGTGTTC
CTTTAACTGATGGTGAGTGCAGATCACTAATCTATAAACCTCTTGATGGAGAATGGGGTACCAATCCCAGGGATG
AAGAATGTGAAAGAATTGTGGCAGGAATAAACCAGTTGATGACACTAGATATTGCCTCAGCATTTGTGGCCCCCG
TGGATCTGCAAGCCTATCCCATGTATTGCACAGTAGTGGCATATCCAACGGATCTAAGTACAATTAAACAAAGAC
TGGAAAACAGGTTTTACAGGCGGGTTTCTTCCCTAATGTGGGAAGTTCGATATATAGAGCATAATACACGAACAT
TTAATGAGCCTGGAAGCCCTATTGTGAAATCTGCTAAATTCGTGACTGATCTTCTTCTACATTTTATAAAGGATC
AGACTTGTTATAACATAATTCCACTTTATAATTCAATGAAGAAGAAAGTTTTGTCTGATTCTGAGGATGAAGAGA
AAGATGCTGATGTGCCAGGAACTTCTACTCGAAAAAGGAAGGACCATCAGCCTAGAAGAAGATTACGTAATAGAG
CCCAGTCTTACGATATTCAAGCATGGAAGAAACAGTGTGAAGAATTGTTAAATCTCATATTTCAATGTGAAGATT
CAGAGCCTTTCCGTCAGCCGGTAGATCTCCTTGAATATCCAGACTACAGAGACATCATTGACACTCCAATGGATT
TTGCTACCGTTAGAGAAACTTTAGAGGCTGGGAATTATGAGTCACCAATGGAGTTATGTAAAGATGTCAGACTTA
TTTTCAGTAATTCCAAAGCATATACACCAAGCAAAAGATCAAGGATTTACAGCATGAGTTTGCGCTTGTCTGCAT
TCTTTGAAGAACACATTAGTTCAGTTTTATCAGATTATAAATCTGCTCTTCGTTTTCATAAAAGAAATACCATAA
CCAAAAGGAGGAAGAAAAGAAACAGAAGCAGCTCTGTTTCCAGTAGTGCTGCATCAAGCCCTGAAAGGAAAAAAA
GGATCTTAAAACCCCAGCTAAAATCAGAAAGCTCTACCTCTGCATTCTCTACACCTACACGATCAATACCGCCAA
GACACAATGCTGCTCAGATAAACGGTAAAACAGAATCTAGTTCTGTGGTTCGAACCAGAAGCAACCGAGTGGTTG
TAGATCCAGTTGTCACTGAGCAACCATCTACTTCTTCAGCTGCAAAGACTTTTATTACAAAAGCTAATGCATCTG
CAATACCAGGGAAAACAATACTAGAGAATTCTGTGAAACATTCCAAAGCTTTGAATACTCTTTCCAGTCCTGGTC
AATCCAGTTTTAGTCATGGCACTAGGAATAATTCTGCAAAAGAAAACATGGAAAAGGAAAAGCCAGTCAAACGTA
AAATGAAGTCATCTGTACTCCCAAAGGCGTCCACTCTTTCAAAGTCATCAGCTGTCATTGAGCAAGGAGATTGTA
AGAACAACGCTCTTGTACCAGGAACCATTCAAGTAAATGGCCATGGAGGACAGCCATCAAAACTTGTGAAGAGGG
GACCTGGAAGGAAACCTAAAGTAGAAGTTAATACCAATAGTGGTGAAATTATACACAAGAAAAGGGGTAGAAAGC
CCAAAAAGCTACAGTATGCAAAGCCAGAAGATTTAGAGCAAAATAATGTGCATCCCATCAGAGATGAAGTACTTC
CTTCTTCAACATGCAATTTTCTTTCTGAAACTAATAATGTAAAGGAAGATTTGTTACAGAAAAAGAATCGTGGAG
GTAGGAAGCCCAAAAGGAAGATGAAGACACAAAAATTAGATGCAGATCTCCTAGTCCCTGCAAGTGTCAAAGTGT
TAAGGAGAAGTAACCGAAAAAAGATAGATGATCCTATAGATGAGGAAGAAGAGTTTGAAGAACTCAAAGGCTCTG
AACCCCACATGAGAACTAGAAATCAAGGTCGAAGGACAGCTTTCTATAATGAGGATGACTCTGAAGAGGAGCAAA
GGCAGCTGTTGTTCGAAGACACCTCTTTAACTTTTGGAACTTCTAGTAGAGGACGAGTCCGAAAGTTGACTGAAA
AAGCAAAAGCTAATTTAATTGGTTGG**TAA**CTTGTACCAAAATATTTTACTTCAAAATCTATAAAGCAGGTACAGT
TAAGGAATAAGTAGAACTAAGGCTTCTGCTTCCTTGCTGCTGTGGTGGAGTAGGGAATGTTATGATTTGATTTGC
AAAAAAAAAAAAAAAAAAAAAA

FIGURE 1724

MSPWDMELIPNNAVFPEELGTSVPLTDGECRSLIYKPLDGEWGTNPRDEECERIVAGINQLMTLDIASAFVAPVD
LQAYPMYCTVVAYPTDLSTIKQRLENRFYRRVSSLMWEVRYIEHNTRTFNEPGSPIVKSAKFVTDLLLHFIKDQT
CYNIIPLYNSMKKKVLSDSEDEEKDADVPGTSTRKRKDHQPRRRLRNRAQSYDIQAWKKQCEELLNLIFQCEDSE
PFRQPVDLLEYPDYRDIIDTPMDFATVRETLEAGNYESPMELCKDVRLIFSNSKAYTPSKRSRIYSMSLRLSAFF
EEHISSVLSDYKSALRFHKRNTITKRRKKRNRSSSVSSSAASSPERKKRILKPQLKSESSTSAFSTPTRSIPPRH
NAAQINGKTESSSVVRTRSNRVVVDPVVTEQPSTSSAAKTFITKANASAIPGKTILENSVKHSKALNTLSSPGQS
SFSHGTRNNSAKENMEKEKPVKRKMKSSVLPKASTLSKSSAVIEQGDCKNNALVPGTIQVNGHGGQPSKLVKRGP
GRKPKVEVNTNSGEIIHKKRGRKPKKLQYAKPEDLEQNNVHPIRDEVLPSSTCNFLSETNNVKEDLLQKKNRGGR
KPKRKMKTQKLDADLLVPASVKVLRRSNRKKIDDPIDEEEEFEELKGSEPHMRTRNQGRRTAFYNEDDSEEEQRQ
LLFEDTSLTFGTSSRGRVRKLTEKAKANLIGW

FIGURE 1725

GGCACGAGGGCGGACGGGCGGACTGACGGGCGCCTCCACCTTGCTCCCTCCCTGGCTGCCGGCTTCCTTTTGTCT
TTCTGGGCGGCGATGAGCGCAGGGCCGGCGCAGCAGCTGCGGGCGCACGGAGGCCCGCGCTGCTAGTCACTCCTC
CCGGCCTCGGCGCGCTTGTCCCGGGCAGCGGCCCGGGCCCGCTGCAGCCGCCGCCGGCGCCGAACTTGGGCTCGG
GAAGCCGGCGGACCGCGTCCTGCGCCGGAGCAGGGGCATGGTCTAGTGGCCCAGTCAGGACGCGGAAACACTCCC
TGGAGGTTCTGACCCGCTCCCTCTCAGCCTCCGCCTGGTCTCTGGTGTAGTCGCCGCCGCCAGCCGCC**ATG**GGCA
AACAGAACAGCAAGCTGCGGCCCGAGGTGCTGCAGGACCTGCGGGAGAACACGGAGTTCACCGACCACGAGCTGC
AGGAGTGGTACAAGGGCTTCCTCAAGGACTGCCCCACCGGCCACCTGACCGTGGACGAGTTCAAGAAGATCTACG
CCAACTTCTTCCCCTACGGCGACGCTTCCAAGTTCGCCGAGCACGTCTTCCGCACCTTCGACACCAACGGCGACG
GCACCATCGACTTCCGGGAGTTCATCATTGCGCTGAGCGTGACCTCGCGGGGCAAGCTGGAGCAGAAGCTCAAGT
GGGCCTTCAGCATGTACGACCTGGACGGCAACGGCTACATCAGCCGCAGCGAGATGCTGGAGATCGTGCAGGCCA
TCTACAAGATGGTGTCGTCTGTGATGAAGATGCCGGAGGATGAGTCCACCCCGGAGAAGCGCACAGACAAGATCT
TCAGGCAGATGGACACCAACAATGACGGCAAACTGTCCTTGGAAGAATTCATCAGAGGTGCCAAGAGCGACCCCT
CCATCGTCCGCCTGCTGCAGTGCGACCCCAGCAGTGCCAGTCAGTTC**TGA**GCGAGCGGCCCCTGGACAGTTGCAG
AGAAACACAGGCTTGTCGTGCCGTTTAAGCTTTGCTTGCAAGAGTGGATGCCCCGCAATCGTTCCTGCTCTCCCG
GGCCCCGGGCCTGGGGCATGCGTTGCACCTGCCCGGCCCGGTGGCTGCGCCTCCCTCCTCCACCTGACCAACGCG
ACATTCCTCCCCTCACGCCTGGCCCGGTCCCTTCCAGGGCAACTCCCAGGGATGTGGTGACATGCAGGGTTCAAG
TGTTCTTGGTTCCAGGCACCTCCCGGCTCACGGGGAGCTCAGAGGTCCATGCCGAGGAGACCAGGCAGGACCTCC
CGAGGCTGCGCCCCGGCCGGCCCATGCGTTTTGTGATCCCAAGTGACTCTGTGGGAAGGGTGGGGACGAGGCGTC
GGGAGGGTATACAGGGAGCCCCTCCCGTGCATGGCTGCCCCCCCGTTCATTTTCTCCACCACAGCCGCTTGCACG
TATAGATACTGTGGTCCCCTTTCTTTTAATATATAAATTATGTATGGTGAAGTGGAGTGTATTGTGTAGGTCCCG
TATTTAATGCCTCTGACTGCCTTTGAAGCGCAGCCCTCTGTGGCCCGCAGCCCCCTGAGCCTGGCTGTTGTGTGG
TATTTATGCTCTCTTTGTCTGCCTGTTTCTAAGGAAATGCATGTGTGCCCTGAGCCGTGATGATCCTCCCATCCG
TGTTGTGAGCACAGGCATTTGTGTCTGGTCTGTCCTCCCTGTTGATTGGTCTGGCATTTCCGGTATTAAAATGAT
AAAATAAATGGCAAAAAAAAAAAAAAAAAA

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FIGURE 1726

MGKQNSKLRPEVLQDLRENTEFTDHELQEWYKGFLKDCPTGHLTVDEFKKIYANFFPYGDASKFAEHVFRTFDTN
GDGTIDFREFIIALSVTSRGKLEQKLKWAFSMYDLDGNGYISRSEMLEIVQAIYKMVSSVMKMPEDESTPEKRTD
KIFRQMDTNNDGKLSLEEFIRGAKSDPSIVRLLQCDPSSASQF

FIGURE 1727A

TTGCTGCGTCAACTGTGTTCCCTTTGGCCTGGCTGAGTTTGATACTGTGGGGATTCAGTTTAGGCGCTGGCCCGA
GGATATCCCAGCGGTGGTACTTCGGAGACACCTGTCTGCATCTGACTGAGCCGGCTCTCCTGGCCTCGCGCTGCA
CATTCTCTCCTGGCGGCGGCGCCACCTGCAGTAGCGTTCGCCCGAACATGGCGACACGGAGCAGCAGGAGGGAGT
CGCGACTCCCGTTCCTATTCACCCTGGTCGCACTGCTGCCGCCCGGAGCTCTCTGCGAAGTCTGGACGCAGAGGC
TGCACGGCGGCAGCGCGCCCTTGCCCCAGGACCGGGGCTTCCTCGTGGTGCAGGGCGACCCGCGCGAGCTGCGGC
TGTGGGCGCGCGGGGATGCCAGGGGGGCGAGCCGCGCGGACGAGAAGCCGCTCCGGAGGAAACGGAGCGCTGCCC
TGCAGCCCGAGCCCATCAAGGTGTACGGACAGGTTAGTCTGAATGATTCCCACAATCAGATGGTGGTGCACTGGG
CTGGAGAGAAAAGCAACGTGATCGTGGCCTTGGCCCGAGATAGCCTGGCATTGGCGAGGCCCAAGAGCAGTGATG
TGTACGTGTCTTACGACTATGGAAAATCATTCAAGAAAATTTCAGACAAGTTAAACTTTGGCTTGGGAAATAGGA
GTGAAGCTGTTATCGCCCAGTTCTACCACAGCCCTGCGGACAACAAGCGGTACATCTTTGCAGACGCTTATGCCC
AGTACCTCTGGATCACGTTTGACTTCTGCAACACTCTTCAAGGCTTTTCCATCCCATTTCGGGCAGCTGATCTCC
TCCTACACAGTAAGGCCTCCAACCTTCTCTTGGGCTTTGACAGGTCCCACCCCAACAAGCAGCTGTGGAAGTCAG
ATGACTTTGGCCAGACCTGGATCATGATTCAGGAACATGTCAAGTCCTTTTCTTGGGGAATTGATCCCTATGACA
AACCAAATACCATCTACATTGAACGACACGAACCCTCTGGCTACTCCACTGTCTTCCGAAGTACAGATTTCTTCC
AGTCCCGGGAAAACCAGGAAGTGATCCTTGAGGAAGTGAGAGATTTTCAGCTTCGGGACAAGTACATGTTTGCTA
CAAAGGTGGTGCATCTCTTGGGCAGTGAACAGCAGTCTTCTGTCCAGCTCTGGGTCTCCTTTGGCCGGAAGCCCA
TGAGAGCAGCCCAGTTTGTCACAAGACATCCTATTAATGAATATTACATCGCAGATGCCTCCGAGGACCAGGTGT
TTGTGTGTGTCAGCCACAGTAACAACCGCACCAATTTATACATCTCAGAGGCAGAGGGGCTGAAGTTCTCCCTGT
CCTTGGAGAACGTGCTCTATTACAGCCCAGGAGGGGCCGGCAGTGACACCTTGGTGAGGTATTTTGCAAATGAAC
CATTTGCTGACTTCCACCGAGTGGAAGGATTGCAAGGAGTCTACATTGCTACTCTGATTAATGGTTCTATGAATG
AGGAGAACATGAGATCGGTCATCACCTTTGACAAAGGGGGAACCTGGGAGTTTCTTCAGGCTCCAGCCTTCACGG
GATATGGAGAGAAAATCAATTGTGAGCTTTCCCAGGGCTGTTCCCTTCATCTGGCTCAGCGCCTCAGTCAGCTCC
TCAACCTCCAGCTCCGGAGAATGCCCATCCTGTCCAAGGAGTCGGCTCCAGGCCTCATCATCGCCACTGGCTCAG
TGGGAAAGAACTTGGCTAGCAAGACAAACGTGTACATCTCTAGCAGTGCTGGAGCCAGGTGGCGAGAGGCACTTC
CTGGACCTCACTACTACACATGGGGAGACCACGGCGGAATCATCACGGCCATTGCCCAGGGCATGGAAACCAACG
AGCTAAAATACAGTACCAATGAAGGGGAGACCTGGAAAACATTCATCTTCTCTGAGAAGCCAGTGTTTGTGTATG
GCCTCCTCACAGAACCTGGGGAGAAGAGCACTGTCTTCACCATCTTTGGCTCGAACAAAGAGAATGTCCACAGCT
GGCTGATCCTCCAGGTCAATGCCACGGATGCCTTGGGAGTTCCCTGCACAGAGAATGACTACAAGCTGTGGTCAC
CATCTGATGAGCGGGGGAATGAGTGTTTGCTGGGACACAAGACTGTTTTCAAACGGCGGACCCCCCATGCCACAT
GCTTCAATGGAGAGGACTTTGACAGGCCGGTGGTCGTGTCCAACTGCTCCTGCACCCGGGAGGACTATGAGTGTG
ACTTCGGTTTCAAGATGAGTGAAGATTTGTCATTAGAGGTTTGTGTTCCAGATCCGGAATTTTCTGGAAAGTCAT
ACTCCCCTCCTGTGCCTTGCCCTGTGGGTTCTACTTACAGGAGAACGAGAGGCTACCGGAAGATTTCTGGGGACA
CTTGTAGCGGAGGAGATGTTGAAGCGCGACTGGAAGGAGAGCTGGTCCCCTGTCCCCTGGCAGAAGAGAACGAGT
TCATTCTGTATGCTGTGAGGAAATCCATCTACCGCTATGACCTGGCCTCGGGAGCCACCGAGCAGTTGCCTCTCA
CCGGGCTACGGGCAGCAGTGGCCCTGGACTTTGACTATGAGCACAACTGTTTGTATTGGTCCGACCTGGCCTTGG
ACGTCATCCAGCGCCTCTGTTTGAATGGAAGCACAGGGCAAGAGGTGATCATCAATTCTGGCCTGGAGACAGTAG
AAGCTTTGGCTTTTGAACCCCTCAGCCAGCTGCTTTACTGGGTAGATGCAGGCTTCAAAAAGATTGAGGTAGCTA
ATCCAGATGGCGACTTCCGACTCACAATCGTCAATTCCTCTGTGCTTGATCGTCCCAGGGCTCTGGTCCTCGTGC
CCCAAGAGGGGGTGATGTTCTGGACAGACTGGGGAGACCTGAAGCCTGGGATTTATCGGAGCAATATGGATGGTT
CTGCTGCCTATCACCTGGTGTCTGAGGATGTGAAGTGGCCCAATGGCATCTCTGTGGACGACCAGTGGATTTACT
GGACGGATGCCTACCTGGAGTGCATAGAGCGGATCACGTTCAGTGGCCAGCAGCGCTCTGTCATTCTGGACAACC
TCCCGCACCCCTATGCCATTGCTGTCTTTAAGAATGAAATCTACTGGGATGACTGGTCACAGCTCAGCATATTCC
GAGCTTCCAAATACAGTGGGTCCCAGATGGAGATTCTGGCAAACCAGCTCACGGGGCTCATGGACATGAAGATTT
TCTACAAGGGGAAGAACACTGGAAGCAATGCCTGTGTGCCCAGGCCATGCAGCCTGCTGTGCCTGCCCAAGGCCA
ACAACAGTAGAAGCTGCAGGTGTCCAGAGGATGTGTCCAGCAGTGTGCTTCCATCAGGGGACCTGATGTGTGACT
GCCCTCAGGGCTATCAGCTCAAGAACAATACCTGTGTCAAAGAAGAGAACACCTGTCTTCGCAACCAGTATCGCT
GCAGCAACGGGAACTGTATCAACAGCATTTGGTGGTGTGACTTTGACAACGACTGTGGAGACATGAGCGATGAGA
GAAACTGCCCTACCACCATCTGTGACCTGGACACCCAGTTTCGTTGCCAGGAGTCTGGGACTTGTATCCCACTGT

FIGURE 1727B

CCTATAAATGTGACCTTGAGGATGACTGTGGAGACAACAGTGATGAAAGTCATTGTGAAATGCACCAGTGCCGGA
GTGACGAGTACAACTGCAGTTCCGGCATGTGCATCCGCTCCTCCTGGGTATGTGACGGGGACAACGACTGCAGGG
ACTGGTCTGATGAAGCCAACTGTACCGCCATCTATCACACCTGTGAGGCCTCCAACTTCCAGTGCCGAAACGGGC
ACTGCATCCCCCAGCGGTGGGCGTGTGACGGGGATACGGACTGCCAGGATGGTTCCGATGAGGATCCAGTCAACT
GTGAGAAGAAGTGCAATGGATTCCGCTGCCCAAACGGCACTTGCATCCCATCCAGCAAACATTGTGATGGTCTGC
GTGATTGCTCTGATGGCTCCGATGAACAGCACTGCGAGCCCCTCTGTACGCACTTCATGGACTTTGTGTGTAAGA
ACCGCCAGCAGTGCCTGTTCCACTCCATGGTCTGTGACGGAATCATCCAGTGCCGCGACGGGTCCGATGAGGATG
CGGCGTTTGCAGGATGCTCCCAAGATCCTGAGTTCCACAAGGTATGTGATGAGTTCGGTTTCCAGTGTCAGAATG
GAGTGTGCATCAGTTTGATTTGGAAGTGCGACGGGATGGATGATTGCGGCGATTATTCTGATGAAGCCAACTGCG
AAAACCCCACAGAAGCCCCAAACTGCTCCCGCTACTTCCAGTTTCGGTGTGAGAATGGCCACTGCATCCCCAACA
GATGGAAATGTGACAGGGAGAACGACTGTGGGGACTGGTCTGATGAGAAGGATTGTGGAGATTCACATATTCTTC
CCTTCTCGACTCCTGGGCCCTCCACGTGTCTGCCCAATTACTACCGCTGCAGCAGTGGGACCTGCGTGATGGACA
CCTGGGTGTGCGACGGGTACCGAGATTGTGCAGATGGCTCTGACGAGGAAGCCTGCCCCTTGCTTGCAAACGTCA
CTGCTGCCTCCACTCCCACCCAACTTGGGCGATGTGACCGATTTGAGTTCGAATGCCACCAACCGAAGACGTGTA
TTCCCAACTGGAAGCGCTGTGACGGCCACCAAGATTGCCAGGATGGCCGGGACGAGGCCAATTGCCCCACACACA
GCACCTTGACTTGCATGAGCAGGGAGTTCCAGTGCGAGGACGGGGAGGCCTGCATTGTGCTCTCGGAGCGCTGCG
ACGGCTTCCTGGACTGCTCGGACGAGAGCGATGAAAAGGCCTGCAGTGATGAGTTGACTGTGTACAAAGTACAGA
ATCTTCAGTGGACAGCTGACTTCTCTGGGGATGTGACTTTGACCTGGATGAGGCCCAAAAAAATGCCCTCTGCAT
CTTGTGTATATAATGTCTACTACAGGGTGGTTGGAGAGAGCATATGGAAGACTCTGGAGACCCACAGCAATAAGA
CAAACACTGTATTAAAAGTCTTGAAACCAGATACCACGTATCAGGTTAAAGTACAGGTTCAGTGTCTCAGCAAGG
CACACAACACCAATGACTTTGTGACCCTGAGGACCCCAGAGGGATTGCCAGATGCCCCTCGAAATCTCCAGCTGT
CACTCCCCAGGGAAGCAGAAGGTGTGATTGTAGGCCACTGGGCTCCTCCCATCCACACCCATGGCCTCATCCGTG
AGTACATTGTAGAATACAGCAGGAGTGGTTCCAAGATGTGGGCCTCCCAGAGGGCTGCTAGTAACTTTACAGAAA
TCAAGAACTTATTGGTCAACACTCTATACACCGTCAGAGTGGCTGCGGTGACTAGTCGTGGAATAGGAAACTGGA
GCGATTCTAAATCCATTACCACCATAAAAGGAAAAGTGATCCCACCACCAGATATCCACATTGACAGCTATGGTG
AAAATTATCTAAGCTTCACCCTGACCATGGAGAGTGATATCAAGGTGAATGGCTATGTGGTGAACCTTTTCTGGG
CATTTGACACCCACAAGCAAGAGAGGAGAACTTTGAACTTCCGAGGAAGCATATTGTCACACAAAGTTGGCAATC
TGACAGCTCATACATCCTATGAGATTTCTGCCTGGGCCAAGACTGACTTGGGGGATAGCCCTCTGGCATTTGAGC
ATGTTATGACCAGAGGGGTTCGCCCACCTGCACCTAGCCTCAAGGCCAAAGCCATCAACCAGACTGCAGTGGAAT
GTACCTGGACCGGCCCCCGGAATGTGGTTTATGGTATTTTCTATGCCACGTCCTTTCTTGACCTCTATCGCAACC
CGAAGAGCTTGACTACTTCACTCCACAACAAGACGGTCATTGTCAGTAAGGATGAGCAGTATTTGTTTCTGGTCC
GTGTAGTGGTACCCTACCAGGGGCCATCCTCTGACTACGTTGTAGTGAAGATGATCCCGGACAGCAGGCTTCCAC
CCCGTCACCTGCATGTGGTTCATACGGGCAAAACCTCCGTGGTCATCAAGTGGGAATCACCGTATGACTCTCCTG
ACCAGGACTTGTTGTATGCAATTGCAGTCAAAGATCTCATAAGAAAGACTGACAGGAGCTACAAAGTAAAATCCC
GTAACAGCACTGTGGAATACACCCTTAACAAGTTGGAGCCTGGCGGGAAATACCACATCATTGTCCAACTGGGGA
ACATGAGCAAAGATTCCAGCATAAAAATTACCACAGTTTCATTATCAGCACCTGATGCCTTAAAAATCATAACAG
AAAATGATCATGTTCTTCTGTTTTGGAAAAGCCTGGCTTTAAAGGAAAAGCATTTTAATGAAAGCAGGGGCTATG
AGATACACATGTTTGATAGTGCCATGAATATCACAGCTTACCTTGGGAATACTACTGACAATTTCTTTAAAATTT
CCAACCTGAAGATGGGTCATAATTACACGTTCACCGTCCAAGCAAGATGCCTTTTTGGCAACCAGATCTGTGGGG
AGCCTGCCATCCTGCTGTACGATGAGCTGGGGTCTGGTGCAGATGCATCTGCAACGCAGGCTGCCAGATCTACGG
ATGTTGCTGCTGTGGTGGTGCCCATCTTATTCCTGATACTGCTGAGCCTGGGGGTGGGGTTTGCCATCCTGTACA
CGAAGCACCGGAGGCTGCAGAGCAGCTTCACCGCCTTCGCCAACAGCCACTACAGCTCCAGGCTGGGGTCCGCAA
TCTTCTCCTCTGGGGATGACCTGGGGGAAGATGATGAAGATGCCCCTATGATAACTGGATTTTCAGATGACGTCC
CCATGGTGATAGCC**TGA**AAGAGCTTTCCTCACTAGAAACCAAATGGTGTAAATATTTTATTTGATAAAGATAGTT
GATGGTTTATTTTAAAAGATGCACTTTGAGTTGCAATATGTTATTTTTATATGGGCCAAAAACNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNGGAATGAATAAACTTTGTAGTAATCAACTGTGAACTTCAAACCAGGTTGATTTTA
GTAACCCAATTGCTTTGATTTGACATTAATGTAGTCTTACAGGGCTGTGCTTGCTGGGCATGCTTTTACGTCTGT
GAGATAATTTCGGTTCAGTAAATTGGCCAATCTTTTTATTTTTCTAAGACACAGAAATGTATTTAATAAAAACCT

FIGURE 1727C

CGAGAGAGTGATGGGTGGAACCCCTTCTCCTTGAAAGTGTGTACAGATATTCCATTTTGTTTGGATATAGTTTAT
AGGAAAGTGTGTGGATGTATTATGGCGGAAGGTTTCTTTATGTTATTTTGTTAATTTATTGGGACTCTGTGTAAG
GCCAGGCTTTAGTGGTCATTAGACACCACATGTGTTATGAGCCCCTTACCCATAGGGTTGGGGGTGGGAAGAGAA
GCATATTTTTTTGCCATTCCGGAAGCAATCCATTTTTATTCACTTGTGTGTCATGTAATGGTCTTTGGCAGGAGA
GAGCACTGAGTCATTGCTGGAGTTCAGTTCAACAGAGCTGCAGCTTGGGAAGCCCTGTAAGCCCACAGCTTCCTC
TCTTATATTAATTGATGGAATTTTACTGTATGTGCCTCTGTACAAGATGTAGCTTTGAGAGCTACAAAATGATAA
CACTGCTTTATTACACACTGGTTTCATTGTCATTGCAAAAACTTACCCTGGTTGTGGGGGAGAGTTCTAGATCTG
TGCCATGATCCATACACTGGCTAATAGAGTACATAATTTTTCCATTTTCCATTTTTTGTTTTTACTTACTACTGA
AGGATCTCAGATGTAAAATTATGTATTTGGTTTGAGATGGCCACTTATTGTCCTTAAAAATCCATACTGATATAT
GCAGTCATTTTGAATTGGACAGTGCCTTCTCTTTTTTTTTCTCCTCTTCTTCCATCTCCCTCACCCATGCCCCCA
CCCAATCTAAAGAGACAGTGCTGTACATTCTCATAGAGATAGAGAAGATCTAAAAAGTTGAGACTACTCAATCCA
GTTAACAACAGCAGGAGCACTAGAGTTTGTTCATTTATTCTCTCTGTAAAACAAGCTGTGCTTTTTTTCTTCTGC
CTTTAAAATGCCACCCGTGTATTCAAACCATGGCCACTTGATACTTATGTAGAATCCATCGTGGGCTGATGCAAG
CCCTTTATTTAGGCTTAGTGTTGTGGGCACCAATGTCGAGCATCGTTGTGACTTGTGCTGTATGATTCTCACTGA
AGAATTTCCTTTCAGCCAAGAAGCAGTGAGGTCTGGGAATATTCCAAAGTCATGTCTCTGAATATGTGTCCTTGA
CGTGCAAGCTTTGTAAAACCCCATCCCCGCTTAGGTGCGAGGCATCACCTTCTCACAAGTGTTTAGTTTCTTTTA
ACCACAAGTATCATTCTTGGGTGATAATATAGTTTCATTCTACTTAGGGATTGTTTAGAAAACAAAGAAAGAGCC
AATTAAATTTTTTAGTTTTTGAAATTTTTATTTATATGTATACTTAGATGAGTATTTTAAGCTGTCGACCTTTAG
TTTGCCATACGGGTAGGACTGTATTTCATGTTAACAACTGGTGGTAATGATAAGCCTTCTTCTAGCGTATTTTCT
CTTCTTTCCTGTCACTTTCCTAAGTTTTTTTTTTTAAAGACTGGAATTTTTTTTGGCTTTATCTTGTCTTACCGT
AGAGATTTGTTCAAAACTCTAAGCCCTACCACCTCCCCTTTAATAAGCTCTTTAAATAGTTGAATCATTAACAAC
CTGGTGGGAGGCAAGTCATTTAATTGAACCACTAGGAAGTGTATTTTCTTTTCTTTTTCTGCCAACTTTTTGGTG
GCATTTGTAAAAGCTGATATAAAAGGCTCTGAGATGTTATTTTCAGTTATTCCATAGGCAAGCCTTTTTACAGAG
CATATGTCTCCAGTTGGCAGCTTGAGATATTTCCGAGCATCCGGTTCTAGCTACCAGTGCCTCCCAATGCTTAGT
GCACAGTACTGTAGACTGGCCATCACCCCTCTCCTTGGAAAATGCCACTGTGCTGTTTGAAAAAAAGCAGCCTTT
TAGGGCTAGAGTATTTTATATAAACAGAAGAGCTAAGTTCCTGAAGACTAAGCTAGATAGCTGCAGCTATATGTA
AATTGTATATTTTTATGAACTTTTGAAGCACACACTCCTGTTTCCCTCTGTGTAGCTTTGTGGGGATTTCATGTA
TATATGCTGTCTGAAAGAATCCAGAGGTTGGAGTGCCAATAGAAAATGAAAACAAATGCCTTGTACTACAGGCAG
CCTCTGAAGGTGACCACATAACTGTCTTCACTGTGACCAATCGGAGTCCCTGCTTGCTTGTGAAGAAGGGGCTTT
TGTACCTTGTTGGAGATGCCACCTCAGAAGTTCACACTGTGCAGGAAAAAGGTTTTATTCTCTCCTGGCATACAT
TAGAATGTCAGATGCCTGCATCCATGTGGACCACGATGGGCCTCTAAAAATTGGTGGGCAGGGGGTTTGCTTATG
AGTTTTCTCTGGAAACCGATTTTACTCCTGGATGTATTGAATGCCCCTTGAGCTTTATGAGATACGAGTCCACAT
GGATAAAATGTTAGAGAGTGGAGTTCTACAGAGGATTCCAGGAAGAGGCCATGTCTGTGCAGTCCTAGTTCCAGA
CAGGTGAGAAGCTCCAGGAACTACTGGCTACCTTGACAAGCTGGGTAAATAGTTATCATTCTGGGTAACTGGTTG
AAACTCTGACTTTTGGACAAGTAATTCCTGGGGTTCTGTCTTTGGTAGCATCACCAGGGATATTTGGGTGGGACA
GACAGAAGACACACAGCTGCCTGTTCTCTCCTGCCCATCATGTTTGGCCCACTAGATGAAGCTGTACTCAGCAAT
TTAGGGAATGTAACCCTTCTCAGAACTGGCCATTTTCAGGGGAAGCTTGGGAGAGCAATAGTATGGTGAGCCCCT
TAGAGATGAGCGCCTACTCCTTCTTGGCGAATGCTGCCTTCAGATGCTTACCAAGTGGTCACTGCATCTAGTAAG
ATTATATTTCCAGTACACTTCCTTAGGGCAGAAACACCATCCTATCAGGTTTGGTCAGTCCCTTCTTCATGAAGG
GAGTCATGGGGAATTCCTGAAAATTTTCTTCCTTCTGCAGACAGTTGGATGAGTCCCTTAGAGAAGGCATCCAGA
GACATAACTAAACTGAATATCATCCCATATTGATTTTAGGAATTGACTCTAAAACTCTGTGCAGAATCTTGTGTT
GGGATTGTATCTTGACATTCCTGTTGTGTTATTTTTCTTAACTGGAGTGTGTGCTGCCTTTCAGGTACAATTTTT
GTGTAATAAAAGCCAGTGCATTAAGTTTATATAGACTACTTTCTATGCAAGACTGAGATATGGAATAGATAGGAA
GAGATATGTACTGCTGGGTACATGGACAGTAAGTGTGTTTTCAGATGGAGTACCAGCACCGAAAATGGGTTGAGG
GAGGATGGGTTGTATGTATGTTTCTGCCCACTAATTTTGAGCAGCCATATTATGAATTAAATCGTCACAGCCAAG
TAATAACCCAAGAATGGTATGAGTTTCATGTGTAATAGCTCAAATGGAATAAGCATGAATGCTGGAGTGGACCAT
TATCCTCAAATATTCTATGTCACTTCTCATTTAAAGACTCTTGTTATGAACTATTAGAAACTTTAGGCAAAATCA
AAAGTATTTGCGGCAAAATAAAGGCCTATTCTACTCTTATTTAAAGTGAAACACTGTATACTTGTTTCTCTCCAA

FIGURE 1727D

AGCGAAATTAAGTATTTATAATTTCAATTGCCTCGATAAGTTTCCAAGTCACTGAAATCTGCTGAAGGTTTTACT
GTATTGTTGCACAACTTTAAGATAATTTTTGTCTCAATGTCAACTTTTTTCACTGAATAAAAATTTAACTGGGTC
AAGAAAACACCTCTTTGAAAATCCACTGTCTCTGTGTGTCTCGAGCTGTTCTTTAGAGCGCAATAAAGATGGCTG
ACGCAGTCTCCAAACCCC

FIGURE 1728

AASTVFPLAWLSLILWGFSLGAGPRISQRWYFGDTCLHLTEPALLASRCTFSPGGGATCSSVRPNMATRSSRRES
RLPFLFTLVALLPPGALCEVWTQRLHGGSAPLPQDRGFLVVQGDPRELRLWARGDARGASRADEKPLRRKRSAAL
QPEPIKVYGQVSLNDSHNQMVVHWAGEKSNVIVALARDSLALARPKSSDVYVSYDYGKSFKKISDKLNFGLGNRS
EAVIAQFYHSPADNKRYIFADAYAQYLWITFDFCNTLQGFSIPFRAADLLLHSKASNLLLGFDRSHPNKQLWKSD
DFGQTWIMIQEHVKSFSWGIDPYDKPNTIYIERHEPSGYSTVFRSTDFFQSRENQEVILEEVRDFQLRDKYMFAT
KVVHLLGSEQQSSVQLWVSFGRKPMRAAQFVTRHPINEYYIADASEDQVFVCVSHSNNRTNLYISEAEGLKFSLS
LENVLYYSPGGAGSDTLVRYFANEPFADFHRVEGLQGVYIATLINGSMNEENMRSVITFDKGGTWEFLQAPAFTG
YGEKINCELSQGCSLHLAQRLSQLLNLQLRRMPILSKESAPGLIIATGSVGKNLASKTNVYISSSAGARWREALP
GPHYYTWGDHGGIITAIAQGMETNELKYSTNEGETWKTFIFSEKPVFVYGLLTEPGEKSTVFTIFGSNKENVHSW
LILQVNATDALGVPCTENDYKLWSPSDERGNECLLGHKTVFKRRTPHATCFNGEDFDRPVVVSNCSCTREDYECD
FGFKMSEDLSLEVCVPDPEFSGKSYSPPVPCPVGSTYRRTRGYRKISGDTCSGGDVEARLEGELVPCPLAEENEF
ILYAVRKSIYRYDLASGATEQLPLTGLRAAVALDFDYEHNCLYWSDLALDVIQRLCLNGSTGQEVIINSGLETVE
ALAFEPLSQLLYWVDAGFKKIEVANPDGDFRLTIVNSSVLDRPRALVLVPQEGVMFWTDWGDLKPGIYRSNMDGS
AAYHLVSEDVKWPNGISVDDQWIYWTDAYLECIERITFSGQQRSVILDNLPHPYAIAVFKNEIYWDDWSQLSIFR
ASKYSGSQMEILANQLTGLMDMKIFYKGKNTGSNACVPRPCSLLCLPKANNSRSCRCPEDVSSSVLPSGDLMCDC
PQGYQLKNNTCVKEENTCLRNQYRCSNGNCINSIWWCDFDNDCGDMSDERNCPTTICDLDTQFRCQESGTCIPLS
YKCDLEDDCGDNSDESHCEMHQCRSDEYNCSSGMCIRSSWVCDGDNDCRDWSDEANCTAIYHTCEASNFQCRNGH
CIPQRWACDGDTDCQDGSDEDPVNCEKKCNGFRCPNGTCIPSSKHCDGLRDCSDGSDEQHCEPLCTHFMDFVCKN
RQQCLFHSMVCDGIIQCRDGSDEDAAFAGCSQDPEFHKVCDEFGFQCQNGVCISLIWKCDGMDDCGDYSDEANCE
NPTEAPNCSRYFQFRCENGHCIPNRWKCDRENDCGDWSDEKDCGDSHILPFSTPGPSTCLPNYYRCSSGTCVMDT
WVCDGYRDCADGSDEEACPLLANVTAASTPTQLGRCDRFEFECHQPKTCIPNWKRCDGHQDCQDGRDEANCPTHS
TLTCMSREFQCEDGEACIVLSERCDGFLDCSDESDEKACSDELTVYKVQNLQWTADFSGDVTLTWMRPKKMPSAS
CVYNVYYRVVGESIWKTLETHSNKTNTVLKVLKPDTTYQVKVQVQCLSKAHNTNDFVTLRTPEGLPDAPRNLQLS
LPREAEGVIVGHWAPPIHTHGLIREYIVEYSRSGSKMWASQRAASNFTEIKNLLVNTLYTVRVAAVTSRGIGNWS
DSKSITTIKGKVIPPPDIHIDSYGENYLSFTLTMESDIKVNGYVVNLFWAFDTHKQERRTLNFRGSILSHKVGNL
TAHTSYEISAWAKTDLGDSPLAFEHVMTRGVRPPAPSLKAKAINQTAVECTWTGPRNVVYGIFYATSFLDLYRNP
KSLTTSLHNKTVIVSKDEQYLFLVRVVVPYQGPSSDYVVVKMIPDSRLPPRHLHVVHTGKTSVVIKWESPYDSPD
QDLLYAIAVKDLIRKTDRSYKVKSRNSTVEYTLNKLEPGGKYHIIVQLGNMSKDSSIKITTVSLSAPDALKIITE
NDHVLLFWKSLALKEKHFNESRGYEIHMFDSAMNITAYLGNTTDNFFKISNLKMGHNYTFTVQARCLFGNQICGE
PAILLYDELGSGADASATQAARSTDVAAVVVPILFLILLSLGVGFAILYTKHRRLQSSFTAFANSHYSSRLGSAI
FSSGDDLGEDDEDAPMITGFSDDVPMVIA

FIGURE 1729

CGAGTGACCTCGCGATCTGGCCCGGCTCCCGCTCGTCGCAACAGCGTGACTACAGGGTATGGCGGGGTCCGGGCA
CTGTGCGGCTGGACCCCCAGTTCTGGGGCCACGCCGCGGAACCGCTTACTGCTGCAGCTTTTGGGGTCGCCCGGC
CGCCGCTATTACAGTCTTCCCCCCGCATCAGAAGGTTCCATTGCCTTCTCTTTCCCCCACAATGCAGGCAGGCACC
ATAGCCCGTTGGAAAAAAAAAAGAGGGGGACAAAATCAATGAAGGTGACCTAATTGCAGAGGTTGAAACTGATAAA
GCCACTGTTGGATTTGAGAGCCTGGAGGAGTGTTATATGGCAAAGATACTTGTTGCTGAAGGTACCAGGGATGTT
CCCATCGGAGCGATCATCTGTATCACAGTTGGCAAGCCTGAGGATATTGAGGCCTTTAAAAATTATACACTGGAT
TCCTCAGCAGCACCTACCCCACAAGCGGCCCCAGCACCAACCCCTGCTGCCACTGCTTCGCCACCTACACCTTCT
GCTCAGGCTCCTGGTAGCTCATATCCCCCTCACATGCAGGTACTTCTTCCTGCCCTCTCTCCCACCATGACCATG
GGCACAGTTCAGAGATGGGAAAAAAAAGTGGGTGAGAAGCTAAGTGAAGGAGACTTACTGGCAGAGATAGAAACT
GACAAAGCCACTATAGGTTTTGAAGTACAGGAAGAAGGTTATCTGGCAAAAATCCTGGTCCCTGAAGGCACAAGA
GATGTCCCTCTAGGAACCCCACTCTGTATCATTGTAGAAAAAGAGGCAGATATATCAGCATTTGCTGACTATAGG
CCAACCGAAGTAACAGATTTAAAACCACAAGTGCCACCACCTACCCCACCCCCGGTGGCCGCTGTTCCTCCAACT
CCCCAGCCTTTAGCTCCTACACCTTCAGCACCCTGCCCAGCTACTCCTGCTGGACCAAAGGGAAGGGTGTTTGTT
AGCCCTCTTGCAAAGAAGTTGGCAGTAGAGAAAGGGATTGATCTTACACAAGTAAAAGGGACAGGACCAGATGGT
AGAATCACCAAGAAGGATATCGACTCTTTTGTGCCTAGTAAAGTTGCTCCTGCTCCGGCAGCTGTTGTGCCTCCC
ACAGGTCCTGGAATGGCACCAGTTCCTACAGGTGTCTTCACAGATATCCCAATCAGCAACATTCGTCGGGTTATT
GCACAGCGATTAATGCAATCAAAGCAAACCATACCTCATTATTACCTTTCTATCGATGTAAATATGGGAGAAGTT
TTGTTGGTACGGAAAGAACTTAATAAGATATTAGAAGGGAGAAGCAAAATTTCTGTCAATGACTTCATCATAAAA
GCTTCAGCTTTGGCATGTTTAAAAGTTCCCGAAGCAAATTCTTCTTGGATGGACACAGTTATAAGACAAAATCAT
GTTGTTGATGTCAGTGTTGCGGTCAGTACTCCTGCAGGACTCATCACACCTATTGTGTTTAATGCACATATAAAA
GGAGTGGAAACCATTGCTAATGATGTTGTTTCTTTAGCAACCAAAGCAAGAGAGGGTAAACTACAGCCACATGAA
TTCCAGGGTGGCACTTTTACGATCTCCAATTTAGGAATGTTTGGAATTAAGAATTTCTCTGCTATTATTAACCCA
CCTCAAGCATGTATTTTGGCAATTGGTGCTTCAGAGGATAAACTGGTCCCTGCAGATAATGAAAAAGGGTTTGAT
GTGGCTAGCATGATGTCTGTTACACTCAGTTGTGATCACCGGGTGGTGGATGGAGCAGTTGGAGCCCAGTGGCTT
GCTGAGTTTAGAAAGTACCTTGAAAAACCTATCACTATGTTGTTGTAACTAACTCAAGAATTTCTAAACTCTCCC
AGGTCACACTGATTCATTCTTAACAAGATATTTATATGTTATTAAACAGGTGGTTGCTTTTTATTTTAACCAGTT
ATTTTTATTATTGAGTCTGCTCAGATAAGTTATTTATAATGGGCATTACTGAATTTTTAAAATGCCGATTACACC
CAAATATTGTGCACATTTAATAATCAGACACCAGATTTTTAGCTCTGTACTCCTAATTAAGGGACATGTATGTGG
CCTTGCCTAGCCCTTTGGTGATAAGTACTTCCTCTAGGAAATGTACGATAGGTAGAATTGTGGTTCCCTAAAGAC
AAGTACATAAAGGTGACCCTGATGAAACCTTGAAGTTCTGAAATTTAACTGCCTAAAATGTTCTCCTTAGATGTG
AGAGAAAGAGAAATCAGAAAAATTAATTCTCTTGGGGGAAGGGCTTGAATTGAAGCTTTACTTTAGAATTTAGCC
CTGGTTTGAAATTTTCCATTACATGATCTTGGTTTATCATCGATGGGAAGGGTAGAAAACTTCAAGGAAAATAAG
TGAAATTTTAAAAGTCAGCATTTTCTTAGACCTCTTCAGCTGATTGTTTATTTTTCTATGAATTCTGTACTCAAA
ATTACACATTTGTTTAAATAAATATCCACACAAATTCTCAGTTACATCAAGTAGCTGGTTTATATTTAGATTATC
TCAAGTAGGGGGGGAATAACCATGTGTAGGAATT

FIGURE 1730A

GAGGAAAAACAGTACAGATGGGCCAAGAGCTTCAAGGAGAAGTAGTTATAATAATTACAGATCAGTACGGAAATC
AGATTCAAGCATTTTCACCAAGTTCTTTATCTTCTTTGTCAATTGCTGGGGTTGGACTTGATAGCTCAAATTTGA
AAACAACCTTTCAGGAAAACACACAGAGTATAAGTGTAAGAGGCATCAAATTTATTCCAGGTCCTCCTGGAAATA
AGGATCTTTGTTTTACTTGGCGTGAGTTTTCTGACTTTATTCGAGTGCAACTAATTTCTGGACCTCCTGCTAAAC
TTCTCCTTATAGACTGGCCAGAACTAAAGGAGTCCATTCCAGTGATTAATGGAAGAGATTTACAGAACCCTATTA
TTGTTCAACTTTGTGATCAGTGGGATAATCCAGCACCGGTACAACATGTTAAAATAAGTCTTACAAAAGCTAGCA
ATTTAAAGCTCATGCCTTCAAACCAACAGCATAAAACAGATGAGAAAGGCAGGGCTAATTTGGGAGTATTCAGTG
TTTTTGCCCCTAGGGGAGAGCATACTCTTCAGGTTAAAGCCATCTATAACAAAAGTATCATAGAAGGACCTATAA
TTAAGTTAATGATTCTTCCAGACCCAGAAAAACCCGTTCGTCTCAATGTTAAATATGACAAAGATGCATCCTTCT
TAGCAGGGGGTCTTTTCACTGATTTTATGATTAGTGTTATTTCTGAAGATGACAGTATCATTAAAAACATTAATC
CAGCACGTATTTCCATGAAAATGTGGAAGCTGTCTACCAGTGGGAACCGACCCCCAGCAAATGCAGAAACATTTA
GTTGTAATAAAATAAAAGATAATGACAAAGAAGATGGCTGCTTCTATTTCAGGGATAAAGTAATTCCTAATAAAG
TGGGGACATATTGTATCCAGTTTGGTTTTATGATGGATAAAACAAATATTCTCAACAGTGAACAGGTTATAGTTG
AAGTCCTGCCTAATCAACCTGTGAAGTTAGTACCTAAAATTAAACCACCTACACCAGCTGTTTCAAATGTTCGCT
CAGTTGCCAGTAGGACCTTGGTCAGAGATCTACATCTTAGTATCACGGATGACTACGACAACCATACTGGAATTG
ATTTGGTTGGCACTATAATAGCCACCATTAAAGGCTCTAATGAGGAAGATACTGATACCCCACTTTTTATTGGGA
AAGTTAGAACACTTGAATTCCCCTTCGTGAATGGTTCGGCTGAAATCATGAGTCTGGTGCTGGCAGAAAGTAGTC
CTGGAAGGGATAGTACTGAATATTTTATTGTATTTGAGCCCCGGCTACCACTTTTATCAAGAACCTTAGAACCAT
ATATCCTACCGTTCATGTTTTACAATGATGTTAAGAAGCAGCAACAAATGGCAGCACTTACAAAAGAAAAGGACC
AATTATCTCAGTCTATTGTTATGTATAAAAGTTTATTTGAAGCCAGCCAACAGCTTCTTAATGAAATGAAATGTC
AAGTTGAAGAAGCAAGATTAAAAGAGGCCCAATTGCGAAATGAACTAAAAATACATAATATTGACATTCCTACAA
CACAACAGGTGCCACACATTGAAGCACTTCTGAAAAGAAAGCTATCAGAACAAGAAGAACTGAAGAAAAAACCTA
GAAGATCGTGTACTCTTCCAAACTATACTAAAGGCAGTGGAGATGTTTTGGGAAAGATTGCACATCTAGCACAAA
TTGAAGATGATAGAGCTGCGATGGTTATTTCTTGGCATCTGGCAAGTGACATGGACTGTGTAGTCACCCTAACCA
CTGACGCTGCACGTCGTATCTATGATGAAACCCAAGGTCGTCAGCAGGTGTTGCCCCTTGATTCTATTTACAAGA
AGACTCTTCCAGATTGGAAAAGATCTCTACCTCATTTCCGAAATGGAAAATTGTATTTTAAACCCATTGGAGATC
CAGTCTTTGCTCGAGACTTGTTAACATTTCCAGATAATGTAGAACATTGTGAAACAGTATTTGGTATGCTGTTAG
GAGACACCATTATTTTGGATAATCTGGATGCGGCCAATCATTATAGAAAAGAGGTTGTTAAAATTACACACTGTC
CTACACTGCTGACCAGAGATGGAGATCGAATTCGAAGTAATGGAAAGTTTGGGGGCCTTCAGAATAAAGCTCCTC
CAATGGATAAACTTCGGGGAATGGTATTTGGAGCTCCAGTTCCAAAACAGTGTCTGATCTTAGGGGAACAAATAG
ATCTTCTTCAGCAGTATCGTTCTGCTGTGTGCAAACTAGACAGTGTGAATAAGGATCTTAACAGTCAATTAGAGT
ACCTTCGCACTCCGGATATGAGGAAGAAAAAGCAAGAACTTGATGAACATGAGAAAAATCTCAAACTAATAGAGG
AAAAACTAGGTATGACTCCCATACGTAAGTGTAATGACTCATTGCGTCATTCACCAAAGGTTGAGACGACAGATT
GTCCAGTTCCTCCTAAAAGAATGAGACGAGAAGCTACAAGACAAAATAGGATTATAACCAAAACAGATGTA**TGA**G
AGGTGACAGAGAGAAGAGGCCATTGGTCTCAGTAAGAATGCCCTGCTTTCTGCATCTCTGTTTCAGAAGACCAAG
AGGGTGACTTACCAGACTGAGTATTTCTGGGGACAATACAAGTACCTGGGCATGAATTTCCATTTCGATTCAGAT
GGGACTGGAAACAACCATTCAATTTTATGAATCTTACTGGACATTATGGATTTACTGGAATTATTCCAGACATTA
TGCCCTTTGGTTGTCACTACCTTGCAAATGTGTAAGAGGAAAATGTGCTAATGTGGCAGTGACTGTAAAACTGGC
ACATGGCATTTATTAATCCTGAAGAAAAGTACATGTACTATTTTTCAGTATAAATATAATGAACATGTCAGAACT
ATTTCTTGAAAACCTTTTTATTACTTTTGCGTGAATTTATTTAACAAAGATGTTTTGTCTTTTGTGTAAGGGAGG
TTCTAGAGGCTAGATGTTTAATTGTAAATATGTGAGGAAACTCAATGCAGAATTCAGGATAAAAATTTTAAAAGC
ACAGGTATTTGGGAATTGAAATGTTAAGATACCCAGAACAACATTAAATCAATGAGTGAACTTGTGACAGTGGTA
GCATTTCAAATTTCAAAAGACTTATCCTGTGTGTGTGTGTGTGTGTATATATATATATATATATAAATATATATA
TATAAAATATTCAGCAGCACCAAGTTTTATAACTATTGTTTGTTTGACTTTATTAATACTAGAATATGTAGTCTC
AGCCTTAATTTTACATTTACATTATTTTGTAATTTTTTATTACTATTTTTAAGGGGTTAAAGAGAACATACATTC
TCACATTAGTGTACTTTCTGGTAGAAAGTTGCTGCAAAAACATTTGAAATGTATATTAACCTAATGTATGTCATA
TATATGTCTTTGTGTAAGTTCAAGACTATTGATCTGTGAAGTTATTTTGTAAGGACATACATTTGGTAAGTAAGT
TTGTGTCCCAGGAAATGTATGTGTTTTTAAACCCTTTCTAAATATGCAGGCCATTAATAAATAAGATTGTTTCTT

FIGURE 1730B

CCCTACTGAATAGATAAGTGTTTTTCTTTTTTAAAATTGGAAGCTTCATAAAAGTTATCTTGTTAAAAAACGATG
ATGATGTTAACCTATCTTTATAATTGGAAATTATTTAAACTGTTTGTTGTTACAGAAGAAACAAAATGGTAATTA
CAGAATTAGCTGTGGGGAAGATTGGCTCCCATGGTACTACAGGTTGAGTATCCCTTATTCAAAATGGTTGGGACC
TGAAGTGTTTTGGATTTTGGTTTTTTGTGGGGTTTTTAAATTATTATTTTGGAATATTTGCATTATATTTACCAA
TTTAGCATCCCTAATCCAAAAATCTTTCATTAGAAATTGGAAATGCTTCAATGAGCATTTCCCTTATGTGTCATA
TCTGCGCTCAAATGTTTTGAATTTTGGAACATTTCTTGTTTCTGACTTTTAGATTAGGGATACTCACCCCGTACC
AATATTTGGAGTCCTTAGACATTAGATTATATGAAAATGATTGATTGATAGGTAAGAAAGGTTAAAGAGAAATGA
CTTTTTAGGAACTAGACTTGAACGTATAATTAATATGTGGAACTAGTTTGCTTTTATAATTCATTGTATCAAGAA
GGAGTCATGTTTTAAATCCAAGGCATTGAGACTATCTAGAAGCAAAAAAGTTGGTTTTAAAAATTCTTTTTATTA
GAAGTGTGTTTAAAAACATGTCTTTTTTTCCCTTGAGCGACAGTGGCCTCACTACATTGCCCAGGCTAGTCTTGA
ACTCCTGGGTTCAAGCAGTCTTCCTGCCTTGGCCTCCTAAGTAGCAGGGATTACAGGCATGCACCCACATGCCAA
TTTTTATTGCTTAAAATGGCGAGTTCTATGGATATTATCTAGCCCCAAGCCCATATCTGTACACTTTTGTTCATT
TTATAATACCAGAAAGAATGTTCTATCAGTAAAAGAAGGTTTTAAGTATGAATCTCCATTTTTGTGGAGTTTTTC
TACCCTGTAAAAATTAACTTTGTGGTTCCCAGTAATTACAGTAAGGAGTTTTTCTATATTTTCACAGTTGGATTT
ATCTAAGGATATTTCTCAGCATATTAAGGAATCCTTTTCTACATTTGAGCAAATACTGAGGTTCATGTTGTACCA
AATAATAATAAATTGCTTTTGTGTTTAATATGTAACACGTAAGAACAATTGAAATTTTCTTCTAAGATTTAATAC
TAGTCTTTTAGTATAAAGGAATGTAACTGGAGAAAAAAATTAATGCTACAGCCATTTATCCTGTGTTATGTGTTA
TATAATCTGAAATTTGTCACAATGTTACAATCAGGAAGTTTTTTTTCTGGTTTCTTCTTCCAAAGGAAAATAATA
GCCTACTTGTATTTTGAAGTAACTGAAATAAAACTCTCTCCAAGCCTTTTTGC

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FIGURE 1731

GKTVQMGQELQGEVVIIITDQYGNQIQAFSPSSLSSLSIAGVGLDSSNLKTTFQENTQSISVRGIKFIPGPPGNK
DLCFTWREFSDFIRVQLISGPPAKLLLIDWPELKESIPVINGRDLQNPIIVQLCDQWDNPAPVQHVKISLTKASN
LKLMPSNQQHKTDEKGRANLGVFSVFAPRGEHTLQVKAIYNKSIIEGPIIKLMILPDPEKPVRLNVKYDKDASFL
AGGLFTDFMISVISEDDSIIKNINPARISMKMWKLSTSGNRPPANAETFSCNKIKDNDKEDGCFYFRDKVIPNKV
GTYCIQFGFMMDKTNILNSEQVIVEVLPNQPVKLVPKIKPPTPAVSNVRSVASRTLVRDLHLSITDDYDNHTGID
LVGTIIATIKGSNEEDTDIPLFIGKVRTLEFPFVNGSAEIMSLVLAESSPGRDSTEYFIVFEPRLPLLSRTLEPY
ILPFMFYNDVKKQQQMAALTKEKDQLSQSIVMYKSLFEASQQLLNEMKCQVEEARLKEAQLRNELKIHNIDIPTT
QQVPHIEALLKRKLSEQEELKKKPRRSCTLPNYTKGSGDVLGKIAHLAQIEDDRAAMVISWHLASDMDCVVTLTT
DAARRIYDETQGRQQVLPLDSIYKKTLPDWKRSLPHFRNGKLYFKPIGDPVFARDLLTFPDNVEHCETVFGMLLG
DTIILDNLDAANHYRKEVVKITHCPTLLTRDGDRIRSNGKFGGLQNKAPPMDKLRGMVFGAPVPKQCLILGEQID
LLQQYRSAVCKLDSVNKDLNSQLEYLRTPDMRKKKQELDEHEKNLKLIEEKLGMTPIRKCNDSLRHSPKVETTDC
PVPPKRMRREATRQNRIITKTDV

FIGURE 1732A

AGAGGAGGAAATTGTTCCTCGTCTGATAAGACAACAGTGGAGAAAGGACGCATGCTGTTTCTTAGGGACACGGCT
GACTTCCAGATATGACC**ATG**TATTTGTGGCTTAAACTCTTGGCATTTGGCTTTGCCTTTCTGGACACAGAAGTAT
TTGTGACAGGGCAAAGCCCAACACCTTCCCCCACTGGATTGACTACAGCAAAGATGCCCAGTGTTCCACTTTCAA
GTGACCCCTTACCTACTCACACCACTGCATTCTCACCCGCAAGCACCTTTGAAAGAGAAAATGACTTCTCAGAGA
CCACAACTTCTCTTAGTCCAGACAATACTTCCACCCAAGTATCCCCGGACTCTTTGGATAATGCTAGTGCTTTTA
ATACCACAGGTGTTTCATCAGTACAGACGCCTCACCTTCCCACGCACGCAGACTCGCAGACGCCCTCTGCTGGAA
CTGACACGCAGACATTCAGCGGCTCCGCCGCCAATGCAAAACTCAACCCTACCCCAGGCAGCAATGCTATCTCAG
ATGCCTACCTTAATGCCTCTGAAACAACCACTCTGAGCCCTTCTGGAAGCGCTGTCATTTCAACCACAACAATAG
CTACTACTCCATCTAAGCCAACATGTGATGAAAAATATGCAAACATCACTGTGGATTACTTATATAACAAGGAAA
CTAAATTATTTACAGCAAAGCTAAATGTTAATGAGAATGTGGAATGTGGAAACAATACTTGCACAAACAATGAGG
TGCATAACCTTACAGAATGTAAAAATGCGTCTGTTTCCATATCTCATAATTCATGTACTGCTCCTGATAAGACAT
TAATATTAGATGTGCCACCAGGGGTTGAAAAGTTTCAGTTACATGATTGTACACAAGTTGAAAAAGCAGATACTA
CTATTTGTTTAAAATGGAAAAATATTGAAACCTTTACTTGTGATACACAGAATATTACCTACAGATTTCAGTGTG
GTAATATGATATTTGATAATAAAGAAATTAAATTAGAAAACCTTGAACCCGAACATGAGTATAAGTGTGACTCAG
AAATACTCTATAATAACCACAAGTTTACTAACGCAAGTAAAATTATTAAAACAGATTTTGGGAGTCCAGGAGAGC
CTCAGATTATTTTTTGTAGAAGTGAAGCTGCACATCAAGGAGTAATTACCTGGAATCCCCCTCAAAGATCATTTC
ATAATTTTACCCTCTGTTATATAAAAGAGACAGAAAAAGATTGCCTCAATCTGGATAAAAACCTGATCAAATATG
ATTTGCAAAATTTAAAACCTTATACGAAATATGTTTTATCATTACATGCCTACATCATTGCAAAAGTGCAACGTA
ATGGAAGTGCTGCAATGTGTCATTTCACAACTAAAAGTGCTCCTCCAAGCCAGGTCTGGAACATGACTGTCTCCA
TGACATCAGATAATAGTATGCATGTCAAGTGTAGGCCTCCCAGGGACCGTAATGGCCCCCATGAACGTTACCATT
TGGAAGTTGAAGCTGGAAATACTCTGGTTAGAAATGAGTCGCATAAGAATTGCGATTTCCGTGTAAAAGATCTTC
AATATTCAACAGACTACACTTTTAAGGCCTATTTTCACAATGGAGACTATCCTGGAGAACCCTTTATTTTACATC
ATTCAACATCTTATAATTCTAAGGCACTGATAGCATTTCTGGCATTTCTGATTATTGTGACATCAATAGCCCTGC
TTGTTGTTCTCTACAAAATCTATGATCTACATAAGAAAAGATCCTGCAATTTAGATGAACAGCAGGAGCTTGTTG
AAAGGGATGATGAAAAACAACTGATGAATGTGGAGCCAATCCATGCAGATATTTTGTTGGAAACTTATAAGAGGA
AGATTGCTGATGAAGGAAGACTTTTTCTGGCTGAATTTCAGAGCATCCCGCGGGTGTTCAGCAAGTTTCCTATAA
AGGAAGCTCGAAAGCCCTTTAACCAGAATAAAAACCGTTATGTTGACATTCTTCCTTATGATTATAACCGTGTTG
AACTCTCTGAGATAAACGGAGATGCAGGGTCAAACTACATAAATGCCAGCTATATTGATGGTTTCAAAGAACCCA
GGAAATACATTGCTGCACAAGGTCCCAGGGATGAAACTGTTGATGATTTCTGGAGGATGATTTGGGAACAGAAAG
CCACAGTTATTGTCATGGTCACTCGATGTGAAGAAGGAAACAGGAACAAGTGTGCAGAATACTGGCCGTCAATGG
AAGAGGGCACTCGGGCTTTTGGAGATGTTGTTGTAAAGATCAACCAGCACAAAAGATGTCCAGATTACATCATTC
AGAAATTGAACATTGTAAATAAAAAAGAAAAAGCAACTGGAAGAGAGGTGACTCACATTCAGTTCACCAGCTGGC
CAGACCACGGGGTGCCTGAGGATCCTCACTTGCTCCTCAAACTGAGAAGGAGAGTGAATGCCTTCAGCAATTTCT
TCAGTGGTCCCATTGTGGTGCACTGCAGTGCTGGTGTTGGGCGCACAGGAACCTATATCGGAATTGATGCCATGC
TAGAAGGCCTGGAAGCCGAGAACAAAGTGGATGTTTATGGTTATGTTGTCAAGCTAAGGCGACAGAGATGCCTGA
TGGTTCAAGTAGAGGCCCAGTACATCTTGATCCATCAGGCTTTGGTGGAATACAATCAGTTTGGAGAAACAGAAG
TGAATTTGTCTGAATTACATCCATATCTACATAACATGAAGAAAAGGGATCCACCCAGTGAGCCGTCTCCACTAG
AGGCTGAATTCCAGAGACTTCCTTCATATAGGAGCTGGAGGACACAGCACATTGGAAATCAAGAAGAAAATAAAA
GTAAAAACAGGAATTCTAATGTCATCCCATATGACTATAACAGAGTGCCACTTAAACATGAGCTGGAAATGAGTA
AAGAGAGTGAGCATGATTCAGATGAATCCTCTGATGATGACAGTGATTCAGAGGAACCAAGCAAATACATCAATG
CATCTTTTATAATGAGCTACTGGAAACCTGAAGTGATGATTGCTGCTCAGGGACCACTGAAGGAGACCATTGGTG
ACTTTTGGCAGATGATCTTCCAAAGAAAAGTCAAAGTTATTGTTATGCTGACAGAACTGAAACATGGAGACCAGG
AAATCTGTGCTCAGTACTGGGGAGAAGGAAAGCAAACATATGGAGATATTGAAGTTGACCTGAAAGACACAGACA
AATCTTCAACTTATACCCTTCGTGTCTTTGAACTGAGACATTCCAAGAGGAAAGACTCTCGAACTGTGTACCAGT
ACCAATATACAAACTGGAGTGTGGAGCAGCTTCCTGCAGAACCCAAGGAATTAATCTCTATGATTCAGGTCGTCA
AACAAAAACTTCCCCAGAAGAATTCCTCTGAAGGGAACAAGCATCACAAGAGTACACCTCTACTCATTCACTGCA
GGGATGGATCTCAGCAAACGGGAATATTTTGTGCTTTGTTAAATCTCTTAGAAAGTGCGGAAACAGAAGAGGTAG
TGGATATTTTTCAAGTGGTAAAAGCTCTACGCAAAGCTAGGCCAGGCATGGTTTCCACATTCGAGCAATATCAAT

FIGURE 1732B

TCCTATATGACGTCATTGCCAGCACCTACCCTGCTCAGAATGGACAAGTAAAGAAAAACAACCATCAAGAAGATA
AAATTGAATTTGATAATGAAGTGGACAAAGTAAAGCAGGATGCTAATTGTGTTAATCCACTTGGTGCCCCAGAAA
AGCTCCCTGAAGCAAAGGAACAGGCTGAAGGTTCTGAACCCACGAGTGGCACTGAGGGGCCAGAACATTCTGTCA
ATGGTCCTGCAAGTCCAGCTTTAAATCAAGGTTCATAGGAAAAGACATAAATGAGGAAACTCCAAACCTCCTGTT
AGCTGTTATTTCTATTTTTGTAGAAGTAGGAAGTGAAAATAGGTATACAGTGGATTAATTAAATGCAGCGAACCA
ATATTTGTAGAAGGGTTATATTTTACTACTGTGGAAAAATATTTAAGATAGTTTTGCCAGAACAGTTTGTACAGA
CGTATGCTTATTTTAAAATTTTATCTCTTATTCAGTAAAAAACAACTTCTTTGTAATCGTTATGTGTGTATATGT
ATGTGTGTATGGGTGTGTGTTTGTGTGAGAGACAGAGAAAGAGAGAGAATTCTTTCAAGTGAATCTAAAAGCTTT
TGCTTTTCCTTTGTTTTTATGAAGAAAAAATACATTTTATATTAGAAGTGTTAACTTAGCTTGAAGGATCTGTTT
TTAAAAATCATAAACTGTGTGCAGACTCAATAAAATCATGTACATTTCTGAAATGACCTCAAGATGTCCTCCTTG
TTCTACTCATATATATCTATCTTATATACTTACTATTTTACTTCTAGAGATAGTACATAAAGGTGGTATGTGTGT
GTATGCTACTACAAAAAAGTTGTTAACTAAATTAACATTGGGAAATCTTATATTCCATATATTAGCATTTAGTCC
AATGTCTTTTTAAGCTTATTTAATTAAAAAATTTCCAGTGAGCTTATCATGCTGTCTTTACATGGGGTTTTCAAT
TTTGCATGCTCGATTATTCCCTGTACAATATTTAAAATTTATTGCTTGATACTTTTGACAACAAATTAGGTTTTG
TACAATTGAACTTAAATAAATGTCATTAAAATAAATAAATGCAATATGTATTAATATTCATTGTATAAAAATAGA
AGAATACAAACATATTTGTTAAATATTTACATATGAAATTTAATATAGCTATTTTTATGGAATTTTTCATTGATA
TGAAAAATATGATATTGCATATGCATAGTTCCCATGTTAAATCCCATTCATAACTTTCATTAAAGCATTTACTTT
GAATTTC

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FIGURE 1733

MYLWLKLLAFGFAFLDTEVFVTGQSPTPSPTGKN

FIGURE 1734

TTAAGCACTTGTTTTGGGTACAAGGCATTTCTGACATTTTATAAACCTACATTTAAGGGGAATTTT**TAA**AGGAAA
TGTTTTTTCTTTTTTTTTTGTTTTTCGAGGGGGCAAGGAGGGACAGAAAAGTAACCTCTTCTTAAGTGGAATATT
CTAATAAGCTACCTTTTGTAAGTGCCATGTTTATTATCTAATCATTCCAAGTTTTGCATTGATGTCTGACTGCCA
CTCCTTTCTTTCAAGGACAGTGTTTTTTGTAGTAAAATCACTGGTTTATACAAAGCTTTATTTAGGGGGTAAAGT
TAAGCTGCTAAAACCCCATGTTGGCTGCTGCTGTTGAGATACTGTGCTTTGGGAGTAAAAAAAGAAAGTTATTTC
TTTGTCTTAAAGAATTTTTAAAAAATTAGTCATGAGACTTATTCATCTTTCCAGGGAACATACTGATTGGTCTTA
AAAGACTAGACAGTTAAGTAAAAGGTGGCTGGAACATCTATTTTTCTACAAAACTGGAAAAATGAACCTGGTTCT
AGAAGAATGTACACCAAAATAAAACATGTGAAGCAGTATTGATTCTTT

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FIGURE 1735

LSTCFGYKAFLTFYKPTFKGNF

FIGURE 1736

GCACGAGCATAGACTTTTAAACTGGTACGGTTCTTAGAG**ATG**GTCCTTGGCCTTCTGTTGTTGTTGTKGTTTTTT
TCTTTTTCTTCTTCTCCTTCTCCTTCTTCTTCTCTTCTCCTTCTTTCTTCTTTTTTTTTTCAGAGTCTTGCTCTG
TCACCAAGACTGGAG**TGA**AGTGATGTGATCTCGGCTTACTGCAACCTGGGAGGCAGAGGTTGCAGTGAGTCGAGA
TGGTGCCATTGCTCTCGTTTGGGCAACAAGAGTGAAACTCTTGTCTCAAAAAAAAAAAAAAAAATGAGGTTTAAGA
CAGTTTTGTCATTACTGGTGGGATCTGGTCACACAAGATAGCATTAAACGTGACATGGCACATAAAATTGGTTAA
AAAATTTTGTTTTTTAATTACGTAATGTAAAAGCCCAACAAACACTTTATGCAAGATTGGAATGTATCTTCAAAT
TCAGATTTAATAAACATGTAAAGATCCTCTGTATATAAAAGTTGTATTTAATCCCTTGTGCCCCAAGAATGCTAT
AAAAGATCCCAAGAATGTTATCTATGAAAAGATAGCAATAGGGAATGGTGAACAAATAATTTAATTTGCCAATTC
TAAAAAACATGGACTTAAACCCCATGAAAACTTGGTTCCATAGTTTTAACTGTTTTATGGTTCCAATACAAAACC
AGAGTGGTTTACATTCCACAATXACCAAATTTGCATCCAATXTTGGGGTAATTTTXGGTATTTGCCATGGGATAC
TATTCATTTTT

FIGURE 1737

MVLGLLLLLXFFSFSSSPSPSSSLLLLSSFFFQSLALSPRLE

FIGURE 1738A

GGCGCGGTCGAGGCCCGGAGGCGGCGGCGCAGGAGGAAGCGGAGGAGGTCGGGCGCTCGGGGCCCGGGAGGCGGG
CCGCGCAGCGCCGCAGCCCCGGGCTCGCCATGCTCCTGGCCTCGGCCGTGGTGGTCTGGGAATGGCTGAACGAGC
ACGGCCGCTGGCGTCCCTACAGCCCAGCGGTGAGCCACCACATCGAGGCGGTGGTCCGCGCCGGCCCCCGCGCGG
GGGGCAGCGTGGTGCTGGGCCAGGTGGACAGCCGTCTCGCGCCCTACATCATCGACCTGCAGTCCATGAACCAGT
TCCGCCAAGACACGGGAACTCTCCGCCCAGTTCGCCGCAACTACTACGACCCCTCCTCGGCCCCTGGGAAGGGCG
TGGTGTGGGAGTGGGAGAACGACAATGGCTCCTGGACGCCCTACGACATGGAAGTGGGCATCACCATCCAGCATG
CCTATGAGAAGCAGCACCCCTGGATCGACCTCACTTCCATTGGCTTTAGCTACGTAATTGACTTCAACACCATGG
GCCAGATCAACCGTCAGACCCAGCGCCAACGCCGCGTCCGCCGGCGCCTCGACCTCATCTACCCCATGGTCACAG
GGACCTTGCCTAAGGCTCAGTCCTGGCCAGTCAGCCCTGGGCCAGCCACCTCGCCCCCCATGTCCCCCTGCTCCT
GTCCCCAGTGTGTCTTGGTGATGAGTGTTAAGGCAGCCGTGGTCAATGGCAGCACTGGGCCCCTACAGCTGCCAG
TGACCCGCAAGAACATGCCGCCTCCTGGAGTGGTCAAGCTACCCCCACTGCCAGGCTCTGGGGCCAAGCCACTGG
ACAGCACAGGCACCATTCGAGGCCCACTGAAGACCGCCCCATCGCAGGTGATCCGGAGACAAGCCTCCAGCATGC
CCACTGGGACAACCATGGGCTCTCCTGCCAGTCCCCCAGGACCCAACAGCAAGACCGGAAGGGTGGCCCTGGCCA
CCTTGAATCGTACCAACCTGCAGCGACTGGCCATTGCCCAGTCCCGGGGTGCTGATCGCCTCTGGGGTCCCCACAG
TCCCAGTGAAGAACCTAAATGGGTCCAGTCCTGTCAACCCTGCCTTGGCAGGAATCACTGGGATCCTCATGAGTG
CAGCGGGGCTGCCTGTGTGTCTCACCAGGCCACCAAAGCTGGTCCTACACCCACCCCCCGTCAGCAAGAGTGAAA
TAAAATCCATCCCAGGGGTTTCCAACACAAGCCGCAAGACCACCAAAAAACAAGCCAAGAAAGGTAAAACCCCAG
AGGAAGTGCTAAAAAAATATCTACAGAAAGTCCGGCACCCACCAGATGAGGACTGCACCATCTGTATGGAACGCC
TCACGGCCCCCTCAGGCTACAAGGGCCCGCAGCCTACGGTAAAACCTGACCTGGTAGGGAAGCTGTCCAGATGCG
GCCACGTCTACCACATCTACTGCTTGGTTGCCATGTACAACAATGGGAACAAGGATGGAAGTTTGCAGTGTCCAA
CCTGCAAGACCATTTATGGGGTGAAGACAGGCACCCAACCTCCAGGGAAGATGGAGTACCACCTCATCCCCCACT
CCTTGCCTGGCCACCCAGACTGCAAAACCATCCGGATCATCTACAGCATCCCCCCCGGCATTCAGGGACCGGAAC
ACCCGAATCCTGGGAAGAGTTTCAGCGCCCGAGGCTTCCCACGACACTGTTACCTTCCGGACAGCGAGAAAGGGA
GAAAAGTTCTGAAGCTGCTGCTCGTGGCCTGGGATCGCCGCCTCATTTTTGCCATTGGCACCTCCAGCACCACAG
GCGAGTCAGACACCGTCATCTGGAATGAGGTCCACCACAAGACAGAGTTTGGCTCTAATCTCACTGGCCATGGCT
ACCCAGATGCCAATTACCTGGATAATGTGCTGGCTGAACTGGCTGCCCAGGGCATCTCTGAGGACAGCACTGCCC
AGGAGAAGGAC**TGA**GGCCAGAAAAGCTTTGAGGTGGGAGGGGCCATGGAGACTGCAGGACAGGAAGTGAGGAGAG
TGAGTCAATGTAGAAGAAGTTGGTGTCCTGCCCTCCCAACTTTCTATCCTCCCCTCCTGCCCTGTGTCCATCCCT
CATCCCTCCCAACCACAGTGGGAGCCAGACTGAATATAGCGACATCATTCATAAATCTCATCCAACACAAAGGGA
GATGGGATGAGGGCCATCCTGGGTCTGTTCCCATGGAGTTTTTGGTGCTGGGTAGGCAGGAATCCCCTCCCTACC
CCACCTCCCAAGTAGGGGCATGGTCAGCACACCTAGGGTATGGGCAGTGCTTAGGCACTCCATATCCTGGCTTTG
GGAAGCCGGGGTTTCTTGCCTCAGCCGGCTTCTTGCTACTTCCACTCTGCTTTGAGACTGGAGTTTCTGCTATTC
TCCCTCTGCTGGAGGCAGGGAGCTCTCACTGTGCAAGGTTGGGGGGTGGGCAAAGGGGTGAATCACTAAACTGCT
GTGACATCAGAAACTGATGCCTTGGTGTAGAGCAAGGAAGCACTTCTTCCCAAGAGGGTCGGAGAAGGAAAAGCC
TCTGGGAGCACATTCTGCTGTCATCACAGTCCTTGGCTTCTCTGGGCCCTCCTCTCCTCCTCACAGCTCTCACCT
GTCCAAAGAGGCATCTGGTTCTCTCATGTGGATGGATGGACTCTGGGGTTCCTCTTTGGAGTGGCATCCCATGAT
GCTGTTTCTAGACCCTCTCTGATCAAACCAGAGCCTGCATCCCACTGAGCATCTGAACTGTCCTCAGGGAGAGGA
GCCCACAGCCTTCTTCCCAACTCATTCTAGACCAGCTCAAAGATTCCATGAGTTTCATCGAGTCACTGTGAGTGG
AGCCCATGCTGGGCTCTGTGCCCTCTGTGTCTGTGCATGCGCGTGTGTGTGTGGGCGTGTGTGCATTGCTGGGCC
AGCTTGAAGGGAAGGCCCGTCATGTCCCTGCACTCTGTTTTGCAAGATGCCAAACCCCAGTTCTGATGGGGCTCC
AACAGCCAGGCTGTGGTCCTTTGACGTTCCTCACCTGTTGCCAACCTATCCCGTAGTGAACTGAAACCCCAATGA
AGACAGAACTGTGCCTGGGGAGATGCAATGAGGTGAGGGCTGAACTCATCCTTTTATATTTCTTTTCAAGATTGG
ATCAGAGCTCATCTCCATCCAGTCTTGTTTCTATGAAGGCTTCAATCTGTTTCCATGCAAATTTGCTAATCAGAG
CCCAGAGCTGCTGGGTCCCTCATCTCCCTCATCTATTATAGATTGACTTACAGCAGGGAGAGAATCTCTTTAGCT
CATTCCTAATGGGGTTGGGATCACAATATGGTCTGGTCCAATCTGCATCTTGTTGTGTCCCAAGACCCTATCTCC
TCCCCAACATTCTTATTGCCTTTGGCTCCCAGTAAGGAACGAATTGGGGGCCAGGGAGGAGAACAGGGGGGATCA
AGAAGGGAAACCCAATTCCCCCTTTGAAAGTGGGTTCTTTGAACTATGTGTTTGGGGGAAGTTCCTCTGGATACT
AATTTGAATTTATATACCTCATGTTTTGGGGGTTTGACGTATATATATATATATATATATATATGCATATATA

FIGURE 1738B

TTTCATAATATTTGGAAGGTTTTTGATGCTAGAAAAATGGAAACAAGAGAACCTTCAAAAATGGTACTTAGATGG
GAACTGGAGGCCAATCTTTCATAAAGCCAGCCCCATAGCTGCTTGCTGTTAGGCCTCCAGCCATTTTGACATTGG
GGTGGATAGTCGATTCACCTGCCTGTCAGTCGATTCACCTGCCTGTCACCCAGTTCTGTGGATGTGCTGGTGCTG
AGCCTTTGCTCTCTTTCCAAATGGTTACAGGGATGTTGATCAGCTCCACCAGAGGGAGCTCTGATGGGAGGAATT
GCTCTGCCATCCTTGTCCCTGTGTCTCCTGTCGGCAGGCAGCCATTGTATCTCACCAGCAGACCAGGAGACTGGT
CCCAAGGTTACTGCACCACAGGGCAATTTCCTGCCATAGTTAGGAAGGAAACACCTGAACTAAATGGAAGAGACA
TCCCTGCGGTGTTTAATATCACACCCATGCCCTTTGTCAGGTTACCATGTACAGAGATTACTTGGAGAGCCTCAT
GCCGTCTCTACCTTCGCACACTGGTCAAGTATCTGCTGAGCTTCTTGGCCGCAAGGATGCAGAAATAGGCTGAGG
GTCCATGGGAAGAAAGACACAATGAGGCAGTAGGAGGTGGGGAAGAAAAGAAGACAGACTTTCAAAATGGAATTA
GGCACTGGGGAGAGATCAGTTTCCCCACATCAGGGAGAAGAAGGTATAGGTGGGGAAGGGGGTGGCCAGGAGCAG
AAGGAAGAAGACTCAAGATGGAAAGGGAGCCGCTGTGCCTGTGGCAATACCACTTGGAGAGGTCGACTTCATACC
TTCAAGCCTTTTCCCCTGGGCTTTTGATTGTGTCTGTGCCCCCTTTCTTGTCCTCTCTGCAGATGCCCAGTAGGG
GCTACCTCATCCTCGTGCTGTTCTTGTGTGGCTTTCTGGGCAGTAGGGATCTTGAATTTCCTTTCTAACACTGTG
CCCGGCAAGGCGGGGAGCATTCCTCTGCCCTTTGTCTTGTGCCAACCTGGAAAGGTGCAGTCTAGATTTCAGTGA
GAACCCTGCCAGCTGAGCCCTGTGCATCTACTACCTTGACACAGAGTGTTTTCCCACTAGAAGCTCTGCTCTGCT
CTCCTGGCCCAAGTAGGGGATTCCATGCCTTCCCTTTCATGGTCTTAGCACCAGCAGCCTAGTTTCTCCCTTCCA
GAGTCTCCAGGGATGACAAATTGGATTGGAGACAAACCTCGTCAGATGCTCATCCCCTAAAAGGTTAATTGTGTA
TTTGTGGCTGCGTGTGCCTTTGTGTTTTCATTCTCTTCCCATTTTTGTACATTTTGGTCTTCTCTGTGGTTTTAT
ACTTGGTCAAAAGTACTCGTCTTGGTATTGCACTGTTGTGTGCATGAGAAAACTGGGGGGAAGGCTCACTGGTACA
AGAAAGGACCCCTGACCCCTTTCCTTCTCTGTGGTCCCCGGCATTAGATTGGGGGTTCTGGGAGAGGCAGGTGAA
TGTCCTAAGTGAATTGTTCTGTTTGTAACTGGAATGTTTTTGAAGTCTTTGGTGTTGCTCCGTGAAAGGACATCG
CCACCTGGTGCTCATGAGGTGTCTTTGCAGAACAATAAATGGCAAATGAACAACCACAAAATTGTTACTCTTGTT
GGCCTTCTGCTGTTTGTAGATTAGTGCACCTATCTGTGAGGGATTTGGGTTACCTCCCTGAGTCTGTAAGCAACC
ACAAGCCCTGCCACTGGGTGGGGGAAGTCCCTCCCCAACCACTTAAAAACAAATTTTCCACATATTACCCACCCA
CACATTTGACCTGGCTAGACTCTTTGTTTGCCTAAAGGAACAGACCACATTGCTGGGAAAATGAGTAAGTGAACG
TGTGGGAGAAAAACACTTTTAGAATCACGAATATTCACTTTTAAAGGTCTCTTTGCCTGGCTGCAATATAGTGTG
TGTTTAAATTATTTACAGGCTGTTGTTTCTCAAATAAATGTTTAATATTAATCATTCCCAAACTGACAAGAACAC
AAAAATAAAATGCAAATACAGAGCC

FIGURE 1739

RGRGPEAAAQEEAEEVGRSGPGRRAAQRRSPGLAMLLASAVVVWEWLNEHGRWRPYSPAVSHHIEAVVRAGPRAG
GSVVLGQVDSRLAPYIIDLQSMNQFRQDTGTLRPVRRNYYDPSSAPGKGVVWEWENDNGSWTPYDMEVGITIQHA
YEKQHPWIDLTSIGFSYVIDFNTMGQINRQTQRQRRVRRRLDLIYPMVTGTLPKAQSWPVSPGPATSPPMSPCSC
PQCVLVMSVKAAVVNGSTGPLQLPVTRKNMPPPGVVKLPPLPGSGAKPLDSTGTIRGPLKTAPSQVIRRQASSMP
TGTTMGSPASPPGPNSKTGRVALATLNRTNLQRLAIAQSRVLIASGVPTVPVKNLNGSSPVNPALAGITGILMSA
AGLPVCLTRPPKLVLHPPPVSKSEIKSIPGVSNTSRKTTKKQAKKGKTPEEVLKKYLQKVRHPPDEDCTICMERL
TAPSGYKGPQPTVKPDLVGKLSRCGHVYHIYCLVAMYNNGNKDGSLQCPTCKTIYGVKTGTQPPGKMEYHLIPHS
LPGHPDCKTIRIIYSIPPGIQGPEHPNPGKSFSARGFPRHCYLPDSEKGRKVLKLLLVAWDRRLIFAIGTSSTTG
ESDTVIWNEVHHKTEFGSNLTGHGYPDANYLDNVLAELAAQGISEDSTAQEKD

FIGURE 1740

ATGGCAAGTTCCCTGGCTTTCCTTCTGCTCAACTTTCATGTCTCCCTCCTCTTGGTCCAGCTGCTCACTCCTTGC
TCAGCTCAGTTTTCTGTGCTTGGACCCTCTGGGCCCATCCTGGCCATGGTGGGTGAAGACGCTGATCTGCCCTGT
CACCTGTTCCCGACCATGAGTGCAGAGACCATGGAGCTGAAGTGGGTAAGTTCCAGCCTAAGGCAGGTGGTGAAC
GTGTATGCAGATGGAAAGGAAGTGGAAGACAGGCAGAGTGCACCGTATCGAGGGAGAACTTCGATTCTGCGGGAT
GGCATCACTGCAGGGAAGGCTGCTCTCCGAATACACAACGTCACAGCCTCTGACAGTGGAAAGTACTTGTGTTAT
TTCCAAGATGGTGACTTCTATGAAAAAGCCCTGGTGGAGCTGAAGGTTGCAGCACTGGGTTCTAATCTTCACGTC
GAAGTGAAGGGTTATGAGGATGGAGGGATCCACCTGGAGTGCAGGTCCACCGGCTGGTACCCCCAACCCCAAATA
CAGTGGAGCAACGCCAAGGGAGAGAACATCCCAGCTGTGGAAGCACCTGTGGTTGCAGATGGAGTGGGCCTATAT
GAAGTAGCAGCATCTGTGATCATGAGAGGCGGCTCCGGGGAGGGTGTATCCTGCATCATCAGAAATTCCCTCCTC
GGCCTGGAAAAGACAGCCAGCATTTCCATCGCAGACCCCTTCTTCAGGAGCGCCCAGCCCTGGATCGCAGCCCTG
GCAGGGACCCTGCCTATCTTGCTGCTGCTTCTCGCCGGAGCCAGTTACTTCTTGTGGAGACAACAGAAGGAAATA
ACTGCTCTGTCCAGTGAGATAGAAAGTGAGCAAGAGATGAAAGAAATGGGATATGCTGCAACAGAGCGGGAAATA
AGCCTAAGAGAGAGCCTCCAGGAGGAACTCAAGAGGAAAAAAATCCAGTACTTGACTCGTGGAGAGGAGTCTTCG
TCCGATACCAATAAGTCAGCC**TGA**TGCTCTAATGGAAAAATGGCCCTCTTCAAGCCTGCCTGATTTTTCCTGCAT
GGGAAGAGCCCACATGTAGCCCTGAGGTTCCCTTCCCAGGACAGCTCCAGGATCGAGATCACTGTGAGTGGTTGT
GGAGTTAAGACCCCTATGGACTCCTTCCCAGCTGATTATCAGAGCCTTAGACCCAGCACTCCTTGGATTGGCTCT
GCAGAGTGTCTTGGTTGAGAGAATAACGTTGCAGTTCCCACAGGGCATGTGACTTTGAAAGAGACTAGAGGCCAC
ACTCAGTTAATAATGGGGCACAGATGTGTTCCCACCCAACAAATGTGATAAGTGATCGTGCAGCCAGAGCCAGCC
TTCCTTCAGTCAAGGTTTCCAGGCAGAGCAAATACCCTAGAGATTCTCTGTAATATTGGTAATTTGGATGAAGGA
AGCTAGAAGAATTACAGGGATGTTTTTAATCCCACTATGGACTCAGTCTCCTGGAAAAGGATCTGTCCACTCCTG
GTCATTGGTGGATGTTAAACCCATATTCCTTTCAACTGCTGCCTGCTAGGGAAAACTGCTCCTCATTATCATCAC
TATTATTGCTCACCACTGTATCCCCTCTACTGGGCAAGTGCTTGTCAAGTTCTAGTTGTTCAATAAATTTGTTAA
TAATGCTGAA

FIGURE 1741

MASSLAFLLLNFHVSLLLVQLLTPCSAQFSVLGPSGPILAMVGEDADLPCHLFPTMSAETMELKWVSSSLRQVVN
VYADGKEVEDRQSAPYRGRTSILRDGITAGKAALRIHNVTASDSGKYLCYFQDGDFYEKALVELKVAALGSNLHV
EVKGYEDGGIHLECRSTGWYPQPQIQWSNAKGENIPAVEAPVVADGVGLYEVAASVIMRGGSGEGVSCIIRNSLL
GLEKTASISIADPFFRSAQPWIAALAGTLPILLLLLAGASYFLWRQQKEITALSSEIESEQEMKEMGYAATEREI
SLRESLQEELKRKKIQYLTRGEESSSDTNKSA

FIGURE 1742A

GGAAGAAAGTAAAAACTCAAACAAGCTCATTTGATATACAAAAAGCAGAATGGCTTCGAAAATATAATCCCGAGC
AGCTCCTTCAAGATGAAGGCTACAAAAAACATATAAAACACCACTGTAATAAGGTTTTGCTTCGTGTGAGAATGC
TGTATTATCTAAAGCAAGAAGTTATTGGAAATGAGTGTCAGAAAGTATTTGATGGAGTTGATGCAAGTGACATTG
ATGTTTGGGTACCAGAACCAGACCACTCAGAAGTTCCTGCTGAGTGGTGGGATTTTGATGCTGATAAGTCACTCC
TTATTGGAGTTTTTAAACATGGATATGAAAAATATAACACTATTCGAGCAGACCCAGCATTATGCTTCTTGGAAA
GAGTGGGAAAACCTGATGAGAAAGCAGTTGCTGCTGAACAGAGAGCGAATGATTATATGGATGGGGATGTGGAAG
ATCCAGAATACAAACCTGCCCCAGCCATCTTTAAAGATGATATAGAGGATGATGTTTCCTCACCAGGAGATCTTG
TTATAGCAGATGGAGATGGTCAACTGATGGAGGGTGATAAAGTATATTGGCCTACTCAATCAGCTTTAACCACAC
GTTTGAGGCGTCTCATCACTGCATACCAGCGTACTAATAAAAACAGACAAATTCAACAGATACAACCGACTTTCT
CGGTGCCTACCAGTGTAATGCAGCCTATTTATGAGGAAGCCACTCTTAATCCTAAAATGGCAGCCAAGATAGAAA
GACAGCAAAGATGGACAAGAAGAGAAGAAGCTGACTTTTATAGGGTTGTATCTACATTTGGAGTGGTTTTTGACC
CTGACAGAGGCCAATTTGATTGGACAAAATTTAGAGCTATGGCTAGGCTACATAAGAAAACTGATGATAGTTTGG
AAAAATATTTGTACGCATTCATGTCCATGTGTCGGAGGGTTTGTCGTCTTCCTTCCAAAGAAGAATTGGTGGATC
CAAATATTTTTATCCAGCCCATCACAGAAGAACGTGCTTCTAGGACTTTGTATCGCATTGAACTTCTAAGGAAAG
TACGGGAACAGGCCCTTCGACATCCACAGTTGTTTGAACGCTTGAAGCTTTGCCATCCAAATCCAGATTTACCAG
TCTGGTGGGAATGTGGCCCTCATGATAGGGATTTGCTTATTGGTGCTGCCAAACACGGGGTGAGCCGAACAGACT
ATCACATTCTTCGTGATCCTGAACTCTCATTTATGGCAGCTCAGAGGAACTACAGTCAAAGTAAGATGGCTCATT
CAAGGACTTCTACCCCACTTCTACAGCAATATCAAGTAGCACTTTCTGCTTCTCCTCTTACCTCTCTACCTAGGC
TCCTAGATGCTAAAGGTATTATTCTAGAGGAGATGAAAGTTAAAAGTGAAAACCTTAAAGAGGAGCCTCAGTCTT
CTGAAGAAGAATCTATGTCTTCTGTGGAAACCAGGACACTGATAAAATCTGAGCCTGTAAGTCCAAAGAATGGTG
TTTTACCACAGGCTACTGGAGACCAGAAATCTGGTGGAAAATGTGAAACAGACAGACGCATGGTTGCAGCCAGAA
CAGAACCCCTAACTCCAAACCCAGCTTCTAAGAAACCAAGAGTCCACAAAAGGGGATCAGAATCTAGTTCTGATT
CTGACTCAGATTCTGAGAGATCATCTTGTTCTTCCAGATCATCTTCTTCCTCATCATCCTCTTCTTGCTCCCACT
CTCGATCAGGCTCTAGTTCTTCTTCATCTTCATCTTGTTCTTCAGCATCTTCTTCATCCTCTTCCTCCACCTCTT
CCTCCTCCTCCTCCTCTTCATCTTCATCAGAAGAAAGTGACAGTGATGAAGAAGAAGCCCAAAAACGAGAAAGTA
CTACTCACATGAAAGCCTATGATGAAGAAAGCGTCGCGTCACTGAGCACTACCCAGGATGAGACTCAGGATAGTT
TTCAGATGAACAATGGGACACCAGAGTCTGCTTATATCTTACAAGGTGGATATATGCTGGCAGCCTCGTATTGGC
CAAAGGATCGTGTGATGATCAATAGGTTGGACAGTATTTGTCAAACAGTTCTGAAAGGAAAGTGGCCTTCAGCTA
GAAGAAGTTATGATGCTAACACAGTGGCTTCTTTCTATACCACAAAACTGCTGGACAGCCCTGGAGCAGCTACAG
AATACAGCGAGCCCAGTGTACCCACTCCCCCAGGTGCCGGTGTTAAAGAAGAACATGATCAGTCAACACAGATGT
CAAAGGAAGGTGGTTTGAAGTTGACATTTCAGAAGCAAGGGCTTGCTCAGAAAAGACCATTTGATGGTGAAGACG
GTGCTCTGGGGCAGCAGCAGTACCTCACTCGGCTTCGAGAGCTTCAAAGTGCATCAGAGACCAGCCTCGTCAATT
TCCCAAAATCCATACCAGTATCAGGTACTTCCATTCAACCAACCCTTGGTGCCAATGGTGTGATATTAGACAACC
AGCCTATAGTCAAAAAAAGGCGAGGAAGGAGGAAGAATGTAGAAGGTGTTGACATCTTCTTTTTTAACAGAAATA
AACCACCTAATCATGTTTCTTTAGGCTTAACCTCCTCACAGATTTCCACAGGGATAAATCCAGCACTATCCTATA
CTCAACCTCAAGGAATTCCTGATACAGAAAGTCCAGTTCCAGTTATTAATCTTAAAGATGGAACGAGACTTGCAG
GAGATGATGCACCAAAGAGAAAGGATTTGGAAAAATGGCTTAAGGAGCACCCGGGTTATGTGGAAGATTTGGGAG
CTTTTATTCCTAGAATGCAGCTTCATGAGGGAAGACCCAAACAAAAAAGACACCGTTGCAGAAACCCCAATAAAC
TAGATGTGAATAGTCTCACTGGAGAAGAACGTGTTCAACTGATTAACAGAAGAAATGCTAGAAAGGTTGGAGGTG
CATTTGCTCCCCCTTTGAAAGATTTATGTAGATTCCTAAAAGAAAATTCAGAATATGGAGTAGCTCCTGAATGGG
GAGATGTTGTTAAGCAATCTGGATTTCTTCCAGAAAGCATGTATGAACGTATTCTCACTGGTCCCGTTGTGAGAG
AGGAAGTAAGCAGGCGGGGGAGACGGCCTAAAAGTGGAATTGCAAAGGCCACAGCAGCAGCAGCTGCTGCATCTG
CCACCAGTGTTTCAGGCAATCCTTTGTTAGCCAATGGACTACTTCCAGGTGTGGATCTCACAACTCTTCAGGCCT
TACAACAAAACCTACAAAACTTGCAGTCACTGCAAGTAACTGCTGGGTTGATGGGAATGCCTACCGGCCTTCCTT
CTGGAGGAGAAGCTAAAAACATGGCTGCTATGTTCCCCATGCTGCTGTCAGGAATGGCTGGATTACCAAATCTGT
TGGGCATGGGAGGACTCCTGACAAAGCCTACGGAATCTGGGACAGAAGACAAAAAGGGAAGTGACTCTAAGGAGT
CAGAAGGAAAAACAGAAAGGACAGAGAGCCAAAGTTCAGAGAATGGTGGAGAAAACTCTGTGTCAAGTTCTCCTT
CCGCATCCTCTACTGCTGCATTAAATACAGCTGCAGCTGCCAACCCATTAGCTCTTAACCCACTATTACTATCTA

FIGURE 1742B

ATATACTTTATCCAGGGATGCTTCTCACTCCAGGCCTTAATCTTCATATTCCAACTTTGTCCCAGTCCAATACTT
TTGATGTACAAAACAAAAACAGTGACTTAGGCTCGTCTAAGTCTGTAGAAGTAAAAGAAGAAGATTCCAGAATTA
AAGATCAGGAAGACAAAGGAGGAACTGAACCAAGTCCTCTCAATGAAAACAGCACAGATGAGGGTTCAGAGAAAG
CTGATGCTTCATCTGGATCTGATAGTACATCGTCGTCATCTGAGGATTCAGATTCTAGTAATGAAGAC**TGA**TTCC
CAGACTCTGCACTTAAAATATGAACTGATTTTGGATTTTTTCTTTAATAATTAATTGTAAATACCCCAGTGTTGA
GTGCATCAATAACTTACTGACCGAACATTTCAGTTATTTGTTTAGAAGTGCAAACTGCTTTCAGAGACTTTTTGC
ATGTAATATTTCTTAAGATTCATAAGTTTCTGAACTCGTATGTACTATCAAATACATAAAGGTGTAAAATTACAA
CAAAAGGCATTATAATTTTGTTGGGGGTTAATTTTATGAAAATTATGCTCAATAAGAGTTGTATATTTAATATAT
TTGCAGTGAACACAGAATACTTTATGCATATTACTGATTTAATTTGAATATAGTTTTACAGCCTCCTTGACACCT
ATAATTTACAGATCAAAACTCAGCAATAATTTGGGCAGCTAATGAATGTCATGAAAGCTGTAGAATCTACATCAC
CATCCATTGCTTTAATTACATGAAAATGCTCTAGTGTTGTGATGCACTGCTGATGTTTCCAATTCAGGTACAAGT
ATGTTTTAAAGAAGAAATAAGTTTCCCAATCAGCCAATTTAACTGGCTACCTGTTACCTCAGCTGAGTTAGTTTA
GGAAGTTTACATTCGTTTCTAATTCTATACTTGTTTTCAGGGGTTTTTTAAACACATCCTATATATCATGTCAAT
CTGGCAAGAAATATGACTTGCTTTTTGCTGAGCTTAATTCAGATATCAGTAAAATTAAGTCATAAAATAATCATG
TGTCATGTGACTTTGGCACCCTATAGACATACTTAGTTTTAACTTTTCAAAGTTTGGCCTCCTATTAGAAATAAT
CATGTCTCAGATGAGTAATGTCTGTTTCCAGGGTTCAGAAAAGGCAAACTCATGAAATGCCACTGAAAAGAACTT
TCAACACAGCATACTTCATGTAAAAGAAATTGTTTGTTTGCTTTCTTTGTGTAGATTTCTATTTGTGTTTTATGT
CATGGAAATATTCCAGAATTAACAGATAATAGTGGTAAAGTAATATGCAGATAGTCTAAATTCATTTTGAGTTTC
TAGGTGTAAGCAGACTAAATGTTGCCCAGAATCAGTGTTGGGTTATCAGTTTATATTAAATATACTGAGTTGCCC
GTTTTGAAAATGCACTTTGAATAATCTCAAAAAGATGTACAAGTTATACCTGTAAACCACAAAAGTGAAGCCTGA
GGCTTCTGTTCAATTTCATAGACTCCTTTACCATGTAAAATTTGTCTGATATTTGATTTGTGATACAATTTCTCC
TGCTAAAGCTGCTATTATTCTGACAAGGTAGAGGTCCAGGTTCACCTTTATATATATTTAAAACAATTAGTACTG
AATTGGACATAAAAATATTGACATTCTAAGGAGAGATATATGTTAGCATTTTTCTGGTACTCAAATAAGTTAGTA
GTAAAGTCTGCAAGGGCATAAATTTAGGGGGAAAAAGTGTCCCAGTTCTCTCCTACAGAAAAAATACTTTCAGTA
TGTTTTGATAAAACTGTTGCTTTGTCATGAGTTAGTCAATTGTATCAGGTTTTCCAAGACCTTTACCAGTAAATT
ATGTTTCTGTATGTAAAATAACCCCTTATTAGAGAGACAGTGTTATATGTATTTACAAAATTATATAAGTTCCAT
TGGGATTGTATTGATTTTGTATTTTCCCAAAATAGTACTTTGAATTGATAGTCCTTTATGCAATGTCTTAGCAAT
AGTCTCTATAATGCCCATCCAGGAGAAGTGGGTAGTAATTCTTCATCATGAAAATGATATATTACATATTTAGTA
TCTTCCCTTTGCAGTATTGCACTTTTGTTTAACTAGAATACACCTATGAGATAGCCAAAGTTTCAAACACAGTTA
TCTTAGTTTACCGGTGGAGTATTTCAACACCAACCACATTTCCCTTCCTCCCTCTAATTCTACCCACATGATCTT
TATTCCTTCCTTTCGCCAATTAAAAAAAAAAAAAAAGGAAAAAAAATCTGTAGATCTTGTCACTAAAATCTAATTT
ATATCAAATTTATGAGAGAAAGTATTTTCCTAATTATGGTCAAATAAATTTGGTTAACATCCTAGTGATTCTCTT
TCTATATAATAAGGCAATTACAGTTTTCAAAGCATTAAGTCTAACATAACTTTAAACATTCTCTTAGGTTTCAAG
ACACTTCTATTTAATATTCATTGGGGAAAAGTTGTCCAGCTATCAGCTAAGAAAACACATGCAAATATGGTTGTG
TAAAGTTAAGGGTTATAAGGAAAAAAAAATCAGTAGAATTACATAATACTAAAGTTGCAGTTGAAAGAATATCCA
AGTATGTGTTGGTAGTTACTAAAAGAATTATAGCTGTTATTGCCTTGTATTTATAGCCCTTGTTTCAGGTTTTAT
GATTCAAGTCTTAGTCCAATCTTTCTTTTGGACATTTGCAATATTTACCAGTTGTGTTTTGTGTAGTCTGAATTT
GCTTTCTGTAGTTGAGCAAACGTCTTAAAAAGTCATTTGTAATTTATTAAATTACTTTCTATGATGTTCTATAGA
GC

FIGURE 1743

KKVKTQTSSFDIQKAEWLRKYNPEQLLQDEGYKKHIKHHCNKVLLRVRMLYYLKQEVIGNECQKVFDGVDASDID
VWVPEPDHSEVPAEWWDFDADKSLLIGVFKHGYEKYNTIRADPALCFLERVGKPDEKAVAAEQRANDYMDGDVED
PEYKPAPAIFKDDIEDDVSSPGDLVIADGDGQLMEGDKVYWPTQSALTTRLRRLITAYQRTNKNRQIQQIQPTFS
VPTSVMQPIYEEATLNPKMAAKIERQQRWTRREEADFYRVVSTFGVVFDPDRGQFDWTKFRAMARLHKKTDDSLE
KYLYAFMSMCRRVCRLPSKEELVDPNIFIQPITEERASRTLYRIELLRKVREQALRHPQLFERLKLCHPNPDLPV
WWECGPHDRDLLIGAAKHGVSRTDYHILRDPELSFMAAQRNYSQSKMAHSRTSTPLLQQYQVALSASPLTSLPRL
LDAKGIILEEMKVKSENLKEEPQSSEEESMSSVETRTLIKSEPVSPKNGVLPQATGDQKSGGKCETDRRMVAART
EPLTPNPASKKPRVHKRGSESSSDSDSDSERSSCSSRSSSSSSSSSCSHSRSGSSSSSSSSCSSASSSSSSSTSS
SSSSSSSSSEESDSDEEEAQKRESTTHMKAYDEESVASLSTTQDETQDSFQMNNGTPESAYILQGGYMLAASYWP
KDRVMINRLDSICQTVLKGKWPSARRSYDANTVASFYTTKLLDSPGAATEYSEPSVPTPPGAGVKEEHDQSTQMS
KEGGLKLTFQKQGLAQKRPFDGEDGALGQQQYLTRLRELQSASETSLVNFPKSIPVSGTSIQPTLGANGVILDNQ
PIVKKRRGRRKNVEGVDIFFFNRNKPPNHVSLGLTSSQISTGINPALSYTQPQGIPDTESPVPVINLKDGTRLAG
DDAPKRKDLEKWLKEHPGYVEDLGAFIPRMQLHEGRPKQKRHRCRNPNKLDVNSLTGEERVQLINRRNARKVGGA
FAPPLKDLCRFLKENSEYGVAPEWGDVVKQSGFLPESMYERILTGPVVREEVSRRGRRPKSGIAKATAAAAAASA
TSVSGNPLLANGLLPGVDLTTLQALQQNLQNLQSLQVTAGLMGMPTGLPSGGEAKNMAAMFPMLLSGMAGLPNLL
GMGGLLTKPTESGTEDKKGSDSKESEGKTERTESQSSENGGENSVSSSPSASSTAALNTAAAANPLALNPLLLSN
ILYPGMLLTPGLNLHIPTLSQSNTFDVQNKNSDLGSSKSVEVKEEDSRIKDQEDKGGTEPSPLNENSTDEGSEKA
DASSGSDSTSSSSEDSDSSNED

FIGURE 1744A

CGGCACGGGGCGGGGTTTAGCCTGTGGTGGGCGCTGCGGGTGTTTGCAGGAGGTTGCAGTACTCGCTGGGCTGAG
GTCGTCTCGGGTGAGGAGGTCGCGCCGGAAGTGGCTCTAGCCGTGGCGCCTCGGCGTAGTAAGGAGCCTGCAACA
GAGTTTTGTTGTTTAGGGGGCGCGGCACCGCACCGCTCCCTTCACCTTGCAGCAGCCATGGCGAAAGGCAGAGTC
GCCGAACGATCGCAGTTGGGCGCTCACCACACGACCCCCGTGGGGGACGGGGCAGCGGGGACGCGGGGTCTCGCG
GCGCCTGGCAGCAGAGACCACCAGAAGGAAAAATCCTGGGTAGAAGCTGGATCAGCAAGAATGTCACTCCTTATA
TTGGTGTCCATTTTCTTATCTGCAGCTTTTGTTATGTTTTTGGTATATAAAAATTTTCCTCAGCTTAGTGAAGAA
GAAAGAGTGAATATGAAGGTTCCCAGAGATATGGATGATGCCAAGGCTCTAGGAAAAGTTTTATCCAAATACAAG
GACACCTTTTATGTTCAAGTACTTGTAGCTTATTTTGCTACATATATTTTCTTGCAAACATTTGCTATTCCAGGC
TCTATATTTCTCAGTATACTCTCAGGGTTTCTTTATCCCTTTCCACTAGCCTTATTTCTTGTTTGTTTGTGTTCT
GGACTTGGTGCCTCTTTCTGTTATATGCTTTCCTATTTAGTTGGGAGACCAGTTGTATACAAATACCTAACAGAG
AAAGCAGTAAAATGGGTCACAGCAGGTTGCAACGTCATAGAGAACATCTCATTAACTACATTATATTTTTGAGAA
TAACACCATTTCTGCCTAATTGGTTTATTAATATCACATCTCCTGTGATAAACGTGCCATTGAAAGTTTTTTTTA
TTGGTACTTTTCTAGGTGTTGCACCTCCTTCTTTTGTAGCCATTAAGGCAGGAACAACACTGTATCAACTTACAA
CAGCAGGAGAAGCTGTTTCCTGGAACTCAATATTTATTCTGATGATCTTGGCTGTTCTTTCTATTCTGCCAGCCA
TCTTCCAAAAAAAACTAAAGCAGAAATTTGAGTAAAAATAATCATCTGATTTTTAGTTTTGCTGTCATCACCATC
TCAGGATTAACAGATGCATCCATTTATGTTTTAAAATCACCTCTTCAGTAATTAAACAAGGAATTTGTAAAATAA
AATTTCCTATCAGATAGTTAAAGTAATACATTTAAGTGACAAGGGGAGAAGAAAGTAAAAATGGAAATTGGTATA
CTGTGAAAAGTGCTATCAATAGTTAAGGTAGACATCTTAGACATCTTATAAATTATTATACCAAGGGTAGCTGTA
GATAATAGTAGTGTGGTAGGAAATTGTTGATCCAGCTAATTCATTCAATTTAATTGAATATTTTTTATCTTTAAT
AACTAAAATAGATATTTTTAAATTCTAGATTTTTTAAAGTAGTGTTGCAGGTTTTGTTAATGTTAGGCTTTTTTC
AGAGCATAAACTGGAAAACTTAAAAAGAGATTTACANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNTTGGAGATGGCATGTTAGTAGACGACTGAATATGGAAAGGATATCGAGTTATCTATTTTGTT
AATTTTATTTTTGTTTTTTATCATCTAGATTTTTATCATGGATTAGTCTGAAATTTAAAGTTCTGGCCAGTCGGT
TTTCTTTCATCTTGTAGTTTTTACAGTATTTCCACTGTGCATATGCAAAATGGGTATTACATAACTGTATCATAN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNTATTCAGATAATTTGTTATGGCTCTTTAATATCCCACAAGGGGCTCTA
AAAAGCAAACATTCAAGAGTATGTAGTTTTTAGACATTAAGTTAATTATTTTAAACAGTGACAGCAAAACACAAG
TGATTAAATATAGTTTATTTGTTCCAATGACTAAATTTTACCTCATTTATTAATCTGGTCATTAAGGAATATATT
TAATAATATTATGTAATTATTCTTTTTATGCATGATACACCTAGAAAAATGCCTTTTGTTTCTATTGATGGCTTT
GTTGTTTGGAGCTACTTTTGATTACTTATTGCAGTTTCCCAATTTAGTCTTTACTTTATCTAACTCACAAAGTAA
AATTAACTGATCACATGGCAACTACTGTATTTAAATAGTTCTGGAAAAATGAAAGTGCTTTTTGCTGCTTGGTAA
ATGGGTAATGCCCTTGATTCCTTGACTGTAGGACATAGCTGATCTAAAGTACTCTGTCAGTTTTACCTTCACCCA
TGACTGTCATTAGTTGTCAAAGTTGAAAAGTACTTTAGCTGTGAGAAATCCTTGTATGTTTTTATTATAAGAGGT
ATAATCATCCTCAAAGCCTGTTTTTATTACATGATGTGGACTGATTATTTTTTCTATCACAGTGTTAACAGATGG
ATTTTATTGTAAATACAAAGAAAACATATTGATTATTGTAGTATTCTTATGTCACCTGGCCTTTTGCGTGAGATT
ATTTATTATTTCTAGCAAGGCTTTCTTCCTTTCTTATTGCCCAGAGACTGACTGATACATCTTTTGTTATTTTTA
CACATAAATTAAACATAGCCTTTTTTGGACAAATTCACTAAATATTAATGTATAAAATGTAATTGAGTAAATTTTT
ATCAGAATTTTAAAAATAAAAGAGCTTAGACTCAGTAGAACTCAGTAGAAGCTTCACTATTTACTCCAGCGTGTG
TAAATTGTACTTACTCTATTCTCAGAGTATATTTACTGTCCTTACCATTGATTCTTTCCCTTTGCTAATTTTTTT
TTTTGTTAATGGTAGCTGCGACTTTAGGTGGGGTATATTTTCTTCTCCTAAGAGAATAGACAGTTTTTCCAGATT
CATCATCATTGACTGTCAAGAAAGGACCCTTCAGCAAGGCTGTACCCTCAATGCAGTTGATGGCCTGTCTTCACG

FIGURE 1744B

GATTTACAGACTTGGCCTGATGCCCATGTAAATTCAAGCTTTGGCTTGTGGTAACAACCACAAGAAGACAAGCAT
CTGTGGTGCGGAGGCAAGCAGGCTAACTAGGAGTTGACAAGCTAAGAAAGTGAAACTGTTCTTTCTTAGTTAACT
GTCTTTCTCTGGAGCTCTGTTATTTTGAGTATAATATTTCCACGACACTTAGTAAATGCAAGCTAAAATGTAATA
ATAATAAATTGTATTGGAGAAACCTAAAAAAA

FIGURE 1745

RHGAGFSLWWALRVFAGGCSTRWAEVVSGEEVAPEVALAVAPRRSKEPATEFCCLGGAAPHRSLHLAAAMAKGRV
AERSQLGAHHTTPVGDGAAGTRGLAAPGSRDHQKEKSWVEAGSARMSLLILVSIFLSAAFVMFLVYKNFPQLSEE
ERVNMKVPRDMDDAKALGKVLSKYKDTFYVQVLVAYFATYIFLQTFAIPGSIFLSILSGFLYPFPLALFLVCLCS
GLGASFCYMLSYLVGRPVVYKYLTEKAVKWVTAGCNVIENISLTTLYF

FIGURE 1746

GGTCGTCTCGGGTGAGGAGGTCGCGCCGGAAGTGGCTCTAGCCGTGGCGCTTCGGCGTAGTAAGGAGCCTGCAAC
AGAGTTTTGTTGTTTAGGGGGCGCGGCACCGCACCGCTCCCTTCACCTTGCAGCAGCCATGGCGAAAGGCAGAGT
CGCCGAACGATCGCAGTTGGGCGCTCACCACACGACCCCCGTGGGGGACGGGGCAGCGGGGACGCGGGGTCTCGC
GGCGCCTGGCAGCAGAGACCACCAGAAGGAAAAATCCTGGGTAGAAGCTGGATCAGCAAGAATGTCACTCCTTAT
ATTGGTGTCCATTTTCTTATCTGCAGCTTTTGTTATGTTTTTGGTATATAAAAATTTTCCTCAGCTTAGTGAAGA
AGAAAGAGTGAATATGAAGGTTCCCAGAGATATGGATGATGCCAAGGCTCTAGGAAAAGTTTTATCCAAATACAA
GGACACCTTTTATGTTCAAGTACTTGTAGCTTATTTTGCTACATATATTTTCTTGCAAACATTTGCTATTCCAGG
CTCTATATTTCTCAGTATACTCTCAGGGTTTCTTTATCCCTTTCCACTAGCCTTATTTCTTGTTTGTTTGTGTTC
TGGACTTGGTGCCTCTTTCTGTTATATGCTTTCCTATTTAGTTGGGAGACCAGTTGTATACAAATACCTAACAGA
GAAAGCAGTAAAATGGTCACAGCAGGTTGAACGTCATAGAGAACATCTCATTAACTACATTATATTTTTGAGAAT
AACACCATTTCTGCCTAATTGGTTTATTAATATCACATCTCCTGTGATAAACGTGCCATTGAAAGTTTTTTTTAT
TGGTACTTTTCTAGGTGTTGCACCTCCTTCTTTTGTAGCCATTAAGGCAGGAACAACACTGTATCAACTTACAAC
AGCAGGAGAAGCTGTTTCCTGGAACTCAATATTTATTCTGATGATCTTGGCTGTTCTTTCTATTCTGCCAGCCAT
CTTCCAAAAAAAACTAAAGCAGAAATTTGAG**TAA**AAATAATCATCTGATTTTTAGTTTTGCTGTCATCACCATCT
CAGGATTAACAGATGCATCCATTTATGTTTTAAAATCACCTCTTCAGTAATTAAACAAGGAATTTGTAAAATAAA
ATTTCCTATCAGATAGTTAAAGTAATACATTTAAGTGACAAGGGGAGAAGAAAGTAAAAATGGAAATTGGTATAC
TGTGAAAAGTGCTATCAATAGTTAAGGTAGACATCTTAGACATCTTATAAATTATTATACCAAGGGTAGCTGTAG
ATAATAGTAGTGTGGTAGGAAATTGTTGATCCAGCTAATTCATTCAATTTAATTGAATATTTTTTATCTTTAATA
ACTAAAATAGATATTTTTAAATTCTAGATTTTTTAAAGTAGTGTTGCAGGTTTTGTTAATGTTAGGCTTTTTTCA
GAGCATAAACTGGAAAACTTAAAAAGAGATTTACATTTTCTTCCTCTTTTTTTTTTTTTTTTTTCTGTTTTGAG
ACGGAGTCTAGCTCTGCCGCCCAGGCTGGAGTGCAGTGGCGCGATCTCCGCTCATTGCAAGCTCCACCTCCTGGG
TTCACGCCATTCTCCTGTCTCAGCCTCCTGAGTAGCTGGGACTACAGGCGCCCGCCACCATGCCCAGCTAATTTT
TTTGTATTTTTAGTAGAGACGGGGTTTCACCGTGTTAGCCAGGATGGTCTCGATCTCCTGACCTCGTGATCTGCC
CGCCTTGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCGCGCCTGGCCCATTTTCTTCCTCTTTTGAGG
TAATGGATTTGTTTGGAGATGGCATGTTAGTAGACGACTGAATATGGAAAGGATATCGAGTTATCTATTTTGTTA
ATTTTATTTTTGTTTTTTATCATCTAGATTTTTATCATGGATTAGTCTGAAATTTAAAGTTCTGGCCAGTCGGTT
TTCTTTCATCTTGTAGTTTTTACAGTATTTCCACTGTGCATATGCAAAATGGGTATTACATAACTGTATCATATT
TGGTATTGATAATTTTTTTTTTTTTTGAGACGGAGTCTTGCTGTTGCCCAGGCTGGAGTGGAGTGCGTGGTGTGA
TCTCGGCTCACTGCAAACTCCGCCTCCTGGGTTCAAGCGATTCTCCTGGCCCAGCCTCCTGAGTAGCTGGGATTA
CAGGTGTGTGCCACCATGCCCAGCTAATTTTTGTGTTTTTAGTAGAGACGGGGTTTCACCATGTTGGCCGGGCTG
GTCTTGAACTCCTGACCTCAGGCTATATGCCCACTTCCACCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACT
GTGCCCAGCCTGGTATTGATAATTTATATTCAGATAATTTGTTATGGCTCTTTAATATCCCACAAGGGGCTCTAA
AAAGCAAACATTCAAGAGTATGTAGTTTTTAGACATTAAGTTAATTATTTTAAACAGTGACAGCAAAACACAAGT
GATTAAATATAGTTTATTTGTTCCAATGACTAAATTTTACCTCATTTATTAATCTGGTCATTAAGGAATATATTT
AATAATATTATGTAATTATTCTTTTTATGCATGATACACCTAGAAAAATGCCTTTTGTTTCTATTGATGGCTTTG
TTGTTTGGAGCTACTTTTGATTACTTATTGCAGTTTCCCAATTTAGTCTTTACTTTATCTAACTCACAAAGTAAA
ATTAACTGATCACATGGCAACTACTGTATTTAAATAGTTCTGGAAAAATGAAAGTGCTTTTTGCTGCTTGGTAAA
TGGGTAATGCCCTTGATTCCTTGACTGTAGGACATAGCTGATCTAAAGTACTCTGTCAGTTTTACCTTCACCCAT
GACTGTCATTAGTTGTCAAAGTTGAAAAGTACTTTAGCTGTGAGAAATCCTTGTATGTTTTTATTATAAGAGGTA
TAATCATCCTCAAAGCCTGTTTTTATTACATGATGTGGACTGATTATTTTTTCTATCACAGTGTTAACAGATGGA
TTTTATTGTAAATACAAAGAAAACATATTGATTATTGTAGTATTCTTATGTCACCTGGCCTTTTGCGTGAGGATT
ATTTATTATTTCTAGCAAGGCTTTCTTCCTTTCTTATTGCCCAGAGACTGACTGATACATCTTTTGTTATTTTTA
CACATAAATTAAACATAGCCTTTTTGGACAAATTCACTAAATATTAATGTATAAAATGTAATTGAGTAAATTTTT
ATCAGAATTTTAAAAATAAAAGAGCTTAGACTCAGTAGGAACTC

FIGURE 1747

VVSGEEVAPEVALAVALRRSKEPATEFCCLGGAAPHRSLHLAAAMAKGRVAERSQLGAHHTTPVGDGAAGTRGLA
APGSRDHQKEKSWVEAGSARMSLLILVSIFLSAAFVMFLVYKNFPQLSEEERVNMKVPRDMDDAKALGKVLSKYK
DTFYVQVLVAYFATYIFLQTFAIPGSIFLSILSGFLYPFPLALFLVCLCSGLGASFCYMLSYLVGRPVVYKYLTE
KAVKWSQQVERHREHLINYIIFLRITPFLPNWFINITSPVINVPLKVFFIGTFLGVAPPSFVAIKAGTTLYQLTT
AGEAVSWNSIFILMILAVLSILPAIFQKKLKQKFE

FIGURE 1748A

GCTGCAGCCGCGGCCGCAGCGCCCGCACGGAGAGGCTTGAGGCGGCTCCTGGCGTCGCCCAGAGGGAGCGACTAG
ACGAACAGTCCGGTGAGGGCGGCGAGAGGAAGCCCGCTACGAGTGCCCTAGCTCCCCGCCGCTCTCGATGAACCG
GACGGAATAAGCCGCGCCTCCAGCAGGGGCTGCGCCTCCATGAATCCCTAGTTGTTTTTTTTTTTTCTTTCTCT
CCCCTCTCCTCACCCCCACCCCGAGCCCCGTCCCGCCTTCTCCCTTCGCCAGAGGCGGGCCGCGTCCAGGTGCGG
AGTCCATACCGGAGCGCA**ATG**GCGTCCAACCCCGAACGGGGGGAGATTCTGCTCACGGAACTGCAGGGGGATTCC
CGAAGTCTTCCGTTTTCTGAGAATGTGAGTGCTGTTCAAAAATTAGACTTTTCAGATACAATGGTGCAGCAGAAA
TTGGATGATATCAAGGATCGAATTAAGAGAGAAATAAGGAAAGAACTGAAAATCAAAGAAGGAGCTGAAAATCTG
AGGAAAGTCACAACAGATAAAAAAAGTTTGGCTTATGTAGACAACATTTTGAAAAAATCAAATAAAAAATTAGAA
GAACTACATCACAAGCTGCAGGAATTAAATGCACATATTGTTGTATCAGATCCAGAAGATATTACAGATTGCCCA
AGGACTCCAGATACTCCAAATAATGACCCTCGTTGTTCTACTAGCAACAATAGATTGAAGGCCCTACAAAAACAA
TTGGATATAGAACTTAAAGTAAAACAAGGTGCAGAGAATATGATACAGATGTATTCAAATGGATCTTCAAAGGAT
CGGAAACTCCATGGTACAGCTCAGCAACTGCTCCAGGACAGCAAGACAAAAATAGAAGTCATACGAATGCAGATT
CTTCAGGCAGTCCAGACTAATGAATTGGCTTTTGATAATGCAAAACCTGTGATAAGTCCTCTTGAACTTCGGATG
GAAGAATTAAGGCATCATTTTAGGATAGAGTTTGCAGTAGCAGAAGGTGCAAAGAATGTAATGAAATTACTTGGC
TCAGGAAAAGTAACAGACAGAAAAGCACTTTCAGAAGCTCAAGCAAGATTTAATGAATCAAGTCAGAAGTTGGAC
CTTTTAAAGTATTCATTAGAGCAAAGATTAAACGAAGTCCCCAAGAATCATCCCAAAAGCAGGATTATTATTGAA
GAACTTTCACTTGTTGCTGCATCACCAACACTAAGTCCACGTCAAAGTATGATATCTACGCAAAATCAATATAGT
ACACTATCCAAACCAGCAGCACTAACAGGTACTTTGGAAGTTCGTCTTATGGGCTGCCAAGATATCCTAGAGAAT
GTCCCTGGACGGTCAAAAGCAACATCAGTTGCACTGCCTGGTTGGAGTCCAAGTGAAACCAGATCATCTTTCATG
AGCAGAACGAGTAAAAGTAAAAGCGGAAGTAGTCGAAATCTTCTAAAAACCGATGACTTGTCCAATGATGTCTGT
GCTGTTTTGAAGCTCGATAATACTGTGGTTGGCCAAACTAGCTGGAAACCCATTTCCAATCAGTCATGGGACCAG
AAGTTTACACTGGAACTGGACAGGTCACGTGAACTGGAAATTTCAGTTTATTGGCGTGATTGGCGGTCTCTGTGT
GCTGTAAAATTTCTGAGGTTAGAAGATTTTTTAGACAACCAACGGCATGGCATGTGTCTCTATTTGGAACCACAG
GGTACTTTATTTGCAGAGGTTACCTTTTTTAATCCAGTTATTGAAAGAAGACCAAAACTTCAAAGACAAAAGAAA
ATTTTTTCAAAGCAACAAGGCAAAACATTTCTCAGAGCTCCTCAAATGAATATTAATATTGCCACTTGGGGAAGG
CTAGTAAGAAGAGCTATTCCTACAGTAAATCATTCTGGCACCTTCAGCCCTCAAGCTCCTGTGCCTACTACAGTG
CCAGTGGTTGATGTACGCATCCCTCAACTAGCACCTCCAGCTAGTGATTCTACAGTAACCAAATTGGACTTTGAT
CTTGAGCCTGAACCTCCTCCAGCCCCACCACGAGCTTCTTCTCTTGGAGAAATAGATGAATCTTCTGAATTAAGA
GTTTTGGATATACCAGGACAGGATTCAGAGACTGTTTTTGATATTCAGAATGACAGAAATAGTATACTTCCAAAA
TCTCAATCTGAATACAAGCCTGATACTCCTCAGTCAGGCCTAGAATATAGTGGTATTCAAGAACTTGAGGACAGA
AGATCTCAGCAAAGGTTTCAGTTTAATCTACAAGATTTCAGGTGTTGTGCTGTCTTGGGAAGAGGACATTTTGGA
AAGGTGCTTTTAGCTGAATATAAAAACACAAATGAGATGTTTGCTATAAAAGCCTTAAAGAAAGGAGATATTGTG
GCTCGAGATGAAGTAGACAGCCTGATGTGTGAAAAAAGAATTTTTGAAACTGTGAATAGTGTAAGGCATCCCTTT
TTGGTGAACCTTTTTGCATGTTTCCAAACCAAAGAGCATGTTTGCTTTGTAATGGAATATGCTGCCGGTGGGGAC
CTAATGATGCACATTCATACTGATGTCTTTTCTGAACCAAGAGCTGTATTTTATGCTGCTTGTGTAGTTCTTGGG
TTGCAGTATTTACATGAACACAAAATTGTTTATAGAGATTTGAAATTGGATAACTTATTGCTAGATACAGAGGGC
TTTGTGAAAATTGCTGATTTTGGTCTTTGCAAAGAAGGAATGGGATATGGAGATAGAACAAGCACATTTTGTGGC
ACTCCTGAATTTCTTGCCCCAGAAGTATTAACAGAAACTTCTTATACAAGGGCTGTAGATTGGTGGGGCCTTGGC
GTGCTTATATATGAAATGCTTGTTGGTGAGTCTCCCTTTCCTGGTGATGATGAAGAGGAAGTTTTTGACAGTATT
GTAAATGATGAAGTAAGGTATCCAAGGTTCTTATCTACAGAAGCCATTTCTATAATGAGAAGGCTGTTAAGAAGA
AATCCTGAACGGCGCCTTGGGGCTAGCGAGAAAGATGCAGAGGATGTAAAAAAGCACCCATTTTTCCGGCTAATT
GATTGGAGCGCTCTGATGGACAAAAAAGTAAAGCCACCATTTATACCTACCATAAGAGGACGAGAAGATGTTAGT
AATTTTGATGATGAATTTACCTCAGAAGCACCTATTCTGACTCCACCTCGAGAACCAAGGATACTTTCGGAAGAG
GAGCAGGAAATGTTCAGAGATTTTGACTACATTGCTGATTGGTGT**TAA**GTTGCTAGACACTGCGAAACCAAGCTG
ACTCACAAGAAGACCTCTTAAAAATAGCAACCCTTCATTTGCTCTCTGTGCCACCAATAGCTTCTGAGTTTTTTG
TTGTTGTTGTTTTTATTGAAACACGTGAAGATTTGTTTAAAAGTACCATTCTAATACTTCTTCAAAAGTGGCTCC
TCATTGTACTTCAGCGTAAATATGAGCACTGGAAACAGTTTCATGGAGTTTAAGTTGAGTGAACATCGGCCATGA
AAATCCATCACGAATACTTTTGGATCAATAGTCTATTTTTAAAAAGAAAGAAAAAAACCACTTTTTTATAGTCCC

FIGURE 1748B

TAGCTTTGCCATATGCCCGCCTTAAGTGGAAGGAAAGTTAATCACTTAACTATGTTTTATAAAAAGAAAAAAGGG
CTTGGAATGCTATTACTGTTCACACAAAGTATGATTCTGTTTGAATAAGGCAAATGCTCCTTTTTTTAANAAAAA
AAGACATTACTGTAATATCAAAAACCGTGGGCAGTTTGTATACAACTCGGGGCTGGGANNNNNNNNNNNNNNNN
NCCAGAATTGATGTCTTATTTTATAAATGTTCTATATTTATTAGGAGAAAACTTTATATTGCCTTTTTTATCAAT
CATGTAACAGGCTTATAGCTTTCCAACAGAGCTGCTTGCCAAACAATTTTTTTTGTTTATTAAACAGTGCTGAAA
CAAACAGGATCAGCATTTACTTAAGATGTTAAGAATGAGGACTTTTAATCAGCCGAACCAAGATATTGTTACCTG
TATGCATTCCCAAAGTCTAGATGCTCAGTATGTTCAGTCATATCTTTCAGAATCAGTGAACCGATTACCCTTTTT
TTGGTATTCACTCTACATCTGCCAACCTAGTTCACCTTGGTTTTGTGTCTGCTGTAGAAGGGAACCATAACTTGG
TTAAACCGTAGGGATTATCATTGTATACATGCTGTGAACATGTATATGTGCAAGTTTTAATGTATTCTATGTTGT
AGGCTTATTATTTAATTTTACCACTTCATCACTTTTGTACAGTGGCCAAGCAGACACCTCAAACTCCAGCATTTA
CATTAAGTGCATTTGTACATTTTAGGCCACTGGATCCAGATTTTATATTGGCAGTTATTGAGGGCAAAAGCAATA
TATTGTAACAGAATGTATAAATATTTTTGATAAAACAGTCTATATTTTATTAAAAAATGAATTATAACACTAAAG
CTGTACCTCAAAAGTCTCAAAAATAATTTGATGAAATATTTTATACAACTCTTCAAAGGATCCGTCTGTGGCTTT
TTATACTCTTTTAGGGTTGTCTTTTTACAAACCATGACTTTCCACTTGCCTGTAGTTTTTTGTTTGTTTTGGTTT
GGTTTGATTTTATATTTTTTTCTCCTAATCTATGACTTTATTGTTTTTTCTTAGTTTAGTAATAGCATCTTTGAT
CCTGTGCTTAGCATGTTAGGGTCATTATACCTCAGGAATAGCAAGCTGTTAAGTAACCATACTGAATTAACTATT
TAATTACAGTGAGCTCATCTCTTAAAAATTGTTCAGGTGTAAATCTTATGAGAAACATGAAAAAGCACACTGATT
TATGGAGAGTTGAGCTAAAAACATTTATAAATATTTGCTGGGATGTTTTAGCATCTTTTCATTGTACTCTGAGAA
CAATTAAAATTGTCCAGAGATCATTTATATTACCTTCCAAATTGTTTATTACCCAAGATCCTTTGGGAGAAAATC
TTATAGAATGGGGGAACAATATGTGGTTTAAAGTTATTTTAAAATGCCAGTTAATTTCCTCGGCAAAGGACAATA
GAGGAACTTAGCTTAATTGTCTGGCTTTAATTTAAACTGTGTTAATACAACATTAAAATAAAACACTAAATACTT
TTGAGGTACAGTCTGCTCACTTTTTTGGTTCTCAAATAGCAAAGAAAGTAATGTCTAAAATAGGCTCTTAGCATT
AAAAACTGACAGCATTTTGTAACTACACAGTGTACAGAATTTTTTTTTAATTGAAGTCAATCACTAAAAAAATTA
GAAGGCAGGGTCTATTTACACAATTAAGCTGAAGAAAGCACTAATTTTTTGTAGTTTAAAATATATATATATTTT
AGTCAGATTTAAAATTTTAAGCTTTATAGAGTGTAAATATATTTTGCTATTACTGTATGTGTATGTGACTGCTCA
AGCACTTTGTAAAGAAATTAGGATATTTTAGAATGGTACACTATGCATTCAAATGAAATGTGCCTTTCACTATGT
CATTCTAAGAAAACAAGTGTTTTTTGCAGTCATAAATTATCACAAATGCACAAATTAAAGTCTATATAGATTGAA
ATTTGTAACTTTGGTTTTAAGTATTCTTTCCTTTTAGAAACTTCCTAATGATTAAAATATACTTTAACTTTTCTG
TGTTCAAAATCTCAAAGACTAATTAACTTTAATAAACATTCTTGCAAGTACTTTTTGTCCTAGTGAAGGCTTAAA
ACCATGAACATTCAGAGCAAACTGTCCACTTCATTGGGAATAATGGGAAAAGTTTGTATTCTGCTCCTGTAAGGT
CAGTAGCATCTTTTATTTGAAGCATATTTATGGACTGCTTACTGTGTATAGATACTGAGAATAGGAAGNNNNNNN
NNNNNNNNNNNNNNNNNTGTTGATGAATGAAGAACAGCCTGTTTTAATTAAGATGCAAGCACCAGTATTGTATGTA
CTTTTCTCTTGTTTGAGGTTAGCTTATTTTAATTTAGGACCTGGCTTCTCAAAAAGGCAAATGAATAAAACAGAA
TACTAGTAA

FIGURE 1749

MASNPERGEILLTELQGDSRSLPFSENVSAVQKLDFSDTMVQQKLDDIKDRIKREIRKELKIKEGAENLRKVTTD
KKSLAYVDNILKKSNKKLEELHHKLQELNAHIVVSDPEDITDCPRTPDTPNNDPRCSTSNNRLKALQKQLDIELK
VKQGAENMIQMYSNGSSKDRKLHGTAQQLLQDSKTKIEVIRMQILQAVQTNELAFDNAKPVISPLELRMEELRHH
FRIEFAVAEGAKNVMKLLGSGKVTDRKALSEAQARFNESSQKLDLLKYSLEQRLNEVPKNHPKSRIIIEELSLVA
ASPTLSPRQSMISTQNQYSTLSKPAALTGTLEVRLMGCQDILENVPGRSKATSVALPGWSPSETRSSFMSRTSKS
KSGSSRNLLKTDDLSNDVCAVLKLDNTVVGQTSWKPISNQSWDQKFTLELDRSRELEISVYWRDWRSLCAVKFLR
LEDFLDNQRHGMCLYLEPQGTLFAEVTFFNPVIERRPKLQRQKKIFSKQQGKTFLRAPQMNINIATWGRLVRRAI
PTVNHSGTFSPQAPVPTTVPVVDVRIPQLAPPASDSTVTKLDFDLEPEPPPAPPRASSLGEIDESSELRVLDIPG
QDSETVFDIQNDRNSILPKSQSEYKPDTPQSGLEYSGIQELEDRRSQQRFQFNLQDFRCCAVLGRGHFGKVLLAE
YKNTNEMFAIKALKKGDIVARDEVDSLMCEKRIFETVNSVRHPFLVNLFACFQTKEHVCFVMEYAAGGDLMMHIH
TDVFSEPRAVFYAACVVLGLQYLHEHKIVYRDLKLDNLLLDTEGFVKIADFGLCKEGMGYGDRTSTFCGTPEFLA
PEVLTETSYTRAVDWWGLGVLIYEMLVGESPFPGDDEEEVFDSIVNDEVRYPRFLSTEAISIMRRLLRRNPERRL
GASEKDAEDVKKHPFFRLIDWSALMDKKVKPPFIPTIRGREDVSNFDDEFTSEAPILTPPREPRILSEEEQEMFR
DFDYIADWC

FIGURE 1750

GGAGCGCAA**ATG**GCGTCCAACCCCGAACGGGGGGAGATTCTGCTCACGGAACTGCAGGGGGATTCCCGAAGTCTT
CCGTTTTCTGAGAATGTGAGTGCTGTTCAAAAATTAGACTTTTCAGATACAATGGTGCAGCAGAAATTGGATGAT
ATCAAGGATCGAATTAAGAGAGAAATAAGGAAAGAACTGAAAATCAAAGAAGGAGCTGAAAATCTGAGGAAAGTC
ACAACAGATAAAAAAAGTTTGGCTTATGTAGACAACATTTTGAAAAAATCAAATAAAAAATTAGAAGAACTACAT
CACAAGCTGCAGGAATTAAATGCACATATTGTTGTATCAGATCCAGAAGATATTACAGATTGCCCAAGGACTCCA
GATACTCCAAATAATGACCCTCGTTGTTCTACTAGCAACAATAGATTGAAGGCCTTACAAAAACAATTGGATATA
GAACTTAAAGTAAAACAAGGTGCAGAGAATATGATACAGATGTATTCAAATGGATCTTCAAAGGATCGGAAACTC
CATGGTACAGCTCAGCAACTGCTCCAGGACAGCAAGACAAAAATAGAAGTCATACGAATGCAGATTCTTCAGGCA
GTCCAGACTAATGAATTGGCTTTTGATAATGCAAAACCTGTGATAAGTCCTCTTGAACTTCGGATGGAAGAATTA
AGGCATCATTTTAGGATAGAGTTTGCAGTAGCAGAAGGTGCAAAGAATGTAATGAAATTACTTGGCTCAGGAAAA
GTAACAGACAGAAAAGCACTTTCAGAAGCTCAAGCAAGATTTAATGAATCAAGTCAGAAGTTGGACCTTTTAAAG
TATTCATTAGAGCAAAGATTAAACGAAGTCCCCAAGAATCATCCCAAAAGCAGGATTATTATTGAAGAACTTTCA
CTTGTTGCTGCATCACCAACACTAAGTCCACGTCAAAGTATGATATCTACGCAAAATCAATATAGTACACTATCC
AAACCAGCAGCACTAACAGGTACTTTGGAAGTTCGTCTTATGGGCTGCCAAGATATCCTAGAGAATGTCCCTGGA
CGGTCAAAAGCAACATCAGTTGCACTGCCTGGTTGGAGTCCAAGTGAAACCAGATCATCTTTCATGAGCAGAACG
AGTAAAAGTAAAAGCGGAAGTAGTCGAAATCTTCTAAAAACCGATGACTTGTCCAATGATGTCTGTGCTGTTTTG
AAGCTCGATAATACTGTGGTTGGCCAAACTAGCTGGAAACCCATTTCCAATCAGTCATGGGACCAGAAGTTTACA
CTGGAACTGGACAGGTCACGTGAACTGGAAATTTCAGTTTATTGGCGTGATTGGCGGTCTCTGTGTGCTGTAAAA
TTTCTGAGGTTAGAAGATTTTTTAGACAACCAACGGCATGGCATGTGTCTCTATTTGGAACCACAGGGTACTTTA
TTTGCAGAGGTTACCTTTTTTAATCCAGTTATTGAAAGAAGACCAAAACTTCAAAGACAAAAGAAAATTTTTTCA
AAGCAACAAGGCAAAACATTTCTCAGAGCTCCTCAAATGAATATTAATATTGCCACTTGGGGAAGGCTAGTAAGA
AGAGCTATTCCTACAGTAAATCATTCTGGCACCTTCAGCCCTCAAGCTCCTGTGCCTACTACAGTGCCAGTGGTT
GATGTACGCATCCCTCAACTAGCACCTCCAGCTAGTGATTCTACAGTAACCAAATTGGACTTTGATCTTGAGCCT
GAACCTCCTCCAGCCCCACCACGAGCTTCTTCTCTTGGAGAAATAGATGAATCTTCTGAATTAAGAGTTTTGGAT
ATACCAGGACAGGATTCAGAGACTGTTTTTGATATTCAGAATGACAGAAATAGTATACTTCCAAAATCTCAATCT
GAATACAAGCCTGATACTCCTCAGTCAGGCCTAGAATATAGTGGTATTCAAGAACTTGAGGACAGAAGATCTCAG
CAAAGGTTTCAGTTTAATCTACAAGATTTCAGGTGTTGTGCTGTCTTGGGAAGAGGACATTTTGGAAAGGTGCTT
TTAGCTGAATATAAAAACACAAATGAGATGTTTGCTATAAAAGCCTTAAAGAAAGGAGATATTGTGGCTCGAGAT
GAAGTAGACAGCCTGATGTGTGAAAAAAGAATTTTTGAAACTGTGAATAGTGTAAGGCATCCCTTTTTGGTGAAC
CTTTTTGCATGTTTCCAAACCAAAGAGCATGTTTGCTTTGTAATGGAATATGCTGCCGGTGGGGACCTAATGATG
CACATTCATACTGATGTCTTTTCTGAACCAAGAGCTGTATTTTATGCTGCTTGTGTAGTTCTTGGGTTGCAGTAT
TTACATGAACACAAAATTGTTTATAGAGATTTGAAATTGGATAACTTATTGCTAGATACAGAGGGCTTTGTGAAA
ATTGCTGATTTTGGTCTTTGCAAAGAAGGAATGGGATATGGAGATAGAACAAGCACATTTTGTGGCACTCCTGAA
TTTCTTGCCCCAGAAGTATTAACAGAAACTTCTTATACAAGGGCTGTAGATTGGTGGGGCCTTGGCGTGCTTATA
TATGAAATGCTTGTTGGTGAGTCTCCCTTTCCTGGTGATGATGAAGAGGAAGTTTTTGACAGTATTGTAAATGAT
GAAGTAAGGTATCCAAGGTTCTTATCTACAGAAGCCATTTCTATAATGAGAAGGCTGTTAAGAAGAAATCCTGAA
CGGCGCCTTGGGGCTAGCGAGAAAGATGCAGAGGATGTAAAAAAGCACCCATTTTTCCGGCTAATTGATTGGAGC
GCTCTGATGGACAAAAAAGTAAAGCCACCATTTATACCTACCATAAGAGGACGAGAAGATGTTAGTAATTTTGAT
GATGAATTTACCTCAGAAGCACCTATTCTGACTCCACCTCGAGAACCAAGGATACTTTCGGAAGAGGAGCAGGAA
ATGTTCAGAGATTTTGACTACATTGCTGATTGGTGT**TAA**GTTGCTAGACACTGCGAAACCAAGCTGACTCACAAG
AAGACCTCTTAAAAATAGCAACCCTTCATTTGCTCTCTGTGCCACCAATAGCTTCTGAGTTTTTTGTTGTTGTTG
TTTTTATTGAAACACGTGAAGATTTGTTTAAAAGTACCATTCTAATACTTCTTCAAAAGTGGCTCCTCATTGTAC
TTCAGCGTAAATATGAGCACTGGAAACAGTTTCATGGAGTTTAAGTTGAGTGAACATCGGCCATGAAAATCCATC
ACGAATACTTTTGGATCAATAGTCTATTTT

FIGURE 1751

MASNPERGEILLTELQGDSRSLPFSENVSAVQKLDFSDTMVQQKLDDIKDRIKREIRKELKIKEGAENLRKVTTD
KKSLAYVDNILKKSNKKLEELHHKLQELNAHIVVSDPEDITDCPRTPDTPNNDPRCSTSNNRLKALQKQLDIELK
VKQGAENMIQMYSNGSSKDRKLHGTAQQLLQDSKTKIEVIRMQILQAVQTNELAFDNAKPVISPLELRMEELRHH
FRIEFAVAEGAKNVMKLLGSGKVTDRKALSEAQARFNESSQKLDLLKYSLEQRLNEVPKNHPKSRIIIEELSLVA
ASPTLSPRQSMISTQNQYSTLSKPAALTGTLEVRLMGCQDILENVPGRSKATSVALPGWSPSETRSSFMSRTSKS
KSGSSRNLLKTDDLSNDVCAVLKLDNTVVGQTSWKPISNQSWDQKFTLELDRSRELEISVYWRDWRSLCAVKFLR
LEDFLDNQRHGMCLYLEPQGTLFAEVTFFNPVIERRPKLQRQKKIFSKQQGKTFLRAPQMNINIATWGRLVRRAI
PTVNHSGTFSPQAPVPTTVPVVDVRIPQLAPPASDSTVTKLDFDLEPEPPPAPPRASSLGEIDESSELRVLDIPG
QDSETVFDIQNDRNSILPKSQSEYKPDTPQSGLEYSGIQELEDRRSQQRFQFNLQDFRCCAVLGRGHFGKVLLAE
YKNTNEMFAIKALKKGDIVARDEVDSLMCEKRIFETVNSVRHPFLVNLFACFQTKEHVCFVMEYAAGGDLMMHIH
TDVFSEPRAVFYAACVVLGLQYLHEHKIVYRDLKLDNLLLDTEGFVKIADFGLCKEGMGYGDRTSTFCGTPEFLA
PEVLTETSYTRAVDWWGLGVLIYEMLVGESPFPGDDEEEVFDSIVNDEVRYPRFLSTEAISIMRRLLRRNPERRL
GASEKDAEDVKKHPFFRLIDWSALMDKKVKPPFIPTIRGREDVSNFDDEFTSEAPILTPPREPRILSEEEQEMFR
DFDYIADWC

FIGURE 1752A

GTCGACCTGCAGGTCAACGGATCTGAGAGGAGAGTAGCTTCTTGTAGATAACAGTTGGATTATATACCATGTCCT
GATCCCCTTCATCATCCAGGAGAGCAGAGGTGGTCACCCTGATAGCAGCAAGCCTGGGGGCTGCAGCTTGGTGGG
TAGAGGTACTCAGGGGTACAGATGTCTCCAAACCTGTCCTGCTGCCTTAGGGAGCTTCTAATAAGTTGATGGATT
TGGTTAAAATTAACTTGGCTACTTGGCAGGACTGGGTCAGTGAGGACCAACAAAAAGAAGACATCAGATTATACC
CTGGGGGTTTGTATTTCTTGTGTTTCTTTCTCTTCTTTGTACTAAAATATTTACCCATGACTGGGAAAGAGCAAC
TGGAGTCTTTGTAGCATTATCTTAGCAAAAATTTACAAAGTTTGGAAAACAATATTGCCCATATTGTGTGGTGTG
TCCTGTGACACTCAGGATTCAAGTGTTGGCCGAAGCCACTAAATGTGAGATGAAGCCATTACAAGGCAGTGTGCA
CATCTGTCCACCCAAGCTGGATGCCAACATTTCACAAATAGTGCTTGCGTGACACAAATGCAGTTCCAGGAGGCC
CAAATGAAAATGTTTGTACTGAAATTTGTTAAAGCTTCCCGACAAACTAGATTTATCAGTAAGGATTGTTTTCTG
CAAGGGGGATGAAACTTGTGGGGTGAGCCATTTGGGCTGAGGAGGAGGGAGGTTGGAGCTGAGAAATGTGGAGAC
AATTTCCCTTTAGAAGGACTGAATCTCCCTGCCTCTCTGGGGTGCGGCAGCCAGCAGGATCCAATGGTGTATATG
TCTCCCCAGCTCCCCATTCAGTGATATCATGTCAGTAGCTTGAAATTATCCGTGGTGGGAGTATTATGTCATGGA
AATTGGCAAATGGAAACTTTTATTGGAGATTCAATTGTTAAACTTTTACCAGCACAACACTGCCCTGCCTTCAGA
GTCAATGACCCTATCCAAGTTTAATCCATCTGTCCACTGTCTCCAACACGATCTTTATAAAACACACCTGACAAC
ATTACCCTTTTATTCAGTTTTTTAAAAGATAAGTTTCCAGCTCATCGGGGTGGCTTTAAAGGCCATTTCTCCTCT
GGACCTCACCCAACTTTTCAAATCACTTTTCCTACCCCTACCTCTAAATGCTACTCAAACTCCAGCCATCCTGAA
TAATAAGACTTTTGAAAAGTAGATTATGGGCTGGGCACAGTGGCTCACACCTGTAATCCCAGCACTTTGGGAGGC
CAAGATGGGTGGATCACCTGAGGTCGGGAGTTCGAGACCAGCCTGACTAACATAGTGAAACCCTGTCTCTACTAA
AAATACAAAATTAGTTGGGGGTGGTGGCACAAGCCTGTAATCCCAGCTACTCAGGAGGTTGAGGCAGGGGAATTG
CTTGAACCTGGGAGGCGGAGGTTGCGGTGAGCCTAGATTGCTCCACTGCACTCCAGCCTGGGCAACAAGAGCGAA
ACTCCATCTCAAAAAAATAAATAAATAAATAAAGTAGATTACATCAGATACCTCTGGCCTAGGTTGTTTATGACC
AACTCTCCTGCTGAGAATAACTAGAAAAGCTAGACAAAACATATTTCCAAAAGATCTCTTTGGAGGCATCAGAGA
ATGGCCAAGGCTGTAAGGAACTGCCTGAGCCCAGAGAGGTGGAGCCCAGCACTGGTGCCCTTTACTCCTGGGGAC
ATGTGCTGGTTTCAAAAACTTCAGCTGAGCTTTTGAGCATTCATGGAACTTGGTGGGGGAGATGAAATTTGTACC
TTAAATCCTGCCTACAGGGAGGGTCCCTGATAATCCCCACCCAATTTGGAAATCTGGGTCAGCCTTCACAGGTAC
TGAAGCCCTCCTCTGAATGATCTCAAGTCCTGCTAGGGTAGAGGTTACCTGCTTTTGAAAGGCTCCTGGCCTACC
TGTGCAGCAGGAGCAAAAGTGAACCATCTCAGGGTACAGATAACAATCATCCAGAGCCTTGAATGACCTCTACTG
TGCTTAATATATAGTATTCAGCAGTCAGTAAAAAGGATTTAGGCACATGCAAGATGACCTGTGTATCAGGGAGAA
ATAGGCAATAAATTGAGATCCAGCAGGGATTTGAATCATGGATTTGAATCAGGGGCAGCCTTCGAAAGAACTATG
GAGAATATACTCAGATTTAAAACATAAGATTGGAATTTTTGGCAGAGAACTAACAACTGTACAAAAAAGGAACCA
AATGGAAATCCTAGAACTGAAAGATGCAATTAACCGATGTTGAGAAATAGCCAACATCTATTGAACACTTCCCAT
GTGGACAGCTGTGCTAAACACTTTACAGGCATCAACATAAGATGTGTCCCCTTACAGCAGTGCAGTGTCCCTCCT
AAGACATGGACAGCCTGGTTTCCCTATCTCTCTGCTTCATCAAAACCCCTTTACGTGGGGCTTAGACACTCCTGT
TGTCTCTAGTGTCTAGTAGCACAGGGCTCAGCACATGGAAGCCACTAGATACAATTTGATGACCAGGACCTCCGA
TGAAAGCCATGGGTGCTGATTGGGAAGGCATTGTCTTTTATGTGCTATGGTCTTAAAGCTTCATCCAGGAAGCAG
AACTCGGGGGGTGCTGAGGACCCAGAACCGAGAATAAGATTAGTCAGAGATTTCCTGTGGGCAGAAATCATAAGG
ACGCCAACTGTTTGGGTGAGATAAGACGAAACCAAGAGTGGACTTGTGGCCAGAAGCGTGAGGAAGAGGGAGAGA
GCTTCCCTTGTCCCCTTTCTTCCTCTCCCTAAGCCACAGTGATTGACAGCCCCCCCGCTTTGGAGTCAGAGCAGG
CTTGAGACTGGACTGGGAAAGGAGGGTGGGTCAGGATACAGAGCAGGAAGGCTGGGAGTGCAGGGCAGGAGCAAG
GGGCTGGGGCATTCATTGTGCCTGATCTCTCCCACTTTACCTGGGGTAAAGAAGCATATGCAAAAGCCACGGTGT
GAGTATTTCCCAAGTGCCAGGGTCAGGGCATGATTCATCACGTGCAGCATTTCATTCAATCCTTATAGTAACCGA
TGATGTGGCTTCTATTATTAGCTCTATCAGATAATGAAACTGAGACCAAGACAGGCTCTGCACATTGTGTGGGGT
AATGACACAGGGGGATTCAGACCTAGACTCCATAACTCCTGCCCCAGGGACCACCCCCACCCTCACCCTGTGCAT
GTCGACAAAGGACAGACTGGGCCACTTCTCAGGACACAGCGGGGAAATGACACAGAGCAGGGAGGTTCCAGGAGC
CCCGAGCGTCTTTTCTCCAGGAGAATACTCTCTGAATTCAGACTGGGGTCAGAGAAACATTTACCCAGGAGCCGC
AGTGTGGGTGGGGCTTTTTACTTGAAACGCTGTCTGAAGGCAGTGGCAGGATGAACTCTCCACCCTACCTTGGCA
AGCCACTTCTCTTCTGCAATCTGTAAGGACATTGTTGAGAGAATTATGGTCTTCCAATTCCGGAGGGTTGAAGAA
AGACAAATAGGAGAGAACCTATCATAGTCAGGTGCTAGCTGCCTTCTCTTTCAGAGAGTGTGAGAATAAAGTGAT

FIGURE 1752B

ACACTTGATTATTAGCAAATACTTTGGAAATTTTAAACGCTAATATTCAACACACTCTGGAAGAGGCAAATAAGT
AGACAGGTTCATATACATCATCTCCTTCAGCTAGTCCTCACAAAAACAAACAAATGAATAAACAAAATTCTTCTT
TGGCCCTCATAGGAAGACACTGTTTCTTGAACGTGTTTCAAAAAGGATGGGTGACTCACTCAAGGTCACACTGTT
TATGAGGACAGTACAGGAATACAGACATGCCATTTTGCCTGAAAAAATCCATCACCCAGGGAGGTGACACAATTT
TGCAGAAATGTTCTATTTCCTCTGAAGGATACATTCTTTAAACCTTTGGGAAATTCATTCATAGTCTTCCTCCTT
TGAAGGATTACTCTCTGGACACAAAGTGTTTGATTCTGATTTGTTGGTTGGAAGATGTGTTGGTTGAGAGAAAGA
TTCTGATTTGTTGGTTGAAAATAGACTCATCAAGATCAACTGCTGTAGTAGTAAATATTTTGACATTTTGTCTGT
ATTCCTGTGCTGCCCTCACAAGCTGCATCACCTTGAGTGAGTCATTCATACTTTTTTGTTTGTTTTTGTTTTGGA
GATGGAGTCTTACTCTGTTGCCTAGGCTGGAGTGCGGTGGCGTGATCTTGGCTCACTGCGACCTCCATCTCCTGG
GTTCAAGTGATCCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTACAGGCACATGCCACCATCCCTGCTAATTTT
TGCATTTTCAGTAGAGACGGAGTTTCACCATGTTGGTCAGGTTGGTCTTGAACTCCTGACCTCAGGTGATCCGCC
CACCTCAGCCTCCCCAAGTGCTGGGATTACAGGTGTGAGCCACCGTGCCCAGCCCAGCCATCATTTTTGAAACAC
GTTTGAGAAATAGTGTCTTCCTTTGAGGGCCAAGGAGACATTTTTTTTGTTTATTTGTTTGTTTTTGTGAGGACT
AGCTGAAGGGGGTGATGTATATTAACCTGCCTACTTATTTGCCTCTTCCCAGAGTGTGATGAATATTAGGGTTTA
AAGTTTCTGAAGCATTTGTTAATAAAGCCCGGGGCTGGAGGTCAGAAGACCTGGATTTCTCTGCATACTTTTGCC
ATCAGCAAGCTGTGTGACCTTGGACAGATCCCTTTTTTGTCTAAATCTTTCTGAGTCTTCTTGAAAACAATGCCA
GGTTGGGACAGGATGATTGCCAAGCTCCCGTCCAGCTCTAAAACACTGCAACGTATGCTTCTGCACCAGCACTGT
CCATCCTGTAGATCATGCAGAAATTCTCTTCAACTTTTTCCTACCCATAAAATAGGAGCATGCTTACCTTTTTCC
TAATGTTCCAGGCCCCGGGTCTAGATATTGTAAGTAAGGAAGTTAATGTGTATCAGAGCCCATTATGGGCCAGAA
GTTCTCCTCTTCCTTCCTACACCTGCTTCCTCCCTCCCTCCCTCCCTCTTTCCCTTCCTTCCTTCCATCCATTTG
TGAAGAAGACATGATCACCCTCATTCTGAGAGTGAAGAGACAGAGGCTCAACTAATGAAATGATTTGTTCAAGGT
CACACGGGTGGCACAAGGCAAGTGGCAGAGGTTGAATTTAGACCCATTCCTGTCCAAATGCTGAGTTTATGTCAT
CGTCCCGAGACCATAACTTTAAAGATGTAAGATAGTGGGAAAAGAGTTGATTTCAAAGCACCTCTCAGAAGGACT
CACTTTACATCAGGGGTCAGCAGACTCAGGCCAAATCCGGTCCATTCCCCGCTTTTGCAAAGAAAGTTGTAGTGG
AACACAGCTAGGCTTATTGATTTATGGATTGCCAACGTCCTTTTGTGAAACAGACAGCTGAGCTGAGTAATCGTG
GCGCACAAAACCTAAAATATTTACTATCTCGTCCTTTACAGAATGTTTGCCAATCTATGGTCCGGAGTCCAAGGC
TGTCCATTTTTCAAAGAACACAAAGTGACATGAGACTGTCCCATGTGCAGGGAGCCCTATCATTTTATTATGAAA
AAACGGCCTTTCTGCTCAAATCTGTTTTTTAAAAAGTCAACAAACAGACTCTGGGTACCTGTCAGGAACAGTAGG
GAGTTTGGTTTCCATTGTGCTCTTCTTCCCAGGAACTCAATGAAGGGGAAATAGAAATCTTAATTTTGGGGAAAT
TGCACAGGGGAAAAAGGGGAGGGAATCAGTTACAACACTCCATTGCGACACTTAGTGGGGTTGAAAGTGACAACA
GCAAGGGTTTCTCTTTTTGGAAATGCGAGGAGGGTATTTCCGCTTCTCGCAGTGGGGCAGGGTGGCAGACGCCTA
GCTTGGGTGAGTGACTATTTCTTTATAAACCACAACTCTGGGCCCGCAATGGCAGTCCACTGCTTGCTGCAGTCA
CAGAATGGAAATCTGCAGAGGCCTCCGCAGTCACCTAATCACTCTCCTCCTCTTCCTGTTCCATTCAGAGACGAT
CTGCCGACCCTCTGGGAGAAAATCCAGCAAGATGCAAGCCTTCAGGTAAGGCTACCCCAAGGAGGAGAAGGTGAG
GGTGGATCAGCTGGAGACTGGAAACATATCACAGCTGCCAGGGCTGCCAGGCCAGAGGGCCTGAGAACTGGGTTT
GGGCTGGAGAGGATGTCCATTATTCAAGAAAGAGGCTGTTACATGCATGGGCTTCAGGACTTGTGTTTCAAAATA
TCCCAGATGTGGATAGTGCGACCGGAGGGCTGTCTTACTTTCCCAGAGACTCAGGAACCCAGTGAGTAATAGATG
CATGCCAAGGAGTGGGACTGCGATTCAGGCCTAGTTGAATGTGCTGACAGAGAAGCAGAGAGGGGCACCAGGGGC
ACAGCCCGAAGGCCCAGACTGATATGGGCAAGGCCTGTCTGTGCTGACATGTCGGAGGGTCCCACTCTCCAGGGA
CCTTGGTTTCCCCGTCTGTGACATCTGTGACATGAGAGTCACGATAACTCCTTGTGTGCCTTACAGGGTTGTTGT
GAAAATTAAATGCACAGATAATAGCGTAACAGTATTCCGTGCATTGTAAAGAGCCTGAAAACCATTATGATTTGA
AAATGGAATCGGCTTTGTGAGACCATCACTATTGTAAAGATGTGATGCTGATAGAAATGACAGGACTGCTTGTGC
ATGCCCTCTGCAGTGTGACATTCCAGCAGTGAAATCATGTTGGGGTGACTTCTCCCCCACTCTGACCTTTATGTT
TGTCTGGGCCGAGGCTGCAAGTCGGGCTCTGTGGGTGTATGAGTGACAAGTCTCTCCCTTCCAGATATGGGGACT
GTCTGCTTCCCTAGGTTGCCTCTCCCTGCTCTGATCAGCTAGAAGCTCCAGGAGATCCTCCTGGAGGCCCCAGCA
GGTGATGTTTATCCCTCCAGACTGAGGCTAAATCTAGAAACTAGGATAATCACAAACAGGCCAATGCTGCCATAT
GCAAAGCACTTTGGTTTGCCTGGCCACCCCTCGTCGAGCATGTGGGCTCTTCAGAGCACCTGATGAGGTGGGTAC
AGTTAGCCACACTTCACAGGTGAAGAGGTGAGGCACAGGTCCCAGGTCAGGCTGGCCGGAGCTCTGTTTATTACG

FIGURE 1752C

TCTCACAGCTTTGAGTCCTGCTCTCAACCAGAGAGGCCCTTTACCAAGAAGAAAGGATTGGGACCCAGAATCAGG
TCACTGGCTGAGGTAGAGAGGAAGCCGGGTTGTTCCCAAGGGTAGCTGCTCCTGCAGGACTCTGAGCAGGTCACC
AGCTAATGGAGGAAAGGCTCTAGGGAAAGACCCTTCTGGTCTCAGACTCAGAGCGAGTTAGCTGCAAGGTGTTCC
GTCTCTTGAAACTTCTACCTAGGTGCTATGGTAGCCACTAGTCTCAGGTGGCTATTTAAATTTATACTTAAATGA
ATGAAAATAGAAGAAAATTTAAAATCCAGACCCTTGGTCACACTATCCACATTTAAAGAGGTCAATAGCCACATG
TGGTTAGTGGCCACCCTATTGGGCAGTGCAGCTACAGAACATTTTTGCATCCCAGAAAGTTCTTTTGGATGTTGC
TGCTCTACAGCATGCTTTGCTGAAACAGAAGTGCCTTCCCTGGGAATCTCAGATGGGAAGCAAGTAAGGAGGGGA
GTCAAATGTGGGCTCACTGCTCACCAGCTGTGAGGGTTGGGCCTGCCTCTTAACCATTGTCAGCCTCAGTCTTCT
CATCCATGCATGCCGTGGGTATACTAAAATACTATACCCCTGGAAGAGCTGGATGCAAATTTGACAAGTTCTGGG
GGACACAGGAAGGTGCCAAGCACAAGGCTGGGCACATGGTGGCTGTGCACTACAGCTGAGTCCTTTTCCTTTTCA
GAATCTGGGATGTTAACCAGAAGACCTTCTATCTGAGGAACAACCAACTAGTTGCTGGATACTTGCAAGGACCAA
ATGTCAATTTAGAAGGTGAGTGGTTGCCAGGAAAGCCAATGTATCTGGGCATCACGTCACTTTGCCCGTCTGTCT
GCAGCAGCATGGCCTGCCTGCACAAACCCTAGGTGCAATGTCCTAATCCTTGTTGGGTCTTTGTATTCAAGTTTG
AAGCTGGGAGGGCCTGGCTACTGAAGGGCACATATGAGGGTAGCCTGAAGAGGGTGTGGAGAGGTAGAGTCTAGG
TCAGAGGTCAGTGCCTATAGGCAAGTGGTCCCAGGGCCACAGCTGGGAAGGGCAAATACCAGAAGGCAAGGTTGA
CCATTCCCTTCCTCAAGTGCCTATTAAGGCTCCATGTTCCTATGTTGTTCAAACCCTAACTCAATCCCAAATTAA
TCCACCATGTATAAGGTTGAGCTATGTCTCTTATTCCTGGACACCATACTCAGCCATATCTGGTCCACACATTAA
CAGCTGGATGACCTTGAAGAAGCTTCACCCACTCTGTTCCTCAGCTTTCCCTTCAGTGGGATGATATCAACTGGA
CAACAGGATGTGCGATTCTTTTAGTTCCAGCCTTCCAGGATGTTTTCACTCCCCTGTTTGTTGTTGTAGGATGGT
ATTACCTCCACCTTCCCACCTTCCCTATGCCCTGGTTCTGTCTCCTGTGCCTCGCTCTGAAAGTGGATGAGACCT
ACAATTCCTGTCCTGGTAGTTCTCCTAATGAACACACTGAAGCACGAGGAAGCTGAGATTTTTGTTGCTACATGA
GAGCATGGAGGCCTCTTAGGGAGAGAGGAGGTTCAGAGACTCCTAGGCTCCTGGTGGAGCCCCACTCATGGCCTT
GTTCATTTTCCCTGCCCCTCAGCAACACTCCTATTGACCTGGAGCACAGGTATCCTGGGGAAAGTGAGGGAAATA
TGGACATCACATGGAACAACATCCAGGAGACTCAGGCCTCTAGGAGTAACTGGGTAGTGTGCATCCTGGGGAAAG
TGAGGGAAATATGGACATCACATGGAACAACATCCAGGAGACTCAGGCCTCTAGGAGTAACTGGGTAGTGTGCAT
CCTGGGGAAAGTGAGGGAAATATGGACATCACATGGAACAACATCCAGGAGACTCAGGCCTCTAGGAGTAACTGG
GTAGTGTGCATCCTGGGGAAAGTGAGGGAAATATGGACATCACATGGAACAACATCCAGGAGACTCAGGCCTCTA
GGAGTAACTGGGTAGTGTGCTTGGTTTAATCTTCTATTTACCTGCAGACCAGGAAGATGAGACCTCTCTGCCCTT
CTGACCTCGGGATTTTAGTTTTGTGGGGACCAGGGGAGATAGAAAAATACCCGGGGTCTCTTCATTATTGCTGCT
TCCTCTTCTATTAACCTGACCCTCCCCTCTGTTCTTCCCCAGAAAAGATAGATGTGGTACCCATTGAGCCTCATG
CTCTGTTCTTGGGAATCCATGGAGGGAAGATGTGCCTGTCCTGTGTCAAGTCTGGTGATGAGACCAGACTCCAGC
TGGAGGTAAAAACATGCTTTGGATCTCAAATCACCCCAAAACCCAGTGGCTTGAAACAACCAAAATTTTTTCTTA
TGATTCTGTGGGTTGACCAGGATTAGCTGGGTAGTTCTGTTCCATGTGGTGGAACATGCTGGGGTCACTTTGGAA
GCTGCATTCAGCAGAGTGCCAGGCTTGCGCTGGGCATCCAAGGTGGTCCCTCATCCTCCAGGCTCTCTTTCCATG
TGATCTCTCAGTGTTTAAGAGTTAGTTGGAGCTTCCTTACAGCATGGCGGCTGACTTCCAAAAGGGATTATTCCA
AAAAGAGCCTCAACATGCAGGCGCTTATTATGACTTCTGCTTGCATCATCCTATTGGCCAAAGCCAGTCACGTGG
CTAAGTCTAGCCCCCTGTGAGAGGAGACTGCATAAGAGTGTGAACACCAGGAGACACGGTCACTGGGGGCCACCA
CTGTAACCATCTACCACAGGACCTGAATCTCTGTGTGCTACTCCCTTGCTCAAGGGCCCCCCTACCCACGCAGAC
CTGCTGTCTTCTAGCAAAGCCCATCCTCAGGACCTTTCTCTTCCAATCCTTATTGACTCAAATTGATTAGTTGGT
GCTCCACCCAGAGCCCTGTGCTCCTTTATCTCATGTAATGTTAATGGGTTTCCCAGCCCTGGGAAAACATGGCTT
TGTCTCAGGGGCTTGCTGGATGCAACCTTAACCTCAATGTGAGTGGCCATACTGTGGCACTGTCCCATCCCTCAC
CAGGGACACTGTTCTGGAGGGTGACTGCCTGTTCTGTGAGGAGTGGGGATGGCTAGGACATTGCATGGAACACAC
CACCACCCCATCTTCTCAGAGCTCAAACCCTGACAGAACACCAGCTCCACAGGCCTTGGCTTCTGCTGATGGTGC
CGTGTATTTACCAGACTTAGTGGTCCAAGGCCAGAGTGGCAGATTTCCCAAAGTCAAGGTGTGACAGTGGGACAG
CCTCTTTGTGTCTTTGCTGTCCTAAGAAACCTGGGCCAGGCCAGGCGCAGTGGCTCACGCCTTGTAATCCCAGCA
CTTTGAGAGGCCAAGGTGGGCAGATCACGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATTGGTGAAACCCTG
TCTCTATTAAAAATAGAAAACATTAGACAGGTGTGGTGGTGCATGCCTGTAATCCCAGCTACTCAGGAGGCTGAG
GCAGGAGAATCGCTTGAACCCAGGAGGTGGAGGTTGCAGTGAGCCGAGATTGTGCCACTGCACTCCAGCCTAGGC

FIGURE 1752D

GACAGAGCAAGACTCCGTCTCGGGAAAATTAATTAATAAATAAATAAACCTAGGTCCCAGAGTCCCACAGAATGG
CAGACAGGAGCACCTGGGGGCTTTTAGGGTATGGCATTTCCCCTGTACTAACTCTGGGCTGTCCAGAGGCGATTT
CATGGCGTGGAGTGGAGAGGGAGGCAGCACAGGACTTCCTAGGCCTCAGCTCTCACCTGCCCATCTTTTGATTTC
CAGGCAGTTAACATCACTGACCTGAGCGAGAACAGAAAGCAGGACAAGCGCTTCGCCTTCATCCGCTCAGACAGT
GGCCCCACCACCAGTTTTGAGTCTGCCGCCTGCCCCGGTTGGTTCCTCTGCACAGCGATGGAAGCTGACCAGCCC
GTCAGCCTCACCAATATGCCTGACGAAGGCGTCATGGTCACCAAATTCTACTTCCAGGAGGACGAGTAGTACTGC
CCAGGCCTGCCTGTTCCCATTCTTGCATGGCAAGGACTGCAGGGACTGCCAGTCCCCCTGCCCCAGGGCTCCCGG
CTATGGGGGCACTGAGGACCAGCCATTGAGGGGTGGACCCTCAGAAGGCGTCACAACAACCTGGTCACAGGACTC
TGCCTCCTCTTCAACTGACCAGCCTCCATGCTGCCTCCAGAATGGTCTTTCTAATGTGTGAATCAGAGCACAGCA
GCCCCTGCACAAAGCCCTTCCATGTCGCCTCTGCATTCAGGATCAAACCCCGACCACCTGCCCAACCTGCTCTCC
TCTTGCCACTGCCTCTTCCTCCCTCATTCCACCTTCCCATGCCCTGGATCCATCAGGCCACTTGATGACCCCCAA
CCAAGTGGCTCCCACACCCTGTTTTACAAAAAAGAAAAGACCAGTCCATGAGGGAGGTTTTTAAGGGTTTGTGGA
AAATGAAAATTAGGATTTCATGATTTTTTTTTTTCAGTCCCCGTGAAGGAGAGCCCTTCATTTGGAGATTATGTT
CTTTCGGGGAGAGGCTGAGGACTTAAAATATTCCTGCATTTGTGAAATGATGGTGAAAGTAAGTGGTAGCTTTTC
CCTTCTTTTTCTTCTTTTTTTGTGATGTCCCAACTTGTAAAAATTAAAAGTTATGGTACTATGTTAGCCCCATAA
TTTTTTTTTTCCTTTTAAAACACTTCCATAATCTGGACTCCTCTGTCCAGGCACTGCTGCCCAGCCTCCAAGCTC
CATCTCCACTCCAGATTTTTTACAGCTGCCTGCAGTACTTTACCTCCTATCAGAAGTTTCTCAGCTCCCAAGGCT
CTGAGCAAATGTGGCTCCTGGGGGTTCTTTCTTCCTCTGCTGAAGGAATAAATTGCTCCTTGACATTGTAGAGCT
TCTGGCACTTGGAGACTTGTATGAAAGATGGCTGTGCCTCTGCCTGTCTCCCCACCAGGCTGGGAGCTCTGCAGA
GCAGGAAACATGACTCGTATATGTCTCAGGTCCCTGCAGGGCCAAGCACCTAGCCTCGCTCTTGGCAGGTACTCA
GCGAATGAATGCTGTATATGTTGGGTGCAAAGTTCCCTACTTCCTGTGACTTCAGCTCTGTTTTACAATAAAATC
TTGAAAATGCCTATATTGTTGACTATGTCCTTGGCCTTGACAGGCTTTGGGTATAGAGTGCTGAGGAAACTGAAA
GACCAATGTGTYTTYCTTACCCCAGAGGCTGGCGCCTGGCCTCTTCTCTGAGAGTTCTTTTCTTCCTTCAGCCTC
ACTCTCCCTGGATAACATGAGAGCAAATCTCTCTGCGGGG

FIGURE 1753A

GGGAAAGCGAGGAGCCGCGGCGGCGTGGAGCCGGCGGGCCCGGGCGGGGGCTCCCCGGAGCCCTACCACCCCACC
CTGGGCATCTACGCCCGCTGCATCCGGAACCCAGGGGTGCAGCACTTCCAGCGGGACACGCTGTGCGGGCCCTAC
GCCGAGAGCTTCGGCGAGATCGCCAGCGGCTTCTGGCAGGCCACAGCTATTTTCCTGGCTGTGGGAATCTTTATT
CTCTGCATGGTGGCCTTGGTGTCCGTCTTCACCATGTGTGTACAGAGCATCATGAAGAAAAGCATCTTCAATGTC
TGTGGGCTGTTGCAAGGAATTGCAGGTCTATTCCTTATCCTCGGTTTGATACTCTACCCTGCTGGCTGGGGTTGC
CAGAAGGCCATAGACTACTGTGGACATTATGCATCTGCCTACAAACCTGGAGACTGCTCCTTGGGCTGGGCCTTT
TATACCGCCATTGGGGGCACAGTCCTCACTTTCATCTGTGCTGTCTTCTCTGCACAAGCAGAAATTGCAACCTCT
AGTGACAAAGTACAGGAAGAAATTGAAGAGGGGAAAAACCTGATCTGCCTCCTT**TAG**TTTGGAAGAGACAATGCC
ATTTTCTCCCTTGAGTAATCTTGTGAAACAGTCCACAGTTTCATCATTTGAGTCAAGTGGAGAACTAACCTTTAC
CTACCAAAGCCACGTTCCACGGCCCGAGGCTTAAACAGGACCAATGAGAGGCCACATCCAGCTACGCAAAGTTAC
TGGACATGCGGTCTGCAGTGCACATTATAAGGAATGGAACATGAAAATAGTATATAATCCTAGACCTGGAGTTGC
CAAGTTCTGTCAGACTCCATCTCCCCCAGGTTCAATGATGGATGATAATCTAAATCATTAGGGCAGCAGTTTCTC
TGGTAACGGAAGAGACCGTCCGCCAGATCTGCAGGCTGTTTCTGCTCCAACACTGCTTGCTTGTGAGCATCTCTG
CCTCAGAATGGGGTTTTGGGTTGGAGTTCTTGTTTTCCTCTGTTCTTTCAAGTTGTCTCCAACGAACAGAAAACT
ATAAACTTACTGGGGACAGGATGTGTGCTAAAGGGCACAGCAAGACACTGTCTTTTGCTTAGCTGACCAAAGGGG
TCAGCAGGGATGGCGTGGAGTCATGCTGTGGAACTTATTCTAGGCTGAATCCTAGGGTAAGGTGGATCAACTGAA
CTGTCACTCCAGAGATTTTAGAAATTTGAGTAAAGAAACAATAAGGACCTATACAATCATATGAGAACAAAAATA
TGAAATCTTGCTAGTGAAGACGTATTTTTTCTTCTTCCCAGCAGCCAGGCTAGCACCAGTTCTGGCCCAGTCTCC
TCTTCTTCTGGAGATCACATGTTTTTCTTCTAAGGTTAGGATTGTGCTTTGACTGCGAAAGGAAACCTCACTGTT
TCCTCCTTCCAGGGACTGAGGTCTCCAAGCTAGCTGTGGCTTATGCAGATGTTCACTGGGAGGACCTGCCAGAAT
CTCGGCACTTGGGGGGAGACCTTTACTCCCAGTTTGGTGACCATGCTGTAGTCAGCTCTATTTCCAATCCCGACA
GTAGCAGAATGGCATTCTACAACAAAAAGAAGCTAGTTATGGGAGTTAAGTTTTTGTAGTTACTGGTGTTGATCC
TGAAAGCAGACTGAGATAACATTAAATTGCTGCAACTGAAGAACTGCAGCCAAGACCTTAATTCCAGGAAAGCAC
AGAGGACAAAGTTAATTCAAAAAGAGGCGCTAGATCAAGGTCACAGCACTGCCTACACCTGTTTACAAAAAGAAT
CAAATACCACTATGAATAAGGATTCAGGGGTTTTTAATCTACTTTCCATAAATTACCAATATCACTGATTCAGGA
AGATAGTATCTCAGAATGACCAGAGCAGCACAGAAACAAGCTACTCTGACATTATGGGAGCTTCAAAATTGTATC
ATGATACAGAAACACTCCTTAGCACTTTAAGAAAGTGAGATGGAACTGCCAGATTTCTGGAAGGAGAAAAAGTGT
AGGTATTTGGGTTCATTAATCTGCTCACTTGAGGACTTTGTTTTGAAAAAGTACCTTCTGTGGACAAGGTATTGT
GCTACCAGCTATACAACCCTGACTTCAGAGTTTGCAACCTTGCCCTGAGTGAATCATGTTAAAGCTGTCTGAGTC
TAAAGCACCGTATCTTGGTGCAGAACAGATAATTATACAGAGATGGAATGGGACAACCGCAGTTTTACTACATTC
TGGTGTTTGGCCTATATGAGAAACCATCTTCTCACAGATTAAGGGCTAAGGGCAAAAGGGGTGGGAGGTGTGGAA
CTAGCCTTAATGAGTTTCCCATTCCTGAACCAAAATTCAAAGTGAGTGAGATGTAAATCCTGTGATTTTGGTGAA
GAAAAAAACGGGTATCTTCATAGCAGCCTAGGAAACCTTAACCATATCTCTAACACCACACAGAAAGAGGCTGGA
GGAGCCACTGGACAAAGCTTCTGTCTCTGTGTGTACATTTATAATGTTCTAACCAAGTCTCAAACCTTGATGAAA
AACACAAAATTTTTCCATAAACTTATCAGAAGACTCACTTTTCTTTCTTTCTTGGATAGAGAAACCATTTTCTGA
CACTAGGTTTACAATCTCAGTGTCCTTACAAGTTAAGTCCTAAGCTCACAGGATCCTCCGAGCATGTCCATCACC
TGCTCTTTGGCTAAGGTGGCAGTGTACCTCTAGATCAACCTGGGAACAGTCACAAGGGAGTGTGACTTCTTGGCC
ATAATAAACTCACTCGATAGTGTTTATGTTATTAATCTGAATGCAACAGAAGACAAAAGCACAGGCATGCACACA
CACAGAACCCCAAACCACTAAAAACTACCTAAACACTGACTTAGTAAATAGTAAAAAGGTAATGTTGGGACTTTT
AAACCTTGAATCCATTAGCCAGGCTTGGGATGAAAGGACCATCTAAAATCATGCTAGTCTAAACCATGCTCTTCC
ACACAGCTGTTTAAAAACCACTGGGTATGAGGAATATGCTAGAAAGAAATGTTAAAAATAGATTGTTGGCTCACA
CTTATTTTTCTAATAAATAGGACCATTATTACTACCAGGAAAGTCTTATTTATTTTGCCTGAAATTGGCTTAAAG
AAAGTCTCATGACGGGATGGGATGGGCTGCGCTTCTCAATGAACTCTGAGGCAGAAATATTTGCCTTGGATTCTG
TGGATTCTTTAAACCTGTGTGCTAATAATTCAAACAATGTTGCATTAATTGTATAAGGGTTTTTGTATAGTTTTC
AAACATCTGTGGTGTAATGATCTTTGTTAAACATATATTCTGTAAAGTGCCATAGTCTTTTTTTATGTGTAGCAT
ATTTAAAAATATATATGTATATTATACATACACAAGTTTGTGTGAAAGATGTGCAATAACAAAGGTGTATGTATG
TTTTGTTGTTTTGTTTTGGAAACTGGACAGGAGTCAAAACAGGGATGTTTGTTTCTGTTTTGGCAAAGGAGAGTT
CCACATTTTTGCCTTCATGGCTTATTCAGTAACCCATAATTTTAATGCTACACAAATCTTATGTGAAGAAAAGAC

FIGURE 1753B

TGGTATGAAATCATTTTTTCCTGGGTCTAAAATAATCGCTAGTGTTATGTCAAAGTTAAGCCCGCACGCCAGGCC
CAGTTAATGCTAGTCTTTCATGTGAAATGTGAAGCTGCCATGTTGCCTTTTCTCTTAGTAGGATAACTAGTAGCT
GGTACATAATCACTGAGGAGCTATTTCTTAACATGCTTTTATAGACCATGCTAATGCTAGACCAGTATTTAAGGG
CTAATCTCACACCTCCTTAGCTGTAAGAGTCTGGCTTAGAACAGACCTCTCTGTGCAATAACTTGTGGCCACTGG
AAATCCCTGGGCCGGCATTTGTATTGGGGTTGCAATGACTCCCAAGGGCCAAAAGAGTTAAAGGCACGACTGGGA
TTTCTTCTGAGACTGTGGTGAAACTCCTTCCAAGGCTGAGGGGGTCAGTAGGTGCTCTGGAGGGACTCGGCACCA
CTTGATATTCAACAGCCACTTGAGCCAAATATAAAATTGTATTTACAGCTGATGGACTCAATTTGAGCCTTCAAA
CTTGTAGTTATCCTATTATATTGTAAACTAATACATTGTCTAGCATTGATTTGGTTCCTGTGCATATGTATTTTC
ACTATGTGCTCCCCTCCCCAGATCTTAATTAAACCAGATTTTGCAATTC

FIGURE 1754

GKARSRGGVEPAGPGGGSPEPYHPTLGIYARCIRNPGVQHFQRDTLCGPYAESFGEIASGFWQATAIFLAVGIFI
LCMVALVSVFTMCVQSIMKKSIFNVCGLLQGIAGLFLILGLILYPAGWGCQKAIDYCGHYASAYKPGDCSLGWAF
YTAIGGTVLTFICAVFSAQAEIATSSDKVQEEIEEGKNLICLL

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FIGURE 1755

GGCACGAGGGGAAGACCTCCTGTCCTATCAGGCCCTCCCC**ATG**GCTTTAGAGACGATCTGCCGACCCTCTGGGAG
AAAATCCAGCAAGATGCAAGCCTTCAGAATCTGGGATGTTAACCAGAAGACCTTCTATCTGAGGAACAACCAACT
AGTTGCCGGATACTTGCAAGGACCAAATGTCAATTTAGAAGAAAAGATAGATGTGGTACCCATTGAGCCTCATGC
TCTGTTCTTGGGAATCCATGGAGGGAAGATGTGCCTGTCCTGTGTCAAGTCTGGTGATGAGACCAGACTCCAGCT
GGAGGCAGTTAACATCACTGACCTGAGCGAGAACAGAAAGCAGGACAAGCGCTTCGCCTTCATCCGCTCAGACAG
TGGCCCCACCACCAGTTTTGAGTCTGCCGCCTGCCCCGGTTGGTTCCTCTGCACAGCGATGGAAGCTGACCAGCC
CGTCAGCCTCACCAATATGCCTGACGAAGGCGTCATGGTCACCAAATTCTACTTCCAGGAGGACGAG**TAG**TACTG
CCCAGGCCTGCCTGTTCCCATTCTTGCATGGCAAGGACTGCAGGGACTGCCAGTCCCCCTGCCCCAGGGCTCCCG
GCTATGGGGGCACTGAGGACCAGCCATTGAGGGGTGGACCCTCAGAAGGCGTCACAACAACCTGGTCACAGGACT
CTGCCTCCTCTTCAACTGACCAGCCTCCATGCTGCCTCCAGAATGGTCTTTCTAATGTGTGAATCAGAGCACAGC
AGCCCCTGCACAAAGCCCTTCCATGTCGCCTCTGCATTCAGGATCAAACCCCGACCACCTGCCCAACCTGCTCTC
CTCTTGCCACTGCCTCTTCCTCCCTCATTCCACCTTCCCATGCCCTGGATCCATCAGGCCACTTGATGACCCCCA
ACCAAGTGGCTCCCACACCCTGTTTTACAAAAAAGAAAAGACCAGTCCATGAGGGAGGTTTTTAAGGGTTTGTGG
AAAATGAAAATTAGGATTTCATGATTTTTTTTTTTCAGTCCCCGTGAAGGAGAGCCCTTCATTTGGAGATTATGT
TCTTTCGGGGAGAGGCTGAGGACTTAAAATATTCCTGCATTTGTGAAATGATGGTGAAAGTAAGTGGTAGCTTTT
CCCTTCTTTTTCTTCTTTTTTTGTGATGTCCCAACTTGTAAAAATTAAAAGTTATGGTACTATGTTAGCCCCATA
ATTTTTTTTTTCCTTTTAAAACACTTCCATAATCTGGACTCCTCTGTCCAGGCACTGCTGCCCAGCCTCCAAGCT
CCATCTCCACTCCAGATTTTTTACAGCTGCCTGCAGTACTTTACCTCCTATCAGAAGTTTCTCAGCTCCCAAGGC
TCTGAGCAAATGTGGCTCCTGGGGGTTCTTTCTTCCTCTGCTGAAGGAATAAATTGCTCCTTGACATTGTAGAGC
TTCTGGCACTTGGAGACTTGTATGAAAGATGGCTGTGCCTCTGCCTGTCTCCCCCACCAGGCTGGGAGCTCTGCA
GAGCAGGAAACATGACTCGTATATGTCTCAGGTCCCTGCAGGGCCAAGCACCTAGCCTCGCTCTTGGCAGGTACT
CAGCGAATGAATGCTGTATATGTTGGGTGCAAAGTTCCCTACTTCCTGTGACTTCAGCTCTGTTTTACAATAAAA
TCTTGAAAATGCCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1756

MALETICRPSGRKSSKMQAFRIWDVNQKTFYLRNNQLVAGYLQGPNVNLEEKIDVVPIEPHALFLGIHGGKMCLS
CVKSGDETRLQLEAVNITDLSENRKQDKRFAFIRSDSGPTTSFESAACPGWFLCTAMEADQPVSLTNMPDEGVMV
TKFYFQEDE

FIGURE 1757

CTTCTAGATCATCATAAGACTACAGAGCACTTTTCAAAGCTCATGCATGTTCATCATGTTAGTGTCGTATTT**TGA**

GCTGGGGTTTTGAGACTCCCCTTAGAGATAGAGAAACAGACCCAAGAAATGTGCTCAATTGCAATGGGCCACATA
CCTAGATCTCCAGATGTCATTTCCCCTCTCTTATTTTAAGTTATGTTAAGATTACTAAAACAATAAAAGCTCCTA
AAAAATCTAAAAAAA

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FIGURE 1758

LLDHHKTTEHFSKLMHVHHVSVVF

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FIGURE 1759

GGGCTTCCTGGGGAGGGTGTGGCAGGGTGGTGGGCATCCCCTCCCTCACCAAAGCATGGGCTCTTTGTTTCCTCT
TTGCCAGGCCTGGGTCCTTCCCAGTGACCCCTCAGCCTTCACTTCCTCCTCACTCCCGGGGAGCTGTGACAGGTG
TTTGGGGGAGGGGAGGGGGGTATGATAAGCTGGGACAGCTGCACCCACCGGTGCTCTGGTGAGATGGGGGGCCCG
G**ATG**TTGGGGAGACACATCTGCTGGGTTCCCAGCCCAAGGTCCCCAACCCTGGCTGTCTGGCCTTGTCTGTCACC
CCCCGTGCCCACTGGCAGGGACAGGAAGCTCCCCCCCCCACCCCGCTTTGGGCAGTTTGCCTTGGCACGGGCCTGA
TCTGTTTTCCTCCCCAGAGCAGCTGCTGTTCTGTCTGCTGGGCAGAGGGCTGGGTTCCTCCGAGGTAGGCAGGGG
CCTCAACCCAGAGCCCCTCTCACACCCTCTTTCAACTCAGGCTTATGTCTCTCCCTCCTCCCCCACCCCCACCCC
AGGAAGAGGAGATCCCAGAACTGGAGAT**TGA**CGTGGATGAGCTCCTGGACATGGAGAGTGACGATGCCCGGGCTG
CCAGGGTCAAGGAGCTGCTGGTTGACTGTTACAAACCCACAGAGGCCTTCATTTCTGGCCTGCTGGACAAGATCC
GGGGCATGCAGAAGCTGAGCACACCCCAGAAGAAGTGAGGGTCCCCGACCCAGGAGAACGGTGGCTCCCACAGGA
CAATCGCTGCCCCCCAACCTCGTAGCAACAGCAATACCGGGGGACCCTGCGGCCAGGCCTGGTGCCATGAGCAGG
GCTCCTCGTGCCCCTGGCCCAGGGGTCTCTTCCCCTGCCCCCTCAGTTTTCCACTTTTGGGGTTTTTTATTGTTA
TTAAACTGATGGGACTTTAAAAAAAAAAAAAAAAAAAA

FIGURE 1760

MLGRHICWVPSPRSPTLAVWPCLSPPVPTGRDRKLPPHPALGSLPWHGPDLFSSPEQLLFCLLGRGLGSSEVGRG
LNPEPLSHPLSTQAYVSPSSPTPTPGRGDPRTGD

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FIGURE 1761

CTTTCTTAAAAAATATATCTTCATATCCATAACTTTTTTCACATCTCTCTCTCTCCCTTTCGGTATTCTATTTCT
TTCCATATCCATATTT**TGA**AATAGCCTTTAAATAACCTCTACGTTAGACAAAATTATTCTTTAAAAAATTTTTNN
NNNNNNNNNNNNNNNNNNNNNGTGTAAGTGGATTAAAAGAGAAACTTGGTCTAGTTCATAATATTTTTAATAGGG
CTTTCCCTGGCTGCTGGAAAACTTAGGCCAGTAAGCATCTCTTTGTTTAAAGTCCTACAAGACAATTTGAAATAA
TTCATTGTTCATGCCAAAATTCTAAGTACTGTTTTTCTTAGCAAGTGTAACATAATCAGGAACAATGGGTACAAG
TAAAACATTCTTTGGATGATATTCAAAGCCTTATTAGCACTGCACCTGAATAATAGGTCATTTTGCCTCACTCAT
TTGCCAAAGTAGCCATTTCTAAGTTAAGGAAGTTTTTAGATAGGCTCATAGCCTTGTATTTCGTTTTAGATTGTA
AGCTCAATGGCAGGGATACTATATTGGTAATTATGTTTTCATATAGCAACCACCACAGTATATTCTTGGTGCTTA
ATAAATGTTTATAATTGTTAACAATAAA

FIGURE 1762

FLKKYIFISITFFTSLSLPFGILFLSISIF

FIGURE 1763

ATGGCGGCGGCATTACGGGTGGCGGCGGTCGGGGCAAGGCTCAGCGTTCTGGCGAGCGGTCTCCGCGCCGCGGTC
CGCAGCCTTTGCAGCCAGGCCACCTCTGTTAACGAACGCATCGAAAACAAGCGCCGGACCGCGCTGCTGGGAGGG
GGCCAACGCCGTATTGACGCGCAGCACAAGCGAGGAAAGCTAACAGCCAGGGAGAGGATCAGTCTCTTGCTGGAC
CCTGGCAGCTTTGTTGAGAGCGACATGTTTGTGGAACACAGATGTGCAGATTTTGGAATGGCTGCTGACAAGAAT
AAGTTTCCTGGAGACAGCGTGGTCACTGGACGAGGCCGAATCAATGGAAGATTGGTTTATGTCTTCAGTCAGGAT
TTTACAGTTTTTGGAGGCAGTCTGTCAGGAGCACATGCCCAAAAGATCTGCAAAATCATGGACCAGGCCATAACG
GTGGGGGCTCCAGTGATTGGGCTGAATGACTCTGGGGGAGCACGGATCCAAGAAGGAGTGGAGTCTTTGGCTGGC
TATGCAGACATCTTTCTGAGGAATGTTACGGCATCCGGAGTCATCCCTCAGATTTCTCTGATCATGGGCCCATGT
GCTGGTGGGGCCGTCTACTCCCCAGCCCTAACAGACTTCACGTTCATGGTAAAGGACACCTCCTACCTGTTCATC
ACTGGCCCTGATGTTGTGAAGTCTGTCACCAATGAGGATGTTACCCAGGAGGAGCTCGGTGGTGCCAAGACCCAC
ACCACCATGTCAGGTGTGGCCCACAGAGCTTTTGAAAATGATGTTGATGCCTTGTGTAATCTCCGGGATTTCTTC
AACTACCTGCCCCTGAGCAGTCAGGACCCGGCTTCCGTCCGTGAGTGCCACGATCCCAGTGACCGTCTGGTTCCT
GAGCTTGACACAATTGTCCCTTTGGAATCAACCAAAGCCTACAACATGGTGGACATCATACACTCTGTTGTTGAT
GAGCGTGAATTTTTTGAGATCATGCCCAATTATGCCAAGAACATCATTGTTGGTTTTGCAAGAATGAATGGGAGG
ACTGTTGGAATTGTTGGCAACCAACCTAAGGTGGCCTCAGGATGCTTGGATATTAATTCATCTGTGAAAGGGGCT
CGTTTTGTCAGATTCTGTGATGCATTCAATATTCCACTCATCACTTTTGTTGATGTCCCTGGCTTTCTACCTGGC
ACAGCACAGGAATACGGGGGCATCATCCGGCATGGTGCCAAGCTTCTCTACGCATTTGCTGAGGCAACTGTACCC
AAAGTCACAGTCATCACCAGGAAGGCCTATGGAGGTGCCTATGATGTCATGAGCTCTAAGCACCTTTGTGGTGAT
ACCAACTATGCCTGGCCCACCGCAGAGATTGCAGTCATGGGAGCAAAGGGCGCTGTGGAGATCATCTTCAAAGGG
CATGAGAATGTGGAAGCTGCTCAGGCAGAGTACATCGAGAAGTTTGCCAACCCTTTCCCTGCAGCAGTGCGAGGG
TTTGTGGATGACATCATCCAACCTTCTTCCACACGTGCCCGAATCTGCTGTGACCTGGATGTCTTGGCCAGCAAG
AAGGTACAACGTCCTTGGAGAAAACATGCAAATATTCCATTG**TAA**

FIGURE 1764

MAAALRVAAVGARLSVLASGLRAAVRSLCSQATSVNERIENKRRTALLGGGQRRIDAQHKRGKLTARERISLLLD
PGSFVESDMFVEHRCADFGMAADKNKFPGDSVVTGRGRINGRLVYVFSQDFTVFGGSLSGAHAQKICKIMDQAIT
VGAPVIGLNDSGGARIQEGVESLAGYADIFLRNVTASGVIPQISLIMGPCAGGAVYSPALTDFTFMVKDTSYLFI
TGPDVVKSVTNEDVTQEELGGAKTHTTMSGVAHRAFENDVDALCNLRDFFNYLPLSSQDPASVRECHDPSDRLVP
ELDTIVPLESTKAYNMVDIIHSVVDEREFFEIMPNYAKNIIVGFARMNGRTVGIVGNQPKVASGCLDINSSVKGA
RFVRFCDAFNIPLITFVDVPGFLPGTAQEYGGIIRHGAKLLYAFAEATVPKVTVITRKAYGGAYDVMSSKHLCGD
TNYAWPTAEIAVMGAKGAVEIIFKGHENVEAAQAEYIEKFANPFPAAVRGFVDDIIQPSSTRARICCDLDVLASK
KVQRPWRKHANIPL

FIGURE 1765

TGGGGTCAAAGCTCGCCAGTACCCTTGGGGTGTTGTACAAGTGGAAAATGAAACCCACTGTGACTTTGTAAAGCT
GCGGGAAATGCTCATTTGTACAAATATGGAGGACCTGCGAGAGCAGACCCATACCAGGCACTATGAGCTTTACAG
GCGCTGCAAACTGGAGGAAATGGGCTTTACAGATGTGGGCCCAGAAAACAAGCCAGTCAGTGTTCAAGAGACCTA
TGAAGCCAAAAGACATGAGTTCCATGGTGAACGTCAGAGGAAGGAAGAAGAAATGAAACAGATGTTTGTGCAGCG
AGTAAAGGAGAAAGAAGCCATATTGAAAGAAGCTGAGAGAGAGCTACAGGCCAAATTTGAGCACCTTAAGAGACT
TCACCAAGAAGAGAGAATGAAGCTTGAAGAAAAGAGAAGACTTTTGGAAGAAGAAATAATTGCTTTCTCTAAAAA
GAAAGCTACCTCCGAGATATTTCACAGCCAGTCCTTTCTGGCAACAGGCAGCAACCTGAGGAAGGACAAGGACCG
TAAGAACTCCAATTTTTTG**TAA**AACAGAGGTTCCAGAGCACAGAAGGTCATCATCACAAGCAAACTTTATTAAAA
AAAAACTAGAAGTGTGCTTTGATTTTGCTGTTATTTGTTTTATCACTTCTATATTTGGTGAACAGCCACAGTTAC
TGATATTTATGGAAAAGTACTTTCAAGTACAAGGTCAATACATAAGCCGGAGTGAATGATACTACGAGTTGAGCA
TCTCTAATTCAAAAATCTGAAATCCAGAAGCTTCAAAATCTGAACTTTTTGAGCACTGACTTGACCCCACAAGTG
GAAAATTCCCCACCCGACACCTTTGCTTTCTGATGGTTCAGTTTAAACAGATTTTGTTTCTTGCACAAAATTTTT
GTATAAATTACTTTCAGGCTATATGTATAAGGTGGATGTGAAACATGAATTATGTAATTAGAGTCGGGTCCCGTT
GTGTATATGCAGATATTCCAAACCTGAAATCCAAAACACTTCTGGTCCCTAGCATTTTGGATAAGGGATACTCAG
CTTGTACCTATATATTCATATATATTCACTGTTGTTAGAAATGTTTAAGTTGCTGTTCTGTGATGAATCTAAATC
TTTTCTCTTGCTACCAAGCTATTGTCACTGCAGTGCATTATACCAAAGAGCGAAGTCAGTGCCGCTGAAAATACA
GAACCCATTAATATCGTGGCTATCTGATTACATTTATATTCCAAGATGAACCTTTTTTATATATGCTAAAAATTT
TGGGGAATATGTTTTGGGATGTATTATGGAGCTAAAACTCTAACCTCTTAATAGTTTTATAGAACTTAAAAATTT
TTTATACAATTACCCAATTGGTGATATGATCTTAAGCTTTTGTGTCAGATTATTTAATATGATGACTTCATGCTT
TATTATGCCTTATTATGGCTGACGTATTACTGTGGTGAAACAAAATATCTTTAAAAGTTAAAACATCCAGATATA
TAAGCTATTTTTTCCTAAGGATAAAGTACCTTTGAGCATGAGTGTATCACAGCTTTCATTAGGAAAACTTTTCAT
TACATACTTGTTTAAACTCTGTCTTCCAGGGTAAAAATAATAAGGTTGAATCATTTTATTAAAAATACTTTTTAA
GAAAATAACTATGAACATCTGAATATTAAAGATATAAAAATGCACATAATTCATATTTCAGGTGGTATTTGCATT
CAGTGCCTTACTGGTATTCTCAGAACATTTTAATGATTTCTAACATTTCTTAACAGTCATAGATATATACATTTT
CATTTTTTGTACTTGAATATTCTAAATAAAACTGACATTTACTCTTGACAAATAAAACATATATTTACCAAAAAA
AAAAAAAAAAAAA

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FIGURE 1766

GVKARQYPWGVVQVENETHCDFVKLREMLICTNMEDLREQTHTRHYELYRRCKLEEMGFTDVGPENKPVSVQETY
EAKRHEFHGERQRKEEEMKQMFVQRVKEKEAILKEAERELQAKFEHLKRLHQEERMKLEEKRRLLEEEIIAFSKK
KATSEIFHSQSFLATGSNLRKDKDRKNSNFL

FIGURE 1767A

GATCTCCACAAGAAACCCATACAGATGAGTGCACATTTGGCCATGATCGATACCCTCATGATGGCTTATACTGTA
AAAATGGTCAGTATAGAAAAAGTAATTGCGTGTGCTCAGCAGTATTCAGCTTTTTTTCAAGCCACAGATCTGCCC
TATGATATTGAGGACGCTGTCATGTACTGGATAAATAAGGTAAATGAACATTTGAAAGACATAATGGAACAAGAA
CAAAAACTGAAAGAACATCACACAGTTGAAGCTCCAGGAGGTCAAAAGTCTCCTTCCAAATGGTTTTGGAAACTG
GTTCCAGCTCGTTATCGGAAAGAGCAAACATTGCTTAAGCAACTGCCTTGCATTCCATTGGTAGAAAATTTGTTG
AAGGATGGGACAGATGGCTGTGCATTAGCTGCCCTTATTCATTTTTACTGTCCTGATGTTGTCAGATTAGAGGAT
ATTTGTTTGAAAGAAACTATGTCTTTGGCTGATAGCCTGTATAATCTGCAGCTGATTCAAGAATTTTGCCAAGAA
TACTTGAACCAGTGTTGCCATTTCACTCTGGAAGATATGCTCTATGCTGCTTCATCCATAAAGAGTAATTATTTG
GTGTTCATGGCGGAACTGTTCTGGTGGTTTGAAGTGGTGAAGCCGTCTTTTGTACAGCCTCGTGTTGTTCGTCCA
CAAGGAGCTGAACCTGTAAAAGATATGCCTTCAATTCCTGTCTTGAATGCTGCCAAAAGAAATGTCTTAGATAGT
AGTTCTGACTTCCCTTCAAGTGGGGAAGGAGCTACATTTACACAGTCTCATCATCATTTGCCTTCTAGGTATTCA
CGTCCCCAGGCTCATTCTTCAGCCTCAGGAGGAATTAGAAGGTCTTCATCTATGTCTTATGTTGATGGCTTCATA
GGGACATGGCCCAAAGAGAAAAGATCATCAGTGCATGGCGTATCATTTGATATTTCTTTTGATAAAGAAGATAGT
GTACAGAGATCCACTCCAAACCGAGGAATCACTCGTTCTATTAGTAATGAAGGACTTACTCTGAACAACAGTCAT
GTATCTAAACACATTAGGAAAAATTTGTCCTTCAAGCCAATAAATGGAGAAGAGGAAGCAGAGAGCATTGAAGAA
GAACTTAATATAGATTCTCACAGTGACCTCAAATCTTGTGTGCCCCTTAACACAAATGAACTAAATTCTAATGAG
AATATTCATTACAAGCTTCCAAATGGAGCTTTACAAAATAGAATACTTCTTGACGAGTTTGGCAATCAGATCGAG
ACACCAAGCATTGAAGAAGCATTACAAATAATTCATGATACTGAAAAATCTCCTCATACACCTCAGCCAGACCAA
ATTGCTAATGGCTTCTTTCTTCATAGTCAAGAAATGAGTATCTTAAATTCAAATATCAAGTTAAATCAATCTAGT
CCTGATAATGTAACTGATACGAAAGGTGCCTTGAGTCCCATAACTGACAATACTGAAGTAGACACTGGAATTCAC
GTTCCTTCAGAAGATATTCCTGAAACT**ATG**GACGAAGATTCTTCGTTGAGAGATTATACTGTAAGCTTGGACTCT
GACATGGATGATGCATCTAAATTTCTTCAGGATTATGATATTCGAACTGGCAACACCAGGGAAGCTTTGAGTCCT
TGTCCAAGTACTGTAAGTACCAAGTCTCAGCCAGGCAGCAGTGCTTCTTCTAGTTCTGGAGTTAAAATGACCAGC
TTTGCTGAACAAAAATTCAGGAAACTGAATCATACCGATGGAAAAAGTAGTGGAAGCAGTTCTCAAAAAACTACA
CCAGAAGGCTCTGAACTTAATATTCCTCATGTGGTTGCTTGGGCACAAATTCCAGAAGAAACAGGGCTTCCACAG
GGACGGGACACTACCCAGCTGTTGGCCTCTGAAATGGTGCATCTTAGGATGAAACTAGAAGAAAAGAGGCGTGCT
ATAGAAGCCCAGAAAAAGAAAATGGAAGCTGCTTTTACCAAACAGAGACAGAAAATGGGAAGGACAGCATTCCTT
ACTGTAGTGAAAAAGAAAGGGGATGGGATATCTCCTCTACGAGAGGAAGCGGCGGGTGCAGAAGATGAGAAAGTA
TATACTGATCGAGCAAAAGAAAAGGAATCACAAAAAACTGATGGACAAAGGAGCAAGTCACTGGCAGATATAAAA
GAGAGCATGGAGAATCCTCAAGCCAAATGGCTAAAGTCTCCAACTACACCTATTGATCCTGAGAAGCAGTGGAAC
CTGGCAAGCCCCTCAGAAGAAACTTTAAATGAAGGAGAGATTTTAGAATATACCAAATCCATTGAAAAGTTAAAT
TCATCCCTGCATTTTCTACAACAAGAAATGCAACGCTTGTCACTTCAGCAGGAGATGTTAATGCAGATGAGAGAG
CAACAATCTTGGGTGATTTCACCTCCACAACCCTCTCCACAGAAACAGATTCGAGATTTTAAGCCTTCTAAGCAG
GCAGGCCTGTCATCAGCCATTGCACCATTCTCCTCAGACTCCCCTCGTCCTACTCACCCATCTCCACAGTCTTCT
AACAGGAAAAGTGCATCTTTTTCTGTTAAAAGTCAAAGGACTCCTAGGCCAAATGAGTTAAAAATAACACCTTTG
AATCGAACCTTGACACCTCCTCGGTCTGTGGATAGCCTTCCTCGGTTAAGGAGGTTTTCACCAAGTCAAGTTCCT
ATTCAAACTAGGTCATTTGTATGTTTTGGGGATGATGGAGAACCTCAGTTAAAGGAATCCAAACCTAAAGAGGAA
GTTAAAAAGGAGGAATTGGAATCCAAAGGGACTTTGGAACAGCGTGGACATAATCCAGAAGAAAAGGAAATCAAA
CCTTTTGAGTCAACAGTCTCTGAAGTCCTATCACTGCCTGTCACAGAGACTGTATGTCTGACACCAAATGAGGAC
CAATTGAATCAACCCACAGAACCCCCTCCTAAACCCGTTTTCCCACCCACTGCTCCAAAAAATGTTAATCTGATT
GAAGTTTCCCTCTCAGATTTGAAACCCCCTGAAAAGGCTGATGTACCTGTTGAAAAATATGATGGAGAAAGTGAT
AAAGAACAATTTGATGATGACCAGAAAGTATGCTGTGGATTCTTTTTTAAGGATGATCAAAAAGCAGAAAATGAT
ATGGCAATGAAACGGGCAGCTTTGTTGGAGAAAAGATTAAGAAGGGAAAAGGAAACTCAGCTCCGGAAACAACAG
TTGGAAGCAGAAATGGAGCATAAGAAGGAGGAAACAAGGCGTAAAACTGAGGAAGAACGTCAGAAGAAAGAAGAT
GAGAGAGCACGCAGAGAATTTATTAGGCAAGAATATATGAGGCGGAAACAACTGAAACTAATGGAAGATATGGAT
ACAGTAATTAAACCCCGTCCTCAAGTAGTAAAACAAAAAAAACAGCGACCAAAATCTATTCACAGAGATCATATT
GAATCCCCCAAAACACCAATAAAGGGTCCTCCAGTCTCTAGCCTTTCTTTGGCATCGCTGAACACGGGTGATAAC
GAGAGTGTACATTCAGGCAAGAGGACGCCAAGATCAGAGTCTGTAGAAGGCTTCTTATCTCCAAGTCGTTGTGGC

FIGURE 1767B

AGTCGAAATGGAGAAAAAGACTGGGAGAATGCATCAACAACTTCTTCAGTGGCTTCTGGAACAGAATATACAGGA
CCAAAGCTCTACAAAGAACCCAGTGCAAAATCCAATAAGCACATAATACAAAATGCTTTAGCTCATTGCTGTTTG
GCTGGAAAAGTAAATGAAGGTCAGAAGAAAAAAATACTGGAGGAAATGGAGAAATCAGATGCCAACAACTTCTTA
ATCTTGTTCCGGGATTCAGGATGCCAGTTCAGATCTTTATACACTTATTGCCCAGAAACTGAAGAAATCAATAAA
CTGACTGGGATAGGCCCTAAATCTATCACTAAAAAAAATGATTGAAGGACTTTACAAATATAATTCTGACAGGAAA
CAGTTTAGCCACATACCCGCTAAAACTTTATCTGCCAGTGTTGATGCAATTACCATTCATAGCCATTTATGGCAG
ACCAAAAGACCAGTAACACCCAAAAAACTTTTACCCACTAAGGCA**TAG**AAGTTGGGAAATACTTGCTTCAGAACA
TTCATGGTAAATTTGCACTTCATCTTTCCTGCCTATAGAAAATCTTTCTAATTGCCAACAAGACTTTTATTAATT
AAAACTGGACATTAAGCTCTGTTGTCATGAACAACTGGAATGTAAACCACAGTATTTTGGAGTGCAGAACATTCT
CAATTAAGTGATAAGTCCAAATGATGAAGGAAATGTTTTAATTCACAAATGGAGATTTGTATGTGTTATCAGGTT
CACCTGCTTGATATTAGATACATTAAAGCACTGAATTTTCATGGATATTAGTTGGATTTATCATTGAAATATGGT
TAAGATTACAAATTATGTGTTTTATTTGTTGCTTTTTTTTAACCTTTTAATGTATATTCTTGTCTTCAGATGGTT
TGCTATTTTTCTCTCCTGGGGGTTTATTCTAAGATACCTTTGTATTTTATTTCATGTGGAGATCATGAAAGTAGG
AAATATACCTTTAGAAGTAACTCGCACCTTTCTTATGATGTTAAGAGAAACACTAGTGTTTAGTTTTACAGTAAC
CCTCATATTTTAATGGTGTTACAGCATTTGCAAAAATTATTCTGCTAAGTATTTACAACTCTATTTATTATTCAC
TCAAGTATTAACATTCTCTATTAAATAAGAGGAGGTGTTGTAAAGAGCTGCTAGTAGGTTCGCTTTAAACCACAT
GAGCTTAACCAAGAATATGTTATGAGAAGTTGCTGATTAAATCAGTGCTGTTTTTACACCACTTCTGGCCAACTC
AGAATAATTTAGATTGTTCTTTTAACAAAAAAGGCTTTCTATCTCTTTTAAAGTAAGTCACTTTATAAGTTGGCA
GAAGTGAATGACACTTTGAGAGTAGTCTTTCAATCTGAAGATGTAAGACTTCCTGAAACAAGTTCTCAAGAAGTC
TTTACATTATATTTATAACTCATATAAAAATTATATTTAGAATTTTTAAACATGTACAAAGGGCTACATTTTAAT
TTTAAAATAGCTTCACATTATTTTACTTATATTGGGTTTTTCTTCATTTTAATCCTTTTCAAGTGGAATGGCTTA
GAATAAGTATACACTTGAAATCTCCTCTACATGATCTTTGTTCTTTAACAGTGTATACCAGAGGGTTAGTTGGGG
AAAAACTTCATTCTCAGGAAAAGACTTGAATGATTATGTGACCCTGTTATATTTCAGTGTTGTGACAAATGTGTA
AACTAGCGGGGGAAGACAGTATTGTATCATAAATGAGATGCGTAGTTTGTTTTCTTTCATGGGAAGTAGAGATAA
AAATATATACATTTCTCTAATTGAGTTGTTTAGAGAAAGAACTAATGTCTCATATGATGTATTTACTTATTTTAA
AAAAAAGAATAGGAATGAGATGTCCCTGAGCTGTACTTTTCTATTATTATAAGGCCTTTAGGCATCAGTGCATCT
GGGTTATCAACATTTTCTCAAATGCTGTCAATATTTTACTGTAATTTATGTTCTTATATTTATGTATATTTGTTA
AAACTGTAAAAAAATTTCACAGATTTTTTTCCAATACCTGTGCAAGATACATGTGTAGCTCAAAACTATTTGTGA
TCTACTGTTTGCATGTAAGAGACCAGGATATGTAACTCTTATATTTTAAGTGTATACATATTGTGTATATAACAT
ATGGATATTAAAAATGGGGAATTGCACATTTTACCTTTTGGACAGTAATTTCTATCACAGTTAGAAGGAAATGAT
AGTCAAATACACGTTTAGATTAAAACTAGTTTAAAAAATTATAAATGAATCTAATCAAAATGTGAATAGTAGTCA
AAAGGATAATTTAATAAGCATTTTACGTTACTAAATTTGTTCATTTCAATATTAACTAAATTTCCCTCATCAAAG
CAATCTTTGTGATATTACTTCGCTATTAAATAAAGAAAATTGGATGCAAGACAATGGAGAAACTTTAAAACTAAA
CAGGACCACCCTTTATTCTTAAATTTGTGTGTGTCCAACAGTTGAATTGAATGTCTATAAGGTCTAAAGGTAGAA
TGTGAATATTGCCACAGAGTTCATTGCTCTCAGTATAAGATTTTACTTTATTAATGCAGAAGGAATATGGATATA
TTTCTTTAAGTCTGCAGATTTTTTTATTATGGTGCAGCTTTTTTTTAATTATGTTTTTAAAATTATACAGTTGAA
AAATATGCCATTTCATAAAGTCTGAGGATTTTCGTCAACCTTACTGAAACACACTGGTGCTTTCATCATCAGAGG
TCAAATTATTATGATAACTATTCCATTAAGTTTGCCAAACATTTGTCGTGGTTACCAGTGCAGCCTGTCAAATTC
TGCTATTTGACACAGCTTTGGAAAGATTTAGTTCTTGGTTTTTCCGTTTTGTATTAGAATGACTGTTACAGTTTT
ATTTGGCTGTTTAAAGCCAAATTCAGCTATTTAATTATGGTTTCATGGACACTGTTGAGCAATGTACAGTGTATG
GTGTGCTTACCTGTCCACTCTAGAGCATTGCTTACAGGTTTTTTGTTTTTTAAGATGCTGTGCTGTAAAATACTG
TCATACTTGCTATTTCCTGGTACAGTGTAGTTTTTCCCCTTTCATTTGAATAAAAGCATGGCACC

FIGURE 1768

MDEDSSLRDYTVSLDSDMDDASKFLQDYDIRTGNTREALSPCPSTVSTKSQPGSSASSSSGVKMTSFAEQKFRKL
NHTDGKSSGSSSQKTTPEGSELNIPHVVAWAQIPEETGLPQGRDTTQLLASEMVHLRMKLEEKRRAIEAQKKKME
AAFTKQRQKMGRTAFLTVVKKKGDGISPLREEAAGAEDEKVYTDRAKEKESQKTDGQRSKSLADIKESMENPQAK
WLKSPTTPIDPEKQWNLASPSEETLNEGEILEYTKSIEKLNSSLHFLQQEMQRLSLQQEMLMQMREQQSWVISPP
QPSPQKQIRDFKPSKQAGLSSAIAPFSSDSPRPTHPSPQSSNRKSASFSVKSQRTPRPNELKITPLNRTLTPPRS
VDSLPRLRRFSPSQVPIQTRSFVCFGDDGEPQLKESKPKEEVKKEELESKGTLEQRGHNPEEKEIKPFESTVSEV
LSLPVTETVCLTPNEDQLNQPTEPPPKPVFPPTAPKNVNLIEVSLSDLKPPEKADVPVEKYDGESDKEQFDDDQK
VCCGFFFKDDQKAENDMAMKRAALLEKRLRREKETQLRKQQLEAEMEHKKEETRRKTEEERQKKEDERARREFIR
QEYMRRKQLKLMEDMDTVIKPRPQVVKQKKQRPKSIHRDHIESPKTPIKGPPVSSLSLASLNTGDNESVHSGKRT
PRSESVEGFLSPSRCGSRNGEKDWENASTTSSVASGTEYTGPKLYKEPSAKSNKHIIQNALAHCCLAGKVNEGQK
KKILEEMEKSDANNFLILFRDSGCQFRSLYTYCPETEEINKLTGIGPKSITKKMIEGLYKYNSDRKQFSHIPAKT
LSASVDAITIHSHLWQTKRPVTPKKLLPTKA

FIGURE 1769A

TTTAAACTGTGCTTTCTAAGCACAGTCAGGTAGCAAAAGTAATAAAAAGGATGGTTGAACAAGTTTTCTTGTATG
TTCCAGGATATGTTTGGGACTTTTCTTTGTTTATTATATGAGTTGTTCCCTTTGAAATTAAAGCTATTTTGTAGG
TTTTGTGGGACATAATTTGATAAGTAGAGTTAATTAAATTTCTTCTGGAAGAGATCTAAATTCTTATTCTTAGTG
AGAGACTGTAGTTAAAAGGAAGGCTTTTAGAACTTGGGTTCAAGGAAGATGGAGATGCGTCGGAAGCTCTTTGGC
GGGGGTGAGGAAGTTCAGAAAGTGTGCATTTTCCTTCTGGCATTTAGGTCTTGTCCGTGTGATTTGGTGGTGCTT
GGGTCATAAGCCTGATTAAAATTCAGGGACATGTACCACGGCGGCCAAAGCGGAATTAATTTTTTTATATGGGGA
CTGGAGCGCTGAAAAGTTGTTCCTGACCAGGCTCTAATGAGAAATTCCTCTCTCCCCAGGTTATGAAGACAGT**AT**
GGAGTTTCCAGACCATAGTAGACATTTGCTACAGTGTCTGAGCGAGCAGAGACACCAGGGTTTTCTTTGTGACTG
CACTGTTCTGGTGGGAGATGCCCAGTTCCGAGCGCACCGAGCTGTACTGGCTTCATGCAGCATGTATTTCCACCT
CTTTTACAAGGACCAGCTGGACAAAAGAGACATTGTTCATCTGAACAGCGACATTGTTACAGCCCCCGCTTTCGC
TCTCCTGCTTGAATTCATGTATGAAGGGAAACTCCAGTTCAAAGACTTGCCCATTGAAGACGTGCTAGCAGCTGC
CAGTTATCTCCACATGTATGACATTGTCAAAGTCTGCAAAAAGAAGCTGAAAGAGAAAGCCACCACGGAGGCAGA
CAGCACCAAAAAGGAAGAAGATGCTTCAAGTTGTTCGGACAAAGTCGAGAGTCTCTCCGATGGCAGCAGCCACAT
AGCAGGCGATTTGCCCAGTGATGAAGATGAAGGAGAAGATGAAAAATTGAACATCCTGCCCAGCAAAAGGGACTT
GGCGGCCGAGCCTGGGAACATGTGGATGCGATTGCCCTCAGACTCAGCAGGCATCCCCCAGGCTGGCGGAGAGGC
AGAGCCACACGCCACAGCAGCTGGAAAAACAGTAGCCAGCCCCTGCAGCTCAACAGAGTCTTTGTCCCAGAGGTC
TGTCACCTCCGTGAGGGATTCGGCAGATGTTGACTGTGTGCTGGACCTGTCTGTCAAGTCCAGCCTTTCAGGAGT
TGAAAATCTGAACAGCTCTTATTTCTCTTCACAGGACGTGCTGAGAAGCAACCTGGTGCAGGTGAAGGTGGAGAA
AGAGGCTTCCTGTGATGAGAGTGATGTTGGCACTAATGACTATGACATGGAACATAGCACTGTGAAAGAAAGTGT
GAGCACTAATAACAGGGTACAGTATGAGCCGGCCCATCTGGCTCCCCTGAGGGAGGACTCGGTCTTGAGGGAGCT
GGACCGGGAGGACAAAGCCAGTGATGATGAGATGATGACCCCAGAGAGCGAGCGTGTCCAGGTGGAGGGAGGCAT
GGAGAGCAGTCTGCTCCCCTACGTCTCCAACATCCTGAGCCCCGCGGGCCAGATCTTCATGTGCCCCCTGTGCAA
CAAGGTCTTCCCCAGCCCCCACATCCTGCAGATCCACCTGAGCACGCACTTCCGCGAGCAGGACGGCATCCGCAG
CAAGCCCGCCGCCGATGTCAACGTGCCCACGTGCTCGCTGTGTGGGAAGACTTTCTCTTGCATGTACACCCTCAA
GCGCCACGAGAGGACTCACTCGGGGGAGAAGCCCTACACATGCACCCAGTGCGGCAAGAGCTTCCAGTACTCGCA
CAACCTGAGCCGCCATGCCGTGGTGCACACCCGCGAGAAGCCGCACGCCTGCAAGTGGTGCGAGCGCAGGTTCAC
GCAGTCCGGGGACCTGTACAGACACATTCGCAAGTTCCACTGTGAGTTGGTGAACTCCTTGTCGGTCAAAAGCGA
AGCACTGAGCTTGCCTACTGTCAGAGACTGGACCTTAGAAGATAGCTCTCAAGAACTTTGGAAA**TAA**TTTTATAT
ATATATAAATAATATATATATATATACATATATATAAATAGATCTCTATATAGTTGTGGTACGGTCTAAAAGCAG
TCTTGTTTCCTGGAAATAAAAAGTTGGGATATTAACTTGTTTTTGCACTTTAGAATAGCATGAGAATCTCACTAA
TTTAGCATTCTGATAAAAGAAACTTTAGAGCAAGTCAGAATAGAGAGGTGTTTTTCCTTTGAGGGGATAGGGGAA
GTAAGCCAATAAGAACCTTTTAAACAAATCGTCCTGTCACAAAATGCTTTCATATGGCTTAATTTTGTCAACACT
GCATTGTCTTTTGAGCTCTTTTTTCCCCCCCCAACAAAGTTTTTTTGTTTTTTGTTTTTTTTTTTAAGTAGAAATT
CCCTCCAGTTTTATTAGCCTCTTTATATGTCTCAAATTGCATGAATTTTTTCTGGCTGTTGGAAACCTGAATGCT
TTTAGACCCAAATGGAAAATTTCTGAAATGCTGGATTATCTATTTTTAAACAAGCAGTTGACTTAAAACTTTCTG
TGGCAACTTCTGGTTTTCTGACAGTTCCCAGTGAGAGAAATGCTGAAAGTACACTGGGATCACTGGGACACTGTC
TTATGAAGGTTTGCTTGGGATGAAAAAGGATATTGCAGCTTCAGCAGTGTTGAACTGTGTGTTTAAAAATGTGAA
TTACTGTTATTGTATACTGTAATTGATTACATGGGCTGGGGGGGTGTCAAAGAACTTGACAGGTTGTGTTGATGC
TCTTAGTTGAGTCTTGAAAAGTAAATATTAACGCTACAGAAATGCATGAGTTTTCAATATATTTTTTGTCTTTGT
TTGCATTGTATAACTTTAACGAGTGAGTTTAAAATTATTTAATTTCCTTAGAAAAATAGCACCATTTGGAAAAAA
AAACTGGTGTTATGAAGAACGTAAATGCACTGTTTTTATTTTTATTTTATATAATTTAAATTGACTTTCCCACTG
TCTTTAAGTTGAAACTGTTAAGCTGAATAAAAACTTAAGCTGCAAATTGATAACTTCGCTACATAACAAGGAAAA
TATAAATGTTTACAAACAGCTTAAAGATTTGCATGTGCAGTGTGCATTTATAACAAACTTCTAATTGCACAAAAC
CCATGCCAGCTCAGAGTTTAGGTGTACACATTTACCCAGTTGAGCGTTCTTAGAATAACTACTGCACAAGTTGAC
AATAGGTCGTTCTCTCTTTTTTTTTGTTTGCTCCCTTTTTCTTTTTCTCCCCTTCCTCCTTACCCTCCCTCCCTT
ACTCTCCCCCCCCACCACCACCCTCCACCCCCAACTCATGAAAAGATTCTATGGACTGAAAAAGCCCCAGGCTGA
AAGGACTGGACTGCCTTGATTGACATGGGGAAGGGGGTTAGTAGACTATGTGGATTGCGGCAGCAGAGGCTGCAG
CCTAACGTGTGGTTTTAATGACCAGCACGCAAGGCAAAAGCATTTTGCACAGTGTTTGTTTTCCTGTCTTGCACT

FIGURE 1769B

TACAAATAAGGTCTATGGGAGTAGCATGGAAAACGTTTGCTGTTTTTCCCTTTTTTTTTTAATTGCTTTTGTTTA
AAATTTGATCGCCTTAACTACTGTAAACATAGCCTATTTTTGTGCTTAAGATACTGAATGGAAAACTCCATTGTG
TGTTGCTGGACTGTTTTGGAAATATTTGGTTAAATGTGTGTTAATTTGGCTGTAATGGCATTTAAAGCAAACAAA
CAAACAAAAAAAGCTGTGAAAATGGCCTTGGAGCATTATCTTTAGTTACTTGAAGAGTTTCTAGTTTTTTTAAAA
TACAGTTTATGTTAAAATAATTTTTATTAATTTAGAGAAGACAATCAATGTCTGTGAGAAAACGGACTTTCTTTT
GGATTTTCTTTTTGTGGTCATTGTGAGTGATTGCTTTTTCCTTTTCTTAGTTTCACATTCTTCCTTTGTTCTAAA
ACTTAGACTGACATCTAGCTTTGACAATCATAGTATGTTTTATTTTCCTGAGGGGGAATAACTTATAATGCTGTT
TAGTTTTGTACTATTGGTGTGTTGGTGAATTTTTAAACTGTGTGCTAACTGCAATAAATTATATGAACTGAGAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1770

MEFPDHSRHLLQCLSEQRHQGFLCDCTVLVGDAQFRAHRAVLASCSMYFHLFYKDQLDKRDIVHLNSDIVTAPAF
ALLLEFMYEGKLQFKDLPIEDVLAAASYLHMYDIVKVCKKKLKEKATTEADSTKKEEDASSCSDKVESLSDGSSH
IAGDLPSDEDEGEDEKLNILPSKRDLAAEPGNMWMRLPSDSAGIPQAGGEAEPHATAAGKTVASPCSSTESLSQR
SVTSVRDSADVDCVLDLSVKSSLSGVENLNSSYFSSQDVLRSNLVQVKVEKEASCDESDVGTNDYDMEHSTVKES
VSTNNRVQYEPAHLAPLREDSVLRELDREDKASDDEMMTPESERVQVEGGMESSLLPYVSNILSPAGQIFMCPLC
NKVFPSPHILQIHLSTHFREQDGIRSKPAADVNVPTCSLCGKTFSCMYTLKRHERTHSGEKPYTCTQCGKSFQYS
HNLSRHAVVHTREKPHACKWCERRFTQSGDLYRHIRKFHCELVNSLSVKSEALSLPTVRDWTLEDSSQELWK

FIGURE 1771

GCTGTTTGTGATATAGGGTCTGCCTCCTTTAAATATGATATGCGCCGACTCAGTGAAATTCTGGCATTTCCAAGA
GCATGGTATAGAAGAAGTATTGCAAGACGTCTATTCCTTGGAGACCAAACTATAAATTTGCCAACATCTGGCCCA
GGGACACCTGATTCCATTGAAGGGGTAAGCCAACACCTTTCCCCTGAATCATCAAGAAAAGCTTACTGCAAGACC
TGGGAGCAGCCAAGTCAGTCAGCCTCCTTCACCCACATGCCTCAGTCACCTAATGTGTTCAATGAGCATATGACA
AACAGCACCATGTCACCAGGGACAGTAGGACAGAGCCTAAAATCCCCAGCTTCCATAAGATCAAGGAGTGTATCT
GATTCTTCAGTTCCTCGAAGAGATTCACTTTCAAAAACATCAACTCCTTTTAACAAATCAAACAAAGCAGCAAGC
CAACAAGGGACCCCATGGGAAACACTTGTCGTGTTTGCTATCAACTTGAAGCAATTAAACGTTCAAATGAATATG
AGTAATGTAATGGGAAATACAACTTGGACAACTAGTGGTTTGAAGAGCCAGGGCCGTCTGTCAGTAGGAAGTAAT
CGTGATCGAGAGATCAGCATGTCTGTTGGTCTGGGAAGATCACAATTAGATTCTAAAGGAGGAGTAGTTGGAGGG
ACCATAGATGTCAATGCTTTGGAGATGGTTGCTCATATTTCTGAACATCCAAATCAGCAACCCAGTCACAAAATT
CAGATTACTATGGGTTCTACTGAAGCTCGTGTTGATTACATGGGCTCAAGTATCCTCATGGGCATCTTCAGTAAT
GCTGATCTTAAGCTTCAGGATGAATGGAAAGTAAACTTGTATAATACATTGGATTCAAGCATAACTGATAAAAGT
GAGATTTTCGTCCATGGAGATTTGAAGTGGGATATTTTCCAAGTAATGATATCAAGGTCAACCACACCAGATCTG
ATAAAAATAGGAATGAAGCTCCAGGAATTTTTCACACAACAATTTGATACCAGCAAACGAGCTCTGTCTACCTGG
GGACCAGTTCCTTACCTTCCGCCAAAGACAATGACTAGCAACCTAGAAAAAAGTTCACAAGAACAATTACTTGAT
GCAGCACATCATCGACACTGGCCTGGAGTATTGAAGGTGGTATCAGGATGCCACATATCCTTATTTCAGATTCCA
TTACCAGAAGATGGAATGCAATTTGGAGGATCAATGAGCTTACATGGAAATCATATGACACTGGCATGTTTTCAT
GGTCCAAATTTTCGTTCAAAATCTTGGGCCCTTTTTCATTTAGAAGAACCAAATATTGCTTTTTGGACTGAAGCT
CAGAAAATCTGGGAAGATGGCTCCAGTGATCATTCTACATATATTGTACAAACACTAGATTTTCACCTGGGTCAT
AATACTATGGTTACCAAACCATGTGGTGCTTTGGAAAGTCCTATGGCAACAATAACCAAGATAACAAGGCGTCGC
CATGAAAATCCACCCCATGGAGTAGCAAGTGTGAAAGAATGGTTCAATTATGTTACAGCTACAAGGAATGAAGAG
CTAAATCTGCTTCGTAATGTTGATGCTAACAACACTGAGAATAGCACTACTGTGAAGAATTCTAGTTTGTTGAGT
GGATTCAGAGGAGGTTCTAGCTACAACCATGAAACAGAGACTATCTTTGCATTACCAAGGATGCAGCTTGACTTT
AAATCCATTCATGTTCAAGAACCACAGGAGCCTTCATTACAGGATGCCAGCCTGAAGCCAAAAGTAGAATGTAGT
GTGGTGACAGAGTTCACTGACCACATTTGTGTGACTATGGATGCTGAGCTCATCATGTTTCTTCATGATTTAGTA
TCAGCTTATCTTAAAGAAAAAGAAAAAGCCATCTTTCCACCTCGGATTTTATCTACTCGACCAGGACAAAAAAGT
CCAATTATTATACATGACGACAATTCCTCTGATAAAGATAGAGAAGATAGCATCACTTATACTACTGTGGACTGG
AGAGATTTTATGTGCAATACATGGCATCTAGAACCTACTCTTAGATTAATTTCTTGGACTGGAAGAAAGATTGAT
CCAGTAGGTGTTGATTATATTCTTCAAAAATTGGGCTTTCATCATGCTAGGACTACTATTCCTAAATGGCTTCAA
AGAGGAGTCATGGATCCACTGGACAAGGTTCTGTCAGTTCTTATCAAAAAGCTCGGTACTGCACTACAGGATGAA
AAGGAAAAGAAAGGCAAAGACAAAGAAGAACACTAAAAAAGTAATTTGATCTGTGAACAAATTATGATTGTGTCT
GTTTTATTACACTGGAGTGTTTTTTTAGTATAATAATTTGAAATATAACTTTAAAATAATTCTAAATTTGTGGCT
ATAATTAAAAGTTTGTAAGTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1772

GGCGTAAACCACTGCACGCAGCCTACCCTCTGCCTTTTTAAGATGATGTATTTATTTAATTTTTGCCATCATTGG
TGCTTCACCTTCCTGCGAAGGAAATTCCAGAGCCTGTATTTAAGCTACCTAGGCTTTTACACTCCCTTTATTGCC
TTTCCAAATAGTATCTCATTTGGTGTACTC**TAG**TGTCCTATACCTCTTGGAAACGAAAGAGGGCCCAACCTACAA
CTAAGAAGGGACAAACCTTGAACTAAGTAAGACCTTACACACCCAGAAAGAACACTGGGCCCTCCTTCTTCAGGG
ACAATGCAGTAGCCACTTGGCTTGTGGAATTTACTGAAGGCTATTTCCTGTAACTTGCTAGTTAACTTAGTTTTG
TATTTCAGGCAGAGGTGCGCTCTGTAATGTTGGGCCTTTGACTTCACAGTACTGGAGAGCTGTTCACACAGATGT
TTAGACCTTTCTCTCTCTCTCTCTTTTCTTCTTTCTCAACAACTCTTTCACAGAGGCAGTCATTTTGAAAGGTTG
AAATATTTGGCCTTTACCAAAGAGCTTTTTTTTTCCTTAAGCAAAATCCTTTCAGAAAGAAACAAATGGGGAAGG
GCAGATTAAGAATGCATATGTCCCAATCCACTTCTATAGGAGTTTAATCATATTCACATGAGTAAAATGATGGAA
GAACTCTTTAAGGTAATCCTTTGGGATAAAGGATCCTGGGAAGTTCTCTCAGGTAAAGAAAGCTTACAGCAGATT
TGTAATATATGTCTGGAGAGCTATTTATAAGAAATTTAAGAGGATTGTTTTGTTTTCCTTTATTAAAGATTTAAG
CCTTTTTACTTTGCAAAAAGAAAACTACAAAAGTTTTATAGATATAACTTTGCTAATTTTTTAAACTTTTCTGAA
ACGATTAGCTGTAGCCAAATTATGTGGTTACGTTTTGCTACATTAGAATTTGAAAATGCAATATGTGTGGTAAAT
CTACTGTTTGAAATTTATAATGGTCTCTGATATGATTCGAATTTTGGTAACTTTTGAAAGTTATTTTCCCCCTTT
AGTCATGGATTTCTATTTGTTTTTTAATGTTAATTTTTCTAGAAAGCATCTGAATTGACTAGGCTTTTCCTATAT
AAAAAACTCAAAACTTGTTAACTCTGTACTTTAATAAAATTTAAAATTAAAACTGTGTTGTTTTTTTCTCTTCTG
CTAGATACATATATAATTAAAGTACTCAAGTTAGTTGTTTTGCAGAGATGTTGCCTTCAGATGTTAATCAGGTCT
CTCAAGTTTCATGGAGTCTATGCTGATCCTTTAATTGACAAATAAAAGATATATATCTGTGGTGTGCAAC

FIGURE 1773

GVNHCTQPTLCLFKMMYLFNFCHHWCFTFLRRKFQSLYLSYLGFYTPFIAFPNSISFGVL

FIGURE 1774A

GCCAATAAAGCAAACACTTCCGGTGACTTTGAGAAAGATGATGATGCCTATAAGACTGAGGACAGCGATGACATC
CATTTTGAACCAGTAGTTCAAATGCCTGAAAAAGTAGAACTTGTAACAGGAGAAGAAGGTGAAAAAGTTCTGTAT
TCACAGGGGGTAAAACTATTTAGATTTGATGCTGAGGTAAGGCAGTGGAAAGAAAGGGGCTTGGGGAACTTAAAA
ATTCTCAAAAACGAGGTCAATGGCAAACTAAGAATGCTGATGCGAAGAGAACAAGTACTAAAAGTGTGTGCTAAT
CATTGGATAACGACTACAATGAACCTGAAGCCCCTCTCTGGATCAGATAGAGCATGGATGTGGTCAGCCAGTGAT
TTCTCTGATGGTGATGCCAAACTAGAGCGGTTGGCAGCAAAATTTAAAACACCAGAGCTGGCTGAAGAATTCAAG
CAGAAATTTGAGGAATGCCAGCGGCTTCTGTTAGACATACCACTTCAAACTCCCCATAAACTTGTAGATACTGGC
AGAGCTGCCAAGTTAATACAGAGAGCTGAAGAAATGAAGAGTGGACTGAAAGATTTCAAAACATTTTTGACAAAT
GATCAAACAAAAGTCACTGAGGAAGAAAATAAGGGTTCAGGTACAGGTGTGGCCGGTGCCTCAGACACAACAATA
AAACCCAATGCTGAAAACACTGGGCCCACATTAGAATGGGATAACTATGACTTAAGGGAAGATGCTTTGGATGAT
AGTGTCAGTAGTAGCTCAGTACATGCTTCTCCATTGGCAAGTAGCCCTGTGAGAAAAAATCTTTTCCGCTTTGAT
GAGTCAACAACAGGATCTAACTTCAGTTTTAAATCTGCTTTGAGTCTATCTAAGTCTCCTGCCAAGTTGAATCAG
AGTGGGACTTCAGTTGGCACTGATGAAGAATCTGTTGTTACTCAAGAAGAAGAGAGAGATGGACAGTACTTTGAA
CCTGTTGTTCCTTTACCTGATCTAGTTGAAGTATCCAGTGGTGAGGAAAATGAACAAGTTGTTTTTAGTCACAGG
GCAGAAATCTACAGATATGATAAAGATGTTGGTCAATGGAAAGAAAGGGGCATTGGTGATATAAAGATTTTACAG
AATTATGATAATAAGCAAGTTCGTATAGTGATGAGAAGGGACCAAGTATTAAAACTTTGTGCCAATCACAGAATA
ACTCCAGACATGAGTTTGCAAAATATGAAAGGGACAGAAAGAGTATGGGTGTGGACTGCATGTGATTTTGCAGAT
GGAGAAAGAAAAGTAGAGCATTTAGCTGTTCGTTTTAAACTACAGGATGTTGCAGACTCGTTTAAGAAAATTTTT
GATGAAGCAAAAACAGCCCAGGAAAAAGATTCTTTGATAACACCTCATGTTTCTCGGTCAAGCACTCCCAGAGAG
TCACCATGTGGCAAAATTGCTGTAGCTGTATTAGAAGAAATCACAAGAGAGAGGACAGATGTTATTCAGGGTGAT
GATGTAGCAGATGCAGCTTCAGAAGTTGAAGTGTCTAGCACATCTGAAACAACAACAAAAGCAGTGGTTTCTCCT
CCAAAGTTTGTATTTGGTTCAGAGTCTGTTAAAAGAATTTTTAGTAGTGAAAAATCAAAACCATTTGCATTTGGC
AACAGTTCTGCCACTGGGTCTTTGTTTGGATTTAGTTTTAATGCACCTTTGAAAAGTAACAATAGTGAAACTAGT
TCAGTAGCCCAGAGTGGATCTGAAAGCAAAGTGGAACCTAAAAAATGTGAACTGTCAAAGAACTCTGATATCGAA
CAGTCTTCAGATAGCAAAGTCAAAAATCTCTCTGCTTCCTTTCCAACGGAAGAATCTTCAATCAACTACACATTT
AAAACACCAGAAAAGGAGCCTCCATTATGGCATGCTGAATTTACCAAAGAAGAATTGGTTCAGAAGCTCCGTTCC
ACCACAAAAAGTGCAGATCACTTAAACGGCCTGCTTCGGGAAATAGAGGCAACCAATGCAGTCCTTATGGAGCAA
ATTAAGCTTCTCAAAAGTGAAATAAGAAGATTGGAAAGGAATCAAGAGCGAGAGAAGTCTGCAGCTAACCTGGAA
TACTTGAAGAACGTCTTGCTGCAGTTCATTTTCTTGAAGCCAGGTAGTGAAAGAGAGAGACTTCTTCCTGTTATA
AATACGATGTTGCAGCTCAGCCCTGAAGAAAAGGGAAAACTTGCTGCGGTTGCTCAAGATGAGGAAGAAAATCCT
TCCCGTTCTTCTGGATGAGCATCCTATCTTCGTAGTTGGTTTGGACTTCGATAGGTTGATGGAAGGAATACTTCT
ATTAACCAAATAGAATCTGTTTACAAAAATGGTTCGTGTGTGTTACCATTATTCTTTTGTCAAAAAGTGTGTATA
TGTGTTTGCATTTACATATATTTGTACATCTGTATGACAGATGTATTTTAAAAGTTTCAACTTGAAGTAAAAGTA
CAACAGCTTGAAGTGTTGATACCAGGCCACAGCCCTCTAACTCATGTGATCTCCCATGCATGCTGCCAGAATAAA
ACCACCAGGAATGAATTCACTCCCCACTTCTCTGGAACCTCAGGACCCGCCCATTTCTCGGCAGTACTGTGAATT
TTGAAGTTAAACTAAATTTTGGTACCATACCAACTGGAATTTAGGCTTTAAAAATAATGTTTCAAGGCCAGGTGT
GGTGATTCATGCCTGAAATCCCACTACTTTGGGAGGCTGAGGCTGGAGAATCGCTTGAGGCTAGTGAGCTGTGAT
TGTACCACTGCACTCCAGCTCGGGGAACAGAGCGAGACCTTGTCTCTAAAAATAATAATAGTAATAAAAATAACG
TTTTATGACTATTTATTGCAAGGTCAGATTTACAGATTGTTATAAATTGTTGAGAAATTTTTGTGATTAGAATAT
GAAGGAAAAAGCTTTGTTGGTAAAAGTGACATGTTAAGGGGCTATGAAGTAAATATGCTGCAGTTAATTGTGCTA
AGTTAAAATACAGTTTAGTTATTTGCTTTAAAATAAACTCTTCTTTTTTTCTTTAAAGTATACTACCTCAAAACT
CATTATGTTGTCAGAGCCCTAGAGCTGGCTAGTGTAACACTGACTATGAGTAGGTGGGCCCACCACTTGAGTTGA
GGTGATTTCATGGTGTCTTTCCAGGCTCTTGATAGGGTGTCACTGCATGCAAGCCATGAATCTGTTTTGAGAATC
CTCTCCATTTTCCCAAATAAAAACCTATCCCAACAGTGACTATATCACTCAGCATTGGATCTAAATATAAAAGTG
GTGCTTTCAGTGTTTTTGGCAGATAGTGTTCCATAACCTTTCCATCAGAAGGGATTTTAGACACCTTAGAGGTCC
GTGCTACATCTTCACAGTTCCTCCGAATAACCTTAGGTGGTAGTGTTACTTGCCTTTGACACCTGTGCATATGTT
TTAATGACTAGATCCAAACTGTGTTGTTCTTAAATCAAAAATTGGATAATTTTTAATATTTATGTATTAATCACA
CAGTGTGCTCTCTGAAGTTCTCTTAAGCCTTCAGTTTATACTCTTAATTTTCTTTCTGAGCTGGGGAACTGACTT

FIGURE 1774B

TGCACTTTGGTTACACAGAACATTGGTTTCCAATTTAGTTTAACTGAAATTTGCTGCTGATATGTTGAGTTTGTT
CTTTAAAAAATATCTCATATATCTCGTCTTTCCTCCTTAGAAGAACAGACCTAACTAGCGAATGTATGAATGAAA
ATGCATCTATTTCAGAGCCGACATGAAGAGTTTAGTTTTTTTACTTTATAAACTGTGAATATGAGTATGCCAGCT
GCATTAGATGTAACTAATCATATTTAAATATATTTCACTTTGACTTTAGACCTTTTGAAGTCTGTATAAACTTGT
TTTGAAATACAGTCTCCACTTACGAATGTCATAACAAAATACTTTTTTGCATGATAAAAAATTACTTTGATTACA
AAAGGCATATTCTTTCATGGTTTCTGCAATGAGAGGAAGTGTAATGATTATTTTAATATTTCTATTAAAACTGTA
TATTTTT

FIGURE 1775

GGGAGAGGGAGCTCTCGGGTCGGGGCTAGGGAAGGCTGAACCCCGCTCGGCCCGGGTGAAAGGGCGGTGACGGCA
CTGGGTGGGGCCGAGCTCCAGGGCTGGCTGCTGGGCTGCTAAGGGAACTGTGAGCCGCTCAGAGCCGCGCGCCTC
CCGGGCGGGGCGGGGCCGGCCGTGGGAGTCCGCGCGTGCCCGCGCCGAGCTGCCTGCTCCGGCGGCTTCGCTGCT
AGCTCGCGGCGACGTCGGGCCGATTTTCCCAGG**ATG**ACAGAGCTGAGGCAGAGGGTGGCCCATGAGCCGGTTGCG
CCACCCGAGGACAAGGAGTCAGAGTCAGAAGCAAAGGTAGATGGAGAGACTGCATCGGACAGTGAGAGCCGGGCA
GAATCCGCACCCCTGCCAGTCTCTGCAGATGATACCCCGGAGGTCCTCAATAGGGCCCTTTCCAACTTGTCTTCA
AGATGGAAGAACTGGTGGGTGAGAGGCATCCTGACTTTGGCCATGATTGCATTTTTCTTCATCATCATTTACCTG
GGACCAATGGTTTTGATGATAATCGTGATGTGCGTTCAGATTAAGTGTTTCCATGAGATAATCACTATTGGCTAC
AACGTCTACCACTCATATGATCTGCCCTGGTTCAGGACGCTCAGCTGGTACTTTCTCCTGTGTGTAAACTATTTC
TTCTATGGTGAGACAGTGACGGATTACTTCTTCACCCTGGTCCAGAGAGAAGAGCCTTTGCGGATTCTCAGTAAA
TACCACCGGTTCATTTCCTTTACTCTCTATCTAATAGGATTCTGCATGTTTGTACTGAGTCTGGTCAAGAAGCAT
TATCGACTGCAGTTCTACATGTTTGGCTGGACCCATGTGACATTGCTGATTGTTGTAACACAGTCACATCTTGTT
ATCCACAACCTATTTGAAGGAATGATCTGGTTCATTGTCCCCATATCTTGTGTGATCTGTAATGACATCATGGCC
TATATGTTTGGCTTTTTCTTTGGTCGGACCCCACTCATCAAGCTGTCCCCGAAGAAGACCTGGGAAGGCTTCATT
GGGGGCTTCTTTGCTACTGTGGTGTTTGGCCTTCTGCTGTCCTATGTGATGTCCGGGTACAGATGCTTTGTCTGC
CCTGTGGAGTACAACAATGACACCAACAGCTTCACTGTGGACTGTGAGCCCTCGGACCTGTTTCGCCTGCAGGAG
TACAACATTCCTGGGGGTGATCCAGTCAGTCATTGGCTGGAAAACGGTCCGGATGTACCCCTTCCAGATTCACAGC
ATCGCTCTCTCCACCTTTGCCTCGCTCATTGGCCCCTTTGGAGGATTCTTCGCAAGTGGATTCAAACGAGCCTTT
AAAATCAAAGACTTTGCCAATACCATTCCTGGCCATGGAGGCATCATGGATCGCTTTGACTGCCAGTATCTGATG
GCCACCTTTGTCAATGTATACATCGCCAGTTTTATCAGAGGCCCTAACCCAAGCAAACTGATTCAGCAGTTCCTG
ACTTTACGGCCAGATCAGCAGCTCCACATCTTCAACACGCTGCGGTCTCATCTGATCGACAAAGGGATGCTGACA
TCCACCACAGAGGACGAG**TAG**GGGCCACCCAGGGTCAGGAGAACAGGAACAGAACTGAGCAGGGGCAGGTCTCCA
AGGCAAGCCCAGCTGGTGTGACTTAGACAATGACGAGGCTTCAACTCACTGTCTTTTTTTTTTTTTTGGAGGGT
ATTTTTTATTTGTGGGTTCAAAAAATCTGTATATACAGTCTATGTGTTTAGAATTTGTGTTGTAAGTAAACTACA
GCTTTGAGTTGGAAAGAAGTCACGGGTTGTAAAACCATTTGGATTTTTTTAAAACAAAAGTATTAATAATCTGGA
AGACAGTGTTGCCCAGGTCAGGAGTGTTTTCTTGGTGGTTCCAGCCCCCATCAATTGAACTGTTTCTGGGCTCAG
TCAGACACAGACATTCATCTGTGTCTGACCAAATCAGGGGACTTCCCCACCTGTGGTGAGGCACAGCTTAGATGT
TTTGTACACCTGGTCTTTTCTAGAAATCCCTGCTTGGAGCTGCAGAAGGGTTGCCTTCTGTAGGTCGGAGGAATG
GAGGCTTACTAACCAGGTAAGCCTTCTATGCATCCACACCAAAATCCTGCAGAATGTAAGTAAGCTCTGCTTTAT
AAGATGGGTTCACCTTCATCGCAGACTGAAAATTTCAGTTTTTATTTTTTTCAGAAAGCACGAAAAATTATTTAT
AATAGTCTGGAGAAAAAACACACTGTAATATTTCAAGTGTATGCAGTAGAATGTACTGTAACTGAGCCCTTTCCC
ACATGTCTAGGCTCCAATGTCTCCTGTAGGTCCACCTAACTGTGTGTTTTCAGGGACAATGCCATCCATGTTTGT
GCTGTAGACTTGCTGCTGCTGAATCCTTTCTGGGGACTTTCTCATCGGGCAGGGAGCAGAGGGCTTCTCGTTCAT
GCACCCTTTGCCTGAACACCCATGTAGCTGCTGTGTTGTGTATATATTACTCTTAAGAGGAGTGTGTGTGTCTGT
GTTTGTTTTAAAAGTCACTTATTTCTTACAGTGATTTCAATTGCACCATGACTTCTTCACTAAAACCACAAAGTC
CTGCTTAAAACTATGGAAAACCTAACCTGATTAGAGCCTTGACTATTTTGAAGATTAAATGCACACTTTTTATAT
AAAAAAAAACG

FIGURE 1776

MTELRQRVAHEPVAPPEDKESESEAKVDGETASDSESRAESAPLPVSADDTPEVLNRALSNLSSRWKNWWVRGIL
TLAMIAFFFIIIYLGPMVLMIIVMCVQIKCFHEIITIGYNVYHSYDLPWFRTLSWYFLLCVNYFFYGETVTDYFF
TLVQREEPLRILSKYHRFISFTLYLIGFCMFVLSLVKKHYRLQFYMFGWTHVTLLIVVTQSHLVIHNLFEGMIWF
IVPISCVICNDIMAYMFGFFFGRTPLIKLSPKKTWEGFIGGFFATVVFGLLLSYVMSGYRCFVCPVEYNNDTNSF
TVDCEPSDLFRLQEYNIPGVIQSVIGWKTVRMYPFQIHSIALSTFASLIGPFGGFFASGFKRAFKIKDFANTIPG
HGGIMDRFDCQYLMATFVNVYIASFIRGPNPSKLIQQFLTLRPDQQLHIFNTLRSHLIDKGMLTSTTEDE

FIGURE 1777A

ACAATGTGGTCCCGAAGCGGCCAGCGCCGGGAGCTGCAGCGCTGAGACCCCCAGCCCGCCCCCTCGGGCTCCCGG
CCGGGGCCCCATCATGTTCTCCAGGAAGAAACGAGAGCTCATGAAAACCCCTTCCATCTCGAAAAAGAACCGCGC
GGGAAGCCCCAGCCCGCAGCCCTCGGGGGAGCTGCCCAGGAAGGATGGGGCTGACGCGGTGTTCCCCGGACCAAG
CCTGGAGCCGCCCGCTGGGTCCTCCGGCGTCAAGGCCACAGGGACCCTCAAGCGGCCCACCAGCCTGAGCCGCCA
CGCCAGCGCGGCTGGCTTCCCCCTGTCGGGTGCTGCCTCCTGGACACTGGGCCGGAGCCACCGGAGCCCACTGAC
AGCCGCCAGCCCGGGCGAGCTGCCCACCGAGGGTGCCGGCCCGGACGTCGTCGAGGACATCTCCCATCTGCTGGC
GGACGTGGCCCGCTTCGCTGAGGGCCTTGAGAAACTTAAGGAGTGTGTGTTGCGTGACGACCTCCTTGAGGCCCG
CCGCCCGCGGGCCCACGAGTGCCTGGGTGAGGCTCTGCGTGTCATGCATCAGATCATCTCCAAGTACCCGCTGCT
GAACACCGTGGAGACGCTCACCGCAGCCGGCACCCTCATTGCCAAGGTCAAAGCCTTCCATTATGAGAGCAACAA
TGATCTGGAGAAACAGGAGTTCGAGAAGGCCCTGGAGACGATTGCTGTGGCCTTCAGTAGCACAGTGTCCGAGTT
CCTCATGGGTGAAGTGGACAGCAGCACCCTCCTAGCAGTGCCTCCTGGGGACTCGAGCCAGTCCATGGAAAGCCT
GTATGGACCGGGCAGTGAGGGCACGCCTCCCAGCCTGGAAGACTGTGACGCCGGCTGCCTGCCCGCCGAGGAGGT
GGACGTGCTGCTACAGCGCTGTGAGGGGGGCGTGGATGCCGCACTGCTGTATGCCAAGAACATGGCCAAGTACAT
GAAGGACCTCATCAGCTACCTGGAGAAGCGGACGACGCTGGAGATGGAGTTTGCCAAGGGCCTGCAGAAGATCGC
TCACAACTGCAGACAGAGCGTCATGCAGGAGCCCCACATGCCGCTCCTGTCCATCTACTCGCTGGCCCTGGAGCA
GGACCTGGAGTTCGGCCACAGCATGGTGCAGGCGGTGGGCACCTTGCAGACCCAGACCTTCATGCAGCCCCTGAC
CCTGCGGCGGCTTGAACACGAGAAGCGCAGGAAGGAGATCAAGGAGGCCTGGCACCGTGCCCAGAGGAAGCTGCA
AGAGGCGGAGTCCAACCTGCGCAAGGCCAAGCAGGGTTACGTGCAGCGCTGCGAGGACCACGACAAGGCTCGCTT
CCTCGTGGCCAAGGCGGAGGAGGAGCAGGCTGGCAGCGCGCCGGGAGCAGGCAGCACGGCCACCAAGACCCTGGA
CAAGCGGCGGCGGCTGGAGGAGGAGGCCAAGAACAAGGCGGAGGAAGCTATGGCCACCTACCGCACCTGCGTGGC
CGACGCGAAGACGCAGAAGCAGGAGCTGGAGGATACCAAGGTGACGGCGCTGCGGCAGATCCAGGAGGTCATCCG
GCAGAGCGACCAAACCATCAAGTCGGCCACGATCTCCTACTACCAGATGATGCATATGCAGACGGCGCCGCTGCC
CGTGCACTTCCAGATGCTGTGTGAGAGCAGCAAGCTGTATGACCCAGGCCAGCAGTACGCCTCCCACGTGCGCCA
GCTGCAGCGGGACCAGGAGCCCGATGTGCACTACGACTTTGAGCCCCACGTCTCCGCCAACGCCTGGTCCCCCGT
CATGCGTGCCCGGAAGAGCAGCTTCAACGTGAGTGATGTGGCGCGGCCGGAGGCTGCCGGGAGCCCCCCAGAAGA
AGGCGGGTGCACTGAGGGCACACCTGCCAAGGACCACAGGGCCGGGCGAGGACACCAGGTTCACAAGTCATGGCC
GCTCTCGATCTCAGACTCGGACAGTGGGCTGGACCCCGGCCCTGGCGCAGGGGACTTTAAGAAGTTCGAGCGGAC
GTCATCCAGTGGTACCATGTCGTCCACGGAGGAGCTGGTGGACCCAGACGGTGGAGCCGGGGCTTCAGCCTTTGA
GCAGGCTGACCTCAACGGCATGACCCCCGAGCTGCCGGTGGCCGTGCCCAGTGGACCGTTCCGCCACGAGGGGCT
GTCCAAGGCGGCCCGTACTCACCGGCTCCGGAAGCTCCGCACGCCCGCCAAGTGCCGCGAGTGCAACAGCTACGT
CTACTTCCAGGGTGCTGAGTGTGAAGAGTGCTGCCTGGCCTGCCACAAGAAATGTCTGGAGACGCTGGCCATACA
GTGCGGGCACAAGAAGCTGCAAGGCCGCCTGCAGCTGTTCGGCCAGGACTTCAGCCACGCGGCCCGCAGCGCCCC
CGACGGCGTGCCCTTCATCGTCAAGAAGTGCGTCTGCGAGATCGAGCGGCGGGCGCTGCGCACCAAGGGCATCTA
CCGGGTCAATGGGGTAAAGACACGCGTGGAGAAGCTGTGCCAGGCCTTCGAGAACGGCAAGGAGCTGGTCGAGCT
GTCGCAGGCCTCGCCCCACGACATCAGCAACGTCCTCAAGCTCTACCTGCGTCAGCTTCCCGAGCCGCTCATCTC
CTTCCGCCTCTACCACGAGCTCGTAGGGCTGGCCAAGGACAGCCTGAAGGCAGAGGCCGAGGCCAAGGCGGCGTC
CCGGGGCCGGCAGGACGGCTCGGAGAGCGAGGCAGTGGCGGTGGCCCTGGCAGGTCGGCTGCGGGAGCTCCTGCG
GGACCTGCCGCCTGAGAACCGGGCCTCGCTGCAGTACCTGCTGCGTCACCTACGCAGGATCGTGGAGGTGGAGCA
GGACAACAAGATGACCCCCGGGAACCTGGGCATCGTGTTCGGGCCCACGCTGCTTCGGCCACGGCCCACCGAGGC
CACCGTGTCCCTCTCCTCCCTGGTGGATTATCCCCATCAGGCCCGCGTCATCGAGACTCTCATCGTCCACTACGG
CCTGGTCTTCGAGGAGGAGCCGGAGGAGACCCCCGGGGGCCAGGACGAGTCATCCAACCAGCGAGCTGAGGTAGT
CGTCCAGGTGCCGTACCTGGAGGCGGGCGAGGCGGTGGTCTACCCGCTGCAGGAGGCGGCGGCGGACGGGTGCAG
AGAATCCCGAGTTGTGTCCAACGATTCGGACTCGGACCTAGAGGAGGCCTCCGAGCTGCTGTCCTCATCGGAGGC
CAGTGCCCTGGGCCACCTCAGCTTCCTGGAGCAGCAGCAGAGCGAGGCCAGCCTAGAGGTGGCTTCTGGCAGCCA
CAGCGGCAGTGAGGAGCAGCTGGAGGCCACAGCCCGGGAGGACGGGGACGGGGACGAGGACGGCCCGGCCCAGCA
GCTCTCAGGATTCAACACCAACCAGTCCAACAACGTGCTGCAGGCCCCACTGCCCCCCATGAGGCTCCGTGGCGG
GCGGATGACACTGGGCTCCTGCAGGGAAAGGCAGCCGGAATTCGTG**TGA**GCTGGGGTGGGGCTGGGACCACAGGT
GGCTTCTCTCTTGCCTGCTCCTGTCCCTCCAGCACGTCCCCTGCACCACGGCATAGCTTAGGTGCGCCGTCCTGG

FIGURE 1777B

GGTCGCTGCCGAGAGCGCCTGGACTTCGACGTCCCACCAGCGGGCGCCTCCTCCCAGAGGCTTCCAGGAGCACGA
GGGCCTTGCGGCACAGGACTGTGCCCTGTGCTGTCCCCTGCACCCCGGCTCAGCTGAGCTGGGGAACACTGCTGT
CGTGTGAAGTCACAGTGGCCTTGTTGGTGCCCACAGGGCTGTGTGGATGGAGGAAGCTGTCCCTGCCCAGTGCAT
CCCCCAGGTCATCACGGGGACGCAGGAGGCAGGCCCTGCCCTGCCCTCTCCTCACAGGTCTGTTGCAGGGACTCC
AGAAACCATTCTGGGAGCCGTGGATGGGGGCGGAGCTGGGGTTTGGTGCAGTTTCCAGGGTGCAGTACAGCAGGG
CCTGAATACTGGCCCTGGACTCCCTTTTCCAGAACACCAGGTGTGGCCACCTGGGGCTCAGGTACACAGTGGGGT
CTCTCGGAAGCCACCGTGTGGTTCTTTCACAGGCACGTTTATTTTGCTGAAATAAAAAGTTTTTAATCGGG

FIGURE 1778

QCGPEAASAGSCSAETPSPPPRAPGRGPIMFSRKKRELMKTPSISKKNRAGSPSPQPSGELPRKDGADAVFPGPS
LEPPAGSSGVKATGTLKRPTSLSRHASAAGFPLSGAASWTLGRSHRSPLTAASPGELPTEGAGPDVVEDISHLLA
DVARFAEGLEKLKECVLRDDLLEARRPRAHECLGEALRVMHQIISKYPLLNTVETLTAAGTLIAKVKAFHYESNN
DLEKQEFEKALETIAVAFSSTVSEFLMGEVDSSTLLAVPPGDSSQSMESLYGPGSEGTPPSLEDCDAGCLPAEEV
DVLLQRCEGGVDAALLYAKNMAKYMKDLISYLEKRTTLEMEFAKGLQKIAHNCRQSVMQEPHMPLLSIYSLALEQ
DLEFGHSMVQAVGTLQTQTFMQPLTLRRLEHEKRRKEIKEAWHRAQRKLQEAESNLRKAKQGYVQRCEDHDKARF
LVAKAEEEQAGSAPGAGSTATKTLDKRRRLEEEAKNKAEEAMATYRTCVADAKTQKQELEDTKVTALRQIQEVIR
QSDQTIKSATISYYQMMHMQTAPLPVHFQMLCESSKLYDPGQQYASHVRQLQRDQEPDVHYDFEPHVSANAWSPV
MRARKSSFNVSDVARPEAAGSPPEEGGCTEGTPAKDHRAGRGHQVHKSWPLSISDSDSGLDPGPGAGDFKKFERT
SSSGTMSSTEELVDPDGGAGASAFEQADLNGMTPELPVAVPSGPFRHEGLSKAARTHRLRKLRTPAKCRECNSYV
YFQGAECEECCLACHKKCLETLAIQCGHKKLQGRLQLFGQDFSHAARSAPDGVPFIVKKCVCEIERRALRTKGIY
RVNGVKTRVEKLCQAFENGKELVELSQASPHDISNVLKLYLRQLPEPLISFRLYHELVGLAKDSLKAEAEAKAAS
RGRQDGSESEAVAVALAGRLRELLRDLPPENRASLQYLLRHLRRIVEVEQDNKMTPGNLGIVFGPTLLRPRPTEA
TVSLSSLVDYPHQARVIETLIVHYGLVFEEEPEETPGGQDESSNQRAEVVVQVPYLEAGEAVVYPLQEAAADGCR
ESRVVSNDSDSDLEEASELLSSSEASALGHLSFLEQQQSEASLEVASGSHSGSEEQLEATAREDGDGDEDGPAQQ
LSGFNTNQSNNVLQAPLPPMRLRGGRMTLGSCRERQPEFV

FIGURE 1779

GGCACGAGCAAGACATCAACTGAATGAGGATTTTAAAAAATGGTATATAAGCATAGGACAAGGGCTATGTTTGTT
TGTTTTTCAAAAGTGCTTTGAAGATAACAGCCTTTAGGTTTGAGTTATTTCACTTTTCATAATTTTTAAGTAGCT
TATATATAATGGTGGTACCATAGGATTTTCTTTTTTCAAATGACTGTCGGCAGAAACAGTGGGCACTGACTCACC
TTTTGAGTTTTAGCAGAGAATTATTTATTTCTTTACAATGCACTTTCTAACCCATTGTAGCTATATTAGCATTAT
CTTTTAAAAAAGACATGCTTTTGTATTTAAATATTGTAGGATTTAAGTGTCTTTCTCAAAATAGCTTATTCCTTT
CTGAAAGAAAATGAGGGAAATACTCTGAATTATTAGGAGACTTAAACCCAATATTTAAATATGCTATTTTATAAC
ACTGCATCAGTTTTAGGAGTTGCATCTCTCCTGCTGGCTCTTTTATATTTGAGCAAGATCAGTGTAGAATATGTG
TTTAGAAACTTGTCTGTTGTCTCAGTTTAGTGAAAAGGAGGTGCTGCATGTGCCTGAATTAAAACCAAGAAATTT
TTCCAAGCCAAATGCAGCCTTAGTGATGAGAGATTTAATTCTCCATTGTCACCTTTTAGCTTTTATGATTGCTTA
GTTTTTTCTGAAGGATGTCTGCATTGTAAAACTATGGACTAAAACCTAAAAAACAGAATCCTCAAAAACTTTGCT
GTATGTGTTTTAACATTTTAGAGAACAGTATGTTGAATAACTAAGGTATGTAACTTGAATAGGAAAAATGTCCAT
CAAATGCACCTTGGAAAATCACAGTAGGTAGAAGGCTGTGTTAACCGTTTGTGTCTTATTAACATCCTTAAGTTA
ATTTTGAATTTTTGACAGTTTTGAGGGAAAAGACCTATGGAACCTAATGTGAAGTATTTCGTATGTTAACTGGTG
TTGAGTTGAAGATTTTTACTGTGTATAAGCAGATATCATTTGAATGATAAAAATGTCATTAACCTGCTGTCTTAA
GATGTTCACACAAATATGGAGAGTAATTCTACAATATAAAAATATTTATTTTAATACTGAGTTTCAGTTAAGTCA
TAAACAGTGTTAAAACTCTTGGGAAGGTGTAGGGGTTTTTTGTTTGTCATTTTTAAAATTGAAACTGTGTCATAC
AGTGTTTCACGTCTCTGAAATTGGGATTATAATAGCACTATTTTGATGTAGCTCTACCGATACTATGTGGTAATG
CTATTTTGTTTTACTAACAAGCTCTGGAATATTTAGCAGTCATTTTCACTGGCACAAGAGCCTTTTGTATGTTAT
TCAATTTAAACTTTTAAACCAAAAATTTTATGGTCCAGTGTCTTTGGCAAAAAGATGCTGGAGGGAATGTAACAT
ACAATTAATATGTGGTTATATATATATATAAAAAGACACAAATTGCCATGTTATGGTTCTGCCTTGAAACAGCAC
AATGAAGTGTATCAGTATATTCTGTGATTATGAAACTTATATGTTGTGTTGTTTTGTGTCTTCTGTTGCCTGTCC
TTTGGGCCAGATGTGGGCCAGTTAAATGCAGTTATCATCTCATTAAATACAGATGCAGATAAAATATCTTTAGTG
CTGCAACATTTTACCTAACTTTTTGTATGTTTTCATGACTGTGTGTTATTTTCCAAAGCTGTTCCTACCTCACCA
TGAGGCTTTATGGATTGTTATGTATTATAAATGTTCTATATGAGACAGACTACTGTGTTTCTTCTCATTTATTAA
AAGTTAAGTAGAAAAATAAACTAATTTTAATATCTAAAAAAAA

FIGURE 1780

CAGTGTGCAAGCGATGTGTGCATAAGCCACGGACACCGAGTATGCCGTGAAGATCATTGATAAGAGCAAGAGAGA
CCCCTCGGAAGAGATTGAGATCCTCCTGCGGTACGGCCAGCACCCGAACATCATCACCCTCAAGGATGTCTATGA
TGATGGCAAGTTTGTGTACCTGGTA**ATG**GAGCTGATGCGTGGTGGGGAGCTCCTGGACCGCATCCTCCGGCAGAG
ATACTTCTCGGAGCGCGAAGCCAGTGACGTCCTGTGCACCATCACCAAGACCATGGACTACCTCCATTCCCATGT
GGGAGAAATACCTGATTCTCCCAATCTGCAGTGGGAGAGCTTTGCTGAATTCCATCCCAAAGTCAAACATGGGCA
AGAGGTGAGGATTTCACTTTTACCCTCAAGTCCGATTTGTCTG**TGA**TTTTAAACTAACTGTGTATGTATTGATGT
TTGGAAGATTGTTTGAATTTTAAAGTGATAATAGTACTTAATGTTATCCAGTATTGTTCATTAAATGGTGTTATC
CTAAAGCTGCACTTGGGATTTTTACCTAACGCTTTACTGATTCTCTCAAGCACATGGCAAAGTTTGATTTGCACT
CCGTTCATTTCTGACACGTTTTGCTGCCTCCTACCTTTCTAAGCGTCATGCAAATTCGAGAATGGAGAAGGACTC
TGCCGGTCCCTGAGCGGTGTGGAGAGGGCGGAAGGTGGACTCCAGCGCAGCTTGAGGGGCTGAGGACGGAGGCTG
CAGCATCTGTGTCGTTCTACTGAGCACGCTTCTCTGCCTCGCTCCTGACTCAGCACTTTGTTCACTGGCTTAGCA
GTTATGTTTACACATCATTTTTATGTTCCTGCTTTGTAATTCATGTTTGAGATGGGTGGCCACTGTACAGATATT
TATTACGCTTTCCAGACTTTCTGAATAGATTTTTTTGAATAAACATGGTTTTATGAAGTGTAATCTTTTTCTAGC
CTAA

FIGURE 1781

MELMRGGELLDRILRQRYFSEREASDVLCTITKTMDYLHSHVGEIPDSPNLQWESFAEFHPKVKHGQEVRISLLP
SSPICL

FIGURE 1782A

TAGGATACAACATAGAACCTATTATGCTCTATCAGGATATGACAGCGCGTGATCTGCTACAGCAGAGATACACCC
TTCCAAATGGAGACACTGCCTGGCGGTCCTCACCCCTTGTGAATGCTGCTCTGGAAGGCAAGCTGGTCCTGCTGG
ATGGCATTCACCGGGTGAATGCGGGCACGCTTGCTGTATTGCAAAGGTTAATCCATGATCGAGAGCTAAGCCTCT
ATGATGGTTCTAGGCTGCTGAGAGAAGACAGGTATATGCGTTTAAAGGAGGAGCTGCAACTGTCTGATGAACAGC
TACAGAAGAGATCCATTTTTCCTATCCATCCCTCCTTCAGAATCATTGCCTTGGCAGAACCCCCTGTTATTGGAA
GCACAGCACACCAGTGGCTGGGACCAGAATTCTTAACCATGTTCTTTTTCCATTACATGAAACCACTTGTGAAAA
GTGAAGAAATCCAAGTGATTAAGGAAAAGGTCCCAAATGTACCTCAGGAAGCTCTGGATAAGTTATTATCATTTA
CACACAAACTCAGAGAAACACAGGATCCAACGGCACAATCATTAGCGGCATCACTTTCTACCAGACAACTGTTGC
GAATTTCTCGTCGGCTGTCACAGTATCCTAATGAAAATCTTCACAGTGCTGTTACTAAAGCCTGCCTTTCCAGGT
TTTTACCCAGTCTTGCTAGGTCAGCATTAGAAAAAAATCTGGCAGATGCTACAATAGAAATAAATACTGATGACA
ATTTGGAGCCAGAACTGAAGGATTACAAATGTGAAGTAACATCTGGAACTCTGAGGATTGGTGCTGTTAGTGCAC
CGATCTATAATGCACATGAGAAAATGAAAGTGCCTGATGTTCTTTTCTATGACAACATTCAGCATGTGATAGTGA
TGGAAGATATGCTGAAAGACTTTCTCCTTGGAGAACACTTATTATTGGTTGGCAACCAGGGTGTAGGAAAAAACA
AGATTGTTGACAGATTCCTTCACCTGCTCAACAGACCCCGAGAATATATTCAGCTACACAGGGATACCACAGTAC
AAACTCTTACGCTTCAGCCTTCGGTTAAAGACGGACTTATTGTATATGAAGACTCACCTTTGGTTAAAGCAGTAA
AGTTGGGTCATATTCTGGTAGTAGATGAGGCTGACAAAGCTCCAACAAATGTCACGTGTATTTTAAAAACTCTAG
TAGAAAATGGAGAAATGATTCTAGCAGATGGAAGACGCATTGTTGCAAATTCTGCTAATGTGAATGGAAGAGAAA
ATGTTGTAGTGATTCATCCTGATTTTAGGATGATTGTTCTGGCAAATAGACCTGGATTTCCTTTCCTAGGCAATG
ATTTCTTCGGTACCTTAGGTGATATTTTTAGCTGCCATGCAGTTGATAACCCCAAACCCCACTCGGAGCTCGAGA
TGCTCAGACAGTATGGACCAAATGTGCCTGAGCCCATCCTTCAGAAGCTTGTGGCTGCCTTTGGAGAGCTGAGGA
GTTTGGCTGACCAAGGGATTATTAACTATCCTTATTCTACCAGAGAAGTTGTCAACATAGTCAAACATTTACAGA
AATTTCCGACTGAAGGTCTCTCCAGTGTAGTTCGAAATGTGTTTGACTTTGATTCCTACAACAATGACATGAGGG
AGATATTGATTAACACTTTACACAAATACGGGATACCTATCGGAGCAAAGCCTACCAGTGTGCAGCTGGCAAAGG
AGTTGACTCTGCCAGAACAAACGTTCATGGGCTACTGGACAATTGGTCAGGCAAGAAGTGGGATGCAAAAACTCT
TGTGTCCAGTGGAAACTCATCATATAGACATAAAGGGTCCAGCACTTATAAATATACAGGAGTATCCAATAGAAA
GACATGAAGAAAGATCCCTAAACTTTACTGAAGAATGTGCCTCATGGAGAATACCATTGGATGAAATTAATATAA
TCTGTGACATTGCTACATCACATGAAAATGAGCAAAATACTCTCTATGTAGTTACATGCAATCCCGCTTCCCTGT
ACTTTATGAATATGACTGGGAAAAGTGGCTTCTTTGTGGACTTTTTTGATATCTTCCCAAGAACAGCCAATGGCG
TTTGGCACCCTTTTGTGACAGTGGCACCGCTGGGAAGTCCTCTCAAAGGTCAAGTGGTTCTCCATGAGCAGCAGA
GTAATGTTATCCTGTTGTTAGATACTACTGGCCGGGCCCTTCATCGTCTCATCCTCCCTTCCGAGAAGTTTACAT
CTAAGAAACCTTTCTGGTGGAACAAAGAAGAAGCTGAAACTTATAAAATGTGTAAAGAATTTTCACACAAAAACT
GGCTGGTGTTCTACAAAGAAAAAGGGAACAGCCTGACTGTGCTGGATGTTCTAGAAGGGCGAACTCACACCATCT
CACTTCCCATCAACCTCAAGACAGTTTTCCTTGTAGCAGAGGACAAATGGCTTCTGGTGGAGAGCAAAACAAATC
AGAAATATCTTTTAACTAAGCCTGCACACATCGAATCTGAGGGTAGTGGGGTTTGCCAGTTGTATGTGCTGAAAG
AGGAGCCGCCCAGCACAGGGTTTGGAGTTACACAAGAAACAGAGTTCAGCATACCTCATAAAATTTCCAGTGATC
AACTATCATCTGAACATCTAAGTTCAGCTGTGGAACAAAAGATTGCCTCTCCCAACAGAATTCTCTCAGATGAGA
AAAATTATGCTACAATAGTTGTTGGTTTTCCAGATCTCATGTCACCCAGTGAAGTTTATTCTTGGAAGAGACCAT
CATCTTTGCATAAACGAAGTGGCACTGATACATCATTCTATAGAGGAAAGAAGAAAAGGGGGACTCCAAAACAAA
GCAATTGTGTGACTCTTTTAGATACGAATCAGGTAGTGAGGATTTTACCCCCAGGAGAAGTCCCTCTAAAAGATA
TCTACCCAAAAGATGTTACTCCTCCACAAACATCTGGTTATATAGAAGTCACTGATCTTCAATCAAAGAAACTCC
GATATATCCCTATTCCCAGATCAGAATCTCTCTCGCCGTATACCACATGGCTGTCGACCATTTCAGACACAGATG
CACTGCTGGCTGAGTGGGACAAAAGCGGTGTTGTTACTGTTGATATGGGAGGTCACATCAGGCTTTGGGAAACTG
GACTTGAACGTCTGCAGCGATCACTCATGGAATGGAGAAACATGATTGGACAAGATGACAGAAATATGCAGATAA
CAATCAACAGAGACAGTGGTGAAGATGTAAGCTCCCCCAAACACGGGAAGGAGGACCCAGACAACATGCCTCACG
TGGGCGGCAACACTTGGGCTGGCGGAACAGGGGGAAGAGACACGGCAGGCCTGGGTGGCAAAGGAGGCCCTTACC
GGCTGGATGCAGGCCATACGGTGTACCAGGTCTCTCAGGCTGAGAAAGATGCAGTTCCCGAAGAGGTCAAGAGAG
CTGCTAGAGAGATGGGCCAGAGAGCATTCCAGCAGAGGCTAAAGGAGATCCAAATGAGTGAATACGATGCTGCAA
CCTATGAAAGGTTTTCAGGTGCTGTTCGGCGACAGGTGCACTCCCTCCGAATCATCCTGGATAATTTACAGGCTA

FIGURE 1782B

AAGGTAAAGAAAGACAATGGCTAAGACATCAAGCTACTGGAGAATTAGATGATGCCAAGATCATTGATGGGCTGA
CTGGAGAAAAAGCCATCTACAAACGTCGGGGTGAGCTGGAGCCACAACTTGGCAGCCCACAACAGAAACCCAAGC
GTCTGCGCCTGGTGGTAGATGTGTCTGGTAGCATGTACCGTTTCAACAGGATGGATGGCCGGCTTGAGCGCACAA
TGGAGGCTGTGTGTATGGTCATGGAAGCCTTCGAGAACTATGAGGAGAAGTTCCAGTATGACATCGTTGGACACT
CTGGAGATGGCTACAACATTGGTCTGGTTCCAATGAACAAAATCCCCAAGGACAATAAGCAAAGACTAGAAATTC
TGAAGACAATGCATGCCCACTCTCAGTTCTGCATGAGTGGGGACCACACGTTAGAAGGGACAGAACATGCCATCA
AGGAAATTGTCAAAGAAGAAGCTGATGAGTACTTTGTCATAGTCTTGAGTGATGCAAATCTGTCACGATATGGAA
TACATCCTGCTAAGTTTGCTCAAATCCTCACAAGAGACCCTCAAGTAAATGCTTTTGCCATTTTTATTGGCTCTT
TAGGTGATCAAGCAACCAGGCTTCAGAGAACTTTACCAGCTGGTCGGTCTTTCGTTGCCATGGATACCAAGGATA
TCCCTCAGATTTTACAACAGATCTTCACCTCCACCATGTTGTCGAGTGTC**TAA**GAAGTGCCCTTCATCACCCTGA
TGACACCAGGATTTGAAATAAGACAGGAATAAAGAGTATTCTGAAAAAAAGAAGATATGGATGAAGTGAACCCAT
GCAGTGACTGGATGATTCCGGCATTCCTGGGTCTTCCTACACTTGCTCCGTAATGAGAATTCAGAGAAGCAGCCA
GAAGGAGACTTAAACATGGAAAGATACTCCACTGATGAGTTTAGAAGTGATTAGGGCAAGCTAGTTGACCTGCAC
TTTATCAAAGGTTGGGGTTAAAGGAAGGTGGTTTTGAGAACTATGTGTTTGGTCTATTTCCAAAAACCTGAGGGG
GAGAAAATACTTTGCTTTTGCCTTAACACATCATCTGGTCACGTTAGAAAAGTGACCCCATCAAACTGAGCCTTT
GATGTCACATTCTGACACAAGATGCAAGTCTGTGCAAAACCCACCAAAATGCTCCTATCCAACAATTATTTTTAT
TTTCTCCCTGCTCTGTATTGACCAGAAAACAATGATTTTATAATATTTAACCCACCAAAAAGTCCCTCCAACAGC
AATATCTTATGAAAGGCTGGCTGTTCTCAATAATTTCATTTTCTTGGCCAAAGCCAAAAGGAATCAAAAAATCCT
TGGAGTGCTTGCCTTTCCACGTGACTTTTAAAAGGCTCTTAAAGAGCAAATGTCCTCTTCTCCTTGCTGCTAGAG
TGGGAGGAGAAAGATGTCTTGCCTTAAAAGTTTACTGTTTCTTCTGTTCTTCTAGCATCTCTCAAAAAATTCACA
GTACTCCATTTTGGGGTCCAAACTGTAATGCTCAAAATAATAAATGCTTACACGAAAATTATTTATTGAGAATAT
TCATATAAAAATTACCTAAAGCAAAGTAAAAAAAGTAAAATCAAGGTGGTATATTTGAAGTGAATGGTGATTGGA
AATTTTTAGCTGTAACAAAAAGAAAGAAAACAACTTTTTTTAAAGCCTCATTCTCTTTTCTTTCAAAATGTACCT
TATTCCCACACACTCTTGGGCTGACCTTTATTTTATCAATAAGCTCAATATTACTTTGTTTAAAATAAGATGCTT
CAGCAAAAGTCATTCTCTCTTTAACCATATAATTTAAAAACTCCTCTTCACGATTGATAGCAAAATCAGAAACGT
TAGGGCACCAGTGAGTTGAAAAAACTGGTCTTAAGTTGGAAAAACTATTATTAATAATATTATCCTATCCATCCA
TATCTATTGAAATTGTACAGGTCCATAATTTCATTTTAATTAATTATAGGAAAGAAGAAAAGATAATACCCATTT
GTTCTATCACCCCTCTCCCTATCATTAACTATCAAATAAATAAATAAAAGCAATCTGATTTCC

FIGURE 1783

GYNIEPIMLYQDMTARDLLQQRYTLPNGDTAWRSSPLVNAALEGKLVLLDGIHRVNAGTLAVLQRLIHDRELSLY
DGSRLLREDRYMRLKEELQLSDEQLQKRSIFPIHPSFRIIALAEPPVIGSTAHQWLGPEFLTMFFFHYMKPLVKS
EEIQVIKEKVPNVPQEALDKLLSFTHKLRETQDPTAQSLAASLSTRQLLRISRRLSQYPNENLHSAVTKACLSRF
LPSLARSALEKNLADATIEINTDDNLEPELKDYKCEVTSGTLRIGAVSAPIYNAHEKMKVPDVLFYDNIQHVIVM
EDMLKDFLLGEHLLLVGNQGVGKNKIVDRFLHLLNRPREYIQLHRDTTVQTLTLQPSVKDGLIVYEDSPLVKAVK
LGHILVVDEADKAPTNVTCILKTLVENGEMILADGRRIVANSANVNGRENVVVIHPDFRMIVLANRPGFPFLGND
FFGTLGDIFSCHAVDNPKPHSELEMLRQYGPNVPEPILQKLVAAFGELRSLADQGIINYPYSTREVVNIVKHLQK
FPTEGLSSVVRNVFDFDSYNNDMREILINTLHKYGIPIGAKPTSVQLAKELTLPEQTFMGYWTIGQARSGMQKLL
CPVETHHIDIKGPALINIQEYPIERHEERSLNFTEECASWRIPLDEINIICDIATSHENEQNTLYVVTCNPASLY
FMNMTGKSGFFVDFFDIFPRTANGVWHPFVTVAPLGSPLKGQVVLHEQQSNVILLLDTTGRALHRLILPSEKFTS
KKPFWWNKEEAETYKMCKEFSHKNWLVFYKEKGNSLTVLDVLEGRTHTISLPINLKTVFLVAEDKWLLVESKTNQ
KYLLTKPAHIESEGSGVCQLYVLKEEPPSTGFGVTQETEFSIPHKISSDQLSSEHLSSAVEQKIASPNRILSDEK
NYATIVVGFPDLMSPSEVYSWKRPSSLHKRSGTDTSFYRGKKKRGTPKQSNCVTLLDTNQVVRILPPGEVPLKDI
YPKDVTPPQTSGYIEVTDLQSKKLRYIPIPRSESLSPYTTWLSTISDTDALLAEWDKSGVVTVDMGGHIRLWETG
LERLQRSLMEWRNMIGQDDRNMQITINRDSGEDVSSPKHGKEDPDNMPHVGGNTWAGGTGGRDTAGLGGKGGPYR
LDAGHTVYQVSQAEKDAVPEEVKRAAREMGQRAFQQRLKEIQMSEYDAATYERFSGAVRRQVHSLRIILDNLQAK
GKERQWLRHQATGELDDAKIIDGLTGEKAIYKRRGELEPQLGSPQQKPKRLRLVVDVSGSMYRFNRMDGRLERTM
EAVCMVMEAFENYEEKFQYDIVGHSGDGYNIGLVPMNKIPKDNKQRLEILKTMHAHSQFCMSGDHTLEGTEHAIK
EIVKEEADEYFVIVLSDANLSRYGIHPAKFAQILTRDPQVNAFAIFIGSLGDQATRLQRTLPAGRSFVAMDTKDI
PQILQQIFTSTMLSSV

FIGURE 1784A

GAGCAGACCCCGAAAGCCCCATCCTGGACCTGGACCTTCACCTGCCCTTGCTGTGCTTCAGGCCTGAGAAGGTGC
TACAGATCCTGACATGCATCCTGACGGAACAGCGGATCGTCTTCTTCTCCTCGGACTGGGCTCTGCTGACGCTGG
TCACTGAGTGCTTCATGGCCTACCTGTATCCGCTGCAGTGGCAGCACCCCTTCGTGCCCATCCTGTCGGACCAGA
TGCTGGATTTCGTCATGGCCCCCACGTCCTTCCTGATGGGCTGCCATCTCGACCACTTCGAAGAAGTCAGCAAGG
AAGCCGACGGTTTAGTTCTGATAAATATTGATCATGGGAGCATCACCTACTCCAAGTCCACGGACGATAACGTGG
ACATTCCTGATGTCCCCCTCCTGGCAGCCCAGACGTTTATTCAGAGGGTGCAGAGCCTCCAGCTCCACCATGAGC
TGCACGCCGCCCACCTCCTCTCCAGCACAGACCTGAAGGAGGGCCGAGCCCACCGGCGGTCCTGGCAGCAGAAAC
TCAACTGCCAGATACAGCAGACCACCCTGCAGCTGCTCGTGAGCATCTTCAGGGATGTAAAGAATCATTTAAACT
ATGAACACAGAGTCTTTAATAGTGAAGAATTTCTCAAAACCAGGGCTCCAGGGGACCATCAGTTTTATAAGCAGG
TCTTAGACACCTACATGTTCCATTCTTTTCTTAAAGCCCGGCTCAATAGGAGGATGGACGCCTTTGCTCAGATGG
ACCTCGACACCCAGTCGGAGGAGGACAGAATAAATGGAATGCTTCTAAGTCCAAGGAGACCGACCGTTGAGAAAA
GAGCCTCCCGGAAGTCCTCGCACCTGCATGTCACCCACAGGCGCATGGTGGTCAGCATGCCCAACCTGCAGGACA
TTGCCATGCCTGAGCTGGCACCCAGGAACTCCTCGCTCCGGCTGACGGACACCGCAGGCTGTAGGGGCAGCAGCG
CAGTTCTGAATGTCACGCCGAAGTCCCCGTATACATTCAAGATTCCCGAAATCCACTTTCCGCTGGAGAGCAAGT
GCGTGCAGGCATACCATGCCCACTTTGTCTCCATGCTGAGCGAGGCCATGTGCTTTCTGGCCCCCGATAACTCTC
TGCTCCTGGCCCGCTATTTGTACCTCCGAGGGCTCGTTTATCTGATGCAGGGACAGCTGCTGAACGCCCTCTTGG
ACTTCCAGAATCTGTATAAAACAGACATACGGATCTTTCCCACTGATTTGGTGAAGAGGACGGTGGAATCCATGT
CTGCCCCTGAGTGGGAGGGGGCTGAGCAGGCGCCGGAGCTGATGAGGCTCATCAGCGAGATCCTGGACAAGCCGC
ACGAGGCCTCGAAGCTGGACGACCACGTGAAGAAGTTCAAGCTGCCCAAGAAGCACATGCAGCTGGGCGACTTCA
TGAAGCGGGTCCAGGAGTCAGGGATCGTGAAGGACGCCAGCATCATACACCGGCTGTTCGAGGCCTTGACTGTAG
GACAGGAGAAACAAATCGACCCAGAAACATTCAAAGATTTCTACAACTGCTGGAAGGAGACGGAAGCAGAAGCCC
AGGAGGTCAGTCTGCCGTGGCTGGTGATGGAACACCTGGATAAAAACGAGTGTGTGTGTAAGTTGTCCAGCTCCG
TCAAGACAAACCTAGGCGTTGGCAAGATCGCCATGACCCAGAAGCGCCTGTTCCTCCTAACCGAAGGAAGGCCAG
GCTACTTGGAGATTTCCACCTTCAGAAATATAGAGGAGGTCAGGAGAACCACTACTACATTTCTACTTCGGAGAA
TACCCACTTTAAAAATCAGAGTGGCGTCCAAGAAAGAAGTCTTCGAAGCCAACCTGAAAACCGAGTGTGACCTTT
GGCACCTGATGGTGAAGGAGATGTGGGCTGGGAAGAAGCTGGCCGATGACCACAAGGACCCTCACTACGTCCAGC
AGGCGCTGACCAACGTCTTGCTGATGGACGCCGTCGTGGGCACACTGCAGTCACCAGGCGCCATCTACGCTGCCT
CCAAGTTATCCTACTTTGATAAGATGAGTAACGAAATGCCCATGACGCTTCCGGAGACAACCCTGGAAACACTGA
AGCATAAAATCAACCCCTCGGCGGGGGAGGCGTTCCCACAAGCGGTGGACGTGCTGCTCTACACTCCAGGGCATC
TTGACCCAGCCGAAAAAGTTGAAGATGCTCACCCCAAGTTATGGTGTGCTCTGAGCGAAGGCAAGGTGACCGTGT
TCAATGCTTCTTCATGGACCATCCACCAGCACTCCTTTAAAGTGGGCACTGCAAAAGTGAACTGCATGGTGATGG
CCGACCAGAACCAGGTGTGGGTTGGCTCGGAAGACTCCGTCATCTACATCATCAACGTCCACAGCATGTCCTGCA
ACAAGCAGCTCACAGCCCACTGCTCCAGTGTCACGGATTTGATTGTGCAGGACGGACAGGAGGCACCCAGCAACG
TGTACTCGTGCAGCATGGACGGCATGGTGCTGGTGTGGAATGTGAGCACACTGCAGGTGACCAGCCGCTTCCAGC
TGCCGCGAGGTGGCCTGACGTCCATCAGACTGCACGGCGGCCGCCTGTGGTGCTGCACAGGTAACAGCATCATGG
TCATGAAAATGAATGGATCCCTCCATCAAGAATTGAAGATTGAGGAGAACTTCAAAGACACCAGTACCTCCTTCC
TGGCCTTCCAGCTCCTTCCTGAGGAGGAGCAGCTGTGGGCGGCCTGTGCAGGACGCAGCGAGGTTTACATCTGGA
GCCTGAAGGACCTGGCCCAGCCCCCGCAGAGGGTGCCCCTCGAGGACTGCTCTGAGATCAACTGCATGATCCGGG
TGAAGAAGCAGGTCTGGGTGGGCAGCCGAGGGCTGGGGCAGGGAACACCCAAGGGGAAAATCTACGTGATTGACG
CCGAGAGGAAGACCGTGGAGAAGGAGCTGGTGGCGCACATGGACACCGTGAGGACGCTGTGCTCGGCTGAGGACA
GATACGTGCTGAGTGGGTCGGGCAGGGAGGAGGGGAAAGTCGCCATTTGGAAAGGCGAA**TAA**ACGTGGCTGAGTC
TGCCAAGTGGAACTGTGCCCTATGTGTGGGGACTGGCTGCCCCCTAGAGCCTGCCAGGAGCAGAAGCCTGGAGGG
GTGGCAGGGCAGAGCAGCCCAGGCTCAGCATGGAGCCCACTTACCGTGTGGCCAGCCGCGAGACCCATGGCCACG
CACCTTCTCTCAGGCCTTCGGGCCCCCTGGTTAAACTGCACCAAGGGTGTTTCCTGTTGGGGTGTGTCTCAGGCA
GGCAGCTGCGTCTTGTTGGTGATAACCTCTGCTGGGAGGTTACTTTGTTGCCTAGAAAGTTCTGGAATCCACAAC
CAGGGGCTGGCACTGGAGCCAGCAGCTTGGCCGAGTCACAGGTGACCCGTGGCCCTCACGTCTCTGGTTTTACCT
TTCCTTACTTCATTCATTCACTCACCCAGTCCTTACGAATCACCGAGGAACACTGGGCTGAGCACATGACAGGGA
GCCTGGAGCCCCGGGGCCTCCAGCGAGGCCTGAGAAGGGTGGTTCGGGTAACCACTGTGGGCTCTCTCCCATCAC

FIGURE 1784B

AGAAGGTGGACAGGGCCTACCCAGGTGGAGGGGACCACCCTGCGATCAGGTGTTTGCGACAGGGGTTGGGCCAGC
TGAGGCAAGCTGTCTTTTTTCCCTTTTCTTTTTAATAGATGCAACATTTTTATAATAATCCTAGAGACCTTTTTT
CTACCAAAGATCACAGACCAGAAAAAGTTCCATCTAAAATATCATGCCCAGGAAAGCACATGGGATCAAAAGTAA
AATAGCATCATGTGTGATCTCGTCTTCCAGCGTGCCGCTCAGTTCCCCGAATCCGTGTGCACACGTGTGATCTCG
TCTTCAGTGTGCCGCTCAGTTCCCTGAATCCGTGTGCACACTGCGTATGTGTACGCGCAGCATGCTATACTGAAC
TCAACAAGATCTTGGCTGTACATAAATATTTGTAAAAGAGACCCTTTGCACCTTTTTACTGTCATGTTGAGACTT
CATTACTTAAATGTTCTACGGAAGGTTCTGGTGTGGTTGTTGGAGCCGGAGGGAGCGTGTCAGCACGTGCTGAGG
GCATGGGGCCTGCCCCCTGGGCACCCATCCACAAGCTGGGCCACGGAGCTCCAGCTTCTCAGGACAAAGCCCCGG
GGCTGGCGCATCCTGAGGGTCTCTGGGGGTGTTTGCCAGGCTCCTGGGATGGGCCGCTTTCAGAAGCCCTGCAGT
GCCTCCAGATGGAAAGGCGGGCCCGGCCTCCGGTTGGGTCTGCATTTTGGAGAGTCCACACCACGGACCAGGTTT
TCCCCCAAGGCTTGGCTTTGTGTAGCTACTAACTTCTTGGGGCATTCTGAGAGTGTGGGCAGAGAGAATTATGTG
GCCTCATCCTCCCCCAAGGCTGTGCTTGCAGCCCGGGCACCTTCCCACTTTCTAGCTCTGGAGAGGTTGGATTTT
GCTTTTGTAAACACATGAATCCTTATGATAAAAGTCTGTCAGTCAAAAATACATTTATAAATTATTTAATGCCAG
TCCTCATGTAACCTCAGGTATCTTCAGCTTGTGGAGAATAAATCTGGTTTAAT

FIGURE 1785

ADPESPILDLDLHLPLLCFRPEKVLQILTCILTEQRIVFFSSDWALLTLVTECFMAYLYPLQWQHPFVPILSDQM
LDFVMAPTSFLMGCHLDHFEEVSKEADGLVLINIDHGSITYSKSTDDNVDIPDVPLLAAQTFIQRVQSLQLHHEL
HAAHLLSSTDLKEGRAHRRSWQQKLNCQIQQTTLQLLVSIFRDVKNHLNYEHRVFNSEEFLKTRAPGDHQFYKQV
LDTYMFHSFLKARLNRRMDAFAQMDLDTQSEEDRINGMLLSPRRPTVEKRASRKSSHLHVTHRRMVVSMPNLQDI
AMPELAPRNSSLRLTDTAGCRGSSAVLNVTPKSPYTFKIPEIHFPLESKCVQAYHAHFVSMLSEAMCFLAPDNSL
LLARYLYLRGLVYLMQGQLLNALLDFQNLYKTDIRIFPTDLVKRTVESMSAPEWEGAEQAPELMRLISEILDKPH
EASKLDDHVKKFKLPKKHMQLGDFMKRVQESGIVKDASIIHRLFEALTVGQEKQIDPETFKDFYNCWKETEAEAQ
EVSLPWLVMEHLDKNECVCKLSSSVKTNLGVGKIAMTQKRLFLLTEGRPGYLEISTFRNIEEVRRTTTTFLLRRI
PTLKIRVASKKEVFEANLKTECDLWHLMVKEMWAGKKLADDHKDPHYVQQALTNVLLMDAVVGTLQSPGAIYAAS
KLSYFDKMSNEMPMTLPETTLETLKHKINPSAGEAFPQAVDVLLYTPGHLDPAEKVEDAHPKLWCALSEGKVTVF
NASSWTIHQHSFKVGTAKVNCMVMADQNQVWVGSEDSVIYIINVHSMSCNKQLTAHCSSVTDLIVQDGQEAPSNV
YSCSMDGMVLVWNVSTLQVTSRFQLPRGGLTSIRLHGGRLWCCTGNSIMVMKMNGSLHQELKIEENFKDTSTSFL
AFQLLPEEEQLWAACAGRSEVYIWSLKDLAQPPQRVPLEDCSEINCMIRVKKQVWVGSRGLGQGTPKGKIYVIDA
ERKTVEKELVAHMDTVRTLCSAEDRYVLSGSGREEGKVAIWKGE

FIGURE 1786

TTTTTTCTGGAGATTTTTTTTTTAATCCTTTTTAGTTCAACATAAAATGAGAAAGAAAAAAATATTTCTGACATT
TTCAAAGAACAGAAATAGGAAAGTATGTTCATATACATTCAACGTATACTGCACATATTGGTTACTACAATACAA
AGCAATGAGTTTTTTTTAAAGTGTAGTTTGCAAGATGGCACGGTTAGTAGGCTCACTGGCTTTCATCTGTTGTTG
CTGGAGGGTGCAGTCTGCTCTCCCATACATACAGTACCATGTAAACACATCAGGCTGAGCGCGTGGTGGTGGTAG
GGCAGGTTGGGGGCATAAGAGTTGGAACAAGCGCAGATAAGTCAACAGCTTTTTAGGGCTTTCTTGGTAAGCCCC
CTTCTGGTGAGTAGTTGGTGACCCCACCAAGTGGAGGGGAGACTGGGGACCATGGAAACATGGGACAGCTCCCAC
GAAGGGCTCTTGCACTGCAGAATTCCACTCAAGGGATCTTGGG

FIGURE 1787

GGCACGAGGCCGCG**ATG**CCGCTGCTCGTCGAGGGGCGGCGAGTGCGGCTGCCGCAGTCAGCCGGGGACCTCGTCC
GAGCCCACCCGCCTTTGGAGGAAAGAGCCAGACTTCTCAGAGGTCAGTCTGTTCAACAAGTGGGACCCCAGGGCC
TTCTGTATGTTCAGCAAAGAGAGCTTGCAGTGACCTCCCCAAAGGATGGCTCCATCTCCATTCTGGGTTCTGATG
ATGCCACTACTTGTCACATTGTGGTCCTGAGGCACACAGGTAATGGGGCCACCTGCTTGACACATTGTGACGGAA
CCGACACCAAAGCTGAGGTCCCCTTGATCATGAACTCCATAAAATCCTTTTCTGACCACGCTCAATGTGGAAGGC
TGGAAGTACACCTTGTTGGAGGCTTCAGTGACGACAGGCAGTTGTCACAAAAACTCACTCATCAACTTCTTAGTG
AATTTGACAGGCAAGAAGATGACATTCACTTAGTGACATTATGTGTGACAGAATTAAATGACCGGGAAGAAAACG
AAAACCACTTTCCAGTAATATATGGCATTGCTGTCAACATTAAGACTGCAGAGATTTACAGAGCATCCTTTCAAG
ATCGGGGTCCGGAGGAGCAGCTTCGTGCTGCGCGAACTTTAGCAGGAGGACCAATGATTAGCATTTATGATGCAG
AGACAGAACAACTTCGTATAGGACCGTACTCCTGGACACCATTTCCACATGTGGATTTCTGGTTGCACCAAGATG
ACAAGCAAATACTAGAGAATCTTTCCACTTCGCCTCTGGCTGAGCCACCCCACTTTGTTGAACATATTAGATCTA
CCTTGATGTTTTTAAAAAAACACCCATCTCCAGCTCACACACTGTTTTCTGGAAATAAAGCCCTACTCTACAAAA
AAAATGAAGATGGCTTGTGGGAAAAGATCTCTTCTCCAGGAAGT**TAA**AAAACATGAATTACCAAAGAAAGCACCT
TCTTGGCCTGACAGACCATTGGTGGGGCTGGCACGAATCCAGATCTGGATCCTACATCTGTTGGGTCTTAGGCCT
CCTTCCCTCCTCAGTGTCTTTCAAATGACTTTCATCAAATGACTTTCAAAATAAAACCTTATTTTGGCAAAAAAA
AAAAAAAAAAAAAAAAAAAAA

FIGURE 1788

MPLLVEGRRVRLPQSAGDLVRAHPPLEERARLLRGQSVQQVGPQGLLYVQQRELAVTSPKDGSISILGSDDATTC
HIVVLRHTGNGATCLTHCDGTDTKAEVPLIMNSIKSFSDHAQCGRLEVHLVGGFSDDRQLSQKLTHQLLSEFDRQ
EDDIHLVTLCVTELNDREENENHFPVIYGIAVNIKTAEIYRASFQDRGPEEQLRAARTLAGGPMISIYDAETEQL
RIGPYSWTPFPHVDFWLHQDDKQILENLSTSPLAEPPHFVEHIRSTLMFLKKHPSPAHTLFSGNKALLYKKNEDG
LWEKISSPGS

FIGURE 1789A

GTTCGATGAAAGAATTGCCGCTTTTCAAACAAAGAGTGGAACAGCCTCGGAGATGGGAACAGAGAGGGCGATGGG
GCTGTCAGAAGAATGGACTGTGCACAGCCAAGAGGCCACCACTTCGGCTTGGAGCCCTTCCTTTCTTCCTGCTTT
GGAGATGGGAGAGCTGACCACGCCTTCTAGGAAGAGAAATTCCTCAGGACCAGATCTCTCCTGGCTGCATTTCTA
CAGGACAGCAGCTTCCTCTCCTCTCTTAGACCTTTCCTCACCTTCTGAAAGTACAGAGAAGCTTAACAACTCCAC
TGGCCTCCAGAGCTCCTCAGTCAGTCAAACAAAGACAATGCATGTTGCTACCGTGTTCACTGATGGTGGCCCGAG
AACGCTGCGATCTTTGACGGTCAGTCTGGGACCTGTGAGCAAGACAGAAGGCTTCCCCAAGGACTCCAGAATTGC
CACGACTTCATCCTCAGTCCTTCTTTCACCCTCTGCAGTGGAATCGAGAAGAAACAGTAGAGTAACTGGGAATCC
AGGGGATGAGGAATTCATTGAACCATCCACAGAAAATGAATTTGGACTTACGTCTTTGCGTGGCAAAATGATTCC
CCAACCTTTGGAGAACATCAGCTTGCCAGCAGCTCTGAGGTGCAAAATGGAAGTCCCATGTCTCAGACTGAGACT
GTGTCTAGGTCAGTCGCACCCATGAGAGGTGGAGAGATCACTGCACACTGGCTCTTGACCAACAGCACAACATCT
GCAGATGTGACAGGAAGCTCTGCTTCATATCCTGAAGGTGTGAATGCTTCAGTGTTGACCCAGTTCTCAGACTCT
ACTGTACAGTCTGGAGGAAGTCACACAGCATTGGGAGATAGGAGTTATTCAGAGTCTTCATCTACATCTTCCTCG
GAAAGCTTGAATTCATCAGCACCACGTGGAGAACGTTCAATCGCTGGGATTAGCTACGGTCAAGTGCGTGGCACA
GCTATTGAACAAAGGACTTCCAGCGACCACACAGACCACACCTACCTGTCATCTACTTTCACCAAAGGAGAACGG
GCGTTACTGTCCATTACAGATAACAGTTCATCCTCAGACATTGTGGAGAGCTCAACTTCTTATATTAAAATCTCA
AACTCTTCACATTCAGAGTATTCCTCCTTTTTTCATGCTCAGACTGAGAGAAGTAACATCTCATCCTATGACGGG
GAATATGCTCAGCCTTCTACTGAGTCGCCAGTTCTGCATACATCCAACCTTCCGTCCTACACACCCACCATTAAT
ATGCCGAACACTTCGGTTGTTCTGGACACTGATGCTGAGTTTGTTAGTGACTCCTCCTCCTCCTCTTCCTCCTCC
TCCTCTTCTTCTTCTTCAGGGCCTCCTTTGCCTCTGCCCTCTGTGTCACAATCCCACCATTTATTTTCATCAATT
TTACCATCAACCAGGGCCTCTGTGCATCTACTAAAGTCTACCTCTGATGCATCCACACCATGGTCTTCCTCACCA
TCACCTTTACCAGTATCCTTAACGACATCTACATCTGCCCCACTTTCTGTCTCACAAACAACCTTGCCACAGTCA
TCTTCTACCCCTGTCCTGCCCAGGGCAAGGGAGACTCCTGTGACTTCATTTCAGACATCAACAATGACATCATTC
ATGACAATGCTCCATAGTAGTCAAACTGCAGACCTTAAGAGCCAGAGCACCCCACACCAAGAGAAAGTCATTACA
GAATCAAAGTCACCAAGCCTGGTGTCTCTGCCCACAGAGTCCACCAAAGCTGTAACAACAAACTCTCCTTTGCCT
CCATCCTTAACAGAGTCCTCCACAGAGCAAACCCTTCCAGCCACAAGCACCAACTTAGCACAAATGTCTCCAACT
TTCACAACTACCATTCTGAAGACCTCTCAGCCTCTTATGACCACTCCTGGCACCCTGTCAAGCACAGCATCTCTG
GTCACTGGCCCTATAGCCGTACAGACTACAGCTGGAAAAACAGCTCTCGCTGACCCATCCTGAAATACTAGTTCC
TCAAATCTCAACAGAAGGTGGCATCAGCACAGAAAGGAACCGAGTGATTGTGGATGCTACCACTGGATTGATCCC
TTTGACCAGTGTACCCACATCAGCAAAAGAAATGACCACAAAGCTTGGCGTTACAGCAGAGTACAGCCCAGCTTC
ACGTTCCCTCGGAACATCTCCTTCTCCCCAAACCACAGTTGTTTCCACGGCTGAAGACTTGGCTCCCAAATCTGC
CACCTTTGCTGTTCAGAGCAGCACACAGTCACCAACAACACTGTCCTCTTCAGCCTCAGTCAACAGCTGTGCTGT
GAACCCTTGTCTTCACAATGGCGAATGCGTCGCAGACAACACCAGCCGTGGCTACCACTGCAGGTGCCCGCCTTC
CTGGCAAGGGGATGATTGCAGTGTGGATGTGAATGAGTGCCTGTCGAACCCCTGCCCATCCACAGCCACGTGCAA
CAATACTCAGGGATCCTTTATCTGCAAATGCCCGGTTGGGTACCAGTTGGAAAAAGGGATATGCAATTTGGTTAG
AACCTTCGTGACAGAGTTTAAATTAAAGAGAACTTTTCTTAATACAACTGTGGAAAAACATTCAGACCTACAAGA
AGTTGAAAATGAGATCACCAAAACGTTAAATATGTGTTTTTCAGCGTTACCTAGTTACATCCGATCTACAGTTCA
CGCCTCTAGGGAGTCCAACGCGGTGGTGATCTCACTGCAAACAACCTTTTCCCTGGCCTCCAATGTGACGCTATT
TGACCTGGCTGATAGGATGCAGAAATGTGTCAACTCCTGCAAGTCCTCTGCTGAGGTCTGCCAGCTCTTGGGATC
TCAGAGGCGGATCTTTAGAGCGGGCAGCTTGTGCAAGCGGAAGAGTCCCGAATGTGACAAAGACACCTCCATCTG
CACTGACCTGGACGGCGTTGCCCTGTGCCAGTGCAAGTCGGGATACTTTCAGTTCAACAAGATGGACCACTCCTG
CCGAGCATGTGAAGATGGATATAGGCTTGAAAATGAAACCTGCATGAGTTGCCCATTTGGCCTTGGTGGTCTCAA
CTGTGGAAACCCCTATCAGCTTATCACTGTGGTGATCGCAGCCGCGGGAGGTGGGCTCCTGCTCATCCTAGGCAT
CGCACTGATTGTTACCTGTTGCAGAAAGAATAAAAATGACATAAGCAAACTCATCTTCAAAAGTGGAGATTTCCA
AATGTCCCCATATGCTGAATACCCCAAAAATCCTCGCTCACAAGAATGGGGCCGAGAAGCTATTGAAATGCATGA
GAATGGAAGTACCAAAAACCTCCTCCAGATGACGGATGTGTACTACTCGCCTACAAGTGTAAGGAATCCAGAACT
TGAACGAAACGGACTCTACCCGGCCTACACTGGACTGCCAGGATCACGGCATTCTTGCATTTTCCCCGGACAGTA
TAACCCGTCTTTCATCAGTGATGAAAGCAGAAGAAGAGACTACTTT**TAA**GTCCAGGAGAGAGAGGGACTCATTGC
TCTGAGCCAGTCACCTGGGACCTCTGCTCAGAGGACCGCACCAGGAGGCTGCGCCCAGGATTTGTCGGGAGCCAC

FIGURE 1789B

GCTGAGTGGCAAGCAGGAAGAGGGACAGGCATGCGGGGCGTGACCACAGTGGAGGAGACAGGTGGATGTGGAACC
ACAGGCTGCTCATTCAGCACCTTTGTTGTTACTGTGAACGTGAATGTGGGCCAGTATCAAGAGAGTCTCTCTGAG
TGACTGCACCATGGCACTGGCACCAGGGCGACTATTAGCCAGGGCAGACCACTAGACTTCAGTGCAGGGACCTGG
TTTTCCCTTCGTTTGCACTTTAGTAAATTGGGTGGGAGGTTTCCTTTTGGATCTGTTTTGAGACTGTTCCAGAAA
GAAGGCTTCCTTTCCCGAGACACTTCCATAGGCAGCAATTTGGTGATTCATTTGCAGCAAAATACTGGCTTGTTA
ATTATTTTCCTGCCCAGCGCCTGCGTGCTAAACAACAGATGAGGATGAGCGTACCACTGAAGTCTGAAGATGTCG
CCATTGAACGGACAGTGTTTTCATATGTTTCTAGGTTGTCTTATGCTACAGTTTCCAAGCCAGCCCCCACAGTGA
GGAAATGTGTGAGGCACCGCACACAACTGCAATGTGTTTTTTAAGTCAAGGTGACACATGTATTTAAGATTTTTT
TTTAAAATCTCTTTGCAGTTAAATCTCACTTTTTCAAACAAGCCTGGATCAGGGCAAAACAACTTATATTTGGTT
TTAGCTGGAGGCTCAGCAGGCAGATTGCAGGCAGGGGGGCACTTTTCATCCATGAGGGCCCAGCCTGGGGCCTGG
GACTCTGATCACCATTGTGGAGGCCAGAGGCAGCTGCGTATGGAGGAGAAATGTCAAACTGAACGCAGGTTTCAC
CACTCTAGGAAAGCAGCTTGTTGAGCCCCTGCAGCTGGATGTGGTTAGAGGGATGGGCTGAATAGGCAGGTTAGA
TTTCCTGCATCAACAGTGCTTTGGGAAGCTGTGTGGATTCCTGAGGAAGAACAGGGAGCCGAGATGGAGCCACAC
ATGAGTTTGCTCACCGGCTACTGCAGCACTTTGTACCCAGAATCTCATGTCCACAAACCCCATGTAAACTTTCAA
CCACTCAAAGCTGTTTATTCGGCTGAAGAAATAACTTTTTTTTCTCACCCAGTCATTTGTACCTCTTCATATGGC
TATGTCGCACCCTCCAGAAACGTGGTTATACTTCCAGTCAGTGTGGGAGAACTGAAGACTTCCGGTTGGTCGAGG
AACTGAGGGTTGACCTTCGGGAAGGAAGTTCCACTCATCTTATTTATTATGCCTGTGATGTGGGTCCTGCCAGGG
AGACATCCAGTACTCGGTGTCTTTAATTGCCACCTGGGGAACTGTGTTTATTGGCCTTCTTTGGGGCATCCTGGT
TTTGGATGAAGTGAGGGGAATACAGAGGTAAAAGAATTGTCTCCACCCTGAAGCGGGGAGTCCCGCTTCACATTT
CTGGAAATGGTGCAGCCACTGGGGACAGTTCTGCCCCGGGCATGGTTGTTTCTTCAAGGTCCTCTAAATATAATC
CCTATTCTTACATAATCCTTGGCCCTGATGGTTTTAAGCAAGAACTCCTGTGTCCCATGGTCTCCACCACTCACC
ATCACCCTGCTGTAGCAAGAGTCCTAGTCAGGGGAGGTGCATTTTAGTAGTTAAATTGCACTTATCCATGAGATA
AATAAAAGGAGAACTGTTTTTATCAGTGGAGGCTAACCTAAAATTTCAAAGTGTCGCCTTTTTGAAATCTTGGGC
CTCTCTCTCTGTAGAACCAATGGCCCTTTGTGGCTCACGGCCTCGCACCTAACTGGAGAGTTCTGAGCTCCTGCA
GCTCACCTGAGCCCACAGACTAGGCTTCTTGGCTCCTTCCGCAGCATGCCTGCTCACCCCCAGAACCCGCAGCTG
TGGGAAGAGCCATGTAGGGAGGCTATTCCCAGGCATACACTTCCACTGCCTTCAGCTGACGTCACAGCTGACAAA
TCATCTCCTCTATCGGAGCCAGAAGACTTCAGCTCCACAAAATGAAGTGTTCTGTCCTGAAAACATTCTTGGGAA
GAATCCCAACATCGAGAAAACGGTGTCCTGTGAGTTCCAACAATGCTTCTTGTTCATGGGTTTCTTCCGTATGGA
GTGGATTAAGAGTGTTTTATTTTGTTGTTCTAACTGAGAAAAAAAGGAGGCACCCACAAGGTTGAGGTCACACAG
TCTCCACAGTTTCCAGGAGGCGTTTGGGGGTGGGGAAGGCACCTCCAGAGCATGAGGCTCTAAGGGGACATGAGT
AAAGCATGTCTGTGACCCAGTGAGGAAGGGAGAGGCCAGCTGCACTCCTGCACGGGGTTCCTAGCTGCAGAAGGG
TCCCGCCTAGGCCGAGGGGAAACACCTGATAGCAGAAGAGGCCTGGATGCACACCTGGCACGCCGAGGCTCTCCG
CCCAGACACAGTGCTCCATGTCAGCCCCTGCACCTGGGGTGTGTGATTCACGTGCACAGATGCCACAATCCTGCA
CCAATATCCCACAGATGGGGGAAGGTGAGAGGAAGGGGCAAGTGATGTGTAACTGCTCAAGAGATGCTTAAACCT
CCATAGAGAGGAGCCGGGCGCAGGGGCATCTGTGTGTCCCGTCACACACTGCAGCAGGGAAGGGTGGCTGGCTGG
CTCCCTGGCATCAGTGGTTTGGTTTAAGCTCCAGAGGGTCTTATTGCCATTGTCTTTTCCTCTGCCCCTTGAGCC
AGCCTAAGGCCCTGGAGTCTGTTTCTTTAGGCGGATGAACTGACATGCTCCTACCATGACCAGGCTCTGGGCAAG
GCTCCTCACAGTATCCTTGAGAGGTGGGCATGGAAGTGCCCATTTCTCAGGTACAGAAACCTTCAGAGAGGATAA
ATAGCTTGCCCTGTAGAAGCAGGACTGAAACCCTTGTCCGCCTGACTCCCCCAGCTACTCTGCCCACTGTAGCCC
CCTGCCTTACTGTCCTGGCACACCCCTCACCATCCTGTATACCTTAAATATCAAAGAGGGCAAGAGAGAAAGGGC
TTTAAAGATAAGTTATTTTTTTAAGGAACCTTAATATTATTTTTAAGAAGTAACCAAATTAGTGACGTGAAATGC
AAAAAAAAAAAAAAAAAAATGCTGACTACCCTTTTGAAAATGTGCTTTCAGATTGTTTTTTATGTGTAATTCTTAG
ACACTTGTCATTAAGAAAATAGTGGCTGGCTTGTGCTCAGCAAGAAGCACACTGGCACGTGGCTTTGGTATAGGA
AGTGGAAGGCAAGGACCTGGGTTTCTGACAAGTGCAGTCAGACATACACATCCATCTGAGAGCTGCTTGCCTTGT
TCCCGTGGTAAGGCCATGGCTCCCACATACTGGAAGCATATTTTTGTGAACTGTTTTCAGAATTGGGAACATATT
CAGTGGAATGTCTTAAACGCTGACACATCTTCCTCCTTTGAGGGGAAGTATATTTTCAGAAGCAGCTAAGACATT
TAGAGCCAAAATTGCTGATAGGTGGTTCAGTCAAGTTGGCTGATGGCATCTGAGGTCAAAAACTAAGATGTGACG
ATTGAGTTCTTAAAGAGGTAACTCTTAAAGTGGGCCCAAGGGAGAAGGCAGCATCTTTGGACTCCTAGGCTGGAT

FIGURE 1789C

GGCTACCCAAGAATATGCCATTGAAGGATGACACCTATTCAGATGTGAAAGTTCCCAGAGCAGGCACCTTTGGGT
CACCCACCACGTGTGGCTTTTTGGTGCCTGCATGAAACTGTGTTGCCCCCTGGTGAGATGCCCGGGTGTCCTGTA
AGCCGATTTAACTCTGCCTGAGGAAGAGGAGCTGTCCACTCCAGTTGCCCTTGGCTAAGTTTAGCCTAACACACA
GGGTTTTGACCCATAGTTCTAAAATACACAAATTTTGAGACTACAGCACTTCTTTGGAAAGAGGAAGAATGCAAA
GTTCAGTATTTCAATACTTTGTATTTTACTTGAAATTACCCTTAGTAGCATCTTTTTTTTCCTGTCTGAAAGCTT
TTGTGTGGATGAGAAGGGACATTTCATTTCCTCCCTTAACAAAGTGTCATTCTGAGGTTCTCATGTGTGTTTTTG
GAAATAGAGATACTGGTTTTGTAGAGTTTGCCTTTGGGTATGTTTTCTTTTTTTCTTAAATCTCCAAGGAAGAGA
ACTGACTAAAATAGTAGGAACATGAAAGTATTAAATGCCAATTAATTTGTTGTAGTAAAGTATCTTCATTAGCGT
TATACTCCATCATATCTGGTGTAAACTGCTCACAGAAAACCCTATGAAACCAAAGGGGGACCATTCAGGTCTAAA
AAGCGACAGGTCCGAGACTGGGTCTGTCACCTGGGCATTTTCAAAGAGGACATTTTGAAGAATTTGCATATTCAG
ATTTTTAAAATGCACTTAACATACTTCATTACAGATTTCTTGGGTAGGGAGGATGGGATAGGCCAGGGATGGGAT
GGAATCAGTTCTGCCTGGGAAACTAATCCGAATCATTTACCTTTCTGTATTAACCTTGGCCTGTCCTAAAAAGAG
AACGACTGTTTCATCATGAGTTGCTCTGAGTTTTGTTAATGTTTGTGTTGGTGGATTGACGGTTAAATGAAGCAT
TTAGCTGGAATATGAACTTTGGGAGTTTTCATGTTGTCCTGGATTTCTCTTTGTAAACCTTTAAACCTTAGCCCC
TGGTTGATTGTGTTAAACCCATTATGAGAATGTTATTTAAAGTTGTATTATAATTGCAACCTCCACTAATTATTC
AGTACTGTAGCAGCAAAGTATTATTTGTAAGAATTTGGTTATTTTTATACTTATATCCACTCTAAGTCTGGCGTT
CTAGTCAGTAAAATGATGCAATAAAATTAATATCATTTTAAAAAAATCTATGTCGGGTGCGGAGAAAGAGGTAAT
GAAATGGCAGGAATTCGATATCAGCTTATCATACCT

FIGURE 1790

FDERIAAFQTKSGTASEMGTERAMGLSEEWTVHSQEATTSAWSPSFLPALEMGELTTPSRKRNSSGPDLSWLHFY
RTAASSPLLDLSSPSESTEKLNNSTGLQSSSVSQTKTMHVATVFTDGGPRTLRSLTVSLGPVSKTEGFPKDSRIA
TTSSSVLLSPSAVESRRNSRVTGNPGDEEFIEPSTENEIWTYVFAWQNDSPTFGEHQLASSSEVQNGSPMSQTET
VSRSVAPMRGGEITAHWLLTNSTTSADVTGSSASYPEGVNASVLTQFSDSTVQSGGSHTALGDRSYSESSSTSSS
ESLNSSAPRGERSIAGISYGQVRGTAIEQRTSSDHTDHTYLSSTFTKGERALLSITDNSSSSDIVESSTSYIKIS
NSSHSEYSSFFHAQTERSNISSYDGEYAQPSTESPVLHTSNLPSYTPTINMPNTSVVLDTDAEFVSDSSSSSSSS
SSSSSSGPPLPLPSVSQSHHLFSSILPSTRASVHLLKSTSDASTPWSSSPSPLPVSLTTSTSAPLSVSQTTLPQS
SSTPVLPRARETPVTSFQTSTMTSFMTMLHSSQTADLKSQSTPHQEKVITESKSPSLVSLPTESTKAVTTNSPLP
PSLTESSTEQTLPATSTNLAQMSPTFTTTILKTSQPLMTTPGTLSSTASLVTGPIAVQTTAGKTALADPSEILVP
QISTEGGISTERNRVIVDATTGLIPLTSVPTSAKEMTTKLGVTAEYSPASRSLGTSPSPQTTVVSTAEDLAPKSA
TFAVQSSTQSPTTLSSSASVNSCAVNPCLHNGECVADNTSRGYHCRCPPSWQGDDCSVDVNECLSNPCPSTATCN
NTQGSFICKCPVGYQLEKGICNLVRTFVTEFKLKRTFLNTTVEKHSDLQEVENEITKTLNMCFSALPSYIRSTVH
ASRESNAVVISLQTTFSLASNVTLFDLADRMQKCVNSCKSSAEVCQLLGSQRRIFRAGSLCKRKSPECDKDTSIC
TDLDGVALCQCKSGYFQFNKMDHSCRACEDGYRLENETCMSCPFGLGGLNCGNPYQLITVVIAAAGGGLLLILGI
ALIVTCCRKNKNDISKLIFKSGDFQMSPYAEYPKNPRSQEWGREAIEMHENGSTKNLLQMTDVYYSPTSVRNPEL
ERNGLYPAYTGLPGSRHSCIFPGQYNPSFISDESRRRDYF

FIGURE 1791A

CGCCCTTAGCCGATCGGGGCGCTCAGCCCACACGCACCGCTGCTCGGGGCTTGGAGATCCGCGCAGGCTGGGCTC
CCGGACGCGGCGGACCGACGCGCGGAGGATCGGGATCCGGCGCTGTGGGGCTGGGGTGGGCGGGGGAGGCTGGGC
CCGGGGCCTCTGGCGCGACACCCGCATGAGGACGCGAGTGAAATAGACCAAGGTGGAATTTCCAAGGGAAAAGCT
TCGGGGTGGTTTTGGTCCATTTCTCCAGCGAAGAAGTAGACATGGCGAGCGACTCCCCGGCTCGAAGCCTGGATG
AAATAGATCTCTCGGCTCTGAGGGACCCTGCAGGGATCTTTGAATTGGTGGAACTTGTTGGAAATGGAACATACG
GGCAAGTTTATAAGGGTCGTCATGTCAAAACGGGCCAGCTTGCAGCCATCAAGGTTATGGATGTCACAGGGGATG
AAGAGGAAGAAATCAAACAAGAAATTAACATGTTGAAGAAATATTCTCATCACCGGAATATTGCTACATACTATG
GTGCTTTTATCAAAAAGAACCCACCAGGCATGGATGACCAACTTTGGTTGGTGATGGAGTTTTGTGGTGCTGGCT
CTGTCACCGACCTGATCAAGAACACAAAAGGTAACACGTTGAAAGAGGAGTGGATTGCATACATCTGCAGGGAAA
TCTTACGGGGGCTGAGTCACCTGCACCAGCATAAAGTGATTCATCGAGATATTAAAGGGCAAAATGTCTTGCTGA
CTGAAAATGCAGAAGTTAAACTAGTGGACTTTGGAGTCAGTGCTCAGCTTGATCGAACAGTGGGCAGGAGGAATA
CTTTCATTGGAACTCCCTACTGGATGGCACCAGAAGTTATTGCCTGTGATGAAAACCCAGATGCCACATATGATT
TCAAGAGTGACTTGTGGTCTTTGGGTATCACCGCCATTGAAATGGCAGAAGGTGCTCCCCCTCTCTGTGACATGC
ACCCCATGAGAGCTCTCTTCCTCATCCCCCGGAATCCAGCGCCTCGGCTGAAGTCTAAGAAGTGGTCAAAAAAAT
TCCAGTCATTTATTGAGAGCTGCTTGGTAAAGAATCACAGCCAGCGACCAGCAACAGAACAATTGATGAAGCATC
CATTTATACGAGACCAACCTAATGAGCGACAGGTCCGCATTCAACTCAAGGACCATATTGATAGAACAAAGAAGA
AGCGAGGAGAAAAAGATGAGACAGAGTATGAGTACAGTGGAAGTGAGGAAGAAGAGGAGGAGAATGACTCAGGAG
AGCCCAGCTCCATCCTGAATCTGCCAGGGGAGTCGACGCTGCGGAGGGACTTTCTGAGGCTGCAGCTGGCCAACA
AGGAGCGTTCTGAGGCCCTACGGAGGCAGCAGCTGGAGCAGCAGCAGCGGGAGAATGAGGAGCACAAGCGGCAGC
TGCTGGCCGAGCGTCAGAAGCGCATCGAGGAGCAGAAAGAGCAGAGGCGGCGGCTGGAGGAGCAACAAAGGCGAG
AGAAGGAGCTGCGGAAGCAGCAGGAGAGGGAGCAGCGCCGGCACTATGAGGAGCAGATGCGCCGGGAGGAGGAGA
GGAGGCGTGCGGAGCATGAACAGGAATACATCAGGCGACAGTTAGAGGAGGAGCAGAGACAGTTAGAGATCTTGC
AGCAGCAGCTACTGCATGAACAAGCTCTACTTCTGGAATATAAGCGCAAACAATTGGAAGAACAGAGACAAGCAG
AAAGACTGCAGAGGCAGCTAAAGCAAGAAAGAGACTACTTAGTTTCCCTTCAGCATCAGCGGCAGGAGCAGAGGC
CTGTGGAGAAGAAGCCACTGTACCATTACAAAGAAGGAATGAGTCCTAGTGAGAAGCCAGCATGGGCCAAGGAGG
TAGAAGAACGGTCAAGGCTCAACCGGCAAAGTTCCCCTGCCATGCCTCACAAGGTTGCCAACAGGATATCTGACC
CCAACCTGCCCCCAAGGTCGGAGTCCTTCAGCATTAGTGGAGTTCAGCCTGCTCGAACACCCCCCATGCTCAGAC
CAGTCGATCCCCAGATCCCACATCTGGTAGCTGTAAAATCCCAGGGACCTGCCTTGACCGCCTCCCAGTCAGTGC
ACGAGCAGCCCACAAAGGGCCTCTCTGGGTTTCAGGAGGCTCTGAACGTGACCTCCCACCGCGTGGAGATGCCAC
GCCAGAACTCAGATCCCACCTCGGAAAATCCTCCTCTCCCCACTCGCATTGAAAAGTTTGACCGAAGCTCTTGGT
TACGACAGGAAGAAGACATTCCACCAAAGGTGCCTCAAAGAACAACTTCTATATCCCCAGCATTAGCCAGAAAGA
ATTCTCCTGGGAATGGTAGTGCTCTGGGACCCAGACTAGGATCTCAACCCATCAGAGCAAGCAACCCTGATCTCC
GGAGAACTGAGCCCATCTTGGAGAGCCCCTTGCAGAGGACCAGCAGTGGCAGTTCCTCCAGCTCCAGCACCCCTA
GCTCCCAGCCCAGCTCCCAAGGAGGCTCCCAGCCTGGATCACAAGCAGGATCCAGTGAACGCACCAGAGTTCGAG
CCAACAGTAAGTCAGAAGGATCACCTGTGCTTCCCCATGAGCCTGCCAAGGTGAAACCAGAAGAATCCAGGGACA
TTACCCGGCCCAGTCGACCAGCTAGCTACAAAAAAGCTATAGATGAGGATCTGACGGCATTAGCCAAAGAACTAA
GAGAACTCCGGATTGAAGAAACAAACCGCCCAATGAAGAAGGTGACTGATTACTCCTCCTCCAGTGAGGAGTCAG
AAAGTAGCGAGGAAGAGGAGGAAGATGGAGAGAGCGAGACCCATGATGGGACAGTGGCTGTCAGCGACATACCCA
GACTGATACCAACAGGAGCTCCAGGCAGCAACGAGCAGTACAATGTGGGAATGGTGGGGACGCATGGGCTGGAGA
CCTCTCATGCGGACAGTTTCAGCGGCAGTATTTCAAGAGAAGGAACCTTGATGATTAGAGAGACGTCTGGAGAGA
AGAAGCGATCTGGCCACAGTGACAGCAATGGCTTTGCTGGCCACATCAACCTCCCTGACCTGGTGCAGCAGAGCC
ATTCTCCAGCTGGAACCCCGACTGAGGGACTGGGGCGCGTCTCAACCCATTCCCAGGAGATGGACTCTGGGACTG
AATATGGCATGGGGAGCAGCACCAAAGCCTCCTTCACCCCCTTTGTGGACCCCAGAGTATACCAGACGTCTCCCA
CTGATGAAGATGAAGAGGATGAGGAATCATCAGCCGCAGCTCTGTTTACTAGCGAACTTCTTAGGCAAGAACAGG
CCAAACTCAATGAAGCAAGAAAGATTTCGGTGGTAAATGTAAACCCAACCAACATTCGGCCTCATAGCGACACAC
CAGAAATCAGAAAATACAAGAAACGATTCAACTCAGAAATACTTTGTGCAGCTCTGTGGGGTGTAAACCTTCTGG
TGGGGACTGAAAATGGCCTGATGCTTTTGGACCGAAGTGGGCAAGGCAAAGTCTATAATCTGATCAACCGGAGGC
GATTTCAGCAGATGGATGTGCTAGAGGGACTGAATGTCCTTGTGACAATTTCAGGAAAGAAGAATAAGCTACGAG

FIGURE 1791B

TTTACTATCTTTCATGGTTAAGAAACAGAATACTACATAATGACCCAGAAGTAGAAAAGAAACAAGGCTGGATCA
CTGTTGGGGACTTGGAAGGCTGTATACATTATAAAGTTGTTAAATATGAAAGGATCAAATTTTTGGTGATTGCCT
TAAAGAATGCTGTGGAAATATATGCTTGGGCTCCTAAACCGTATCATAAATTCATGGCATTTAAGTCTTTTGCAG
ATCTCCAGCACAAGCCTCTGCTAGTTGATCTCACGGTAGAAGAAGGTCAAAGATTAAAGGTTATTTTTGGTTCAC
ACACTGGTTTCCATGTAATTGATGTTGATTCAGGAAACTCTTATGATATCTACATACCATCTCATATTCAGGGCA
ATATCACTCCTCATGCTATTGTCATCTTGCCTAAAACAGATGGAATGGAAATGCTTGTTTGCTATGAGGATGAGG
GGGTGTATGTAAACACCTATGGCCGGATAACTAAGGATGTGGTGCTCCAATGGGGAGAAATGCCCACGTCTGTGG
CCTACATTCATTCCAATCAGATAATGGGCTGGGGCGAGAAAGCTATTGAGATCCGGTCAGTGGAAACAGGACATT
TGGATGGAGTATTTATGCATAAGCGAGCTCAAAGGTTAAAGTTTCTATGTGAAAGAAATGATAAGGTATTTTTTG
CATCCGTGCGATCTGGAGGAAGTAGCCAAGTGTTTTTCATGACCCTCAACAGAAATTCCATGATGAACTGGTAAC
AGAAGAGCACTTGGCACTTATCTTCATGGCGTTATTTCTAATTTAAAAGAACATAACTCATGTGGACTTATGCCA
GTCTAGAGGCAGAATCAGAAGGCTTGGTTGAACATATCGCTTTCCCTTTTTCCTCTCCCTCCGCCCCTCCCAGTA
CAGTCCATCTTTCAATGTTGCAGCCTGGTTGAGAAGGAGAGAAAAAGGTGGCAGGAATTTCCAGGAGATCCCCAA
GAATGCTGCCTTGTCTGTGGACAAAGATGGACCATGTGCCCTTCGGAATTAGGGATAGAAACAAATATTGTGTGC
TCTTAACGATTAAGCTGTGTTATGGTGGGTTTTCAGGTTTTTACCTTTTTTCTTTACCCCTTTACTCTGCAAGAA
TGGGGAAAGAATGCATACTGCGAAAATGAGTCTTTTAAATTCTGTCTGCCTACTAGTTTTAAGTATATGGTATGT
TGTAAAATTTCCAATGATGAGAGACAGCACAATAAATGTACCTTATCTCCTTAGGCTGAAGGCCATAACTACATA
GTGGAGTAATTTAAGAACTCTCTTGCCTTCACCAACCCAAAAGGTTGCTTTTTGATAGCAACTGGCTAATGAATT
TTTAAAAAGAGAAGAAAAATACTAGTTTTCCCCTCTTTTGGGAAATAGATTTTAAATGGCTAAACTACTAGCCTT
AAAACTACTAGTCTAATAAAATCAACTACCACTTTTGTGAATCTGACAGGCCACATTTTTATATGGCCCTTTACA
GAATGGAGTGTGTTGAACAGGATACTAACGCCATTGAGTTGAGCTGGCCTAGCGATGGAGGGACACTCTAACACA
ACTTTCCCTCAGCTATTATGCAACAGATCAGGGAAAAAGATGGGATGACAGATGGGGTCAGACAGAAAGAGCTTC
TGGGAAACAAGCTTACATAGTCTTTTTTAAAATGCACAAAGCCTCCCAGCTAAGAGGTCACTTGGTTTGGGCTTC
ATTAGGACTGAGACTTTGTTGAGTTCTTTCTGGGACTTGGAGAGTGGATGATATTCAGGCTCTGAACATTCCCAG
CGCTCTCCCGAGGGTGCCACTTTCTCAAGATGAAAACTGTGACTGAAAAAATTAATAATAAATGTTTCTGAGCTG
CCTGTGTTCTCCCTGTGTGGGTGAGAGAAGGGACTAGACTCCTAAGCCTGCCTCAGATACAAGAGGCATCATTGG
CTCCAATTTTAGAGAACTTGAAAGCAAGGCTTTGGACAAAATTTTGAGACCCTAATCACTTTACCTTCCTCCAAA
TTACCCAACATACGGTAAACAACATTTGTGCAGAAGTATGTATGTATTTAGTTCAGGTTGACTTGTGTCCTTATA
AACTCTTACTCAAATGATTTGAACTTT

FIGURE 1792

AAAGGACTCCCAAGAACTGGAGCTGGAAGGAACAGGAGTGTGTTTCAGCAAACAGCCTTCATCCAAAATGGAGGA
GCCAGGCCCCCGCTTCAGTCAAGACCTGCCTAGAAAAAGGAAGTGGAGCGGGAGCACCGTCCAGCCTCCGTGCAG
CCGTGGCGTGCAGGACTCGGGTGGCTCTGAGGTCGCCTGGGGACCCCAGAAGGGACAGGCTGGCCTGAC**ATG**GAA
GGTGAAACAAGCAGCAGCCCCTGCCTTCAGGAGAACTCTGCAGACTGCAGTGCCGGGGAGCTGAGGGGTCCTGGG
AAGGAGCTATGGAGTCCCATCCAGCAGGTTACAGCCACATCCTCTAAATGGGCGCGATTTGTCCTGCCACCTAGA
AAAAGTTCACATGTGGACAGTGAGCAGCCAAGGTCTCTTCAGAGGGACCCCAGGCCAGCTGGTCCAGCACAGGCT
AAGCAAGGGACCCCCAGAGCACAGGCCTCAAGAGAAGGCCTCAGCAGGCCCACTGCCGCTGTCCAGCTTCCTCGG
GCCACACACCCCGTCACATCTGGGTCTGAGAGGCCTTGCGGGAAGACCTCATGGGACGCAAGGACTCCCTGGGCA
GAGGGTGGGCCCCTGGTCCTGGAGGCACAGAATCCTCGACCCACACGACTATGTGACCTCTTTATAACTGGGGAA
GACTTCGATGATGATGTG**TGA**TCTGGGACTGGCAGGTTATTAATCGAGATACACTTGTTAGGAGGGACAGGGTTC
CCCTAAGGCACTTTTAAAGATACTCTGTAAGAACCATTAACAATAAACTTACTGTCAATCAAAAAAAAAAAAAAA
AAAAA

FIGURE 1793

MEGETSSSPCLQENSADCSAGELRGPGKELWSPIQQVTATSSKWARFVLPPRKSSHVDSEQPRSLQRDPRPAGPA
QAKQGTPRAQASREGLSRPTAAVQLPRATHPVTSGSERPCGKISWDARTPWAEGGPLVLEAQNPRPTRLCDLFIT
GEDFDDDV

FIGURE 1794

GGGCGGGCCCGCACCCCTGCGAAC**ATG**GCGCTGCGAGTGGTGCGGAGCGTGCGGGCCCTGCTCTGCACCCTGCGC
GCGGTCCCGTTACCCGCCGCGCCCTGCCCGCCGAGGCCCTGGCAGCTGGGGGTGGGCGCCGTCCGTACGCTGCGC
ACTGGACCCGCTCTGCTCTCGGTGCGTAAATTCACAGAGAAACACGAATGGGTAACAACAGAAAATGGCATTGGA
ACAGTGGGAATCAGCAATTTTGCACAGGAAGCGTTGGGAGATGTTGTTTATTGTAGTCTCCCTGAAGTTGGGACA
AAATTGAACAAACAAGATGAGTTTGGTGCTTTGGAAAGTGTGAAAGCTGCTAGTGAACTCTATTCTCCTTTATCA
GGAGAAGTAACTGAAATTAATGAAGCTCTTGCAGAAAATCCAGGACTTGTAAACAAATCTTGTTATGAAGATGGT
TGGCTGATCAAGATGACACTGAGTAACCCTTCAGAACTAGATGAACTTATGAGTGAAGAAGCATATGAGAAATAC
ATAAAATCTATTGAGGAG**TGA**AAATGGAACTCCTAAATAAACTAGTATGAAATAACGCAAGCCAGCAGAGTTGTC
TTAAATTAGTGGTGGATAGAAGACTTAGAATAGAAACTTTTAGTATTACCGATGGGGAAAAAAAAACTACTGTTA
ACACTGCTAATGAAAGAAAATGCCCTTTAACTTTCTAATGATTATAGATAAATATAATATGCGTCTTTTTCACAA
TATCCTATGATTTTTAGACTAGGCTCTAGTGTTCAGAATTCATGAAATTATCCATGGTAAAAACTAGTTATAAAA
ATTACATAATTCAAAGATAACATTGTTATTCTTAAGCCTTATATAATATTGTAACTTGCATGTATCCATACCTGG
ATTTGGGATGAAATACTTAATGATCTTTCCATTGGAAATAACTGGAAGTGAAGAGGTTTTGTTGCTTGTACAGTG
TCAGATGAGGAACACCACTATCTTAATTTTGCGATACACTGCATTTGCTGGTGCTATTTTTATACAGTGAAGCAA
CAGCTTTGCAGCAAAATAATAAAATACTTCTTCGTT

FIGURE 1795

MALRVVRSVRALLCTLRAVPLPAAPCPPRPWQLGVGAVRTLRTGPALLSVRKFTEKHEWVTTENGIGTVGISNFA
QEALGDVVYCSLPEVGTKLNKQDEFGALESVKAASELYSPLSGEVTEINEALAENPGLVNKSCYEDGWLIKMTLS
NPSELDELMSEEAYEKYIKSIEE

FIGURE 1796

GATTTCTTTTAGTCATGTTGATTTGATTTCAGTTTCTGGCTATGAAAAACATTTTTAAACTCGTCACCCACAACA
AACTGAACAAAACTACTACAGTGAAAGCCCTTTTCAGTGAAAGATGTCAGAAACCTCAAAACCTTTGGCCTGACT
CAGAACTACCATGTGAAAATCAGTACTCTCTTAATGTTTGAAATAAAAACTGAAAAAAAAAAACAAAAAAACAAAA
AACCTTTTTTGAAGCACCTTAACGTGGCCATCCATTTGAGAAGTGGGTGCCACTTTTTTTCTTTGAGCACCTTAT
TGATGTGTTTGCTATCTGCTGTCTTTCTGTTACCTGTTGGCTGAATGGCTAGCTGTTAACATATACATGTGCACA
GAAGAGATATCTGGGCATGTATGTTCTCAATGAAGTTTACTGTGGTGACTGCTGAAAGGTGAACCCATTTCCTGA
TTTTTCCCGCCGCAGTGTTGTGATAAGATTCGAAGAAACCTTTTTCCCTGCACAGAAATGTTTCTTATCACATTG
TATCTTAGTATGGAAAGGAATATGGTCCCTTTTTTGCAATTGCTACTGTGTACACACACACACACACACACACAC
ACACACACACACACACACTCTGTATGTTTAGACCTAAAATACACACACCCACGCACACACTGTATGTTTATGTGA
CCTAAAACATACACACATGCACACACACATACATATCCATTCATTCATTCATTCAAGTGGTGTTTCCAGTGTCTG
TGTGTCACTGTTTATGCAGTTTCCATTTCCCAGTGAATTATGAGTGGAGGGCAACTTTTCTAACCAGATTGTCTT
TTCAGAACAAAGACCTGGGAATTGAGGAAGAGTTTGGAAAGAGGGAGAGGCAAGGAAAGAGAGCTTTAAATTGAA
AGGTTAATTTCCTAAGAGGAACCTGGGCTGAATGACTACAGTGTTATACCCTCCAATCTTTGCAGGTGGGCATGG
AACACTGCTTGTATCACTCTGTGCACGGTATAAATCCATATATCCACAAAAACACACATCCATCCATCAACATAT
ACATGGTTTGGGATGAGCAGGTCAATAGTTTTGAGAGGGAGTTTGTTCCTTTTTTTTTCTCATTATACTCTTAAA
TTGTTGTCAGTTATCAAACAAACAAACAGAAAAATTGTTTGGAAAAACCTTGCATACGCCTTTTCTATCAAGTGC
TTTAAAATATAGACTAAATACACACATCCTGCCAGTTTTTTCTTACAGTGACAGTATCCTTACCTGCCATTTAAT
ATTAGCCTCGTATTTTTCTCACGTATATTTACCTGTGACTTGTATTTGTTATTTAAACAGGAAAAAAAACATTCA
AAAAAAGAAAAATTAACTGTAGCGCTTCATTATACTATTATATTATTATTATTATTGTGACATTTTGGAATACTG
TGAAGTTTTATCTCTTGCATATACTTTATACGGAAGTATTACGCCTTAAAAATACGAAAATAAATTTTACAAGGT
TTCTGTTTTGTGTGGAAGAGTAATTGATGTTGCTAAGAATGATGTTTGTTTTTTTGGGGTTTTTGTTGTTTTTTT
TTTAAATGTTACCAGCACTTTTTTTGTAAGTTTCACTTTCCGAGGTATTGTACAAGTTCACACTGTTTGTGAAGT
TTGAATATGAAGGAATAATTAAAAAAAAAAAAAACTCTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAGGGCGGCCG

FIGURE 1797A

GCGGCCGCCCGCGGGCGGAGAGGGGGCGGCGCGGCGGCAAGGCGCGCGGGCGGGGCGGGGCGCGCCGAGGGGGCG
TGGCGCGGCGTCTGCGCAGCTGCCAGCGCCTTTAAGCCCGGGCTCGCGCTCTCGGACCGTGCTTTCGCCGCCTGG
GAGCCGTCCGGCGCAGCAGTTTCTAGGTCCCCACTGTCCCCGCCGTCCCGCCCCTTCGCGTCCCGGGAACCGGTT
GGCTTCCGAGCCGCACTCGCCGATCCTCCAGGCATGCCCCGCTACGAGCTGGCTTTAATCCTGAAAGCCATGCAG
CGGGTAAGTGACCTTCCCTCAGAGCCGGTTTTCCCGCGCGGGCGCCCCCTGTGCTTGTCATGACCCCTATATTGA
GGTTGGCAAATAGATGTATGTTTATGTGTTGAATAAAATAATTAATAAAATAATTAAGGTACGTATATATAGTTT
TATGACTGGATATGGCTTTGGGTATGAAGGCTTCTGCTTTATAGAAAAATGCTGATTTTTTTGTTTTCTATTATA
AATGAGTAGAAAAACCTTGTAAGATCTGAAATGAAGATACTGGATGTGTTACCATAGAATAAACAAAGACTGGCA
TTGGGAGACTAGAAGGAGCTTTAGAGGCAGATGGGACTGGGTTTTGGATTGTAGCACCTACTTCCTAAGGACTTT
AACCTTCTGGATCCTCAGTTCCTTCTTTGTAAGCCGGAAGTAATTCATTTGGGAGGGTATTTGAAGATAAAGTGG
TTATGTGACCTTGGAGGTAGTTAAGTGTAGTTCTGTCATTAAAGTAGCTTTGTGGTCTTAGGCAAGTCGCTGTGA
ACTTCATTGCCTAGTTTTTCATTATTCCCAGTTTATTAATGAAGAAACTCTAAAAGATAAAACTTATTATATCTA
AGTTTATTTCATCAGAATCCCAAACTAGATCAAAGCTGAAATACAGTTGCTTGTTAAGTAAATGTTTGAATTAGT
GGTGTTGGTGCTTACTACTCTGCTCCCATCTATTATTGCCATGAGGGGTGTGGGCCTGGTTTTGCCAGCTTTTTT
TTTCTCTCTTCCTCCTACCAGCCAGAAATCCAGATTTTATAGGAAATCTGGTTTTTTTTTTTTGATGTTGCCAAC
TAATTGAATACTTAGGTACCATGGATCAAATGTAATGTATCTGTGGGTTAGGTTGGCTCTCATTTTGTAATCTAG
ATATTCAGATAATTAGCTGTAGGTTGTCTGTAAATCTCTTAGCATTTATGTTGACAAAGCCCACCTTGTTAATTG
GTCACTGGTTTGCAGTAGGACTGATTTCAGCAATGGCAGGCATATTCAATTCTTGAAAGTATCTATAGTTTCGGA
TTGTTGGGTTGTATATGTGCATTTAGGCTAAAATATACATGTAGGCTTCAGAGCTGCACCGTGTAAACTGTGAGG
GAGTGACATTCACAGTCCACTTTTTCTTTCAATGTCTGAGTGATATCTTGTTTTAGGCATGTATTAGTACTATTT
GGTTTGTACCCATTGTATTAACCTCTTAGGTGTTTGAAATACTACTGGCATGCAAAGATTGCTTTGCCTAGAAAA
TATTTTTTTTTGCTCAGAGTGTATCTGTGGAATTAAAAATAGTTTACCCATGATCCCTGGAAAATAGTATTACCA
TGAAAAAAATTCAGGTGCTCTCTTGGTAAAGATTATAGAGGAGGGAGGTGATGACATTTTTATTTTTGACCAGGC
TTTGTGTTTCCATAAAATAGAAGCCAAGTTATTACCTTGACTAACCTTCCTTTTTTGTCTTTTTTTTCACTCCCA
CTCCAGATAGATAACATCAAATTGCAAATAAAACGAACTCAGATCCCAGGTTGTTCTTACGTACGTTTTGGCCCA
AGGTGTAATTGACTTGTTTTGCTTCCCCTTGCAATCATTTTTACTATGATTACAGTCCCAGGTAAGGTAATTTCT
GTCCACTTTGGGCATACCTCAGTAGAGGTTGGTGTAGATGAAAGCTTAAAAATGAAATTGCAAGTGAAAGCACAG
ACTTAGCAAAACTTCTTTATTGGAGCCCTCAATCCTCATAAACTGGCATTTTTCTGCTTCTGCCCCAGAATCGAG
AATTCCTGGTTTTGTCTTTGTTTTGACTTGAGTTTTTAAAAGTTTCTCTGTAACACCTACCCTGGAGTGGTTAAG
TGCTTTAATTTTGTCAGGTGAAGAAACCAAGTGCAGTTATGGTAGCCGGGTTGCTGTGGATATAATCCAGTTTGA
GAAAATTCTCATTGTGGTGATCAGAAGTGCAGTGTTGTGGTTGCATTTCAGCTGCTGGGAAGATGCTCTTGCAAA
TCCATGTGTCGTCTTTGCTTCCGTTAGAAAGGTGCAGAATCAGTGTAAGTTCCAGATATCTGCTCCCTTTTCATT
TTGTGCTCAGATGCCCCGTGTATGAATTCCGAATATAAAACATCTGTTCAGTCTGGTTTTGATTCAGATTTAAGG
TGAATTTCTGTTGCTCAGTTGAAAAGCTAAATTTGAGTGTAGGCTCTGTCAGGCATGTTGTAGGAAAGGTGTATG
GTACTGAAGTGTGTGGTTTTGTTTTTTAACTGCTTGACACTGTTAAGTAAGCAAATGACCCAGTCATGGGTTGTT
TTGATTGCCATTCTTCTGTTGGTGTACTGCTTGCCTTCTGTTTTGTTAATAGTCATATGAGAAAACAGTTGTATG
AAGTATAGTATCTTGAAGCTTTAAGACACCAAGTTTCCATTAGGCAGCCTAAGTCTCGCAGACTTTGGTAGCACT
GTTGGTCTCATGGGAATGCCATTCTCATGTGTGGACTAAGTAAGGGCCAGGAGATTTTGCAAATTTTGTGTGTGT
AAGAAGATCGAAGAAAACATTTTTCCTAATGTCACTGTCTTGAGTATTTTATCTGATTAGGATGGACTCATTGGA
AACTATTGATAATTTCAAGATTTCTTGTCATCTGGCATACAAAGAAAACAGTCGTGACCCTATTTCCCTGGATTT
TTCTATCCCTCTACTTGTCCTGTGTTTGCAATGCAAGAGGAAAATCCAGCTGCCTTTATAATCTAGAATACCATG
TTTCTGTTTTTATTTCTTAGGTTTAATTCAGGGCGTAATTTCTACCAGTCCCTCCAAATACTGTTAAAGTTACTC
TTTTTGTGGTCTTACTTCTTACTTCTTGAGTGTTATATTCTCCAAACCTTGGAGAAAATTAGAAGGTTTTAAAGT
TTTCCAACTGAAAAGTATCTTTCAGAGGAAATACCCTAATTTCTGAATCTTCTATTTATAACTTGGCCTGGAGAA
TTATAATCTGGTCTACCAGGAAGGTGCTTGTGCTTAGGTTTTCTGCCTTAGTCACATGGAAAGATGAGCAGAAGC
GATTCCTTCTAGAAACAGTTTTTTTCTAGAAACATAAAATTGGAACCAAGTAGACTGAGAACAGAAAAAAAACAC
AAAGTTGACCTGGTAGGATGTTTTACCTCTATAAACCTCATAGTTGCTAGCCTTTGAGGGAGGCTAGATGAGTTG
ATAATAATGCCTAACCTTAGCAATGGATTGAAGTAGGGGTGCAGGGGTTATGTAGGTGTGTATATGTATTTAGGA

FIGURE 1797B

TATATATACACACCTACATATTATACACACACACATATGTACAATTCTCTTGAATCCTCAGCCATCTAAGGTTAG
GTAGAGCTATTTCCGTGTTGGGAATGGAAAAACTGAAGAATTAAAACACAGACTTGGTCATACGTAATGGTAAAT
ACAGTAGTTTAATGAAATTTTGTATTGTACCTATCACTCAGCTTCAACTGTTAATTTCCAGTCTGCTCACCTCTG
TTTTCTTTATCTTAAAATTTTTTTCATTAATTTCCCTTGGCTAACATGACTAAAAAAATTTCAGACTTAAAGAGC
AGTTCATTTAACACTTGTATGATTTTTGCCTAGATCACTAATTGTTAGAATATGCCTTATTTTATCTTTTTTTAA
TCTGCGTTATTTCGAGAGTTGCAGACATCTTGACATACCTTTCTTAGGAATAAGGGCCTTCCTCCTAACCACAAC
ATAGTCATCACATTCAAAACGGACATTGATACGATACTACCACCAAATATTCAATTCATATAGAAATTTACGCTG
TTCTTCCAGTAATAGTTTTTAGTGTTTTAATTCAGTATTCAATCAAGGATCATATATTTACTTGTTTAGTCTCCT
TGAACAGTTCCAAAGCCTTTGTCATTAATAACAGTGGCACTTTGAGGAGTTTTGGAGTCCAGGCCTACTGTTTTG
CAGAAACCCTCACTTTGGAGTTGACTGTAGTTGCGTTTTCATGATTAGAGTTAGATTAGCCATTGTTGACAGGAA
TGAGTATTTCATAGGGATGTCAATGCATCACACCGGGAGGCATACCACTTTGTTAAGCAGTCATTTGGTTAGGTG
GCATTCACCAGAATGGGCCATTGTAAATGTACCCTATTTCCCTTTTGTATTAAGTGATCTATGGAATAACAAACT
TGAGACTGAATATTTTGTTTTCCAACAATCTGCATTGGTTTTAGCATCTGTTGGTGACTGAATCAGTTATTGCAG
GAGTACTTTAAAGCAAACTTAGATATATCATTTCACCTGTAAGTAATTAGTGTATAAGAAATAAGGACTTTTTTT
TTTTTTTTTTTGAGACTGAGTCTTGCTCTTTCGCCCAAGCTGGAGTGCCAGTGGCGTGATCTCGGCTCACTGCAA
GCTCTGCCTACCGGGTTTCACGCCATTCTCCTGCCTCAGCCCCAGCTGGGACTGGGACTACAGGCGCCCGCCACC
GCACCCAGCTAATTTTTTGTAGTTTTAGTAGAGACGGGGTTTCACCGTGTTAGCTAGGGTGGTCTTGATGTCCTG
ACCTCGTGATTCACCCGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGTGTGAGCCACTGCGCCCGGCCAGAAAT
AAGGACTTTTAAACAACCGTAGTGCCTTTACACCTAACTACAATTCCTTAACACCTCATGTTCATGTTCAAATTC
CCTGAATTGTCAAAAGTGTCTGTCTACAGTTTTGGTTGACTCTGAATCTAAACAAGGTCCACAAATTATGTTTGC
TTAATGACCTTAAGTCTCTTACTCTGTAATAGCTTCTTACCCCACTCTTTACCTTTCCGGATTTGGCTGGTCACT
TATGCTGTTTATATATATTCTTCTATTCCAGGTAATTTCTGTAGACCCATAGGTTCTAGAAATTTGATTAGATTC
AGGTTTTGTTTTGTTTTGTTTTGTAAGAGCACTTAAGTGGTCTTGGGAGGGATAGATCACATCAAGAGGGACACA
TGTCTGCATTTTAGAGAAAAATTAATCTTGGTGTGGGTACAGATGTTAGCAGCTGCATGCGTCCATTTTGAATCC
CCCAGCAGCCTTTCTCCTGAAAATTGTAGCATCCCTGTACTCATAGCCTGGGTGCATTACTTCAGGGCTTACCGG
TGGTGATTTTCCTCATTACATTAGTCCTTTTGCATCAGTTAGCTGGATTTTATCTGACTTGTGTTTATTCCTAGT
TTGTGTTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTATCTCCCTGAAAGGTGTTGTAAAAGGATGCGTTCTCC
ATCTTTATTTCAAAAAGGATGTTCATGAACTCCCTTAGTGATCCTCTCAAATGTCCTCAGTTTTCTCATTTGTAA
ATTGGGGATCATTATCATGTCTGCCTCTTGGGGTTTTTGTTAGGATTAAATGAGCTCAAACATGTAGTGTAAAAA
TAGTGGTTGGCACATGGTGTTTGGTAAATGCTAGTTACTAAGGTAACTTCTTTAGTTTTGTGGGAACTCTGAACT
CAAGTTGTAATGGAGAGGTGGAAGAGGATTCTTCATGAGTTGACATCAGGGTGCTTGGGTTTCTGTTGGGTGAGC
TGAAGGGAATTGTTGCTTGCCGGCACTGACCTGCTCTTTCAGCTGTGTGGGAACAGTTGCCAGACAGACACGCAC
AGGGAAGGTCTGCACATATCACTGCACACTAAGAGGTGGATGTCGACAGTTGCAGCAGTAAAACTTGAAACACGT
TCCGCAGTGGAGTTAGCACAGTGAAGGGAAGTGGGCCAGACTGGTGGTAGGTGGTAGGTTGAGGGAGATGGTGGC
TCCAGATACAGGTTTTTACTATGTCATGGGCCACTGAGATTTTTATCTGAATGAACATATTTGTCTAGTCCAGTT
TGCCTTGTCATTACACATACCCTCAACTGGAGCTATTTGAGATTGCAGATCACTGGTGGAGGAGGGAGGAGGCTC
TTTTTCCCTTTAGCCTCTTTAATCTGCATCTCTTGTTGCTTAAAAAACCACTGTTGATGGTAATATAGGATATTG
GAAGTTTAGCAGTCTTGATGGCGAAGAACTTAGTTGTTAATATTTGATTTTTTTATTTAACAAACATTTGAGCAC
CTGTAATATGTAAGATGGTGTTCTGGACACTAGGACACATCAGGGAACAACACAGAAAATTCTACCCTCATGGAG
TTTACATACATGGTAGTGAGGAGACAGAAGAAACGTTTAAGTTTTATAGCGTGTTAGGTGTTGAGTACTATGGAT
AAATACAAAGTTGGAAGGGAGGCATTGAGATGGTCAGGGAAGTTACTTTTGTGCAAAGACGTAAAAGGAGAGGAG
ACAGGTCTTGTGGAAACCTGGGGTTACAAAGTGTTGCCTGCATAGGAAATAGCCAGTCCCAGAGGCTAGTTTGGT
CCATTGTGATGAAAGGGTTGACTGCTTGCTGTGCTAGTGCCCTGTAGTGGGCCAAGGGCAGAAGCATGGAGACAA
GAGGCTGGGACAGTGATCTGGATGAGATGGAATGGTGATTTGAACTAAGGTGCTAGTAGTTGTCTTTGATTCTGG
ATATATTTTAAGTATCGCCAACAGGCTTTGCTGATGGATTGATTGCATGTGGGTTGAGGGAGAAAGTGAGCAGTC
AAGGATGACTAAAATTTTTGGACTGAGCAATAGTGAGGATGAAGTTGCTGTTCTGAGATGGGGAGGATTGAGAGT
AGAACACATTTTTTGGGCAAGAGCAAATTATTCATACCCCGGAACAACAGGCAACTACAACACTTCATCCATTAA
GAGCAGTTGTCCATAAATTTTACTGTGAGAACCCTTGCATTTGTAGATTGTACAGCTAATTCCTTTAACTTAATG

FIGURE 1797C

TTTTAAAGTTGTGGGAGTTGATAAAGATTGGCTTAGATAGAATCTATAGCTGTGATGACTGGGTCAAGTATAGAA
TACACTTAAGACTTACTATTTTTCCCCTTCTGGTGGAATGACTAATTAACACTGATAAAAAGAATGAAGGCAGAA
AGCGTTGAACTTGGATGGTGAGAACATAGATACGTCTGGTCTTACAGCTGACCCATCAGGGCTTTGCTGTATGTG
AAGCCTATGCCTGGGACTTCTTTTTACTTTTAATCTCTGCATTTTATCCATACACATCCATTCACATGATCACAC
AAAGATTTCAACTGGTTTTTATCTTACGTGCTGTTTGCAGTCTTACTTTGTTAACAGTTGTTACATATCCATCTT
GTGTATTTTCAAGCACAACTTTTTAAACACGCATGATCTTTTATCAATATCGTTAATGTTTCTTCCTGTCAGTAA
TGTCCTTTTCACTGAAGGTAGTATTGCATAGTGATTAAGGGCAAAAGCTGTTTAGACATATAGATGTGAGGCAAC
ATCCTGGCTGTAACACAGACAGCTGTGGCCTGGGGTGAGTTATACTACCTCATGGCTTCAGTTTTCTCATCTGTA
AAATGGTCATAATAATTGTACTTATCTCATGATTGTTATAAGGATTAAAGTAATGCACATAAAACTAGACACAGT
ACCTAGATGGTGTTAGGACTTAGGTTAGTGTAAGATTTTTTTTTTTTTTTAAATTTCCATTATTTATAACTCACT
TATCTTTGATAAACAGTCTTTTACAAGCAGATAGTGTTGAGCCTCTTGAATTCTTATTGAGTTACACAAATGTTT
GGTTAAGATTACATAGTAATAGGCATTGCTGCTCTGTTATTTCATATTTCCTTTTCTTTTTGAGACAGTCTCGCT
CTGTTGCCCAGGCTGGAGTGCAGAGGTGTGATCTCGGCTCACTGCAACCTCCACCTCTCTGGGTTCAAGCGATCC
TCTTGCCACAGCCTCCTGAGTAGCTGGGATTACAGGCGTGTGCTACCACACCTGGCTGATTTTTGTGTTTTTTTA
GAGATGAGGTTTGGCCAGGCAGGTCTCGAACTCCTGGCCTCAAGTGATCCACCCGCCTTGGCCTCCCAAAGTGCT
GGGATTACAGGTGTGAGTCACCACGCCCAGCCTGTTATTTCATGTTTTCATTTATCTTTAACAAAATGGGTTGTT
GGGAGTTTGCTCCTATATGTGATCTAGTATCATTCACATAAAAGTTAAAACCAGTAGTAGTTTCATAGTTGTTCT
TCCCTCCCTGACTGCCATATCTACAAGGTCTTATTTCTCTGAGATTTCTATAAAAAAATTCATGATGAGCCAAAC
TTATTGGTAGAATCAGGTTAAAATGAATATATCTTGGGCGGAGTGTATATGGATGAAGTAAATCTGGTGGTTTAT
GAACTTTTCTAGGTGAATAAGATTTTATTTGAGGAAATGGTTTACTTTGGAAATTATCCATTCTTAACCCCTCCC
CACTCCTGTCCCGGGAGAAACTGATAAAAGTAGAGCTGTTCTGGTGGTAGAGGGTTGGAAGGAGGGCCGCAGTCC
CTCCCTACTCTGCCTCAACTTCACCCATCAGAATACAGCTTCAGCACCATTTGAGTCCAATCAGGGTTTTGTATA
ATTAATAACTTTTAAAAAGTTGAGGGTGCAAGTTTAATAGAAATGTTTTGTCAAAAAGATTTAAGGGCAAATTCT
TTATATTTTAGGGATGGTTAAAACATTACGGTACAGGTTGAATATCCCGTATCTTAAATGCTTGGGACCAGAAGT
GTTTTGGATTGTGGGATATTGCATATTACTTGGTGGCTGAGCATCCCATATCTGAACATCCCAAACCCAAAATGC
TCCAGTGAGCATTTCCTTTGAGCATCATGTCAGTTCTCAAAAAGTTTTGGATTTGGGAGGAGCATTTCAGATTTT
GTATTTTTGCATTAGGGATACTTAATCTGTAGTGTTGTCTTTAGCTCCACTTACAATTTAAAACTGGCTGGAGTT
CAGGCCAGTTATATTAGGAAAACCTGTTTTGCTCTTTGTGTTACTGATGAACCGCTACAGTATCCTTGCTCCACA
TTTTTAAAGTAAGCAGGGGTTGAGGACAGTCCTATGTGAGTACACATACACTCTGCATCAAGCGTTAGTAGTCTA
TTCCACCACAGGAATTTGCTTTCCTAGAACTTGAGTCAAGGTGACAAAAGTGAAAGCATGTATGTAAAGTCTTAA
GAATTTTATATACATTTTTTCTTTTTGTATTTTACTTGAAGTGATTTAAGTAGGAGCTAATAGTTGATGAGACAG
TTGGGAGTCTAAAATGTTTGAGAGAGCTGCATCTTTAATGCATTATTTTATCTAATCTTTCTATATATAAATAAC
TTGGGAAAATCCTAATATGCCTTGCACATAGTTGACAGTTTAATTTGAAAGGAACTAATATCACTTCTAGTATAT
TCAGGTTGTAGGGAGTAAACTGACATTTACTGAGCCACCTCCCCATTGCACTGGGCAATACTAGCTTTCTCTGTT
ACTTATTCCTTATAAATCATAAGGAGCAAGTTGGTTTCATTTTAAAAGCCAGACAGTTGAGACTTGTTGAGGCTC
ATAGAGATGAAGTTGTTGCCTGAGATCCTACAGTTAGGAAGTGACGGAGCATGGAACCCAGCCCTTAAAAACTGT
GCTGTTTTCTTCTGTACCGTGCCACCTACATAGATGTGGTACCTACACCCACCTCCCTTCTTACAGAATCATGAA
ATCTGTCTGTTGGGGTGGGGAGAAAACAAGCTTGGGTATGCCCATGTTTTTTGTTTTTGGTAGGTTACACAAAAG
TGATTGTAATTCAGGTAATTAGTTTTCAGAGGTGTCTGTGTGTTCTATAACCCTTCAATTATTAGCTGGCTAAGT
GAATATTTTTCATTTGGATCAGAGGATGAGCAGGGCTCATCAAGCTTACCATTGACAGAGTGCTGGACTAGGCGT
CTCAGATTGTACCTTGAGTGTGTGGTTTGTAAATTGACTCCAAAGCTAAAAGAGGTGGTTGTTTGGTCACGTTTA
AGATTATTGCGTACTACTCTTTGCAGGCCCCGCCCTGTGTCATTGAACTTATGACTTGAAGCCCTGAGTATAGGA
GATAATTTTTCTTGTTCCTTGTTTGGTTTTAGTGGCAGGTGGTTTTTTATTTTATTATTTTTTTGATAGAGTGCC
CATATATCCTGCTGTTTACATATAGTTCCAGAATAAGTTTCTGGTTTGGAAGATAAATTATATGGTCACCCAGAC
AGTACTAGAGAGATCTGGTCATGATAACTAATTACATTTTGGTTAACATGGTTATATCACCTGAAGGAGTGCTTA
TTTAAATTTGGTCTTACCTTTTTTTCTCTTTCTATTTGGTCAAATGCAGCAAATATTTATATTTACACTTCTCTA
TTTGGATTAATTCTTCAGTTGCAATTTAATTTATCCAGATGCGTGGAATAGAACCAAAACTGCATTCTAATTCTG
TGCAAAACAATAAAATACTACTTTCTGAGAAGGATGCCTTCTCTTTTGGGAAGAAGGGGAATCTGCTCTGTTTCA

FIGURE 1797D

AAGCACCTTTGTGTTCAAGGTTTGGCTAAATCTGCTCATCACCACTAGGGGACTGTTTCTTTTTGCATTCTACAA
GTATTACTCCCATTACAGAAGCTTTTTAAGAAAAAAATGGACTACCAAGGAACCCACCTACATGCTTTTCATAAC
TATACCTATTTTATTGTCTTATAATTTGACTTGAGAGGTTTGCGTGAATGATGAACTGTGACAAAAAGCATATAT
AAATATAAAAATACAAGTTAAAAAGCCTCATGTTAGCTGAAGATTTTCCATGTGTATTCTTATAAAAATAAGGGA
ACCCTGGACAGTGCTCATTGTATTTTGTTGAAGAAATGTTAACTTCTTTAAAAGGGAGGAAAACATATATATATA
TATATAACATACTGTATATTCAGAACCATTTTTAAGGGATGTAGTTTATCTCTTGAAAGACTGAAATTCAAGGCT
GTGACTATGACTAGAGTGTAAAATATAGCTGCATTGCATTATAGTATTTTATATATTTGTACAAACCAAATTGAC
CTGTTTTTGGTTTTGTTTTTCCTTTTCCAGTCTTTACCAGGTGCTGGTCTCTGCATGTGTTTTGTTGGAAGTTGG
AAAATGTAGACACGACCCACAGAGTGGTATGGTATCCAGTGAGAAGGGAACTGTCCGCAGTGGCTTTGAAGGATA
TGAGGAAGCCTAGGCGGAGAGTTGAGAATTCAGCCTTGAGCTAGTGTTAGGGTACTATTTGGTACCTCTCCTGTG
GGCAGAGCGACTTTACTAGAGAAGTTAGGAGTTAGGGCTAGCATGAGAACTTCATGCAGTTTGAGCATTCATCAG
GCAGCAGAATATAGCTTCTATATTTACCTTGCATAAATCAGATTTGACAATGAAGAACAATGTTACTGATAGTAA
CAGTGCTTCCCAGTGATTGAGGAAGTGCTTGTTTTCTTTTTCAGCACTTTGTTCTATGAACAAATAAGGTGCAGC
AGCTAGTATGACACATAACCCACCGTATTTCCCCCCCAACGGCCAGATGAAACCAGAAATACCCACTGTGTTTTT
CTCTCCCTTCTTTGGAAAGCACGTGGTTGGTACTGCCATTGGGAAGAGTGATACCTGATTAGCCAGGTAGCCTTC
TGAAAATTGAAACAAGTGGCCTGAGGATGACTTGGATGGCTGTTGGGTAGCAGAGAGCCCTGGAGGCAGGGTTTC
ATAACTGCGAACAGCAGTTTTCATTGTAATTGACACAGCAGATTTCATTGTAATTGACAAGCTTCCCTTATGCAG
AAACATTTAACGATACCTTTTTAAATAATGTTTACTAGTCATCTGATTAGATTTTATTAAAAATTTAGATGATTC
GTCCTACATAATGTCAAAGCATTTGTTTAAAAACTTGGAAGCTTTTGGGGGGTGGGGAAGGTGGTCATAGAAATAT
GATCATCTTCAGGATTTGGCAGGTATGAAGTGATACAAACCTCAACTTTTAAGATTTTTTTTTTTTTTTTGCTT
TTCTCTGGCAATCAATCTTATTTATGCCAGCCGTTGACACTTAGAAAGGATTTAAATCACTTTTCATAGCATAAT
TATTGTATTGCTTAATGCTTTAAAAAGGCACGCAGATGGGATTGAGACATTTCTATCCAGGCAGTTTTTTCTGCA
TTAGACCTAAGAACCTAATTTTGTAGGGCAGTAGTCTCTAGGCATTATGTTTAGCTCCTTTTGTCAGTGAGAAGT
GTGTTGTAAAGTTTCTAATACTGTGGTCTGTTTTGAACGGTTTTGAGAAGAGGTAGCTTTAGTATAATTTATAGG
ACTTAAAAGGAAAATGCCTAGAATCATCAGAAAAAGCATGGAAAAACATTCTTCTCTGAGGTTGCCTTATTGGAA
AAGGAGAAATCATTTAGAAGTTAATGTGTGGAAGGCATTAGGTTGAATAAAATTGTTGTTCGTATTGATCTGTCA
GCTGCAATTACAATTAACTGAAAATTTAGTATTTGTCTCTTTTTCAGGAGAGAAGCCGTCAAATTTTAATACATT
TAATTTTAGGTATATTTAAATGTCTGTTTTGCAGAGTGATTATCTTAATCCAGAACTGAAAAATTCCTGATGGTC
CTACTGAAGATTTATCTAATGGTCCACAAATGTCTGTTTTGTTGAGGTTTGGCGGACATAATAATAAATCATTTT
TTAGTCTTCTGAAAACTTTTCTCCTCCTCCCTCTTTTCTCTGCTTCTTATACCCTTCAACAAAAAGCATTAAAAG
GAAAACATAAAATCACGCCTTTAGTCAGTGCCGTTATCCTCTCAGAGGTTGTTTTGGAAATACTGCCTGATGAAA
AGGAAGAGAAGGAAATTGCTTCTTTTAAAGTTTGCTTTTTATCTTCTTGCAGCATCTTCTAACTGGCAGAAATAA
TACAATTTTTGAGTTGTTTTGTAAGTTGGATATTTTTAGTTTTGTGTGGAATGTCGTGTTTCCCATTAGGGCAGG
GGGCGTCTCACAAGATCTAGGTTACTGTATGACAACTATATCCATTTACTGGAGTTTAAGAAGCTTTATAACAAT
ACATTTCCAGAGACTAGGCAGTACTTGGTTTTCTGTATTTAAATTTTCTGAGGGTAGATGATAACATCTAGTAAA
CACCACCTGCCTGTTCCATCCAGGACCCTAACTGGCCATAAAGTTACCCCCAAACTCTCCTAGGATTCATAGTAT
TTTAAGATTTCATTTTTGTGCCCTTATTACGAATATAATTAGTGTTTTCTCCCCTTTAGGGTGCTTTAAGATCTT
AGTGCCTGTCCTAATCTGAGCATACCACAGTAAGACAAGAAAGGGCAATGCTGTGGTAGGCAGTTAGCTGCTGAA
GTTAGGCCACTTAGTTATGAGGTAGATGAATTTCTGTCCTCAGCTCAAAATGATAATATTCTCACTGACAAAAGT
ATCAGCTGTGATCATATAGATTGCTCTTTCCTGTGGAACTGAAGTGTATTAAAAAAATTTTTTTTCTTCCAATAA
AGAATGTCTCGTTGCGCCGGGTTTGCTAGACTGAAAGTTTCCTCATCACGTGGCGAGACCTCCTCTACTTCAATC
TTTGTCTTTTGTCTCTGCTGCCTTGCAGGGTTGGTACAGTAGGCTTCACTAGACTTAGCTGCAACTCAGAATTTC
TCCTCCAGCACCTGAGTAAATGCTGATGGTCTTGTGGAGAGTGGATTAAGAGTACGAGCTAAGTTCTCAATCCCA
ATTAAGAAGCGGAAAATTTAAACTGTCTTCTTCAAAGTTTATCACAACCACCACCATCAAGACAGCAAACCAAAG
GACAAAGACTTTGACCCTGCTGTGTTGCTCTGTGTAGTCCAGTTCACGTATGGTTTACAGACTTGGCTGGGGTTA
CTAAAAATAAATAAAAAGTTGGACACTTCTGTCATTGGAGCGCTATTATTCACAAGTTACCAGA**ATG**AGAGCTGT
ACTGGACACAGCAGACATTGCCATAGTGGCCCTGTATTTTATCCTGGTCATGTGCATTGGTTTTTTTGCCATGTG
GAAATCTAATAGAAGCACCGTGAGTGGATACTTCCTGGCGGGGCGCTCTATGACCTGGGTAACAATTGGTGCCTC

FIGURE 1797E

TCTGTTTGTGAGCAATATTGGGAGTGAGCACTTCATTGGGCTGGCAGGATCTGGAGCTGCAAGTGGATTTGCAGT
GGGCGCATGGGAATTCAATGCCTTACTGCTTTTACAACTTCTGGGATGGGTTTTCATCCCAATTTACATCCGGTC
AGGGGTATATACCATGCCTGAATACTTGTCCAAGCGATTTGGTGGCCATAGGATTCAGGTCTATTTTGCAGCCTT
GTCTCTGATTCTCTATATTTTCACCAAGCTCTCGGTGGATCTGTATTCGGGTGCCCTTTTTATCCAGGAGTCTTT
GGGTTGGAATCTTTATGTGTCTGTCATCCTGCTCATTGGCATGACTGCTTTGCTGACTGTCACCGGAGGCCTTGT
TGCAGTGATCTACACAGACACTCTGCAGGCTCTGCTCATGATCATTGGGGCACTTACACTTATGATTATTAGCAT
AATGGAGATTGGCGGGTTTGAGGAAGTTAAGAGAAGGTACATGTTGGCCTCACCCGATGTCACTTCCATCTTATT
GACATACAACCTTTCCAACACAAATTCTTGTAATGTCTCCCCTAAGAAAGAAGCCCTGAAAATGCTGCGGAATCC
AACAGATGAAGATGTTCCTTGGCCTGGATTCATTCTTGGGCAGACCCCAGCTTCAGTATGGTACTGGTGTGCTGA
CCAAGTCATCGTGCAGAGGGTCCTTGCAGCCAAAAACATTGCTCATGCCAAAGGCTCTACTCTTATGGCTGGCTT
CTTAAAGCTCCTGCCAATGTTTATCATAGTTGTCCCAGGAATGATTTCCAGGATACTGTTTACTGATGATATAGC
TTGCATCAACCCAGAGCACTGCATGCTGGTGTGTGGAAGCAGAGCTGGTTGCTCCAATATTGCTTACCCACGCCT
GGTGATGAAGCTGGTTCCTGTGGGCCTTCGGGGTTTAATGATGGCAGTGATGATTGCAGCTCTGATGAGTGACTT
AGACTCTATCTTTAACAGTGCCAGTACCATATTCACCCTCGATGTGTACAAACTTATCCGCAAGAGCGCAAGCTC
CCGGGAGTTAATGATTGTGGGGAGGATATTTGTGGCATTTATGGTGGTGATCAGCATAGCATGGGTGCCAATCAT
CGTGGAGATGCAAGGAGGCCAGATGTACCTTTACATTCAGGAGGTAGCAGATTACCTGACACCCCCAGTGGCAGC
CTTGTTCCTGCTGGCAATTTTCTGGAAGCGCTGCAATGAACAAGGGGCTTTCTATGGTGGAATGGCTGGCTTTGT
TCTTGGAGCAGTCCGTTTGATACTGGCCTTTGCCTACCGTGCCCCAGAATGTGACCAACCTGATAATAGGCCGGG
CTTCATCAAAGACATCCATTATATGTATGTGGCCACAGGATTGTTTTGGGTCACGGGACTCATTACTGTAATTGT
GAGCCTTCTCACACCACCTCCCACAAAGGAACAGATTCGAACCACCACCTTTTGGTCTAAGAAGAACCTGGTGGT
GAAGGAGAACTGCTCCCCAAAAGAGGAACCATACCAAATGCAAGAAAAGAGCATTCTGAGATGCAGTGAGAATAA
TGAGACCATCAACCACATCATTCCCAACGGGAAATCTGAAGACAGCATTAAGGGCCTTCAGCCTGAAGATGTTAA
TCTGTTGGTAACCTGCAGAGAGGAGGGCAACCCAGTGGCATCCTTAGGTCATTCAGAGGCAGAAACACCAGTTGA
CGCTTACTCCAATGGGCAAGCAGCTCTCATGGGTGAGAAAGAGAGAAAGAAAGAAACGGATGATGGAGGTCGGTA
CTGGAAGTTCATAGACTGGTTTTGTGGCTTTAAAAGTAAGAGCCTCAGCAAGAGGAGTCTCAGAGACCTGATGGA
AGAGGAGGCTGTTTGTTTACAGATGCTAGAAGAGACTCGGCAAGTTAAAGTAATACTAAATATTGGACTTTTTGC
TGTGTGTTCACTTGGAATTTTCATGTTTGTTTATTTCTCCTTA**TGA**ACTTAAGGATATGGTGAGACACTAACTTA
AGACAATACTGACTGGTCTTTGGGGAAAAAAGTTATGTAACTGTGCATCTCTCAGGCATTGTTTACGCTGTAGGT
TTTAGCCAAATTTTACTTAGCAGAAAATCATCTAATTACAAGACTTTATTTTCCCAGAGATGGATTAAAGTAAAT
CTTCAACTTAAGTGAAGCCAAACCTAACAGACTGAATTGTGCAAATGTGGTTTTAAATTTTGCATACCAAAGTAA
GAAGAGACCAATTATTCTCACAGAGCACTTAGAGCAGAATATATGTTAAGTTACCATGAATTAAGGTATACTGTC
TGCACTGCCAAGTCTTGGCAGACCTTACCCTGAAGTAGAAGATTTGCTCATTTCTAAAGTTTTTTTTCTGTCTCT
GTAATCCCTCCTACCATTAAGAAAAACTTATTTCTTAGACATTGTACAATCAGTTATGTACTGAAAATCGAATGT
GCTTGTGTGATACTTGTTTCAGGACAAGTTCATTTGCCAGGTTCATTTTGTTAGCATGAGCCTACGGATTCTGAT
TTCCCAAAGAAAGAATGTTTTCCTGTAGGTATTTTTGTACCACCAGTATATGGAATGTTAGGGAAAAACTTTGTT
CCAGTTCCTTTTTTTTTTTCTTTCTACTTTCAAGTTTAAGTGAACCATACTGAAATGACCAACAAGTCTGCCTGT
AAAGTTACATGTCATGATTGTGTTGTTAAATGATTATGGGGGAGAAAATGAAGTAAATGTTGCTGATGATCCCCA
TATTTATTGATCATATTAAGGTTGTTTATATAGTTTGGAAATGACCAGCCCCCTAAGCAGTGTTTGATTAACTTA
TGCTAATCAGATGATTACTCATATATTCTGCTAATTTTCTAGCTTTATTCTTGTTATTTGGAAAAATTATTAGCC
AAATGCCTTCCTAGGTGGATCCAGTTGGAAGATATGTCCAGAAACCTGAAGAAAAATTGACGCTGCCTTTGTGTG
CTGGATTGCTCTACTTGATTAGATCATGATATATCAAGGTTGAATTTTTAGAGGGAAAATTTAATTCTGATATCT
TATTGCATCCTTGATAAGTTTTTCCCTGATTTTTTTTTCCTCCAAAGACTTTCCATCTGGACACAGCCTCCACAT
TTTTGTTGTAGTGACTTAGAGCATAAGGATGTTTCAGTGCCAATTCCGGCCGTCGGTAACAGAAAACTCAGTGCA
TACTTTGCTGTTGTTAGGTTGTCAATATAGTCTTTCTGTAGGATGGATAGCATGTTTGAGAGGTGCCAAACAAGA
ACTTTTGGGGTTAGTAGTGTGTCTTGTGGAGGGTATTACAGGACTGTGTAATTATAGGACTCTAACTTGACATGG
CTTGGCACCCACTTGCAGCTAGTGGGTACAGGGTACAAAAGATGTTAGAGAAAAGCTCTACAGATTACGTACTTC
TGTGTCTTCGTATGCTCAACACTGTCCTTTGTCCTCCATGAAAGATGAAGGAAGCAAATTATGTATGTACTTTCT
TTGACCTTCTTTAATCTCTGATACTTTTTAGATTGCATGATTTTACTAGGCTTGTATTTAGGGAAATTACTTTCA

FIGURE 1797F

TAAATACTTTTGTAGATTTTGAATCAAAACTCAGTCTTTTTAATTTTTTTGTAGTCTATAAACTAGTTTCATTAT
GATGGACTTGATTAGTCCAAAGTTAATTTTAGAAATTGTCAGGTAGCATAGTGTCTTCCCATGATCAGGAGGCTT
TCTGAAGGACTGAGTCTGTAAATGAAAAAATAATTTATGTATGAATAGCATGTATTTCTGAAGAGCTTAGAGTGC
CTCGTAGAATTTTTCTCAATTTTATTCTTGAGGTTTATAATTTGGGGGCCAAATAGATAGAGCTCATCATTTTCT
TGTTTGGAAGTTGAGGCTGCGACATGTCCAAGGTTATGAAGTCTCTTTTGGGAAGAACAGAAACCAGGTCTCCAA
ATCTGGACTCATGGTTTGTTCAGATGTGTCTGGACAAATGGTTGTCAATGTTTTGTCCTGTTTTTTCAAAGGAAC
TGTTCTTCCTTTGGGACAACCTTTTGGTGTTTGGGAAAGTAATAAGATCTTGGATTTTTCAAATTAACATTAAGT
TGTAAGAACTAAAATTTTCTTTGAACCACACTACTGTGTAATTCACTGATAATTGACATATTGGCTGGGCAGCCT
ATCTCTTCCATATCCAGCGTAAATGAATAGGAGGTGTCTGTGATTTTTTTTTTCTCCCTTTATTTAACATTGAGT
CCTAGTAGTTTGGAGAATTAGGGTCCCTCTACCTTCTTTCTGCTCTTGTCTTAGTAAGATACATAAGGTACATCA
TCTTGTGTCTGTGTGTATATAGCAGTAGGTCAAGTTTAGAGTACTAAAGTCTGTAAATAAGGAATGACTATTAGC
ATATTCATTAGAATTGTTTATTCTTGCCAGTATAAACATCATTTTATTTAGACTAAAGTCCCTGAAGCTTGTCTT
TCTTATTGCTTTCCAGTAAATAGATAATGTGCTCGAGTAAGTTTGTGAATTGCTGATTGCAACTTAATTCAGGGA
CCAGTCTTCAATCTATATTTCATTAGAATGATTGTCCCTGGAATGATCATACATGGACTGTCTTAAGCTAGCAAA
ATGTTCATACTTTACACTGACTAAATGGGTCCTAAATGATGACATTGGTCTTTAGACATTAACATGTGTATATTT
TTATATTAGCTCAAGCTAAGGTTCAGAATTGAAGCTTGATATTGACTAGAATAGCTAAAAGTCAAAATGAGGTGA
GGACACTGGTCTTGGAAGGTAGAGAAAAATAAATGTCTTACCAGGTGTTAATGGTATCCCCAGTTCTTAGACTTT
TGTCTTCTCAGGCAATTTTCATCTCAAGATCTGATGAGAAGGGCATATTACATTGGTATGCAGGATGATTATTGC
ATATTTTGTGGGACCTCTAATTTCCCTGGTCATCTTTCAGAATATTCTGTTCTGCCACCCCCAGAGAGTAAACAC
TTGAGCCGATTTCTTCTTCCCCAGCTATTCTTTCCTGGGGGTAATTATGCTTTGTCTTTAGATTAGAGAAGCATC
AAGCAATAGCAATGGTGCTGTGTCCTTCGGCCTAAATTCAATAGATCTCATCTCCTAGGGCTTCCTTTTCACTTG
GCTCAAAGGATCCATTGTATTTTGGCACAAAGAGCCTGGCCAGGGTCATGTAGCCATAGCTCTTAGGGATGATAC
CTCAAGAAATTAGCTGGGACCCATCACTCTGTGAAACTTCACATTTTAAGAACTGAGTTGAGGGGGTTGTTATGC
ACTTCTGTAACTTGAGGCTAAGCAAGGGGTTAACTCTTGTGAGAGCCAATAGAGTGTGTCTGTATTCGCAGTCCA
TGGCTCATTTTCTTTATAGTAGGCATATGGATCTTCCCCTCTGACTTTGAATATCATTTGGTGTGGCCTGTGGGT
TATTTTCATTCTTTACCACCAAATAAAGCGGCTTATTAGCTACTCAGTTACTTGCTACTCAAAGGTTAGGTCTTC
CCTGTTCCTGCTTGGCAGTGTTAAAGCTTACAGGGTTAACTTATGATGATTCTCCTGGCTCATTTTCATCAGAGG
CATGATGACTGGAAAGGGATCACATGGGTCGTTGGTGGTGACACCTCACTGTTTCCTAGGTTTGGATAGAGAGAT
GTATACAAGACCTTTCCTGTTAAATTACGTGACTACAGAGACTTGCCAGGACAAAATTTCCTAAGAAATCAGAAA
AATGATTAAGTGAGATAAGTACCTGGGTGACACAGATATTAGCCCGTTGGTAAAAGACAACAAATATTAGCTTAA
AATCTGCATATGTAGAATCATTTTCATTAGATTTAGAGCTTGAAGCACCTTGGCTCTCAGCTACTTTAAACTCCT
CCCCATATAAATCAGGGCACCAATAAATAAGTTTCAGCTTTTTAAACCCTGGTTTGATGTTAAGCATTATAAAGT
ACGAAGTTTGTTACCACAGTAGAGATAATTTAGTAGAAAAATGCTTTGAGGCTTCAGTATTTGTAAGATTTTGCA
TTAGCCAGATGCTAGGTTGTTGAAGGCATTTCAGTGTTGATAATAGCCTGAGCAGACTTCTTTACAAATGGGATC
TGTTTCTATATGTGTATATGCCCACTTACCATTCAGAGAGACTGGTCTTTCTCTTTGTCTCCCTTCACATTGCTG
TGTCAGTCCTACACCTAGTCTTTTCAGCACTTAGCAAATTCAAATTTGGATTTTTTGGTCAGCTTAGTTCACTTT
AAGGCATATTGGCATGGTGTGTGAAAGTGATGTTTGGCCCCAGTATTGAGGACTTTTAGATCCAAATAATGACTC
ATTAAATATAATTATGTTTTAAGTATACTGAATTTCTGTTAGCTTAAAATGTTAATCCTCAGGAATGATTTCCTC
ACACTTTGTGTTGGCTAATAATAAAAGCACTGTTTTATCCTCAAAACTCCTTTTTCAAAAATTAGGGAGAGAGCA
GTAGTGATCATTTATGTGAGCCCCTTTGAAATGATGGTGTCAGAGTGCAGAGAAACAATGGAGTTTTGATGCCAA
AAAGGTTTTTTTGCAGTAAAAGTAAAAATTTGGAATTAGTTGGCATATAAAGGAACCCTTTTGTACTGGAACGTA
TGAGGCTGGATTGTGAAAAGGTAATCTTTCGATTGCTAGACTTGGTTAACTTAGGGCTGCAAATCTTTTTCTTCT
ATCAAGGTCACTTAATATGGAATGTTTTTGTCAGACTGTCCTTTGTTGGAATACTTTAGCTGTTCAGCTACTTTG
ACTCCTAGGAGAGAATTTAGTTAAGGTTCAAAGTAATTAACTGGCTTTGCCAGTGGTGAGTCCCACACCATTATT
CACTTAGTAGTCATATAAATGTTTTTATTTACTCTCTTCAATGCTGAGAATAAGGCTTTAAATTACTGATTCACC
TTTAAAGGAATGTTGTGAGAATTGATGTAATTTCTGTTTCTGTTTCCATCTAAACTTCTTTATAAAAAGAGGGAT
TAGTTTTTTTGTTTTGGGGTAAGCACCTAATTTATCCAGTAACCAACAACCCTAACCATTGGCATATATAGTCTT
TCACTCAGAAATAAACAAAAACTGTTTGGTATATCTGTATCATTGCTAATCTTGTGCACTTTACTTTTTGGGCAG

FIGURE 1797G

TACCATACATAGTCTGAGGCTATTGACTTAAACCAATAACTGTACTTTATGTAATGACTCTTAAATTTGGTTACC
TGGGTTCACAGCTTGCTTGAAGAGAAAGGATGCTAGAATAAAGTAAGCAGCTGAAGAGCGAGCAAATCAAGACAA
AACACAGTGGTCTCAGATTTTTCGTAGTGTGGGAACAGTGGTTTTGCTCTATACCACTGAAAAGCACTATAACAT
AATTGTTGTCCATGATACTGAAGCTTTTCCCCTCACTTCTAGGTTGTTTACATTCAGAGCTCTATCAATAAGAGG
AATACATATTACAGTGAATTCGACAACCGCACAAGTTGGCAGTAGGTATCCCCAACCTAATTTATCTTGGTAAAT
TCACCCTGTTTCCTAGTGCTGCTGGATAAAAGAGTGTTTACTTTTTATTGCTCTTAGACAGAGTAGTCTAGATAA
GTTTTCAATTTATCAACATAGCCTAGACTTCTGTAAGTGGAATGTTCATTAGTAACTCATCTTTTTGTTGTTATA
ATTGGAAACAGAAACGAGGCTTATTGCTATTGCAGAAATCCCAAACTGGCAAAGGCCAGTATATATGGTATTCCA
TAATATAACCAGCTTTTGAAATTTATGTGTTTGGATTAGTGCCTTCTGGTTACCAGTATTGACTCTGCTAGTTTG
CACCTTTCCGTTCTTAACAGAAAATTTGTATTTGTTATTCCTCTTAAATTTTGTCGTAACTAGTGAAGGAAGTAA
AAAAAAAAAAAAAAACATGCATTACATTGACATACTTTATGTGCAGCCTTTATTTAGGTTCAGTGAAACCAGGTA
GTTCTGTATTTGTGTTGTAGCCTAAATGTTGTTTCTTTTATATCCATTAAAAACTTAAAGTTACTTATGTTCTGT
GATCTTAATTTTGTTGTGTTTCCATTGTAGGTTGATAGGTATATCGAGAACAGGTACGTGACAACAGTTTATATT
CCATGATAGAAAGCTAAAGTCCATAGAAAGCACAAAATCGTGTTCACACATTAGTGTACCCACACATAGAAAGCA
CAAGACTAATAGTATTCTCTGTATCCCACAAGTGCCAGTCATAAAGGCCACCAGGTATTTGTCTCAGAGTTGCTA
TGAGCACTACAGTATTGATAAGCCCAAGACAATGCGGTATCTAAACTGGTCCTAATGGTAAGGGACCCAAAGGAA
TAATCTCAATAAGTTTGTACCACATTGATGGAGGGAGAGAATACAAATGTCAAGAATGCCAAAATTATATTTGGG
GGTTACTAGCTAAAATGGGGTTTGAGGGCTTTTTACTGCAACTTGAAACTGGAGAAATAGGGACAGATGTCTAGG
TTTTTGGTGGGTGGAACAGGTGACATATTTCTGTTTTAAGCTGTAGTGTGATTGGGGTTTTTTGTAAAAAATCTT
AAATCTTTTAGGAAATATTACCTCTTAACAGTGCCCCCCCAAACATGCAGAAAGTCATACTTTAACAGGGCAAAT
ACTACTTGTCTTTGATTTTTTTTGTGTACGTTTGTATGTGAGAGATGAAGTTACCTTTATTTTTTTCCTATACTT
GACTGTGCTTCATTTTAATAAAGGATAATTTGATCTGA

FIGURE 1798

MRAVLDTADIAIVALYFILVMCIGFFAMWKSNRSTVSGYFLAGRSMTWVTIGASLFVSNIGSEHFIGLAGSGAAS
GFAVGAWEFNALLLLQLLGWVFIPIYIRSGVYTMPEYLSKRFGGHRIQVYFAALSLILYIFTKLSVDLYSGALFI
QESLGWNLYVSVILLIGMTALLTVTGGLVAVIYTDTLQALLMIIGALTLMIISIMEIGGFEEVKRRYMLASPDVT
SILLTYNLSNTNSCNVSPKKEALKMLRNPTDEDVPWPGFILGQTPASVWYWCADQVIVQRVLAAKNIAHAKGSTL
MAGFLKLLPMFIIVVPGMISRILFTDDIACINPEHCMLVCGSRAGCSNIAYPRLVMKLVPVGLRGLMMAVMIAAL
MSDLDSIFNSASTIFTLDVYKLIRKSASSRELMIVGRIFVAFMVVISIAWVPIIVEMQGGQMYLYIQEVADYLTP
PVAALFLLAIFWKRCNEQGAFYGGMAGFVLGAVRLILAFAYRAPECDQPDNRPGFIKDIHYMYVATGLFWVTGLI
TVIVSLLTPPPTKEQIRTTTFWSKKNLVVKENCSPKEEPYQMQEKSILRCSENNETINHIIPNGKSEDSIKGLQP
EDVNLLVTCREEGNPVASLGHSEAETPVDAYSNGQAALMGEKERKKETDDGGRYWKFIDWFCGFKSKSLSKRSLR
DLMEEEAVCLQMLEETRQVKVILNIGLFAVCSLGIFMFVYFSL

FIGURE 1799

GGGGGGCGGCATCCGGGACGGCGGGCGGGCTGGCCACCACGGGACAGGAAGGCACAGAGCATGGAGAATGATGAA
CTTCCGTCAGCGGATGGGATGGATTGGAGTGGGATTGTATCTGTTAGCCAGTGCAGCAGCATTTTACTATGTTTT
TGAAATCAGTGAGACTTACAACAGGCTGGCCTTGGAACACATTCAACAGCACCCTGAGGAGCCCCTTGAAGGAAC
CACATGGACACACTCCTTGAAAGCTCAATTACTCTCCTTGCCTTTTTGGGTGTGGACAGTTATTTTTCTGGTACC
TTACTTACAGATGTTTTTGTTCCTATACTCTTGTACAAGAGCTGATCCCAAAACAGTGGGCTACTGTATCATCCC
TATATGCTTGGCAGTTATTTGCAATCGCCACCAGGCATTTGTCAAGGCTTCTAATCAGATCAGCAGACTACAACT
GATTGACACG**TAA**AACCAGTCACCGTTTTTTCCCTACGATTACAAAACTGCCAGTCCTATATGGAGTCTGATCAC
AAGACTGCAGTTTCTTCACAGATCTCAGGAAGTTGTCGTGGGGCAGAGGCTTTTTAAAAACATGTGATTAGGGAG
CTATCTTTATCTGAATAATAACGAATTTTTAGGTAAAACCTGAGATAGAGTACTACAAAATCATGTTGATGACTT
CAGATTTTGGAAGTTAAATCATGTCTGTTATTTGCATTCTTTAGAAACTTGACTAAGTACCTGAATTCATATTTC
TATTCTACTGTGCAACATAGTGATGATTCAGAAATTTTTCCTTTGGGGAAAAAAATGAATATGAACATTTCCATT
GTGTTAAGTGTAAAAAGGTCCAGACATGATCATAAAATTTAAATTTTATACAATTAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1800

GGGIRDGGRAGHHGTGRHRAWRMMNFRQRMGWIGVGLYLLASAAAFYYVFEISETYNRLALEHIQQHPEEPLEGT
TWTHSLKAQLLSLPFWVWTVIFLVPYLQMFLFLYSCTRADPKTVGYCIIPICLAVICNRHQAFVKASNQISRLQL
IDT

FIGURE 1801

CACATTAATTTATTCCTCTTCCTCTTATAGGTTTCATCCAAAGAATATCAAAAGGAGGCCTAATTAAAACCAAAA
GAAAAAGAAAGAAGCAGAGAGTGAAAATAGCATATGAAGAAATTTTTGTTAAAAATATGTGAATTTGTTATAGCA
ATGTAACATTAATTCTACTAAATATTTTATATGAAATGTTTCACTATGATTTTCTATTTTTCTTCTAAAATGCTT
TTAATTAATATGTTCATTAAATTTTCTATGCTTATTGTACTTGTTATCAACACGTTTGTATCAGAGTTGCTTTTC
TAATCTTGTTAAATTGCTTATTCTAGGTCTGTAATTTATTAACTGGCTACTGGGAAATTACTTATTTTCTGGATC
TATCTGTATTTTCATTTAACTACAAATTATCATACTACCGGCTACATCAAATCAGTCCTTTGATTCCATTTGGTG
ACCATCTGTTTGAGAATATGATCATGTAAATGATTATCTCCTTTATAGCCTGTAACCAGATTAAGGAATACAGCT
CTTAAAAAATCAAGAACTTCCTGAGTTTCACATATAAAATGGTGACAAACACCTGCTTCTGATAAAGTTTATCCA
ATTTTGTATTTATAGAATTCTATTATGTGCTTCCCTCCTTAGACATAGTTTTTCTCCTTTTGTACTAACCAGTAC
TTCCATCTATATTGAGCTAAACTGTCTTTGAACAGTCAACTCTGCATCATGTGCCTGCCTGATTTGGATTGGTTT
CACTTTTTTTTTGTTTGACCATAGCCCATTCTATCAGTCAAGATGACTGAATAATTGTGTGTTAAATACAACTCA
TGATAAGGAGAACCTTTATGGAAACAAGAAGTTTTATGGAAATCGAGAGAGAATTATTTATATGTACTTCTTAAT
ACTATGCTTCCCAATATTTTTTCTTACTAAAAATAACAAAAATATTTAAACCTTCTGAAATCTATTCAGTTATCA
TTAGGATTTGCACACAATGCAACTAATAATTCATGCTTTAAAAAGTAGGTTATTTCTGTTGAAGAGAAAATTATC
AGCAGGGAAGAGTCTACTAGAAAATTCATGTGCTAGTCATTCTTGGGGATTTAATATTTTGCTGGAGTTAATTCA
CTATATCCAGACCTGTATCTTTCATTTATTGCTGAGCCATGTGCAGTCTGGCATCTCAACAACCTCAACAACCTC
AACAACCTCCAAGACATGTCAGTTTCTGTAGTGTTCACCTCAAATCTGACACTGGAATTGGAACTGATTTAGAAA
CAACCATTTCATTCATTTGGTATGACTAGCTTCATGACTAGCTTCATGAATAGCTTCATGAATAGCTTCATGACT
TCTCGCTAACAATGATAGTATAATTCTGCCTGTTCTTCAGGATTGAAATTTTGAACTCAATTTAGATTTCCTGTT
TTCCCTCATATACCACATCTAAACAGTCTCCAAATCTTTATGCTTTTTTTTTTTTTTTCAAAAAGTTCACCCAAT
CCCTAGGCTTTTTACTTTTTTCTTTTTCTTTTCTTTTTTCTTGTTTTTTTTTTTTTTCATTTTGTTTTGTTTTGTT
ATGTTTTTTTAGACAGGGTCCCACTCTGTCACCCAGGCTGGAGTGCAGTGGTGCAATCACAGGTCACTGAAACCT
CCCACCTAGCTGGGACTAGAGGTGCAGGCCACCACACCAGCTAATTTATGTAATTTTTGTAGAGACGAGTTTCAC
CACGTTACCTAGGCTTGTCTTGAACACCTGGGCTCAAGCAATCTTCCAGCCCCAGCCTCCCAAAGTGCTGGGATT
ACAGGTATAAACCACAATGCCCCCGTTTTTACTCTTTACTGCATCCTTCCCATCAGTATTAATTCCTCAGAAATT
TAGTACATTCCTCCACCATTTCAAAATGCTCCCAGAACTCACACTAGTTGGTACTTAACTACAACCTTCAACCTC
ACCATTTAATTTTGATGTATGTTTTTGGATTTACCAACAGTACTTTCTTTCATGACTACTTTGATTTAGTTAAGA
ATGCTCACTGTACACTGAATGTTAATTACTCAGCTAATTCACACTGATTTCCTGTTTAAAAATATGATCCCCTCC
AGGCCATTCATGTGAAGTCAGGGTACACTGATGCCAGCTACAGAATCACTATGTTTCAATATGGAATATGAAAAG
TCCTAACACATAATTGCAAATCATTTTCTACTATGGTATACAAATTTTATCATTACAAAATAGTATCAGCTTTTT
TCACTTAAGGAAAATAATACATCTTCATTCAAATATTCAGTGCATAAATAATTGCCTTAAATTGAGTCTTTGCTG
TGGAATTTGAGAGTTTTGGAAATCAAAGGCCCTTGTGAAACATTTCCTGTTGCCATTTATTTATAGATAGCAATA
GCTTCAAATGAGTGGGAAAGTCTACTTAGGTGAAGTGGTAAATAGTCACTAAGATTGTATAAATAGCGCATTGAT
GAGTTGCCTAATTGTTTTCTCCAACAATAACCACTGGTCCATTGGTTCACTACTTACTCAAGAAAGACATATACT
GAGATTGCTTGAAATGTTTAATGCATGTGAACGTTATTTTTACCGTGTTTTGGAAAAAGATCTTGATGTTATTGT
CTTCCTTTATTTTCCACAATTAAGTGCATCTAACTGTGAATTGTATATGGAATTACATTATTCAGCATATACACT
ATATTTACCTGCTTTGTTCATTCTCTGTATTCAAAATTAACAGATCATGCTGAAAACCACTCAAACGATTATATT
TTTTACATTATAAGAAGTAAAATATATTATTCTGAATAATGAAACCTGGCTGTTGTACTCGTAAAGATTTTAGT

FIGURE 1802

CTTGAAGTCTACTCTGATGGGATCTCAGATCCTTTGTCACTGCCTATAGACTTG**TAG**CTGCTGTCTCTCTTTGTC
CCTGCAGAGAATCACGTCCTGGAACTGCATGTTCTTGCGACTCTTGGGACTTCATCTTAACTTCTCGCTGCCCCA
GCCATGTTTTCAACCATGGCATCCCTCCCCCAATTAGTTCCCTGTCATCCTCGTCAACCTTCTCTGTAAGTGCCT
GGTAAGCTTGCCCTTGCTTAAGAACTCAAAACATAGCTGTGCTCTATTTTTTTGTTGTTGTTGTGACTGACAGCC
TGGGGGGACAAGAGTGAATCTGTGTCTCACC

FIGURE 1803

LEVYSDGISDPLSLPIDL

FIGURE 1804A

CTTTTAAGGAGTTCTTGGACCTGCTGGGGGGACACGATCACACTGCAGGATTTCAAAGGTTTCCGAGGAGGCCTGG
ACGTGACCCACGGACAGACAGGGGTGGAATCAGTGTACACAACATTCCGGGACAGGGAGATCATGTTTCACGTTT
CCACAAAGCTGCCATTTACCGACGGAGACGCCCAGCAGCTCCAGAGAAAGAGACACATTGGAAATGACATCGTGG
CCATCATCTTCCAAGAGGAAAACACGCCGTTTGTCCCAGACATGATAGCCTCCAATTTCTTACATGCCTACATCG
TCGTGCAGGTCGAGACCCCAGGCACAGAGACCCCATCCTACAAGGTCTCTGTCACTGCGCGGGAAGATGTGCCCA
CCTTTGGTCCACCTCTGCCCAGTCCCCCCGTTTTCCAGAAGGGCCCGGAATTCAGGGAGTTTCTGCTCACCAAGC
TCACCAATGCCGAGAACGCCTGCTGCAAGTCGGACAAGTTTGCAAAGCTGGAGGACCGGACCAGGGCTGCCCTCC
TGGACAACCTTCACGATGAGCTCCACGCCCACACACAGGCCATGCTGGGACTGGGCCCAGAGGAGGACAAGTTTG
AGAATGGAGGCCACGGGGGGTTCCTGGAGTCTTTTAAGAGGGCCATCCGCGTACGCAGCCACTCCATGGAGACCA
TGGTGGGCGGCCAGAAGAAGTCGCACAGTGGGGGCATCCCTGGCAGCCTCAGCGGGGGCATCTCCCACAACAGCA
TGGAGGTCACCAAGACCACCTTCTCGCCTCCAGTGGTGGCGGCAACGGTGAAGAACCAGTCACGGAGTCCCATCA
AGCGACGCTCGGGGCTCTTCCCCCGCCTGCACACGGGCTCAGAAGGCCAGGGCGACAGCCGGGCACGATGTGACA
GCACATCCAGCACACCCAAGACCCCAGATGGTGGACACTCCTCTCAGGAGATAAAGTCTGAGACCTCATCCAATC
CCAGCTCTCCAGAAATCTGCCCCAACAAGGAGAAGCCCTTCATGAAGTTGAAGGAAAACGGCCGCGCCATCTCCC
GCTCCTCCTCCAGCACCAGCAGCGTCAGCAGCACTGCAGGGGAGGGCGAGGCCATGGAGGAGGGCGACAGTGGGG
GCAGCCAGCCGTCCACGACCTCACCCTTCAAGCAGGAGGTGTTTGTCTACAGCCCGTCCCCGAGCAGCGAGAGCC
CCAGCCTGGGGGCAGCTGCCACCCCAATCATCATGAGCCGGAGTCCCACAGATGCCAAAAGCAGAAACTCCCCGA
GATCGAACCTGAAATTCCGCTTTGACAAGCTCAGCCATGCCAGCTCTGGTGCGGGTCAC**TAA**TGTGAAAGTGGAG
TCCTTCGCCTGTCCAAGGGAATCCCCTCTTCTGTCCTGGAAAAGGCTCCTGACCTCCCAGTGTGATGTCCGGGTC
CTTTATCATCCTATTCATCCTGGAGAGGAAAAGTGTCGGGCAAAGGGGGATCTGGGGGGAGCTCAGCAGTGACTG
GGGAGCTGGTCTGCCTCAGAGACAGAGTAGGGGGTGGGAGCAGAGCCTCGGTGAGGGTCTTGGCCACAGGGCAGT
GCCTTCCTGAACGTGGCAGGCTTTACTACCAGGAACGCACTCGGTGGTGGAGGCCCCATGTTCCCAGGAGCCAAG
ATTCGTAGCATCCTTGAGGCCATCCTGATAAAATTCGGCGCTATTGCCCCCGTAGCTCTGGAGCTCTAAACCGTC
TATCTGCTTCTGTGCTGAACGCCTTTCCCATCTGCTGACGTAGGCCCAGGGCTGCCCTGCCCCTGCTGCCAGTGT
ACCGTGAGCGGGGCTCCAGCCAGTTCAAGCTCAGAGCCAGAGCTGGACGGGCCAGAACTGCGCTGCACACTTCCT
GGACTGAGGCGGGGACTTTGGGTCCCACCCGGTTTCTCCTGATTATGGCTGCTGTGGGGTGAGGGGAGGGAGGGG
CAGCCCCGAGGCAGTCTCTTCCCTTTGAGAAGATATTTTCCCACAAAGGGGTGGGAAGCCAGGAGTGAGAAGGAA
TTCAGGGAGAGCAAAGGAGCCAGTGCTGAGATGCTGCTGTGTTGGTTGAGGAAAACCTCGGGCCTGAGGGCCAGG
CCGGAGCCCAGGTCTCTGCTGACAATGGGGGTTCAAGGAAGACGTCGTTATCTCCCCTCCCCACTTACTCGAGGA
GAGAGGTGAGGGGGGGATGACTTGCGGGTTCTGATCAGGCCCCTGGGTGGGGAAGGGGCACAGTGTCCCTCAGCA
GCTTACGCCCCTGGAGTCTTGGGGGGCCCAGCCTGGCCCTGGGGCCTTTTCCAGCTACTGTGCCCTTGGGCAGCT
GCGTCTGGGGCTCAACCCCCCAATCCTGTTCCCCTCTCCAGCTGCGGGTCTGTAGGCAGCTGTCACATCTGAAGG
GTTTCTGCAACCTGGACCCCATCTGGGTGTGGGTCAGACCCTGTGACCCACATGCCACCCCCACCCTCCACAGAG
CCCCCTTGCTGGGACAGCCAGCTCACCTCCAAGGACATCCCCTCCTGGCTTCTCCCCCTTCCGAGTCTGCAGCGC
CGTGGGCTTCTCTGCCGATGGGCCCGGGTTGGGGTTAAGGTGGGCATCCTCCAGGTACAACGAGCCTGAAGAGCC
CCTTTCAGTGCAGACGGGGCTGCAGAGTGACACTGGCTGGGCACCTGCCCCACGACCAATGACAAGGATTTCCAG
CTGAATGCTTTATTCCCATAGGGATCTGGACCTGTGCCCAAGATATAAATACTACACTTTTTTTTTTTTTTTTT
TTTAACTGACATTGTGAAATTCTCCCTATAGCTTTTGCCATTCAAGCAACATTGTGATCTTTCTTCCCCGCCACG
TGTGTGGGAATGATTGAGTCCTGTTTGCAAGCTGGAGAGGAGCTCTCCCTTCGCTAGTACTTTCTCTAAAGTACT
AGTCTAGTAAAATTTATTCTTGTTAGAAGGTCAACAAAATATCTGTTTAGCTTTTATGAAGAGTCACCGTAGCAG
CCCCCACGGCTGGAAAGAGGCCCGTACGTTCTGGACGCGTTTTGTTGGCTGGGCTTCTGGAGGCACTGGCAAGGT
CAAACTGCATTTCTTTAAGAACAGTTGCAGGATCTGGCTTGCCTCTGTGGGAAGCCGGCATTACAGGTGCTTGGT
GGATGGGCCGTGTCACATTGCCATCTGGGGTCCTTTGGGGTTTCCAGGTTGTCAGCATGCTGTCCCATTTGGGAA
TCCCATACCTGCCTGTCCCCACTGCGCTGGCTGACCCTTGCTGCCTGCTGCCTCTTGGGAGGGCTTTGTCCCTGC
CTCTGAGCTGGTGGGCAGGATGGCTGGGTGGCCCCCAGAGAAGCACAGACCTGGGATGGGGTCTCCATGCCCGGT
TTGCTGTTGGAATGATCTGAACAGGACCCCAAATGCCTCTTCCCTCTGGTCATGCCTCACTATCTCTAGGAGCTC
CATCCTGTGGCTTCCAGAGTGTGCACTTCCAGCCCACCCGGGCAGTGCTGAGAGGGAGGAGGAGAACAAGGATGG
CCCAGCCTCCCCTCCCTCCCCTAGACCACGGGGCGGGCAGCTCGGGTTCCTGGAGGGCTGTTTCCCCCACGCTGT

FIGURE 1804B

CCCTACATCTGCTCTGATCTAAAATGTCTTTCCTTTTATGCTGCGCCCAGTCTTGGGGCTCAAAGATTTGCCCAA
ACCTCATTGGCCCTCGTGACTAGGCTCATCTAGATGGTGCTCACGCTGGTGTTTGAGGCATTTCCACTGTGATCT
CCACGAGGGGATGTTTTCCGGGACACATCTCTGGCTCTGGGAACTGCCTGACTCACTGAAGAAACTACTTTTCAG
GCACTGTAGGGTCACCCATATGCCTCCAGCTCAGTTGACGCTTAAAAACAGGTGCAGAAAAGCTCGCGATGGAAG
GTCTTAATGAGAGTGTCTGTCTATGCCAGTCATGTAAAATGACGTTTCTTGAAAAAGATTCAGTGGTTCAGCTTT
GTCAGCATCATCTCAACACAAGCCTGCTGGCTCTTTTTAGCATCTCATCCAACCATGTCATCGTCCAGATGAGAA
ATCTTAGCCCAGGTGAGGGGAATAACTTGCTTGAGGTCACACAGCTGGCTGTTGGCAAAGCTGGGATTAGAACCC
TCAACCCAGGGTCCCTTCCTCTGCAGCGCCTACATGGTTGGTTGAATAAGTGGCTGCGTTTCCTGGGGCCCTGGG
TTTTGGGGAAGCCAGTTAGCTGCTGCTTTGGCACTGGCATGGAGGTGAGCAGTCAAGGATGCTGGTGAGGCCGCA
GTTTCTGCTCTTTTTCATCAGGGGGGATAGTCTCTAGGATTTTTCAGTGAGGACCCTTGGGCTTTGGATGCAGCT
TGAACCAAGAAAACGAGGAGGGAAAGGGATTCAGTGAACTATTCCTCAGTGGGATCGGTTCTTCAGCTCCTGATG
GGGGCTGTGTAATGGGGGCAGAGGCCAGGGAAAAAGATGCTGTTCACCCACCCTCAGCTTCCCTTTTCCTAAATT
AAGAGGAAAAGTGGTCAAAGAAAAACTCTTCATTTCTCCCTGATTCTTAAGCGAAGGTGGTTAATAGAAACTCAG
GCTCCCGTGACAAGGCAGGACAAGAGCCTGTTTCGCTTTCCTCCCTGACCCTGCCAGGTGCCAACTCAAACACTA
CCTTTCTCATTGGTTTCTAAGTCAGTAGAGACAGATCTGTTTTAAGCAGTTGGGGGTTCGAGTAGATCTCATGGG
TACAGGAGGCCAGCAGGGACCAGGCCAGTCAGCCATGCTCAGGACCCCTCGGCTCCTCCCCCAGCCTCTAGCTAC
CCTGTATCGAGGCAAGGGGAGGCCAGTAAAGTTTGCCAAGCCTGATCCTGCAGCCTGGTGGGGCTGGCTGGGGTA
TTCTTTTACCAAACTCTGTTTTACCGCCAGCCCCTTGTACACCCCAATCCCATGTCTCCCTCCCTTCAGCTGGAC
CGTGTGCCCCTTTGGGAGGAAGAAGACAAGCCCCACTAGGGCCAAGGGCAGCAGAGCCCTGCCGAGTGAGAGGCT
GTGGGGCAGCGGCTCTGTCCTGTGCCTTACCAGCCCTGGGGAGGGGGACATTTGGCTGGAAGACTGGAATTTAAT
TGCCATCGTCTTTGATTTTGTGACATTTCTGCTTGGAAGTGTGAACTACCCTCCCCCCCCCGCTTCCTGCTCCTT
AGCATGCGTGCAGCTCTCTCCTGTTTTGGGTGTTCCCCTTGGACACTCCAGCTCGGGGACTGCTGGCGTGTGAAT
GTGCAGATTCCCCTGTGTGGTCGAACCTAAGAACTGTGGCTTGGAAGTGATGCTCCATGTGACGACGACTTTGCT
TTCTTTCCTCTTAGTGAGGAGGTGATTCGTAGATCCCAACTGCCTATGTAATGTAAATAATGTACATTTAATTTA
TTGCTATGGTAGCACATTGTATTTGTTAATGTACAAAACAAATTCT

FIGURE 1805

FKEFLDLLGDTITLQDFKGFRGGLDVTHGQTGVESVYTTFRDREIMFHVSTKLPFTDGDAQQLQRKRHIGNDIVA
IIFQEENTPFVPDMIASNFLHAYIVVQVETPGTETPSYKVSVTAREDVPTFGPPLPSPPVFQKGPEFREFLLTKL
TNAENACCKSDKFAKLEDRTRAALLDNLHDELHAHTQAMLGLGPEEDKFENGGHGGFLESFKRAIRVRSHSMETM
VGGQKKSHSGGIPGSLSGGISHNSMEVTKTTFSPPVVAATVKNQSRSPIKRRSGLFPRLHTGSEGQGDSRARCDS
TSSTPKTPDGGHSSQEIKSETSSNPSSPEICPNKEKPFMKLKENGRAISRSSSSTSSVSSTAGEGEAMEEGDSGG
SQPSTTSPFKQEVFVYSPSPSSESPSLGAAATPIIMSRSPTDAKSRNSPRSNLKFRFDKLSHASSGAGH

FIGURE 1806

GAATTCGGCACGAGCTCTTCTCCCCTGATTCAAGACTCCTCTGCTTTGGACTGAAGCACTGCAGGAGTTTGTGAC
CAAGAACTTCAAGAGTCAAGACAGAAGGAAGCCAAGGGAGCAGTGCA**ATG**GATTTCTCAGTAAAGGTAGACATAG
AGAAGGAGGTGACCTGCCCCATCTGCCTGGAGCTCCTGACAGAACCTCTGAGCCTAGATTGTGGCCACAGCTTCT
GCCAAGCCTGCATCACTGCAAAGATCAAGGAGTCAGTGATCATCTCAAGAGGGGAAAGCAGCTGTCCTGTGTGTC
AGACCAGATTCCAGCCTGGGAACCTCCGACCTAATCGGCATCTGGCCAACATAGTTGAGAGAGTCAAAGAGGTCA
AGATGAGCCCACAGGAGGGGCAGAAGAGAGATGTCTGTGAGCACCATGGAAAAAAACTCCAGATCTTCTGTAAGG
AGGATGGAAAAGTCATTTGCTGGGTTTGTGAACTGTCTCAGGAACACCAAGGTCACCAAACATTCCGCATAAACG
AGGTGGTCAAGGAATGTCAGGAAAAGCTGCAGGTAGCCCTGCAGAGGCTGATAAAGGAGGATCAAGAGGCTGAGA
AGCTGGAAGATGACATCAGACAAGAGAGAACCGCCTGGAAGATCGAGAGACAGAAGATTCTGAAAGGGTTCAATG
AAATGAGAGTCATCTTGGACAATGAGGAGCAGAGAGAGCTGCAAAAGCTGGAGGAAGGTGAGGTGAATGTGCTGG
ACAACCTGGCAGCAGCTACAGACCAGCTGGTCCAGCAGAGGCAGGATGCCAGCACGCTCATCTCAGATCTCCAGC
GGAGGTTGACGGGATCGTCAGTAGAGATGCTGCAGGATGTGATTGACGTCATGAAAAGGAGTGAAAGCTGGACAT
TGAAGAAGCCAAAATCTGTTTCCAAGAAACTAAAGAGTGTATTCCGAGTACCAGATCTGAGTGGGATGCTGCAAG
TTCTTAAAGAGCTGACAGATGTCCAGTACTACTGGGTGGACGTGATGCTGAATCCAGGCAGTGCCACTTCGAATG
TTGCTATTTCTGTGGATCAGAGACAAGTGAAAACTGTACGCACCTGCACATTTAAGAATTCAAATCCATGTGATT
TTTCTGCTTTTGGTGTCTTCGGCTGCCAATATTTCTCTTCGGGGAAATATTACTGGGAAGTAGATGTGTCTGGAA
AGATTGCCTGGATCCTGGGCGTACACAGTAAAATAAGTAGTCTGAATAAAAGGAAGAGCTCTGGGTTTGCTTTTG
ATCCAAGTGTAAATTATTCAAAAGTTTACTCCAGATATAGACCTCAATATGGCTACTGGGTTATAGGATTACAGA
ATACATGTGAATATAATGCTTTTGAGGACTCCTCCTCTTCTGATCCCAAGGTTTTGACTCTCTTTATGGCTGTGC
TCCCTGTCGTATTGGGGTTTTCC**TAG**ACTATGAGGCAGGCATTGTCTCATTTTTCAATGTCACAAACCACGGAGC
ACTCATCTACAAGTTCTCTGGATGTCGCTTTTCTCGACCTGCTTATCCGTATTTCAATCCTTGGAACTGCCTAGT
CCCCATGACTGTGTGCCCACCGAGCTCCTGAGTGTTCTCATTCCTTTACCCACTTCTGCATAGTAGCCCTTGTGC
TGAGACTCAGATTCTGCACCTGAGTTCATCTCTACTGAGACCATCTCTTCCTTTCTTTCCCCTTCTTTTACTTAG
AATGTCTTTGTATTCATTTGCTAGGGCTTCCATAGCAAAGCATCATAGATTGCTGATTTAAACTGTAATTGTATT
GCCGTACTGTGGGCTGGAAATCCCAAATCTAGATTCCAGCAGAGTTGGTTCTTTCTGAGGTCTGCAAGGAAGGGC
TCTGTTCCATGCCTCTCTCCTTGGCTTGTAGAAGGCATCTTGTCCCTATGACTCTTCACATTGTCTTTATGTACA
TCTCTGTGCCCAAGTTTTCCCTTTTTATTAAGACACCAGTCATACTGGCTCAGGGCCCACCGCTAATGCCTTAAT
GAAATCATTTTAACATTATATTCTCTACAAAGACCTTATTTCCAAATAAGATAATATTTGGAGGTATTGGGAATA
AAATTTGAGGAAGGCACGATTTCACTCATAACAATCTTACCCTTTCTTGCAAGAGATGCTTGTACATTATTTTCC
TAATACCTTGGTTTCACTAGTAGTAAACATTATTATTTTTTTTATATTTGCAAAGGAAACATATCTAATCCTTCC
TATAGAAAGAACAGTATTGCTGTAATTCCTTTTCTTTTCTTCCTCATTTCCTCTGCCCCTTAAAAGATTGAAGAA
AGAGAAACTTGTCAACTCATATCCACGTTATCTAGCAAAAGTCATAAGAATCTATCACTAAGTAATGTATCCTTC
AGAATGTGTTGGTTTACCAGTGACACCCCATATTCATCACAAAATTAAAGCAAGAAGTCCATAGTAATTTATTTG
CTAATAGTGGATTTTTAATGCTCAGAGTTTCTGAGGTCAAATTTTATCTTTTCACTTACAAGCTCTATGATCTTA
AATAATTTACTTAATGTATTTTGGTGTATTTTCCTCAAATTAATATTGGTGTTCAAGACTATATCTAATTCCTCT
GATCACTTTGAGAAACAAACTTTTATTAAATGTAAGGCACTTTTCTATGAATTTTAAATATAAAAATAAATATTG
TTCTGATTATTACTGAAAAGATGTCAGCCATTTCAATGTCTTGGGAAACAATTTTTTGTTTTTGTTCTGTTTTCT
TTTTGCTTCAATAAAACAATAGCTGGCTCTAAAAAAAAAA

FIGURE 1807

MDFSVKVDIEKEVTCPICLELLTEPLSLDCGHSFCQACITAKIKESVIISRGESSCPVCQTRFQPGNLRPNRHLA
NIVERVKEVKMSPQEGQKRDVCEHHGKKLQIFCKEDGKVICWVCELSQEHQGHQTFRINEVVKECQEKLQVALQR
LIKEDQEAEKLEDDIRQERTAWKIERQKILKGFNEMRVILDNEEQRELQKLEEGEVNVLDNLAAATDQLVQQRQD
ASTLISDLQRRLTGSSVEMLQDVIDVMKRSESWTLKKPKSVSKKLKSVFRVPDLSGMLQVLKELTDVQYYWVDVM
LNPGSATSNVAISVDQRQVKTVRTCTFKNSNPCDFSAFGVFGCQYFSSGKYYWEVDVSGKIAWILGVHSKISSLN
KRKSSGFAFDPSVNYSKVYSRYRPQYGYWVIGLQNTCEYNAFEDSSSSDPKVLTLFMAVLPVVLGFS

FIGURE 1808

CCGGCGCCGGGGGCGGCGGGGAACCCCAAACGCAACCGGGTCTGGAGGGATCCCCGCGCCGAGCCAGCCGCCGTC
ACCGCCTCCGCGCCGCCCCTGCGGGCTTGGCAGGCGCCCGGCGCGCCCGCACTGCGCCCGGCCGCCGGCTCCCGC
GGTCCCACCGTGAGCTCGCCGGCCCGTCGCCCGCTCGCCATGCAACCGCCGCCGGCCTCGCGCGCGTAGGCGCCC
GCCGCAGGCC**ATG**CTGCCCCTGCTCGCCGCGCTCCTGGCCGCCGCCTGCCCGCTGCCGCCCGTCCGCGGCGGGGC
CGCGGACGCGCCCGGCCTCCTCGGGGTGCCCTCCAATGCTTCAGTCAACGCGTCCTCCGCGGACGAGCCCATCGC
CCCGCGGCTGCTGGCCTCGGCGGCCCCCGGGCCCCCCGAGCGCCCGGGCCCGGAGGAGACGGCGGCGGCAGCGGC
GCCGTGCAACATCAGCGTGCAGCGGCAGATGCTGAGCTCGCTGCTCGTGCGCTGGGGCCGCCCGCGGGGCTTCCA
GTGCGACCTACTGCTCTTCTCCACCAACGCGCACGGCCGCGCTTTCTTCGCCGCCGCCTTCCACCGCGTCGGGCC
GCCGCTGCTCATCGAGCACCTGGGGCTGGCGGCGGGCGGCGCGCAGCAGGACCTGCGCCTCTGCGTGGGCTGCGG
CTGGGTGCGCGGTCGCCGCACTGGCCGCCTCCGGCCCGCCGCCGCCCCCAGCGCCGCCGCCGCCACCGCCGGGGC
GCCCACCGCGCTGCCAGCCTACCCCGCGGCCGAGCCGCCCGGGCCGCTGTGGCTGCAGGGCGAGCCGCTGCATTT
CTGCTGCCTAGACTTCAGCCTGGAGGAGCTGCAGGGCGAGCCGGGCTGGCGGCTGAACCGTAAGCCCATTGAGTC
CACGCTGGTGGCCTGCTTCATGACCCTGGTCATCGTGGTGTGGAGCGTGGCCGCCCTCATCTGGCCGGTGCCCAT
CATCGCCGGCTTCCTGCCCAACGGCATGGAACAGCGCCGGACCACCGCCAGCACCACCGCAGCCACCCCCGCCGC
AGTGCCCGCAGGGACCACCGCAGCCGCCGCCGCCGCCGCCGCTGCCGCCGCCGCCGCGGCCGTCACTTCGGGGGT
GGCGACCAAG**TGA**CCCGCTCCGCTCCTCCCTGTGTCCGTCCTGTGTCCGCGCGCGCGGGTGCCTTTCCCGCCGGG
GACTCGGCCGGTGTGCTTCGTGCTGTAGTTATCGTTAGTTCCTCTTCCCGAGATGGGGCCGCCGAGAGACCCCAG
CGCCTTTGAAAAGCAAGGTTTGTGCTGCGCTTCCAGTTCCGAAAAGCAGATGTTTAAGCCCTTGGACTGAGGGTG
GGATCGCAGCTCCGAAGACGGAGAGGAGGGAAATGGGGCCCTTTCCCCTCTATTGCATCCCCCTGCCCGACTCCT
TCCCCGCACCCACGTGCCCTAGATTCATGGCAGAAAATGACCAAATCCTGTGTATTTGTTTTATATATTTAATAA
CTGTTTTAAATGAAAGTTTTAGTAAAAAAAATACAAAACAAAAAGATTAAATTGCTATTGCTGTAGTAAGAGAAG
CTCTTTGTATCTGAACATAGTTGTATTTGAAATTTGTGGTTTTTTAATTTATTTAAAATTGGGGGGAGGGCATGG
GAAGGATTTAACACCGATATATTGTTACCGCTGAAAATGAACTTTATGAACCTTTTCCAAGTTGATCTATCCAGT
GACGTGGCCTGGTGGGCGTTTCTTCTTGTACTTATGTGGTTTTTTGGCTTTTAATACAGACATTTTCCTCCA

FIGURE 1809

MLPLLAALLAAACPLPPVRGGAADAPGLLGVPSNASVNASSADEPIAPRLLASAAPGPPERPGPEETAAAAAPCN
ISVQRQMLSSLLVRWGRPRGFQCDLLLFSTNAHGRAFFAAAFHRVGPPLLIEHLGLAAGGAQQDLRLCVGCGWVR
GRRTGRLRPAAAPSAAAATAGAPTALPAYPAAEPPGPLWLQGEPLHFCCLDFSLEELQGEPGWRLNRKPIESTLV
ACFMTLVIVVWSVAALIWPVPIIAGFLPNGMEQRRTTASTTAATPAAVPAGTTAAAAAAAAAAAAAAVTSGVATK

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FIGURE 1810

CATCTTGCTCAGGGTGGTCCTCTGGGAGTCTTTCCCCAGGGCTGATGCTGGGTGCCCTGCCCCAGTGAGATATGT
GTGGGTGGTATCTGTAAAGAGGTTTGTCTTGCAGTTGAAGGTGGGAAAAGAAGGAAGGGGGGGCATGCAATATGG
GTGAGGGTAGGGTATTACCTTTTTTTTGCAGCATTTTTCGGCCTCTTTATTTAGAACCCGGCGGACGAGGGGCCG
GGGCAGTGGTACAGACGGCTCAGGAACCATTTTAACAGACTTGTCTTCAAGTTTCAGATAAACACAGTCATAATA
AGAGAGACAGCGAAAGCGCGAAGAGACTGCAAGCTAGATGGGCATGTATGGCAGCTACAGCTTGTGAGTGACCCC
CTTCCCCAGAGTCCGCGATGAAAATAAAGTTACACTTGTCAATAACCAGATGTGGGAGATGGAGAGTGCCTTTGG
CATAACCAATAACCGAGCTAGTGCGTGGCAGAGCGGTCCACGCCTGGACATAAATAGAAAATATAAGTTAGTATA
ACTTTAAAAACTTTTTGTACAAATATACATGGTTTTTTTATTTTTTCCTTTTTTTTTTCTTTTTTCTTTTTTTTG
CACTGAGTTTCAGCAGAGATTAAACATTTTATATAAATGACTCTTAAAGCTTTACACCTTGGGACCAGTGTACCT
TCTCGTGCAGAATACATTTAGATATAAAAAGACGTTATTAATACATTGCACAGTTTTCAAAATTTAAAAACAAAA
CCGAACGCTGCTCTGCGGCAGCCGCCGCCGGTTGCTGCTACATGAACGGTCCCAGCCGAGGCCCAGCGCCCTTCC
AACGTCCGCTGCCCCGGCAGGTTCCCTCGGGGCTCTTTGGGCTCTAAATTGGCTCACCGCAGCCTCTTGCGCGGG
GTCTGCTCCACCGAGCCCACGCCAGGGGCGGCGCTTGGAGAGGGACACGGCGCGGGGACATCGCCCGACGACTTC
TCAGGCGCTGATCTCTTGCGCTTGGCGAAGAAATCTGCACCGACTCGCGGATAGAACGCGGGCACCGAGTCGACT
GTCCACTTCGGTCCAGCTGCAGGCGTCCAGGGCCCCGCAGCGGCATGTCCTGCTGGAAGTCGTAATCCCAGCGGT
TCTGGTCCTCGGCGTTCAGCTCGGCCAGGCGGGCCTGCAGCTCGCGGCTCAGCTCCTCGTGGTCCACCGGCCCGA
AGAGGCTGCGGCAGGCGCTGGTGCGCACTAGTGCTGGGAAGGTCCCACGGGCGACAGACGCTCCATCGTGGATGT
GCTGGCTGTCCGGTGGTTGACTCTTCTGCGTCGGGTCGCCTGTCT

FIGURE 1811

ILLRVVLWESFPRADAGCPAPVRYVWVVSVKRFVLQLKVGKEGRGGMQYG

FIGURE 1812

TGAAGGCTGGTTGTTCAGACTGAGCTTCCTGCCTGCCTGTACCCCGCCAACAGCTTCAGAAGAAGGTGACTGGTG
GCTGCCTGAGGAATACCAGTGGGCAAGAGAATTAGCATTTCTGGAGCATCTGCTGTCTGAGCAGCCCCTGGGTGC
GTCCACTTTCTGGGCACGTGAGGTTGGGCCTTGGCCGCCTGAGCCCTTGAGTTGGTCACTTGAACCTTGGGAATA
TTGAGATTATATTCTCCTGCCTTTTAAAAAG**ATG**GACTTCAGCAGAAATCTTTATGATATTGGGGAACAACTGGA
CAGTGAAGATCTGGCCTCCCTCAAGTTCCTGAGCCTGGACTACATTCCGCAAAGGAAGCAAGAACCCATCAAGGA
TGCCTTGATGTTATTCCAGAGACTCCAGGAAAAGAGAATGTTGGAGGAAAGCAATCTGTCCTTCCTGAAGGAGCT
GCTCTTCCGAATTAATAGACTGGATTTGCTGATTACCTACCTAAACACTAGAAAGGAGGAGATGGAAAGGGAACT
TCAGACACCAGGCAGGGCTCAAATTTCTGCCTACAGGTTCCACTTCTGCCGCATGAGCTGGGCTGAAGCAAACAG
CCAGTGCCAGACACAGTCTGTACCTTTCTGGCGGAGGGTCGATCATCTATTAATAAGGGTCATGCTCTATCAGAT
TTCAGAAGAAGTGAGCAGATCAGAATTGAGGTCTTTTAAGTTTCTTTTGCAAGAGGAAATCTCCAAATGCAAACT
GGATGATGACATGAACCTGCTGGATATTTTCATAGAGATGGAGAAGAGGGTCATCCTGGGAGAAGGAAAGTTGGA
CATCCTGAAAAGAGTCTGTGCCCAAATCAACAAGAGCCTGCTGAAGATAATCAACGACTATGAAGAATTCAGCAA
AGGGGAGGAGTTGTGTGGGGTAATGACAATCTCGGACTCTCCAAGAGAACAGGATAGTGAATCACAGACTTTGGA
CAAAGTTTACCAAATGAAAAGCAAACCTCGGGGATACTGTCTGATCATCAACAATCACAATTTTGCAAAAGCACG
GGAGAAAGTGCCCAAACTTCACAGCATTAGGGACAGGAATGGAACACACTTGGATGCAGGGGCTTTGACCACGAC
CTTTGAAGAGCTTCATTTTGAGATCAAGCCCCACGATGACTGCACAGTAGAGCAAATCTATGAGATTTTGAAAAT
CTACCAACTCATGGACCACAGTAACATGGACTGCTTCATCTGCTGTATCCTCTCCCATGGAGACAAGGGCATCAT
CTATGGCACTGATGGACAGGAGGCCCCCATCTATGAGCTGACATCTCAGTTCACTGGTTTGAAGTGCCCTTCCCT
TGCTGGAAAACCCAAAGTGTTTTTTATTCAGGCTTGTCAGGGGGATAACTACCAGAAAGGTATACCTGTTGAGAC
TGATTCAGAGGAGCAACCCTATTTAGAAATGGATTTATCATCACCTCAAACGAGATATATCCCGGATGAGGCTGA
CTTTCTGCTGGGGATGGCCACTGTGAATAACTGTGTTTCCTACCGAAACCCTGCAGAGGGAACCTGGTACATCCA
GTCACTTTGCCAGAGCCTGAGAGAGCGATGTCCTCGAGGCGATGATATTCTCACCATCCTGACTGAAGTGAACTA
TGAAGTAAGCAACAAGGATGACAAGAAAAACATGGGGAAACAGATGCCTCAGCCTACTTTCACACTAAGAAAAAA
ACTTGTCTTCCCTTCTGAT**TGA**TGGTGCTATTTTGTTTGTTTTGTTTTGTTTTGTTTTTTTGAGACAGAATCTCG
CTCTGTCGCCCAGGCTGGAGTGCAGTGGCGTGATCTCGGCTCACCGCAAGCTCCGCCTCCCGGGTTCAGGCCATT
CTCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGGGCCCGCCACCACACCTGGCTAATTTTTTAAAAATATT
TTTAGTAGAGACAGGGTTTCACTGTGTTAGCCAGGGTGGTCTTGATCTCCTGACCTCGTGATCCACCCACCTCGG
CCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCGCCTGGCCGATGGTACTATTTAGATATAACACTATGT
TTATTTACTAATTTTCTAGATTTTCTACTTTATTAATTGTTTTGCACTTTTTTATAAGAGCTAAAGTTAAATAGG
ATATTAACAACAATAACACTGTCTCCTTTCTCTTACGCTTAAGGCTTTGGGAATGTTTTTAGCTGGTGGCAATAA
ATACCAGACACGTACAAAATCCAGCTATGAATATAGAGGGCTTATGATTCAGATTGTTATCTATCAACTATAAGC
CCACTGTTAATATTCTATTAACTTTAATTCTCTTTCAAAGCTAAATTCCACACTACCACATTAAAAAAATTAGAA
AGTAGCCACGTATGGTGGCTCATGTCTATAATCCCAGCACTTTGGGAGGTTGAGGTGGGAGGATTTGCTTGAACC
CAAGAGGTCCAAGGCTGCAGTGAGCCATGTTCACACCGCTGCACTCAAGCTTGGGTGACAGAGCAAGACCCCGTC
CCCAAAAAAATTTTTTTTTTAATAAACCCAAATTTGTTTGAAAACTTTTAAAAATTCAAATGATTTTTACAAGTT
TTAAATAAGCTCTCCCCAAACTTGCTTTATGCCTTCTTATTGCTTTTATGATATATATATGCTTGGCTAACTATA
TTTGCTTTTTGCTAACAATGCTCTGGGGTCTTTTTATGCATTTGCATTTGCTCTTTCATCTCTGCTTGGATTATT
TTAAATCATTAGGAATTAAGTTATCTTTAAAATTTAAGTATCTTTTTTCCAAAACATTTTTTAATAGAATAAAAT
ATAATTTGATCTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1813

MDFSRNLYDIGEQLDSEDLASLKFLSLDYIPQRKQEPIKDALMLFQRLQEKRMLEESNLSFLKELLFRINRLDLL
ITYLNTRKEEMERELQTPGRAQISAYRFHFCRMSWAEANSQCQTQSVPFWRRVDHLLIRVMLYQISEEVSRSELR
SFKFLLQEEISKCKLDDDMNLLDIFIEMEKRVILGEGKLDILKRVCAQINKSLLKIINDYEEFSKGEELCGVMTI
SDSPREQDSESQTLDKVYQMKSKPRGYCLIINNHNFAKAREKVPKLHSIRDRNGTHLDAGALTTTFEELHFEIKP
HDDCTVEQIYEILKIYQLMDHSNMDCFICCILSHGDKGIIYGTDGQEAPIYELTSQFTGLKCPSLAGKPKVFFIQ
ACQGDNYQKGIPVETDSEEQPYLEMDLSSPQTRYIPDEADFLLGMATVNNCVSYRNPAEGTWYIQSLCQSLRERC
PRGDDILTILTEVNYEVSNKDDKKNMGKQMPQPTFTLRKKLVFPSD

FIGURE 1814

ATGCTCAGAATGGAGCAGTGGACAAAGGAGACAAAAATCCCTGCCTTCATGGAACATGTATTCTATCAGAGAAAA
AAAATTCTCAAGGAAAAAAGGCAATTTTAGCATCTGCTCTGCTCTGTTCTCTCAAAAAATAAGCAAAGGATTTCA
CAGTGTTCTAGGTACTTGGGAATCATCAGTGAACAAAACAAAGATCCTGCCCTTGTGGACCTTATGTGCCAGAGG
CTCCTGACCACCATAAAGATAGAACTGGGGCTTAACCCTCATCACTTCTGAAGCTGATGGAATGACAATTGCAGC
ATGACTTTCCCAGGGCCCTGATTTTCAGCACGGATGATTTTTTCTTCAGGGAAGATGGTGCCTATGAGTTCAATC
CTGACTTCCTGGAGGAAGCTCATGAATGGAACCAAAAAAGAGCAAGAAAAGCA**ATG**AGGAATGGCATATCCCCCA
TTATTATTGATAATACCAACCTCCACGCCTGGGAAATGAAGCCCTATGCAGTCATGGCACTTGAAAATAACTATG
AAGTTATATTCCGAGAACCTGACACTCGCTGGAAATTCAACGTTCAAGAGTTAGCAAGAAGAAACATTCATGGTG
TCTCAAGAGAAAAAATCCACCGAATGAAAGAACGGTATGAACACGATGTTACTTTTCACAGTGTGCTTCATGCAG
AAAAGCCAAGCAGAATGAACAGAAACCAGGACAGGAATAATGCATTGCCTTCCAACAATGCCAGATACTGGAATT
CCTACACAGAGTTTCCAAACCGGAGGGCCCACGGTGGATTTACAAATGAGAGCTCCTATCACAGAAGGGGCGGTT
GTCACCATGGATAT**TAG**AGGCCTATCTTACAGCCAGGCAGAATTTTCCTAAGTCAGTTTCTACTTCAGTTTTTGT
TATTTTTTGTTGCATTTTAGTCAGAGCTCCAATTCCAGTGTAAATAGCTGAACTCAAAAGTTTCTGAGCAAAGTC
ATTATATTCACTTTCTTCACCAAAATTTGTTAAAGTGCTTCTATATGCATGGTCTGATGCTGGGAATTCTGCAGA
TTTGAGTAAACAGTCTCTTTCTCTAGGGTAAGAATTTGAAACCAAAACTTGAGAACACACCCAAGAATATATTTA
CATAGGTTCATAGATGAAATAAAGTGTTTATATTATATATAAGCTTCAGTACCATTTGCTCTGAAGTGATCTATT
TATTTTTTCAGGAAATTCATCTCCATCGGTAAAGTTGGGAAGGTGGAGAGAAGTGGTGGGGGGGCATTGCTACTT
ATCAAAGTGCCATTGCTACTTTGATAATCTATGTATCTAAAAATGTGAGATGTGCGACTCTTATGATACTGATTT
TCCTTTAATGTTAATATGCCAGAAAGCATACATCTAAGGGAACATTGTCCTTCAAAGTAGACACTTTGGGAAGTT
ATTTCTTTATTTTAATGATGTATCATTGTTAAAAATGCTGTCAAATCCTTAATAGCTACAGGAGCTACTGAGGGA
AATCAGTGTCATTATTTAAAGTCACGCCTTGTGTTTTTACTACTTTATTCAGCAGGATTAAACCTGAATAACTTT
TGGCTGTTGTGCTAATAGTGTAAATAAAATAAGCCTGCCTTCATAAAACACTAACTTTTAAAAGGAATAAACGAC
TTCTAAAATTATGCCTATTAACATGTGTAATTAGTCGGCAGCTCAAATGTTTGGGAGTGCAAGAAATTAGGCACC
CCAGGATATAGGTCATACAGGGATATATAAAAGCCATGCTCATTACAAAATGAGCAGTTGATGTTTTATGTGGCA
TTAAGACAATCAAGTCCTCACAACTCTGGAATGTCTTCTTATACTGATGCTGAATTTATGAATCCAAATTAATTT
CCAACAGGTTGGAATCAGATTTAATGTGAGATCATGATAGACAAGACCACAGAGGACGTATGCTCTATTTCTTGT
TGGCCAACAGCTTCTTTCTAATGTTCTGTGAAAAATTATTTTAAGTGTCTTATATAATGGTGCTTTTATGGTTAT
TAAAAATTGTAAATGGTATCACATTTATATGGATTTGTCATTGGATCTTTTTTTGGTTCAACAATAAAAAAATTT
AATTACC

FIGURE 1815

MRNGISPIIIDNTNLHAWEMKPYAVMALENNYEVIFREPDTRWKFNVQELARRNIHGVSREKIHRMKERYEHDVT
FHSVLHAEKPSRMNRNQDRNNALPSNNARYWNSYTEFPNRRAHGGFTNESSYHRRGGCHHGY

FIGURE 1816

ATTCTGAGCATGGCGTGCTACTATAATAGGTCTCAGCTTATGGAAAGAGTTTTTTCCCAGATTA**ATG**ACAGAATT
AATGGAACTACAGGAATTCTATGACCCAGATACAGTGGAACTTATGACCTGGATAAAAAGGCAAGCTCCAGTTGC
AGCTGTGTTTGCAGGGAGTCCACAGTTAATGGGTGCGATTAAATTATGCACTGGATGGATGGTGACAAGTTTGCC
TCTTTACAATGATGATGATCTTCTCAAGAGAAATGAAAATATCTACCAAATCTATTCAAAGCGATCTGCTGAGGA
TATTTATAAAATACTGACATCTTACAAAGCTAATTACCTAATTGTAGAGGATGCTATCTGCAATGAGGTGGGACC
CATGAGAGGCTGTAGGGTTAAAGATTTATTAGACATTGCAAATGGCCACATGGTTTGTGAAGAAGGTGACAAGCT
AACCTACTCAAAATATGGGCGATTTTGTCATGAGGTCAAAATTAACTATTCTCCATATGTGAATTATTTCACTAG
AGTATACTGGAACAGATCCTACTTTGTATATAAAATCAACACTGTGATATCCTTCCAGTCT**TGA**AAAATAACAGA
GCCTTCATTTCAAAGACTACCTGAAGTAAAATGCAGTTTTCTTCTACCTACTCGGTGTCTTTTGCAGATCAGAGT
ATGGACATTTGAAATATTGCTGCTTCTTTCCCCCTTCTGCTGTTAACTGGATCCAGAGTTCTGTGGGAAATAGAA
GATCAAGCATTACTGTCCTTTGATTAAATGTGATATCTACCACTCTGCAATATTCCAGACAGGTGTCTTCCTTAC
CGTTACATGGTCTTTAACACTTTTACTGATTGCAATATTTTCCCCATAAAATCTTCATTCTATTATAATATTGAT
CTTGAATTTGAATATGTGCAAGGTCAGATACATTTCTCAAACATAACATTTAATAAATAATGTGATATAATTATT
TAATAGAAAGAATAATTCCGACCTTCAAGCAAGTTTCTGAAGGTATTTTATGATGTATAACAACTGAAGTTTTAC
AATAAAAACTAATTTAAATGTTAGCTGAAGATATGTGGCATTTAAATTAAAATGGAAATTATATAAAGGAAAGTG
ATTTTTAAGGATATACATAAAGATATATTTAGAATTTTCATGATACTGTTCTCCTCATCTACTGCTTATGTTAAG
TGAGAACTTTCTTAGTAATACATAATGCATGATGTTACTGCATTTTCTAAATGACTAGTAAGTGATTAGTTTTTT
CACTTATGCCTATTAATTTGATACCAATTTAATCATGATAAAACAATAACCGTTAACATATATTTTGTTAAATGG
ACATTTAAAAGAATGTTGTTCAGGTTTTTTTTTTAAATACTGATATGGGGCATACAATCTATTCACATGTTTTCT
ACTGAAGTACTAAGTAAAAAAATTAAATCATTATCAGAATAAAAATATGTGTTCTAAAATTAGCAACAATTTCTG
GGGATACATGCAGATGTTGTTAAACGTACCTCTGCATACAGATATATTATAAAACACAAGCAATGTTATTTATGA
AACTGTGATGCAGTCTTCAACATCAAGAAAAAATGACAACTATAATAAAATTTACAACACAGTTTCACAGTCTAA
ATGCTATGTTCCTTTAAGTATTTTCATATTTTTAATCATTTATTAAGAGAAAATTGTGAAAAGTTAATTTGGCCT
TATAGAGAGATTCAGGATAGATGTAGCCTATAGATGTGTCATTTTAATAAGTTGGGATACATGTTTAGTTTTTCC
TTATATTCCTGTTCAGTGAACAGATTTTCATAATTCTCACTTGTTAAAGTGCTGCAAAAATTGCATTTTCAGTAC
TCTAAATTACTACATTAGAAGAGAGCATTTCTCCATTGTCTTTATTTTCTGTTATATATGTGTTGTAAAAGTACA
CTACATTAGAAGGGAGCTTTTCCGTTGTCTTTATTTTCTGTTATACATGTGTTGTTAAAGTACATGCATTCTTAG
ACTAACTCTCAGATGCTTTGCTCTTTTGGAGCTGAAGAATTGTTTGATGGTGATGTCATATATCTGATAGATTAG
TTTCAGTGGTTCTCATTTCACTTTTATACGTAATTTCTTAACTATATTAAGATAGTTGCAGGCAGTGTACCTCAG
GTTGACTCTGTACATCTGAATAGTGAGTCACTAGTATTTTGCTTCAAGCCTTCTGAAAATATAACCATAGTTACC
TAAGCACACAGTGAATAGTCACATGGTAGTACTTGTGATTAGAGCATGTAAAACAATGTAATTGAAAAGTCAGCT
TCCATATTTTGTAGGGGAAATAGAACACCCTACTTTTTATCTAGTGTGAAATATTTAATCGAATTTTTGTTGATT
TATATTATGTTACCTGTGCTGAATTAGGTTTGGTACTTGTGTTTTGTTTGACATATTAGTAAGTTGCTTTTGCTT
CTTTCTGTCAACTTATTTTTTAAATAAAATTGATCTGGAAAAATTGTTAATGGGATGTTTTAAATAATGAATTTT
TCATCCAGCATCAGTTGAAAAGGAAAAGAAAGCTTCATTATGGAAATGACAATATTGAATATGACAGATAAGTTT
ATTTGCTTCTGTTTTAACTGCAGTTAATAGTACTAGACAACTTTAAGTGGAAAGCATTTAGTTTATTTCTTCACT
TATTTGTAGAGTGAACAAATGATTCACAATTCTACAAGTAATTCCACTTAGGTAACTTACAGTTGTTAGGTTTGA
CAATAAAGATCTACTATGAGAGGAGAAGAATTTATGGGTTTTGGGTGGAAGGAATTTCTCAAAGAAATAAAAAAT
GTTCTTTGCCCTTGATACTGCAAACCCACTGATACAAGTGCCTTGAATTTATTA

FIGURE 1817

MTELMELQEFYDPDTVELMTWIKRQAPVAAVFAGSPQLMGAIKLCTGWMVTSLPLYNDDDLLKRNENIYQIYSKR
SAEDIYKILTSYKANYLIVEDAICNEVGPMRGCRVKDLLDIANGHMVCEEGDKLTYSKYGRFCHEVKINYSPYVN
YFTRVYWNRSYFVYKINTVISFQS

FIGURE 1818

AAGCTAAATAAATATAGCTTTATTCATCTTTCAGAGATTGCCATTTAGCCTAGAAAATTACATCAAAAGATGAAC
TGATTTTTGCTTGAAAAAGTCAACCATGTTTAATTGCTCACACAATTTTAATTACAACAGATGTAATTTCTAATA
TATACCATTCGATCACACACCATTTTTATGTTCTGGAGTGAGACCTGGGAGTATTTTGCTTAAGACTTTCTCATT
CTCTAAAACTAGCTTTGGCAGTTAACAATGTGGAGAATTCAGCACAAAAAGCACCCTAGCCCAGCCTTTTTATTT
TATTTTTTTAAATCTCTATTTAACCCTTCAAAGTTTCCTTTGCAGCCATATGCATTTCTAGGTGGCTCTACCTGT
AGAAGGCTGCACTTTCCAAGCGGCGAGGGACTTTAATTCTCACTTXCCACCACTCC

FIGURE 1819

GGCACGAGGGAGGTCTGCATGAAGGGGATCCCCTACATCGCAGCCTACCAGAAGGAACTGGCTCATTCCCAGCCG
GCGGTGCAGCCCCGGCTCAAGCTGCTCCTGATGGGGCATAAGGCTGCAGGAAAGACTTTGCTGCGCCACTGCCTC
ACCGAGGAGAGAGTGGAGGGATGCCCAGGAGGAGGGGACAAGGAGAAGTGCTACCCACCGTCACCTCCCCCTGTG
AGCAAGGGCATCGAGGTGACCAGCTGGACGGCCGATGCCTCCCGGGGCCTGCGGTTCATCGTGTATGACTTAGCT
GGGGATGAAAGTTATGAGGTGATCCAGCCCTTCTTCCTGTCCCCAGGGGCCCTATACGTGCTGGTGGTCAACTTG
GCCACCTATGAGCCTCGCCACTTTCCTACCACCGTGGGCTCCTTCTTGCATCGGGTCGGGGCGAGAGTGCCCCAC
GCGGTGGTGTGCATCGTGGGCACCCACGCAGACCTGTGCGGAGAGCGTGAGCTGGAGGAGAAATGTCTGGACATT
CACCGCCAGATCGCCCTGCAGGAGAAGCACGACGCGGAGGGACTGAGCCGCTTGGCCAAGGTGGTGGACGAGGCA
CTGGCCCGGGACTTCGAGCTGCGCTCTGCCAGCCCCCACGCAGCCTACTATGGCGTTTCGGACAAGAACCTTCGA
CGGCGCAAGGCCCATTTTCAATACCTGCTCAACCACCGGCTGCAGATCCTCTCCCCCGTGTTGCCTGTTAGCTGC
AGGGACCCGCGCCACTTACGACGCCTTCGGGACAAGTTGCTGTCAGTTGCTGAGCACCGAGAGATCTTCCCCAAC
TTACACAGAGTACTGCCTCGATCCTGGCAGGTGCTGGAGGAACTGCATTTCCAGCCACCTCAGGCCCAGCGACTG
TGGCTAAGCTGGTGGGACTCGGCGCGCTTGGGCCTGCAGGCGGGTCTGACCGAGGACCGACTGCAGAGTGCCCTC
TCCTACCTGCATGAGAGCGGCAAGCTACTCTACTTTGAGGACAGTCCGGCTCTCAAGGAGCACGTCTTCCACAAC
CTCACCCGCCTCATCGACATCCTCAATGTCTTCTTCCAGAGGGATCCCTCTTTGCTGCTGCATAAGCTGCTCCTA
GGGACCAGTGGAGAGGGCAAGGCGGAGGGGGAAAGCTCCCCGCCCATGGCGCGGTCCACCCCCAGCCAGGAACTG
CTCCGGGCCACCCAGCTCCATCAGTATGTGGAGGGCTTTCTGTTGCATGGGCTCTTGCCAGCTCATGTCATTCGG
TTGCTGCTTAAGCCTCATGTCCAGGCCCAGCAGGACTTGCAGCTGTTGCTGGAGCTGCTGGAGAAGATGGGACTC
TGTTACTGCCTCAATAAACCCAAGGGCAAGCCTTTGAATGGGTCCACAGCTTGGTACAAGTTCCCATGCTATGTG
CAGAACGAGGTGCCCCATGCAGAAGCCTGGATTAATGGGACCAACCTAGCTGGGCAGTCTTTTGTGGCTGAGCAG
TTGCAGATTGAATATAGCTTTCCTTTTACTTTTCCACCTGGGTTGTTTGCACGCTACAGTGTCCAGATCAACAGC
CATGTGGTGCACAGGTCGGATGGTAAATTTCAGATCTTTGCCTATAGAGGGAAAGTTCCTGTGGTTGTGAGTTAC
AGACCTGCCAGGGGAGTCCTGCAGCCAGACACCCTGTCCATTGCTAGCCATGCATCATTACCAAATATATGGACC
GCATGGCAAGCCATAACCCCCTTGGTGGAGGAACTGAATGTCCTACTTCAGGAATGGCCTGGACTGCACTACACC
GTGCACATTCTCTGTTCTAAGTGCCTTAAGAGAGGATCGCCCAATCCACATGCTTTTCCAGGGGAGTTGCTGAGT
CAGCCCAGACCGGAAGGAGTGGCAGAGATCATTTGCCCCAAGAACGGCAGCGAGCGAGTAAATGTTGCCTTGGTT
TACCCACCCACGCCGACTGTGATCAGCCCCTGTTCCAAGAAGAATGTTGGTGAAAAGCACAGAAACCAGTGACGT
TTGTGGCTGTGGAATTTCCATGGAGAAAAGAGAGCATCTGAACACCTGGACCATCTTTTGCACCTGGCAGACCCT
CTGCACTCACCCCAGCGTGTTCTGTGAACTTGAGTGACAACGCGTGCTTGCAGGGTGCTTTTTGGATGACTGGGG
AAGAGGTGGGGAGGGGGTGGTGGGGGGAAGCATGGACGAGAACATGGAGCAAATGTTTTACAACCTGAACCTCAG
AACTGTGATCCTCCAAGGAGCGCGCTACTTGAAGAAAAAAAAAAAAAAAAAAAAA

FIGURE 1820

ATGCGGGAGATCGTGCACATCCAGGCCGGCCAGTGCGGCAACCAGATCGGGGCCAAGTTCTGGGAAGTCATCAGT
GATGAGCATGGCATCGACCCCAGCGGCAACTACGTGGGCGACTCGGACTTGCAGCTGGAGCGGATCAGCGTCTAC
TACAACGAGGCCTCTTCTCACAAGTACGTGCCTCGAGCCATTCTGGTGGACCTGGAACCCGGAACCATGGACAGT
GTCCGCTCAGGGGCCTTTGGACATCTCTTCAGGCCTGACAATTTCATCTTTGGTCAGAGTGGGGCCGGCAACAAC
TGGGCCAAGGGTCACTACACGGAGGGGGCGGAGCTGGTGGATTCGGTCCTGGATGTGGTGCGGAAGGAGTGTGAA
AACTGCGACTGCCTGCAGGGCTTCCAGCTGACCCACTCGCTGGGGGGGGGGACGGGCTCCGGCATGGGCACGTTG
CTCATCAGCAAGGTGCGTGAGGAGTATCCCGACCGCATCATGAACACCTTCAGCGTCGTGCCCTCACCCAAGGTG
TCAGACACGGTGGTGGAACCCTACAACGCCACGCTGTCCATCCACCAGCTGGTGGAAAACACGGATGAAACCTAC
TGCATCGACAACGAGGCGCTCTACGACATCTGCTTCCGCACCCTCAAGCTGGCCACGCCCACCTACGGGGACCTC
AACCACCTGGTATCGGCCACCATGAGCGGAGTCACCACCTCCTTGCGCTTCCCGGGCCAGCTCAACGCTGACCTG
CGCAAGCTGGCCGTCAACATGGTGCCCTTCCCGCGCCTGCACTTCTTCATGCCCGGCTTCGCCCCCCTCACCAGG
CGGGGCAGCCAGCAGTACCGGGCCCTGACCGTGCCCGAGCTCACCCAGCAGATGTTCGATGCCAAGAACATGATG
GCCGCCTGCGACCCGCGCCACGGCCGCTACCTGACGGTGGCCACCGTGTTCCGGGGCCGCATGTCCATGAAGGAG
GTGGACGAGCAGATGCTGGCCATCCAGAGCAAGAACAGCAGCTACTTCGTGGAGTGGATCCCCAACAACGTGAAG
GTGGCCGTGTGTGACATCCCGCCCCGCGGCCTCAAGATGTCCTCCACCTTCATCGGGAACAGCACGGCCATCCAG
GAGCTGTTCAAGCGCATCTCCGAGCAGTTCACGGCCATGTTCCGGCGCAAGGCCTTCCTGCACTGGTACACGGGC
GAGGGCATGGACGAGATGGAGTTCACCGAGGCCGAGAGCAACATGAACGACCTGGTGTCCGAGTACCAGCAGTAC
CAGGACGCCACGGCCGAGGAAGAGGGCGAGATGTACGAAGACGACGAGGAGGAGTCGGAGGCCCAGGGCCCCAAG
TGAAACTGCTCGCAGCTGGAGTGAGAGGCAGGTGGCGGCCGGGGCCGAAGCCAGCAGTGTCTAAACCCCCGGAGC
CATCTTGCTGCCGACACCCTGCTTTCCCCATCGCCCTAGGGCTCCCTTGCCGCCCTCCTGCAGTATTTATGGCCT
CGTCCTCCCCCACCTAGGCCACGTGTGAGCTGCTCCTGTCTCTGTCTTATTGCAGCTCCAGGCCTGACGTTTTAC
GGTTTTGTTTTTTACTGGTTTGTGTTTATATTTTCGGGGATACTTAATAAATCTATTGCTGTCAGATACCCTT

FIGURE 1821

MREIVHIQAGQCGNQIGAKFWEVISDEHGIDPSGNYVGDSDLQLERISVYYNEASSHKYVPRAILVDLEPGTMDS
VRSGAFGHLFRPDNFIFGQSGAGNNWAKGHYTEGAELVDSVLDVVRKECENCDCLQGFQLTHSLGGGTGSGMGTL
LISKVREEYPDRIMNTFSVVPSPKVSDTVVEPYNATLSIHQLVENTDETYCIDNEALYDICFRTLKLATPTYGDL
NHLVSATMSGVTTSLRFPGQLNADLRKLAVNMVPFPRLHFFMPGFAPLTRRGSQQYRALTVPELTQQMFDAKNMM
AACDPRHGRYLTVATVFRGRMSMKEVDEQMLAIQSKNSSYFVEWIPNNVKVAVCDIPPRGLKMSSTFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEEGEMYEDDEEESEAQGPK

FIGURE 1822

GGCACGAGGCGAGGATCCGCTCGGGAGCCTCCCCTGGCCAGGAGCAGGGGATTAGTCTGCCCCGCGACCGGCCCC
AGCCACGACGCGGACATCGCCCCCTCTGTCTGGGCCGCTGTCACTCACGCGCCAAAGGGCCACGGAGAAAGAAGG
GGCGGGCCGGGGCGGGCCGGGCGAGCGGAGGCGGGGACTTGCGCCGTCCTGAGGCTGCCTCCTAGGGTCCGGCCG
GCGCTGGAGCTGCGGATTTAGATTGTCACTGCCACCTCGGTCGGTGCTTACTTCGCTGCCAGCTGGTCGTCGCC**A**
TGAACCCGGACCTGCGCAGGGAGCGGGATTCCGCCAGCTTCAACCCGGAGCTGCTTACACACATCCTGGACGGCA
GCCCCGAGAAAACCCGGCGCCGCCGAGAGATCGAGAACATGATCCTGAACGACCCAGACTTCCAGCATGAGGACT
TGAACTTCCTCACTCGCAGCCAGCGTTATGAGGTGGCTGTCAGGAAAAGTGCCATCATGGTGAAGAAGATGAGGG
AGTTTGGCATCGCTGACCCTGATGAAATTATGTGGTTTAAAAATTTTGTGCACCGAGGGCGGCCTGAGCCTCTGG
ATCTTCACTTGGGCATGTTCCTGCCCACCTTGCTTCACCAGGCAACTGCGGAGCAGCAGGAGCGCTTCTTCATGC
CCGCCTGGAACTTGGAGATCATTGGCACTTATGCCCAGACAGAGATGGGTCATGGAACTCACCTTCGAGGCTTGG
AAACCACAGCCACGTATGACCCTGAAACCCAGGAGTTCATTCTCAACAGTCCTACTGTGACCTCCATTAAATGGT
GGCCTGGTGGGCTTGGAAAGACTTCAAATCATGCAATAGTTCTTGCCCAGCTCATCACTAAGGGGAAATGCTATG
GATTACATGCCTTTATCGTACCTATTCGTGAAATCGGGACCCATAAGCCTTTGCCAGGAATTACCGTTGGTGACA
TCGGCCCCAAATTTGGTTATGATGAGATAGACAATGGCTACCTCAAAATGGACAACCATCGTATTCCCAGAGAAA
ACATGCTGATGAAGTATGCCCAGGTGAAGCCTGATGGCACATACGTGAAACCGCTGAGTAACAAGCTGACTTACG
GGACCATGGTGTTTGTCAGGTCCTTCCTTGTGGGAGAAGCTGCTCGGGCTCTGTCTAAGGCGTGCACCATTGCCA
TCCGATACAGCGCTGTGAGGCACCAGTCTGAAATGAAGCCAGGTGAACCAGAACCACAGATTTTGGATTTTCAAA
CCCAGCAGTATAAACTCTTTCCACTCCTGGCCACTGCCTATGCCTTCCAGTTTGTGGGCGCATACATGAAGGAGA
CCTATCACCGGATTAACGAAGGCATTGGTCAAGGGGACCTGAGTGAACTGCCTGAGCTTCATGCCCTCACCGCTG
GACTGAAGGCTTTCACCTCCTGGACTGCAAACACTGGCATTGAAGCATGTCGGATGGCTTGTGGTGGGCATGGCT
ATTCTCATTGCAGTGGTCTTCCAAATATTTATGTCAATTTCACCCCAAGCTGTACCTTTGAGGGAGAAAACACTG
TCATGATGCTCCAGACGGCTAGGTTCCTGATGAAAAGTTATGATCAGGTGCACTCAGGAAAGTTGGTGTGTGGCA
TGGTGTCCTATTTGAACGACCTGCCCAGTCAGCGCATCCAGCCACAGCAGGTAGCAGTCTGGCCAACCATGGTGG
ATATCAACAGCCCCGAAAGCCTAACCGAAGCATATAAACTCCGTGCAGCCAGATTAGTAGAAATTGCTGCAAAAA
ACCTTCAAAAAGAAGTGATTCACAGAAAAAGCAAGGAGGTAGCTTGGAACCTAACTTCTGTTGACCTTGTTCGAG
CAAGTGAGGCACATTGCCACTATGTGGTAGTTAAGCTCTTTTCAGAAAAACTCCTCAAAATTCAAGATAAAGCCA
TTCAAGCTGTCTTAAGGAGTTTATGTCTGCTGTATTCTCTGTATGGAATCAGTCAGAACGCGGGGGATTTCCTTC
AGGGGAGCATCATGACAGAGCCTCAGATTACACAAGTAAACCAGCGTGTAAAGGAGTTACTCACTCTGATTCGCT
CAGATGCTGTTGCTTTGGTTGATGCATTTGATTTTCAGGATGTGACACTTGGCTCTGTGCTTGGCCGCTATGATG
GGAATGTGTATGAAAACTTGTTTGAGTGGGCTAAGAACTCCCCACTGAACAAAGCAGAGGTCCACGAATCTTACA
AGCACCTGAAGTCACTGCAGTCCAAGCTC**TGA**AGTGTCACAAGGACAAGTTTAATCTGCTTCAGAAAGCGCCTGT
GTGCAACTCAAATTTTGTGGAATCTTTTTCGAATTCAAATAGCTATAGAGCAAATGATAAATTGACCCCTTTTTA
TAAATGGAGGGAAAAAATGAACAGATTTCAGAGATTAAATGAAAAAAAGCAGATGTTTTAAGTGCAATTAACACT
GAAAGAGACCTGTTAAACCATTCAGAAAAAGCTTAAGAAATGCGATATGACTTCCTTTTGTAATGCTGCTGATCC
CAGTAGACTATGACTTTTGATAATTAGCAGAATTTAACTACTGAGTAGTTGATTATTTTCACATTTTAATTGCTA
ATCACTGGCTATATAAGTGTTTTTAAGCAAAGGTATTTTTGAAGTGGTGTAGAACCCTTCCAAGCTTTCCTGCTC
AGTGTTCTACCAGACTTACCCTGGGGCCTGGCTTAAAAGCAGGATTGAAGAAAAGGGACTGGGGGAAGGAAACTT
ATTGGAAAACTTGATGCGAATGAGTTTCTGCTTGGCACAGTCTCTGCCTGCTTGCTCTCCTTTGCTGATGGATTG
CATTTATCAAACTATTCATGCTAGCATTTTTCCAACGAGGGAACTTATTCCGCACGGGCCTACTGTAGGACCATT
GTCTCGTGTAATTAGGAATTTTCCATTTGAAGGATTGCTAAATTGTCACAGTAGTAGGAAGTATAGGGAAACCTC
TCAGCTGTGGCACTGTTGTAGCTTTGGAGTGCAGAGTGTAACTCTGGGACAATCAGATTTCACATATTCTGTCAT
CTTGGCATAAGCCATTAAAAGCTTGGAGATTACTGTATTTGGCATTAAAAAAAAATGTCACTTAGGTCAGCACTC
CCAGACGTAGCACAGAAAAACCCTTTGACACAAACCATGTGTTCTGATTTTTGGTTCAGAAAATATTGAAACTGT
GAGTTGTTTTTTTTTTAACAACTGGGAAAAAACAAAAACAAAAAACTATAGTTAGAAAAATGGAAGTTCCATAGG
TTCTATTTCTTACTCTATGTATGGCTTTGTTTTCAGTCTATTTCTAGGAGCTTTCTCTGAATCGCTAATTGTCCT
TTCAGTTGAAATCTAATTTATACAATCATTCTATACTTAAAGGTTAAATACATCTTAATTAATTTTTTCTTAAAA
AAAAAAAAAAAAAAAAAAAAAA

FIGURE 1823

MNPDLRRERDSASFNPELLTHILDGSPEKTRRRREIENMILNDPDFQHEDLNFLTRSQRYEVAVRKSAIMVKKMR
EFGIADPDEIMWFKNFVHRGRPEPLDLHLGMFLPTLLHQATAEQQERFFMPAWNLEIIGTYAQTEMGHGTHLRGL
ETTATYDPETQEFILNSPTVTSIKWWPGGLGKTSNHAIVLAQLITKGKCYGLHAFIVPIREIGTHKPLPGITVGD
IGPKFGYDEIDNGYLKMDNHRIPRENMLMKYAQVKPDGTYVKPLSNKLTYGTMVFVRSFLVGEAARALSKACTIA
IRYSAVRHQSEMKPGEPEPQILDFQTQQYKLFPLLATAYAFQFVGAYMKETYHRINEGIGQGDLSELPELHALTA
GLKAFTSWTANTGIEACRMACGGHGYSHCSGLPNIYVNFTPSCTFEGENTVMMLQTARFLMKSYDQVHSGKLVCG
MVSYLNDLPSQRIQPQQVAVWPTMVDINSPESLTEAYKLRAARLVEIAAKNLQKEVIHRKSKEVAWNLTSVDLVR
ASEAHCHYVVVKLFSEKLLKIQDKAIQAVLRSLCLLYSLYGISQNAGDFLQGSIMTEPQITQVNQRVKELLTLIR
SDAVALVDAFDFQDVTLGSVLGRYDGNVYENLFEWAKNSPLNKAEVHESYKHLKSLQSKL

FIGURE 1824

TTCATATTAAAAAAATAGCTGGTAAATCTTTCTAGGTAGTAACTTATCCAAACAATACTTTGAGTATCATATTTT
GTGAATGACTTGCTTAAACTGGGAAACTGAATATTCTTTTTAAATCATATAATTCCTGTATTAAATGTGAAACAC
ACAGTCTCCAAAGTCACCTGATTCTCTGTGGAAAATGAAAGGCATTGAAGGAAACCAGATACATTAATACTTAGT
TTTGGTTGAAAGTGCAACATTACTGTACTTAGAAGGGGCTTGGTTTATTTTTAGATATTTAAGCTATCATTAATT
TTAGACCAATGGCTAATAATAAGAGAGATTTTTGGTTGCTCATTTATGGAGAGACAAAGAACAGCATGGCATAAA
CAAACATCCCAGAAATAAATGAAAAGTTTTAAGTGATAAAATTGTGTTTTCTATGAACCAGTGTTGTACATGAAC
CAACATTGTGTTTCTTAGCTCTGACCTGTACAGTGAGGTACCTGTCAGGACCCCTAGTCTTGGCACTGGAAATGA
CAAAGTTCTCCTATTACTAAATTCTCATGCCTTCCTTTTCTGACTTAGTAGATTGAAATTGGTAGGTACTAATGA
TTTATGTTTGATAAACTTAAGTTCTGCTGATATCCTGTTACTGGTAATTCTGGTACCAAAATTTCAAACGGTTTG
ATTATTAGTAGCATTTTGAGTACCTAGGTGCATATAATACAGTTAGCAGACCCTTACAGAGTCAAAAGAGATTTT
GGAATCTGGTGATACTGTTGTTTATTACACTAGCCTATTACATTTTCTTTCTTTATAATAACTGTTTATGTGAGT
TTCATTGAAAATCGTGGCTCTATTGCTTTATTCATGGTTTCCACAACTCTTTTTGTAACACCTTAATTTTCTCTC
TTAGGTATTTTCCTGTTAAATAAGATATCAAAAGCATCAATCACAAGACAGAGAAAACGTATTAGGAAAAACTTG
TATTAGTATATTCTAAACTGAAATGGAAAAACTCATTATTCATATTTTAATAAATAAAACTCCCAAATGATCTTG
CTAAATTATCCCACTATTTAGAAGTAGAAAATAAGAGAAGAGTGCTTTCAAGGAAATTTGTCATATTCTCCCTTC
TATCTAGAAGTTGACAATGAATTGCAATAAAACTAAGAAATAACTGAATGCTGAAAAATACCATGAATTAATGTT
ATGGCTTCTTTATTTTTGTATATCCATTCCCACAAAATTGAATTTAAGATTATTAATGAAAATTCTATATTAAGT
AATAATGCTTGTATTAGTAATGGGCAAAGAAGTCTTTCTTTGTTACATTAACCGTTAGTAAAAGATGTACTTTGA
CATTTCTGATGTAAAACCTATATGTAAATATTGTAATTTAAATATGATTGGACAGCTGTTAAGTTTTGGGGAGGG
AAGCAGATGCCAGCGTTCTCTGCTGAAAAGACAAGATGGCGCTTGACGGACCACAGCAGATGGAGCTGGAGGAGG
AAAAGGCAGGCAGTGGACTCTGCCAGTATTATCTGTCCAAGATTGAAGAACTCCAGGGTCAACTGCAATATAAAT
TGGATGGGGGAAAGCCACAAGGAACAGTTCTGAACTCCAGGTGCATTTGCAGCTGATTTTGAATGATAAGACCCA
AAACCTCTGGAGGCGGCAGGTGCACGGGAATGAACTAAATGTTAAAGTGTGCCTATTACAGGAGGAGCTACAGCT
GCTGCAGGAATAGGACTCCTGTGTCAGGGAAGTAGTCCAGGCC**ATG**GGTAAGAAGAAAGTGTTGGTCAAGGTGCA
TCTCAAGGACAAGTTTGTCATAGATGTGGACAAAAATATCAGCATCAGTGATGTGACACCCAGTTCCTTGGTGGT
TCTAAGAAATGACAGCTACACTTTGCACAAGATCCTACCCAACAAGGTGGACTCATTGGTGTCACTGATGATGGT
GAAGAAAGTACCAGATTCAGCTTATGAAATGATTGGTAGACTGGATAGGCAGATCAAGAAGATCAAAGAAGTGAT
CGACCTGCCTGCTAAGCATCCCGAGCTCTTCAAAGCACTGGGCATTGCACAGCCCAAGGGAATGCTGCTTGGAAG
AGACTGTTGGCCTGGGCTCTGGCTCATCATAGGGACTGTGTACCTTTATTCATGTCTCTGGCTC**TGA**ATTGGTAC
AGAAATTCATTGGGGAATTTCTGTGATGGCAGAGAAAATGCTCATCTGTCATCTTCATGGATGAAATTGACTCTT
TTGGCTCCTCAGAGCTGGAGGGGGATGCTGGAGGGAACAGTGAAGTGCAGCAGATGATGCTTCGAGGGTGGCTTT
GAGGCCACCAAGAGTATCACGGTTTATCACGGCTGCTAATACGATTGATATCCTGGACTCGGCACTGCTTTGCCC
AGGGCACATTGACAGAAAAATTGAATTCCCAACCTGCAATGAGTAGGCCTGGCTGGTCACTTTGAAGATTCATTC
TCAGAAATGAACCTGACCCAGGGGATCAACCTGAGAAAAATTGCTGAGCTTATGCCAGGAGCATCAGGCTGAAGT
GAAGGGCATGTGCACAGAAACCGGCATGTATGCCCTGAGTAGCGAGTCCATGTCACTCAGAAGGACTTTGAGGTA
GTCCAAAGTCCTATCTCATGCCAAAGGACAGTGAGGAAAAACATGTCCATCAAGAAACTATGGAATTGAGGGCAC
ATCCTTTGTGTGTATCCCTACAATAAAACTCAGTGGGACAAGCAAAAAAAAAAAAAAAAA

FIGURE 1825

MGKKKVLVKVHLKDKFVIDVDKNISISDVTPSSLVVLRNDSYTLHKILPNKVDSLVSLMMVKKVPDSAYEMIGRL
DRQIKKIKEVIDLPAKHPELFKALGIAQPKGMLLGRDCWPGLWLIIGTVYLYSCLWL

FIGURE 1826

GGGGCCGGAAGCCACGGCTCACTTCTGCTTGCACTTAGGCGACCTCGGGAGCTCGGACTCCTACGCAGTCACCGG
GAAGGGCCGCCGCCCCGCCCGCGGCTGCTGGCCCGGGTGACACTTCCGCCTGCTATAAGAGCAGCGGCCCTCGGT
GCCTCCTTCCTGACCTCGCACCCAGCTCGGAGCCCGGAGCGTGCCTCGGCGGCCTGTCGGTTTTCACCATGGAGC
AGCTGAGCTCAGCAAACACCCGCTTCGCCTTGGACCTGTTCCTGGCGTTGAGTGAGAACAATCCGGCTGGAAACA
TCTTCATCTCTCCCTTCAGCATTTCATCTGCTATGGCCATGGTTTTTCTGGGGACCAGAGGTAACACGGCAGCAC
AGCTGTCCAAGACTTTCCATTTCAACACGGTTGAAGAGGTTCATTCAAGATTCCAGAGTCTGAATGCTGATATCA
ACAAACGTGGAGCGTCTTATATTCTGAAACTTGCTAATAGATTATATGGAGAGAAAACTTACAATTTCCTTCCTG
AGTTCTTGGTTTCGACTCAGAAAACATATGGTGCTGACCTGGCCAGTGTGGATTTTCAGCATGCCTCTGAAGATG
CAAGGAAGACCATAAACCAGTGGGTCAAAGGACAGACAGAAGGAAAAATTCCGGAACTGTTGGCTTCGGGCATGG
TTGATAACATGACCAAACTTGTGCTAGTAAATGCCATCTATTTCAAGGGAAACTGGAAGGATAAATTCATGAAAG
AAGCCACGACGAATGCACCATTCAGATTGAATAAGAAAGACAGAAAAACTGTGAAAATGATGTATCAGAAGAAAA
AATTTGCATATGGCTACATCGAGGACCTTAAGTGCCGTGTGCTGGAACTGCCTTACCAAGGCGAGGAGCTCAGCA
TGGTCATCCTGCTGCCGGATGACATTGAGGACGAGTCCACGGGCCTGAAGAAGATTGAGGAACAGTTGACTTTGG
AAAAGTTGCATGAGTGGACTAAACCTGAGAATCTCGATTTCATTGAAGTTAATGTCAGCTTGCCCAGGTTCAAAC
TGGAAGAGAGTTACACTCTCAACTCCGACCTCGCCCGCCTAGGTGTGCAGGATCTCTTTAACAGTAGCAAGGCTG
ATCTGTCTGGCATGTCAGGAGCCAGAGATATTTTTATATCAAAAATTGTCCACAAGTCATTTGTGGAAGTGAATG
AAGAGGGAACAGAGGCGGCAGCTGCCACAGCAGGCATCGCAACTTTCTGCATGTTGATGCCCGAAGAAAATTTCA
CTGCCGACCATCCATTCCTTTTCTTTATTCGGCATAATTCCTCAGGTAGCATCCTATTCTTGGGGAGATTTTCTT
CCCCT**TAG**AAGAAAGAGACTGTAGCAATACAAAAATCAAGCTTAGTGCTTTATTACCTGAGTTTTTAATAGAGCC
AATATGTCTTATATCTTTACCAATAAAACCACTGTCCAGAAACAAGTCTTTCATTTTCTTTGTAAGTTTGGCTCT
GTTGGCTGTTTACACCCATGAATTTTGGCATGGGTATCTATTTTTCTTTTTTACATTGAAAAAAATCCAGTGGTT
GCTTTTGAATGCATCAAGTAAAGAAGAAGAAAAGAATACATCCGATGCGTAGATTCTTGACCATGTAGTAATCTA
TAAAATTGCTATATCCTCCTGATAGCCATGGGAAAACATGATAAGATGGTCATTTATTTTGCAGTTAGAATTTTG
GAAGCCACAAAATAGACAGACACCCTGACTGTTGAAGGGAGGTTTAAAAACAGATATTCAATTGAAATGTAAGAG
AGCACCCCAATTGAGAGCCCAGGTTACGAAGACAAGCTTGCCTCGCCTGACTTTTCTGTCCCTTGTTCTGCAGGA
TTAGTATTCTGTTACAGACCTCTAGTTTTTAGACTCTTCAATTAAAGGGCCAATGGTTATAACCTGCATTCCCTT
TTTTGTTCTTCTTTATGTATAATATATAGTTCATGTGGCGCTGCATGAAATCAAGAAGTGGGTGTCTTAGGATAA
AAGATACCAAGAGTCTACAAAAATAACCATGTAGTAAGATAAACTGCTGAACAAAGGTTTTACTGTTAGCCACCT
TCTCATGTGTTTTCTTTTCTCTTTTTCCGTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNATTAAGGCTCTTGACT
TCCAAGGCTGTGTGGGGAGATGGGGTGGGGGCTCTTGGACTGATATAAAACTTTGTCAAATGTAGTTCTTTGAAT
GGAGCTTGAAACGCCGCATATTCTTGCTCCCACAAGGATAGTGGGCATCATGAATTAATAAAACGTCCTAGGATT
CTGCAAGCT

FIGURE 1827

GAGSHGSLLLALRRPRELGLLRSHREGPPPRPRLLARVTLPPAISSGPRCLLPDLAPSSEPGACLGGLSVFTMEQ
LSSANTRFALDLFLALSENNPAGNIFISPFSISSAMAMVFLGTRGNTAAQLSKTFHFNTVEEVHSRFQSLNADIN
KRGASYILKLANRLYGEKTYNFLPEFLVSTQKTYGADLASVDFQHASEDARKTINQWVKGQTEGKIPELLASGMV
DNMTKLVLVNAIYFKGNWKDKFMKEATTNAPFRLNKKDRKTVKMMYQKKKFAYGYIEDLKCRVLELPYQGEELSM
VILLPDDIEDESTGLKKIEEQLTLEKLHEWTKPENLDFIEVNVSLPRFKLEESYTLNSDLARLGVQDLFNSSKAD
LSGMSGARDIFISKIVHKSFVEVNEEGTEAAAATAGIATFCMLMPEENFTADHPFLFFIRHNSSGSILFLGRFSS
P

FIGURE 1828

GGCGCCATTTTGCTGGAGCCTGCGACCGAGTGGGAGTGGAGTGGAGCGGCTGTGGTTGCCGACTCTTTCCTCTTC
CCCACGGTCCAGTCAGCGGGTTAATTAGGCCATCGGCCCTCGAGCCGAGACTTGTCTCTTATTTAGTTCTGGGGA
GCGCCTCGTCGACA**TGA**GTGATGTGGAGGAAAACAACTTCGAGGGCAGAGTGAGTACAAAGCCGCGGGAGCCGTC
TAGGCGGCGGCCCAATGCTCGGGGTTTCACGGGAACAAGCGCGGTCGGGCGGGGTTGCGGGTAGTCCCGCGAGGA
GCAACCTCTGGAGCCATCGCGATTGATTCCTCCCATCCCAAGATGGCTTCTGGGTTCCACTCCTTCCCCAAACAC
CACGGATAACACCCCTCCCCCTTTTTTGGAGGCTGACTGATACCTGGACTTCTGGGTCCTCTTCCCTCCCCGCCC
CCGCATTGCTTCCTCCCTTCTCCCCACCCCTGAGGCTTCCTTATGTCTGCTCCGAGGTGTGGGTCCCCGTCGCGG
TTGGGCGGGAGGAGGCGGCAGGGAGCTCCCCTCCGTCCGGATAGTGGTAGGTGCTTCCTGCGGTGGCATTTCTGG
CGACCCCGAGCATCGTAGAGGGTCTCGGGATCGAAAGTGCGCGGGGCTGCTTTCCGGGCGGGGAGAAGCTGGCGT
GGGACTAGCTGGGGCCTGTGTCTCCTTGGCTCTCTATTTCAGTGAGCGGCCGCGTCTCTGTTGGAACCGGCGGCG
TTGCGTCTAAAAAGGCGAAAGCCTTGAGGTTGAAGGTGGGACGAGCCTAATGAAGTGGTTAGTCAACGACCGCAC
CGACCCTTAAGCGTTCTTAAGACGAGAGCTGTGAGGGGAAACTACGCAAGGAGCCCTTTTCCCTTAATGTCCCTT
CGACTTTCCTTTCACTTCGAAATGAATGTGGAAATGCTGTCACGCCTTATTTTTCTAATTCCTCGATGTTGGGTT
TTTTCTCTTCTTTATATCTCAACTTTTAATGCTCTTCTTCCTATGACCTTTCATCTAAAAACTGACCACTCCTTT
ACAGGTTTTTACGGTAAAAAAAAAAAAATCGGTCTTTCTTTAATCTTACATAGCTGAACGAATTCATTGGCTCAG
TATTTTTAAGATAACTAGTCAGTATATACTGTTCTGTAACTTAAAAGATGACCTGAAAATTAACAGGCCCTCTCC
CATTTCTCTTCTCACTCTATCCCCCACCGAAGAGGGCTCAGAAAAAAGTTTTTATTAATATATTTGGGGTCGGAG
AAATACAAACATCACAAAGAATACGATATCCCCAGCTTAAATGTACTGGAACGTTTGTCAGTGAGTTTCATTTCC
AAAGTTTACCCTACATAGGGAATTGTAGAAGTGAGTTAGTAGAAGTGAGTTCGTGTGAAACCCTGGAAAGAAAAC
AAAAGCCCCATGCAACACGTTCCGGGCTGTTGTGTAGATGTTTATTCTAGTCACTAGGGGAAGCACATAAAAACA
CCTGAGGTGTGTGTGCTGAAGGGCGAATTTTGTCCTTTTGGGGAGTTCATGATATAAACATCTAGAACCAAAAAG
TCAAATCAGAAGGTCAGTTTAGGCTTTAGTTCTCTTTGAGGAAAGATTTAAAGCAATAGACTATAATAGTTACCC
GGTAGACTAAAAAATTTGCCTTTAATTCTTTTGATTGGAATTTTTTTTTACAAAGTTTGGAGCATGGAAACAAAT
GAAAATTGAACCTGCTTATTTTTTAGGATGGTGTATTGATGGCCCCAACAGAACTTTCTAAAATCATGCGATAAA
CATATATGATAGTAGTTGTAAAATGCTTCTTGTTTTGAAAATGTTGAGTAATTATCGATAGAAATTTTGCTGTCC
ATTCATACATTCCTTCAATTAACTTTCATTGTTAAAAAATTGGGGGATTGATGTTTGGTTTGGTTTGTGGGGAGT
GAAGAGGACTACTGGAGGGACCTTGTTTGCTTGCTTTTTTTCTTTTTTTAATTTATCATCAAGTCTAGGAAAGGA
GTAAGTTGCCGACAATTGTCACTTTTCCCTCCTAAGAAAGTAACATGTTAAGATTCCCACCTACCAGCCTGGGTG
ACAGTGAGACTCCCGTCTCNNNNNNNNNNNNNNNNNNNNTTCCCACCCACTTTTAAGCTAAAGTATATGTAGGCA
TTAAAGATTTATTTAATAGAAATAAAGGGCCCTCTTACGGCCCTTTGTGGTCATAGGAAATATTTTTTTCACAAG
TGGTACCCAAGTGTATTT

FIGURE 1829

RHFAGACDRVGVEWSGCGCRLFPLPHGPVSGLIRPSALEPRLVSYLVLGSASST

FIGURE 1830

GAACACAAACATGCAGTCTGTAGCAGATGGTAATAGGCTGAYATATTACACTTGTTGATGTAAATCTGATAGGTT
TCTTTCTCTCCAAGGACAGCTTTTTAAATATTTAACAGTATCAATAATTTTTCAGTTTCTGTGAGAATTTTATAA
TTTATAATTTGCAGACTTAATGTATAATCTATTTTGTCCTAACAATTACAAATATATTTTTTATTTCAGATTRTA
TATATTCCTACCAGATGGAGATAATTACAGCTTTAAAAATTTTTATTTTTTCATTTTATTTCACACATTGACATT
AAATTTTTATGGACACATAATAACTGTACATATATATGGGGTAGAATGTGATGTTTTAATACATGTACTCAATGT
GTAATGATCAAATCAGGGTAATTTGCATAATGATTTTTCTGTAGGGAGAAAATTCAAAATCTACTCTTCTGGCTA
TTTTCAAATATATAATATGTTATTGTTAACTATACTCATCCTACTATGCAATAGGACACCAGAACTTATTCCTGG
GTTCTACATCCGT**TAA**GGCAACCAAGGATTGGAAATATTGGAAAAAAAAAATTGCGTCTGTACTGAACATGTACAG
ACTTTTTTCTTGTCCTTATTCCTTACACAATATAGTACAATAACTATTTGCATGACATTTACATCGGATATTATG
AGTGATCTAGAGTTGATATGAAGTATATGGGAGGATGTGCAAAGGTGATGTGCAAATACTATGTCATTTTATATC
AGGGACTTGAGTATCCTTTGTTAYCCTCAGGAGATCCTGAAACYAGTCCCCCATGGATACTGAGGGCTGACTGTA
TAGTCCTATCCTCACGGAACTTTCATTCTAATGRGGGAAGACTGACTATAAACAAAATATATGTAATAGGTGGTG
GTAAGTACCGTGGAGAAGTAACAAATGGGGCAAAGTGAGTTATACAGCTCCATYCTTAGAAACCTTGGAGTACTT
TTCTTAGTTTATACTCGTGGTGGTTTCCTTTTGTCTCCTTTATTACATGGGACTCTGACATGTGCCCATAGCTAG
GGTGGCAGTAGGATCTACCCGAAAAGCGTCCTGCTGATACAGGACCAAAGCATCCTGTTGTTCTCGAGCCTATAA
AAAGAGCTAATGGTCTTGCTTCTCTTAACTGTGGCCTCCTACACTGTGTTTTGGATGATTGGTGATGTCTTGGAT
ATTCTGTTTCTTTGGAACTTTGAATATACAACACTTTACTAGGGAATTAGCAATGGAAGCAGAGCAAAGATGTAC
AGAGGAAACAATGCRTAACTCTGATGGAATTGAAGTCATGAGGCAGCAGAGAGCTTAAATTASAGCTTTAAAAAT
TTTTATTTTTTAGAGGGAATTTAMTTGGGAGTAACAGCAGTAATAGTTAACGGAGCCAGAATGCTTGAGTCATAT
AATTGCAAAGCAGAGTTGGGAGCAACAGATGCTAAAGAGTAGTTGCTGTAGTTCCTCTTTGGGTCGTAGGAGCAG
TTGTCATRTTMCTATAYAGCTACTGCATGAAGAAGAGTTCTTAGTGAGGCCTGGGTGAACAGCTCTTCTTAGTAT
TCTGTGTGACCCCATTYGACCTTTTAACAAATCCCTAAGTAAATAAATAGCCCCTMAGGWAAACTAAGTTTTTCT
CTGCTGTTTTTTTGCTTGAGAGAGCTATAACTGTAATAGACTTATATTTCTGAACATTTTAGTGCTTGCCAATAT
TTGGTAATATTTATGTTTCCTATATTTGTAATGAACATTCTTCTTCMGGTACATTTYTTGTTAAATTATTGTTTS
ATGSATAAAAGTTCACCTTTTATTGTATAAAATTGACTCAGATTAATTTATACACATTGACAATGGGTAAATAGA
GTTTTTCAGATTATTAAAAGCTGAAGGATGCCCATGTAAGCAAAAAAAAAAAAAAAAAACTCGA

FIGURE 1831

IYSSGYFQIYNMLLLTILILLCNRTPELIPGFYIR

FIGURE 1832

ATCTCCCTCCAGGCAGCCCTTGGCTGGTCCCTGCGAGCCCGTGGAGACTGCCAGAG**ATG**TCCTCTTTCGGTTACA
GGACCCTGACTGTGGCCCTCTTCACCCTGATCTGCTGTCCAGGATCGGATGAGAAGGTATTCGAGGTACACGTGA
GGCCAAAGAAGCTGGCGGTTGAGCCCAAAGGGTCCCTCGAGGTCAACTGCAGCACCACCTGTAACCAGCCTGAAG
TGGGTGGTCTGGAGACCTCTCTAAATAAGATTCTGCTGGACGAACAGGCTCAGTGGAAACATTACTTGGTCTCAA
ACATCTCCCATGACACGGTCCTCCAATGCCACTTCACCTGCTCCGGGAAGCAGGAGTCAATGAATTCCAACGTCA
GCGTGTACCAGCCTCCAAGGCAGGTCATCCTGACACTGCAACCCACTTTGGTGGCTGTGGGCAAGTCCTTCACCA
TTGAGTGCAGGGTGCCCACCGTGGAGCCCCTGGACAGCCTCACCCTCTTCCTGTTCCGTGGCAATGAGACTCTGC
ACTATGAGACCTTCGGGAAGGCAGCCCCTGCTCCGCAGGAGGCCACAGCCACATTCAACAGCACGGCTGACAGAG
AGGATGGCCACCGCAACTTCTCCTGCCTGGCTGTGCTGGACTTGATGTCTCGCGGTGGCAACATCTTTCACAAAC
ACTCAGCCCCGAAGATGTTGGAGATCTATGAGCCTGTGTCGGACAGCCAGATGGTCATCATAGTCACGGTGGTGT
CGGTGTTGCTGTCCCTGTTCGTGACATCTGTCCTGCTCTGCTTCATCTTCGGCCAGCACTTGCGCCAGCAGCGGA
TGGGCACCTACGGGGTGCGAGCGGCTTGGAGGAGGCTGCCCCAGGCCTTCCGGCCA**TAG**CAACCATGAGTGGCAT
GGCCACCACCACGGTGGTCACTGGAACTCAGTGTGACTCCTCAGGGTTGAGGTCCAGCCCTGGCTGAAGGACTGT
GACAGGCAGCAGAGACTTGGGACATTGCCTTTTCTAGCCCGAATACAAACACCTGGACTT

FIGURE 1833

MSSFGYRTLTVALFTLICCPGSDEKVFEVHVRPKKLAVEPKGSLEVNCSTTCNQPEVGGLETSLNKILLDEQAQW
KHYLVSNISHDTVLQCHFTCSGKQESMNSNVSVYQPPRQVILTLQPTLVAVGKSFTIECRVPTVEPLDSLTLFLF
RGNETLHYETFGKAAPAPQEATATFNSTADREDGHRNFSCLAVLDLMSRGGNIFHKHSAPKMLEIYEPVSDSQMV
IIVTVVSVLLSLFVTSVLLCFIFGQHLRQQRMGTYGVRAAWRRLPQAFRP

FIGURE 1834

TAGATATTTTTCAAAAATACAGTGATGTCATTGCAGGACAATTTTATGGACACACTCACAGAGACAGCATTATGG
TTCTTTCAGATAAAAAAGGAAGTCCAGTAAATTCTTTGTTTGTGGCTCCTGCTGTTACACCAGTGAAGAGTGTTT
TAGAAAAACAGACCAACAATCCTGGTATCAGACTGTTTCAGTATGATCCTCGTGATTATAAATTATTGGATATGT
TGCAGTATTACTTGAATCTGACAGAGGCGAATCTAAAGGGAGAGTCCATCTGGAAGCTGGAGTATATCCTGACCC
AGACCTACGACATTGAAGATTTGCAGCCGGAAAGTTTATATGGATTAGCTAAACAATTTACAATCCTAGACAGTA
AGCAGTTTATAAAATACTACAATTACTTCTTTGTGAGTTATGACAGCAGTGTAACATGTGATAAGACATGTAAGG
CCTTTCAGATTTGTGCAATTATGAATCTTGATAATATTTCCTATGCAGATTGCCTCAAACAGCTTTATATAAAGC
ACAAATAC**TAG**TATTTCACAGTTTTTGCTAATAGAAAATGCTGATTCTGATTCTGAGATCAATTTGTGGGAATTT
TACATAAATCTTTGTTAATTACTGAGTGGGCAAGTAGACTTCCTGTCTTTGCTTTCTTTTTTTTTTTCTTTTTGA
TGCCTTAATGTAGATATCTTTATCATTCTGAATTGTATTATATATTTAAAGTGCTCATTAATAGAATGATGGATG
TAAATTGGATGTAAATATTCAGTTTATATAATTATATCTAATTTGTACCCTTGTTGAAATTGTCATTTATACAAT
AAAGCGAATTCTTTATCTCTAAAAAAAAAAAAAAAAAA

FIGURE 1835

DIFQKYSDVIAGQFYGHTHRDSIMVLSDKKGSPVNSLFVAPAVTPVKSVLEKQTNNPGIRLFQYDPRDYKLLDML
QYYLNLTEANLKGESIWKLEYILTQTYDIEDLQPESLYGLAKQFTILDSKQFIKYYNYFFVSYDSSVTCDKTCKA
FQICAIMNLDNISYADCLKQLYIKHKY

FIGURE 1836

TTCAGAGCACAGGATGGAACAAGAACTCCAGCCACTGACTGTCTCATGTATCTGCAAGGGCCGAGGAAATTAATG
ACCCAAGGAGGCTATGATATGGTCCAAAAACTTTTCCTGGATTTTTTCCGTAGGCGGCTGAGCCAGAGGCCAACT
GCAGAGGAACTGGAACAGAGGAACATTTTGAAACCTCGGAATGAACAAGAGGAACAGGAGGAGAAGAGAGAGATC
AAGAGGAGGCTAACCCGAAAGCTCAGTCAAAGGCCCACGGTGGAAGAGCTTCGGGAAAGAAAGATCCTCATCCGC
TTCAGTGACTACGTGGAGGTGGCTGACGCTCAGGACTATGACCGCAGGGCAGATAAGCCGTGGACCCGCCTCACC
GCTGCAGACAAAGCTGCCATCCGAAAGGAGCTCAATGAATTCAAAAGCACTGAGATGGAAGTTCATGAATTGAGT
AGACACTTAACAAGGTTTCACCGACCT**TAA**CAGTCGAATTCCTCTTGAGTGCTATGCTGTCTTCAAAACATAAAT
TTATAAGAACCATAAGTGCTGGTATTTATTCACTTCCCCATTACGATGTAAATCTTCTGAACTGCCTTTTTTTTA
AAAAGAAGAAAAATCAAGGAAACACAATCAGGATTTTATGTGTGAAAACGCAAAAGTGATGGCTCGGCGGTCCGA
GCTGCTGGTCCCACTTCTGACACCAAAATGCATCCCAACCCCCGGCAGTGCCAAGGGCACCAGCAGGGCCCTGAC
TGAAGACTGTCTGGCAGGTGGAACGGTCCTTGTCCTCTCCAGCCAGGCCCAGCAGGCACTACCTTCATAAGTCTC
CAGCAAACCTCTTCCTCACAAGTGTCTGTCATCTGAGTCCAAAGAAAGCTGAAGGGGTGGGTTTGTTTTGGGGGT
ACTGTGCAAAGCTAATGATCTGGTTGGACTTCTACACTTGGCCAAATGTACTGGCTCCAGACATGACATTTGGTT
TGGGGGCCCTTTGAAGTTGATGCCAAGAAGGAGTGAACACTTCTCAGTTGCCCCTGGCTTTTCCGAACCATCCAG
CGTCCCTGAATATAAAATGTACAGAGTGCAGTGGGAAGCAGGCTGGAGAGAGGTTCACAGGGGCCAGACCACCCA
GGGATTTATGAGCCGATTGGAGGAGCTTGGACTTTATCCTGTGGAAAATGGGGAACCCTTGAAAATCTTCAAGCA
GAGAGTGACTTGATCAGAGTTGTCTTTTAGGAAGAATTCTCTGGTAGCTGTGCAGGGAATGGTTTACAGAAGAGT
AAGACCAGGGCACTTATGCCAGCTAGGAGATACCATAGGAATGTCAGCAAGAGTTGCTTGAGACAGCATGGTGGG
AGAGGATCAGGGTAGTGGTTATGTGCAAAAGCTCT

FIGURE 1837

FRAQDGTRTPATDCLMYLQGPRKLMTQGGYDMVQKLFLDFFRRRLSQRPTAEELEQRNILKPRNEQEEQEEKREI
KRRLTRKLSQRPTVEELRERKILIRFSDYVEVADAQDYDRRADKPWTRLTAADKAAIRKELNEFKSTEMEVHELS
RHLTRFHRP

FIGURE 1838A

CCCCCAGCAGAAGGGCGCGACGGCTGCAACATCAGCGGTTAAATTGTACAGCCTTTCATAGGCCGGTTCAATGCA
TCCGTACTAAGATTGTTAAGGCTGAGGGTCCCTAGCCTGGGGAAAAACGAAAGGAGGCAGAGGGTAGGGAGACGG
GAAGGAAGACAAGGAGGGTGTAGAAAACGGGGAGAGGAGGGGGCGGGACAGCATGGGGAAGGCCTCAGGTTTACT
GGAGAGATCGTGGCGTTCCCATAGAAACGTATCCCTCCGCCCATGACCCGCGTGTTAGTCTCTTCAGTTCCTTCC
GCGTCGTTTCTTGGCTGTTTCCGCCCAGCTCCTTTGTGCCGCGCAGAACAACGAGATGACGCATGCGCAAAGCGC
AGCGGCCGCATATATAAACGCGAACCCGGGCTCTTCCTCGTAGTGCCGCCGGGACTCTTGGCGGGTGAAGGTGTG
TGTCAGCTTTTGCGTCACTCGAGCCCTGGGCGCTGCTTGCTAAAGAGCCGAGCACGCGGGTCTGTCATCATGTCG
CGTTACGGGCGGTACGGAGGAGGTAAGAAGCTGGAGTCCGGTGAGGGACGTTGGTGTGGGTGTAGTGAGCACTGC
GAGGCCGTAGGGTTGTCGCGGAGGTTGGGAGACGGTTATTCCGCGTGCGTAATGGCGGCTTAGGAGCACGCCAGA
CGAAGCCGGAGGCAGCGGAGGCGGGGTGCTGAAGGGAGACGGGATGGCGGGTGTACATCTCTGCCGAGTTCCGTA
CTCTTGGGCATTTTTGTGGCCCAATCCAGCCTAAAGCAGGGTTGAGATGACGGTTTTCGCGTTGCCTTTCTCGGA
GCTGCCCGCCGGCCCCCCTCCCCCCCCCGCCCTCGGCCGGCGGCTGCCATTTTGCGCACATTGAGGACCGTGGTGG
CGCATTTCCTCAGCGCTTTCCCGCCACTTCAGCGGACAGATCTGGCCGCAGCTGTAAGATCGTGGTTGTGTTTGA
GATAGAACGAAATTGGCAGCTGTGAGCTGCATGTTCTCGTCAAACAATCGGTTAAATTGCGGAATGGGAATGGGG
ACGTAATCTGCGACTGGCGGCTGGGTTTTTTTTTAGTTATTTCCAGCGCGGTTTATGGCTCTGGGGCGGGGAGCT
GGAGTCTTGGGCGAGCCTGTGCCTGGGACGTTTGCCGCGGAGGACGAGAGCCGGCGCAGCCCTGCTCTCCTGGCC
CGGCCCCTACCGAGGCCCTCCCGCCGCCGACGCGCTGCCGCTGCGGGCCCGCGCGCTCCCGGTGCGCCCGGGGCT
GCCGGGACTCATGGGTGGGGCCGGGCCAGGTCCCGCCCCACGCCTCGGTGTATCCTACCACGCGTTTCTGCTTGT
GTTCGGGAGGGTCACCCCGCATTATTTAGAACGTTAAGAATTTTGTCAAAAGTCTAGTTTCTCGGGGATTTGCGG
ACTTCACCAGTTTTACGACTAAGTTTTGTCTTGGATAGAGGGCATTAAATGTGCTTTACCCAATCTTGAGGATGG
CCCGTTTTAAGGCAAGTAAGTAATTGAAACTTGGGCCAGATTTTGCATAACGTGCATTCTTCTATTTGCGTTTTT
AAACAGAAACCAAGGTGTATGTTGGTAACCTGGGAACTGGCGCTGGCAAAGGAGAGTTAGAAAGGGCTTTCAGTT
ATTATGGTCCTTTAAGAACTGTATGGATTGCGAGAAATCCTCCAGGATTTGCCTTTGTGGAATTCGAAGATCCTA
GAGATGCAGAAGATGCAGTACGAGGACTGGATGGAAAGTAAGTAAGATGTTATGAATCTTCTGTTCATTAAAATA
TACTGTGGCTAGATAATGAACTTAGTGCTAAATTTGGATTCTGAAGTCTGGAAGAGACCTTAAATAGCTGGTCAT
AGTGTTAAATGCTAAAGGCACACGAAGGTTAAAGAAGATAGCGGAGATGGAGTTAGGGCTTGGTAAAGACCGCCA
AAGTTTGTTGGGGGGGAAGGAGTGGTTGGAAAGAGTGAGTGGTTGGAAAGAGTTCTTTTTAAATCTATAAGTCCT
GAATATATTTTTAACTTTAGAATTTTGTTAATTTGCTTTTATTAGGGTGATTTGTGGCTCCCGAGTGAGGGTTGA
ACTATCGACAGGCATGCCTCGGAGATCACGTTTTGATAGACCACCTGCCCGACGTCCCTTTGATCCAAATGATAG
ATGCTATGAGTGTGGCGAAAAGGGACATTATGCTTATGATTGTCATCGTTACAGCCGGCGAAGAAGAAGCAGGTA
TTTATTTTAATAAAGGAATGGTTGGTATTCTAGTTAATCAAGTAATTCTTTTATTAGCAAGGCAGAAACTAGTGT
TTTTCTATAAACTTGAATGTTAATTGTACAGGTGTATTTTACAATTTGTGTTTAATTAAAAAAATGTTACTATAT
TAATAATCAACCTGGTCAAAACCTTTCAGGTTTCTTCGTTTGAGTCAGTCGCCTTGATTCAGAATGTCACGAGCC
TTATGATATCATGCTGAGGCGCCTTGCAAATCCGACAATTAAGATCCTCCTAGACCTTGAGGTGATCAGCATAAG
AGGCCAGATCCCCTCGAGTCATCTACACCTAGCTTCACCTTATTCTTTAAAGGGCAGAAAATTTGAGACGGTGAT
CGCCGTAACAGTAAATTTGGCTTACAATTGGGGCCCCCCTCCGGTTTAGAAAGAGGAACACCAGATTGACCACAT
TCCCAACTAGAAAAATCTTCTTGCGTCAATCAAGCCTCACCTGGCTCATTTGGCTGTCAGTTTGATCGTCGTTAG
ATTGAAGAAAACATCTAGATGCAGCGATCGGCTATAGATACTTCTAGATCGTCTAGATCTACTAGACCATGGGCC
AAAGAGGGTCGACCTGCAAACTTGCAAGGTTTATGTTAAATACACATTACAGTGTTTTATATTATGTAATGCTAA
GTTGTAATTCAGCTTTTAACAAATCTTTTTTTAGGTAGTAAAAAAAAAAATACTCAACAACTAATAGGCCCAGAG
TTTATTTCCAAATGAGACACTAAATTTAAATAGTTTTGAGATTTGATTTCAGCAGAGGCACACAAACTCTTAAAA
ACGAGTTATTGTCTGACATTTTGTTTTTTCTCTAACTTGAAAAATAGGTCACGGTCTAGATCACATTCTCGATCC
AGAGGAAGGCGATACTCTCGCTCACGCAGCAGGAGCAGGGGACGAAGGTGAGATCTTGTTTAACTGAAGTCTTTC
TGTATTATTATTAAATTCACTGGTAGTCCAACACAGAAAAAGCTCATTATTTTTTTTGGAGACAGGGTCTTGCTC
TGTCACCCGGGCTGGAGTACAGGGGCATAACCACGACTCACTGCTGCCTTGATGATCTCTTGGGTTTAAGCAGTT
CTCCTACCTCAGCCTCCCGAGTAGCTGGGACTGTAGGCACTGCCACCATACCCAGCTAATTTTTATTTTTGTAGA
AATGGTCTTGCACTGTTTCCCAGGCTGGTCTCAAGCTCCTGGGCTCAAACGATCCTCCCGCAGTGCTGGGATTAT
GGGCATGAGCCACTGCACCGTTCCCCAGTTGAAGTCTTAACAGGCCAAAAAAAAAAAAAAACTGTGGAGATGGACT

FIGURE 1838B

TAAAGTTCTTTATTTTAGGTCAAGGTCAGCATCTCCTCGACGATCAAGATCTATCTCTCTTCGTAGATCAAGATC
AGCTTCACTCAGAAGATCTAGGTCTGGTTCTATAAAAGGATCGAGGTATTTCCAGTATGTAACACTTTTTTTCCT
TACTTGTGTTTGGATTGTTCACATCTTATCAGTAGAGTGTCTTAAGGACATAATTCAAATGGATTGCTTCAGGGA
ATATTTGAGATGTAAAAGTTTGGAATTTATGTGTAACTTGTAACATAAATATTACCCTAGTTTCACAGATGAAGA
AAAGGGCTACTAGAGATTTTAAGGCTTGTTAGGCCGTGTGGTAGACAAGGGTCCCAAGCAATACAGCTCTACTCA
ACACTCTGGGTAGGCATGTTGCTATAAACTTTTCTGGCTTCAGATTGGATGATACTAGCTCTGAAAGATGGTAAT
TGATTTTCCCGACAAAAAGGCCTATTAGCACCAGGAAAAGAGATCAGAAGCAAGTAGAAACATTTCTCATTTTTG
GAATGATGGGGTTGATTTGAGACACTGGAAAGTTGACTAGGGCAGTAGTGTGTACACAGAAATGAATGTGGATTT
TTTTTTTAGACCGTTTCAGACCTGAAAAAACTAAAGAACCAGAGCTTTACTATTTGTAGAAGGCCTTAAAAGGAG
ATAGAATGGAAAAAATTGTAAAATAAGTATTGCAACATGTAATTAACAATATTGTTATCTGTACCAACGATAAAA
CCGTGGTACGGAATGCTACTGGGAGTTAAATTGCTGTTTAATAGCACAAAACCTTTAAATGCAGGAATTCTGAAT
CTTGTGGTCTATTTGAGAAAGCTATGAACCATCTCTTTAGATAAATTTAAAAGATAGATATGTCAGTCTGATTTG
GTTTGTCTGACAGATTGATGGCTCTCAAACATAACTTGATCCGGGAAGAAGCCTGACAAATGGGGGGCGGCTTTC
TTTTCGTCTGGCCTTATCACCTGAATTAGTCTCAGTTCAGGGGTCTGGTTATTTTCATCCTGCCTTAGCCTCCTG
AGTAGCTGGGACTGCCATTGTGTACCACAGTGCCCAGCTGAGGGATCTGTGCCTTAAGTGAGGTTAGTTTTGCTT
CCTTCATACCAGTCTCATCAAATGAAAACCATGTATTTCCCTTGGATATTACACAGTGTTTGAGAATGTTATACC
TGTACAGAAACTAACCAATTGAGTGATAGAAACAAGTAATTGAAATGGGGGTTCCTTATGTCTGGTAACACTTTG
TTTGACAGTGTGTTAGACAGAATAAGGCAAGTGTTGCATCTTGTTTAGTTTTAGCTTCTTTATGCCTGACCAACC
TAATACAGTGTTGAGTAGTTAAGGAAATTCCTTTGGACTGATTGATATAATTGTGTTTTTTCACTTTTTTTATTA
AGATCCCCGTCGAGGTCAAGATCAAGATCCAGGTCTATTTCACGACCAAGAAGCAGGTAGGGTAAAAATTTGATT
ATCCTTTTCTAGTTATATGGCACCAATATCCAAAGAGTTCAAAGTGTTTTTAATTGTTGAAATTTTAAGTGTTAA
CTCTAAACTTAGGTTTTAGTGGGAACACAGTACCTTATTTGTGTATGTCCTATTTATTACTGGCTGACTTTCCCT
GAACAAGGGAATGTAAAACTATAGTGAGAAAGAAGCTTATGACTTGGGGGATTATATTAAAGAGGCCCTTGTTAG
AACTGATAGGTGCATGGAGAAGCATCCTGAAATCGATGTGCTTAAAGCAGAATGTAAAAGATTAATCATGATGTA
GTAATTGAGTCATTTTTTGAAAAACAGTTGTTGAAAGATTGGCTTTTGTTAGCAACAACTGGTAGGATGTTTTTC
AGTTTAAGTGCAGTCTGACATTTTAAGCTTAGGACATTTGGGGGTTTTACGGTATTGGTGACTACAAGAAAGGGA
TTGGTTAGTACTCTTTCTTTAATAGAATTTCTCATGTTTTGACAGCCGATCAAAGTCCAGATCTCCATCTCCAAA
AAGAAGGTAAGCTAAATGTTTTGTTGCCAAATCTTGCCTGTCAAGTGTGGCCTCTGCAGAATTTGTTTGCTTACT
GCTTTGCAGTCTTTGAGCTCTTTGGAGAATTGGTGCTATATAGATTAAAATACTATGCTAAGTTTCTGAAATACT
TTTTTTTTTTGATTCAGTAACATTAGTTTATACTTTTGCTGGAAATACTTAGTCATAAAATGTTAGGGTGATTAT
TAAGATGTGATTGGTCCTGTGAGTACTTGGTAGAAATTTTGGTAAGATAGATGCCTTTTCCCCACATGTACAATA
GATACAAAGTGTGGAGAAAAGTCTTGGAAATAGTTACCTGCCTAGTGCTTCTTTATGACCAGAAAACTTCAAATA
GTTGTCATATTTATCTAGTGCTTCTTAATGACCAGAAGACTTCAAATAGTTGTCATATTTAACTGCAGGTTGACC
TTGCAATTTTGACAAGGAGGATAGCCTAATTTTTTTTTTTTCTGGGATGGAGTTTTCGCTCTGTCCCCAGGCTT
GGAGTGCAGTGGCTCAATCTTGGCTCACTGCAGCCTCCGATTCCCGGGTTCAAGCAATTATCCTGTCTCAGCCTC
TTGAGCAGTTGGGATTACAGGCACCCACCGCCAAGCCTGGCTAATTTTTTGTATTTCTAGTAGAGACGGAGTTTC
ACCATGTTGGCGAGGTTGGTCTTAAACTCCTGATCTTAGGTGATCACCTGCCTCGGCCTCTCCCAAAGTGCTGGG
GTTACAGGCGTGAGCCACCGTGCCTGGCCAGGGTAGCCTAATCTTAAGCCAGGGACAAAAGATGAATATATGTAA
GTTTCATGTCATTTTTAGGTCTTTGCTATAGGAAATTAGTACCTTAGGCCACCTTTGAAGTTATTGAAAGTTAGT
ACATGTACATGAGAGTTTCAATTGACACTAATTGGATCCAAACCTAATGTTTTTCTTTTTAGTCGTTCCCCATCA
GGAAGTCCTCGCAGAAGTGCAAGTCCTGAAAGAATGGACTGAAGCTCTCAAGTTCACCCTTTAGGGAAAAGTTAT
TTTGTTTACATTATTATAAGGGATTTGTGATGTCTGTAAAGTGTAACCTAGGAAAGATAATTCAACCATCTAATC
AAAATGGATCTGGATTACTATGTAAATTCACAGCAGTAAGGATAATATAAATTTTGTTGAATGTATGAACATCAT
ATGGTCTGAAAATGTGGGTTTTTATTTGGCACATTTAAATAACATGTTTCTAACTAGATTTTTGATTTGTGTTCA
ATATTAACACTTCTTAATTTGATATATTTGAGAGTCAGACATTATAATTGTTAATCCTTATTCATACATACCTAC
ATTCAGAATTGAAAGGTGTTGGTTAAGTCTTGAACATCACTATTCTATGCATAAAACTTGGCCAGGATCTTAAGG
GACTTTGAAAATTCCATCTTACCCTTGTAGCTCTGGGTAAGATGACCTGAGTCCCTTATGATACAGCCTGAATGC
ATCATGACAGATCCTTAGTTAGCTAATCCGTTTGAAGTTGGTGTTAGTAGGTATTGTATGATCAGTGGTGAAGCA

FIGURE 1838C

AGTAGGACCACTGATGTGTCTAAATGAGCATGACAGGAACTAAACGAAACTGATTAAATGTATGAGAAATAGAAA
CTGATTTCTGGATGATCTTTATACTAATTGCAGCTTTCAGGCTACTAGGTGGCATAGTGTTAATTAGGACTCCCC
AAGATATGGGGAGTTCTACTCTCAATGGTCTTGTTTCTTTGCTTTCTACATTAGTTAACCAGTTTTATACCAAAA
AATGCATGTTTGAGGAATTGTCTGAAATTGGGACAAAACACCTTCATGTAAACCAGCTTTGCAAAATTTTCCAGC
CCAGATACTCTTCATCTATTCAAATGGATTGTCTTATTCTGAGCAAAGACCTGTTGTTAATCTTCAAGCTAGGTT
TTGCAGTTCCCAACCACAACATTCTTCTATTTTGCCAGGCTGGTGCAAAGTAATTAAAGATGTCAATCAGAAATG
TCAATGAGACTAAAGTGGTTTTGTAAATCTCAGCTATATTTAGCAACACTCCATGTAGCTAATATTTTTTGGTAG
CATCTGGTAGACCTTAGAATGTTACATAGCCAGTAGGTTCTTTATTCAAATTTTAAGTATCTTAAGAATAGTAGG
GCAGTAACAGTTACTTTTGAGAGTTTTCTGGTCAAGCTTTTACCAGGCATTCTCTAGCCTTGGTACAAAAAAAAA
AAAAACCTGCTGGTTGCGCAGATACCTAGGCTTGTCCATTTTATGCATTTCAGCAAAGTCATTGGAGACTATTGC
AACTTGGGAATACTGGTCTGCATCAAGTTTAATTCGGTAGTTTGACCGCTAGTATGTTGGAAGTTATTTGGATTG
TTTTTGGAATTTTGACTGGCTGAATTATGGTTGGTATAAAGTTATGTGTATAACTGGCAGGCTTATTTATCTGTT
GCACTTGGTTAGCTTTAATTGTTCTGTATTATTTAAAGATAAGTTTACTCAACAATAAATCTGCAGAGATTGAAC
AAATAATCCTGATACTTAATTTTTGGAAGTGGGAGCTC

FIGURE 1839

GGGTCGAGGTCGGACGGTATCGATAAGTTTTTTTTTTTTTTTTTTTGTTTACTTTTCATTTATTCACATTTCAT
GGATTGTTACACTTCCTCGATGGGAGCATTCAAAAACTAATACAAGCTGAGATTATATTGTCTGACAATTCAAGT
ATTTTAGTTTTAGAAAACAATTTCCTATTTAAAGTAAAAAGCAAACAATTTATCCATCTGATTGCTAAGAAGTTT
TACATCTCCATTACAATTGTGTCTGCATCAAACGGAGAGTCCTTCGTCCTCAGTATGATTGTTACTGGC**TGA**GAA
CATACGGTGACCTGTGTTCTGAGTGCCTGCTTGGAAAAGACCTCCCTGTCATCTGCCATACTACGGGACAAATCA
GTATCTACTCAAATTCCCACTTCCAGAAGGAGAGGACTCATCAGGGGTTTAGGAGTTTGCAAAGCCTTCAAAATG
TATCGTGCTTGAATTTTGACTCTTCTGAAATAGAATAACTGACAAATGCTCAAAAAAACAAACTTGTTTAACTTT
TACTGAAAAGGCTCTCAGTGAAAACTTGTTTTGAACTCTACTAGTAAGGTAGAATATTAGTTTTTCTTCCCCTCC
ACACCAGAAAAGGCAGTTTTCTCTTTTTTTTTTTTTTGGCATGCAGCATATATAAAATGTGATCTAGAATTGAAA
TTGTAAAACAGAATAATCCTCTTAAAGAAAATCAGCCTATGAACAGTCAGACTTGTCCTTCCATGGAAAACATAA
TCTAAACTTCTTTAAAAACTGGCCATATTTTTTCAGTCTGTAATTCGAATAATGAAGATGGCATAACAAATTTTT
TTGCTTACTAGGAATGCGCAAGAGGATGAGATGGATACACAGGTTTAAAAAAAAAAAAAAAAAA

FIGURE 1840

GSRSDGIDKFFFFFFLFTFHLFTFHGLLHFLDGSIQKLIQAEIILSDNSSILVLENNFLFKVKSKQFIHLIAKKF
YISITIVSASNGESFVLSMIVTG

FIGURE 1841

ATTTTCCTGGGGCTCCGGGGCGCGGAGAAGCTGCATCCCAGAGGAGCGCGTCCAGGAGCGGACCCGGGAGTGTTT
CAAGAGCCAGTGACAAGGACCAGGGGCCCAAGTCCCACCAGCC**ATG**CAGACCTGCCCCCTGGCATTCCCTGGCCA
CGTTTCCCAGGCCCTTGGGACCCTCCTGTTTTTGGCTGCCTCCTTGAGTGCTCAGAATGAAGGCTGGGACAGCCC
CATCTGCACAGAGGGGGTAGTCTCTGTGTCTTGGGGCGAGAACACCGTCATGTCCTGCAACATCTCCAACGCCTT
CTCCCATGTCAACATCAAGCTGCGTGCCCACGGGCAGGAGAGCGCCATCTTCAATGAGGTGGCTCCAGGCTACTT
CTCCCGGGACGGCTGGCAGCTCCAGGTTCAGGGAGGCGTGGCACAGCTGGTGATCAAAGGCGCCCGGGACTCCCA
TGCTGGGCTGTACATGTGGCACCTCGTGGGACACCAGAGAAATAACAGACAAGTCACGCTGGAGGTTTCAGGTGC
AGAACCCCAGTCCGCCCCTGACACTGGGTTCTGGCCTGTGCCAGCGGTGGTCACTGCTGTCTTCATCCTCTTGGT
CGCTCTGGTCATGTTCGCCTGGTACAGGTGCCGCTGTTCCCAGCAACGCCGGGAGAAGAAGTTCTTCCTCCTAGA
ACCCCAGATGAAGGTCGCAGCCCTCAGAGCGGGAGCCCAGCAGGGCCTGAGCAGAGCCTCCGCTGAACTGTGGAC
CCCAGACTCCGAGCCCACCCCAAGGCCGCTGGCACTGGTGTTCAAACCCTCACCACTTGGAGCCCTGGAGCTGCT
GTCCCCCCAACCCTTGTTTCCATATGCCGCAGACCCA**TAG**CCGCCTGCAAGGCAGAGAGGACACAGGAGAGCCAG
CCCTGAGTGCCGACCTTGGGTGGCGGGGCCTGGGTCTCTCGTCCCACCCGGAGGGCACAGACACCGGCTTGCTTG
GCAGGCTGGGCCTCTGTGTCACCCACTCCTGGGTGCGTGCAGACCCTTCCCCTCCACCCCCCAGGTCTTCCAAGC
TCTGCTTCCTCAGTTTCCAAAATGGAACCACCTCACCTCCGCAGCACCCGACTTACCAGGACGCATGCCCCTCCC
TCTGCCCTCATCAAACCCACAGACCCGGACTCCCTTTCTGCCACCCCAGGCTGGTCCGGCCCCAGGTGTGGGGTC
CGCTCTCTCCACTCCCAGGGCTCCGCGCCCAAGTGAGGGGGCCCCTGCCGGAGCCTCAGACACACTGGAGTTCAG
GGCTGGGGGGGCCTTGGCACATACCTGTCCCTTGGCTATGAGCAGGCTTTGGGGGCCCTTCCGCGGCAGCCCCGG
GGGCCGAGGTAGGGTCTGGGGGCTTAGAGGCTGGGATGGCTCCTGGCCCCACCGCCAGGGGGCAAGCGCAGGCCG
GGCTGGGAGGCGGCGGCGGCGGCTCGGGCTGGGGGGTCAGGTGGACGCTGCCTCCGGGGCTGGTCGCGCATCCCT
CAGTCCCTCGGCCACCCGGGGGTCGCTCCCTCGTGCCCACCGCACCTGCCGAGCCTCTTTGGACCCAGATCTGTT
CATGCTTTTGTCTTCGTCACTGCGGCGGGGCCCTTTGATGTCTTCATCTGTATGGGGTGGAAAAATCACCGGGAA
TCCCCCTTCAGTTCTTTGAAAAAGTTCCATGACTCGAATATCTGAAATGAAGAAAACAAACCGACTCACAAACCT
CCAAGTAGCTCCAAATGCAATTTTTAAAATGGAAAACAAAAATCTGAAAGAAACGTCTTTAGTGGCTTTAAGCCC
CAAAACGTCCCTAAGGCGTCCTCGAGATGAAGACGGGGGGGAGCCCCCAGCCAGGTGGAGACCCCGCAGGACGCG
GCGGCGCCCGGTGACCGAGGCCTCGCACAGCCGGCCGCCCTGAGGGTCGGGCCGGAGCCAGGGTCCAAGAGGGGC
GCGTTTGTGTCTCGGGTTAAAATAAGGTTCCGTCCGCGTGCTGGGTCAGA

FIGURE 1842

MQTCPLAFPGHVSQALGTLLFLAASLSAQNEGWDSPICTEGVVSVSWGENTVMSCNISNAFSHVNIKLRAHGQES
AIFNEVAPGYFSRDGWQLQVQGGVAQLVIKGARDSHAGLYMWHLVGHQRNNRQVTLEVSGAEPQSAPDTGFWPVP
AVVTAVFILLVALVMFAWYRCRCSQQRREKKFFLLEPQMKVAALRAGAQQGLSRASAELWTPDSEPTPRPLALVF
KPSPLGALELLSPQPLFPYAADP

FIGURE 1843

CAGGAGAAGCTGACCAGCCGCAAGATGGACAGCCGCTGGGGCGGGCGCAGCGAGTCCATCAATGTGACCCTCAAC
GTGGAGCAGGCAGCCTACACCCGTGATGCCCTGGCCAAGGGGCTCTATGCCCGCCTCTTCGACTTCCTCGTGGAG
GCCATCAACCGTGCTATGCAGAAACCCCAGGAAGAGTACAGCATCGGTGTGCTGGACATTTACGGCTTCGAGATC
TTCCAGAAAAATGGCTTCGAGCAGTTTTGCATCAACTTCGTCAATGAGAAGCTGCAGCAAATCTTTATCGAACTT
ACCCTGAAGGCCGAGCAGGAGGAGTATGTGCAGGAAGGCATCCGCTGGACTCCAATCCAGTACTTCAACAACAAG
GTCGTCTGTGACCTCATCGAAAACAAGCTGAGCCCCCCAGGCATCATGAGCGTCTTGGACGACGTGTGCGCCACC
ATGCACGCCACGGGCGGGGGAGCAGACCAGACACTGCTGCAGAAGCTGCAGGCGGCTGTGGGGACCCACGAGCAT
TTCAACAGCTGGAGCGCCGGCTTCGTCATCCACCACTACGCTGGCAAGGTCTCCTACGACGTCAGCGGCTTCTGC
GAGAGGAACCGAGACGTTCTCTTCTCCGACCTCATAGAGCTGATGCAGTCCAGTGACCAGGCCTTCCTCCGGATG
CTCTTCCCCGAGAAGCTGGATGGAGACAAGAAGGGGCGCCCCAGCACCGCCGGCTCCAAGATCAAGAAACAAGCC
AACGACCTGGTGGCCACACTGATGAGGTGCACACCCCACTACATCCGCTGCATCAAACCCAACGAGACCAAGCAC
GCCCGAGACTGGGAGGAGAACAGAGTCCAGCACCAGGTGGAATACCTGGGCCTGAAGGAAAACATCAGGGTGCGC
AGAGCCGGCTTCGCCTACCGCCGCCAGTTCGCCAAATTCCTGCAGAGGTATGCCATTCTGACCCCCGAGACGTGG
CCGCGGTGGCGTGGGGACGAACGCCAGGGCGTCCAGCACCTGCTTCGGGCGGTCAACATGGAGCCCGACCAGTAC
CAGATGGGGAGCACCAAGGTCTTTGTCAAGAACCCAGAGTCGCTTTTCCTCCTGGAGGAGGTGCGAGAGCGAAAG
TTCGATGGCTTTGCCCGAACCATCCAGAAGGCCTGGCGGCGCCACGTGGCTGTCCGGAAGTACGAGGAGATGCGG
GAGGAAGCTTCCAACATCCTGCTGAACAAGAAGGAGCGGAGGCGCAACAGCATCAATCGGAACTTCGTCGGGGAC
TACCTGGGGCTGGAGGAGCGGCCCGAGCTGCGTCAGTTCCTGGGCAAGAAGGAGCGGGTGGACTTCGCCGATTCG
GTCACCAAGTACGACCGCCGCTTCAAGCCCATCAAGCGGGACTTGATCCTGACGCCCAAGTGTGTGTATGTGATT
GGGCGAGAGAAGATGAAGAAGGGACCTGAGAAAGGTCCAGTGTGTGAAATCTTGAAGAAGAAATTGGACATCCAG
GCTCTGCGGGGGGTCTCCCTCAGCACGCGACAGGACGACTTCTTCATCCTCCAAGAGGATGCCGCCGACAGCTTC
CTGGAGAGCGTCTTCAAGACCGAGTTTGTCAGCCTTCTGTGCAAGCGCTTCGAGGAGGCGACGCGGAGGCCCCTG
CCCCTCACCTTCAGCGACACACTACAGTTTCGGGTGAAGAAGGAGGGCTGGGGCGGTGGCGGCACCCGCAGCGTC
ACCTTCTCCCGCGGCTTCGGCGACTTGGCAGTGCTCAAGGTTGGCGGTCGGACCCTCACGGTCAGCGTGGGCGAT
GGGCTGCCCAAGAACTCCAAGCCTACCGGAAAGGGATTGGCCAAGGGTAAACCTCGGAGGTCGTCCCAAGCCCCT
ACCCGGGCGGCCCCTGGCGCCCCCCAAGGCATGGATCGAAATGGGGCCCCCCTCTGCCCACAGGGGGGGGCCCCC
TGCCCCCTGGAGAAATTCATTTGGCCCAGGGGGCACCCACAGGCCTCCCCGGCCCTCCGTCCACATCCCTGGGAT
GCCAGCAGACGACCCCGGGCACGTCCGCCCTCAGAGCACAACACAGAATTCCTCAACGTGCCTGACCAGGGGATG
GCCGGCATGCAGAGGAAGCGCAGCGTGGGGCAACGGCCAGTGCCTGTGGGCCGACCCAAGCCCCAGCCTCGGACA
CATGGTCCCAGGTGCCGGGCCCTATACCAGTACGTGGGCCAAGATGTGGACGAGCTGAGCTTCAACGTGAACGAG
GTCATTGAGATCCTCATGGAAGATCCCTCGGGCTGGTGGAAGGGCCGGCTTCACGGCCAGGAGGGCCTTTTCCCA
GGAAACTACGTGGAGAAGATCTGAGCTGGGCCCTGGGATACTGCCTTCTCTTTCGCCCGCCTATCTGCCTGCCGG
CCTGGTGGGGAGCCAGGCCCTGCCAATGAAAGCCTCGTTTACCTGGGCTGCAATAGCCTAAAAGTCCAATCCTTT
GGCCTCCAGTCCTTGCCCAGGCCCTGGGTCACCAGGTCACTGGTGCAGCCCCCGCCCCTGGGCCCTGGTTTTCCT
CCAACATCACACCTGCTGCCCATTGTCCAAAACTGTGTGTGTCAAAGGGGACTAACAGCAGAATTTACCTCCCAA
CTGCCATGTGATTAAGAAATGGGTCTTGAGTCCTGTGCTGTTGGCAAAGTTCCAGGCACAGTTGGGGAGGGGGGG
CCGGAATCCGC

FIGURE 1844

GGAGGAGGACGACAATGAAGAGGAAGGGGACAGGAAAACGGGCAAGCAGGCTTTTATGGGAGAGCAAGAGAAGTT
GGATGTACATGAGAAATCTAAGGCAGATAAGATGAAAGAAGGGTCAGATTCTTCTGTATCCTCAGAAAAAGGAGG
CCGGCTTCCTACTCCCAAGCTGAGAGAACTTGGTGGAATCCAGAGGACTCATCATGATCTCACTACTCCAGCTGT
TGGTGGTGCTGTTTTAGTGTCTCCATCTAAGATGAAGCCTCCAGCCCCAGAACAGAGGAAAAGAATGACCTCTCA
GGATTGTTTAGAAACTTCAAAGAATGATTTTACTAAGAAAGAAAGTCGTGCTGTATCCCTACTGACTTCTCCAGC
TGCTGGTATAAAAACAGTTGATCCTCTGCCTTTGCGGGAAGATTCTGAAGACAATATCCACAAATTTGCTGAGGC
AACTCTTCCAGTTTCAAAAATTCCAAAATACCCAACAAATCCCCCTGGACAGTTGCCTTCTCCACCACATGTTCC
ATCCTACTGGCATCCCTCTCGACGAATTCAGGGCTCTCTTAGAGATCCAGAGTTTCAGCACAATGTGGGAAAAGC
AAGGATGAACAATTTGCAGTTACCTCAACATGAAGCCTTTAATGATGAAGATGAGGACAGATTGTCTGAGATTTC
TGCTCGCTCTGCAGCTTCTAGTCTCCGGGCTTTTCAAACTCTGGCACGAGCTAAGAAAAGGAAGGAGAATTTCTG
GGGTAAAACA**TAA**ACCTAGCTGAGTTGCCTTTATCTAAGGAAACATTGGCATAATTTTTCTTTATTGCTTACTGT
GTTAAAATTTTTTGAGTGAAGTTTTTCCTAACATTTTCTACTTTGAAATATTTAATTTCCAATAGAACAGTTTAC
TTGGAAATTGTTAACATAGGCTTATACAAATTTAACTTTTAAAGAATTCTTTTTACATCTATCCCAGAGTACAAA
GACCTAGATTATTGAATTCTTCACATGTAACTTTCGTAATAGGTGTCATGGATAGATTTTCACCTATCCAGAGAG
TATTCTAAAAAAATAAACAAAGTGAAGTAAAAGTTAAGATCCCAGTGTGAAGTATATATTCCCCTAAGATTTGAT
ATATGTATCTTTATAATTGATGATGTTGTAAAATGAATTTGTTGTTCCTTTAACCTTTGCTGTAGTGTTTCTTTT
TATTTTAGTTCCTTCTATACATGTTTGCAGTGTTAAGATAATTGTACTTTGAAAACACCAGCTGTATATATTTTT
CTTATTTATGTAACAAAGTTTGCTGAAAGATATGTATATTTTTGATCTTTGAGTGTATTCTATTTGTGTAAGGAC
TTTGGCTTACATTTGAATAATGTCTAGATTTTGAAAAATTACCTGTATAATGGAGAATTAAAACTTTGTAGACAT
TTTGAAATAAAAATGGATCAAGTGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1845

EEDDNEEEGDRKTGKQAFMGEQEKLDVHEKSKADKMKEGSDSSVSSEKGGRLPTPKLRELGGIQRTHHDLTTPAV
GGAVLVSPSKMKPPAPEQRKRMTSQDCLETSKNDFTKKESRAVSLLTSPAAGIKTVDPLPLREDSEDNIHKFAEA
TLPVSKIPKYPTNPPGQLPSPPHVPSYWHPSRRIQGSLRDPEFQHNVGKARMNNLQLPQHEAFNDEDEDRLSEIS
ARSAASSLRAFQTLARAKKRKENFWGKT

FIGURE 1846

GGCACGAGGGCCGCACTGAGCCACAGCCCCGGGGGCCGCCTCCCGGGGCCCCTTGAGGCACTGAGGCACCGAGAC
TGGTTCTCCCCGAGAGACTCGGAAGGTGGGGAACGAGGGGACTGTGTTTGGGGAGGTGGCTTTTTCGTCTGCTGT
TGACTGAACACTACAGCGCCCTGTGGTTCCGGGCTTCGCACAGCTGTCCCAGGG**ATG**GATCGCCTGTGCTGCCTT
CGCCCGCCGCCACACCGGGACCCTGCACGGCTGCTTCTGGCCTCGACAGATGACAAAAGAAACAGCCCCAAAATA
CGACCACTCCAACCAGCAGTTCCCGCCTGCCTGCCCGCCACTGTCAGGCCTGCCCTGGCCTCCTCGTCCGCAGGG
CTGTCTGCTGGCTTCTGGGGGCAGAAGAGCGGGGAGCCCCGTGGAAGGGTCAGGGGAGACCAGGTCAGGGCAGCT
ACATTTCTGGTGATCAGCCCCATGGGGAGACGGGGCTGGCGGGATACCGCCCCCCCGGCTTCCCCACACCACTTC
TGTCTCACCCGGAAGCGTCCTTTTTTTGTGCCAGGTGTCTACCTAAGAGGGTTGGTGCCAGAAGCCCCCCATGGC
GAGTGCTGGGGCCCGGCGGTGCCCTGGGGGAGCAGATGGGGCCACCCCTGGCAGGGCCGCTACAACTTTTTCCAG
CAGCGGAGCCCTCTGGGGGGCCTGTGCTTGTGGCATCTC**TGA**GGGCCCAGATTGCACAAGGTGACCTGGCCGTGG
CCTGAGGGTGGAGTCGCCCAGCACGCAGGCCGGGGCGCTGCGGGGCTAAGTATTAGGCCTTCCCAGGGAGGGGGC
GTGCCAAGCATCCCAGAGCCGGGCTGGGACCGCCAAAACGTCGTGGCCTGGATCCTCTGGGTCTGAGTGCCTGAT
CCCCTGCCCCCCAAAAAAGCAGAGGTAGGTGTTGCAGGCCCAGGGCAGGGGTGCCTGCCCCAGGAGAGTCCCAGG
CAGTGGTTCTCGTGCCAGTGGCACCCAGGGGCAAGGACAGCCAACCCCCACCCTTGCCACGTGTGGGGCCACGTG
GGCATGTGGGGTGTGTGTTTTTACCTTGGTGAATCTCACCTGCCAACGATTTCTCGTGAGTGCCAATGTCCCCCA
GTGGTGGCAGCAGATCCTGTGGCCGGCCTGGCGGACGGGACCCAGTGATACTTGTATATTACACAGTCCTGATTT
CAGACAATTTCAACCTTAATCTATTTAAAAAAGAATATTCTATACAAGCTGTTTTTAAGCCTTTTACCATTTGAA
ATGCATGTGTTGTGCGCGTTGGGGATGGGAGGAGGGGCTGAGGAGCGGCTCAGTGTCACCTCCCACAGCCACCGG
CCCTGACCCTTAATCCAGACACCGATGGAAGTCGACTTTTCATATCTTTCTCCTGAAATGAACTCTGTTTTAAAT
TGGAATAAATTTTGTTCCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1847

MDRLCCLRPPPHRDPARLLLASTDDKRNSPKIRPLQPAVPACLPATVRPALASSSAGLSAGFWGQKSGEPRGRVR
GDQVRAATFLVISPMGRRGWRDTAPPASPHHFCLTRKRPFFVPGVYLRGLVPEAPHGECWGPAVPWGSRWGHPWQ
GRYNFFQQRSPLGGLCLWHL

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FIGURE 1848

ATTTTGTGGAATAGAGTTGATCGCTGTCTCCTCCGCAAAGCATTTTAACTCGAATAAGCAAATGCCGCCTCTGTT
TGAACGTTTTGGTATTTACAAGAGAGAAATCATTTTACCTAAGAGAACTAATTGAATTGGCAGCATCCTTGAAAT
ACCTCCGGACAAGGATCTGGGGGTGGGGGTGGAAAAGCAACTGCGAAATAGCAGACGGAGAAATTCCTTTGGAAG
TTATTCCGTAGCATAAGAGCTGAAACTTCAGAGCAAGTTTTCATTGGGCAAA**ATG**GGGGAACAACCTATCTTCAG
CACTCGAGCTCATGTCTTCCAAATTGACCCAAACACAAAGAAGAACTGGGTACCCACCAGCAAGCATGCAGTTAC
TGTGTCTTATTTCTATGACAGCACAAGAAATGTGTATAGGATAATCAGTTTAGATGGCTCAAAGGCAATAATAAA
TAGTACCATCACCCCAAACATGACATTTACTAAAACATCTCAGAAGTTTGGCCAGTGGGCTGATAGCCGGGCAAA
CACCGTTTATGGATTGGGATTCTCCTCTGAGCATCATCTTTCGAAATTTGCAGAAAAGTTTCAGGAATTTAAAGA
AGCTGCTCGACTAGCAAAGGAAAAATCACAAGAGAAGATGGAACTTACCAGTACACCTTCACAGGAATCCGCAGG
CGGGGATCTTCAGTCTCCTTTAACACCGGAAAGTATCAACGGGACAGATGATGAAAGAACACCTGATGTGACACA
GAACTCAGAGCCAAGGGCTGAACCAACTCAGAATGCATTGCCATTTTCACATAGTTCAGCAATCAGCAAACATTG
GGAGGCTGAACTGGCTACCCTCAAAGGAAATAATGCCAAACTCACTGCAGCCCTGCTGGAGTCCACTGCCAATGT
GAAACAATGGAAACAGCAACTTGCTGCCTATCAAGAGGAAGCAGAACGTCTGCACAAGCGGGTGACTGAACTTGA
ATGTGTTAGTAGCCAAGCAAATGCAGTACATACTCATAAGACAGAATTAAATCAGACAATACAAGAACTGGAAGA
GACACTGAAACTGAAGGAAGAGGAAATAGAAAGGTTAAAACAAGAAATTGATAATGCCAGAGAACTACAAGAACA
GAGGGATTCTTTGACTCAGAAACTACAGGAAGTAGAAATTCGGAACAAAGACCTGGAGGGACAACTGTCTGACTT
AGAGCAACGTCTGGAGAAAAGTCAGAATGAACAAGAAGCTTTTCGCAATAACCTGAAGACACTCTTAGAAATTCT
GGATGGAAAGATATTTGAACTAACAGAATTACGAGATAACTTGGCCAAGCTACTAGAATGCAGC**TAA**GGAAAGTG
AAATTTCAGTGCCAATTAATTAAAAGATACACTGTCTCTCTTCATAGGACTGTTTAGGCTCTGCATCAAGATTGC
ACAAAAAAAAAAAAAAAAAA

FIGURE 1849

MGEQPIFSTRAHVFQIDPNTKKNWVPTSKHAVTVSYFYDSTRNVYRIISLDGSKAIINSTITPNMTFTKTSQKFG
QWADSRANTVYGLGFSSEHHLSKFAEKFQEFKEAARLAKEKSQEKMELTSTPSQESAGGDLQSPLTPESINGTDD
ERTPDVTQNSEPRAEPTQNALPFSHSSAISKHWEAELATLKGNNAKLTAALLESTANVKQWKQQLAAYQEEAERL
HKRVTELECVSSQANAVHTHKTELNQTIQELEETLKLKEEEIERLKQEIDNARELQEQRDSLTQKLQEVEIRNKD
LEGQLSDLEQRLEKSQNEQEAFRNNLKTLLEILDGKIFELTELRDNLAKLLECS

FIGURE 1850A

GAGCCTGGGGAGGTCGAGGGTGCAGCGAGCCGTGATCGTGCTACTGCACTCCAGCCTGGGCAACACAGAGAGACC
CTGTCTCAAAACAAACAAACAAACAAACAAACAAACAAAACAAAGAAAAAAAAATGGGAGTGGGCCGGGCGCGGT
GACTCACACCTGTAATCCCAGCACTTTCGGAGGCCAAGGCGGGTGGATCACGAGGTCAGGAATTCAAGATTAGCC
TGGACAACATGGTGAAACCCCATCTCTACGAAAAATACAAAAATTAGCCAAGTATGGTGGCCGGCGCCTGTAATC
CCAGCTACTCGGGAGACTGAGGCAGAGAACTGCTTGAACCTGGGAGGCAGAGGTTGCAGTGATCCGAGATCGCGT
CACTGCACTCCAGCGTGGGCGACAGAGCGAGACTCCGTTTCAGAAAAGAAAAAAAAAAAAAAAAAAAAAGGGAG
TCGGGGTGGAGCTCTCATTGGCTCGTTGCATGTGAGTGTCCCTACGGCCTAGAAATACCAGAGAAGCACATCGGA
ACGGGCTGGAAATCCACCCAGTTAACTAGAGGGCTTTGAACCTTTTATTAACTTGGAGGTTGACTCTCCTGTCAA
CTCGATTCCCTTTTGGCTGTTTGGCAGGGTCAGTGAGACATCCCCTGGGTCGCTCGACCCCGTAGGACGGTTCAG
GGAGCCCTCCAGGTCTTCGTTTCTCCTCTTCCCCGCACAGTGCTGTTATCCAGCTGGGGGATCCAACGCACACTT
AAGGCTCCAGCAAAGTGGCTCCGCTGCCGGATGGGAGTGCCCCAGTGTGCTGGATGAAGCTGGCGCATGCACC**ATG**
TCATCATGTGTCTCTAGCCAGCCCAGCAGCAACCGGGCCGCCCCCCAGGATGAGCTGGGGGGCAGGGGCAGCAG
CAGCAGCGAAAGCCAGAAGCCCTGTGAGGCCCTGCGGGGCCTCTCATCCTTGAGCATCCACCTGGGCATGGAGTC
CTTCATTGTGGTCACCGAGTGTGAGCCGGGCTGTGCTGTGGACCTCGGCTTGGCGCGGGACCGGCCCCTGGAGGC
CGATGGCCAAGAGGTCCCCCTTGACTCCTCCGGGTCCCAGGCCCGGCCCCACCTCTCCGGTCGCAAGCTGTCTCT
GCAAGAGCGGTCCCAGGGTGGGCTGGCAGCCGGTGGCAGCCTGGACATGAACGGACGCTGCATCTGCCCGTCCCT
GCCCTACTCACCCGTCAGCTCCCCGCAGTCCTCGCCTCGGCTGCCCCGGCGGCCGACAGTGGAGTCTCACCACGT
CTCCATCACGGGTATGCAGGACTGTGTGCAGCTGAATCAGTATACCCTGAAGGATGAAATTGGAAAGGGCTCCTA
TGGTGTCGTCAAGTTGGCCTACAATGAAAATGACAATACCTACTATGCAATGAAGGTGCTGTCCAAAAAGAAGCT
GATCCGGCAGGCCGGCTTTCCACGTCGCCCTCCACCCCGAGGCACCCGGCCAGCTCCTGGAGGCTGCATCCAGCC
CAGGGGCCCCATTGAGCAGGTGTACCAGGAAATTGCCATCCTCAAGAAGCTGGACCACCCCAATGTGGTGAAGCT
GGTGGAGGTCCTGGATGACCCCAATGAGGACCATCTGTACATGGTGTTCGAACTGGTCAACCAAGGGCCCGTGAT
GGAAGTGCCCACCCTCAAACCACTCTCTGAAGACCAGGCCCGTTTCTACTTCCAGGATCTGATCAAAGGCATCGA
GTACTTACACTACCAGAAGATCATCCACCGTGACATCAAACCTTCCAACCTCCTGGTCGGAGAAGATGGGCACAT
CAAGATCGCTGACTTTGGTGTGAGCAATGAATTCAAGGGCAGTGACGCGCTCCTCTCCAACACCGTGGGCACGCC
CGCCTTCATGGCACCCGAGTCGCTCTCTGAGACCCGCAAGATCTTCTCTGGGAAGGCCTTGGATGTTTGGGCCAT
GGGTGTGACACTATACTGCTTTGTCTTTGGCCAGTGCCCATTCATGGACGAGCGGATCATGTGTTTACACAGTAA
GATCAAGAGTCAGGCCCTGGAATTTCCAGACCAGCCCGACATAGCTGAGGACTTGAAGGACCTGATCACCCGTAT
GCTGGACAAGAACCCCGAGTCGAGGATCGTGGTGCCGGAAATCAAGCTGCACCCCTGGGTCACGAGGCATGGGGC
GGAGCCGTTGCCGTCGGAGGATGAGAACTGCACGCTGGTCGAAGTGACTGAAGAGGAGGTCGAGAACTCAGTCAA
ACACATTCCCAGCTTGGCAACCGTGATCCTGGTGAAGACCATGATACGTAAACGCTCCTTTGGGAACCCATTCGA
GGGCAGCCGGCGGGAGGAACGCTCACTGTCAGCGCCTGGAAACTTGCTCACCAAAAAACCAACCAGGGAATGTGA
GTCCCTGTCTGAGCTCAAGGAAGCAAGGCAGCGAAGACAACCTCCAGGGCACCGACCCGCCCCCCGTGGGGGAGG
AGGAAGTGCTCTTGTGAGAGGCAGTCCCTGCGTGGAAAGTTGCTGGGCCCCCGCCCCCGGCTCCCCCGCACGCAT
GCATCCACTGCGGCCGGAGGAGGCCATGGAGCCCGAG**TAG**CTGCCTGGATCGCTCGACCTGGCATGCGCGCCGCG
TCGCCTCTGGGGGGCTGCTGCACCGCGTTTCCATAGCAGCATGTCCTACGGAAACCCAGCACGTGTGTAGAGCCT
CGATCGTCATCTCTGGTTATTTGTTTTTTCCTTTGTTGTTTTAAAGGGGACAAAAAAAAAAAAAAAAAGGACTTGA
CTCCATGACGTCGACCGTGGCCGCTGGCTGGCTGGACAGGCGGGTGTGAGGAGTTGCAGACCCAAACCCACGTGC
ATTTTGGGAAATTGCTTTTTAAAAGATTTTTATGCCAAAAATCCTTCATTGTGATTTTCAGAACCACGTCAGATA
TACCAAGTGACTGTGTGTGGGGTTTGACAACTGTGGAAAGGCGAGCAGAAAACTCCGGGGGTCTGAGGCCATGGA
GGTGGTTGCTGCATTTGAGAGGGAGTAGGGGGCTAGATGTGGCTCCTAGTGCAAACCGGAAACCATGGCACCTTC
CAGAGCCGTGGTCTCAAGGAGTCAGAGCAGGGCTGGCCCTCAGTAGCTGCAGGGAGCTTTGATGCAACTTATTTG
TAAGAAGGATTTTTAAATTTTTTATGGGTAGAATTGTAGTCAGGAAAACAGAAAGGGCTTGAAATTTAATAAGTG
CTGCTGGAAGGGGATTTTCCAAGCCTGGAAGGGTATTCAGCAGCTGTGGTGGGGAAACATTTCTCCTGAAAGACT
GAACGTGTTTCTTCATGACAGCTGCTCAAAGCAGGTTTCTGAGATAGCTGACCGAGCTCTGGTAAATCTCTTTGT
CAAATTACGAAAACTTCAGGGTGAAATCCTATGCTTTCATGTACATTACATGGCTTAAGATTAAACAAAAACATT
TTTCAAGTCTCTAACTAGAGTGAACTCTAGAGCACAGTAGTTCAGAAACTATTTAGAGCTTCCAGGATATATTTC
ACAGCTTCAGGCATGTGATCAGTTAGAGCCGATGAAACCTATGCCCGCCTGTATATATATTAGCAGCTTAGCTAG

FIGURE 1850B

TTCATAACCTGTATATTCTAAAGACTGCTAAGGTTTTGTTTTCATTTTAAATCCTAGCTGATTGTTGTGGTCAAT
GAAATACCCAGTTTCTGAAGGGCCAGGTGGGAAATGCTTTCACTGGACCAACACACAAATGATCATCCTGAGGAT
CTGAGCTTCCCTAGACTCCACACAATAACCTTGGGGCACCCTTTTAGAGAAGACTGTTGAAACCCACAGCACTCG
TTGGGGTATGAGGAAACCAGGGCTTGGCACAGGAAGTTCCCCTTTGTAGCTAAAAGTCCAGAAAGAAAGGGTTCA
TCTTTTTGACTTCCAACTGATATTGGGAAGTTTGGTTGAGGTTCAAGTGTGACTCCTTCCAGAGCCACAGGTAGG
GGAGTGTGAAGTTGAGGGGGAGGAAAGCTGGAAGGACTCTGCCTTGGGAGATTCCCAGCTCTGCTTTCCAGCGCT
TGGTGGAATCTGGGCTGGGGAAAGACGGCACCGGGAAACTCTGCTTCCCCATTGTTTCCATCTGATCAGCTGTGG
TGTGAGGACTTCTCAGACAAAGGCAAGGCCTCGTGCCCCTGCCCAGCCCATTCATGGAGCCCTGGGCCTTCTTGG
CTTCCATAGATCCTAAGCTCTTGACTGTAGTTTAGCCAGACTTGTTTTGCTATCTTATAAGCAGTTCAGAATTAG
GGAATGCTGGTTTTGAAGAGCAAAGGACAGGTAGTCTAGAGAGGGTCGTCTGGCCTGCTTGCTGGGTCTTTGTAA
CCCAGCACTTCCTCTTGCCCTCCTGGCTTTATGTTTATGGGAGAGGACTCAATAGCTCCACCCCTTCTGGCACCA
GATGGGGCTTGGTTAGTTTGCAATAAGCACCTTGCAGAGGTTAAAGCCAGCGGGTCCCTAGTCTTAGGCCCAGCC
TGCTTGTGTGGGCTCTGGCCTGGCCTGGTGGCTGGCCCAGGGGGCAGCAGTGCTTAGAGCTTCTGCAGGGCTTCT
CTTGTTTACACAGCTGCATCAGACAATGCCATTTCTCCCCACCACGGAACCTTCCATCTAAGATTTCTTCCAGGG
AATGCCAGCAATCAGGCAGCACCCAGCTGTGGGGGCAGTGGGGTGGGGGAGACCCACATTGATGACTTTTTTTTT
TTCTTTTAATGAAGAAACACCAAAGAAAGCTGTGGAAAGGACCTGCCCCACATGAAAAGGATAAGCCAAGATGGC
TGTAAACACAGAGCATTTGAGCTGCCACTCTTGGAGCACATTGATTTTTCAAAAGCCAGCTCTGTCAGGAAAGGA
GGTGCTGTTATGACAGCTCTTCCAGTGGGCAAAGAGGACGCCCATAATTTCTTCCATTGCTAGCTCATCTGTGGG
ACCAATTTGGTGTAAGCAACCTGTGGCCTGCACTTGTGGCCTCGAAGGAAGCACAAACCCTCCATCCACTTCCCA
TTTCCTCTGCCCTTTTCCACCTCCCCCTTCCATCCCACCAGCTGCCAGTGGCTCCCAGAAAGCCTTATTGAGCCC
CTTGTTGACACTTGGGGCTGCGGAGGCCTTTCCCTACTGGTCTGGCCTTTCCTGAGAGGCAGGTCTTCCGTCCTC
AGAGCCTTTCTGGAACAAGGAGAATGCCTGTGCAGGTGGACACACAGGCCTGGCCTGTCGCTCTCACTTGTCTTC
CAGCGGGGAGCTTCACGTTGCCGAGTGGAAGAACCATGACCTCCACTTGCTTCCAAGGTGCTAGGGAAGTTTCAG
GGTACGCTGGTTCCCCTCTCCAGCTGGAGGCCGAGTTTCTGGGGACTGCAGATTTTTCTACTCTGTGATCGATTC
AATGCCCGATGCTTCTGTTTCATTCCCGACCCTTTCTACTATGCATTTTCCTTTTATCAGGTGTATAAAGTTAAA
TACTGTGTATTTATCACTAAAAAGTACATGAACTTAAGAGACAACTAAGCCTTTCGTGTTTTTCCACAGGTGTTT
AAGCTTCTCTGTACAGTTGAAATAAACAGACAGCAAAATGGTAAAAAAAAAAAAAAAAAAA

FIGURE 1851

MSSCVSSQPSSNRAAPQDELGGRGSSSSESQKPCEALRGLSSLSIHLGMESFIVVTECEPGCAVDLGLARDRPLE
ADGQEVPLDSSGSQARPHLSGRKLSLQERSQGGLAAGGSLDMNGRCICPSLPYSPVSSPQSSPRLPRRPTVESHH
VSITGMQDCVQLNQYTLKDEIGKGSYGVVKLAYNENDNTYYAMKVLSKKKLIRQAGFPRRPPPRGTRPAPGGCIQ
PRGPIEQVYQEIAILKKLDHPNVVKLVEVLDDPNEDHLYMVFELVNQGPVMEVPTLKPLSEDQARFYFQDLIKGI
EYLHYQKIIHRDIKPSNLLVGEDGHIKIADFGVSNEFKGSDALLSNTVGTPAFMAPESLSETRKIFSGKALDVWA
MGVTLYCFVFGQCPFMDERIMCLHSKIKSQALEFPDQPDIAEDLKDLITRMLDKNPESRIVVPEIKLHPWVTRHG
AEPLPSEDENCTLVEVTEEEVENSVKHIPSLATVILVKTMIRKRSFGNPFEGSRREERSLSAPGNLLTKKPTREC
ESLSELKEARQRRQPPGHRPAPRGGGGSALVRGSPCVESCWAPAPGSPARMHPLRPEEAMEPE

FIGURE 1852

GGACACCTCAAAGATGAAGTCAGATAAGCTGGCAGTGACCTGATTAACGTTGTGGTAAGCAGATGCCACTGTGGC
TGGGAAGTACCAAATCTTCTGTTGAGTGATTCAGTCTTCCTGACTAGATTTGCCTTCTAGTGGGTGTATTAATAA
GCGTTAGTTGATATGAATTAAATGTTGCAACTTTCTATGGGTAATAAGAGGATACCTTTATAGTTTCATGATGTG
GAGACCAAGATACATAAGAAAGCAAGAATGAGTCTCCGGGTGTTCCCTCTGATCAGCAAACATGAATTCATAATT
TCATTTACTCTCATTTTTGTAATGCACTCTGAGCAATCCTCCAGGCAGATCCTATTTACTAAGCTTCAGGCTTTT
GTCCCATTTTATAATGCCCAAACACATGGAGAAAACATTTTGTTGTTTTTAAAAACAGGTATGGGATTTCTGATA
TAATCAATTTTATTGACTTCTTGGGAGTTGTAATGATCTGTGACTCACTGCATAATATTGTAGTTTTATAGGGTG
GCACATCACCCTGTGTAAAACAACTTTAATGACCTGAGGACTGATGAGTACAGGAAGTGAGGTTTATCATGAGTA
GCATTTATTAAGCATCTGCTAGAATCAAAGCACTGCATTAGCTACTAAGGTACAAAGTAAGACACAGTTTAATAA
GGAAGACAGGGCATCTACCCAAGTCAACAGTTCAGTGACATCTGTTATTTGAACCACACACCAATGCAACCGAAG
TAAATGCTGAAAGGGTGAGAAGAAGGAATAGATTACTATGCATTTTTGAGAGGATGAAGAAGGCTTCTTGGAGAA
GGTTTCTGAAAAGAGATACGGAATTAAGAGAATAGAAAAGAGCACTGACGAAGCACTCAGGATGGCTATTCAAGG
AATTGGGGATCCACAGCAGCTGTGCACAACCATCCCTAATGCCAGAAAAATGGGGTAAGGGTGAAGGGAACTGGG
TCTAGAGCTTTGCATGTTTTTTTCTGGTTAACCCTTAGAGTCACCCTGAAGGTGTGGATCCCATCTTATAATAAG
GTGAGGACACTGAGTCAGGAAACTAACTTGCTAAAATCAAGTCCTCCCAGTCCTCCCATCAGGTCCTTCCAGATC
TGGAGGAGCCAGGATTTGAACTCACATTTGTCTGACTTCAAAATCCATGCTTTTTCTTGTGTTCCAAATTGCACA
ATGGAGTCACTGCCAGTTCAAGCTCCTATGAAAAGGGATGGATGTGAAAAGTCATTTGTTGATTCCACAGATTTT
TAGTAGGTACCATGTCTCCTGCCTTTATCACTATCCTACTCCTCTGCTACAACTTCTCTGCTACAGGCACCCACT
GCAGTTACTTGATATGAGTTAAATGAATCCATCCATCCAAACTTCCATTCATTGAATAAATACTTAGCAATGGCT
TCCTTTGTATCAGGCACTATTCTAGGAGCTGGGGCTACAGTGCCAGATGGAAACCAGCAAAGCTCACTGCCCTCA
TGGAGCTTATATGTGAGTGAATAAATCTCAGGGTGGTTCTCCTGTCATAGGTCCTGGCTCCTCTGCCAGCTCTTC
CAAATGGGTTCAGAGAGGTTTTCTCCTTGTCCTGTTGTGTAACTGATAATCCCATGGTGGACCTCACTTTGCTAT
TCATATGCACTAAGTAGTTTATGGTGTGCTTTGTGGCTGGCAATTGTGACAGATTCTATTCTTCTATTGGTATGT
GGTTTCTTTGGGGCATTTGTTTGGATACTGATGGCATCTTCCGGGGGGTCTGAGGCACCTACACAAACCTCAGGTC
ACTATCACGTGATACTGGAGTTGCCTGTTAAATTATATTTCTTCTTCCACAAAACTGCAGGTTCCCTGAGGGAAA
GGTCTATGTCCTGCTCATTTTTGGATCCCTAATGGCTGGCACAGTACCTGGTGCATAATATGGTTCAACAAATAT
TTGTAAAATGAATGAATCAAATAGTCCTTCAAAGCATCTTCAGAATCAAGATTGTCATCTAGATTGCACCCGAAG
TTTATCTTTCTAGTATTCAGAATATAATCAATCATTGCTTAAATTATTCCATTTCATCATTCTTGAATAAAAGCT
ACTAATTTTAAATACTAATATCTGAGATATCTTCGAAAAGAAGATTAGTCGTTGTATGTGTTGCTTATAAATTTT
CTCTATGGTGGAAAATATTCCCAAACCATGTCTAAGCAATGAAAAACCAGTGTTCTGGCAGGAAATAAACTGATG
TTTGTTGTGTTTTGTATCTGTCTTCCCGTTCCAAATCATTTATATATACTTGATGGTCTGTGGGCTTGACTTGCA
AGTATTTTCCTGGGAGACATTTTTATTCAAAAGACCTGTATTGCCTGCCAAACCTTCATTTAAGAGACTCATTAT
GGATGTCATCTGCATCATTGCAAACTTTTCTGGTCGTCTCTATAAATAGCAAGATAATATTTACAGAGTTTTACA
TTGGCTCTTGAATTTTAAAATATTCTTATAGACAAACATTAATTGGAATGGGGGGTAAGGAGGTAGGAATGGCTT
ACTTGCGGAAATGCAGGCTCATTGTTGTGTCTAGTAGGTGCTAGGTGCATTCACACATCTCTTAAGCTTTAAACA
ACCTATTGAGCCGGTTTCCATTTCCTTGATCTATTAGATTTAAAAAAATGAAGCATAAAGGAGTTGGCTCTTGCC
CTAAGTCATACTACTGATGGAATGAGAATACAAACCAAAAACACTTTATTCAAGTCCAGGAAATATCTGCCTTGA
AAAAGAATAACTTAAAAATTAAAAGTGTCCTCTATTTGAACATGAAAACAGCTAATAAAGATGTGTTATTTTATT
TTATTATTATTAATTTTGTCCTCCCATATTGGCAAAGATAAAGCAATTGACAAAAATGGAATTCTTGTTCAATAC
TGGCAGGAGTGAAAATTGGTAGAACCTTTCTAGAAGGCAATTTGGCAACATGTATGAAAACCTAAATGTTGATAC
ACCTTTACCCAGCAGTTTGTTTAGGAATTTATCCTAATGAATAAAAGTTGTCCAAGTCTTCAAACATGAGCCCAA
AGGTATATTTCATGATGTTTATGATATTAAAACATTGGAAACAACTGAAACATCCTTCAGTAAAAGATGGATTAA
ATAAATTCCATGCAGTTGTCATTTAAAAATATTTAGATATATGTTTATTGCTATGGATATATGTTCCCAAAATAT
TATTGAATCAAAAAGTAGACTACAGGATATATGTTGAATATGAGCTCATTTATAACATTGAATATTTTAAGATAA
TGTATGTTTCATAGAGAGATCTTCACCAAATGTTAAGGATTTTTTTTTCTGGGCTGTGGTATTTGGGTGATCTTT
ACATTCTTCAGACTCATGTGTGTTTGAAACTTTTTATAATGAACATATATCATTTTTATTAGAAAAGAATAAAGT
TTTTGAAAAAA

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FIGURE 1853

DTSKMKSDKLAVT

FIGURE 1854A

GTTTGTCGCAGCAAGAACAAACAGCATTCCTTCCAGCAAATCAAGTGCCTGTTTTACAACAGAACACTTCAGTTG
CTGCAAAACAACCCCAGACTTCTGTGGTACAGAATCAACAACAGATATCACAACAGGGACCTATATATGATGAAG
TGGAATTGGATGCATTGGCTGAAATTGAGCGAATAGAGAGAGAATCAGCTATTGAAAGGGAGCGCTTCTCAAAAG
AAGTTCAAGATAAAGATAAGCCTTTGAAAAAAAGAAAACAAGATTCTTACCCACAGGAGGCTGGGGGTGCTACAG
GAGGTAATAGACCAGCTTCTCAGGAGACGGGTTCTACGGGAAATGGGTCAAGGCCAGCATTA**ATG**GTTAGCATTG
ATCTTCATCAGGCAGGAAGAGTGGACTCTCAGGCTTCTATAACTCAGGATTCAGACTCCATAAAAAAAGCCTGAAG
AAATCAAACAATGTAATGATGCACCTGTTTCTGTTCTTCAGGAAGATATTGTTGGAAGTCTTAAATCTACACCAG
AAAACCATCCTGAGACACCTAAAAAAAAGTCTGATCCTGAGCTTTCAAAGAGTGAAATGAAACAAAGTGAAAGTA
GATTAGCAGAATCTAAACCAAATGAAAACCGATTGGTGGAGACAAAATCAAGTGAAAATAAGTTAGAAACTAAAG
TTGAGACCCAAACAGAAGAACTTAAACAGAATGAGAGCAGAACAACTGAATGCAAACAAAACGAGAGCACCATAG
TTGAGCCTAAACAAAATGAAAATAGACTGTCTGACACAAAACCAAATGACAACAAACAAAATAATGGCAGATCAG
AAACAACAAAATCAAGGCCTGAAACCCCAAAGCAAAAGGGTGAAAGCCGGCCTGAGACTCCAAAACAAAAGAGTG
ATGGGCATCCTGAAACCCCAAAACAGAAGGGTGATGGAAGGCCTGAAACTCCAAAGCAAAAAGGTGAGAGCCGCC
CTGAAACTCCAAAGCAAAAAAATGAAGGGCGACCTGAAACACCAAAACACAGGCATGACAATAGGAGGGATTCTG
GAAAGCCATCTACAGAGAAAAAACCTGAAGTGTCTAAACATAAACAAGATACTAAATCTGACTCACCTCGGTTAA
AATCAGAACGAGCTGAAGCCTTAAAGCAGAGACCTGATGGGCGATCTGTTTCTGAGTCACTAAGACGTGACCATG
ATAATAAACAAAAATCAGATGACAGGGGTGAATCAGAGCGACATCGAGGGGATCAGTCTAGGGTTCGAAGACCAG
AAACATTGAGATCCTCTAGTAGAAATGAACATGGCATTAAATCTGATAGTTCAAAAACTGATAAACTAGAACGAA
AACACAGGCATGAATCAGGGGACTCAAGGGAAAGACCATCTTCTGGGGAACAAAAATCAAGACCTGACAGTCCTC
GTGTTAAACAAGGAGATTCTAATAAATCAAGATCTGATAAACTTGGTTTTAAATCACCAACTAGTAAAGATGACA
AAAGGACAGAGGGTAACAAGAGTAAAGTAGACACTAATAAAGCACACCCTGACAATAAGGCAGAATTTCCAAGTT
ATTTGTTGGGGGGCAGGTCTGGTGCGTTGAAAAATTTTGTCATTCCGAAAATCAAGAGGGATAAAGATGGCAATG
TTACTCAGGAGACAAAGAAAATGGAAATGAAAGGAGAGCCGAAAGACAAAGTAGAAAAAATAGGATTAGTTGAAG
ATCTAAATAAAGGAGCTAAGCCTGTAGTTGTGCTACAAAAACTGTCTTTGGATGATGTTCAGAAACTTATTAAAG
ATAGAGAGGACAAATCAAGAAGTTCCCTTAAACCTATCAAGAATAAACCATCAAAGTCAAATAAAGGTAGTATAG
ATCAATCAGTGTTAAAAGAATTACCCCCTGAACTCCTGGCAGAAATTGAGTCCACCATGCCACTTTGTGAACGTG
TGAAAATGAACAAACGCAAGCGTAGCACAGTTAATGAAAAGCCAAAATATGCTGAAATCAGTTCAGATGAAGATA
ATGATAGTGATGAAGCTTTTGAATCCTCTAGGAAACGACATAAAAAAGATGATGATAAAGCTTGGGAATATGAAG
AGCGTGACAGAAGAAGCTCTGGGGATCATAGGAGAAGTGGCCACTCTCATGAAGGAAGAAGGAGTTCAGGTGGTG
GTCGTTATCGAAACCGAAGTCCGTCAGATTCTGACATGGAAGATTATTCTCCTCCTCCCAGCCTTAGTGAGGTTG
CTAGGAAAATGAAGAAAAAAGAAAAACAGAAGAAAAGGAAAGCATATGAACCAAAACTAACACCTGAAGAAATGA
TGGACTCTTCAACTTTTAAGAGATTCACAGCCTCAATAGAGAATATTTTGGATAATTTGGAAGATATGGATTTTA
CTGCGTTTGGTGATGATGATGAAATTCCTCAGGAACTGCTCTTAGGAAAACATCAGCTTAATGAACTTGGCAGTG
AATCTGCTAAAATAAAAGCAATGGGTATAATGGATAAGCTTTCAACTGACAAAACTGTGAAAGTCTTAAATATCT
TGGAGAAGAATATTCAGGATGGGTCAAAGCTTTCCACTTTGTTAAATCATAATAACGATACTGAAGAAGAAGAAA
GGTTATGGAGAGACCTTATTATGGAGAGAGTTACAAAATCAGCGGATGCTTGTCTTACAACTATCAACATTATGA
CATCCCCTAACATGCCAAAAGCTGTGTACATTGAGGATGTAATTGAAAGAGTTATACAGTACACTAAATTTCATT
TGCAGAATACACTTTATCCTCAGTATGATCCTGTTTACAGATTAGATCCTCATGGAGGAGGCTTATTAAGTTCAA
AAGCAAAACGGGCTAAATGTTCTACCCATAAGCAGAGAGTAATAGTAATGCTTTATAACAAAGTTTGTGACATTG
TTAGCAGCTTATCAGAATTGCTAGAGATACAACTTCTTACAGACACAACAATTCTTCAGGTTTCATCTATGGGAA
TAACACCATTTTTTGTGGAAAATGTCAGTGAACTACAGTTGTGTGCCATTAAGTTAGTCACTGCAGTATTCTCAA
GATATGAAAAACATAGGCAGTTAATTTTGGAAGAAATTTTTACTTCACTTGCAAGATTACCAACCAGCAAGAGGA
GTTTAAGGAACTTCAGGTTAAACAGTAGTGATATGGATGGAGAACCTATGTATATTCAGATGGTTACAGCACTGG
TTTTACAACTTATTCAGTGTGTGGTACACTTACCATCATCAGAGAAGGACTCTAATGCAGAAGAAGATTCAAATA
AAAAAATTGACCAGGATGTTGTCATTACTAACTCTTATGAAACAGCTATGCGAACAGCCCAAAACTTCCTCTCCA
TCTTCCTTAAAAAATGTGGTAGTAAGCAAGGTGAAGAAGATTACAGACCACTGTTTGAAAATTTTGTTCAAGACC
TTCTTTCAACAGTCAATAAGCCTGAATGGCCAGCTGCTGAACTACTCCTTAGTTTGTTAGGGAGACTGTTGGTTC
ATCAGTTCAGTAACAAGTCAACAGAGATGGCTTTAAGAGTGGCATCTCTTGATTACCTTGGAACTGTTGCTGCAC

FIGURE 1854B

GGCTAAGAAAAGATGCTGTTACAAGCAAAATGGATCAAGGATCTATAGAACGCATTTTAAAACAGGTTTCAGGAG
GGGAAGATGAAATCCAACAATTACAAAAAGCATTGCTTGATTACTTGGATGAAAACACTGAGACTGATCCTTCAC
TAGTGTTTTCTCGTAAATTCTATATAGCCCAGTGGTTTCGAGACACAACTCTGGAAACAGAAAAAGCAATGAAAT
CACAAAAAGATGAAGAATCATCTGAAGGAACACATCATGCAAAGGAAATTGAGACAACTGGCCAAATTATGCATC
GAGCTGAAAACCGAAAAAAGTTTCTTAGAAGCATTATCAAAACCACACCTTCTCAGTTTAGCACATTAAAGATGA
ACTCTGATACTGTGGACTATGATGATGCTTGCTTGATTGTTCGATACTTGGCCTCCATGAGGCCGTTTGCCCAGA
GCTTTGATATTTATTTGACACAGATCCTACGAGTTCTTGGTGAAAATGCAATTGCTGTTCGAACAAAAGCCATGA
AGTGTTTGTCTGAGGTTGTTGCTGTAGACCCCAGTATTCTAGCAAGGCTTGATATGCAACGAGGTGTTCATGGAC
GATTGATGGATAATTCGACTAGTGTCCGAGAAGCAGCAGTAGAATTACTAGGTCGATTTGTCCTTTGTCGACCTC
AGCTTGCTGAACAGTATTATGATATGCTGATTGAAAGAATATTGGATACTGGTATCAGTGTCAGGAAAAGAGTAA
TAAAGATTCTCAGAGACATTTGTATTGAACAACCAACATTTCCAAAAATCACAGAAATGTGTGTAAAAATGATTC
GCAGAGTCAATGATGAAGAGGGCATTAAGAAATTAGTAAATGAAACATTCCAGAAACTCTGGTTTACTCCAACTC
CACACAATGACAAAGAAGCAATGACAAGGAAAATTTTAAACATTACCGATGTGGTTGCAGCATGCAGAGATACTG
GATATGACTGGTTTGAGCAACTGCTTCAAAACTTGTTGAAGTCCGAAGAGGATTCCTCATATAAACCTGTGAAGA
AAGCTTGTACTCAACTTGTTGATAACCTAGTTGAGCACATTCTTAAATATGAGGAATCTCTAGCTGACTCTGACA
ATAAAGGTGTGAATTCTGGAAGATTGGTAGCTTGCATAACCACTTTGTTCTTATTCAGCAAAATAAGACCCCAGC
TCATGGTTAAACATGCAATGACTATGCAACCATACCTTACCACTAAATGTAGTACGCAAAATGATTTCATGGTTA
TCTGCAATGTTGCAAAAATCCTAGAGCTAGTTGTACCACTGATGGAGCATCCAAGTGAAACTTTTCTTGCCACTA
TTGAGGAAGATCTAATGAAGCTCATCATCAAATATGGCATGACTGTAGTGCAACATTGTGTGAGCTGTCTTGGAG
CTGTTGTAAATAAAGTGACACAAAATTTTAAATTTGTGTGGGCTTGTTTCAATAGATACTATGGTGCCATTTCAA
AATTAAAAAGTCAACACCAAGAGGACCCAAATAACACTTCACTTCTAACAAACAAACCAGCACTTCTTAGATCCC
TTTTCACCGTTGGAGCACTATGTCGGCATTTTGATTTTGATCTGGAAGATTTTAAAGGCAACAGCAAGGTTAACA
TAAAAGATAAAGTACTTGAACTATTGATGTATTTTACAAAACACTCAGATGAAGAAGTACAAACAAAAGCTATCA
TTGGTCTAGGATTTGCCTTTATTCAGCATCCAAGTCTAATGTTCGAGCAAGAAGTGAAGAATCTATATAATAATA
TTTTATCTGATAAGAACTCCTCAGTCAATTTAAAAATACAAGTGTTAAAAAACCTCCAGACCTACCTACAAGAAG
AAGATACACGTATGCAGCAGGCAGATAGAGACTGGAAGAAAGTTGCAAAACAGGAAGACTTAAAAGAAATGGGTG
ATGTTTCCTCAGGGATGAGTAGTTCCATCATGCAGCTTTATCTCAAACAGGTGCTTGAGGCATTTTTTCACACCC
AGTCAAGTGTACGCCACTTTGCCCTAAATGTCATTGCATTGACTCTAAATCAAGGTCTTATTCATCCAGTTCAGT
GTGTGCCATATTTAATTGCTATGGGCACAGACCCAGAACCTGCTATGCGGAACAAGGCTGATCAGCAACTTGTGG
AAATAGACAAAAAATATGCTGGATTCATTCATATGAAAGCAGTGGCTGGTATGAAGATGTCTTACCAGGTACAAC
AGGCAATCAACACATGCCTAAAAGATCCTGTAAGGGGTTTCAGACAAGACGAGTCCTCTAGCGCTTTGTGTTCAC
ACCTTTACTCCATGATCCGTGGAAACCGCCAACACAGACGAGCCTTTCTTATTTCTTTACTCAACCTCTTTGATG
ACACAGCAAAAACAGACGTGACTATGCTCTTGTATATAGCAGACAATCTAGCCTGTTTTCCATACCAGACACAGG
AAGAGCCGTTGTTTATAATGCATCATATAGACATTACACTCTCAGTTTCTGGTAGTAACCTACTGCAGTCATTCA
AGGAGTCTATGGTAAAGGACAAAAGGAAAGAGAGAAAATCATCACCTAGTAAGGAAAATGAGTCAAGCGACAGTG
AAGAAGAAGTTTCCAGGCCTCGGAAGTCACGGAAACGTGTAGATTCAGATTCAGATTCAGATTCAGAAGACGATA
TAAATTCAGTGATGAAATGTTTGCCAGAAAATTCAGCTCCTTTAATCGAATTTGCAAATGTGTCCCAGGGTATTT
TATTACTTCTCATGTTAAAACAACATTTGAAGAATCTTTGTGGATTTTCTGATAGTAAAATTCAGAAGTACTCTC
CATCTGAATCTGCAAAAGTATATGATAAAGCGATAAACCGAAAAACAGGAGTTCATTTTCATCCAAAACAAACAC
TGGACTTCCTGCGGAGTGACATGGCTAATTCCAAAATCACAGAAGAGGTGAAAAGGAGTATAGTAAAACAGTATC
TAGATTTCAAACTTCTCATGGAACATCTGGACCCTGATGAAGAAGAAGAAGAAGGGGAGGTTTCAGCTAGCACAA
ATGCTCGGAACAAAGCAATTACCTCACTGCTTGGAGGAGGCAGCCCTAAAAATAATACAGCAGCAGAGACAGAAG
ATGATGAAAGTGATGGGGAGGATAGAGGAGGAGGCACTTCAGGGGTGAGGCGGAGGAGGAGTCAACGTATTTCGC
AGCGTATTACGTAAAATGATTTTTATGTGCTTATATATGTCAGTCTATTAAATGTACACCAAGTAATGTAATACT
TAAAAGAGAAAACATTTTGTAGATAGAGATTCTCTACTTACCCGTTTATACATCCTTTTGTAGAAAGTTTAACAT
AAAAGACAATAAAAAAACAGAAATGAGATTT

FIGURE 1855

MVSIDLHQAGRVDSQASITQDSDSIKKPEEIKQCNDAPVSVLQEDIVGSLKSTPENHPETPKKKSDPELSKSEMK
QSESRLAESKPNENRLVETKSSENKLETKVETQTEELKQNESRTTECKQNESTIVEPKQNENRLSDTKPNDNKQN
NGRSETTKSRPETPKQKGESRPETPKQKSDGHPETPKQKGDGRPETPKQKGESRPETPKQKNEGRPETPKHRHDN
RRDSGKPSTEKKPEVSKHKQDTKSDSPRLKSERAEALKQRPDGRSVSESLRRDHDNKQKSDDRGESERHRGDQSR
VRRPETLRSSSRNEHGIKSDSSKTDKLERKHRHESGDSRERPSSGEQKSRPDSPRVKQGDSNKSRSDKLGFKSPT
SKDDKRTEGNKSKVDTNKAHPDNKAEFPSYLLGGRSGALKNFVIPKIKRDKDGNVTQETKKMEMKGEPKDKVEKI
GLVEDLNKGAKPVVVLQKLSLDDVQKLIKDREDKSRSSLKPIKNKPSKSNKGSIDQSVLKELPPELLAEIESTMP
LCERVKMNKRKRSTVNEKPKYAEISSDEDNDSDEAFESSRKRHKKDDDKAWEYEERDRRSSGDHRRSGHSHEGRR
SSGGGRYRNRSPSDSDMEDYSPPPSLSEVARKMKKKEKQKKRKAYEPKLTPEEMMDSSTFKRFTASIENILDNLE
DMDFTAFGDDDEIPQELLLGKHQLNELGSESAKIKAMGIMDKLSTDKTVKVLNILEKNIQDGSKLSTLLNHNNDT
EEEERLWRDLIMERVTKSADACLTTINIMTSPNMPKAVYIEDVIERVIQYTKFHLQNTLYPQYDPVYRLDPHGGG
LLSSKAKRAKCSTHKQRVIVMLYNKVCDIVSSLSELLEIQLLTDTTILQVSSMGITPFFVENVSELQLCAIKLVT
AVFSRYEKHRQLILEEIFTSLARLPTSKRSLRNFRLNSSDMDGEPMYIQMVTALVLQLIQCVVHLPSSEKDSNAE
EDSNKKIDQDVVITNSYETAMRTAQNFLSIFLKKCGSKQGEEDYRPLFENFVQDLLSTVNKPEWPAAELLLSLLG
RLLVHQFSNKSTEMALRVASLDYLGTVAARLRKDAVTSKMDQGSIERILKQVSGGEDEIQQLQKALLDYLDENTE
TDPSLVFSRKFYIAQWFRDTTLETEKAMKSQKDEESSEGTHHAKEIETTGQIMHRAENRKKFLRSIIKTTPSQFS
TLKMNSDTVDYDDACLIVRYLASMRPFAQSFDIYLTQILRVLGENAIAVRTKAMKCLSEVVAVDPSILARLDMQR
GVHGRLMDNSTSVREAAVELLGRFVLCRPQLAEQYYDMLIERILDTGISVRKRVIKILRDICIEQPTFPKITEMC
VKMIRRVNDEEGIKKLVNETFQKLWFTPTPHNDKEAMTRKILNITDVVAACRDTGYDWFEQLLQNLLKSEEDSSY
KPVKKACTQLVDNLVEHILKYEESLADSDNKGVNSGRLVACITTLFLFSKIRPQLMVKHAMTMQPYLTTKCSTQN
DFMVICNVAKILELVVPLMEHPSETFLATIEEDLMKLIIKYGMTVVQHCVSCLGAVVNKVTQNFKFVWACFNRYY
GAISKLKSQHQEDPNNTSLLTNKPALLRSLFTVGALCRHFDFDLEDFKGNSKVNIKDKVLELLMYFTKHSDEEVQ
TKAIIGLGFAFIQHPSLMFEQEVKNLYNNILSDKNSSVNLKIQVLKNLQTYLQEEDTRMQQADRDWKKVAKQEDL
KEMGDVSSGMSSSIMQLYLKQVLEAFFHTQSSVRHFALNVIALTLNQGLIHPVQCVPYLIAMGTDPEPAMRNKAD
QQLVEIDKKYAGFIHMKAVAGMKMSYQVQQAINTCLKDPVRGFRQDESSSALCSHLYSMIRGNRQHRRAFLISLL
NLFDDTAKTDVTMLLYIADNLACFPYQTQEEPLFIMHHIDITLSVSGSNLLQSFKESMVKDKRKERKSSPSKENE
SSDSEEEVSRPRKSRKRVDSDSDSDSEDDINSVMKCLPENSAPLIEFANVSQGILLLLMLKQHLKNLCGFSDSKI
QKYSPSESAKVYDKAINRKTGVHFHPKQTLDFLRSDMANSKITEEVKRSIVKQYLDFKLLMEHLDPDEEEEEGEV
SASTNARNKAITSLLGGGSPKNNTAAETEDDESDGEDRGGGTSGSLRRSKRNSDSTELAAQMNESVDVMDVIAIC
CPKYKDRPQIARVVQKTSSGFSVQWMAGSYSGSWTEAKRRDGRKLVPWVDTIKESDIIYKKIALTSANKLTNKVV
QTLRSLYAAKDGTSS

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FIGURE 1856

TTTTTTAATTAGGATAATGCCTTTATTAACGAGAATGAAACGTTCATTCCTCCTTCCACTCCTTCTCGTTGGTTT
TCTGGACACAGCTCACCTGATCCTGCTAGAAACGTTGTCAGTCTGCTTGTGGCTTCCCTCCTTGATTGACTCACG
CTGTGTGATGTCT**TGA**GAAGTATCTATCCACTTCATGTGAATGAGCACTCCAATATCAGCCAACATCAATCATTC
TTACCATGTCACTTCCCATCATGGAACCACTCATGGTTGCTGGTGGAACGCCAGGATTAGCTTCATAACCTATGC
CACCACCACCTCCTAGAGGTGGAAATTTCTGGCCTCCTGAACCATAGGGATCTCCCATGTTCATTGCTCCTCCGC
CACCCATTCGCATGTCTCTTTCCCGTGGATCCATGTAGCCCATTCGGCTGTAACTTTCCTCTCTTTGGCGCCTC

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FIGURE 1857

FLIRIMPLLTRMKRSFLLPLLLVGFLDTAHLILLETLSVCLWLPSLIDSRCVMS

FIGURE 1858

GCTCACTGAGCACCGTCCCAGCATCCGGACACCACAGCGGCCCTTCGCTCCACGCAGAAAACCACACTTCTCATA
CCTTCACTCAACACTTCCTTCCCCAAAGCCAGAAG**ATG**CACAAGGAGGAACATGAGGTGGCTGTGCTGGGGGCAC
CCCCCAGCACCATCCTTCCAAGGTCCACCGTGATTAACATCCACAGCGAGACCTCCGTGCCCGACCATGTCGTCT
GGTCCCTGTTCAACACCCTCTTCTTGAACTGGTGCTGTCTGGGCTTCATAGCATTCGCCTACTCCGTAAAGTCTA
GGGACAGGAAGATGGTTGGCGACGTGACCGGGGCCCAGGCCTATGCCTCCACCGCCAAGTGCCTGAACATCTGGG
CCCTGATTCTGGGCATCCTCATGACCATTGGATTCATCCTGTTACTGGTATTCGGCTCTGTAACAGTCTACCATA
TTATGTTACAGATAATACAGGAAAAACGGGGTTAC**TAG**TAGCCGCCCATAGCCTGCAACCTTTGCACTCCACTGT
GCAATGCTGGCCCTGCACGCTGGGGCTGTTGCCCCTGCCCCCTTGGTCCTGCCCCTAGATACAGCAGTTTATACC
CACACACCTGTCTACAGTGTCATTCAATAAAGTGCACGTGCTTGTGA

FIGURE 1859

MHKEEHEVAVLGAPPSTILPRSTVINIHSETSVPDHVVWSLFNTLFLNWCCLGFIAFAYSVKSRDRKMVGDVTGA
QAYASTAKCLNIWALILGILMTIGFILLLVFGSVTVYHIMLQIIQEKRGY

FIGURE 1860

ATCAGACAGAAGGGGATTTCAGTTTGCAAATAATGAGCAATGTAGCAATTTTAACACATTTCATAAATATATATT
TTGTCATTGGTGGAGAGCACCATTTGTTGTTTTGAATATACTTTAAAGGAAGAGGTACAAGGACATAAATGTTGA
GATTACCTACAGGATGGAAATAGCAGTACAGTTCATTGTAGATATTTTGAAATGTTTTTGATTGTTTTATATAAC
CTAGAGTGACTTCCCTTACCCTTATTTAGATCTGCATATATAGTTCTAGTATGAAGTTTAATAGTTAAGGAGTTA
GCTATTTGTTATCTTTAAGAGTAGGGTATTGACGTGAACAATTGCAGTATTTTGCATGATACTGTTTTATAGATG
ACCTTTTAGGAAAGTGGTGCATTTATTAATTGAACTGAAGAAGTAGTTCAGTTGAATTCAGTATCATAATTCACA
AATTGGAGGCTGTTGATTTTGATTCATTTAAGGTTTAAAATCTTTATTAATTGCAAACAGTGCAATTATTTATAC
TTCACAGTGCCTTCCCAGACCTTCCACCTTAGGTTCTGCTGCAAAAAGCACCAGTGCTGAAGATGCTGCAAGCAC
CAAATCATAGCTCATAAAATCAGGTCCTGAGATAGTTACCCATAAAGAGGAATCCTTTGAGTGTATGCCATTGGT
GAGCCGATGAGCATGGACCATAGAAGGGCTCAATGTAGAAGAAACTACCCGTGTGTAAAAAGAAGATTGGCTTAA
AATGGCTACTGTGATGGGAACAGTGTCTTAGGGAGATGCAGCTTGGACTTGAGGTAAATTGAATACTTTACAACT
GTGGTTTAGAGTTTGCTTTAATGACATTGTATGTAAAAGGTCACATGATTGCTGTAATTTTGTATTCATTATGGT
TTCCTCAATAAATGTACATTGATGACTA

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FIGURE 1861

SDRRGFQFANNEQCSNFNTFHKYIFCHWWRAPFVVLNIL

FIGURE 1862A

GGATCCTTGAGGGCACTGGTGCGACTTTCAGGTGAGGTCTTAGCAGATGAAAGCGGCTGGCTGTGGCCCGCGCCA
GTAGTGCTTTCTGCTCCGCACTCGCCGTGAGCCAGGTGTGCAACCGGATTTGGGGCGAGGGTCGCGCTGGCTACC
TCGCATGCGCAGAGCCGGAAGCCCGCTGACCGGACTACAGCTCCCAGAAGAGCCTTGTGGAGGCCGCAGACGCGA
AGCCGCTGGCGCCATCTTGAAATCTGATCCTCCATCCCCGAGGCTTTGCGTCTGCGCGGCCGGCCGCTGCTGCTC
CGGGAGCCCAGTCTGCTAAAAGGGGAGGACGTTGAGGACGCGGCGGCTGGCGGGAGAGACAGCTGGGGAGAGACA
TGGCAGGGTCGGAGCGCGGCCTGCGCCTCTGTCACTCAGCATCCTCTTAGGCGTTTCCACGCCCGCCCCCTGCCC
GAGGGGCGGGGCTGACGGCTCTGGTACCCGGAGTCGGCGCGCGGGGCAGGGGCGCGCCCCTGCAGAGTGGGGACC
CCACTGGGCTGTGCCATGCTGACCGGAGACCACCGAGGCGGGAGACAGAGCGCGGCGAAGAGCCATTGAGTGGTC
ACCCAGTAGCCGCCGCCGCCGCCGCCTCGGGAAGCTTGCCACCCGCTAGGAGGGAAG**ATG**AAGGAGATTTGCAGG
ATCTGTGCCCGAGAGCTGTGTGGAAACCAGCGGCGCTGGATCTTCCACACGGCGTCCAAGCTCAATCTCCAGGTT
CTGCTTTCGCACGTCTTGGGCAAGGATGTCCCCCGCGATGGCAAAGCCGAGTTCGCTTGCAGCAAGTGTGCTTTC
ATGCTTGATCGAATCTATCGATTCGACACAGTTATTGCCCGGATTGAAGCGCTTTCTATTGAGCGCTTGCAAAAG
CTGCTACTGGAGAAGGATCGCCTCAAGTTCTGCATTGCCAGTATGTATCGGAAGAATAACGATGACTCTGGCGCG
GAGATCAAGGCGGGGAATGGGACGGTTGACATGTCCGTCTTACCCGATGCGAGATACTCTGCACTGCTCCAGGAG
GACTTCGCCTATTCAGGGTTTGAGTGCTGGGTGGAGAATGAGGATCAGATCCAGGAGCCACACAGCTGCCATGGT
TCAGAAGGCCCTGGAAACCGACCCAGGAGATGCCGTGGTTGTGCCGCTTTGCGGGTTGCTGATTCTGACTATGAA
GCCATTTGTAAGGTACCTCGAAAGGTGGCCAGAAGTATCTCCTGCGGCCCTTCTAGCAGGTGGTCGACCAGCATT
TGCACTGAAGAACCAGCGTTGTCTGAGGTTGGGCCACCCGACTTAGCAAGCACAAAGGTACCCCCAGATGGAGAA
AGCATGGAGGAAGAGACGCCTGGTTCCTCTGTGGAATCTTTGGATGCAAGCGTCCAGGCTAGCCCTCCACAACAG
AAAGATGAGGAGACTGAGAGAAGTGCAAAGGAACTTGGAAAGTGTGACTGTTGTTCAGATGATCAGGCTCCGCAG
CATGGGTGTAATCACAAGCTGGAATTAGCTCTTAGCATGATTAAAGGTCTTGATTATAAGCCCATCCAGAGCCCC
CGAGGGAGCAGGCTTCCGATTCCAGTGAAATCCAGCCTACCTGGAGCCAAGCCTGGCCCTAGCATGACAGATGGA
GTTAGTTCCGGTTTCCTTAACAGGTCTTTGAAACCCCTTTACAAGACACCTGTGAGTTATCCCTTGGAGCTTTCA
GACCTGCAGGAGCTGTGGGATGATCTCTGTGAAGATTATTTGCCGCTCCGGGTCCAGCCCATGACTGAAGAGTTG
CTGAAACAACAAAAGCTGAATTCACATGAGACCACTATAACTCAGCAGTCTGTATCTGATTCCCACTTGGCAGAA
CTCCAGGAAAAAATCCAGCAAACAGAGGCCACCAACAAGATTCTTCAAGAGAAACTTAATGAAATGAGCTATGAA
CTAAAGTGTGCTCAGGAGTCGTCTCAAAAGCAAGATGGTACAATTCAGAACCTCAAGGAAACTCTGAAAAGCAGG
GAACGTGAGACTGAGGAGTTGTACCAGGTAATTGAAGGTCAAAATGACACAATGGCAAAGCTTCGAGAAATGCTG
CACCAAAGCCAGCTTGGACAACTTCACAGCTCAGAGGGTACTTCTCCAGCTCAGCAACAGGTAGCTCTGCTTGAT
CTTCAGAGTGCTTTATTCTGCAGCCAACTTGAAATACAGAAGCTCCAGAGGGTGGTACGACAGAAAGAGCGCCAA
CTGGCTGATGCCAAACAATGTGTGCAATTTGTAGAGGCTGCAGCACACGAGAGTGAACAGCAGAAAGAGGCTTCT
TGGAAACATAACCAGGAATTGCGAAAAGCCTTGCAGCAGCTACAAGAAGAATTGCAGAATAAGAGCCAACAGCTT
CGTGCCTGGGAGGCTGAAAAATACAATGAGATTCGAACCCAGGAACAAAACATCCAGCACCTAAACCATAGTCTG
AGTCACAAGGAGCAGTTGCTTCAGGAATTTCGGGAGCTCCTACAGTATCGAGATAACTCAGACAAAACCCTTGAA
GCAAATGAAATGTTGCTTGAGAAACTTCGCCAGCGAATACATGATAAAGCTGTTGCTCTGGAGCGGGCTATAGAT
GAAAAATTCTCTGCTCTAGAAGAGAAAGAAAAAGAACTGCGCCAGCTTCGTCTTGCTGTGAGAGAGCGAGATCAT
GACTTAGAGAGACTGCGCGATGTCCTCTCCTCCAATGAAGCTACTATGCAAAGTATGGAGAGTCTCCTGAGGGCC
AAAGGCCTGGAAGTGGAACAGTTATCTACTACCTGTCAAAACCTCCAGTGGCTGAAAGAAGAAATGGAAACCAAA
TTTAGCCGTTGGCAGAAGGAACAAGAGAGTATCATTCAGCAGTTACAGACGTCTCTTCATGATAGGAACAAAGAA
GTGGAGGATCTTAGTGCAACACTGCTCTGCAAACTTGGACCAGGGCAGAGTGAGATAGCAGAGGAGCTGTGCCAG
CGTCTACAGCGAAAGGAAAGGATGCTGCAGGACCTTCTAAGTGATCGAAATAAACAAGTGCTGGAACATGAAATG
GAGATTCAAGGCCTGCTTCAGTCTGTGAGCACCAGGGAGCAGGAAAGCCAAGCTGCTGCAGAGAAGTTGGTGCAA
GCCTTAATGGAAAGAAATTCAGAATTACAGGCCCTGCGCCAATATTTAGGAGGGAGAGACTCCCTGATGTCCCAA
GCACCCATCTCTAACCAACAAGCTGAAGTTACCCCCACTGGCCGTCTTGGAAAACAGACTGATCAAGGTTCAATG
CAGATACCTTCCAGAGATGATAGCACTTCATTGACTGCCAAAGAGGATGTCAGCATACCCAGATCCACATTAGGA
GACTTGGACACAGTTGCAGGGCTGGAAAAAGAACTGAGTAATGCCAAAGAGGAACTTGAACTCATGGCTAAAAAA
GAAAGAGAAAGTCAGATGGAACTTTCTGCTCTACAGTCCATGATGGCTGTGCAGGAAGAAGAGCTGCAGGTGCAG
GCTGCTGATATGGAGTCTCTGACCAGGAACATACAGATTAAAGAAGATCTCATAAAGGACCTGCAAATGCAACTG

FIGURE 1862B

GTTGATCCTGAAGACATACCAGCTATGGAACGCCTGACCCAGGAAGTCTTACTTCTTCGGGAAAAAGTTGCTTCA
GTAGAATCCCAGGGTCAAGAAATTTCAGGAAACCGAAGACAACAGTTGCTGCTGATGCTAGAAGGACTAGTAGAT
GAACGGAGTCGGCTCAATGAGGCCTTACAAGCAGAGAGACAGCTCTATAGCAGTCTGGTGAAGTTCCATGCCCAT
CCAGAGAGCTCTGAGAGAGACCGAACTCTGCAGGTGGAACTGGAAGGGGCTCAGGTGTTACGCAGTCGGCTAGAA
GAAGTTCTTGGAAGAAGCTTGGAGCGCTTAAACAGGCTGGAGACCCTGGCCGCCATTGGAGGTGCAGCTGCAGGG
GATGACACCGAAGATACAAGCACTGAGTTCACTGACAGTATTGAGGAGGAGGCTGCACACCATAGTCACCAGCAA
CTA**TAG**CTTCAGAAGCATTTTTACTTGCAAGACGATGGACACATTCCCCTTGGGCTTTTTGTAACTGAAACGCAC
CACAGAAGACAGGGAGTCATCGAAGGGCTGCTCGGGGAGGTGGCAGGGCGGAGGACCTGCTTGGGAAGAAACTCC
AAGAAGATTGGAATGCTTCCAAAGCAAGAATCTTTCTCAGTGAAATCTCATTATACAAAGAGAACCTTATGCAAC
CTGACAAACCACTGAGGTCATGGTGACTCAGTGATCAGCAGATGGTACTTCAACAGCAATCCCCTGTCAAACCTC
AGAACTTGAGGCTGAAACATTGCTTCCACCCACCATCAGTGAAGATGTAACTAGCATGTTACAAGAGTGAATAAT
CTGGACTTCAGAGATTAAGTCACCAATAGTGATCTCACAAGCACTCACCGGAACTCCTATAATGTCTCCACTTTG
TCCATGCCATTTAGCAATCTCATCTCCTAAATGGACTGTGCCTATGATTCTTAAGGAGAAAGTGAATCATTGGTA
GATATCCTGCACAAGCAGCTGGACTTTCCAGTAATAGCTTTCTTGGGGCTATTAGGAAAATTAAACAAGAAATGA
GGCTTTCTGGGTCTGCCTGTATGTCTTCTGCATAAGACAAAGAAGAGACATCGAATCAACCAATAAGAAGAGCCC
AAATAAGCATCCTCAAATCTTTTGGGATTTGGCACTTGGGGACATGAGTAGTTGTCTGGGATACGTCATATTCTC
AACAGTTTCTTTGTAGTAGTAGGATCACCTTCTTATAATAGGATCACCTTCTTGTTGCTATAGCTGTACCCGACC
TTCCCTTCTCCCTTGAGTGCTTGCATGAGCTCCACTTTTCCTTTTGCTTGAACAGCTTCTCCTGAGTCCTCCTTA
CCGATGGTTGTGACTTTAATTATATACATCTCTGTCCCTCCAGACAGATCCCTCTGTCCTCACTCTCTGATTTCA
TTGAGGATCTTGGGTGAGAGAGAGGGACCTGCAGGATGAACAAATGTCTACTCTAAGACAGCTAGATTGGGAGGT
TGGCTGGTCACTGATGGTTATAATGACTGTGGGACAGGATTAACTTCAGAATAAATGAACAGGAGACACAGATAT
GAAGAAAGTTTCTGATTGATATGGTCTGAAGTACTCCTGGTATTGCAAGTCATTTGCTCTAATTCTCAATTGTAG
GCAAACTGATTTGTAAATTTGCTTCTTCAGCCTTCTTTCCTGTAGCCTAGCATGGAGAATCTGACCAGACCCCAT
TTTGAGAAGGTCAGCCTACACTGGAATGAACTTTTTACATTAGGGCATTTGTATTTCCCTCACAATACTTGCCAC
ATTACTTGGCATAGGAGAGATGCTTAGTGTAATTATAAGTTAACAAGCCTTTGGATCAGGGCTTGACTCATGATA
GACAAAGTATATGCCTGCTGGATGGAAGAATCTCTTGGGCGAGCACCATTTTTCTTTCCATCACCTTTCCTTGAA
AATATATCTTCAGCTTTGGGTAGGAGGAATCTTGGTGTATGAAATCATTGCAAATTTACTTCATCTTTTCTGGAG
TTTGAAGTTGTGACTCTCCTGCTACCAATTAAATAAAGCTTACTTTGCCAT

FIGURE 1863

MKEICRICARELCGNQRRWIFHTASKLNLQVLLSHVLGKDVPRDGKAEFACSKCAFMLDRIYRFDTVIARIEALS
IERLQKLLLEKDRLKFCIASMYRKNNDDSGAEIKAGNGTVDMSVLPDARYSALLQEDFAYSGFECWVENEDQIQE
PHSCHGSEGPGNRPRRCRGCAALRVADSDYEAICKVPRKVARSISCGPSSRWSTSICTEEPALSEVGPPDLASTK
VPPDGESMEEETPGSSVESLDASVQASPPQQKDEETERSAKELGKCDCCSDDQAPQHGCNHKLELALSMIKGLDY
KPIQSPRGSRLPIPVKSSLPGAKPGPSMTDGVSSGFLNRSLKPLYKTPVSYPLELSDLQELWDDLCEDYLPLRVQ
PMTEELLKQQKLNSHETTITQQSVSDSHLAELQEKIQQTEATNKILQEKLNEMSYELKCAQESSQKQDGTIQNLK
ETLKSRERETEELYQVIEGQNDTMAKLREMLHQSQLGQLHSSEGTSPAQQQVALLDLQSALFCSQLEIQKLQRVV
RQKERQLADAKQCVQFVEAAAHESEQQKEASWKHNQELRKALQQLQEELQNKSQQLRAWEAEKYNEIRTQEQNIQ
HLNHSLSHKEQLLQEFRELLQYRDNSDKTLEANEMLLEKLRQRIHDKAVALERAIDEKFSALEEKEKELRQLRLA
VRERDHDLERLRDVLSSNEATMQSMESLLRAKGLEVEQLSTTCQNLQWLKEEMETKFSRWQKEQESIIQQLQTSL
HDRNKEVEDLSATLLCKLGPGQSEIAEELCQRLQRKERMLQDLLSDRNKQVLEHEMEIQGLLQSVSTREQESQAA
AEKLVQALMERNSELQALRQYLGGRDSLMSQAPISNQQAEVTPTGRLGKQTDQGSMQIPSRDDSTSLTAKEDVSI
PRSTLGDLDTVAGLEKELSNAKEELELMAKKERESQMELSALQSMMAVQEEELQVQAADMESLTRNIQIKEDLIK
DLQMQLVDPEDIPAMERLTQEVLLLREKVASVESQGQEISGNRRQQLLLMLEGLVDERSRLNEALQAERQLYSSL
VKFHAHPESSERDRTLQVELEGAQVLRSRLEEVLGRSLERLNRLETLAAIGGAAAGDDTEDTSTEFTDSIEEEAA
HHSHQQL

FIGURE 1864

GGGCAACTCACCCTCACTCAGAGGTCTTCTGGTTCTGGAAACAACTCTAGCTCAGCCTTCTCCACC**ATG**AGCCTC
AGACTTGATACCACCCCTTCCTGTAACAGTGCGAGACCACTTCATGCCTTGCAGGTGCTGCTGCTTCTGTCATTG
CTGCTGACTGCTCTGGCTTCCTCCACCAAAGGACAAACTAAGAGAAACTTGGCGAAAGGCAAAGAGGAAAGTCTA
GACAGTGACTTGTATGCTGAACTCCGCTGCATGTGTATAAAGACAACCTCTGGAATTCATCCCAAAAACATCCAA
AGTTTGGAAGTGATCGGGAAAGGAACCCATTGCAACCAAGTCGAAGTGATAGCCACACTGAAGGATGGGAGGAAA
ATCTGCCTGGACCCAGATGCTCCCAGAATCAAGAAAATTGTACAGAAAAAATTGGCAGGTGATGAATCTGCTGAT
TAATTTGTTCTGTTTCTGCCAAACTTCTTTAACTCCCAGGAAGGGTAGAATTTTGAAACCTTGATTTTCTAGAGT
TCTCATTTATTCAGGATACCTATTCTTACTGTATTAAAATTTGGATATGTGTTTCATTCTGTCTCAAAAATCACA
TTTTATTCTGAGAAGGTTGGTTAAAAGATGGCAGAAAGAAGATGAAAATAAATAAGCCTGGTTTCAACCCTCT

FIGURE 1865

MSLRLDTTPSCNSARPLHALQVLLLLSLLLTALASSTKGQTKRNLAKGKEESLDSDLYAELRCMCIKTTSGIHPK
NIQSLEVIGKGTHCNQVEVIATLKDGRKICLDPDAPRIKKIVQKKLAGDESAD

FIGURE 1866A

CAAGCCAATTATGGCTCCCTTTCCCAATGGTAGTTTGTGAATGGCTTTAATTCGCCAGGATCTTATAAAACAAAT
GCTGCTGCT**ATG**AATATGGGTCGACCATTCCAAAAAAATCGTGTGAAGCCTCAGTTTAGGTCATCTGGTGGTTCA
GAACACTCAACAGAGGGCTCTGTATCCTTGGGGGATGGACAGTTGAACAGATATAGTTCAAGAAACTTTCCAGCT
GAACGGCATAACCCCACAGTAACTGGGCATCAGGAGCAAACTTACCTTCAGAAGGAGACTTCCACTTTGCAGGTG
GAACAGAATGGGGACTATGGTAGGGGCAGGAGAACTCTCTTCAGAGGTCGAAGACGACGAGAAGATGACAGGATC
TCAAGACCTCATCCTTCAACAGCTGAATCAAAGGCTCCAACACCAAAGTTTGACTTATTAGCCTCAAATTTTCCA
CCTTTACCTGGAAGTTCATCAAGAATGCCAGGTGAACTCGTTTGGAGAATAGGATGTCTGATGTTGTTAAAGGTG
TCTACAAAGAAAAGGATAATGAAGAGTTGACAATTAGTTGCCCAGTGCCTGCAGATGAGCAGACAGAATGCACTT
CTGCCCAGCAACTCAATATGAGTACCAGTTCTCCATGTGCTGCTGAGCTTACTGCATTAAGCACAACTCAGCAAG
AAAAGGATCTAATAGAAGATTCCTCTGTTCAGAAGGATGGTCTCAATCAGACAACTATACCAGTTTCTCCTCCAA
GTACTACAAAGCCATCGAGGGCAAGTACTGCTTCACCATGTAATAATAACATAAATGCAGCTACAGCTGTGGCTC
TACAGGAACCCCGAAAGTTAAGTTATGCTGAAGTGTGCCAGAAGCCCCCTAAAGAGCCATCTTCAGTTCTTGTGC
AGCCACTACGGGAACTTCGCTCCAATGTGGTGTCTCCCACCAAAAATGAAGACAATGGAGCTCCTGAGAACTCCG
TTGAGAAACCACATGAGAAGCCAGAAGCAAGGGCTAGTAAGGATTATTCTGGCTTCCGAGGCAATATAATCCCCA
GGGGAGCAGCAGGAAAAATCAGGGAACAGAGACGCCAGTTTAGCCATAGGGCTATACCTCAGGGAGTGACTCGAC
GTAATGGCAAAGAGCAATATGTGCCACCCAGATCACCAAAG**TAA**AAAACAACAAAACTATTCAAAAACTTCACTC
TCTTCCCATTAAACTTGAACTGTGGCTATATTGAACTGTTTTGGAGGGGAGGGGGTAGCCAGGAAGGAAACAAGA
GAAAGTACGTCCATTTCATTATGGATTTTGGAGTTGTGAGTGATAGGATCCCAAAATTCATCTCTAATGTGGTTT
TTAAATGCTGGAGGATTCCAATCAATATAAATATATATATATATACACACACATATATAAAAAGTATAATTTT
TCTATTTTTGTTTTTGGTTTTAATTTGCAGAGATTTGCTGCCAGGAATCAATTTTGAGGGTTCAGATTTAGCTTG
GAAGAAAAAAAAGAAACATACATCCTTCAGTATAGGAGATGAGGGAATGAGAGAAAATATTTTTTGAAGAAGCAT
TTCTGTAAAATTAGAAATTACTTTTTTTAATCTATTTAAAGTTTGGCTTGAAGAATGCCATCTCTGACTATATGG
CCTTGTATTGCAAAGCAGATCAGTGGCTGGGGTGCCTGTTGTGGGTGTGAGTGTGTACAAGAGCGATTGAAGCCA
AATCTGTTGTCATGTTAGTAAATGATTTGAAAACTGAATGTAATACTTGAGTAGATTTTTTTTTCTAGTTTGAAA
TTTAGTCTGTCTTTTTGACCTTACTAATATTTCATTTAACAAGTTGTAAAACTCTGATTGTACTTAGAGATGTGA
CTACCAATCAGTTTGATACTCAAGGAAAGGGGGTTATTCAAGAAATTGAAAATTTCATCTTGGACCTCAGTGCAT
CGGTCAAATGGATTTCAGAGGTTTAAACTTCCCTGTGATTCCCCCTGAATACCCCCAAAATGAGAAACAAAATTT
TTTTTCTTACTCCATTTGTTACTCTCTGTTCTTTGACTGCCCACCCACAGAAAAGCAAAATAACCAACTACCTAC
TCAATTGTGTGTTTGTAATTGCTTTGAGCAGTCTAGTCAAATCATATAAATTGTTCTAAATTTCAGAATTGAACA
TTGAAGTATTAACTCTTCTGTTCACACATTTAGAATTTTAGCTCCCAAGATGGTAGGGCAGACTGACCGTACAGT
AATTTATTTGTCGTTAGTGTTAAAGATTAAGCATAGTAACTGACTCTTAAGTGTTAAATAATGTAGAAGTAAAAA
AATTTTTTTTAAAGGCTTAATTTGGGAGGGGGGACTTATTTCTGTTTACAGTGTATTACCTTCCTTCCCTCCTCT
TCTCCCCCCACACCCAACAAAATACAGTTTGGAATTCACTGAAACAGTACCAGCAAGTCATGAGATTTTTTAGTA
AAGATGAGAAAGATGGTTGAAGAAAATTAGTGCATAATTTCTCAGTGAATAAAGTTGTAGCTCTCATATACTAAA
TAGACAAGTTTACATGCTGTTATTTAGAAAATGACTAAAATATTAAAAACCGTGTTGTGTTAATCTGTTTTAAGT
CATACCATGTTCAGAGTTCTATGTAAGGTGGGTTTTATTTTTCTTTTAAGGGATAGTTTGTAATAGTAAGAACTG
TCCCATATGTTAGTAAATTACATATGTACAAATTGAAACTGTAAATTGTGAACACTGGAAAGCACCATTGTGACA
TAGAGTAAACATCTTAGTAATATATTAAAGTGAATGTAAATGGTGGTTAAAATTACATTACTGTGAAATTCATCT
TCCAACTCTAAGTTAAGCTTTGGAGATACATGTTAGTGGTTAACTGTTAAGAGCTTTGAAAACACTGCACATATC
TGTACAAGCCAGAATTACTATTTCTTTGACTTATTATTAGCTTGGCAGTTGCTTTTGATTTGATTGTTTTATGAC
ATGGTATACTACTATATTTACTCAGTTTGAAACTATTCATTTCTACACACTATTTTTAAAAATTGCCTACTAGGT
GAAACATAACAATAAAACTACCTGTGCTGAAATTTGGGGGAAGTTTAGGTCCTTTAAAAAAACATATTAATCATT
GACTACATCTATGATAAAAGTGCTTATTTTGGTTTACTAAGATAATGCAGTTGGTGGAAATGATAAACGTTTTAA
GTGTTAACATCCTTTGAATGCGTTGGATTTCAGAGAATAAACATTTTGTAAAAATCACTTGGTAAGGATTATAAA
CTTAATTACTGCACTTAAAATGAAACATTACTTTTTTTAAACAATGTGTCACAAATGTAGGTCTGTATTACTTGT
ATGCTTGTGTGACTTACTGTTAGTCCAGCTCTAAAAATTTAAAGGTTGTAATTGAAATACAAGAAAAGAGCCTTC
TTTTAGAAGAAAGCAAGTATATTTTTGCTTTTACTTCAAATGTTATTTAAAGTAGAAATTTAATTTGTAGATATA
ACCTTTAAAAATTTTCTCATTAAGACAATGTTTTTAATTTAATTTGCCTCATTACATCTAATAGTTCCCATTTGA

FIGURE 1866B

TGGCATGTATAGGGAAGAGTGANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAATATTTATATATATTCACAGTATG
TATTTAGCATTTATTTTATTACAGCAGATTTAAAGTTTGTATCTAAATAATGCCTATGAGTTGTGTGAAGCTCTT
GGCTTTTTTCCAACGTTACTTTGTAACTAATGAGGGTGGATGTTCATTGTAGTTTATTTATTTGGTTCTTTAGAT
GGAGGAATTTAAAAAATCAAATTTTTCTCTTCACCTTTATGACTTGACATTTCCTTGATCTGTTGGAGGCTAAAA
GTAGGTATAAATGATATTGAATGTTGGGTATAGTGATACTCTGCCATAGTTCTTACTGCATGAAGAGAACAAGAG
TCACACAAGTTCACCACTTTGCACTTCATAGAGAAGGTACATAGAGACATTGCAAAACCTGTCTCCATTTGCTAT
CCTGATAATTAAGGTTTTCATAATACCTAGGGCCTGTCTCTGAGTAATTTTAATTTTGCCAAATACACTGACATT
TAAAATAGTGATCCATCTAAATTTTTTTCAGCTGGGTTTTGAGGAATATAAGAGCTTTCAATGATAAAGGTTTGT
TGTAGTTGTCTTATGTGCTGAATTTGCAGATGATCAGATGCTGTGCAGAATTCTGATTTATTTTTGTTTCCTAAA
ATTAAGATAGCTTGAATATTATTTCACATTCCTTTTTCTTTTTTAAATAAACAGGTTTGCTTTGGAAAGGCTTAA
TGATGGAATGTTAGCATCTTCACTAGGGTAAAGAAGAACAAAAAGAATGTTGCTGGAACGTAAAATAGTATTTAA
AAGTTAATGAACACTTCTCTAGTTTTCTTAGTTATGGCCTTAATAATTAGTCTCTTGGCTTAAATGTCCACTGGT
TTTACTTTGACACAGTTGAACAACACTGGGGTTAAGTCTCTGGTATTTAGGCTGGCAATATATATATTAACCATA
TTTTAAAAGTACCAATTTTGTTTTTACAGAAAAGATAAAACTCAAAAGAGAACAGTGTATTCCTTCTGAGGGGCT
TTTATAAATTATTAACTATAATATATGATGGATTTTTTCCTAATTTTTTATATTTCCTTACAATTTTGGTGGCCA
TTAATTTAACTTTAGGCTTTTGGGCATATGCTAGTCTGAGCTTCCGAAAAGATACATATATGTTTCCCTTTTCAT
TAGCTGAATGAGGATATTTTAAGAAGTTGAAAGAGAATTTATTTTCAAGTTGTGAGTAAATCCTCCTTTGAAATT
CACCTGATTATTAGATAACTTAAAGTTTATTTTTAAAAGCTGACAACTTTTTATGAATCTTCGAGTTGACAGTTC
CTAAAAGCGTAACTCAGATATTAATGGGCTGTGTATTAAATGGTTTTATTTTCAGTTTTGCAGCACAGAACACTG
TTGAAATATCCATATCAACTTGATTTTTTTAACCTAATTCAGGTGTCCTTTGCATCTCTTAAATGTTGGGGGTGG
GGGTCAGAGCCAGTTATCCGGCTTCTGTTTTGTCGATTGCTTAGATTTGTTCCTGTTGTCAAAACTGTTACCCCC
AAAATTGGTGTGACACATGCTCATGCATAAAATGTTAAAATGAGTACATCCTTGTATTTGTATTTGTTTTCAACA
TCGCCAAGGTGCTATGGGAAATTAACAAAATTAGAAAAAAAATAAAATTATTAAAAAGCAGAAAAA

FIGURE 1867

MNMGRPFQKNRVKPQFRSSGGSEHSTEGSVSLGDGQLNRYSSRNFPAERHNPTVTGHQEQTYLQKETSTLQVEQN
GDYGRGRRTLFRGRRRREDDRISRPHPSTAESKAPTPKFDLLASNFPPLPGSSSRMPGELVWRIGCLMLLKVSTK
KRIMKSTISCPVPADEQTECTSAQQLNMSTSSPCAAELTALSTTQQEKDLIEDSSVQKDGLNQTTIPVSPPSTTK
PSRASTASPCNNNINAATAVALQEPRKLSYAEVCQKPPKEPSSVLVQPLRELRSNVVSPTKNEDNGAPENSVEKP
HEKPEARASKDYSGFRGNIIPRGAAGKIREQRRQFSHRAIPQGVTRRNGKEQYVPPRSPK

FIGURE 1868

CACCGCACCCTCGGACTGCCCCAAGGCCCCCGCCGCCGCTCCAGCGCCGCGCAGCCACCGCCGCCGCCGCCGCCT
CTCCTTAGTCGCCGCC**ATG**ACGACCGCGTCCACCTCGCAGGTGCGCCAGAACTACCACCAGGACTCAGAGGCCGC
CATCAACCGCCAGATCAACCTGGAGCTCTACGCCTCCTACGTTTACCTGTCCATGTCTTACTACTTTGACCGCGA
TGATGTGGCTTTGAAGAACTTTGCCAAATACTTTCTTCACCAATCTCATGAGGAGAGGGAACATGCTGAGAAACT
GATGAAGCTGCAGAACCAACGAGGTGGCCGAATCTTCCTTCAGGATATCAAGAAACCAGACTGTGATGACTGGGA
GAGCGGGCTGAATGCAATGGAGTGTGCATTACATTTGGAAAAAAATGTGAATCAGTCACTACTGGAACTGCACAA
ACTGGCCACTGACAAAAATGACCCCCATTTGTGTGACTTCATTGAGACACATTACCTGAATGAGCAGGTGAAAGC
CATCAAAGAATTGGGTGACCACGTGACCAACTTGCGCAAGATGGGAGCGCCCGAATCTGGCTTGGCGGAATATCT
CTTTGACAAGCACACCTGGGAGACAGTGATAATGAAAGCTAAGCCTCGGGCTAATTTCCCA**TAG**CCGTGGGGTGA
CTTCCTGGTCACCAAGGCAGTGCATGCATGTTGGGGTTTCCTTTACCTTTTCTATAAGTTGTACCAAAACATCCA
CTTAAGTTCTTTGATTTGTACCATTCCTTCAAATAAAGAAATTTGGTACCC

FIGURE 1869

MTTASTSQVRQNYHQDSEAAINRQINLELYASYVYLSMSYYFDRDDVALKNFAKYFLHQSHEEREHAEKLMKLQN
QRGGRIFLQDIKKPDCDDWESGLNAMECALHLEKNVNQSLLELHKLATDKNDPHLCDFIETHYLNEQVKAIKELG
DHVTNLRKMGAPESGLAEYLFDKHTWETVIMKAKPRANFP

FIGURE 1870

GTCTTTATTTCAGTCCCGGATCCGCGGGCGCAGGCCCAGCTCAGGCCCCCAGGGATGGACGTCGTGGACCCTGAC
ATTTTCAATAGAGACCCCCGGGACCACTATGACCTGCTACAGCGGCTGGGTGGCGGCACGTATGGGGAAGTCTTT
AAGGCTCGAGACAAGGTGTCAGGGGACCTGGTGGCACTGAAGATGGTGAAGATGGAGCCTGATGATGATGTCTCC
ACCCTTCAGAAGGAAATCCTCATATTGAAAACTTGCCGGCACGCCAACATCGTGGCCTACCATGGGAGTTATCTC
TGGTTGCAGAAACTCTGGATCTGCATGGAATTCTGTGGGGCTGGTTCTCTCCAGGACATCTACCAAGTGACAGGC
TCCCTGTCAGAGCTCCAGATTAGCTATGTCTGCCGGGAAGTGCTCCAGGGACTGGCCTATTTGCACTCACAGAAG
AAGATACACAGGGACATCAAGGGAGCTAACATCCTCATCAATGATGCTGGGGAGGTCAGATTGGCTGACTTTGGC
ATCTCGGCCCAGATTGGGGCTACACTGGCCAGACGCCTCTCTTTCATTGGGACACCCTACTGGATGGCTCCGGAA
GTGGCAGCTGTGGCCCTGAAGGGAGGATACAATGAGCTGTGTGACATCTGGTCCCTGGGCATCACGGCCATCGAA
CTGGCCGAGCTACAGCCACCGCTCTTTGATGTGCACCCTCTCAGAGTTCTCTTCCTCATGACCAAGAGTGGCTAC
CAGCCTCCCCGACTGAAGGAAAAAGGCAAATGGTCGGCTGCCTTCCACAACTTCATCAAAGTCACTCTGACTAAG
AGTCCCAAGAAACGACCCAGCGCCACCAAGATGCTCAGTCATCAACTGGTATCCCAGCCTGGGCTGAATCGAGGC
CTGATCCTGGATCTTCTTGACAAACTGAAGAATCCCGGGAAAGGACCCTCCATTGGGGACATTGAGGATGAGGAG
CCCGAGCTACCCCCTGCTATCCCTCGGCGGATCAGATCCACCCACCGCTCCAGCTCTCTGGGGATCCCAGATGCA
GACTGCTGTCGGCGGCACATGGAGTTCAGGAAGCTCCGAGGAATGGAGACCAGACCCCCAGCCAACACCGCTCGC
CTACAGCCTCCTCGAGACCTCAGGAGCAGCAGCCCCAGGAAGCAACTGTCAGAGTCGTCTGACGATGACTATGAC
GACGTGGACATCCCCACCCCTGCAGAGGACACACCTCCTCCACTTCCCCCCAAGCCCAAGTTCCGTTCTCCATCA
GACGAGGGTCCTGGGAGCATGGGGGATGATGGGCAGCTGAGCCCGGGGGGTGCTGGTCCGGTGTGCCAGTGGGCCC
CCACCAAACAGCCCCCGTCCTGGGCCTCCCCCATCCACCAGCAGCCCCCACCTCACCGCCCATTCAGAACCCTCA
CTCTGGAACCCACCCTCCCGGGAGCTTGACAAGCCCCCACTTCTGCCCCCCAAGAAGGAAAAGATGAAGAGAAAG
GGATGTGCCCTTCTCGTAAAGTTGTTCAATGGCTGCCCCCTCCGGATCCACAGCACGGCCGCCTGGACACATCCC
TCCACCAAGGACCAGCACCTGCTCCTGGGGGCAGAGGAAGGCATCTTCATCCTGAACCGGAATGACCAGGAGGCC
ACGCTGGAAATGCTCTTTCCTAGCCGGACTACGTGGGTGTACTCCATCAACAACGTTCTCATGTCTCTCTCAGGA
AAGACCCCCCACCTGTATTCTCATAGCATCCTTGGCCTGCTGGAACGGAAAGAGACCAGAGCAGGAAACCCCATC
GCTCACATTAGCCCCCACCGCCTACTGGCAAGGAAGAACATGGTTTCCACCAAGATCCAGGACACCAAAGGCTGC
CGGGCGTGCTGTGTGGCGGAGGGTGCGAGCTCTGGGGGCCCGTTCCTGTGCGGTGCATTGGAGACGTCCGTTGTC
CTGCTTCAGTGGTACCAGCCCATGAACAAATTCCTGCTTGTCCGGCAGGTGCTGTTCCCACTGCCGACGCCTCTG
TCCGTGTTCGCGCTGCTGACCGGGCCAGGCTCTGAGCTGCCCGCTGTGTGCATCGGCGTGAGCCCCGGGCGGCCG
GGGAAGTCGGTGCTCTTCCACACGGTGCGCTTTGGCGCGCTCTCTTGCTGGCTGGGCGAGATGAGCACCGAGCAC
AGGGGACCCGTGCAGGTGACCCAGGTAGAGGAAGATATGGTGATGGTGTTGATGGATGGCTCTGTGAAGCTGGTG
ACCCCGGAGGGGTCCCCAGTCCGGGGACTTCGCACACCTGAGATCCCCATGACCGAAGCGGTGGAGGCCGTGGCT
ATGGTTGGAGGTCAGCTTCAGGCCTTCTGGAAGCATGGAGTGCAGGTGTGGGCTCTAGGCTCGGATCAGCTGCTA
CAGGAGCTGAGAGACCCTACCCTCACTTTCCGTCTGCTTGGCTCCCCCAGGCTGGAGTGCAGTGGCACGATCTCG
CCTCACTGCAACCTCCTCCTCCCAGGTTCAAGCAATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTACAGGC
CTGTAGTGGTGGAGACACGCCCAGTGGATGATCCTACTGCTCCCAGCAACCTCTACATCCAGGAATGAGTCCCTA
GGGGGGTGTCAGGAACTAGTCCTTGCACCCCCTCCCCCATAGACACACTAGTGGTCATGGCATGTCCTCATCTCC
CAATAAACATGACTTTAGCCTCTGCAAAAAAA

FIGURE 1871

MDVVDPDIFNRDPRDHYDLLQRLGGGTYGEVFKARDKVSGDLVALKMVKMEPDDDVSTLQKEILILKTCRHANIV
AYHGSYLWLQKLWICMEFCGAGSLQDIYQVTGSLSELQISYVCREVLQGLAYLHSQKKIHRDIKGANILINDAGE
VRLADFGISAQIGATLARRLSFIGTPYWMAPEVAAVALKGGYNELCDIWSLGITAIELAELQPPLFDVHPLRVLF
LMTKSGYQPPRLKEKGKWSAAFHNFIKVTLTKSPKKRPSATKMLSHQLVSQPGLNRGLILDLLDKLKNPGKGPSI
GDIEDEEPELPPAIPRRIRSTHRSSSLGIPDADCCRRHMEFRKLRGMETRPPANTARLQPPRDLRSSSPRKQLSE
SSDDDYDDVDIPTPAEDTPPPLPPKPKFRSPSDEGPGSMGDDGQLSPGVLVRCASGPPPNSPRPGPPPSTSSPHL
TAHSEPSLWNPPSRELDKPPLLPPKKEKMKRKGCALLVKLFNGCPLRIHSTAAWTHPSTKDQHLLLGAEEGIFIL
NRNDQEATLEMLFPSRTTWVYSINNVLMSLSGKTPHLYSHSILGLLERKETRAGNPIAHISPHRLLARKNMVSTK
IQDTKGCRACCVAEGASSGGPFLCGALETSVVLLQWYQPMNKFLLVRQVLFPLPTPLSVFALLTGPGSELPAVCI
GVSPGRPGKSVLFHTVRFGALSCWLGEMSTEHRGPVQVTQVEEDMVMVLMDGSVKLVTPEGSPVRGLRTPEIPMT
EAVEAVAMVGGQLQAFWKHGVQVWALGSDQLLQELRDPTLTFRLLGSPRLECSGTISPHCNLLLPGSSNSPASAS
RVAGITGL

FIGURE 1872A

GTCTTGTGGGTGGAAACGCGCTGGCTGACTGGGGTCGGCGTTTAGTTCAGCGCAGCGACTCGGGGACCTGGAGCT
GACGCCTAGACACTTGTATTAGCTTTAATAGAAGAGAAATGGAGGAGCCATAGAATATTAAGG**ATG**AATTCAGGA
AGGCCTGAGACCATGGAAAACTTGCCTGCTCTCTACACTATTTTCCAAGGAGAGGTTGCTATGGTGACAGACTAT
GGGGCCTTTATCAAAATCCCAGGCTGTCGGAAGCAAGGTCTGGTCCATCGAACTCATATGTCATCCTGTCGGGTG
GATAAGCCCTCTGAGATAGTAGATGTTGGAGATAAAGTGTGGGTGAAGCTTATTGGCCGAGAGATGAAAAATGAT
AGAATAAAAGTATCCCTCTCCATGAAGGTTGTCAATCAAGGGACTGGGAAAGACCTTGATCCCAACAATGTTATC
ATTGAGCAAGAAGAGAGGCGGAGGCGATCCTTCCAGGATTACACTGGGCAGAAGATCACCCTTGAGGCTGTCTTG
AACACTACCTGCAAGAAGTGTGGCTGTAAAGGCCACTTTGCAAAAGATTGTTTCATGCAACCAGGTGGGACTAAA
TACTCTCTGATACCTGATGAGGAAGAGGAAAAGGAAGAGGCAAAGTCAGCAGAGTTTGAGAAGCCTGACCCTACA
AGGAATCCTTCTAGAAAAAGAAAGAAGGAGAAGAAGAAAAAGAAACATAGAGATAGGAAGTCATCTGACTCTGAC
AGCTCAGACTCTGAGAGTGATACAGGCAAGAGGGCAAGGCACACATCAAAAGACAGCAAGGCAGCAAAGAAGAAG
AAAAAGAAGAAGAAGCACAAGAAGAAGCACAAGGAG**TGA**GAGTATAAAGAGTGTAGGGGGTGGTTGAGAGTAAGA
AACCAGGAGCCTTGTGCCTTGAGACTCCTGGAAAGACTCAATAGTGAGAATATAGCCTCCCACCCCATTAACTTC
GCTCCCATGGGAGATGGCTTCCCCTCATGCAACAGGCAGGTTTGGGAGTTAGAGGTCAAAAGCAGCTGCCTGAAT
GAGTTGTTGTTTCCTTATCACTCCTGGTCCCTTTGCAAGTGAACCCTGCAGCTCACCCATTCATTCACCCAACTT
CCTTCATTCAGCAGGAGGCCCTATTACCCTCTCCAGCTGCCACTGCCAGAGCTGGATTCCTGTAAAGGAGTCCAG
GCTAGAGCCACAGAGACTGTTGTGGAGGTGAGTTCGGCTGTAGTTAGAGTGATTGGACCCTTCCTATTGGTCTGT
CCTGGGCCAACTGGTGGGTGATCTCTGCTGCATCCAACATGGGAGCAGAGACTGGCAGCAGGAGGGGGGAACATG
GTGAGAAGTGGTGCTCACTTTTCCCATTCCTCCTAACATAGTTCTACTATGCTAGAAGTGGCATCCAGCGGCCAC
AGCTAGAAAACAGTCTGCAGTGTGACTTAACTTGTGTATTGCATTCCAGCAGACCACTGAACCAGACAGCGAAGC
CAAGATCATTGTTCTACTTTGTATTTACTACTGTGTGAATCAGTTGATTCTACTTCAGGTCCTTGCTTAAATTCC
TGTCACTAAATGGAAATGTGTTTGGTTTTAAACTTACTGAGTTATTTTTCCTATAATCCTTCTTCCTGGGTAACT
TACAGACTTAAAGTCACTGAGCCTGCATTAGCTGACAAAAACATTTAATATGTTACCTTAGACCTTGGAGAGATG
CCCAGCAGAGGTACAGAGCCAAAGGCACTAGCAGATCACTGCCTTCTTGGGAGATCACTTATAAGCCCTCCCTTT
TGTAATGATCAGATGCCCTCTTCCCTCAGAGTTGATTAGAGAAGCAGTAAGAATTTGTAGTCATAAGTACTAGCC
TGGTGCACAGGTCAGCAGTCCTCTTGGCCAGTGGTCATTTTCTCCCACCACCATGGTACAAGCCTGGGTTCTGTG
CCCTGAACCTGAATTCTGGAAAGGGAGAGACTACAGCATTTCACAGAGAACAGCCAGACCCAAGAGCTTTCAGTG
TAGGATGGGCCTGAAGTGACAGTTCAATAGCCAAACCTGGGGAAGCCCCATCACTGACTGAACTAGGTCATTTGA
CCATGGAGGGGGGGCAGTGTAAAGGCAACGTGTAGGTACAGCTCTTTTATTATTAAATGTGTAAGGTGATCAGCT
GATTAACAGGCTCCGAGACTGTCCATTTCAGTCTCCCATCCAGTGCTTCTTCCTCAGTAACCTTCAGGCCGTTAT
TTCTGCCCACTCTCTGACACACAGGATAAACCAAGACTCCCAGAGTTATGTTACCAAAGGCAAAAAGGCAACTGG
GTGGCCTTGGCTCTGCTTTATTGACCTCAGAGCACCCTATGAGTGCAGTTAAAAATAAAAACAAAAAAACCACAT
ACACCATGGGAACTGGAACTGGATCCCGGTCAGTGGCACCTGACCCCAGAAGAATTCGTGGATTTGTACAAAATG
CAGAGGAAGAAATGAGGCAATGTGGTGCTGAGTCGAGGGGTAGCCGATTGGCAGAGTAGTAGTCAGCAACAGTGC
AGTCAGGTCATGCCTCTTTCTCATAAGTGCGAGTGCAAACTGCAGTGCCGTGGGTGAGTGTCAGGATGAGTTTTC
CATCAATTAGCTCCCGCACAAGTGTGGTCTCTTGCCCGTCCCATTTCTGCAGGTGAACAAGTTTCCCTCCATCCA
GTGTCACAATGGACTTGACCTTCCTGTCATCTGCTGTTGTCTCATCGAACTCCACCCCCAACTTAAAGCTGATCT
CTGTGTTCTTGAAGGTGCTGTGTGTTTTTAGGGTGAGAATGTCCCCATTCTTTTCGATGATTGTGGTAGGCTTGG
TCATGCTGGCCACCTGCCTGGTAGCAAAACCCACACCGAGTGACTTCATGTAGTCATCGAAATTCTTGCTGTCCA
CTAGCTTCCAGGTGCCCAGGAAAGCGTCCACCATAGTGATGCTGGGCTAGGCTGAGAGAAGCTACAAGAGAGCAG
GCGTGCAAGGGCTCCGACGGCGGCTCCCTGCCCGGGCTGCCGCTTTAAATAGCCCTCGCATCACATGAGGAGACG
TGGCCCACGCCCCCGGCTCCCGAAATAGGAAGCCCCAGGCTAGGGCTCACCCAGGAGGGGCTGGTGCGCCCATCC
CCCAACCCACCGAGGTGGATGGGGACCAGCCAGTGGCGCCCTGCTAGCCTGCGTCAGCGCCAGTGCCTGGCCCCC
GAGTCCCTACCCCAGGCTGGTAGGACCTTCTCCCTTTCCTGGCCTCTAGGCACTCTGGAATCTGAGAAGGAAGCA
GCCGACACCAGCCCGAGAGCTAGGGCGCATGCCATGGTGGATATCTTCCCGTCCCCCAGTCCCTCTTTGAGCTTA
GCGTCAGAGCAGAGATGAGACTAGAAAAGCAAAACGCCCTTGGGCTGGTGCCCACGCCGGGGAAAGCTCTGGTTG
ACTTCTGGCACGGGCATCTGTCCTCGTTTTACAAGTGAGTCCGAGGCTCACAGGGGAACTGACAAGGTCTCAAGA
AATAGGAGGGGGTGAATGGAGCTCAGATTGCAAGCTTAGTCTAGCGGGCTTCAGAGCTCGCGCTCTCCCTTCACT

FIGURE 1872B

CTCAC

FIGURE 1873

MNSGRPETMENLPALYTIFQGEVAMVTDYGAFIKIPGCRKQGLVHRTHMSSCRVDKPSEIVDVGDKVWVKLIGRE
MKNDRIKVSLSMKVVNQGTGKDLDPNNVIIEQEERRRRSFQDYTGQKITLEAVLNTTCKKCGCKGHFAKDCFMQP
GGTKYSLIPDEEEEKEEAKSAEFEKPDPTRNPSRKRKKEKKKKKHRDRKSSDSDSSDSESDTGKRARHTSKDSKA
AKKKKKKKKHKKKHKE

FIGURE 1874

TGTACTGGACCAGCTTGTGCCTTTCAGGCTCTTGCCTGGGCACCTGGGTGCTTGCGGCCCACAAGATAAGATATA
TTGCGTTGAACTATAATTTATGTTGATTGCTGAATGATTTAGGGCGGGGGGGTGGGCACCCCCTGAAATTCTGCC
CTGGAGGAGTGGCCTCACCCTAACCCTGGCCGTGGCTAATAATAAGGCCCACCTCTTAGGGCCGTGGAGTGAAAT
AAGTTTTCCAGGTAATGCGCAGTAGAGCCCTCAGCCCTCCGCTGAAGTTGCGTTAGGAAGGAGGAAGGGAGAGGT
AAATGCTGAGCCCGCAGGCGGCAGTCTGTGCCTCGGAGAGAAACTTTATCCCAACCTTGCTGGGGGCCTTGACGC
CCACCTTGCCCCAAGAGCACCCCGGCAGCCACCCCTGCCCTCTGGGGTCCTGCCACCCCGAGCCCGACCTTCCCC
CTTTTCCCCCGCGCCGGGCCAATAGCCTCCTAACTGCGTCGTGCTCATCACCTTTGCGTCGTTTCTTCGCTCCAC
AAACGTTTACTGAGCGCCTTCCACACGCCAGGCGCCAGACTCGCGCGGGGAAACAGGGATAAGCACTGAGGAGGG
GTCCCAGCCCTCAGCGATGGGATTTCAGAGCGGGAGATAAAGGGTTGCCCAGAAGGGTGGTGAGTGGAATGGCTG
ATATAAACAACGGGGGCGCGATGAAATACACAGGAGGGCTGCTAGTCACATATGGGGCGGGTGCCGAGGGCCCTT
GACTAAGGGAGGCTTCCTGCACGGGTGACACCCAAGCGGAGTCCTGACGACCTGCGTCAGAAGTAGCCAGGCGAG
GAGGAGGGGAAAGGAATCCACGTCCCGAGCAGAGAGGCAGCGTTCCCTACACAGCACAGGACACGGTCCGCGCAC
AGAAGCCGCAGGAGACGCAGGCACAGGGGCTGGGGAGAATCCTTGCTGGGCCCTCGCCGCCTCCCTCTGCCGGGT
GTCTGGTGCCAGCCTCCTGCCTGGCAGAGGAGCTCCAGCCCCTGCTCCCGGAAGCCCCTCCAGGCCTTCGGCTTC
CCTGACTGGGCATGGGCCCCTCGTCCCCTCGTCCCCTCGGGTACGGGGCCGGTCTCCCCGCCCGCGGGCGGCGAA
GTAAAGGCCCAGCGCAGCCCGCGCTCCTGCCCTGGGGCCTCGTCTTTCTCCAGGAAAACGTGGACCGCTCTCCGC
CGACAGGTCTCTTCCACAGACCCCTGTCGCCTTCGCCCCCGGTCTCTTCCGGTTCTGTCTTTTCGCTGGCTCGAT
ACGAACAAGGAAGTCGCCCCCAGCGGAGCCCCGGCTCCCCCAGGCAGAGGCGGCCCCGGGGGCGGAGTCAACGGC
GGAGGCCACGCCCTCTGTGAAAGGGCGGGGCATGCAAATTCGAAATGAAAGCCCGGGAACGCCGGAAGAAGCACG
GGTGTAAGATTTCCCTTTTCAAAGGCGGAGAATAAGAAATCAGCCCGAGAGTGTAAGGGCGTCAATAGCGCTGTG
GACGAGACAGAGGGAATGGGGCAAGGAGCGAGGCTGGGGCTCTCACCGCGACTTGAATGTGGATGAGAGTGGGAC
GGTGACGGCGGGCGCGAAGGCGAGCGCATCGCTTCTCGGCCTTTTGGCTAAGATCAAGTGTAGTATCTGTTCTTA
TCAGTTTAATATCTGATACGTCCTCTATCCGAGGACAATATATTAAATGGATTTTTGGAGCAGGGAGATGGAATA
GGAGCTTGCTCCGTCCACTCCACGCATCGACCTGGTGTTGCAGTACCTCCAGGAACGGTGCACCCCCTCCGGGGA
TACAACGTGTTTCCTAAAAGTAGAGGGAGGTAAGAGACGGTAGCACCTGCGGGGCGGCTTGCACGCCGAGTGCCT
GTGACGCGCCGGCTTGACTTAACTGCTTCCCTGAAGTACCGTGAGGTTCCTGATGTGCGGGCGGTAGACGGTAGG
CTTATGCGGCACGCTTTCGTTTCCACCGTGGCTACTGCGCTTTGGGAAGGCCACGACCTCCTCCTTTGGGGAGGT
CCTTAGGATCTCAGCTTGGCAGTCGAGTGGGTGGCGACCTTTTAAAGGA**ATG**GGACCCACCCGGAGTTCTTCTTT
CTCCTGTCTC

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FIGURE 1875

MGPTRSSSFSC

FIGURE 1876

GGGATCAGTCTTCCCGCGTCCGCCGATTCCTCCTCCTTGGTCGCCGCGTCCTTGGCTGGCGTCAGAAAA**ATG**GCT
ACAAACTTCCTAGCACATGAGAAGATCTGGTTCGACAAGTTCAAATATGACGACGCAGAAAGGAGATTCTACGAG
CAGATGAACGGGCCTGTGCGAGGTGCCTCCCGCCAGGAGAACGGCGCCACGGTGATCCTCCGTGACATTGCGAGA
GCCAGAGAGAACATCCAGAAATCCCTGGCTGGAAGCTCAGGCCCCGGGGCCTCCAGCGGCACCAGCGGAGACCAC
GGTGAGCTCGTCGTCCGGATTGCCAGTCTGGAAGTGGAGAACCAGAGTCTGCGTGGCGTGGTACAGGAGCTGCAG
CAGGCCATCTCCAAGCTGGAGGCCCGGCTGAACGTGCTGGAGAAGAGCTCGCCTGGCCACCGGGCCACGGCCCCA
CAGACCCAGCACGTATCTCCCATGCGCCAAGTGGAGCCCCCAGCCAAGAAGCCAGCCACACCAGCAGAGGATGAC
GAGGATGATGACATTGACCTGTTTGGCAGTGACAATGAGGAGGAGGACAAGGAGGCGGCACAGCTGCGGGAGGAG
CGGCTACGGCAGTACGCGGAGAAGAAGGCCAAGAAGCCTGCACTGGTGGCCAAGTCCTCCATCCTGCTGGATGTC
AAGCCTTGGGATGATGAGACGGACATGGCCCAGCTGGAGGCCTGTGTGCGCTCTATCCAGCTGGACGGGCTGGTC
TGGGGGGCTTCCAAGCTGGTGCCCGTGGGCTACGGTATCCGGAAGCTACAGATTCAGTGTGTGGTGGAGGACGAC
AAGGTGGGGACAGACTTGCTGGAGGAGGAGATCACCAAGTTTGAGGAGCACGTGCAGAGTGTCGATATCGCAGCT
TTCAACAAGATC**TGA**AGCCTGAGTGTGTGTACGTGCGCGCGTGCGTGAGGGCCCTGCCACGATTAAAGACTGAGA
CCGGCAAAAAAAAAAA

FIGURE 1877

MATNFLAHEKIWFDKFKYDDAERRFYEQMNGPVRGASRQENGATVILRDIARARENIQKSLAGSSGPGASSGTSG
DHGELVVRIASLEVENQSLRGVVQELQQAISKLEARLNVLEKSSPGHRATAPQTQHVSPMRQVEPPAKKPATPAE
DDEDDDIDLFGSDNEEEDKEAAQLREERLRQYAEKKAKKPALVAKSSILLDVKPWDDETDMAQLEACVRSIQLDG
LVWGASKLVPVGYGIRKLQIQCVVEDDKVGTDLLEEEITKFEEHVQSVDIAAFNKI

FIGURE 1878

TCCCCGTACGCCCAAATGAAACCTACATGTGCAGAATGAAGCGTTTTTTCGTTGTCATCATGAAAACTCCTTTTT
TTCTACCTTTCTGTTTCTTTTTTTAAATATGTATCCTTGGGGTTTGTTTATTTTTTTTTTCTTGTTTCACTTCAA
ATGAATCTGGAAGAACTTTCCAGGGGGCTTCTCCCTGGGTGTGGTGTGTGATCGGCAGCCCCGCCGTTGTGGCCC
GAGGCTCCTGGAAGCTCATCAGCTGATGGTCTTCCTTGGCCTGTAGTAAAAATACTGCTGAATTCCTCGTTGGGC
TTTAAATCCATTGGCACTGCCACCTGGTTCCATTGTAACATAGCTTTTGGATTATTAGAAATAGGAATAACTTGA
TAGTTAAATCATTCAGCAGCATCTTTACGAATATGGTTTGGGAAGCTGGCCTTGGAGCTAAGAATCACATTGAAT
GGTTAATTTATTTTTAATTCT**ATG**AAAGGAGCTGGAGAGAGAGAAGTAAAATATTCAGGGGATTTTCTGTGTTTT
AAAAGAGAAAACCTCCTGATTGCAAGCTCTAAAATAAATGCTAAGATTTGTCACACTTTCAGCCCACGGGAGATT
TGCTTTTCTCGCATAGTATGGACTCACCAGGATCTGAAATTAGGGGCTTTCCTTAGAGGTGGCCTCAGGCTTTCC
TACCCCCACAGTTGGATTATGCAGAGAAGGTCACTGGGTCCTGAGGCTGCTGCCGAGGCGTGCTGTCCCGGGTGG
ACAGCGTGGCCCTGTCATCTTTCATTAGGATGTGTGTGCCTGTGCCGCACCAGCCACAGGTCAGGATGCCAGCCC
CTGCACGCCCTGCGTGCTCATTTGAAAACTGAGGGTATCTGGGAAGTCACCTTACAAGGTGCCGAGGAGCAGATG
GCTAATTTAAAGGCAATCTGTATGTGCTCTGAGCCTCCCAAATTATCCATTTCT**TGA**ATCCTCAATGTGTGAAAT
TCAGCACACTAAGTCCTCACAGGCTAGGAAATCAAATGCTGGACAGGCCATTCCCTACCATCATCTGGAGTATTC
AGAGTATTTGGAATATTCACAGTCTTCAAGGTGTAGCTGTCGGGCTCTGTGAAGGATACCTTGCATTTATAGGGA
TCGTCAGGTCTCCTCTTCCTACGTATTTGAAGTATTATGGCTTGGAGTACTTTCTCCACCAATGAAGAAAAGTTT
ATATGGCCTCTCCTACGCTCTTGTCTTGTCCCAAAAGTAGGGCTTAACTCTGTCCTTGCCATCAATCTGTGCACA
TGTTATGGAGTGACCATGGTGAATGGGCGATAGAGGTTCCTTCCTAGGAGAAACTTTCCCAGCTTCCCCAAATGT
GAGAGGGGCGCCTCTCTCCCGAATTCCCCAGAGCCCTTTCCTCCCTTCCCTCTGCCCTCACCTCCCTGGATGCTT
CAGGATACTCTGTGGATACTCTTCCGTGCTCCAGGAGAGCATGGCCCCGTGGCTGATAGACTCAGCTCTCACCCC
TCTAAGAGCTGCTCATGAGTATCCTCGAGTGGATGAGTGAACAGATTTCTAACTCAACAGACATAAATCCCCAGT
GGAGCTTAAGTTAAATGCCTGGTTTTTAAATTAAGAAATATGACTTCAGCAATATGTATAAACCAAAGGAACATT
AAACTAATGATAGTATCTTTACAAATGAGTTGTTGAGGATTTGGAGATAGTTTGTATAACATAAAACATAACAAA
TACAGTAGAAAGCATATGGTAGTGGGATTGAAGAAACCCGAGAGGTTATTTATCCCAAACACCACCTGATGTTAC
AGTGCTTATTGAGTGATTGATACTGTGTCCTACGTAGAGGGGGCACATAAACAATTCACATGTAATTTTTCTGTA
TTACATTGACAGATATATATAAAATGATCTCTGCATCTAAAATTCAAGCAGTCCAGCCTGGAATACTATCACCAA
AAAGTGAAAACTGATTTTAGAAACGAATAATATTTTGTTGTGAACAACTCTGAAAACATACTGGTCGATGAGGTT
TATAGCTAGAGTCTAAAATGCCACATTTATATGGGTGAAACATTTTCAGCTTCAGGAGAAAATAAAACC

FIGURE 1879

MKGAGEREVKYSGDFLCFKRENLLIASSKINAKICHTFSPREICFSRIVWTHQDLKLGAFLRGGLRLSYPHSWIM
QRRSLGPEAAAEACCPGWTAWPCHLSLGCVCLCRTSHRSGCQPLHALRAHLKTEGIWEVTLQGAEEQMANLKAIC
MCSEPPKLSIS

FIGURE 1880

AGGTTAATCTTAAAAGCCCAGGTTACCCGCGGAAATTTATGCTGTCCGGTCACCGTGACA**ATG**CAGCTGAGGAAC
CCAGAACTACATCTGGGCTGCGCGCTTGCGCTTCGCTTCCTGGCCCTCGTTTCCTGGGACATCCCTGGGGCTAGA
GCACTGGACAATGGATTGGCAAGGACGCCTACCATGGGCTGGCTGCACTGGGAGCGCTTCATGTGCAACCTTGAC
TGCCAGGAAGAGCCAGATTCCTGCATCAGTGAGAAGCTCTTCATGGAGATGGCAGAGCTCATGGTCTCAGAAGGC
TGGAAGGATGCAGGTTATGAGTACCTCTGCATTGATGACTGTTGGATGGCTCCCCAAAGAGATTCAGAAGGCAGA
CTTCAGGCAGACCCTCAGCGCTTTCCTCATGGGATTCGCCAGCTAGCTAATTATGTTCACAGCAAAGGACTGAAG
CTAGGGATTTATGCAGATGTTGGAAATAAAACCTGCGCAGGCTTCCCTGGGAGTTTTGGATACTACGACATTGAT
GCCCAGACCTTTGCTGACTGGGGAGTAGATCTGCTAAAATTTGATGGTTGTTACTGTGACAGTTTGGAAAATTTG
GCAGATGGTTATAAGCACATGTCCTTGGCCCTGAATAGGACTGGCAGAAGCATTGTGTACTCCTGTGAGTGGCCT
CTTTATATGTGGCCCTTTCAAAAGCCCAATTATACAGAAATCCGACAGTACTGCAATCACTGGCGAAATTTTGCT
GACATTGATGATTCCTGGAAAAGTATAAAGAGTATCTTGGACTGGACATCTTTTAACCAGGAGAGAATTGTTGAT
GTTGCTGGACCAGGGGGTTGGAATGACCCAGATATGTTAGTGATTGGCAACTTTGGCCTCAGCTGGAATCAGCAA
GTAACTCAGATGGCCCTCTGGGCTATCATGGCTGCTCCTTTATTCATGTCTAATGACCTCCGACACATCAGCCCT
CAAGCCAAAGCTCTCCTTCAGGATAAGGACGTAATTGCCATCAATCAGGACCCCTTGGGCAAGCAAGGGTACCAG
CTTAGACAGGGAGACAACTTTGAAGTGTGGGAACGACCTCTCTCAGGCTTAGCCTGGGCTGTAGCTATGATAAAC
CGGCAGGAGATTGGTGGACCTCGCTCTTATACCATCGCAGTTGCTTCCCTGGGTAAAGGAGTGGCCTGTAATCCT
GCCTGCTTCATCACACAGCTCCTCCCTGTGAAAAGGAAGCTAGGGTTCTATGAATGGACTTCAAGGTTAAGAAGT
CACATAAATCCCACAGGCACTGTTTTGCTTCAGCTAGAAAATACAATGCAGATGTCATTAAAAGACTTACTT**TAA**

FIGURE 1881

MQLRNPELHLGCALALRFLALVSWDIPGARALDNGLARTPTMGWLHWERFMCNLDCQEEPDSCISEKLFMEMAEL
MVSEGWKDAGYEYLCIDDCWMAPQRDSEGRLQADPQRFPHGIRQLANYVHSKGLKLGIYADVGNKTCAGFPGSFG
YYDIDAQTFADWGVDLLKFDGCYCDSLENLADGYKHMSLALNRTGRSIVYSCEWPLYMWPFQKPNYTEIRQYCNH
WRNFADIDDSWKSIKSILDWTSFNQERIVDVAGPGGWNDPDMLVIGNFGLSWNQQVTQMALWAIMAAPLFMSNDL
RHISPQAKALLQDKDVIAINQDPLGKQGYQLRQGDNFEVWERPLSGLAWAVAMINRQEIGGPRSYTIAVASLGKG
VACNPACFITQLLPVKRKLGFYEWTSRLRSHINPTGTVLLQLENTMQMSLKDLL

FIGURE 1882

ATGGTCGACTACCTAGCAAATAAGCCCAAGGGTCAGAATTCTTTGGCTTTACACAAAGTCATCATGGTGGGCAGT
GGTGGCGTGGGCAAGTCAGCTCTGACTCTACAGTTCATGTACGATGAGTTTGTGGAGGACTATGAGCCTACCAAA
GCAGACAGCTATCGGAAGAAGGTAGTGCTAGATGGGGAGGAAGTCCAGATCGATATCTTAGATACAGCTGGGCAG
GAGGACTACGCTGCAATTAGAGACAACTACTTCCGAAGTGGGGAGGGGTTCCTCTGTGTTTTCTCTATTACAGAA
ATGGAATCCTTTGCAGCTACAGCTGACTTCAGGGAGCAGATTTTAAGAGTAAAAGAAGATGAGAATGTTCCATTT
CTACTGGTTGGTAACAAATCAGATTTAGAAGATAAAAGACAGGTTTCTGTAGAAGAGGCAAAAAACAGAGCTGAG
CAGTGGAATGTTAACTACGTGGAAACATCTGCTAAAACACGAGCTAATGTTGACAAGGTATTTTTTGATTTAATG
AGAGAAATTCGAGCGAGAAAGATGGAAGACAGCAAAGAAAAGAATGGAAAAAAGAAGAGGAAAAGTTTAGCCAAG
AGAATCAGAGAAAGATGCTGCATTTTA**TAA**

FIGURE 1883

MVDYLANKPKGQNSLALHKVIMVGSGGVGKSALTLQFMYDEFVEDYEPTKADSYRKKVVLDGEEVQIDILDTAGQ
EDYAAIRDNYFRSGEGFLCVFSITEMESFAATADFREQILRVKEDENVPFLLVGNKSDLEDKRQVSVEEAKNRAE
QWNVNYVETSAKTRANVDKVFFDLMREIRARKMEDSKEKNGKKKRKSLAKRIRERCCIL

FIGURE 1884

ATGGATTGCAGTAACGGATCGGCAGAGTGTACCGGAGAAGGAGGATCAAAAGAGGTGGTGGGGACTTTTAAGGCT
AAAGACCTAATAGTCACACCAGCTACCATTTTAAAGGAAAAACCAGACCCCAATAATCTGGTTTTTGGAACTGTG
TTCACGGATCATATGCTGACGGTGGAGTGGTCCTCAGAGTTTGGATGGGAGAAACCTCATATCAAGCCTCTTCAG
AACCTGTCATTGCACCCTGGCTCATCAGCTTTGCACTATGCAGTGGAATTATTTGAAGGATTGAAGGCATTTCGA
GGAGTAGATAATAAAATTCGACTGTTTCAGCCAAACCTCAACATGGATAGAATGTATCGCTCTGCTGTGAGGGCA
ACTCTGCCGGTATTTGACAAAGAAGAGCTCTTAGAGTGTATTCAACAGCTTGTGAAATTGGATCAAGAATGGGTC
CCATATTCAACATCTGCTAGTCTGTATATTCGTCCTGCATTCATTGGAACTGAGCCTTCTCTTGGAGTCAAGAAG
CCTACCAAAGCCCTGCTCTTTGTACTCTTGAGCCCAGTGGGACCTTATTTTTCAAGTGGAACCTTTAATCCAGTG
TCCCTGTGGGCCAATCCCAAGTATGTAAGAGCCTGGAAAGGTGGAACTGGGGACTGCAAGATGGGAGGGAATTAC
GGCTCATCTCTTTTTGCCCAATGTGAAGACGTAGATAATGGGTGTCAGCAGGTCCTGTGGCTCTATGGCAGAGAC
CATCAGATCACTGAAGTGGGAACTATGAATCTTTTTCTTTACTGGATAAATGAAGATGGAGAAGAAGAACTGGCA
ACTCCTCCACTAGATGGCATCATTCTTCCAGGAGTGACAAGGCGGTGCATTCTGGACCTGGCACATCAGTGGGGT
GAATTTAAGGTGTCAGAGAGATACCTCACCATGGATGACTTGACAACAGCCCTGGAGGGGAACAGAGTGAGAGAG
ATGTTTAGCTCTGGTACAGCCTGTGTTGTTTGCCCAGTTTCTGATATACTGTACAAAGGCGAGACAATACACATT
CCAACTATGGAGAATGGTCCTAAGCTGGCAAGCCGCATCTTGAGCAAATTAACTGATATCCAGTATGGAAGAGAA
GAGAGCGACTGGACAATTGTGCTATCC**TGA**

FIGURE 1885

MDCSNGSAECTGEGGSKEVVGTFKAKDLIVTPATILKEKPDPNNLVFGTVFTDHMLTVEWSSEFGWEKPHIKPLQ
NLSLHPGSSALHYAVELFEGLKAFRGVDNKIRLFQPNLNMDRMYRSAVRATLPVFDKEELLECIQQLVKLDQEWV
PYSTSASLYIRPAFIGTEPSLGVKKPTKALLFVLLSPVGPYFSSGTFNPVSLWANPKYVRAWKGGTGDCKMGGNY
GSSLFAQCEDVDNGCQQVLWLYGRDHQITEVGTMNLFLYWINEDGEEELATPPLDGIILPGVTRRCILDLAHQWG
EFKVSERYLTMDDLTTALEGNRVREMFSSGTACVVCPVSDILYKGETIHIPTMENGPKLASRILSKLTDIQYGRE
ESDWTIVLS

FIGURE 1886

GGGGCATTTTGTGCCTGCCTAGCTATCCAGACAGAGCAGCTACCCTCAGCTCTAGCTGATACTACAGACAGTACA
ACAGATCAAGAAGT**ATG**GCAGTGACAACTCGTTTGACACGGTTGCACGAAAAGATCCTGCAAAATCATTTTGGAG
GGAAGCGGCTTAGCCTTCTCTATAAGGGTAGTGTCCATGGATTCCGTAATGGAGTTTTGCTTGACAGATGTTGTA
ATCAAGGGCCTACTCTAACAGTGATTTATAGTGAAGATCATATTATTGGAGCATATGCGGAAGAGAGTTACCAGG
AAGGAAAGTATGCTTCCATCATCCTTTTTGCACTTCAAGATACTAAAATTTCAGAATGGAAACTAGGACTATGTA
CACCAGAAACACTGTTTTGTTGTGATGTTACAAAATATAACTCCCCAACTAATTTCCAGATAGATGGAAGAAATA
GAAAAGTGATTATGGACTTAAAGACAATGGAAAATCTTGGACTTGCTCAAAATTGTACTATCTCTATTCAGGATT
ATGAAGTTTTTCGATGCGAAGATTCACTGGATGAAAGAAAGATAAAAGGGGTCATTGAGCTCAGGAAGAGCTTAC
TGTCTGCCTTGAGAACTTATGAACCATATGGATCCCTGGTTCAACAAATACGAATTCTGCTGCTGGGTCCAATTG
GAGCTGGGAAGTCCAGCTTTTTCAACTCAGTGAGGTCTGTTTTCCAAGGGCATGTAACGCATCAGGCTTTGGTGG
GCACTAATACAACTGGGATATCTGAGAAGTATAGGACATACTCTATTAGAGACGGGAAAGATGGCAAATACCTGC
CGTTTATTCTGTGTGACTCACTGGGGCTGAGTGAGAAAGAAGGCGGCCTGTGCAGGGATGACATATTCTATATCT
TGAACGGTAACATTCGTGATAGATACCAGTTTAATCCCATGGAATCAATCAAATTAAATCATCATGACTACATTG
ATTCCCCATCGCTGAAGGACAGAATTCATTGTGTGGCATTTGTATTTGATGCCAGCTCTATTCAATACTTCTCCT
CTCAGATGATAGTAAAGATCAAAAGAATTCGAAGGGAGTTGGTAAACGCTGGTGTGGTACATGTGGCTTTGCTCA
CTCATGTGGATAGCATGGATTTGATTACAAAAGGTGACCTTATAGAAATAGAGAGATGTGAGCCTGTGAGGTCCA
AGCTAGAGGAAGTCCAAAGAAAACTTGGATTTGCTCTTTCTGACATCTCGGTGGTTAGCAATTATTCCTCTGAGT
GGGAGCTGGACCCTGTAAAGGATGTTCTAATTCTTTCTGCTCTGAGACGAATGCTATGGGCTGCAGATGACTTCT
TAGAGGATTTGCCTTTTGAGCAAATAGGGAATCTAAGGGAGGAAATTATCAACTGTGCACAAGGAAAAAAA**TAG**A
TATGTGAAAGGTTCACGTAAATTTCCTCACATCACAGAAGATTAAAATTCAGAAAGGAGAAAACACAGACCAAAG
AGAAGTATCTAAGACCAAAGGGATGTGTTTTATTAATGTCTAGGATGAAGAAATGCATAGAACATTGTAGTACTT
GTAAATAACTAGAAATAACATGATTTAGTCATAATTGTGAAAAATAGTAATAATTTTTCTTGGATTTATGTTCTG
TATCTGTGAAAAAATAAATTTCTTATAAAACTCGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1887

MAVTTRLTRLHEKILQNHFGGKRLSLLYKGSVHGFRNGVLLDRCCNQGPTLTVIYSEDHIIGAYAEESYQEGKYA
SIILFALQDTKISEWKLGLCTPETLFCCDVTKYNSPTNFQIDGRNRKVIMDLKTMENLGLAQNCTISIQDYEVFR
CEDSLDERKIKGVIELRKSLLSALRTYEPYGSLVQQIRILLLGPIGAGKSSFFNSVRSVFQGHVTHQALVGTNTT
GISEKYRTYSIRDGKDGKYLPFILCDSLGLSEKEGGLCRDDIFYILNGNIRDRYQFNPMESIKLNHHDYIDSPSL
KDRIHCVAFVFDASSIQYFSSQMIVKIKRIRRELVNAGVVHVALLTHVDSMDLITKGDLIEIERCEPVRSKLEEV
QRKLGFALSDISVVSNYSSEWELDPVKDVLILSALRRMLWAADDFLEDLPFEQIGNLREEIINCAQGKK

FIGURE 1888

ACG**ATG**CGCGAGTACAAAGTGGTGGTGCTGGGCTCGGGCGGGGTAGGCAAATCCGCCCTGACCGTGCAGTTCGTG
ACCGGCACCTTCATCGAGAAATACGACCCCACCATCGAGGACTTCTACCGCAAGGAGATCGAGGTGGATTCGTCG
CCGTCGGTGCTGGAGATCCTGGACACGGCGGGCACCGAGCAGTTCGCGTCCATGCGGGACCTGTACATCAAGAAC
GGCCAGGGCTTCATCCTCGTCTACAGCCTCGTCAACCAGCAGAGCTTCCAGGACATCAAGCCCATGCGGGACCAG
ATCATCCGCGTGAAGCGGTATGAGAAAGTGCCAGTCATCTTGGTTGGGAACAAAGTGGACCTGGAAAGTGAGAGA
GAAGTATCGTCCAGCGAAGGCAGAGCCCTTGCTGAAGAGTGGGGCTGCCCCTTTATGGAAACTTCCGCTAAGAGT
AAAACAATGGTGGACGAACTCTTTGCAGAAATTGTGAGGCAGATGAACTATGCTGCTCAGCCTGACAAAGATGAC
CCATGCTGTTCTGCATGTAACATACAA**TAG**

FIGURE 1889

MREYKVVVLGSGGVGKSALTVQFVTGTFIEKYDPTIEDFYRKEIEVDSSPSVLEILDTAGTEQFASMRDLYIKNG
QGFILVYSLVNQQSFQDIKPMRDQIIRVKRYEKVPVILVGNKVDLESEREVSSSEGRALAEEWGCPFMETSAKSK
TMVDELFAEIVRQMNYAAQPDKDDPCCSACNIQ

FIGURE 1890

ATGGAAACCAACTTCTCCATTCCTCTGAATGAAACTGAGGAGGTGCTCCCTGAGCCTGCTGGCCACACCGTTCTG
TGGATCTTCTCATTGCTAGTCCACGGAGTCACCTTTGTCTTCGGGGTCCTGGGCAATGGGCTTGTGATCTGGGTG
GCTGGATTCCGGATGACACGCACAGTCAACACCATCTGTTACCTGAACCTGGCCCTAGCTGACTTCTCTTTCAGT
GCCATCCTACCATTCCGAATGGTCTCAGTCGCCATGAGAGAAAAATGGCCTTTTGCGTCATTCCTATGTAAGTTA
GTTCATGTTATGATAGACATCAACCTGTTTGTCAGTGTCTACCTGATCACCATCATTGCTCTGGACCGCTGTATT
TGTGTCCTGCATCCAGCCTGGGCCCAGAACCATCGCACCATGAGTCTGGCCAAGAGGGTGATGACGGGACTCTGG
ATTTTCACCATAGTCCTTACCTTACCAAATTTCATCTTCTGGACTACAATAAGTACTACGAATGGGGACACATAC
TGTATTTTCAACTTTGCATTCTGGGGTGACACTGCTGTAGAGAGGTTGAACGTGTTCATTACCATGGCCAAGGTC
TTTCTGATCCTCCACTTCATTATTGGCTTCACGGTGCCTATGTCCATCATCACAGTCTGCTATGGGATCATCGCT
GCCAAAATTCACAGAAACCACATGATTAAATCCAGCCGTCCCTTACGTGTCTTCGCTGCTGTGGTGGCTTCTTTC
TTCATCTGTTGGTTCCCTTATGAACTAATTGGCATTCTAATGGCAGTCTGGCTCAAAGAGATGTTGTTAAATGGC
AAATACAAAATCATTCTTGTCCTGATTAACCCAACAAGCTCCTTGGCCTTTTTTAACAGCTGCCTCAACCCAATT
CTCTACGTCTTTATGGGTCGTAACTTCCAAGAAAGACTGATTCGCTCTTTGCCCACTAGTTTGGAGAGGGCCCTG
ACTGAGGTCCCTGACTCAGCCCAGACCAGCAACACACACACCACTTCTGCTTCACCTCCTGAGGAGACGGAGTTA
CAAGCAATG**TGA**

FIGURE 1891

METNFSIPLNETEEVLPEPAGHTVLWIFSLLVHGVTFVFGVLGNGLVIWVAGFRMTRTVNTICYLNLALADFSFS
AILPFRMVSVAMREKWPFASFLCKLVHVMIDINLFVSVYLITIIALDRCICVLHPAWAQNHRTMSLAKRVMTGLW
IFTIVLTLPNFIFWTTISTTNGDTYCIFNFAFWGDTAVERLNVFITMAKVFLILHFIIGFTVPMSIITVCYGIIA
AKIHRNHMIKSSRPLRVFAAVVASFFICWFPYELIGILMAVWLKEMLLNGKYKIILVLINPTSSLAFFNSCLNPI
LYVFMGRNFQERLIRSLPTSLERALTEVPDSAQTSNTHTTSASPPEETELQAM

FIGURE 1892

CGGACGCGTGGGCCGGTTCAGCC**ATG**GGGACCTCTCCGAGCAGCAGCACCGCCCTCGCCTCCTGCAGCCGCATCG
CCCGCCGAGCCACAGCCACGATGATCGCGGGCTCCCTTCTCCTGCTTGGATTCCTTAGCACCACCACAGCTCAGC
CAGAACAGAAGGCCTCGAATCTCATTGGCACATACCGCCATGTTGACCGTGCCACCGGCCAGGTGCTAACCTGTG
ACAAGTGTCCAGCAGGAACCTATGTCTCTGAGCATTGTACCAACACAAGCCTGCGCGTCTGCAGCAGTTGCCCTG
TGGGGACCTTTACCAGGCATGAGAATGGCATAGAGAAATGCCATGACTGTAGTCAGCCATGCCCATGGCCAATGA
TTGAGAAATTACCTTGTGCTGCCTTGACTGACCGAGAATGCACTTGCCCACCTGGCATGTTCCAGTCTAACGCTA
CCTGTGCCCCCCATACGGTGTGTCCTGTGGGTTGGGGTGTGCGGAAGAAAGGGACAGAGACTGAGGATGTGCGGT
GTAAGCAGTGTGCTCGGGGTACCTTCTCAGATGTGCCTTCTAGTGTGATGAAATGCAAAGCATACACAGACTGTC
TGAGTCAGAACCTGGTGGTGATCAAGCCGGGGACCAAGGAGACAGACAACGTCTGTGGCACACTCCCGTCCTTCT
CCAGCTCCACCTCACCTTCCCCTGGCACAGCCATCTTTCCACGCCCTGAGCACATGGAAACCCATGAAGTCCCTT
CCTCCACTTATGTTCCCAAAGGCATGAACTCAACAGAATCCAACTCTTCTGCCTCTGTTAGACCAAAGGTACTGA
GTAGCATCCAGGAAGGGACAGTCCCTGACAACACAAGCTCAGCAAGGGGGAAGGAAGACGTGAACAAGACCCTCC
CAAACCTTCAGGTAGTCAACCACCAGCAAGGCCCCCACCACAGACACATCCTGAAGCTGCTGCCGTCCATGGAGG
CCACTGGGGGCGAGAAGTCCAGCACGCCCATCAAGGGCCCCAAGAGGGGACATCCTAGACAGAACCTACACAAGC
ATTTTGACATCAATGAGCATTTGCCCTGGATGATTGTGCTTTTCCTGCTGCTGGTGCTTGTGGTGATTGTGGTGT
GCAGTATCCGGAAAAGCTCGAGGACTCTGAAAAAGGGGCCCCGGCAGGATCCCAGTGCCATTGTGGAAAAGGCAG
GGCTGAAGAAATCCATGACTCCAACCCAGAACCGGGAGAAATGGATCTACTACTGCAATGGCCATGGTATCGATA
TCCTGAAGCTTGTAGCAGCCCAAGTGGGAAGCCAGTGGAAAGATATCTATCAGTTTCTTTGCAATGCCAGTGAGA
GGGAGGTTGCTGCTTTCTCCAATGGGTACACAGCCGACCACGAGCGGGCCTACGCAGCTCTGCAGCACTGGACCA
TCCGGGGCCCCGAGGCCAGCCTCGCCCAGCTAATTAGCGCCCTGCGCCAGCACCGGAGAAACGATGTTGTGGAGA
AGATTCGTGGGCTGATGGAAGACACCACCCAGCTGGAAACTGACAAACTAGCTCTCCCGATGAGCCCCAGCCCGC
TTAGCCCGAGCCCCATCCCCAGCCCCAACGCGAAACTTGAGAATTCCGCTCTCCTGACGGTGGAGCCTTCCCCAC
AGGACAAGAACAAGGGCTTCTTCGTGGATGAGTCGGAGCCCCTTCTCCGCTGTGACTCTACATCCAGCGGCTCCT
CCGCGCTGAGCAGGAACGGTTCCTTTATTACCAAAGAAAAGAAGGACACAGTGTTGCGGCAGGTACGCCTGGACC
CCTGTGACTTGCAGCCTATCTTTGATGACATGCTCCACTTTCTAAATCCTGAGGAGCTGCGGGTGATTGAAGAGA
TTCCCCAGGCTGAGGACAAACTAGACCGGCTATTCGAAATTATTGGAGTCAAGAGCCAGGAAGCCAGCCAGACCC
TCCTGGACTCTGTTTATAGCCATCTTCCTGACCTGCTG**TAG**AACATAGGGATACTGCATTCTGGAAATTACTCAA
TTTAGTGGCAGGGTGGTTTTTTAATTTTCTTCTGTTTCTGATTTTTGTTGTTTGGGGTGTGTGTGTGTTTGTG
TGTGTGTGTGTGTGTGTGTGTGTGTTTAACAGAGAATATGGCCAGTGCTTGAGTTCTTTCTCCTTCTCTCT
CTCTCTTTTTTTTTTAAATAACTCTTCTGGGAAGTTGGTTTATAAGCCTTTGCCAGGTGTAACTGTTGTGAAATA
CCCACCACTAAAGTTTTTTAAGTTCCATATTTTCTCCATTTTGCCTTCTTATGTATTTTCAAGATTATTCTGTGC
ACTTTAAATTTACTTAACTTACCATAAATGCAGTGTGACTTTTCCCACACACTGGATTGTGAGGCTCTTAACTTC
TTAAAAGTATAATGGCATCTTGTGAATCCTATAAGCAGTCTTTATGTCTCTTAACATTCACACCTACTTTTTAAA
AACAAATATTATTACTATTTTTATTATTGTTTGTCCTTTATAAATTTTCTTAAAGATTAAGAAAATTTAAGACCC
CATTGAGTTACTGTAATGCAATTCAACTTTGAGTTATCTTTTAAATATGTCTTGTATAGTTCATATTCATGGCTG
AAACTTGACCACACTATTGCTGATTGTATGGTTTTCACCTGGACACCGTGTAGAATGCTTGATTACTTGTACTCT
TCTTATGCTAATATGCTCTGGGCTGGAGAAATGAAATCCTCAAGCCATCAGGATTTGCTATTTAAGTGGCTTGAC
AACTGGGCCACCAAAGAACTTGAACTTCACCTTTTAGGATTTGAGCTGTTCTGGAACACATTGCTGCACTTTGGA
AAGTCAAAATCAAGTGCCAGTGGCGCCCTTTCCATAGAGAATTTGCCCAGCTTTGCTTTAAAAGATGTCTTGTTT
TTTATATACACATAATCAATAGGTCCAATCTGCTCTCAAGGCCTTGGTCCTGGTGGGATTCCTTCACCAATTACT
TTAATTAAAAATGGCTGCAACTGTAAGAACCCTTGTCTGATATATTTGCAACTATGCTCCCATTTACAAATGTAC
CTTCTAATGCTCAGTTGCCAGGTTCCAATGCAAAGGTGGCGTGGACTCCCTTTGTGTGGGTGGGGTTTGTGGGTA
GTGGTGAAGGACCGATATCAGAAAAATGCCTTCAAGTGTACTAATTTATTAATAAACATTAGGTGTTTGTTAAAA
AAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1893

MGTSPSSSTALASCSRIARRATATMIAGSLLLLGFLSTTTAQPEQKASNLIGTYRHVDRATGQVLTCDKCPAGTY
VSEHCTNTSLRVCSSCPVGTFTRHENGIEKCHDCSQPCPWPMIEKLPCAALTDRECTCPPGMFQSNATCAPHTVC
PVGWGVRKKGTETEDVRCKQCARGTFSDVPSSVMKCKAYTDCLSQNLVVIKPGTKETDNVCGTLPSFSSSTSPSP
GTAIFPRPEHMETHEVPSSTYVPKGMNSTESNSSASVRPKVLSSIQEGTVPDNTSSARGKEDVNKTLPNLQVVNH
QQGPHHRHILKLLPSMEATGGEKSSTPIKGPKRGHPRQNLHKHFDINEHLPWMIVLFLLLVLVVIVVCSIRKSSR
TLKKGPRQDPSAIVEKAGLKKSMTPTQNREKWIYYCNGHGIDILKLVAAQVGSQWKDIYQFLCNASEREVAAFSN
GYTADHERAYAALQHWTIRGPEASLAQLISALRQHRRNDVVEKIRGLMEDTTQLETDKLALPMSPSPLSPSPIPS
PNAKLENSALLTVEPSPQDKNKGFFVDESEPLLRCDSTSSGSSALSRNGSFITKEKKDTVLRQVRLDPCDLQPIF
DDMLHFLNPEELRVIEEIPQAEDKLDRLFEIIGVKSQEASQTLLDSVYSHLPDLL

FIGURE 1894A

ATGAGGAGGGACGAGCGAGACGCCAAAGCCATGCGGTCCCTGCAGCCGCCGGATGGGGCCGGCTCGCCCCCCGAG
AGTCTGAGGAACGGCTACGTGAAGAGCTGCGTGAGCCCCTTGCGGCAGGACCCTCCGCGCGGCTTCTTCTTCCAC
CTCTGCCGCTTCTGCAACGTGGAGCTGCGGCCGCCGCCGGCCTCTCCCCAGCAGCCGCGGCGCTGCTCCCCCTTC
TGCCGGGCGCGCCTCTCGCTGGGCGACCTGGCTGCCTTTGTCCTCGCCCTGCTGCTGGGAGCGGAACCCGAGAGC
TGGGCTGCCGGGGCCGCCTGGCTGCGGACGCTGCTGAGCGTGTGTTCGCACAGCTTGAGCCCCCTCTTCAGCATC
GCCTGTGCCTTCTTCTTCCTCACCTGCTTCCTCACCCGGACCAAGCGGGGACCCGGCCCGGGCCGGAGCTGCGGC
TCCTGGTGGCTGCTGGCGCTGCCCGCCTGCTGTTACCTGGGGGACTTCTTGGTGTGGCAGTGGTGGTCTTGGCCT
TGGGGGGATGGCGACGCAGGGTCCGCGGCCCCGCACACGCCCCCGGAGGCGGCAGCGGGCAGGTTGCTGCTGGTG
CTGAGCTGCGTAGGGCTGCTGCTGACGCTCGCGCACCCGCTGCGGCTCCGGCACTGCGTTCTGGTGCTGCTCCTG
GCCAGCTTCGTCTGGTGGGTCTCCTTCACCAGCCTCGGGTCGCTGCCCTCCGCCCTCAGGCCGCTGCTCTCCGGC
CTGGTGGGGGGCGCTGGCTGCCTGCTGGCCCTGGGGTTGGATCACTTCTTTCAAATCAGGGAAGCGCCTCTTCAT
CCTCGACTGTCCAGTGCCGCCGAAGAAAAAGTGCCTGTGATCCGACCCCGGAGGAGGTCCAGCTGCGTGTCGTTA
GGAGAAACTGCAGCCAGTTACTATGGCAGTTGCAAAATATTCAGGAGACCGTCGTTGCCTTGTATTTCCAGAGAA
CAGATGATTCTTTGGGATTGGGACTTAAAACAATGGTATAAGCCTCATTATCAAAATTCTGGAGGTGGAAATGGA
GTTGATCTTTCAGTGCTAAATGAGGCTCGCAATATGGTGTCAGATCTTCTGACTGATCCAAGCCTTCCACCACAA
GTCATTTCCTCTCTACGGAGTATTAGTAGCTTAATGGGTGCTTTCTCAGGTTCCTGTAGGCCAAAGATTAATCCT
CTCACACCATTTCCTGGATTTTACCCCTGTTCTGAAATAGAGGACCCAGCTGAGAAAGGGGATAGAAAACTTAAC
AAGGGACTAAATAGGAATAGTTTGCCAACTCCACAGCTGAGGAGAAGCTCAGGAACTTCAGGATTGCTACCTGTT
GAACAGTCTTCAAGGTGGGATCGTAATAATGGCAAAAGACCTCACCAAGAATTTGGCATTTCAAGTCAAGGATGC
TATCTAAATGGGCCTTTTAATTCAAATCTACTGACTATCCCGAAGCAAAGGTCATCTTCTGTATCACTGACTCAC
CATGTAGGTCTCAGAAGAGCTGGTGTTTTGTCCAGTCTGAGTCCTGTGAATTCTTCCAACCATGGACCAGTGTCT
ACTGGCCCTCTAACTAATCGATCACCCATAGAATTTCCTGATACTGCTGATTTTCTTAATAAGCCAAGCGTTATC
TTGCAGAGATCTCTGGGCAATGCACCTAATACTCCAGATTTTTATCAGCAACTTAGAAATTCTGATAGCAATCTG
TGTAACAGCTGTGGACATCAAATGCTGAAATATGTTTCAACATCTGAATCAGATGGTACAGATTGCTGCAGTGGA
AAATCAGGTGAAGAAGAAAACATTTTCTCGAAAGAATCATTCAAACTTATGGAAACTCAACAAGAAGAGGAAACA
GAGAAGAAAGACAGCAGAAAATTATTTCAGGAAGGTGATAAGTGGCTAACAGAAGAGGCACAGAGTGAACAGCAA
ACAAATATTGAACAGGAAGTATCACTGGACCTGATTTTAGTAGAAGAGTATGACTCATTAATAGAAAAGATGAGC
AACTGGAATTTTCCAATTTTTGAACTTGTAGAAAAGATGGGAGAGAAATCAGGAAGGATTCTCAGTCAGGTTATG
TATACCTTATTTCAAGACACTGGTTTATTGGAAATATTTAAAATTCCCACTCAACAATTTATGAACTATTTTCGT
GCATTAGAAAATGGCTATCGAGACATTCCTTATCACAATCGTATACATGCCACAGATGTGCTACATGCAGTTTGG
TATCTGACAACACGGCCAGTTCCTGGCTTACAGCAGATCCACAATGGTTGTGGAACAGGAAATGAAACAGATTCT
GATGGTAGAATTAACCATGGGCGAATTGCTTATATTTCTTCGAAGAGCTGCTCTAATCCTGATGAGAGTTATGGC
TGCCTGTCTTCAAACATTCCTGCATTAGAATTGATGGCTCTATACGTGGCAGCTGCCATGCATGATTATGATCAC
CCAGGGAGGACAAATGCATTTCTAGTGGCTACAAATGCCCCTCAGGCAGTTTTATACAATGACAGATCTGTTCTG
GAAAATCATCATGCTGCGTCAGCTTGGAATCTATATCTTTCTCGCCCAGAATACAACTTCCTTCTTCATCTTGAT
CATGTGGAATTCAAGCGCTTTCGTTTTTTAGTCATTGAAGCAATCCTTGCTACGGATCTTAAAAAGCATTTTGAT
TTTCTCGCAGAATTCAATGCCAAGGCCAAATGAGTGTAAATAGTAATGGCATAGAATGGAGTAATGAAAATGATCG
CCTCTTGGTATGCCAGGTGTGCATCAAACTGGCAGATATAAATGGCCCAGCAAAAGTTCGAGACTTGCATTTGAA
ATGGACAGAAGGCATTGTCAATGAATTTTATGAGCAGGGAGATGAAGAAGCAAATCTTGGTCTGCCCATCAGTCC
ATTCATGGATCGTTCTTCTCCTCAACTAGCAAAACTCCAAGAATCTTTTATCACCCACATAGTGGGTCCCCTGTG
TAACTCCTATGATGCTGCTGGTTTGCTACCAGGTCAGTGGTTAGAAGCAGAAGAGGATAATGATACTGAAAGTGG
TGATGATGAAGACGGTGAAGAATTAGATACAGAAGATGAAGAAATGGAAAACAATCTAAATCCAAAACCACCAAG
AAGGAAAAGCAGACGGCGAATATTTTGTCAGCTAATGCACCACCTCACTGAAAACCACAAGATATGGAAGGAAAT
CGTAGAGGAAGAAGAAAAATGTAAAGCTGATGGGAATAAACTGCAGGTGGAGAATTCCTCCTTACCTCAAGCAGA
TGAGATTCAGGTAATTGAAGAGGCAGATGAAGAGGAATAGCGACAGTTTGAGTAAAAGAAAAGTCATATTGAAGA
AGCCCAGAGGGTTGTGCCCAGGGGCAGAAATCATTGCCTAGTGTTCACCGGCTGACTCTCAACTGACCATTCCCA
TGTGGACAGGCCTTAATACTGTGAGAGGATCCTTGCTCTGCTGGCAGTTTCCCACTCCTATGCACTTTCACAGGA
ACTAGAAAACTATTCTTAAACCAAAAATACCATCCGTGTTGACCCATGTTGCAGAGCCCTTACTTAAATCCTTCA

FIGURE 1894B

CTGGTGTATGAATACTTTGTCATAATGCTGCTTTGCTGGGTAGTGAGCTCTTATTTTTCACTGGGGGTCAGCTAT
AACTAAAAACTCAAGTGACATATTTCAGTTACCAAAGTGGCCAGGAACTTTTTGCTTTTATGAAAATAGATTCAT
ATTGTATTTCCCAGTGTGTCTTTTATGTCTTTGAATGTTTTGGAGAAAAGTCTATGCCTGTCTAAAAATGAATCC
AGTGTTGCCTTTCTGAGGGATTTCTGCTCAATGCAATACACTGTTCAGTGCTATTCTCCCAGCTAGGTTTATCCA
TGAAGGACTGAGTGACCTTTGTTGTATTTAACAAAATCCAGGTGCATCAATTTCTGATGCTTTTTACTATTGTGT
ATTATCTACTATGTGTGTTTTATTTCTGCTGAGAGTATTCAGGTTTGCCATGGACATCAGAAGTTTGAATTCCAG
TCTTATCTTATGTTCCATGGCTGAATTTTAAAGCTGTTTAGGTTTAACAATGAAGGGATTTATTCTTTAGTCAAA
ATTGTTGTTTTTACTCTAGCTCAGGATTCGTATTTTTAAAGATTTAGTTAATATAAACACAGCACAGATTTGTCA
GAAGAAAAAAAATTTGCTGTAATACCAAAACTAACCTCATCAAAGATACAGAAAAAAAGAAATATAGTGAGCCCT
AAAGGACACATACATTGAATAAATAATTGGAACATGTGGTTATCTTTAGATCCACATCTTAGCTGTCATTTGTTC
ACTCTAAAACTGATGTTCATCTTTCTGTTAATTTCCCTCTGCCTAAAGACTACATGACAGAAATGACCTATCACT
ACTTATTATTTCTGAAGCCTAACTGCAAGACTGATTTCTGAGAACAAGTAAAGAACTGGAATACTTATTTTTCAT
ATAAAAATCTAAATGTGTTAATAAATCATTTCATACAAAAGTACATTATTAAATAACCACATTATTAAAATAATT
GCAAGAAAATGGACCATATTTACAATGTTTTGTAAACTTGCTAGTGTGTGGATATGTACCCTACTTGTGAAATAC
ATTTGAAGATATAAAGAGCAGCCAAAATGATGGCAAAATGGTAGGCTAATATTTTCTATTATTATTGGAGAACAT
ATCATATTTTGGAATCATGCAATTTTGCACACAGTGAAACCATTAATTTTCCAAGGTAATTCCTTTAGAATATGG
TATTGGCATGCAGTTTCTTACTTATCTAGAATATTTGGCTTATCTGAAAGATATCAATTTAAGATCTCTGGAAGT
GTTAGAATTTTTGATCCTTCACAGTGTCAATATTTAATGAATCACTAAGCTTTATTTATTAGACGTGTTGAGTGA
GTGCTGAGTTCCTTGCTGCCACTTTTGTTACCATTGTCACACACTATGTGTAAACCAGTCCCACCACTTATTACT
AATAAAATTTTGACTGATAATTTATATTTGCACTTACAATATATATATCCTGTCCTTATATTTCTCTAGAGTACA
TTTTCCATCATGTTTAAGTGTATTTCTGCTATTATTTCCTCTCCTGCAGAATACATACAAGTGTATGTGTATAAA
GTCATACATGTACAAGCATGCATATTGAGATTGAATCACATTTCCATACTGTCTGTTATTTTATTGGGTTTTATA
TTGGGTTTCTTTAGTTTATGTTGTTTTCTCAAAAGCAGCATTTTAAATTACGAATACTGGACTTATTGGATTTAA
TTATAAATCCAATTACTACTGGAAACTCATTTTTACATAATATAGTCCTTAAATTATTTAACCCTTGCTAAGTAA
TTGACATATGTAACAATAACTAGCCTAAAGAAACCCAAAAAAAGTATCTCTCCCGAGCTGAAACTTAAAAATTCG
TAAGTGTAAGAAAGAATGTGAGAATATATTAAATGCACACTGTACCATTAGATGAAATCTTACTTGAGAAATTGC
CATAAGCCATATTACAGATCTTACTTTGATTGTTACTGAATCAGATTAATTTCTTGTTATAATAATTTTCATCAT
AAATTTTCTATTTTTAAAGCCGCTGGTACTAGAAATATTCTTTTAATGCTATATCTATGTACCTACTGACACATT
TTTCTCCATAAAAGTACTTTTAAAAATTACTTCATGATTTG

FIGURE 1895

MRRDERDAKAMRSLQPPDGAGSPPESLRNGYVKSCVSPLRQDPPRGFFFHLCRFCNVELRPPPASPQQPRRCSPF
CRARLSLGDLAAFVLALLLGAEPESWAAGAAWLRTLLSVCSHSLSPLFSIACAFFFLTCFLTRTKRGPGPGRSCG
SWWLLALPACCYLGDFLVWQWWSWPWGDGDAGSAAPHTPPEAAAGRLLLVLSCVGLLLTLAHPLRLRHCVLVLLL
ASFVWWVSFTSLGSLPSALRPLLSGLVGGAGCLLALGLDHFFQIREAPLHPRLSSAAEEKVPVIRPRRRSSCVSL
GETAASYYGSCKIFRRPSLPCISREQMILWDWDLKQWYKPHYQNSGGGNGVDLSVLNEARNMVSDLLTDPSLPPQ
VISSLRSISSLMGAFSGSCRPKINPLTPFPGFYPCSEIEDPAEKGDRKLNKGLNRNSLPTPQLRRSSGTSGLLPV
EQSSRWDRNNGKRPHQEFGISSQGCYLNGPFNSNLLTIPKQRSSSVSLTHHVGLRRAGVLSSLSPVNSSNHGPVS
TGPLTNRSPIEFPDTADFLNKPSVILQRSLGNAPNTPDFYQQLRNSDSNLCNSCGHQMLKYVSTSESDGTDCCSG
KSGEEENIFSKESFKLMETQQEEETEKKDSRKLFQEGDKWLTEEAQSEQQTNIEQEVSLDLILVEEYDSLIEKMS
NWNFPIFELVEKMGEKSGRILSQVMYTLFQDTGLLEIFKIPTQQFMNYFRALENGYRDIPYHNRIHATDVLHAVW
YLTTRPVPGLQQIHNGCGTGNETDSDGRINHGRIAYISSKSCSNPDESYGCLSSNIPALELMALYVAAAMHDYDH
PGRTNAFLVATNAPQAVLYNDRSVLENHHAASAWNLYLSRPEYNFLLHLDHVEFKRFRFLVIEAILATDLKKHFD
FLAEFNAKAK

FIGURE 1896

ATTTTTAGATAATCATTAAAGACCACAGAAAATGTAACAGATCCTACTCTTCAAAATAATTGCTATTCAGTATTA
AAACGAGCAGTCAGCTGCGTGATTCCCGTGATTGCGTTACAAGCTTTGTCTCCTTCGACTTGGAGTCTTTGTCCA
GGACG**ATG**AGACACTCAAAGAGAACTTACTGTCCTGATTGGGATGACAAGGATTGGGATTATGGAAAATGGAGGA
GCAGCAGCAGTCATAAAAGAAGGAAGAGATCACATAGCAGTGCCCAGGAGAACAAGCGCTGCAAATACAATCACT
CTAAAATGTGTGATAGCCATTATTTGGAAAGCAGGTCTATAAATGAGAAAGATTATCATAGTCGACGCTACATTG
ATGAGTACAGAAATGACTACACTCAAGGATGTGAACCTGGACATCGCCAAAGAGACCATGAAAGCCGGTATCAGA
ACCATAGTAGCAAGTCTTCTGGTAGAAGTGGAAGAAGTAGTTATAAAAGCAAACACAGGATTCACCACAGTACTT
CACATCGTCGTTCACATGGGAAGAGTCACCGAAGGAAAAGAACCAGGAGTGTAGAGGATGATGAGGAGGGTCACC
TGATCTGTCAGAGTGGAGACGTACTAAGTGCAAGATATGAAATTGTTGATACTTTAGGTGAAGGAGCTTTTGGAA
AAGTTGTGGAGTGCATCGATCATAAAGCGGGAGGTAGACATGTAGCAGTAAAAATAGTTAAAAATGTGGATAGAT
ACTGTGAAGCTGCTCGCTCAGAAATACAAGTTCTGGAACATCTGAATACAACAGACCCCAACAGTACTTTCCGCT
GTGTCCAGATGTTGGAATGGTTTGAGCATCATGGTCACATTTGCATTGTTTTTGAACTATTGGGACTTAGTACTT
ACGACTTCATTAAAGAAAATGGTTTTCTACCATTTCGACTGGATCATATCAGAAAGATGGCATATCAGATATGCA
AGTCTGTGAATTTTTTGCACAGTAATAAGTTGACTCACACAGACTTAAAGCCTGAAAACATCTTATTTGTGCAGT
CTGACTACACAGAGGCGTATAATCCCAAAATAAAACGTGATGAACGCACCTTAATAAATCCAGATATTAAAGTTG
TAGACTTTGGTAGTGCAACATATGATGACGAACATCACAGTACATTGGTATCTACAAGACATTATAGAGCACCTG
AAGTTATTTTAGCCCTAGGGTGGTCCCAACCATGTGATGTCTGGAGCATAGGATGCATTCTTATTGAATACTATC
TTGGGTTTACCGTATTTCCAACACACGATAGTAAGGAGCATTTAGCAATGATGGAAAGGATTCTTGGACCTCTAC
CAAAACATATGATACAGAAAACCAGGAAACGTAAATATTTTCACCACGATCGATTAGACTGGGATGAACACAGTT
CTGCCGGCAGATATGTTTCAAGAGCCTGTAAACCTCTGAAGGAATTTATGCTTTCTCAAGATGTTGAACATGAGC
GTCTCTTTGACCTCATTCAGAAAATGTTGGAGTATGATCCAGCCAAAAGAATTACTCTCAGAGAAGCCTTAAAGC
ATCCTTTCTTTGACCTTCTGAAGAAAAGTATA**TAG**ATCTGTAATTGGACAGCTCTCTCGAAGAGATCTTACAGAC
TGTATCAGTCTAATTTTTAAATTTTAAGTTATTTTGTACAGCTTTGTAAATTCTTAACATTTTTATATTGCCATG
TTTATTTTGTTTGGGTAATTTGGTTCATTAAGTACATAGCTAAGGTAATGAACATCTTTTTCAGTAATTGTAAAG
TGATTTATTCAGAATAAATTTTTTGTGCTTATGA

FIGURE 1897

MRHSKRTYCPDWDDKDWDYGKWRSSSSHKRRKRSHSSAQENKRCKYNHSKMCDSHYLESRSINEKDYHSRRYIDE
YRNDYTQGCEPGHRQRDHESRYQNHSSKSSGRSGRSSYKSKHRIHHSTSHRRSHGKSHRRKRTRSVEDDEEGHLI
CQSGDVLSARYEIVDTLGEGAFGKVVECIDHKAGGRHVAVKIVKNVDRYCEAARSEIQVLEHLNTTDPNSTFRCV
QMLEWFEHHGHICIVFELLGLSTYDFIKENGFLPFRLDHIRKMAYQICKSVNFLHSNKLTHTDLKPENILFVQSD
YTEAYNPKIKRDERTLINPDIKVVDFGSATYDDEHHSTLVSTRHYRAPEVILALGWSQPCDVWSIGCILIEYYLG
FTVFPTHDSKEHLAMMERILGPLPKHMIQKTRKRKYFHHDRLDWDEHSSAGRYVSRACKPLKEFMLSQDVEHERL
FDLIQKMLEYDPAKRITLREALKHPFFDLLKKSI

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FIGURE 1898

GGGAGCACAGAAAAACTCACACTGGAGAGAAACCTTATAAATGTAAGGATTGTGGGAGAGCCTTCACTGTTTCCT
CTTGCTTAAGTCAACAT**ATG**AAAATCCATGTGGGTGAGAAGCCTTATGAATGCAAGGAATGTGGGATAGCCTTCA
CTAGATCTTCTCAACTTACTGAACATTTAAAAACTCACACTGCAAAGGATCCCTTTGAATGTAAGATATGTGGAA
AATCCTTTAGAAATTCCTCATGCCTCAGTGATCACTTTCGAATTCACACTGGAATAAAACCCTATAAATGTAAGG
ATTGTGGGAAAGCCTTCACTCAGAACTCAGACCTTACTAAGCATGCACGAACTCACAGTGGAGAGAGGCCCTATG
AATGTAAGGAATGTGGAAAGGCCTTTGCCAGATCCTCTCGCCTTAGTGAACATACAAGAACTCACACTGGAGAGA
AGCCTTTTGAATGTGTCAAATGTGGGAAAGCCTTTGCTATTTCTTCAAATCTTAGTGGACATTTGAGAATTCACA
CTGGAGAGAAGCCCTTTGAGTGCCTGGAATGTGGTAAAGCATTTACGCATTCCTCCAGTCTTAATAATCACATGC
GGACCCACAGCGCCAAAAAACCATTCACGTGTATGGAATGTGGCAAAGCCTTTAAGTTTCCCACGTGTGTTAACC
TTCACATGCGGATCCACACTGGAGAAAAACCCTACAAATGTAAACAGTGTGGGAAATCCTTCAGTTACTCCAATT
CGTTTCAGTTACATGAACGAACTCACACTGGAGAGAAACCCTATGAATGTAAGGAGTGCGGGAAAGCCTTCAGTT
CTTCCAGTTCCTTTCGAAATCATGAAAGAAGGCATGCGGATGAGAGACTGTCAGCA**TAA**GGAATGTGGGAAAACC
TAAAGGTGTCCCTGTTCTCTCTGAAGACATGAAAACTCACTGGGGAGAAACCCTATGAATGTAAAAATGTGGAAG
CAACTTTGTATCTCAGGTCTTAATGAACACATATGAATTCACAGTGGAGAAGACCCTGCATCAGGGAATGTGGAA
ATGACTTTGCTGAATTCTCAAGCCTTACCAAACACATCAGAAATCTCACTGGAGAGAAACCGTATGAATGTAGAG
AATCTGGGAATACCTTTCTGAATCCCACAAACCTTAATGTGTGTATGTGAACTCACATTGGAGAGAAACCCTGCA
ATTTAAATGGTATGGTCTGGATGATGCCCCACTCCATATTTGTAAGCCCTAAGTCCTAGTTCCTTACACTATAAC
TGTATTTGGACATAGGGTTTTCAAACAGGTGAGTAACTTCAAATGAGGTTGTTGGGTTCGATCCCTAATCTGACA
TCACTGGTGTCCCTATAAGGGAAACTGAAGGAAGGATACACATGGAGAAGACTGTGTGGATCCACCAGAAGATGG
CCATCTACAAGCCAAGGACAGAGACCTGGAACAGATGCTTTCATTATGGCCTCCAGAGGAAACCAACCCTGTCTC
CACCTTGATATTGCACTTCCAGGCTCCAGAACTGTGAGGCAATAAATTTCTCTTGGTTAAACCAAAAAAAAAAAA
AAAAAAAAAAAAAAA

FIGURE 1899

MKIHVGEKPYECKECGIAFTRSSQLTEHLKTHTAKDPFECKICGKSFRNSSCLSDHFRIHTGIKPYKCKDCGKAF
TQNSDLTKHARTHSGERPYECKECGKAFARSSRLSEHTRTHTGEKPFECVKCGKAFAISSNLSGHLRIHTGEKPF
ECLECGKAFTHSSSLNNHMRTHSAKKPFTCMECGKAFKFPTCVNLHMRIHTGEKPYKCKQCGKSFSYSNSFQLHE
RTHTGEKPYECKECGKAFSSSSSFRNHERRHADERLSA

FIGURE 1900

GGAAACATGCAGCATGTAGTAATTTATGACAGCTTCTTTCACTTAGCATGAGGTTTTCAAAGTTCATTGATGTGG
TAGCATTTGTCAGTACTCTGTGCCTTTTTATGGCTGAATAATATTTTATCATATGGATTTACCACATTTTATCAT
TTTATTTATCCATCATCAGTTGATTGACATTTGAGTTGCTTCTACTTTTTGAGTATTATCAATAATTCTGTTATG
AACATTCTTGTACAATTTTTTGGTAGACATTTATCTTCATATTTCTTGGATATATACCTAGGAGCAGAATTGCTG
CGTCAGATGGTAATGCTGTTTAACCTTTTCAGGAACTGTCAGACTGTTCTGAAGTGGGTACATTATTTTACATTC
CAACCAGCAGTGTATGAGAATTCCAGTTTCCCCACATCCTCATCAACAGTTGTTATTGTCTGTCTTTTTTATTAT
ATTCATCTGTAATGTGAAGTGTTTATCTCATTGTGGTTTTGATTTACATTTCCCTGATGGTTGATGATTTTCAAC
ATCTTTTCATATACTTATTAGTCATTATGTATCTTCTTTGGAGAATGTCTGTTCAGATCCTTTACCTACTTTATA
ATTGGTTTATCTTTTTAATATTGAACTGTAATAGTTTTTAAAAAATATATCCTAAATACAAGTCTCTTATCAGAT
AATATGATTTGCAGATATTTTCTGTCATTCTATGTACTGTCTTTTCACATTCTTGATGATAGACTTTTCAGCCCA
AATGTTTTTAACTTGATGGAATACAATTTATTTTTTCTTTTGTTGCTTGTGCTTTCAGTCATATTTGTGAAAACT
TTGCTTATCCCACATTACAAAGATTTACTATTTCTAAGTGATTTATAATTTTACCACCTACCTTTAGGTCTCTGA
TCCATTTTGAGTTAATTTTTATGTGCGAGGAGGGAGTCTAACTTGATTCTTTTACATGTGGATATTTAGTTGTCC
CAGGACCATTTGTTGAATTAAGTGCCCAGAACAAGTACATCTATATATAGAGAAAGTAGATTAGTGGTTGTCAGA
GACTGTAAGAAGTGGGGAATTGGAGAGTGACTGCCCATAGGTACAGGCATGCTTTTTGGCATTATGAAAATATTC
TGGAATTAGGTAGTGGTGATGGTTGCAGAACTTTTGGAATATGGTAAAAGACACTGAAATATATGCTTAAAAATG
GTGATTTTTGTGATATATGAATTATACTATAGAACTAATAATAACAGTAATAAAGCAAGGTGTCTTTCCACATCT
CCATGCCTTGTATTTTCATTAAAAAAAAAAAAAAAAAAGCATTTCAGGGCCAGGCTCAGTGGTTTACTCTTGTAA
TCCCAGCACTTTTGGAGGCCTAGGTGGGAGGATCACTTGAGGCCAGAAGTTCAAAACCAGCCTGAGCAACATAGC
AAGACCTTGTCTCCATGAAAAATAAAAAATTAGCCAGAAATGGTGATGTGTGCCTAGAGTTCCAACTACTTGGAA
AGCTGAGGCAAGAGGATCGCTTGAGCCTAGGAGTTCAAGGTTGCAGTGATCTATAATCACCACTGCACTCCAGCC
TGGGTGACAGAACAAGACCCTGTCTC

FIGURE 1901A

AAAACTCAAGGTTTTCTCACGATGAGTCGGAGGAGGATATCGTGTAAAGATCTGGGCCATGCTGACTGCCAAGGG
TGGCTGTATAAGAAAAAGGAAAAGGGAAGTTTCCTAAGCAACAAATGGAAAAAGTTCTGGGTGATACTGAAGGGG
TCGTCACTGTACTGGTATAGCAATCAAATGGCAGAGAAAGCTGATGGATTTGTCAACCTGCCTGATTTCACTGTG
GAAAGAGCATCTGAATGCAAGAAAAAGCATGCTTTTAAGATCAGCCATCCACAGATCAAGACCTTTTATTTTGCA
GCTGAGAATGTGCAGGAAATGAACGTGTGGTTAAATAAACTTGGATCGGCTGTAATCCATCAGGAATCCACTACA
AAGGATGAAGAATGTTACAGTGAAAGTGAACAGGAAGATCCAGAAATAGCTGCGGAGACACCACCCCCTCCTCAC
GCTTCCCAGACTCAGTCTTTGACTGCACAGCAGGCATCTTCATCCTCACCCAGCCTGAGTGGAACGTCGTATTCT
TTCTCTTCCCTGGAAAATACAGTGAAGACACCCAGCAGTTTTCCTTCCTCCTTATCTAAAGAGAGACAATCCTTG
CCTGACACAGTTAACAGTTTGTCTGCTGCTGAAGATGAGGGACAACCAATAACGTTTGCTGTGCAAGTTCATTCA
CCTGTACCCTCAGAGGCAGGCATCCACAAGGCCCTGGAAAACAGTTTTGTCACATCAGAAAGTGGATTTTTGAAC
TCTTTATCTAGTGATGATACTTCTTCATTGAGTAGCAATCATGACCATCTTACTGTCCCAGATAAGCCTGCTGGA
TCAAAGATCATGGACAAAGAAGAGACAAAAGTGTCTGAAGATGATGAAATGGAGAAGCTGTACAAATCATTAGAG
CAAGCTAGTCTATCTCCTCTTGGGGACCGACGACCTTCGACTAAAAAGGAGTTGAGAAAATCCTTTGTTAAGCGG
TGTAAAAATCCATCTATAAACGAGAAACTCCACAAAATCCGAACATTGAATAGCACATTAAAGTGTAAAGAACAT
GATCTGGCCATGATTAACCAGTTGCTGGATGACCCGAAGCTGACAGCCAGGAAATACAGAGAGTGGAAAGTCATG
AACACCCTGCTGATCCAGGACATCTATCAGCAGCAGCGGGCTTCGCCTGCCCCTGATGACACTGATGACACCCCC
CAGGAACTCAAGAAATCACCTTCTTCTCCCTCTGTTGAAAATTCCATTTGAGACAAAGTCAGGGTTTTCTCCTCT
TATATTTTATCACAAGCAACTCTTCAAGATGTTGCAAAAGCTTACATTTTTCCTTAAAAGGAAAACTGAAACCCA
GTCCTTCAAGCATCAGCTTCCCATCTAAAGATGCACGTTAGATGAAGATAATCACCGAATACACCAGGGCTCCTC
ATTTCAGTCGTAACGCATCCATTGAGATTGGAATGATTGAGTTCAGTTGAAAGGCGTTTTTTGTGTTCCTACTGG
GAGCTCACGGTGATGTGGGGCTCTAGGGGGGATGTGAGAAATGTCTCTTCTGTTCATTGCTCTCCAGAGAATGCT
ATGGACAAGAATCAAATTTTACCAGGAGTAATTGCCCATGGAAACATTCTGTTTTTCAAAAGAAGAATGTACATA
TTCCACTTGACTGGGAAGCTGTGTGGCCCAAATCACTGTTTGAGTGGAGGAATGTTTTCTAGAGCAGTGACTGGA
AGGACAAACGTGGTGTTGCAGAACAAAAATTCCTTGCCTTTGGTATGGAATGGTGGTGCCTTTTCCATGTGATGA
GAAATGCTTCATAGACAGTGGCATGTGGGAGAGCTGAAGGAGGAGGCGTGTTCCATATTCCACTCATTCAAAGGA
CAGCTTGGTGTTTTCACACTTTATGCAGGTTAGGGGATCTGATTAATGTTTCCTTTCCTTACAACAGCTAGAGAA
AACATCTCATCACAATTGGAGACCTCTACTTCCTTTGAGCTTTCCTACTCAATGGTAGGAGATAGGAATATGTTC
CGCAAAGAATGTCTACTGCTCTTGTCCTTGGCTGTGATCCCTATACATAGTGTGAATTTATATCCAGGTTTCCCA
GGATCAATATTGACAAGACGACTTTGGCATCTGAATTGTTTTAATATCTTTACTCAAAAAAACAAAAAAACAAAA
ACCCATGGAAGCAACAAAAGAGTTAAACATGAGGGATTTATTTTTGTATGTTTATATGTCACTTGTGTGCTATGT
GAATAGCTATGTTTGTTATTTAAATATATTTATAGAAGTTCAAATTACTAGTGTTTAAAAGATGATATACTATTA
TATATTGTGCTTAGTATATATTTGATGAGTCTATACTTTTTGCTTGAGAAAAATAGAAATACTATTGATTCACTG
GTGTTATGATGTTGCACTGTGTCTGAGGAATGCTCAGGAAATCTTGTGGGAAAAAAATGGGGCATGCATTCATAA
TTTTTCATTTTCTTCCCCACCCCAACCCCCATGAGCTCTTAAATTTAGATTTCTATCTCTTGTAAGTCACTCTTT
TAACCAGCAAAGGACTTTCATCTTAGATTATCCTTTCTATTAAATAAACTTTAAGCTTTGTGCCATTTATGCCTG
CAAACCTTAGACCAAAGGCAACACAACTAATGTCATCTTTTCATTAAAGACTAATAGAAATTTAGAAATCATTGT
GTTAAAGAGAGCTATAGAGAAACAATATGAAAGTCTTCCCTTACTAATCACCATGAATATTTCTCACCATAGGAA
TAACCACAACCCACCAAGTACCCATGTTGGCCCTGCCTACCCGTAACAAATTGTTCACACAACCTATTTTGTTTT
ATAGCTTCAAAGTGTGGCTTGACATTCAATGGAAGGAACCACCTGAATTATATCTGCAAACAAAATGGAAATAGT
TGTTGAATAGTTCCCCAAGCTTTACTAAGAAGCCTTAATACTCTGTAAACAAACAAACAAACAAAAAACAACCTT
AGCATTAAGAAATAAAAACAAAAAACAAGAAGCAAGTTGTACTGCTAGAAACTTCTCTAAGATAAGAGGCCAGGC
CAGTCAGTTTGGCCCAGCAAACATGTGGGTACTTCTCCACCTAGGGAAGCCACTGAAGATGAGTTTGACCTGTGG
TGACCTGACAGAGAGAACATTCAGATCCTCAGATTGCACCCTGATGCCCTGGTTTAGGAAAGCAGTGCTTTAACC
TTTTGCCCCTGGAAATTACTGATTCTTTCTGTGATTAGCAGATACCAGAAGGGAAATTATTTAGGATTGGCAATG
TAAAGAGTATTGAAGGAACAACAAATAACAATAGCAGAAATAACAGTGTGACATAAAGTGCCCTTCCACCTATTT
TTCTTTGGTTTGCAACACCAGCCTGTAGACTTCCAGTTTTTCTTAAATTGAAGAGCTCCAGACACTTTTGAGCAG
GGTTTGTGAATAGCTTTGAATGCTTTCCTTTGGCTTTTCGTGAAGACATATTTCCCCAGCCTTTCAACTGTAAAC
TCCTTTAGTACCATTGAAACTTAAGGCAAAAAAGATCCCTGGGATTACTTAGCCAAGGCTTAAATTTATTTTTCA

FIGURE 1901B

AAGTCAAGAACATTAGCCTAGAAGTTTTTGCTTTGCTAGTTAAAGCTTACTTTGCAGAGCTTCCCAAAGTGAAAG
GGAAACTGAACTTCACAATTTTGCACCTGGCTTTCTGGAGCCCCATTGCCTGCTCATTCGTGTTTTTCCCCCTGT
AAATTATTTTGCTTTTGACCAGGTTGTGCTAGAAAGTAGGGCTGCTTCTGTGAGTTCTCAGCCTAGGCTGTGGCC
ACTAAGACGTGGGTGGGGGGGATAGACAGGAGTGAGAGGGAGAGTGGGTGACACTTTCCGTGACACTTAATGTAGG
AAGACATGGGCTTCTCTCTCTTGGCCTCAAGCCACTTTTCTGGTCCAAAGAATATTGGGAAAACTGGATTACTTT
CAGTATATTTCTTGAGACCGGGTCATCTCTGAAATGCATTTGGGGTAGTTTCCTGGGGTCCAAGGGCCAATTCCT
ATACCCAGTCCTGCAGTGTCTGTGAGCTGTGGAATGAGAGAGAAAACCATGGCTGCTCAGGAAGGAAGTGGAGAA
TCTCTCAGCACACGTAGATCCAAATCTGTGGCACCTGCTAAAGATTAGGATTTGGAGAGGACTCCTCTTTGGGGT
TGTGAAGAGGACCTTTTCCCTCTGTTGTTAGCCTGTAGATCCAGAACGGAGCCTGATGTGATGCCTTCACTGGTT
GATATATTGCAAATAGACACTCTGAGCCCTGCATTGCAAGGGCGTCTTTTGCTTTAAAGAATTCTTAGTTTTGCC
ACAACAGCTCAAATCTCAGAATAGGATCAAAGGCCTAGAAAGACTCCTAAAGTATAGGATTACAAAGACTCCAGG
AAGCGTAAGAAAGAGATTGTGTTTGGAGTCAGATTTCAATGTGAAACCCATGCCTTACATTTACACAGCACTTTG
TAGTTTGCAAATTGGTGTGTTTTCAGCCCCCTCCCGCTGCCCCATGCTCTGAGATGATTGTGGATTATTACAGTG
AAGTGCCTGGCCCGGAGCCCCCAGTGATGAAGCAGGAACTTGAGTCTCAGGACTCCCAGCGGCTCTCTGCCCATT
TCCTCCTCTCCGCCCCCCACCTCGCTTCACCTGTTACCTTGTGAAGTTGCTGTTGGCACATAGCCCACTAGGAAA
CCAAGAAGTTTGACTGGGAGCGTGTGTTTCATTGCACTGGGCTTAGCATACGGCTGGCCCTGGTGGCTGTTTGGC
TAAATTCTCCATTTGAAACCTAAAGGGCCCTCTCTGTGCTTGAGCACAGTCTCCTCCTAGTGGTCCTGCCTCAAC
CTGCTGGCGGGCTGTCTATGGATTGGGGTTTCACCTAATCATGCTGTGTTTCCTTTCTTTTCTTTCTGTACATTA
GACTACTTGGGAGGTGCTGTGTGATCCTTGGATGAAAAACATATATTTAAAGAAATGGAGAGTGTTTATTTTGTT
TGCTTTTTGAGGCATGTGCTGTCAAATGTTAGAGACCAAACTTAGTGATTAGAGGTTGGTCCTTTGACCTTCTTC
TCTTAATTGCTTTTCATGTAATCATGATAATTTACTCAGGTAGCACTCCAGTCACAAACAATGTCACAGAGATGA
AACAGATTCAAAGAAAAAATATTTTTAAGTCTTTTGAAAAGAAGTGCTATTCAAATTTAAGACATGTTTAAATTC
ATAGGTACATTATCTCTTAGTAAGAAATACTTTTTTTTTTCTTTTTTTAGACAGAGTCTTGCTCTGTTGCCCAGG
CTGGAGTGCAGTGGCACGATTTTAGCTCACTGCAACCTCTGCCTCCCTGGTTGAAGTGATTCTCCTGCCTCAGCC
TCCCGAGTAGCTGGGACTACGCCCGGCTAATTTTTATATTTTTAGTAGAGACCGGGGTTTACCATGTTGCCCAGG
CTGGTTTCAAACTCCTGACCTCAGGTGATCTGCCTGCCTCTGCCTCCCAGAGTGCTGGGATTACAGGTGTGAGCC
ACCACACCTGGCCGAAAGACAGTATTTTGATATAGCCACATACATGATTTAATGAGTAATGTTAAGTACAGAAAA
GCTGCCATATCCACATAGTTTTAGGGGGCATTTCTTCTTCAGTCTAACAAGAATATGATATCCAATTGTGGTTTT
CCAATTTATTTCTCTTCCAATTTCTTTTGTATACCTCACAGGAGAAATTGAATCCTAGAACTGGGAGATGACTGC
CCTGCCCAGGGTTTTGTAATACATAATTGAAAATAAAAGTCCCTGAAACTAAATGTTTGCAGCCTGTATGAAATG
GACTGTGGAAGGGGGATAATTTCTCTCCTCACAGAAAGCCACTCGTCTCCTTGAATGAGGCATTGAGCAGACACA
CGTTTCTCTGTGTCGTGGGGCAGGAAGCAATTCCCTTGCCTCTTCAGCACATCTCAGTTCTTTCCCACATGACCC
CAGAACCACATAGAAAACATTGAAAATAATGGATTCTTCATTGTATTTGAATTTTTTTTTTTAACCTTTAGCCC
AAAAGGGAAGTGTGCCTCGTGGAAAGAGCAAATGCCGTAAAATAGAAACCAGGAGTTTTAATCGCCATATATTTT
AATGTGCTTGCATGATGGGAATGTGACTTTTAGCACTGCATGGTGTTTGGGGGCAAGATATTAATGTGGAAATCT
TAGCTTAAGTTTTACTGTGCTCTCATCCTGTGTCAGCTACCCCTCTAAACTGAAAAAGAGGCATGGCTCATTTCT
CTCCTGCTTTATGTTTTTGAGGTTGACTTGTAAGATAAAAATAAAAATAAGAAAAAAATATATCTAGGCAAATGA
CATGAAAAAAAAGTTGAAATATACTACTGGTGTTCATTTTTGTCCTGCAGTGTTGCTTTCTCAAAGAAATAAACA
TGTGGCTGGAAGTGTTT

FIGURE 1902

CGGGAATAACTATATTGACATATTTATTTGGCGAGAACCAATTAACAGCAGCTGGCTAAATGTAACTCACCCAGG
ACAGAAGGGGAAGTGGAGGGGGGTGGTCTGTGTGTGGATGGAGGTGGGACGAGTGGCGTACATGGAGAGTCAGGT
GTTCCCTCCCCCAATTCATTTAGCAGCCCCAGAACGTGTCCGATTTTAACTTTAATGAAACTTTAAGTACATAAA
TAACCACTCTTTCCTGCCCTGGTTGAGGCCGCGCTGGGTCCGGGAAATATCTGCTTTCCAACGGGGCACCTGGGT
GGGAGCCTTCCAAGAACTTCAGCTCAGCGGTTCCCAGCAAGGGTTCGCTGAGTCTCTGTCCTAGGAGGTCCGAGC
TGGGTATGCTGTGCGGACGCAGACACTGCGGGAAGGAAACAGGTGTCCCGCGGCGGCCAAACCTTCGGGCAGCAG
CCCAGGTCGCCTTGCTCACCCCAGGCGGTCTCATGGCACGGGCCTCTCGAAACTGTGGGCAAGAAAGGGTCCTCG
TGAGAACTAGGCTCAGAAGAAGAGCGGGGGCGGCGCCACCTCGGGGGGAGCGGACCAGGCTGGGGCCGCAAGGGC
GGCGTCCGGGGCCGCGTGGGCGGCTTCGCCGTGAATGAGCTGGTGCCGCACCAGGTGGGTCTTGCGGCTGAAGCT
CTTTCCGCACTGCGGGCAGGAGAAGGGGCGGGAGCCTGTGTGGATCGCCTGGTGGCGGACTAGGTTGGTTTTGGA
GCTGAAGCTGCGGGCGCAGACGGCGCAGGCGTGGGGGCGACTGCCAGTGTGCACCGCCTGGTGGCGGCCCAGGTG
CGACTTGCGGCTGAAGCGGCGGCCGCACTGAGCGCAGGCGAAAGGCCTGGCGCCGCTGTGGGCCCTGGAGTGGGC
GACCAGATTAGGCCGCGAGCCGAAGCGGCGGTCACACTGCGTGCAGGCGAAGGGCCGTTCGCCCGTGTGCACGCG
CGGGTGCCGCGCCAGGTGCTGCCCATGGGAGAAGCCGCGCCCGCAGTCCGGGCAGAAGAAGGACCGCTCGCCCGA
GGGGGCGCGCTGGGGCACCACGGGATCGGATCCTGGGCCGCAGCCCGGTCCGCCAGGCGCGCTGGCCAGGGGCTT
GGCGGCGGGGGCATCCACGGTGGCGCCCAGTGCGCACTCATCGCACCCAAAGGGGCGACCCTCGCTGCGGTGCAG
ACACTGGTGCGTGGCGAGGTTCTTTTTCCAGCCGAAGCTCAAGCCGCAGTCGGAGCACGCGAAAGGCTTTGGCCC
GGGAAAGGATGGGGTCGGGGACGGGGCAGTGGA**ATG**AGGAGAAGCGGACGAGTCGGGAGAGGGCCTGGCCGGGCC
GGCCGTCTGGTGCACCCTTTGGTGCCGCACCAAGTGCTGCTTGTGCGTGAAGCTGCGTGCGCACTGTGCGCACTG
GTAGGGCCTCTCGCCCGTATGGATGCGCTGGTGCCGAATCAAGTGCGTCTTCTTGCGAAAGCGCTTCTCGCATTC
CGTGCAGGGGAAGGGCCGCTCGCCGGTGTGGGTCTTTTGGTGCGAGCCCAGGTGGATCTTCTGGCTGAAGCGCTT
GCCGCACTCCGCGCACGGGTAGGGCCGCTCGCCCGTGTGCGTGCGCAGGTGGCGGGTCAGATGGGCCTTCTTGCT
GAAGCGCTTGTCGCACTCGGAGCACGGGAAAGGCCGCTCGCCGCGGTGGCTGCGCTGATGCAG**TAG**CATGTGGGC
GCGCTGCGTGAAGCTGCGGCCGCAGTCCGGGCAGGCGCAGGGGCCCTCGCCCCGGTGCAGCCGCTGGTGCAGTCG
CAACGTCAGCTGGTCCCGGAAGCGCCGCTCACACTCCCCGCAGCCGTAGGGCTTCTCCGGCATCGGACCCCACCC
AGACAGCGCGAGCCCACTCAGTGCCCCCGGGGCCCCTGGCTCCAGTTTGTACGCGGCAGCCAGATGCCCCAGGTC
AGGCGCGGGAAAGGGGCTGGGAAGTAACGATAGATGCTGGGGCCATTCGACCTCCTCTTCTGCCTCCTGATCTTC
GTCCTCCACCTTCACCTTCCGAATCATCCACTCCTCTCCTGGGCAGGTACCCACAGGCTGAGCCTTCTGTGCTGA
GCACGCCTGGCCTCTGCAGGGAGCCTCGGCTTGTTCTGTGTGGGCACCTTCCTCCGGTGTAGGGGCCTCGTGCCC
TGAGCACACCCCCAGTGCTCTCTCTTCCCTAGAAGAGGACATCTGCTCCTGGGCATTATGGGATCCTTCCCTGGG
CTCACTTTGGGGGGCCATCTCTGGCTGTCCCACAGAGAATCCCAGGGAGCTGAGGGCCTCCAAGGTCTCTCTCCG
GGGTGAACCACGAGATATACGTTCTCTCTCTGGGAGACACAGGCACACAGAACCTGGCAGGTCTGTCACCGCCAA
CCCCGGCCCATCAGCACCGCAACTCCACGCCCCAGCGTCCTTGCCTGGGAAAGTGCAGGCAAGATTCGATTCTCT
GGGGAGAGGCTTGAGGGTGGGAGCCCAGGGTGGGGAGTGGGAAACTTCATCTCCCAGGTCCTCCAGCTGTCACTG
CCCGAGCTGGTGAAATAGGAGCCAGCCCAGGGGCGGGAGTGAGTGTCACTTTAGGGGTACTGCTTGGGGAGGTCC
TCGAGAGGATCCTCTTGTAGCTAGAAAATGATCGCCTCTTCCTAAACCCCTACCACAAAACCACCTCTCACCCGT
GCCGGGCTGCCCAAGGCCCGGACACCGCCCCTGCTGCCCCTTCCCTGC

FIGURE 1903

MRRSGRVGRGPGRAGRLVHPLVPHQVLLVREAACALCALVGPLARMDALVPNQVRLLAKALLAFRAGEGPLAGVG
LLVRAQVDLLAEALAALRARVGPLARVRAQVAGQMGLLAEALVALGARERPLAAVAALMQ

FIGURE 1904

ATTTGGAGTCAGGCCTGGCTGTTGCTCAGGTGACCAGCTTGTGTCTCTGGGAGGGCGCTGCTTTCCCCGGCCACC
CGGCGCG**ATG**ATCCAGAATGTCGGAAATCACCTGCGACGGGGCTTGGCCTCTGTGTTCTCCAACCGCACATCCCG
GAAGTCAGCCTTACGTGCGGGGAACGACAGTGCCATGGCAGACGGCGAGGGATACCGGAACCCCACGGAGGTGCA
GATGAGCCAGCTGGTGCTGCCCTGCCACACCAACCAACGTGGTGAGCTGAGCGTCGGGCAGCTGCTCAAGTGGAT
TGACACCACGGCTTGCCTGTCCGCGGAGAGGCACGCTGGCTGCCCCTGTGTCACAGCTTCCATGGATGACATCTA
TTTTGAGCACACCATTAGTGTTGGACAAGTGGTGAATATCAAGGCCAAGGTGAACCGGGCCTTCAACTCCAGCAT
GGAGGTGGGCATCCAGGTGGCCTCGGAGGACCTGTGCTCTGAGAAGCAGTGGAATGTGTGCAAGGCCTTGGCCAC
CTTCGTGGCCCGCCGAGAGATCACCAAGGTGAAGCTGAAGCAGATCACGCCGCGGACAGAAGAGGAGAAGATGGA
GCACAGTGTGGCGGCTGAGCGCCGGCGCATGCGCCTTGTCTATGCAGACACCATCAAGGACCTCCTGGCCAACTG
CGCCATTCAGGGCGATCTGGAGAGCAGAGACTGTAGCCGCATGGTGCCGGCTGAGAAGACCCGTGTGGAGAGTGT
GGAGCTGGTCCTGCCTCCCCACGCCAATCACCAGGGCAACACCTTTGGGGGCCAGATCATGGCCTGGATGGAGAA
TGTGGCCACCATTGCAGCCAGCCGGCTCTGCCGTGCCCACCCTACGCTGAAGGCCATTGAAATGTTCCACTTCCG
AGGCCCGTCCCAGGTCGGCGACCGTCTGGTGCTCAAAGCCATCGTGAACAATGCCTTCAAACATAGCATGGAGGT
GGGCGTGTGCGTGGAGGCCTATCGCCAGGAGGCTGAGACCCACCGGCGCCACATCAACAGTGCCTTTATGACCTT
TGTGGTCCTGGACGCAGATGACCAGCCCCAGTTGCTGCCCTGGATTCGGCCCCAGCCCGGCGATGGTGAGCGGCG
GTACCGAGAGGCCAGTGCCAGAAAGAAGATCCGCCTGGACAGGAAGTACATCGTGTCCTGTAAGCAGACAGAGGT
GCCCCTCTCCGTCCCCTGGGACCCTAGCAACCAGGTGTACCTGAGCTACAATAACGTCTCCTCCTTGAAGATGCT
TGTGGCCAAGGACAACTGGGTGCTGTCCTCGGAGATCAGTCAGGTCCGCCTGTACACTCTGGAGGATGACAAGTT
CCTCTCCTTCCACATGGAGATGGTGGTGCATGTGGATGCAGCCCAGGCCTTCCTGCTGCTCTCGGACCTGCGTCA
GAGGCCAGAGTGGGACAAGCACTACCGGAGCGTGGAGCTAGTGCAGCAGGTAGACGAGGACGACGCCATCTACCA
CGTCACCAGCCCTGCCCTCGGAGGTCACACAAAGCCCCAGGACTTCGTGATCCTGGCCTCAAGGCGGAAGCCTTG
TGACAATGGGGACCCCTATGTCATCGCGCTGAGGTCGGTCACGCTGCCCACACACCGAGAGACGCCAGAGTACAG
ACGCGGAGAGACCCTCTGCTCAGGCTTCTGCCTCTGGCGCGAGGGGGACCAGCTGACCAAGGTATCCTACTACAA
CCAGGCCACCCCAGGTGTTCTCAACTATGTGACCACCAACGTGGCCGGCCTCTCCTCTGAGTTCTACACCACCTT
CAAGGCTTGTGAGCAGTTTCTCTTGGACAACCGGAATGATCTGGCCCCCAGCCTCCAGACCCTC**TAG**ATGCCCTC
AGTGGCCACATCATGCCCACTCCCACTCCATCCTGTCCCCAAGGACTCACATACAGTGCCTGGAGAAAGCCAAAG
ACCTTTATTTCTTCCTGCCTCCCCGTGGGAAGCCTCCGCCCTGAGGTCCGCTGGCCCACCACCCCTGGGTGCTCA
GTTTCTACCAACATGAGCCAGCAAGTCCTTGTGGTAGCCCTGGGGTAGCCTGTAGTAGACTCGGGTCCTGTCCAC
AGCCCTAGCTGCCAGCAATGCTGTCCTCACAGAGGCATAGTCGCCCCCAGCTGGGTTGTGCTCCACTGTGACGGT
GGCCCGGGGGGAGGATGCCAGCAGCCTGGCTATGGCTCCAGCTGTGCTGTGGCCCAGCAGCATGGCCTGCATCTG
GAAGGACACAGGTTGCCAGAGCCCCTGGCACAACTCTAGCATATCTGTGAGCAGCTGTTCCCTGTAGCCACTGCC
CAGCACCTCCTCAGGCCAGCCTGGTGCCACAGTCACGTGGGGGAAGACCTCAGCCACAGCTGTAAGCAGCTCTCT
GCCAGCCACATGGCCGGGGACCAAAAAACTCCCGTGGGAGATTTTGGCCCCAACCCACACAGGCCAATGCAAGAG
GCCAAGGCTGGAGAGGCGTGCCAGCAAGGCCAGGGATGGCCGGAGGGCTGCGGGCTCCGCTATTTGCAAATGGAT
GCCCCAGTGTCCGGGATGTGTGGCCAGCTGCTGCAGGCAGGACTCCAGCGTCAGGATGTTGCCACTTGGAGTATG
AACAATGGGCACGGGGTTTTCAGCCACAGTTCCCTCGAGGCCAGTGTTCAGCAGGATCATGCCTTCTGTGTCTGG
AAGAGGCGGCAGAGGCAACAGTGTTTAGGATTTGGGTTATCATAAGGTGTTAAGAGTCCCTTGTTAAAGGGGCAG
TGGGAGTTATGGGGTCATCAAGGACCTTGCCTCTCTGGAATCTGTCAACCCAGTTTTGGGCTCCAGGTGGATGGG
TTGCTTTATAAATGTGCCTGGTGCATGAGAAACTCTTGTTTCAGCTCTTGGCCTTTACCCATGACTCAGCCTGGG
GGCTGGTGCCGGCCTTGCCTGCAGCAATGTAGCTGAGGACTGGTCTGAAGGCCAGGAGCCCTGTGCTCTTGACAT
CACTGTACTCCCTCTCCCTCCCCGCAACCCTGCCCCACCTTGCATCCAGGGTATGGTGTAAATAAACCTGTGTTG
CCATGGC

FIGURE 1905

MIQNVGNHLRRGLASVFSNRTSRKSALRAGNDSAMADGEGYRNPTEVQMSQLVLPCHTNQRGELSVGQLLKWIDT
TACLSAERHAGCPCVTASMDDIYFEHTISVGQVVNIKAKVNRAFNSSMEVGIQVASEDLCSEKQWNVCKALATFV
ARREITKVKLKQITPRTEEEKMEHSVAAERRRMRLVYADTIKDLLANCAIQGDLESRDCSRMVPAEKTRVESVEL
VLPPHANHQGNTFGGQIMAWMENVATIAASRLCRAHPTLKAIEMFHFRGPSQVGDRLVLKAIVNNAFKHSMEVGV
CVEAYRQEAETHRRHINSAFMTFVVLDADDQPQLLPWIRPQPGDGERRYREASARKKIRLDRKYIVSCKQTEVPL
SVPWDPSNQVYLSYNNVSSLKMLVAKDNWVLSSEISQVRLYTLEDDKFLSFHMEMVVHVDAAQAFLLLSDLRQRP
EWDKHYRSVELVQQVDEDDAIYHVTSPALGGHTKPQDFVILASRRKPCDNGDPYVIALRSVTLPTHRETPEYRRG
ETLCSGFCLWREGDQLTKVSYYNQATPGVLNYVTTNVAGLSSEFYTTFKACEQFLLDNRNDLAPSLQTL

FIGURE 1906A

TCTTCATGTACCAGATGCTGAAATACTATGAGATAAAGATTTTAGGTTTCAATTGTAAAGAGAGAGAAGTGGATA
AATCAGTGCTGCTTTCTTTAGGACGAAAGAAGTATGGAGCAGTGGGATCACTTTCACAATCAACAGGAGGACACT
GATAGCTGCTCCGAATCTGTGAAATTTGATGCTCGCTCAATGACAGCTTTGCTTCCTCCGAATCCTAAAAACAGC
CCTTCCCTTCAAGAGAAACTGAAGTCCTTCAAAGCTGCACTGATTGCCCTTTACCTCCTCGTGTTTGCAGTTCTC
ATCCCTCTCATTGGAATAGTGGCAGCTCAACTCCTGAAGTGGGAAACGAAGAATTGCTCAGTTAGTTCAACTAAT
GCAAATGATATAACTCAAAGTCTCACGGGAAAAGGAAATGACAGCGAAGAGGAAATGAGATTTCAAGAAGTCTTT
ATGGAACACATGAGCAACATGGAGAAGAGAATCCAGCATATTTTAGACATGGAAGCCAACCTCATGGACACAGAG
CATTTCCAAAATTTCAGCATGACAACTGATCAAAGATTTAATGACATTCTTCTGCAGCTAAGTACCTTGTTTTCC
TCAGTCCAGGGACATGGGAATGCAATAGATGAAATCTCCAAGTCCTTAATAAGTTTGAATACCACATTGCTTGAT
TTGCAGCTCAACATAGAAAATCTGAATGGCAAAATCCAAGAGAATACCTTCAAACAACAAGAGGAAATCAGTAAA
TTAGAGGAGCGTGTTTACAATGTATCAGCAGAAATTATGGCTATGAAAGAAGAACAAGTGCATTTGGAACAGGAA
ATAAAAGGAGAAGTGAAAGTACTGAATAACATCACTAATGATCTCAGACTGAAAGATTGGGAACATTCTCAGACC
TTGAGAAATATCACTTTAATTCAAGGTCCTCCTGGACCCCCGGGTGAAAAAGGAGATCGAGGTCCCACTGGAGAA
AGTGGTCCACGAGGATTTCCAGGTCCAATAGGTCCTCCGGGTCTTAAAGGTGATCGGGGAGCAATTGGCTTTCCT
GGAAGTCGAGGACTCCCAGGATATGCCGGAAGGCCAGGAAATTCTGGACCAAAAGGCCAGAAAGGGGAAAAGGGG
AGTGGAAACACATTAACTCCATTTACGAAAGTTCGACTGGTCGGTGGGAGCGGCCCTCACGAGGGGAGAGTGGAG
ATACTCCACAGCGGCCAGTGGGGTACAATTTGTGACGATCGCTGGGAAGTGCGCGTTGGACAGGTCGTCTGTAGG
AGCTTGGGATACCCAGGTGTTCAAGCCGTGCACAAGGCAGCTCACTTTGGACAAGGTACTGGTCCAATATGGCTG
AATGAAGTGTTTTGTTTTGGGAGAGAATCATCTATTGAAGAATGTAAAATTCGGCAATGGGGGACAAGAGCCTGT
TCACATTCTGAAGATGCTGGAGTCACTTGCACTTTA**TAA**TGCATCATATTTTCATTCACAACTATGAAATCGCTG
CTCAAAAATGATTTTATTACCTTGTTCCTGTAAAATCCATTTAATCAATATTTAAGAGATTAAGAATATTGCCCA
AATAATATTTTAGATTACAGGATTAATATATTGAACACCTTCATGCTTACTATTTTATGTCTATATTTAAATCAT
TTTAACTTCTATAGGTTTTTAAATGGAATTTTCTAATATAATGACTTATATGCTGAATTGAACATTTTGAAGTTT
ATAGCTTCCAGATTACAAAGGCCAAGGGTAATAGAAATGCATACCAGTAATTGGCTCCAATTCATAATATGTTCA
CCAGGAGATTACAATTTTTTGCTCTTCTTGTCTTTGTAATCTATTTAGTTGATTTTAATTACTTTCTGAATAACG
GAAGGGATCAGAAGATATCTTTTGTGCCTAGATTGCAAAATCTCCAATCCACACATATTGTTTTAAAATAAGAAT
GTTATCCAACTATTAAGATATCTCAATGTGCAATAACTTGTGTATTAGATATCAATGTTAATGATATGTCTTGGC
CACTATGGACCAGGGAGCTTATTTTTCTTGTCATGTACTGACAACTGTTTAATTGAATCATGAAGTAAATTGAAA
GCAGGACATATGAGAAAACTGACCATCAGTATATTTGTCCAGATAACTGGTGGATCAAAAATGCCACTTAACAGG
AAGTTTAGTTTGTTATGCACTTTAAATGGAATAATTAGCTTGTTACAATTCTAGGACATGGTGTTTAAAATTTAA
ATCTGATTAATCCATTTTAACAAACAATGCAAACATTTTCAGTGCAGAAGGAAGAGTGGTTTCAACTGTTTGGAG
TCTTTTATGAAGTCAGTCAACATTTACAACCAAAGGGCGGGGTCGGGGGGGGGGTGCGTCTTTAGTCCTAAAGGGA
CAGTAACTCTGAGCATGCCCCAAAAAAGTAGCTTAGCAACCTTTTGTTGGTAGTCAACCCATCCCCAGGGCCATA
GTGTAGAGTGTGAAAAGCTACCCGGAAGCCCAGTAATTCTACCCTGAAAGTGACTGTCTGCAGAAAGACCAGTAG
TTGATATTAAAGCGCAAATGAATTCAACCTCAGCCCTGAAAATAACAGAATTCTGAAGTTTCCTATGACTAATTC
ACAAAAAAAGTAATTGTAAACTAGTACTATTATGGAATTACTCTACTGTTCTTTCTTTAATAGTGGCAAATGAAA
GCATAAGCTTAAGCATTTTTTCATATTCTGAAGTCTCACCACACATAATAACCAAGTGGTAGACTCACAGCCGTC
CAACTTAAAAAGGCAAAACCTTACCTTGGAATTGGAATTACTGTAAACAGCCTACTGAAAATGCATTTTTATCAT
GTAACATTCTTCTACTTGTTTAACATTGCTGATTTTCTCTGGCAGCATAATTTTGTGGTTAAGAGAATGAATTCT
GAATGTACACTTTCTGTCTCAAACCCTGGCTGTAATTTCAGCTAGTTAATAATTCTTTGTGTTCAGTTCCACTAT
CTAGGTATTTTCTTCAAAAGGTAAATACAATGGTTTCTGAAAGAATCATTTGCATTATCAGCCTGTTTGGGATGT
CTGAGATCAGTGCCTCTGGGTTGTTAATACTGTATTGCTGTATGGTATATGTATGCTGATTTACTACTTATGCGT
AAGTGGTATGCATGGGATGTCTGAAATCAGTGCCTATGGGTTGTCAATAGTATTAACTATTAGTGTTAACTGTTA
GTATTAACTATTAGTATTATTAACACTAATAATAGTACTATTACTATTACTATTTTTATTTTAAAATAAAATTTA
CCTTTAAAATAATAATAGTGCTATTGCTAGTACTAGTACTATTGCTATTACTAGTGCTATTACTAGTACTAGTAC
TATGACACTGTTAATAGTACTATTAACAACCCATAGGCACTTGGGATGTCTGAGATCAGTGCCTATGGGTTGTTA
ATACTATATTGCTGTATGGTATATGCATGCTGATTTACCACTTATGCATAGATATATCTTTAATAAGTAATCTAA
AAATCCTTTTTGTATTTGAGAGAATCTACTAAGTTCAGTCCAGTCAAGAAAAGAACCTAATAGCACCAATACAAA

FIGURE 1906B

TTGAGGACTTAATTTACTTTGGAATGTTGAATTGCATTTGTTCCATTAAAAAAAACAGAAATTTGCGATTTGGTT
TTTTTGAAAAAATAGCTCAGCTGACCAGAATGAATGTATTCTACTTGTTGAGCCATCCAGCATCACGTTAAATGC
AAAATGTATATATAAATAAAAGAAGAAGAAAAAAGAAAGACCAAAGGGATGTAGAAAATGAAGAATAACCATTAA
TATCTAAGGGCCAAACACATTCCACCTAAATTATCTAAATAGTTTCAAATAAAACTTTCCATTTTTTCAAAAC

FIGURE 1907

FMYQMLKYYEIKILGFNCKEREVDKSVLLSLGDERSMEQWDHFHNQQEDTDSCSESVKFDARSMTALLPPNPKNS
PSLQEKLKSFKAALIALYLLVFAVLIPLIGIVAAQLLKWETKNCSVSSTNANDITQSLTGKGNDSEEEMRFQEVF
MEHMSNMEKRIQHILDMEANLMDTEHFQNFSMTTDQRFNDILLQLSTLFSSVQGHGNAIDEISKSLISLNTTLLD
LQLNIENLNGKIQENTFKQQEEISKLEERVYNVSAEIMAMKEEQVHLEQEIKGEVKVLNNITNDLRLKDWEHSQT
LRNITLIQGPPGPPGPPGEKGDRGPTGESGPRGFPGPIGPPGLKGDRGAIGFPGSRGLPGYAGRPGNSGPKGQKGEKG
SGNTLTPFTKVRLVGGSGPHEGRVEILHSGQWGTICDDRWEVRVGQVVCRSLGYPGVQAVHKAAHFGQGTGPIWL
NEVFCFGRESSIEECKIRQWGTRACSHSEDAGVTCTL

FIGURE 1908A

ATGGCGGCGGCGGCGGGGAATCGCGCCTCGTCGTCGGGATTCCCGGGCGCCAGGGCTACGAGCCCTGAGGCAGGC
GGCGGCGGAGGAGCCCTCAAGGCGAGCAGCGCGCGCGCGGCTGCCGCGGGACTGCTGCGGGAGGCGGGCAGCGGG
GGCCGCGAGCGGGCGGACTGGCGGCGGCGGCAGCTGCGCAAAGTGCGGAGTGTGGAGCTGGACCAGCTGCCTGAG
CAGCCGCTCTTCCTTGCCGCCTCACCGCCGGCCTCCTCGACTTCCCCGTCGCCGGAGCCCGCGGACGCAGCGGGG
AGTGGGACCGGCTTCCAGCCTGTGGCGGTGCCGCCGCCCCACGGAGCCGCCAGCCGGCGCGGCGCCCACCTTACC
GAGTCGGTGGCGGCGCCGGACAGCGGCGCCTCGAGTCCCGCAGCGGCCGAGCCCGGGGAGAAGCGGGCGCCCGCC
GCCGAGCCGTCTCCTGCAGCGGCCCCCGCCGGTCGTGAGATGGAGAATAAAGAAACTCTCAAAGGGTTGCACAAG
ATGGATGATCGTCCAGAGGAACGAATGATCAGGGAGAAACTGAAGGCAACCTGTATGCCAGCCTGGAAGCACGAA
TGGTTGGAAAGGAGAAATAGGCGAGGGCCTGTGGTGGTAAAACCAATCCCAGTTAAAGGAGATGGATCTGAAATG
AATCACTTAGCAGCTGAGTCTCCAGGAGAGGTCCAGGCAAGTGCGGCTTCACCAGCTTCCAAAGGCCGACGCAGT
CCTTCTCCTGGCAACTCCCCATCAGGTCGCACAGTGAAATCAGAATCTCCAGGAGTAAGGAGAAAAAGAGTTTCC
CCAGTGCCTTTTCAGAGTGGCAGAATCACACCACCCCGAAGAGCCCCTTCACCAGATGGCTTCTCACCATATAGC
CCTGAGGAAACAAACCGCCGTGTTAACAAAGTGATGCGGGCCAGACTGTACTTACTGCAGCAGATAGGGCCTAAC
TCTTTCCTGATTGGAGGAGACAGCCCAGACAATAAATACCGGGTGTTTATTGGGCCTCAGAACTGCAGCTGTGCA
CGTGGAACATTCTGTATTCATCTGCTATTTGTGATGCTCCGGGTGTTTCAACTAGAACCTTCAGACCCAATGTTA
TGGAGAAAAACTTTAAAGAATTTTGAGGTTGAGAGTTTGTTCCAGAAATATCACAGTAAGCGTAGCTCAAGGATC
AAAGCTCCATCTCGTAACACCATCCAGAAGTTTGTTTCACGCATGTCAAATTCTCATACATTGTCATCATCTAGT
ACTTCTACATCTAGTTCAGAAAACAGCATAAAGGATGAAGAGGAACAGATGTGTCCTATTTGCTTGTTGGGCATG
CTTGATGAAGAAAGTCTTACAGTGTGTGAAGACGGCTGCAGGAACAAGCTGCACCACCACTGCATGTCAATTTGG
GCAGAAGAGTGTAGAAGAAATAGAGAACCTTTAATATGTCCCCTTTGTAGATCTAAGTGGAGATCTCATGATTTC
TACAGCCACGAGTTGTCAAGTCCTGTGGATTCCCCTTCTTCCCTCAGAGCTGCACAGCAGCAAACCGTACAGCAG
CAGCCTTTGGCTGGATCACGAAGGAATCAAGAGAGCAATTTTAACCTTACTCATTATGGAACTCAGCAAATCCCT
CCTGCTTACAAAGATTTAGCTGAGCCATGGATTCAGGTGTTTGGAATGGAACTCGTTGGCTGCTTATTTTCTAGA
AACTGGAATGTGAGAGAGATGGCCCTCAGGCGTCTTTCCCATGATGTCAGTGGGGCCCTGCTGTTGGCAAATGGG
GAGAGCACTGGAAATTCTGGGGGCAGCAGTGGAAGCAGCCCGAGTGGGGGAGCCACCAGTGGGTCTTCCCAGACC
AGTATCTCAGGAGATGTGGTGGAGGCATGCTGCAGCGTTCTGTCAATGGTCTGTGCTGACCCTGTCTACAAAGTG
TACGTTGCTGCTTTAAAAACATTGAGAGCCATGCTGGTATATACTCCTTGCCACAGTTTAGCGGAAAGAATCAAA
CTTCAGAGACTTCTCCAGCCAGTTGTAGACACCATCCTAGTCAAATGTGCAGATGCCAATAGCCGCACAAGTCAG
CTGTCCATATCAACACTGTTGGAACTGTGCAAAGGCCAAGCAGGAGAGTTGGCAGTTGGCAGAGAAATACTAAAA
GCTGGATCCATTGGTATTGGTGGTGTTGATTATGTCTTAAATTGTATTCTTGGAAACCAAACTGAATCAAACAAT
TGGCAAGAACTTCTTGGCCGCCTTTGTCTTATAGATAGACTGTTGTTGGAATTTCCTGCTGAATTTTATCCTCAT
ATTGTCAGTACTGATGTTTCACAAGCTGAGCCTGTTGAAATCAGGTATAAGAAGCTGCTGTCCCTCTTAACCTTT
GCTTTGCAGTCCATTAATAATTCCCACTCAATGGTTGGCAAACTTTCCAGAAGGATCTACTTGAGTTCTGCAAGA
ATGGTTACTACAGTACCCCATGTGTTTTCAAAACTGTTAGAAATGCTGAGTGTTTCCAGTTCCACTCACTTCACC
AGGATGCGTCGCCGTTTGATGGCTATTGCAGATGAGGTGGAAATTGCCGAAGCCATCCAGTTGGGCGTAGAAGAC
ACTTTGGATGGTCAACAGGACAGCTTCTTGCAGGCATCTGTTCCCAACAACTATCTGGAAACCACAGAGAACAGT
TCCCCTGAGTGCACAATCCATTTAGAGAAAACTGGAAAAGGATTATGTGCTACAAAATTGAGTGCCAGTTCAGAG
GACATTTCTGAGAGACTGGCCAGCATTTCAGTAGGACCTTCTAGTTCAACTACTAACTACTACTACAACAACAGA
GCAACCAAAGCCAATGGTTCAAACAAAAGGCAGACCCCACAGTCAGTGTTTGAACTCCTCTCCTTTATCTCATCA
TTCCCAATTAATGTTTCCAGCCTTGTCAACCCCTTCTTCTTCTACCCCATCTGTACCAGCTGGCACTGCAACAGA
TGTCTCTAAGCATAGACTTCAGGGATTCATTCCCTGCAGAATACCTTCTGCATCTCCTCAAACACAGCGCAAGTT
TTCTCTACAATTCCACAGAAACTGTCCTGAAAACAAAGACTCAGATAAACTTTCCCCAGTCTTTACTCAGTCAAG
ACCCTTGCCCTCCAGTAACATACACAGGCCAAAGCCATCTCGACCTACCCCAGGTAATACAAGTAAACAGGGAGA
TCCCTCAAAAAATAGCATGACACTTGATCTGAACAGTAGTTCCAAATGTGATGACAGCTTTGGCTGTAGCAGCAA
TAGTAGTAATGCTGTTATACCCAGTGACGAGACAGTGTTCACCCCAGTAGAGGAGAAATGCAGATTAGATGTCAA
TACAGAGCTCAACTCCAGTATTGAGGACCTTCTTGAAGCATCTATGCCTTCAAGTGATACAACAGTAACTTTTAA
GTCAGAAGTTGCTGTCCTGTCTCCTGAAAAGGCTGAAAATGATGATACCTACAAAGATGATGTGAATCATAATCA
AAAGTGCAAAGAGAAGATGGAAGCTGAAGAAGAAGAAGCTTTAGCAATTGCCATGGCAATGTCAGCGTCTCAGGA

FIGURE 1908B

TGCCCTCCCCATAGTTCCTCAGCTGCAGGTTGAAAATGGAGAAGATATCATCATTATTCAACAGGATACACCAGA
GACTCTACCAGGACATACCAAAGCAAAACAACCGTATAGAGAAGACACTGAATGGCTGAAAGGTCAACAGATAGG
CCTTGGAGCATTTTCTTCTTGTTATCAGGCTCAAGATGTGGGAACTGGAACTTTAATGGCTGTTAAACAGGTGAC
TTATGTCAGAAACACATCTTCTGAGCAAGAAGAAGTAGTAGAAGCACTAAGAGAAGAGATAAGAATGATGAGCCA
TCTGAATCATCCAAACATCATTAGGATGTTGGGAGCCACGTGTGAGAAGAGCAATTACAATCTCTTCATTGAATG
GATGGCAGGGGGATCGGTGGCTCATTTGCTGAGTAAATATGGAGCCTTCAAAGAATCAGTAGTTATTAACTACAC
TGAACAGTTACTCCGTGGCCTTTCGTATCTCCATGAAAACCAAATCATTCACAGAGATGTCAAAGGTGCCAATTT
GCTAATTGACAGCACTGGTCAGAGACTAAGAATTGCAGATTTTGGAGCTGCAGCCAGGTTGGCATCAAAAGGAAC
TGGTGCAGGAGAGTTTCAGGGACAATTACTGGGGACAATTGCATTTATGGCACCTGAGGTACTAAGAGGTCAACA
GTATGGAAGGAGCTGTGATGTATGGAGTGTTGGCTGTGCTATTATAGAAATGGCTTGTGCAAAACCACCATGGAA
TGCAGAAAAACACTCCAATCATCTTGCTTTGATATTTAAGATTGCTAGTGCAACTACTGCTCCATCGATCCCTTC
ACATTTGTCTCCTGGTTTACGAGATGTGGCTCTTCGTTGTTTAGAACTTCAACCTCAGGACAGACCTCCATCAAG
AGAGCTACTGAAGCATCCAGTCTTTCGTACTACATGG**TAG**CCAATTATGCAGATCAACTACAGTAGAAACAGGAT
GCTCAACAAGAGAAAAAAAACTTGTGGGGAACCACATTGATATTCTACTGGCCATGATGCCACTGAACAGCTATG
AACGAGGCCAGTGGGGAACCCTTACCTAAGTATGTGATTGACAAATCATGATCTGTACCTAAGCTCAGTATGCAA
AAGCCCAAACTAGTGCAGAAACTGTAAACTGTGCCTTTCAAAGAACTGGCCCTAGGTGAACAGGAAAACAATGAA
GTTTGCATGACTAAATTGCAGAAGCATAATTTTATTTTTTTGGAGCACTTTTTCAGCAATATTAGCGGCTGAGGG
GCTCAGGATCTATTTTAATATTTCAATTATTCTTCCATTTCATATAGTGATCACAAGCAGGGGGTTCTGCAATTC
CGTTCAAATTTTTTGTCACTGGCTATAAAATCAGTATCTGCCTCTTTTAGGTCAGAGTATGCTATGAGTAGCAAT
ACATACATATATTTTTAAAAGTTGATACTTCTTTATGACCCACAGTTGACCTTTATTTTCTTAAATACCAGGGCA
GTTGTGGCTCATTGTGCATTTTACTGTTGGCCCATTCATTTCGTTTTTGGAAATTATGGTTTTGTATTTTCATGT
TTATTTACATTCATTTTTGTTTATTCAGGGAAAGCTGATCTTTTTTTCAAACCAGAAAAAAAAAAATGAACTAGAT
ATGAAGTAGAGTTCATTAAATATCTTGCTATTGTCAGAGTTTTTAAAATATAGACTTAATTTTGTTTTTTTAAAT
TGGAATACAATAAAGTACTACCTACATTTGAGTCAGTCACCACTCTTATTGTGCAGGTTAAGTACAAGTTAACTA
AAAATAAACTGTCCTCTCTGGTGCAACTCACAACCAAGATCAAGATTACCTTAAAATTTATTTGAATTTTTTAGA
TGTTTTGGTTGTCAAACTGTAGGAAACTTCACAACATTTAAGTCTTACTCTGTATGTAACAATCCATCATTCACC
TTCACTACTGGTAATAACATAGAGCTGCCATTTTCCTTTTACCATGCATCATCTCTTTACAGTAGGCCTGGCAGA
TCATTTTTTAAAAAGATTATTCAACTACCAATCAGTAATGTTTTTAAACAGTACATTTGCTTTGAACTTGGAAAA
TGTGTTCAGAAAGAAAAATGGAATTGAATTTCATTTATACACTAATTCCTTGGATTTTGCACAGTTACCTAACGG
TTTTAGTCTGGAGTTAAATTCAGATGCATGGAATCCTGAAGGAAAATGGTAGCTTTTTAATCTTTTTGTGTGTGT
GTGAGTCTTTTAAATCAAGTACTGATTAACTATTAAGTACAACTTTGAGATTTTAGTTTTAACTCTTCAGAAGCC
AGTGTGAAATAGAATTGGTTATTCTCAAAGACTCAGGATAAACTAAATAAGCTATATATAGAGTACATTTAAAAT
GTACAACACAAATTGGAAGTAAAATAAGTTACAAGATAAGTTTACAGGGATATATTGCTTACAATTTTTAAAAGG
CAGTTTGTTTTTTATGTGAATATGTTTCTTAGTGAAATTTTACATTCCTTTGTTTTGGAAGATTGGCGATATTTG
AAGAGTTAAAAATAGTACAGAAATGTGAAGTTTGGTATCTCTAAATGTGTTGTACTTGACTTTCTTTTTTATTTT
TTTTTATTTTTTTTGACTACTTAGAATTTTCACAATTCTAATAAGATTGTTTCCAAGTCTCTCATGTGCAAGCTT
TAAAGGATGCACTCTTGCCATTTTATGTACTGGAAGATCATTGGTCAGATGAATACTGTGTCTGACAAAAATGTA
AACTGTATAAACTGAGGAACCTCAGCTAATCAGTATTACTTTGTAGATCACCATGCCCACCACATTTCAAACTCA
AACTATCTGTAGATTTCAAAATCCATTGTGTTTGAGTTTGTTTGCAGTTCCCTCAGCTTGCTGGTAATTGTGGTG
TTTTGTTTTTTGTTTTGTTTTCAATGCAAATGTGATGTAATATTCTTATTTTCTTTGGATCAAAGCTGGACTGGA
AATTGTATCGTGTAATTATTTTTGTGTTCTTAATGTTATTTGGTACTCAAGTTGTAAATAACGTCTACTACTGTT
TATTCCAGTTTCTACTACCTCAGGTGTCCTATAGATTTTTCTTCTACCAAAGTTCACTTTCACAATGAAATTATA
TTTGCTGTGTGACTATGATTCCTAAGATTTCCAGGGCTTAAGGGCTAACTTCTATTAGCACCTTACTGTGTAAGC
AAATGTTACAAAAAAAGACAAGAAAAAAATCTCTGGGTTAAGAAAATTTGGCTTAAATGTATCCTTTGTTATTTT
AAATATATTGAGATATTTTAATTAAAATTTTTACCCCATTGAACCGATTTTATAGTATTTGTACCTATTTTGGTG
TTTTTGTCTTTATAGTAAATAAAAGTTTTTGAACAAAAAAAAAAGTCGACGCGG

FIGURE 1909

MAAAAGNRASSSGFPGARATSPEAGGGGGALKASSARAAAAGLLREAGSGGRERADWRRRQLRKVRSVELDQLPE
QPLFLAASPPASSTSPSPEPADAAGSGTGFQPVAVPPPHGAASRRGAHLTESVAAPDSGASSPAAAEPGEKRAPA
AEPSPAAAPAGREMENKETLKGLHKMDDRPEERMIREKLKATCMPAWKHEWLERRNRRGPVVVKPIPVKGDGSEM
NHLAAESPGEVQASAASPASKGRRSPSPGNSPSGRTVKSESPGVRRKRVSPVPFQSGRITPPRRAPSPDGFSPYS
PEETNRRVNKVMRARLYLLQQIGPNSFLIGGDSPDNKYRVFIGPQNCSCARGTFCIHLLFVMLRVFQLEPSDPML
WRKTLKNFEVESLFQKYHSKRSSRIKAPSRNTIQKFVSRMSNSHTLSSSSTSTSSSENSIKDEEEQMCPICLLGM
LDEESLTVCEDGCRNKLHHHCMSIWAEECRRNREPLICPLCRSKWRSHDFYSHELSSPVDSPSSLRAAQQQTVQQ
QPLAGSRRNQESNFNLTHYGTQQIPPAYKDLAEPWIQVFGMELVGCLFSRNWNVREMALRRLSHDVSGALLLANG
ESTGNSGGSSGSSPSGGATSGSSQTSISGDVVEACCSVLSMVCADPVYKVYVAALKTLRAMLVYTPCHSLAERIK
LQRLLQPVVDTILVKCADANSRTSQLSISTLLELCKGQAGELAVGREILKAGSIGIGGVDYVLNCILGNQTESNN
WQELLGRLCLIDRLLLEFPAEFYPHIVSTDVSQAEPVEIRYKKLLSLLTFALQSINNSHSMVGKLSRRIYLSSAR
MVTTVPHVFSKLLEMLSVSSSTHFTRMRRRLMAIADEVEIAEAIQLGVEDTLDGQQDSFLQASVPNNYLETTENS
SPECTIHLEKTGKGLCATKLSASSEDISERLASISVGPSSSTTNYYYNNRATKANGSNKRQTPQSVFELLSFISS
FPINVSSLVNPFFFYPICTSWHCNRCLKHRLQGFIPCRIPSASPQTQRKFSLQFHRNCPENKDSDKLSPVFTQSR
PLPSSNIHRPKPSRPTPGNTSKQGDPSKNSMTLDLNSSSKCDDSFGCSSNSSNAVIPSDETVFTPVEEKCRLDVN
TELNSSIEDLLEASMPSSDTTVTFKSEVAVLSPEKAENDDTYKDDVNHNQKCKEKMEAEEEEALAIAMAMSASQD
ALPIVPQLQVENGEDIIIIQQDTPETLPGHTKAKQPYREDTEWLKGQQIGLGAFSSCYQAQDVGTGTLMAVKQVT
YVRNTSSEQEEVVEALREEIRMMSHLNHPNIIRMLGATCEKSNYNLFIEWMAGGSVAHLLSKYGAFKESVVINYT
EQLLRGLSYLHENQIIHRDVKGANLLIDSTGQRLRIADFGAAARLASKGTGAGEFQGQLLGTIAFMAPEVLRGQQ
YGRSCDVWSVGCAIIEMACAKPPWNAEKHSNHLALIFKIASATTAPSIPSHLSPGLRDVALRCLELQPQDRPPSR
ELLKHPVFRTTW

FIGURE 1910

GTTGTGAGAAATTAAATGAGATCGTACATATCAAGTAGTAGGAAAAATGCCTAGTACAGTGTTAGAAGTTTATGG
TCTTGTAGGAAGCACAAATACAGAATTAAAGCAATGATAGAAGCATTAACATGGTACAGTCCTAGCAGATGAGAG
AATGCTTCATTATCTTTGGAGGTTGGGAGATATGAGGGACCAGGAAGCTTTCCTGGAAGAGCTTACATTATGACC
CAATATACATTATGACCCAACATAACACATGTATACACCTATGTGCAATGTGTTTATACATTTATCAATTTGTAT
GTTTTTACTGGTTTGTGATATAAAATGGACATGTATATGAAATAAAACAGAACTTAGCATCAGTATGCATAGTTC
TCTGTAATATTTTCTAGTTTCTTATACTGTGTTTCATTAAACAAAACAAAACTTTTAAAAATT

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FIGURE 1911

CEKLNEIVHIK

FIGURE 1912

GCGCGACCGACGACTGGAGCGCAGGGCAGGGGTAGAGGCTCGTAGATGGAACTGGTAGTCAGCTGGAGAGCAGCA
TGGAGGCGTCCTGGGGGAGCTTCAACGCTGAGCGGGGCTGGTATGTCTCTGTCCAGCAGCCTGAAGAAGCGGAGG
CCGAAGAGTTGAGTCCGTTGCTAAGCAACGAACTTCACAGACAGCGATCCCCAGGTGTTTCATTTGGTTTATCAG
TGTTTAATTTGATGAATGCCATCATGGGAAGTGGCATCCTTGGCTTAGCTTATGTTATGGCTAATACCGGTGTCT
TTGGATTTAGCTTCTTGCTGCTGACAGTTGCTCTCCTGGCTTCTTACTCAGTCCATCTTCTGCTTAGTATGTGTA
TTCAGACAGCTGTAACATCTTATGAAGATCTTGGACTCTTTGCATTTGGATTACCTGGAAAGTTGGTGGTGGCAG
GCACCATAATAATTCAGAATATTGGAGCTATGTCATCTTATCTTTTAATTATTAAAACAGAGCTTCCTGCTGCTA
TTGCAGAATTTTTGACTGGAGACTATAGTAGATATTGGTATCTTGATGGACAAACACTACTAATAATCATATGTG
TTGGCATTGTGTTCCCTCTTGCACTTCTTCCCAAAATAGGCTTTCTTGGCTACACAAGTAGTTTATCATTTTTCT
TTATGATGTTCTTTGCTCTTGTGGTAATAATTAAAAAATGGTCCATCCCTTGTCCTCTGACATTAAATTATGTAG
AGAAAGGCTTCCAGATTTCAAATGTTACAGATGATTGTAAGCCAAAGCTCTTTCATTTCTCCAAAGAGAGTGCTT
ATGCCTTACCAACCATGGCTTTTTCATTTCTCTGCCATACCTCAATATTGCCCATATACTGTGAACTTCAAAGTC
CTTCAAAGAAAAGAATGCAGAATGTTACCAATACAGCAATTGCTTTAAGTTTTCTCATTTATTTTATATCTGCAC
TCTTTGGGTACCTCACTTTTTATGACAAAGTGGAGTCAGAATTACTAAAAGGTTATAGTAAATACTTATCACATG
ATGTTGTTGTCATGACTGTGAAGTTATGCATACTATTTGCTGTGCTTTTGACAGTCCCTCTAATCCACTTCCCTG
CCAGAAAAGCTGTAACAATGATGTTTTTCTCCAATTTTCCATTCTCATGGATTCGCCATTTTTTGATCACTCTAG
CACTCAATATTATCATCGTTTTACTTGCAATATATGTTCCTGACATTAGAAATGTATTTGGTGTAGTTGGTGCCA
GTACATCAACATGTTTGATTTTTATATTCCCAGGACTATTTTATCTTAAACTTAGCAGAGAGGATTTTCTGTCAT
GGAAAAAGCTTGGGGCATTCGTTTTGCTCATCTTTGGAATTTTGGTTGGGAATTTTAGTTTAGCACTCATCATTT
TTGATTGGATTAATAAA**TAA**AAGAAATATTTTCCTACTTCTTACAAGAATAATATACCCCTAGTTGCAAGAATGA
ATTATTCCGGAAGACACCCTGGATGAAAAATAACATTTTAATAAAAATTATTAACAGAAAAGCAGAACAAAATGG
CAGTGGGTATGGGGAAGTAAGAGTGTAGCAGTTTTAATCAAAAAAAGAAACAAACTCGAAATGCTCTTAAAAAAA
AAAAAAAAAAAAAAAAAAAGGGGGGGCCGCGGAATTATGGGGTTCGTTACCCGGGGATATAATTCCGGGACGGAT
ACCTTAAGGGGGGCTTAGAGAAATTCGATTTAAGGTTTATAAATACAGTAGACCTTTAGGGGGGGCGCGGTTCCC
ATTTCGCCCTTATGTGAGATGTATAAGCGCGCACATGGGCCGCCGTTTAAGAGTCGTGCTGGAAACCCGTGGT

FIGURE 1913

RDRRLERRAGVEARRWNWSQLESSMEASWGSFNAERGWYVSVQQPEEAEAEELSPLLSNELHRQRSPGVSFGLSV
FNLMNAIMGSGILGLAYVMANTGVFGFSFLLLTVALLASYSVHLLLSMCIQTAVTSYEDLGLFAFGLPGKLVVAG
TIIIQNIGAMSSYLLIIKTELPAAIAEFLTGDYSRYWYLDGQTLLIIICVGIVFPLALLPKIGFLGYTSSLSFFF
MMFFALVVIIKKWSIPCPLTLNYVEKGFQISNVTDDCKPKLFHFSKESAYALPTMAFSFLCHTSILPIYCELQSP
SKKRMQNVTNTAIALSFLIYFISALFGYLTFYDKVESELLKGYSKYLSHDVVVMTVKLCILFAVLLTVPLIHFPA
RKAVTMMFFSNFPFSWIRHFLITLALNIIIVLLAIYVPDIRNVFGVVGASTSTCLIFIFPGLFYLKLSREDFLSW
KKLGAFVLLIFGILVGNFSLALIIFDWINK

FIGURE 1914

AGCCTGCGGGAATCCAGCGCTTATTCGCTGACCCTCGAGTCGCTTCGCTAGCTGTGCGCCCTCCTGGGCACTAGC
CTGGAGAGGAGCGTGCAGACGCGGCTCCTTGGAGGGAGTGCGGTCCTCTAGGGAGGCATCGGGCTCCTAGGGGCT
TCTTGGCGTGTGTGGTGGGATTGGGGTCCGCCGGCC**ATG**GCCTTCACTTTCGCTGCGTTCTGCTACATGCTGTCT
CTGGTGCTGTGCGCTGCGCTCATCTTCTTCGCCATCTGGCACATAATTGCCTTTGATGAGTTAAGGACAGATTTT
AAGAGCCCCATAGACCAGTGCAATCCTGTTCATGCGAGGGAACGGTTGAGGAACATCGAGCGCATCTGCTTCCTT
CTGCGAAAGCTGGTGCTGCCAGAATACTCCATCCATAGCCTCTTCTGCATTATGTTCCTGTGTGCGCAAGAGTGG
CTCACGCTGGGGCTGAATGTCCCTCTACTTTTCTATCACTTCTGGAGGTATTTCCACTGTCCAGCAGATAGCTCA
GAACTAGCCTACGACCCACCGGTGGTCATGAATGCCGACACTTTGAGTTACTGTCAGAAGGAGGCCTGGTGTAAG
CTGGCCTTCTATCTCCTCTCCTTCTTCTACTACCTTTACTGCATGATCTACACTTTAGTGAGCTCT**TAA**CGCAAA
GACCATGCACATCATCAGAGACTGAGATGGGAGAGGCCTGAGACGGAGAGGTGCATTTCTGCTGGTGACTGGAGG
AGGGACCAGAATGAGGATACGTGAGAAATAGACCCGGCAGGCAGTCAGACTGAATGGGAGCTGGAATCACGCAGC
AGTTGGGAGCCGAGTTAACCCTGCGTGTCTGTGTCACCCTGTTTGTCAATCTTTGGCATTCGAATTCCACACACG
GGGTCCTAGAGCCCTTCTGAGCATCAGTGGTGTGGGGGAGTAGGTGACGAAACACTAGACCTCTCCTGAGAGAGA
ATTGCTGCTTCCTGAATCCACTTCATTGAACAGCACCTTGCAAGTTCAAATGAGTTCCTGGGAGCGGAGGCTGGA
AGGCCACAAGGTGCTTGCTAAGGAACAGAATGACCCAGAGTCAAGGCCAAGTCTGCAGGGACCTGTTGAAAGCCT
CGAGAATGTCTTGGCTGCCCAAGACTCTTGTTGCCTTTCTTCCAAGCCATGGCCATGCCCTTTTTCTCAAATGGG
AGGGGCTGGAGGGTGTGTGGGATTTGTCTTCAGCTGCAACCAGCCTTGAGCCTGCTGGGCTATTTTCAGCGAGGA
GGGGTGAATATAGGAAAAATGCATTTTTGAAACGTTTGCAACATGATCAAGGTGTTAGTTCTCCACCACACAAGT
TGTATTCTTCTTTTGCCACCTCAAACCATCACAGAGTCTTTAAATGCAAATCAATTGGTCAATGCTAGTCAAAGC
TATGTTCTTACAAAAACCCCAGACAGCTCAGAGCTCAGAAAATCCTGTGGAGTGGCTGCTCTGTACCGTGGGCAT
CCGGCAGCCAGGAAGTGAGACAACATAATTATAACTTTGTTTTATGATGCTGCATCATTTGTACTGTTTAGGTCG
ACGTGAGGACATCATCTTATTTAGAATTTTCCGTTTGGCATTCTCTTTTGGGTGGGAGTTATGCTGGGGGTTGTA
AATAATGACAAGGCTGAGATTTTTATGATGTTTAAATTGGGCACAATGATTTTGACCTTATTCCCCAAACTTCTT
TTCTTTTCTACTGTTTAACATACACAGGCTATTTATACACGTCCCCAGCTCCCATCTGAAACCTGTGACTCAGGT
TTATGAATGGTGTTTGTGTAGCAACACATTGTGTGCTATGTTTATTAAAATGCAGCGACAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAA

FIGURE 1915

MAFTFAAFCYMLSLVLCAALIFFAIWHIIAFDELRTDFKSPIDQCNPVHARERLRNIERICFLLRKLVLPEYSIH
SLFCIMFLCAQEWLTLGLNVPLLFYHFWRYFHCPADSSELAYDPPVVMNADTLSYCQKEAWCKLAFYLLSFFYYL
YCMIYTLVSS

FIGURE 1916

GAATTCCGGGCTGCAGTCACAGA**ATG**GAAATCTGCAGAGGCCTCCGCAGTCACCTAATCACTCTCCTCCTCTTCC
TGTTCCATTCAGAGACGATCTGCCGACCCTCTGGGAGAAAATCCAGCAAGATGCAAGCCTTCAGAATCTGGGATG
TTAACCAGAAGACCTTCTATCTGAGGAACAACCAACTAGTTGCTGGATACTTGCAAGGACCAAATGTCAATTTAG
AAGAAAAGATAGATGTGGTACCCATTGAGCCTCATGCTCTGTTCTTGGGAATCCATGGAGGGAAGATGTGCCTGT
CCTGTGTCAAGTCTGGTGATGAGACCAGACTCCAGCTGGAGGCAGTTAACATCACTGACCTGAGCGAGAACAGAA
AGCAGGACAAGCGCTTCGCCTTCATCCGCTCAGACAGTGGCCCCACCACCAGTTTTGAGTCTGCCGCCTGCCCCG
GTTGGTTCCTCTGCACAGCGATGGAAGCTGACCAGCCCGTCAGCCTCACCAATATGCCTGACGAAGGCGTCATGG
TCACCAAATTCTACTTCCAGGAGGACGAG**TAG**TACTGCCCAGGCCTGCCTGTTCCCATTCTTGCATGGCAAGGAC
TGCAGGGACTGCCAGTCCCCCTGCCCCAGGGCTCCCGGCTATGGGGGCACTGAGGACCAGCCATTGAGGGGTGGA
CCCTCAGAAGGCGTCACAACAACCTGGTCACAGGACTCTGCCTCCTCTTCAACTGACCAGCCTCCATGCTGCCTC
CAGAATGGTCTTTCTAATGTGTGAATCAGAGCACAGCAGCCCCTGCACAAAGCCCTTCCATGTCGCCTCTGCATT
CAGGATCAAACCCCGACCACCTGCCCAACCTGCTCTCCTCTTGCCACTGCCTCTTCCTCCCTCATTCCACCTTCC
CATGCCCTGGATCCATCAGGCCACTTGATGACCCCCAACCAAGTGGCTCCCACACCCTGTTTTACAAAAAAGAAA
AGACCAGTCCATGAGGGAGGTTTTTAAGGGTTTGTGGAAAATGAAAATTAGGATTTCATGATTTTTTTTTTTCAG
TCCCCGTGAAGGAGAGCCCTTCATTTGGAGATTATGTTCTTTCGGGGAGAGGCTGAGGACTTAAAATATTCCTGC
ATTTGTGAAATGATGGTGAAAGTAAGTGGTAGCTTTTCCCTTCTTTTTCTTCTTTTTTTGTGATGTCCCAACTTG
TAAAAATTAAAAGTTATGGTACTATGTTAGCCCCATAATTTTTTTTTTCCTTTTAAAACACTTCCATAATCTGGA
CTCCTCTGTCCAGGCACTGCTGCCCAGCCTCCAAGCTCCATCTCCACTCCAGATTTTTTACAGCTGCCTGCAGTA
CTTTACCTCCTATCAGAAGTTTCTCAGCTCCCAAGGCTCTGAGCAAATGTGGCTCCTGGGGGTTCTTTCTTCCTC
TGCTGAAGGAATAAATTGCTCCTTGACATTGTAGAGCTTCTGGCACTTGGAGACTTGTATGAAAGATGGCTGTGC
CTCTGCCTGTCTCCCCCACCAGGCTGGGAGCTCTGCAGAGCAGGAAACATGACTCGTATATGTCTCAGGTCCCTG
CAGGGCCAAGCACCTAGCCTCGCTCTTGGCAGGTACTCAGCGAATGAATGCTGTATATGTTGGGTGCAAAGTTCC
CTACTTCCTGTGACTTCAGCTCTGTTTTACAATAAAATCTTGAAAATGCCAAAAAAAAAAAAAAAAAAAACCGGAA
TCCCGGCCGGAATTC

FIGURE 1917

MEICRGLRSHLITLLLFLFHSETICRPSGRKSSKMQAFRIWDVNQKTFYLRNNQLVAGYLQGPNVNLEEKIDVVP
IEPHALFLGIHGGKMCLSCVKSGDETRLQLEAVNITDLSENRKQDKRFAFIRSDSGPTTSFESAACPGWFLCTAM
EADQPVSLTNMPDEGVMVTKFYFQEDE

FIGURE 1918

CTCAGTGCAGGGACGTCACCCCTGCCAGGCAAGCCCAGGGCACAGATGCCAGGATGGCTTCTCCCTCTCAGTGCG
AGGCTTCACCCCTGCCAGGCAAGCCCAGGGCATAGATGCTGAGACAGCCTCTCCCTCTCAGTGCAGGGACGTCAC
CCCTGCCAGGCAAGCCCAGGGCACAGAGGCCGGGACGGCCTCTCCCTCTCAGTGTGAGGCTTCACCCATGCTAGG
CAAGCCCAGGGCACAGATGCCGGGATGGCCCCTCCCTCTCAGTGCGGGAACGTCACCCCTGCCAGGCAAGCCCAG
GGCACAGATGCTGCGATGGCCTCTTCCTCTTAAGTGTGGGGCCTCACCCCTGCTTTTCTTTCTTTTTTTGTATTG
TCAAAATTGTATTTCCATATTGAAGCAGCTTGAGTTTCTACTGAAAATGAGCCCGAATTATTTCACTATTACTGT
AAAGGGTTCATCTTACTCTGGCATTCTGAGAATTAGACTGAAAGTTTAATTTCTGCAGTTCCCTCATATTCAGAT
TCTTTCTTTGATGTTATAACACAAAGTCATTCCTACTCAAATGTAATAAAATTGAGGCTCCACGGAGGCCCGTGT
CCACATCAGCTGCAGCTCCCACTCAGACAGACGGCCTGCCCCACAGNCTGCCCTTTGCTGAAGATACCCTCGCTT
TATACTTGCATTTCGCTTTTCAGTAAAAACAG

FIGURE 1919

GCAGAAGGCACGAGGAAGCCACAGTGCTCCGGATCCTCCAATCTTCGCTCCTCCAATCTCCGCTCCTCCACCCAG
TTCAGGAACCCGCGACCGCTCGCAGCGCTCTCTTGACCACTATGAGCCTCCTGTCCAGCCGCGCGGCCCGTGTCC
CCGGTCCTTCGAGCTCCTTGTGCGCGCTGTTGGTGCTGCTGCTGCTGCTGACGTACCAGGGCCCATCGCCAGCGC
TGGTCCTGCCGCTGCTGTGTTGAGAGAGCTGCGTTGCGTTTGTTTACAGACCACGCAGGGAGTTCATCCCAAAAT
GATCAGTAATCTGCAAGTGTTCGCCATAGGCCCACAGTGCTCCAAGGTGGAAGTGGTAGCCTCCCTGAAGAACGG
GAAGGAAATTTGTCTTGATCCAGAAGCCCCTTTTCTAAAGAAAGTCATCCAGAAAATTTTGGACGGTGGAAACAA
GGAAAAC**TGA**TTAAGAGAAATGAGCACGCATGGAAAAGTTTCCCAGTCTTCAGCAGAGAAGTTTTCTGGAGGTCT
CTGAACCCAGGGAAGACAAGAAGGAAAGATTTTGTTGTTGTTTGTTTATTTGTTTTTCCAGTAGTTAGCTTTCTT
CCTGGATTCCTCACTTTGAAGAGTGTGAGGAAAACCTATGTTTGCCGCTTAAGCTTTCAGCTCAGCTAATGAAGT
GTTTAGCATAGTACCTCTGCTATTTGCTGTTATTTTATCTGCTATGCTATTGAAGTTTTGGCAATTGACTATAGT
GTGAGCCAGGAATCACTGGCTGTTAATCTTTCAAAGTGTCTTGAATTGTAGGTGACTATTATATTTCCAAGAAAT
ATTCCTTAAGATATTAACTGAGAAGGCTGTGGATTTAATGTGGAAATGATGTTTCATAAGAATTCTGTTGATGGA
AATACACTGTTATCTTCACTTTTATAAGAAATAGGAAATATTTTAATGTTTCTTGGGGAATATGTTAGAGAATTT
CCTTACTCTTGATTGTGGGATACTATTTAATTATTTCACTTTAGAAAGCTGAGTGTTTCACACCTTATCTATGTA
GAATATATTTCCTTATTCAGAATTTCTAAAAGTTTAAGTTCTATGAGGGCTAATATCTTATCTTCCTATAATTTT
AGACATTCTTTATCTTTTTAGTATGGCAAACTGCCATCATTTACTTTTAAACTTTGATTTTATATGCTATTTATT
AAGTATTTTATTAGGAGTACCATAATTCTGGTAGCTAAATATATATTTTAGATAGATGAAGAAGCTAGAAAACAG
GCAAATTCCTGACTGCTAGTTTATATAGAAATGTATTCTTTTAGTTTTTAAAGTAAAGGCAAACTTAACAATGAC
TTGTACTCTGAAAGTTTTGGAAACGTATTCAAACAATTTGAATATAAATTTATCATTTAGTTATAAAAATATATA
GCGACATCCTCGAGGCCCTAGCATTTCTCCTTGGATAGGGGACCAGAGAGAGCTTGGAATGTTAAAAACAAAACA
AAACAAAAAAAAACAAGGAGAAGTTGTCCAAGGGATGTCAATTTTTTATCCCTCTGTATGGGTTAGATTTTCCAA
AATCATAATTTGAAGAAGGCCAGCATTTATGGTAGAATATATAATTATATATAAGGTGGCCACGCTGGGGCAAGT
TCCCTCCCCACTCACAGCTTTGGCCCCTTTCACAGAGTAGAACCTGGGTTAGAGGATTGCAGAAGACGAGCGGCA
GCGGGGAGGGCAGGGAAGATGCCTGTCGGGTTTTTAGCACAGTTCATTTCACTGGGATTTTGAAGCATTTCTGTC
TGAATGTAAAGCCTGTTCTAGTCCTGGTGGGACACACTGGGGTTGGGGGTGGGGGAAGATGCGGTAATGAAACCG
GTTAGTCAGTGTTGTCTTAATATCCTTGATAATGCTGTAAAGTTTATTTTTACAAATATTTCTGTTTAAGCTATT
TCACCTTTGTTTGGAAATCCTTCCCTTTTAAAGAGAAAATGTGACACTTGTGAAAAGGCTTGTAGGAAAGCTCCT
CCCTTTTTTTCTTTAAACCTTTAAATGACAAACCTAGGTAATTAATGGTTGTGAATTTCTATTTTTGCTTTGTTT
TTAATGAACATTTGTCTTTCAGAATAGGATTCTGTGATAATATTTAAATGGCAAAAACAAAACATAATTTTGTGC
AATTAACAAAGCTACTGCAAGAAAAATAAAACATTTCTTGGTAAAAACGTATGTATTTATATATTATATATTTAT
ATATAATATATATTATATATTTAGCATTGCTGAGCTTTTTAGATGCCTATTGTGTATCTTTTAAAGGTTTTGACC
ATTTTGTTATGAGTAATTACATATATATTACATTCACTATATTAAAATTGTACTTTTTTACTATGTGTCTCATTG
GTTCATAGTCTTTTAATGTTTATTCAAAGGACAAAATAAAGACTATGAACCAATGAGACACATAGTCTTTATTTT
GTCCTTTGAATAAACATTAAAAGATTTCTAAACTTC

FIGURE 1920

QKARGSHSAPDPPIFAPPISAPPPSSGTRDRSQRSLDHYEPPVQPRGPCPRSFELLVRAVGAAAAADVPGPIASA
GPAAAVLRELRCVCLQTTQGVHPKMISNLQVFAIGPQCSKVEVVASLKNGKEICLDPEAPFLKKVIQKILDGGNK
EN

FIGURE 1921

CCGGCGGCGGCGGCGGCGGCGGGCTGCGAGGGCGGCGGGGGCCCGAACCCGGGGCCGGCGGGCGGCAGGAGGCCT
CCTCGGGCCGCGGGGGGCGCCACCGCCGGCTCCCGGCAGCCCAGCGTGGAGACCCTGGACAGTCCCACAGGATCA
CATGTTGAATGGTGTAAACAGCTTATAGCTGCTACAATTTCTAGTCAGATTTCAGGTTCAGTGACATCAGAAAAT
GTGTCCAGAGATTACAAGGCTCTAAGGGATGGAAATAAGCTGGCACAGATGGAAGAGGCTCCACTTTTCCCAGGA
GAATCAATTAAAGCCATTGTGAAAGATGTCATGTATATCTGCCCATTTATGGGAGCAGTGAGTGGAACCCTGACA
GTGACGGACTTTAAGCTGTACTTCAAAAATGTCGAGAGGGACCCGCATTTTATCCTTGATGTTCCCCTTGGAGTG
ATCAGCAGAGTGGAGAAGATTGGAGCACAGAGCCATGGAGACAATTCCTGTGGTATAGAGATAGTGTGCAAGGAT
ATGAGGAACTTGCGGCTTGCTTATAAACAGGAAGAACAGAGTAAACTAGGGATATTTGAAAACCTCAACAAACAT
GCATTTCCTCTTTCTAACGGACAGGCACTATTTGCATTCAGCTATAAAGAAAAATTTCCAATTAATGGCTGGAAA
GTTTATGATCCAGTATCTGAATATAAGAGACAGGGCTTGCCAAATGAGAGTTGGAAAATATCCAAAATAAACAGT
AATTATGAGTTCTGTGACACCTACCCTGCCATCATTGTTGTGCCAACTAGTGTAAAAGATGATGACCTTTCAAAA
GTGGCAGCTTTTCGAGCAAAAGGCAGAGTCCCTGTGTTGTCATGGATTCATCCGGAAAGTCAAGCAACGATTACC
CGTTGCAGCCAGCCACTTGTGGGTCCCAATGATAAGCGCTGCAAAGAGGATGAAAAATACTTGCAAACAATAATG
GATGCTAACGCACAGTCACACAAGCTTATCATCTTTGATGCTCGACAAAACAGTGTCGCTGATACCAACAAGACA
AAGGGTGGAGGATATGAAAGTGAAAGTGCTTACCCAAATGCAGAACTTGTGTTCTTGGAGATCCACAACATTCAT
GTCATGCGAGAGTCACTACGCAAATTAAAAGAGATTGTGTACCCTTCGATCGATGAGGCGCGGTGGCTCTCCAAT
GTGGATGGGACGCATTGGCTGGAATATATAAGGATGCTGCTTGCTGGGGCAGTAAGAATTGCTGATAAAATAGAA
TCTGGGAAAACATCTGTGGTGGTGCATTGCAGCGACGGTTGGGACCGAACAGCCCAGCTCACATCTCTGGCTATG
CTAATGTTGGACAGTTACTACAGGACCATTAAAGGATTTGAAACTCTCGTAGAAAAGGAGTGGATAAGCTTTGGA
CACAGGTTTGCACTGCGAGTGGGCCATGGTAATGACAACCATGCGGATGCTGACCGATCTCCCATATTTCTGCAG
TTTGTTGATTGTGTTTGGCAAATGACAAGGCAGTTTCCTTCAGCATTCGAGTTTAATGAGCTATTCTTGATTACA
ATTTTGGATCACCTTTATAGCTGTCTTTTTGGGACCTTTTTGTGCAACTGTGAACAGCAGCGATTCAAAGAGGCA
TGGGGGGCTGGGACCCAGCGAGCCCGTGGCTCTCTCAGGAGTAGATGAGTGCTAGACCCTGGACCTCCTGACTCC
GAGTTCATGTAGTCTCCGCTGCACCAACTCCAAAACCGTGGGATTCTGCTTTTCATCCTCTGTGGTGTTGGCCAG
ATCATACTTGAAGGCCTTGGAAATGGAGTCTGCTGATTAGCCAAAAAGCCCACTTTAGGATGTATATACAAAGAC
GATATCTTTATGGTCGTATATCAATAGCCAGCTAGACGAGTTTTCTAATCCCTTCTTTGTGAATTATGAAAACCA
CGTGTTATATCCTGTTGCTAGTCTGAGTCATTTGGAATTGTGGGTAAATTATTATGTACGATGGAATCCACGGAT
GAGACCTCAGATGCCCATTCACCAGAATCTCAAGGAGCTGCTGGCCGTCAGGGCGGAGCTGCAGAAGCGTGTGGA
GGGTCTACAGCGGGAGGTGGCCACGCGCGCCGTCTCATCCTCATCTGAGCGGGGCTCCTCGCCCTCCCACTCCGC
CACCTCCGTCCACACCTCGGTCTGATGGGCGAGAAATATGTAATCCCCTGGCTGACTAGGACTGTTAAACATAGT
GTGGACTGGATGATGCCTTCGACAAACCAGAGAAGCCAAGTTGGGGGGAGCTGGTGCCTGGAGTGGGCCCTGTGC
ACCTCACCTGGCGGAGGCTGGGGGGGGCTCTGTCAGCAGGACCCTAGAGGAGACTCTCATTCGATTTTAAAGAAG
CACAACGGGTCATTTTCCTTTGTATGTTCCTAGCGCAGAACTGTTTCTAAAACAACTTGAAGTATAGTTTTGTTA
TCTAAGCAATTTTTGTTTTAAGTAAGTAAGTGTACTAGAATGCGAAGCCGTTATGGTTCAGGTTTTTAAAAACTG
GTACAGTATTGTATTTGTCTCATCTGTTGCACTGTATTTCAATCATCTGTAATTAAAATGATCATATGTTTGCTC
CCTGGTCTTTTTTAAGTAAGTAAGTAAGTATCTTAGTAGATTTTTCCTTTGAGGAAAATCGGTAATAAAATAACA
TGGATTGAATGTTTACTGTGCGTCAAGCACAGTTAATATATGATGATGTAAAGTAACTAACTTTATGTGATTTAA
TTCATTCAGTAAATTGT

FIGURE 1922

GGGACTCGTGGCTGTGGTGGCTTCGGCAGCGGCTTCAGCAGATCGGCGGCATCAGCGGTAGCACCAGCACTAGCA
GCATGTTGAGCCGGGCAGTGTGCGGCACCAGCAGGCAGCTGGCTCCGGTTTTGGGGTATCTGGGCTCCAGGCAGA
AGCACAGCCTCCCCGACCTGCCCTACGACTACGGCGCCCTGGAACCTCACATCAACGCGCAGATCATGCAGCTGC
ACCACAGCAAGCACCACGCGGCCTACGTGAACAACCTGAACGTCACCGAGGAGAAGTACCAGGAGGCGTTGGCCA
AGGGTAGGTTCCAGGCTGAGCGGCGGGAGGCAGTCCCCGGCAGAGGCGACCCCAGGGAGCCAGGCCCCATACGGA
CGGGCCTCTCCGTGGAGGAGAACTCGCTTCGCATTTGTACCGGTTCCGAGTTTTCCAGGCACGATAGTCTCTCTT
TTAAACACATGGTCTACCTCATTGTAGAAGGAGTGCCTCGATGGGTTTGAACACACTTCTGTCATCTCAGGGAAC
TTGGGGTCCTGCGAAGGAGCTTGCCTTACTGTTGTGAGCCACATTCCGTTACACATATTGCCAGCACTGGTGAAT
TGTAGGGCCTGAAAAGAAAGCTCTACTGTGTCACTCGTTTTTTTTGCAAATTGAAATTGTTCTTGTTGTATAATG
TGCTTTGGGGAAATGTTTGGTCTCTCAGGTAGGTGTGCCAGCCGTTTGCAGGAGGGCTGAGAGCGCCTGTCCACT
GGTGGCCAGACATCATCGGGTCCGCAGGTGTCTCTGAGTGTCAGGGTCACCTCCTGATAGAAGTGGGAGTGGTGT
CTTACTGCCAGGTCACACTGAAGGTGGGAGACAGGAGGACACTACTCCGTGCTAGGAACCATGGTCCTTGTCATC
TTCCTGAGAGCAAACGGGGTCGGGACTCCAGCCTAGGACTTGGAGACTCCCTGCATCCCCAGCTACCCTGCAGGT
GAAACTTCACTGAGCCCACTTGACTTCAGGTGGGAGAGGAGGAGGCACACCGTTGTGGTGTGCGTTACCAAAAAA
GCAGTAACCTAACTGTGGAACAGTTCAGGATCTTTAGACTTGATACTTTTCTTGATTTCCCTTAGGGGTCAAAGT
TCACAAGGAAAATAGCCCTTTAGTGGGAAACTGAAACAGGCTTGTTTTTATTTACTATTTACTCATATTTGTAAT
GCAATTAAAATATATGTTGTTAACTTTTTTTTTTTTCTCAAGAGCTCGGTTGATAAAACCAGGGGTATGTGGACT
TTTTGAGTCTGTGCCTTTTGGGGGTGTGTATGGGAATGTTATGTTTTAACGTTTTTTACAAAATAGAATTGTCTT
TTTAGTCTATTCGTTAGTGGTTTGCACAAGGAAGATAATCGATAGTCATGTTTTTTAGACTCTCTGTATTGCTTG
GTAAGCTACGTAGTAAAAAATGTTTACTTTTCCTTAAATGTTTTGAATTTCGGGGTTATGAAATTTGTTGAGTAA
TTTTTAGACAGTCACATCTTGTTGACTGGAGGCATCTAGTGGAAAAATGCAGTATTTCAGCCTGATTGTGTTTGA
AGTAAATGATTAAAAGAGGAGGAAGTTACCACATTCTGGAAGATTTACTTGAGACAGACGAACCTTGAATTACGG
GAAAAGGCCCCGTGATTTAGGAAATAACAAATTTGGGAAACATGTAATGGGGAGAGACTGGGGAATACCCCAGTT
GTGAAAGTACTTCCTGTAAGGCAACATCTGACACCAGGAACCTTTCTCTTCAGTATTTTAAAAACAACTTAATTT
CAGTCCTTTACTTGTGGAATCAGAGCCTTACTTATGTAATACAACCCACTGGAAAAAAGCTTTTTATTGTATTGT
ACTATATTGTTTATAAGTGATTGAGTACCTGCAGAGCTTTCTTTTACTTAAACATATTTTAAAAATTATTAAAAA
GATTTTCATGTTTGAAAAAAAAAAAAAAAAAAA

FIGURE 1923

TCCAGAGAAGCTTCGCGAGTGGCTAGAGACGGCTGGGCCCTGGGGCCAGGCTGCGTGGCAGGACTGCCAGGGTGT
GCAGGGGGCTGCTGGCCAAGCTGCTGTCTCAGCTGCAGCGCTTCGATCGCACCCACCGGTGCCCCTTCCCCCATG
TGGTGCGAGCTGGCGCCATCTTCGTGCCCATTCACCTGGTGAAGGAGCGGCTCTTCCCTCGGCTGCCACCCGCTT
CTGTGGACCATGTGCTGCAGGAGCATCGTGTGGAGCTGCGGCCCACCACGCTGTCGGAGGAGCGGGCACTGCGGG
AGCTCGCCCTGCCAGGCTGCACCTCACGCATGCTGAAGTTACTGGCGCTGCGCCAGCTGCCGGACATTTACCCCG
ACCTTCTCGGCCTGCAGTGGCGCGACTGTGTACGCCGCCAGCTGGG**TGA**GCATGGGGCAGCCCCAGTGGCCACCG
GAGCTGTGTGAGCAAGTGACAGGTGTGTGTGCTGTGTGAGTGCGTCACAGCTGGGGCTGAGTGATTCCAAGGACT
CCTGCCCGGGTAGGGGGCTTTAGGATGAGCTCTAGGTACCCCCACCCCTTGACCCTCCAGACAATCAGTGAGCAC
CTTCATAGCCTCTTTTGTAGGCTTCTGAACATGCCAGCTGCTCTGTCCCCATGGAAACTCCTCGGCCTCCCCTGG
TGCTGCACCTTCTTGGATTCCCTCCTCCTCTGCCTGTGCCTTCTCCATCTTTGGTGCAGTGTTTCCGGCACTCTG
GTTAGGCCCTGTTTTCTAGCTGAGATAATTTCCCTGATCTCCAGCCTAGCATCCCCTTTGTGAGCTCTAGCCCTA
AATAACCCACTGCATGCTGGGCCTCAGCCCCTGGGTCTCTCTCCCACACTGAACTCATCCCAAATCACACTCCCG
AGCCTTCCCCTCAGCTCACTTCCCACAACCAGTTCTTTTCCATGTCAGTGAAGGGCACCCCCTTTCACAAAGCTC
CTCATGCTCTAGACCTGGTGAGGGCCACAGCTGCCTTTTTGAACGTGTAGTTTTGCAGTCCTCCCCGGCCCTTGC
ATACACAGAAGTGTGCGCATAAGTCGCATTGTTTTGTGGTTTGCTTTTCCTCTACTAAATGATGTGCCTGCTGTT
CTCCAGCTTGTTTTCTTTTAATGTCCTGGAGGACCACACAACTGCCGAAGTGTTGTGTGGCGTGTATGATCACAC
TTCTTCAGCTAGGGATCTGGTGATGGGACCAAGTGGATTCTGTTATTGCCCCTCCTGCAGTCAGTACACCTGGCA
TTGCAGCCTGAGGCCCCCTCTAGATTTATCTCTCCCTGCTGACCCCAATTCCACCCTCTCCCATTTCCACTGACC
AGACTCTTCCCATGTAGAAACTGTTCCTAGTTCCATCACCGTAGTGGCAGCCTTGACCCGGGACCTTACCTGGTT
GGGATGGGGAA

FIGURE 1924

PEKLREWLETAGPWGQAAWQDCQGVQGAAGQAAVSAAALRSHPPVPLPPCGASWRHLRAHSPGEGAALPSAATRF
CGPCAAGASCGAAAHHAVGGAGTAGARPARLHLTHAEVTGAAPAAGHLPRPSRPAVARLCTPPAG

FIGURE 1925

ATGCGCGATCTCCCGGAGC**ATG**CGCAGCAGCGGCGCCGACGCGGGGCGGTGCCTGGTGACCGCGCGCGCTCCCGG
AAGTGTGCCGGCGTCGCGCGAAGGTTCAGCAGGGAGCCGTGGGCCGGGCGCGCGGTTCCCGGCACGTGTCTCGGC
ACGTGGCAGCGCGCCTGGCCCTGGGCTTGGAGGCGCCGGCGCCCTGGATCCGCCGGCCGTGGTCGCCGAGTCGGT
GTCGTCCTTGACCATCGCCGACGCGTTCATTGCAGCCGGCGAGAGCTCAGCTCCGACCCCGCCGCGCCCCGCGCT
TCCCAGGAGGTTCATCTGCTCCTTCCCTGACTGCAGCGCCAATTACAGCAAAGCCTGGAAGCTTGACGCGCACCT
GTGCAAGCACACGGGGGAGAGACCATTTGTTTGTGACTATGAAGGGTGTGGCAAGGCCTTCATCAGGGACTACCA
TCTGAGCCGCCACATTCTGACTCACACAGGAGAAAAGCCGTTTGTTTGTGCAGCCAATGGCTGTGATCAAAAATT
CAACACAAAATCAAACTTGAAGAAACATTTTGAACGCAAACATGAAAATCAACAAAAACAATATATATGCAGTTT
TGAAGACTGTAAGAAGACCTTTAAGAAACATCAGCAGCTGAAAATCCATCAGTGCCAGAATACCAATGAACCTCT
ATTCAAGTGTACCCAGGAAGGATGTGGGAAACACTTTGCATCACCCAGCAAGCTGAAACGACATGCCAAGGCCCA
CGAGGGCTATGTATGTCAAAAAGGATGTTCCTTTGTGGCAAAAACATGGACGGAACTTCTGAAACATGTGAGAGA
AACCCATAAAGAGGAAATACTATGTGAAGTATGCCGGAAAACATTTAAACGCAAAGATTACCTTAAGCAACACAT
GAAAACTCATGCCCCAGAAAGGGATGTATGTCGCTGTCCAAGAGAAGGCTGTGGAAGAACCTATACAACTGTGTT
TAATCTCCAAAGCCATATCCTCTCCTTCCATGAGGAAAGCCGCCCTTTTGTGTGTGAACATGCTGGCTGTGGCAA
AACATTTGCAATGAAACAAAGTCTCACTAGGCATGCTGTTGTACATGATCCTGACAAGAAGAAAATGAAGCTCAA
AGTCAAAAAATCTCGTGAAAAACGGGAGTTTGGCCTCTCATCTCAGTGGATATATCCTCCCAAAAGGAAACAAGG
GCAAGGCTTATCTTTGTGTCAAAACGGAGAGTCACCCAACTGTGTGGAAGACAAGATGCTCTCGACAGTTGCAGT
ACTTACCCTTGGC**TAA**GAACTGCACTGCTTTGTTTAAAGGACTGCAGACCAAGGAGTCGAGCTTTCTCTCAGAGC
ATGCTTTTCTTTATTAAAATTACTGATGCAG

FIGURE 1926

MRSSGADAGRCLVTARAPGSVPASREGSAGSRGPGARFPARVSARGSAPGPGLGGAGALDPPAVVAESVSSLTIA
DAFIAAGESSAPTPPRPALPRRFICSFPDCSANYSKAWKLDAHLCKHTGERPFVCDYEGCGKAFIRDYHLSRHIL
THTGEKPFVCAANGCDQKFNTKSNLKKHFERKHENQQKQYICSFEDCKKTFKKHQQLKIHQCQNTNEPLFKCTQE
GCGKHFASPSKLKRHAKAHEGYVCQKGCSFVAKTWTELLKHVRETHKEEILCEVCRKTFKRKDYLKQHMKTHAPE
RDVCRCPREGCGRTYTTVFNLQSHILSFHEESRPFVCEHAGCGKTFAMKQSLTRHAVVHDPDKKKMKLKVKKSRE
KREFGLSSQWIYPPKRKQGQGLSLCQNGESPNCVEDKMLSTVAVLTLG

FIGURE 1927

GCCACAGTGCTCCGGATCCTCCAATCTTCGCTCCTCCAATCTCCGCTCCTCCACCCAGTTCAGGAACCCGCGACC
GCTCGCAGCGCTCTCTTGACCACT**ATG**AGCCTCCTGTCCAGCCGCGCGGCCCGTGTCCCCGGTCCTTCGAGCTCC
TTGTGCGCGCTGTTGGTGCTGCTGCTGCTGCTGACGCAGCCAGGGCCCATCGCCAGCGCTGGTCCTGCCGCTGCT
GTGTTGAGAGAGCTGCGTTGCGTTTGTTTACAGACCACGCAAGGAGTTCATCCCAAAATGATCAGTAATCTGCAA
GTGTTCGCCATAGGCCCACAGTGCTCCAAGGTGGAAGTGGTAGCCTCCCTGAAGAACGGGAAGGAAATTTGTCTT
GATCCAGAAGCCCCTTTTCTAAAGAAAGTCATCCAGAAAATTTTGGACGGTGGAAACAAGGAAAAC**TGA**TTAAGA
GAAATGAGCACGCATGGAAAAGTTTCCCAGTCTTCAGCAGAGAAGTTTTCTGGAGGTCTCTGAACCCAGGGAAGA
CAAGAAGGAAAGATTTTGTTGTTGTTTGTTTATTTGTTTTTCCAGTAGTTAGCTTTCTTCCTGGATTCCTCACTT
TGAAGAGTGTGAGGAAAACCTATGTTTGCCGCTTAAGCTTTCAGCTCAGCTAATGAAGTGTTTAGCATAGTACCT
CTGCTATTTGCTGTTATTTTATCTGCTATGCTATTGAAGTTTTGGCAATTGACTATAGTGTGAGCCAGGAATCAC
TGGCTGTTAATCTTTCAAAGTGTCTTGAATTGTAGGTGACTATTATATTTCCAAGAAATATTCCTTAAGATATTA
ACTGAGAAGGCTGTGGATTTAATGTGGAAATGATGTTTCATAAGAATTCTGTTGATGGAAATACACTGTTATCTT
CACTTTTATAAGAAATAGGAAATATTTTAATGTTTCTTGGGGAATATGTTAGAGAATTTCCTTACTCTTGATTGT
GGGATACTATTTAATTATTTCACTTTAGAAAGCTGAGTGTTTCACACCTTATCTATGTAGAATATATTTCCTTAT
TCAGAATTTCTAAAAGTTTAAGTTCTATGAGGGCTAATATCTTATCTTCCTATAATTTTAGACATTCTTTATCTT
TTTAGTATGGCAAACTGCCATCATTTACTTTTAAACTTTGATTTTATATGCTATTTATTAAGTATTTTATTAGGA
GTACCATAATTCTGGTAGCTAAATATATATTTTAGATAGATGAAGAAGCTAGAAAACAGGCAAATTCCTGACTGC
TAGTTTATATAGAAATGTATTCTTTTAGTTTTTAAAGTAAAGGCAAACTTAACAATGACTTGTACTCTGAAAGTT
TTGGAAACGTATTCAAACAATTTGAATATAAATTTATCATTTAGTTATAAAAATATATAGCGACATCCTCGAGGC
CCTAGCATTTCTCCTTGGATAGGGGACCAGAGAGAGCTTGGAATGTCAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

FIGURE 1928

MSLLSSRAARVPGPSSSLCALLVLLLLLTQPGPIASAGPAAAVLRELRCVCLQTTQGVHPKMISNLQVFAIGPQC
SKVEVVASLKNGKEICLDPEAPFLKKVIQKILDGGNKEN

FIGURE 1929

CGCCTCTTCACGGCACTGGGATCCGCATCTGCCTGGGATCATCAAGCCCTAGAAGCTGGGTTTCTTTAAATTAGG
GCTGCCGTTTTCTGTTTCTCCCTGGGCTGCGGAAAGCCAGAAGATTTTATCTAGCTTATACAAGGCTGCTGGTGT
TCCCTCTTTTTTTCCACGAGGGTGTTTTTGGCTGCAATTGC**ATG**AAATCCCAATGGTGTAGACCAGTGGCGATGG
ATCTAGGAGTTTACCAACTGAGACATTTTTCAATTTCTTTCTTGTCATCCTTGCTGGGGACTGAAAACGCTTCTG
TGAGACTTGATAATAGCTCCTCTGGTGCAAGTGTGGTAGCTATTGACAACAAAATCGAGCAAGCTATGGATCTAG
TGAAAAGCCATTTGATGTATGCGGTCAGAGAAGAAGTGGAGGTCCTCAAAGAGCAAATCAAAGAACTAATAGAGA
AAAATTCCCAGCTGGAGCAGGAGAACAATCTGCTGAAGACACTGGCCAGTCCTGAGCAGCTTGCCCAGTTTCAGG
CCCAGCTGCAGACTGGCTCCCCCCCTGCCACCACCCAGCCACAGGGCACCACACAGCCCCCCGCCCAGCCAGCAT
CGCAGGGCTCAGGACCAACCGCA**TAG**CTGCCTATGCCCCCGCAGAACTGGCTGCTGCGTGTGAACTGAACAGACG
GAGAAGATGTGCTAGGGAGAATCTGCCTCCACAGTCACCCATTTCATTGCTCGCTGCGAAAGAGACGTGAGACTG
ACATATGCCATTATCTCTTTTCCAGTATTAAACACTCATATGCTTATGGCTTGGAGAAATTTCTTAGTTGGGTGA
ATTAAAGGTTAATCCGAGAATTAGCATGGATATACCGGGACCTCATGCAGCTTGGCAGATATCTGAGAAATGGTT
TAATTCATGCTCAGGAGCTGTGTGCCTTTCCATCCCTTCCGGCTCCCTACCCCTCACTTCCAAGGGTTCTCTCTC
CTGCTTGCGCTTAGTGTCCTACATGGGGTTGTGAAGCGATGGAGCTCCTCACTGGACTCGCCTCTCTCCTCTCCT
CCCCCCAGGAGGAACTTGAAAGGAGGGTAAAAAGACTAAAATGAGGGGGAACAGAGTTCACTGTACAAATTTGAC
AACTGTCACCAAAATTCATAAAAAACAATAGTACTGTGCCTCTTTCTTCTCAAACAATGGATGACACAAAACTAT
GAGAGTGACAAAATGGTGACAGGTAGCTGGGACCTAGGCTATCTTACCATGAAGGTTGTTTTGCTTATTGTATAT
TTGTGTATGTAGTGTAACTATTTTGTACAATAGAGGACTGTAACTACTATTTAGGTTGTACAGATTGAAATTTAG
TTGTTTCATTGGCTGTCTGAGGAGGTGTGGACTTTTATATATAGATCTACATAAAAACTGCTACATGACAAAAAC
CACACCTAAACCCCTTTTAAGAATTTGGCACAGTTACTCACTTTGTGTAATCTGAAATCTAGCTGCTGAATACGC
TGAAGTAAATCCTTGTTCACTGAAGTCTTTCAATTGAGCTGGTTGAATACTTTGAAAAATGCTCAGTTCTAACTA
ATGAAATGGATTTCCCAGTAGGGGTTTCTGCATATCACCTGTATAGTAGTTATATGCATATGTTTCTGTGCATGT
TCTCTACACAATTGTAAGGTGTCACTGTATTTAACTGTTGCACTTGTCAACTTTCAATAAAGCATATAAATGTTG

FIGURE 1930

MKSQWCRPVAMDLGVYQLRHFSISFLSSLLGTENASVRLDNSSSGASVVAIDNKIEQAMDLVKSHLMYAVREEVE
VLKEQIKELIEKNSQLEQENNLLKTLASPEQLAQFQAQLQTGSPPATTQPQGTTQPPAQPASQGSGPTA

FIGURE 1931

GCTCATTACTTAATCTCAGGCTCCCCACTCAAAATTTTTCCTGTCAGGTGTATGATTTAAAGGGGGAGGCCTCAA
AATACTTGCAGCTTGTGTCCTGTCTGGCTTTAGAACTTCTGGTGTTTGGTGCATTTTAACTTCAGCGCTTGCACT
TTTTTCCTGTGCCTGCCTAATCTGTCTCTACCCTGGGATGTCTTGCTCTTCTAAAGAGTTCCTGGCCATCCCTTG
ATTTACAAATGTGATGTTGATTTGTCAGCCCTGTATTACAGTTACTCCTATTCCTGTATCCACCCCACGATGCTG
TCCAGTAGATTTTTAGCCTTTGGGTTAGAAATTGTTTTTTGTTCACCATTAATATCCATTTGAGGGCTGGGTAGC
ACTGTGATTGTGATTCAGCAATTGCATGGGCTTTTTCCTCTTCTCAGAACACTTCCTGGGTCTGATTGGTGGCCC
AGGGAGCTGTCAGAGAAGAGCAGAGCAAATGGCCTTCACTTTGTAGATGAGATGGCAGGAGGGTGGATTGTTGGT
CTCAGTCAGTGGTGGGACAGACCAGAGCTCCGAACACTTCAGTTTTAAAACTAGTTGTGAGTTTCCAATTCTGTT
AATGTCTTTTTTGGTCCTTGTTTCTGCTAAATGAATACATCCCCTCCCCTTGGAACTTAATATCAATAAATAACA
AGCACAGAAATATGCAAAAGGACCAGGTCTACTTGAAGAATTTGTGAGGATTAAATGGTTT**ATG**AGTAGAGGAGG
GTCAGTCAGTAAGTATTGGCTACCTCATGTGTGTCCCATTACTAACTTGGTTAGACTTATCTATTTTTTGTGTAG
TCTTCCTGTCATAAAAATTCTGTGTAAGGACCCCATGCTAGTATCAGTGAAGATTGTGAATCCAGGTGTGTCTGA
CTCTACAATAGTTCTTCACAAGCATTATATTTCACTGTGTAGTGATACTTCATTT**TGA**AAGTTGGGAAAAGCGTC
TTTTTCACTTTAGTACAGATGGGTATAAAAGTTACTTAGGACACTAGAAAACAGTTCATTAAAAGTAAAACAAAG
CCTGGTGCTTGGGCCCCAGGAATTCAAACTGTTTTCCAGTGTAAATCTGAATAGCTTGGTCTCTGCTCATTGCCA
GGACTGGGAGGAGTTGGGGGTCCCAGGTCCCATTTCTACATCCCAATTCAGTGATACTGGGATCTTAATAACCTA
CCTGTGAGGTGAAGTTGGAAAAGGCATAGGCAAGGATAGTTGTCCTGAGAGTTTTACACTTGTGAGAAAATACTG
GCAGCTTTGATTTTAAGATGTGAATAGATGATCGTGGTTCATGCCTATACTCCCTATACTCCCAG

FIGURE 1932

MSRGGSVSKYWLPHVCPITNLVRLIYFLCSLPVIKILCKDPMLVSVKIVNPGVSDSTIVLHKHYISLCSDTSF

FIGURE 1933A

GAGATATCCTTACCTTACTCAACAGCACCAACAAGGATTGGTGGAAGGTGGAAGTGAACGATCGTCAGGGTTTTG
TGCCGGCTGCGTACGTGAAGAAATTGGACCCCGCCCAGTCAGCCTCCCGGGAGAATCTCCTGGAGGAGCAAGGCA
GCATAGCACTGCGGCAGGAGCAGATTGACAATCAATATCATTCTCTGCTGGAACTGGGTGAGAAGCGTAAAGGCA
TGTTGGAGAAGAGTTGCAAGAAGTTTATGTTGTTCCGTGAAGCGAATGAACTACAGCAATGGATCAATGAGAAGG
AAGCCGCTCTGACAAGTGAGGAGGTGGGAGCAGACTTGGAGCAGGTTGAGGTGCTCCAGAAGAAGTTTGATGACT
TCCAGAAGGACCTGAAGGCCAATGAGTCACGGTTGAAGGACATTAACAAGGTAGCTGAAGACCTGGAGTCTGAAG
GTCTTATGGCAGAGGAGGTGCAGGCTGTGCAACAACAGGAAGTGTATGGCATGATGCCCAGGGATGAAACTGATT
CCAAGACAGCCTCCCCGTGGAAGTCTGCTCGTCTGATGGTTCACACCGTGGCCACCTTTAATTCCATCAAGGAGC
TGAATGAGCGCTGGCGGTCCCTACAGCAGCTGGCCGAGGAACGGAGCCAGCTCTTGGGCAGCGCCCATGAAGTAC
AGAGGTTCCACAGAGATGCTGATGAAACCAAAGAATGGATTGAAGAGAAGAATCAAGCTCTAAACACAGACAATT
ATGGACATGATCTCGCCAGTGTCCAGGCCCTGCAACGCAAGCATGAGGGCTTCGAGAGGGACCTTGCGGCTCTCG
GTGACAAGGTAAACTCCCTTGGTGAAACAGCAGAGCGCCTGATCCAGTCCCATCCCGAGTCAGCAGAAGACCTGC
AGGAAAAGTGCACAGAGTTAAACCAGGCCTGGAGCAGCCTGGGGAAACGTGCAGATCAGCGCAAGGCAAAGTTGG
GTGACTCCCACGACCTGCAGCGCTTCCTTAGCGATTTCCGGGACCTCATGTCTTGGATCAATGGAATACGGGGGT
TGGTGTCCTCAGATGAGCTAGCCAAGGATGTCACCGGAGCTGAGGCATTGCTGGAGCGACACCAGGGACACCGGA
CAGAAATCGATGCCAGGGCTGGCACTTTCCAGGCATTTGAGCAGTTTGGACAGCAGCTGTTGGCTCACGGACACT
ATGCCAGCCCTGAGATCAAGCAGAAACTTGATATTCTTGACCAGGAGCGTGCAGACCTGGAGAAGGCCTGGGTTC
AGCGCAGGATGATGCTGGATCAGTGCCTTGAACTGCAGCTGTTCCATCGGGACTGTGAGCAAGCTGAGAACTGGA
TGGCTGCCCGGGAGGCCTTCTTGAATACCGAAGACAAAGGAGACTCACTGGACAGCGTAGAGGCTCTGATCAAAA
AACATGAAGACTTTGACAAAGCGATTAACGTCCAGGAAGAGAAGATTGCTGCTCTGCAGGCCTTTGCCGACCAGC
TCATCGCTGCCGGCCATTATGCCAAGGGAGACATTTCTAGCCGGCGCAATGAGGTCTTGGACAGGTGGCGACGTC
TGAAAGCCCAGATGATTGAGAAAAGGTCAAAGCTAGGAGAATCTCAAACCCTCCAACAGTTCAGCCGGGATGTGG
ATGAGATTGAGGCTTGGATCAGTGAAAAATTGCAAACAGCGAGTGATGAGTCGTACAAGGATCCCACCAACATCC
AGAGCAAGCACCAGAAGCACCAGGCTTTTGAAGCAGAGCTGCATGCCAACGCTGACCGGATCCGTGGGGTTATCG
ACATGGGCAACTCCCTCATTGAACGTGGAGCCTGTGCCGGCAGTGAGGATGCTGTCAAGGCCCGCCTGGCTGCCT
TAGCTGACCAGTGGCAGTTCTTGGTGCAAAAGTCAGCGGAAAAGAGCCAGAAACTGAAAGAAGCCAACAAGCAGC
AGAACTTCAACACAGGGATCAAGGACTTTGACTTCTGGCTGTCTGAGGTGGAGGCCCTGCTGGCATCCGAAGATT
ATGGCAAAGACCTGGCTTCTGTGAACAACCTGCTGAAAAAGCATCAACTGCTGGAAGCAGATATATCTGCCCATG
AGGATCGCCTGAAGGACCTGAACAGCCAGGCAGACAGCCTGATGACCAGCAGTGCCTTCGACACCTCCCAAGTAA
AGGACAAGAGGGACACCATCAACGGGCGCTTCCAGAAGATCAAGAGCATGGCGGCCTCCCGGCGAGCCAAGCTGA
ATGAATCCCATCGCCTGCACCAGTTCTTCCGGGACATGGATGACGAGGAGTCCTGGATCAAGGAGAAGAAGCTGC
TGGTGGGCTCAGAGGACTACGGCCGGGACCTAACTGGCGTGCAGAACCTGAGGAAGAAGCACAAGCGGCTGGAAG
CAGAACTGGCTGCGCATGAGCCGGCTATTCAGGGTGTCCTGGACACTGGCAAGAAGCTGTCCGATGACAACACCA
TCGGGAAAGAGGAGATCCAGCAGCGGCTGGCGCAGTTTGTGGAGCACTGGAAAGAGCTGAAGCAGCTGGCAGCTG
CCCGGGGTCAGCGGCTGGAAGAGTCCTTGGAATATCAGCAGTTTGTAGCCAATGTGGAAGAGGAAGAAGCCTGGA
TCAATGAGAAAATGACCCTGGTGGCCAGCGAAGATTATGGCGACACTCTTGCCGCCATCCAGGGCTTACTGAAGA
AACATGAAGCTTTTGAGACAGACTTCACCGTCCACAAGGATCGCGTGAATGATGTCTGCACCAATGGACAAGACC
TCATTAAGAAGAACAATCACCATGAGGAGAACATCTCTTCAAAGATGAAGGGCCTGAACGGGAAAGTGTCAGACC
TGGAGAAAGCTGCAGCCCAGAGAAAGGCGAAGCTGGATGAGAACTCGGCCTTCCTTCAGTTCAACTGGAAGGCGG
ACGTGGTGGAGTCCTGGATCGGTGAAAAGGAGAACAGCTTGAAGACAGATGATTATGGCCGAGACCTGTCTTCTG
TGCAGACGCTCCTCACCAAACAGGAAACTTTTGACGCTGGGCTGCAGGCCTTCCAGCAGGAAGGCATTGCCAACA
TCACTGCCCTCAAAGATCAGCTTCTCGCCGCCAAACACGTTCAGTCCAAGGCCATCGAGGCCCGGCACGCCTCCC
TCATGAAGAGGTGGAGCCAGCTTCTGGCCAACTCAGCCGCCCGCAAGAAGAAGCTTCTGGAGGCTCAGAGTCACT
TCCGCAAGGTGGAGGACCTCTTCCTGACCTTCGCCAAAAAGGCTTCTGCCTTCAACAGCTGGTTTGAAAATGCAG
AGGAGGACTTAACAGACCCCGTGCGCTGCAACTCCTTGGAAGAAATCAAAGCTTTGCGCGAGGCCCACGACGCCT
TCCGCTCCTCCCTCAGCTCTGCCCAGGCTGACTTCAACCAGCTGGCCGAGCTGGACCGCCAGATCAAGAGCTTCC
GCGTAGCCTCCAACCCCTACACCTGGTTTACCATGGAGGCCCTGGAGGAGACCTGGAGGAACCTACAGAAAATCA
TCAAGGAGAGGGAGCTGGAGCTGCAGAAGGAGCAGCGGCGGCAGGAGGAGAACGACAAGCTGCGCCAGGAGTTTG

FIGURE 1933B

CCCAGCACGCCAACGCCTTCCACCAGTGGATCCAAGAGACCAGGACATACCTCCTCGATGGGTCCTGTATGGTGG
AAGAGTCGGGGACCCTCGAATCCCAGCTTGAAGCTACCAAACGCAAGCACCAGGAAATCCGAGCCATGAGAAGTC
AGCTCAAAAAGATCGAGGACCTGGGGGCCGCCATGGAGGAGGCCCTCATCCTGGACAACAAGTACACGGAGCACA
GCACCGTGGGCCTCGCCCAGCAGTGGGACCAGCTGGACCAGCTGGGCATGCGCATGCAGCACAACCTGGAGCAGC
AGATCCAGGCCAGGAACACAACAGGTGTGACTGAGGAGGCCCTCAAAGAATTCAGCATGATGTTTAAACACTTTG
ACTAGGACAAGTCTGGCAGGCTGAACCATCAGGAGTTCAAATCTTGCCTGCGCTCCCTGGGCTATGACCTGCCCA
TGGTGGAGGAAGGGGAACCTGACCCTGAGTTCGAGGCAATCCTGGACACGGTGGATCCGAACAGAGATGGCCATG
TCTCCTTGCAAGAATACATGGCTTTCATGATCAGCCGCGAAACTGAGAACGTCAAGTCCAGCGAGGAGATTGAGA
GCGCCTTCCGGGCCCTCTGCTCAGAGGGAAAGCCTTACGTGACCAAGGAGGAGCTCTACCAGAACCTGACCCGGG
AACAAGCCGACTACTGCGTCTCCCACATGAAGCCCTACGTGGACGGCAAGGGCCGCGAGCTCCCCACCGCGTTCG
ACTACGTGGAGTTCACCCGCTCGCTTTTCGTGAACTGAGCCACTCCCTGGGTCACCCACCCCTCGCTGCTTGCCC
TGCGTCGCCTTGCTGCATGTCCGCTCCTCTGTGTGCTCTCACTTTCCACTGTAACCTTAAGCCTGCTTAGCTTGG
AATAAGACTTAGGAGAATATGGTGCTTCACTAACCCGCTTCCGGTCCAGTCACAATCATCATGTCACTGTGGGGA
CCCAGATCTGTGTCTTGAAGCAGCTGCCCTCATTCCGACTTCAGAAAATCGAAGCAGCTGGCTCCTCCCCTTGTT
CTCTCTCCCACCCTCCCCCAAATCTGTTTTCATGTAAAAGACAAATAAATGATGACTTCCCCCAAAAAAAAAAAA
AAAAAAAAC

FIGURE 1934A

CTCACACATAGACACGCACACACACCCTTTCTCGCACACACACACACACACACACACTCTCACACATTCTCAC
ATGCTAGACCCTTCTAAGCAGCTTGTCCGTTTTTACACATGTATCTGAACTCTCCTGCATCACTCTTGGCCATTT
TCTCGCATTCGATTGCTTTTGCCGTTTTTTATTTAGATCAGTACTTGATTTCATTTTCATTTTCCAGTCTACTTT
GGGGTTCTCGCAGTGGATAATTTAGCCAAAATGTTTTTCTTGTGGAGACATTAGCTGACAATTCCCACCACAGAC
TGGCTTGTACGTCCTCCCAGGGAGACCTAAACCTGGCTCCCCTCCCACCGCAGTTCTTAATATTGTGGATAAGAG
ATCCATCTTTCTCATTCTGGATACCTACTTAGTGCTC**ATG**GAAGAAGGGGTGCCCTGCCCAGCCCCAGCTGCTAA
GCTCACACCTCCTGTCAAAAAGTCCCAGGACATGCACGACGAGAGGAGCAAGCTGGTGAATGAGTATGCGTGTCG
AGTGCTGGAACTTCTGGGGATGGGGCATCGTCTGTTTGTGCCTCGGCTTCTGGCGACCTCAAAGGAAGACCTTCT
GCAGGCTGATTTTGAAGGTGCTTTAAAGTTCTTTAGAGTTCAGCTTCCAAAGAGATACAGGGCAGAGGAAAATGC
AAGAAGACTGATGGAGCAGGCTTGCAATATTAAAGTACCAACCAAGAAGCTGAAGAAATATGAGAAAGAATATCA
GACAATGCGAGAGAGTCAGCTGCAACAGGAAGACCCAATGGATAGATACAAGAGGGAGAACCGAAGATTACAGGA
GGCCAGCATGAGGTTGGAACAAGAGAATGATGACCTTGCCCATGAACTAGTAACAAGCAAAATTGCTCTACGGAA
TGACTTGGATCAGGCAGAAGACAAGGCAGATGTGTTGAATAAAGAGCTCCTTTTGACCAAACAGAGGCTGGTGGA
GACTGAAGAGGAGAAGAGGAAGCAAGAGGAAGAGACTGCCCAGCTAAAAGAAGTCTTCAGGAAACAGCTAGAGAA
GGCAGAATATGAAATAAAGAAGACTACAGCTATCATTGCTGAGTATAAACAGATCTGTTCGCAGTTGAGTACCAG
GCTGGAGAAACAGCAAGCAGCCAGCAAGGAGGAGCTGGAAGTGGTAAAGGGTAAGATGATGGCATGCAAACACTG
CAGTGACATTTTCAGCAAGGAGGGTGCTTTGAAACTAGCAGCCACAGGCAGAGAGGACCAGGGAATTGAAACAGA
TGATGAGAAGGACTCACTTAAGAAGCAGCTGAGAGAGATGGAACTGGAACTGGCACAAACCAAACTGCAGTTGGT
GGAGGCCAAGTGTAAAATTCAGGAACTTGAACATCAGAGAGGAGCCCTTATGAATGAAATCCAAGCTGCGAAAAA
CTCTTGGTTTAGCAAAACCCTGAACTCTATCAAAACGGCCACGGGCACCCAGCCATTGCAGCCAGCACCGGTCAC
CCAGCCACCCAAGGAGAGCACA**TAG**TTCCAGCCTTACCCAAGCACAAGAGCACAATGTTCAAACCAATGGAAATC
TGGGAGGATTCTTCCTGGTGTCCCTTTGAAGGAAAGTCAAGGAGGCCAGAAAACAAGCCAGAATTTTTCAGTAGC
TCTCACTCTTTCTTGTATGACACTTTTCAAAGGGATGCTATTTAAACTGACCTGTTCTATGTTGAATACCTATTT
TCCAGCTTCTGGAAGGCCATGTTCAGATCCATCATAGTATTACACATTATTTTGTTTGCCTGATGTTTAGTTGGA
AATAAGTAATTCAGAACTAAATGCTTTTTTATTTAGAATTATTCATAATTATTTTTATCTTACATAAAAATGGAG
ACATCTGTTATTCCAAGGTTGAAGTGATAAGAAGATCTTTGTCACAGGAAAAAAAAAAATTGAAACCTAAACATC
TTAAGTTTTCAGGATTTATTCAGATAAAGCACACTGTGGGGCCAGGCATGACCACTCTCAGGTTTCCTCCTGAGC
CTGATTCCCAGGGAAGTGTTAATCCTGTCCAAAGGAAAGAACCAATCAGCGATCATTGGTTTACTTTCATTTTCT
GTTCGGTACATCTGGAAATGAAGTGCCAGGAATAGACGGGCTGTTCAGATTATACGCTAGGTAAAAGGAACTGAA
ATTTTAATAAGTGTAGGTCAGGATCATTTGGGCTGTGGTATTCTAACAGATCCTTTTAAGAATGCCACATAGGAC
TTGTGAGTTCCTAAGTACACCAAAGTATGGACACAGATGTGACTTCTGGCAATTATAAAGTTAAAGGTGGATATT
GCACCTTACAGACTTAGGGAGCCTTTACCAGAGACGCCTAAAAAGCCCCAGGTTCAGCCATTGTGCTGAATAGAG
TGGAATATAGAACCAGGGACAGAGTATTTCATTTAACGTTGATATATACTTGCTAAGGAAACACTAACAATACTG
TAACTTTGTTAAAGGACATAGTATTGAAATGGGAAATAGAGGTCAGGCTCACATCATCTTAGTTTAATGCTGGGC
AACTTTTTTCTGATTTCTGTAGTTCCCTGAAAATGTGTCCTTCGTACCCATAAAGAGATACAAATGCATTTGTAA
CATTTTTGATTGAATATAAAACCTTTACAGAAATACTTATCTCATGGAAAGGTAAAGCTATTGTTTAAAAATTAG
TGGAAATATTTTTTCAATTATATTTAACATGCCTATAAAAATAGTCCTTGCAGGAAATTATTTGATAAGAGCAAA
ACTATTTTTATTTTATAAACTATTTTGGAGGCCTCTGATCCTTTCAAACCAACCAAACTACTATTAGATATGTAC
AATAACATTTGTTGATATTAATCATTGGCCTCATTGTTGAACATATTATTTGCAAAGAATCTTAAACTCTGTAGT
GCCAGAATGATTCTCATCTGTGCCATATTTTGCAATTAAAAGTAACACACCCTTAGAAGAATCAAATAAGAGCCA
TCTACATCCCAGGAGGATGCACCAAGTTGCTCACAGTGGATCTTTTCCTCTAAAATGATCTTTTATGTTCTAAAA
AGTGAAATCCCCTTTATCTGTGTTTATATTCTCTACAGCCCATAAAACTGATGTGATTGTTATGTTATACTCATC
AGATAATACTTTTCTTACATAAATCTTTCATTGTTGTTCTGACATCTTTCATTACAAAATTTATTTTCTTAACAA
AAAGGAACATAACCCAGCATTCCAAGTGTCTGTGTTGGCTTTAACATTCTCTACATGGTGGTCTAGATAAGCTAA
TTTTTTTTTTTTTTTTTTTTGTAAAATGTAATAGCTAGAAAATGTTATCTTCGCGCTTGTTTTTGTAAATCATTT
AGTATAGGCTGTTAGCTTTACTGGTACTTTACGCTTTGATTCCAAGAAGCCTTGTGCAGTTGCCTTATCAAATGG
CCAGCTAAATTAAAGATGCTCTTTTGTGTTGTGAATTTCATAGTTCTGTACAGAGCTTGTTTCAATTTACAAAAA
TAAGTACATTCCACAGAATGCCTAAATTGTGTAATTTTCTTTAAATAATAGTAGGTGAGGGAGAAACATAATGGC

FIGURE 1934B

TCTAGGTCAATCCCTTATCTAAAGACCTTGTTCAACTTCATAGTCCCTTTCCTTTTAAAGAGGAGAAGAGAAAAA
TCCCCCCTGGCCAGGCATGGTGGCTCACATCTGTAATCCCAGCACTTTGGGAGGCTGAGGTGGGTGGATCACCTA
AGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCTATCTCTACTGCAAAATACAAAAATTAGCCGG
GCTTGGTGGCGGGTGCCTGTAATCCCAGCTACTCGGGAGGTTGAGGCAGGAGAATCACTTGAACCCAGGAGGCAG
AGGTTGCAGTGGGCCAAGATTACGGCATTACATTCCATCCAGCCTGGGCGACAAGAGCAAAATTCCGTCTCGAAA
AATCACCAGGTACATACCTCTCAAGTTTGATAAGTCCATCTTTTGAGTTTTCTTTTAGCTCTTTCAAAAGATTAC
GAGGGCAATACATATTTTTTTTTTTTTATTCTCCAGCCCCATATCATACTTGGGTATGCCTGTTGGTACCATAA
GCCTAAACTCTCCTTCACTGCAATGCCTTTGAGTCAGTAGCAATAGTAAAGACTAGAAACAAAGAAAATTCAGAA
TTTGGTATGTGATATGATTGTTCATACAATATGTTATAATAGCAATATTCCAAACAATATGTCCTTCACTGTCTA
TTGTTGGAAAACTCATGCATCCCAGCATGAAGTAACTCCTAGTTTTAATTTTAGTTATTTTGAGATATATTTGAG
AATTGCATCTCTTCTCTTGAATTTCACTTAGAAGAGATTAACCAGCCAAATATCCAGGAAAGTTTCAAAACATTC
TAGTGTTTTTCATCCTTTGCTAGGATGCACTCTGTACAAAACATTCCTCTGAAAATCTAATATTTGCAGTATCTA
AGAATTGATCATTTCTATTTTCATTAAATTCTGTGGAAAAAATTAAATGAATGAAATTCAACTTCATAATTCAGT
TCATCAGCTTTTGTATCTTGAGAATCTAAACACGTCTXXAAATCTGAAAGAAACCAAGCTGGATTTTGCAGTGCA
TATGTTTGCTAGCTTCCCACATCCTGAACCATGTCAAAATTTGGTTTTATTTAGTTACATATAATTTAATGCAAA
GAAATTCTGTTACTTAATGTTCTGTTTATTTATGAGTGCCTATCAGGAACACTAATAGGAATGCCATTCAACCAG
TGTCTTCTGCCCCTCTCCCAGCTGTTAAATTAGTACTTCTTCATTGGCTTTCTGAAATGTCCTGAGTAAAGTAGA
AAAGCAACCTTTGTATGGATGTGGGGATATTTAATAGTATGTATCTTGTTTCATTTTTTTCCTATGATGTATTAA
TATTTATTTTTCTCCAACCCCTGCTCCATTTTCTTAAAATATTTTCCAGTTAATAACTAGTTGCTTTATTTCCTA
GCTGAAGTGAGAAAACCAACGGAAAACAATACAGATTTGGGCAGAGGAGATAGAGTTACATCTTTAAAGGAGTGA
GCCAGTCACCCAGGAGAATCACATGTGTAACTGATGTAGGGGTTTAAGTCTTCATACTTTCACTAAAATCTGTCT
ACTAACTCTCCCACCAACCTTTGCATCAAACACTTAGGTACCTGCCTGATTAGGGGGGCCCCTTTAAGGGAAAAA
ACTTTTAAAAAATTAAATGCCTTGGTTTTGTTTTATCTTCTGGGAAAGAACACTTTTACTTGATTAGCAAGATGA
TTATATTATATAACTTGCCCTTAAAAACACTCCAAAATACTGACTCCTTTTCTCCAATTACAAATGAGTGTGAAG
AAATTCTGTTGTATGATTTGAACACTATTAGGTTTGTATGTGTGTTTAATTGGAAGAATTTTATATAGAGTATCT
CTGCTGCTTTTGTTTACCTGGGTACCACACAACCAAATACACATTGAGATTTCAAGAAATGATGATGAAAGCCAG
AAGGCCAGACCACAGCTCTGCAGCCTGTTTCCTACAACCAGATATAAAACTCTTTCTCGTCGCCATGCTGATAGT
CACACTGAACTAGAACTGTCCCAACACATTCTTCCTCTCTCATAATGGCTTCCATTTAATACAGGCAAAGCCCTT
TACCTTAGCAAATTCTTTATCTTTCAAAAGTGACCAAAATGAGGACTTCAACCTTGGCTGCACCTCAATAGGAGA
TGCTGATCTTGAGTTGTAATGAGAAAAGTGGGCATATAGGAGATTTTAGTGACTGCAGTCAGCTGTCTGGCATTC
CTTTCTCAGTTTGCATCTAAAAGACTACATATGTCAAGCTTATCTCCACCTGAATTTGCTGCCTGCTATAAAAAC
ATTTCATTAATATATCCCATTCTTCCTACCTCCATCTCTGGTTTGTCATTAGTGGTATTCTGAAAAGCTTAAGAA
AAAAGAATCATTGAGTAGAAAGTGAACATTTTAAGTTATTTTCCTTTTTCATTGGCAATTAGTTAACATGTAAAA
TCTTTTCCATTAAACTGTATAACTTTTAATAACTATATATTATATATGGGATAAAATATATGGACTGAATTGTGA
GAATATAAATGCATCGAAAGACTCTGGTGTCATGAAAGCACAAGAATAAGGCTGGAGATGGTCCCAGATCCAAGA
TGTCCCAAAAGCCTTTTGTATCAGTTTCTCTATTTTTGGTATTTTGCATAATGCATGGATCCTTAGTTCAAATGA
GGGACAAAGTTTCTCAGTCAGCCCCACTTCCTTTCTTTCTAACTCCTACCTTTCCCTTGCAGAGGAGGTAGTAGA
GATTCTGGAATTGTCTATTTTTATGAATTCCATTATTTTGTCCATGGCATCTCTAATGAAAACAGGTTCTAGAAT
AAAGGAGTTGATTAGTCTGAACAGTACTAATTAACTACAAAATAAACGTTAGTGATCAGCCTCTTCCTCTATAAA
CAATGACCAATTAGACGTTTCCGTAATTCCATGTATTATGTATAGTACACTCTATAAATGTAAATGTAATGCTTG
TCTAAAAAGTGCAATTTATTGTACATTGTCCCAACAAATGTTTACTTTTATAATCGTTATGAACTTGAATTGGAT
TAGTATCTTGTTTTTATGTGTGAATGAAGCCTTGTGAAATAAACAAATGCAACTGAGAAGGTAACAAGGTGACTG
TTTTTGTGAGCCAGTGATGTTTTCAATGCTTTGTGTTGCCCCTTTGGCCCCATTAAGCAGTAATAAACATTTGTT
CTGAAGTCC

FIGURE 1935

MEEGVPCPAPAAKLTPPVKKSQDMHDERSKLVNEYACRVLELLGMGHRLFVPRLLATSKEDLLQADFEGALKFFR
VQLPKRYRAEENARRLMEQACNIKVPTKKLKKYEKEYQTMRESQLQQEDPMDRYKRENRRLQEASMRLEQENDDL
AHELVTSKIALRNDLDQAEDKADVLNKELLLTKQRLVETEEEKRKQEEETAQLKEVFRKQLEKAEYEIKKTTAII
AEYKQICSQLSTRLEKQQAASKEELEVVKGKMMACKHCSDIFSKEGALKLAATGREDQGIETDDEKDSLKKQLRE
MELELAQTKLQLVEAKCKIQELEHQRGALMNEIQAAKNSWFSKTLNSIKTATGTQPLQPAPVTQPPKEST

FIGURE 1936

GGCACGAGGCGCCAGTCCCCTAACCCTGAGGCTGCCGCGCGGCGGTCACTGCGCCGGGGTAGTGGGCCCCAGTGT
TGCGCTCTCTGGCCGTTCCTTACACTTTGCTTCAGGCTCCAGTGCAGGGGCGTAGTGGGAT**ATG**GCCAACTCGGG
CTGCAAGGACGTCACGGGTCCAGATGAGGAGAGTTTTCTGTACTTTGCCTACGGCAGCAACCTGCTGACAGAGAG
GATCCACCTCCGAAACCCCTCGGCGGCGTTCTTCTGTGTGGCCCGCCTGCAGGATTTTAAGCTTGACTTTGGCAA
TTCCCAAGGCAAAACAAGTCAAACTTGGCATGGAGGGATAGCCACCATTTTTCAGAGTCCTGGCGATGAAGTGTG
GGGAGTAGTATGGAAAATGAACAAAAGCAATTTAAATTCTCTGGATGAGCAAGAAGGGGTTAAAAGTGGAATGTA
TGTTGTAATAGAAGTTAAAGTTGCAACTCAAGAAGGAAAAGAAATAACCTGTCGAAGTTATCTGATGACAAATTA
CGAAAGTGCTCCCCCATCCCCACAGTATAAAAAGATTATTTGCATGGGTGCAAAAGAAAATGGTTTGCCGCTGGA
GTATCAAGAGAAGTTAAAAGCAATAGAACCAAATGACTATACAGGAAAGGTCTCAGAAGAAATTGAAGACATCAT
CAAAAAGGGGGAAACACAAACTCTT**TAG**AACATAACAGAATATATCTAAGGGTATTCTATGTGCTAATATAAAAT
ATTTTTAACACTTGAGAACAGGGATCTGGGGGGATCTCCACGTTTGATCCGTTTTCAGCAGTGCTCTGAAGGAGTA
TCTTACTTGGGTGATTCCTTGTTTTTAGACTATAAAAAGAAACTGGGATAGGAGTTAGACAATTTAAAAGGGGTG
TATGAGGGCCTGAAATATGTGACAAATGAATGTGAGTACCCCTTCTGTGAACACTGAAAGCTATTCTCTTGAATT
GATCTTAAGTGTCTCCTTGCTCTGGTAAAAGATAGATTTGTAGCTCACTTGATGATGGTGCTGGTGAATTGCTCT
GCTCTGTCTGAGATTTTTAAAAATCAGCTTAATGAGAGTAATCTGCAGACAATTGATAATAACATTTTGAAAATT
GGAAAGATGGTATACTGTTTTTAGAGGAATAAACGTATTTGTGGTTTAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 1937

MANSGCKDVTGPDEESFLYFAYGSNLLTERIHLRNPSAAFFCVARLQDFKLDFGNSQGKTSQTWHGGIATIFQSP
GDEVWGVVWKMNKSNLNSLDEQEGVKSGMYVVIEVKVATQEGKEITCRSYLMTNYESAPPSPQYKKIICMGAKEN
GLPLEYQEKLKAIEPNDYTGKVSEEIEDIIKKGETQTL

FIGURE 1938

GTTGGAAATAACTATAACTTAAAGCAAATCTAACCCAGTAAGCTATCAAAAAGAAAAATTATATAATTACCAAGT
AGAGTTAATTTCACCTGAGTTCTATGAACATATTCATTATTAAAGGAAACCTCAAATTATTGTCCCATTGGAAGC
AAAATATACATTTATAAATAGCCATTTCTCGTTTTAAAAAACTAATAACATTGAAATAAACAGAAACTTAAGCTC
TTCTAGTTTGCCAAAAACCAGAAAGCAAACATCATATACTAAATGATGAAATGCCAAAGCCATTTCCATTATATC
AGAAACGAGACTAATACTTCCTGTCATCATTTACATGATTGTCACTATTATTAAGCATTGTTTTGGTAGTTCTAG
CCATTGCAGTAAGACAGTAGACAGAAAGTCAAATAATTGGCATAAATATTGGAAACAAAAAATTATTTCTACTTT
GAAATGATACAATAGAATAGCTGGAAAGCCCAGGGGGACTCTAGTAGAAAACAGCAATGAGGATTAAATGTAAGA
CACTTTGGAAAGCTGATGTGTGAGAAATGTACACAAACTAATAGCTTTCTCTTTATTAGTAGTCATCAGTTGAAA
ATGGAAATGACCAAGCAAAAATATTCAACAGAATGACAAAACTATTGGTTACACCTAGGAATAAATGTGTTAAAG
AAAGGTACAGAGTGAAGGTAATGACCCTTATGAAGAAAACTTGATATTATAAAAAGTAGTCCTTTTCTCCCTCAG
TTTTTGTCTTCAAAATGTTTACTTGGGACAGATCGTGGTTTACATGATGGTCCTCAAACATATTGTGAACAACAT
TAAAAAAAAAAGACACATTTTACTCAATAAGTAACATTTTTTGAGAAGCTACTATGTGCTAGGGACCTAGTTTTT
AGTGCAGTGGTCTCCAAAATAATGTACTGGCAGTATGGGAAGAGCGTTTAGAACACTGTACCTTTTTATTTGGGA
GGAGAAAAGAAACCTTTGTCAAATATTTAACACCTGCTGCCAGAGGTCTGTAGATTTGATGATTGTGTGCCATGA
GTTACACACAGACTCCTAAATCAGTTTCACCTGTGGTGTCCTCATTCTGTTTACTTTGAGCATTTTGCATTCTAT
ATCTGCTTAGTTATATGGATTTATTCGTCCCATATAATATGTGTAGCCACATGGACACATGTTTTAAAAGGTTTT
AAATTCTGCAAGATAGTGACGATGATGTAAACACAAGAAAAGGGCAAATGGATACATTTTCCTACTCTGTGCTCA
TCAAACATATTACAGGATAAAATTATTGGCTATCTAATAAAAACACAGACTAATAAGACCTGATAAGTTGGACAA
AATGTTTAAAAATTAACATGAAGATGATAGGAAGTATGAATCTATATTCACTGTCATTA**ATG**TCAAACCTTTACC
TTATGGTATATTGTACTTTGAGAAATTA

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FIGURE 1939

MSNLYLMVYCTLRN

FIGURE 1940A

GCGAAAACAAAAATGCCGCCTAATTGGTCACTGGCCCTTTCTCATGAATGAAGGAGGTTTCTGTTTTAAGAAATA
AAGTGACTCCTCAGCCGTTGATTCACTGCCCACAGGGAGATTTTGAGCAGAGGCTTCCTAGGCTCCGTAGAAATT
TGCATACAGCTTCCACTTCCTGCTTCAGAGCCTGTTCTTCTACTTACCTGGGCCCGGAGAAGGTGGAGGGAGACG
AGAAGCCGCCGAGAGCCGACTACCCTCCGGGCCCAGTCTGTCTGTCCGTGGTGGATCTAAGAAACTAGA**ATG**AAC
CGAAGCATTCCTGTGGAGGTTGATGAATCAGAACCATACCCAAGTCAGTTGCTGAAACCAATCCCAGAATATTCC
CCGGAAGAGGAATCAGAACCACCTGCTCCAAATATAAGGAACATGGCACCCAACAGCTTGTCTGCACCCACAATG
CTTCACAATTCCTCCGGAGACTTTTCTCAAGCTCACTCAACCCTGAAACTTGCAAATCACCAGCGGCCTGTATCC
CGGCAGGTCACCTGCCTGCGCACTCAAGTTCTGGAGGACAGTGAAGACAGTTTCTGCAGGAGACACCCAGGCCTG
GGCAAAGCTTTCCCTTCTGGGTGCTCTGCAGTCAGCGAGCCTGCGTCTGAGTCTGTGGTTGGAGCCCTCCCTGCA
GAGCATCAGTTTTCATTTATGGAAAAACGTAATCAATGGCTGGTATCTCAGCTTTCAGCGGCTTCTCCTGACACT
GGCCATGACTCAGACAAATCAGACCAAAGTTTACCTAATGCCTCAGCAGACTCCTTGGGCGGTAGCCAGGAGATG
GTGCAACGGCCCCAGCCTCACAGGAACCGAGCAGGCCTGGATCTGCCAACCATAGACACGGGATATGATTCCCAG
CCCCAGGATGTCCTGGGCATCAGGCAGCTGGAAAGGCCCCTGCCCCTCACCTCCGTGTGTTACCCCCAGGACCTC
CCCAGACCTCTCAGGTCCAGGGAGTTCCCTCAGTTTGAACCTCAGAGGTATCCAGCATGTGCACAGATGCTGCCT
CCCAATCTTTCCCCACATGCTCCATGGAACTATCATTACCATTGTCCTGGAAGTCCCGATCACCAGGTGCCATAT
GGCCATGACTACCCTCGAGCAGCCTACCAGCAAGTGATCCAGCCGGCTCTGCCTGGGCAGCCCCTGCCTGGAGCC
AGTGTGAGAGGCCTGCACCCTGTGCAGAAGGTTATCCTGAATTATCCCAGCCCCTGGGACCAAGAAGAGAGGCCC
GCACAGAGAGACTGCTCCTTTCCGGGGCTTTCAAGGCACCAGGACCAGCCACATCACCAGCCACCTAATAGAGCT
GGTGCTCCTGGGGAGTCCTTGGAGTGCCCTGCAGAGCTGAGACCACAGGTTCCCCAGCCTCCGTCCCCAGCTGCT
GTGCCTAGACCCCCTAGCAACCCTCCAGCCAGAGGAACTCTAAAAACAAGCAATTTGCCAGAAGAATTGCGGAAA
GTCTTTATCACTTATTCGATGGACACAGCTATGGAGGTGGTGAAATTCGTGAACTTTTTGTTGGTAAATGGCTTC
CAAACTGCAATTGACATATTTGAGGATAGAATCCGAGGCATTGATATCATTAAATGGATGGAGCGCTACCTTAGG
GATAAGACCGTGATGATAATCGTAGCAATCAGCCCCAAATACAAACAGGACGTGGAAGGCGCTGAGTCGCAGCTG
GACGAGGATGAGCATGGCTTACATACTAAGTACATTCATCGAATGATGCAGATTGAGTTCATAAAACAAGGAAGC
ATGAATTTCAGATTCATCCCTGTGCTCTTCCCAAATGCTAAGAAGGAGCATGTGCCCACCTGGCTTCAGAACACT
CATGTCTACAGCTGGCCCAAGAATAAAAAAAACATCCTGCTGCGGCTGCTGAGAGAGGAAGAGTATGTGGCTCCT
CCACGGGGGCCTCTGCCCACCCTTCAGGTGGTTCCCTTG**TGA**CACCGTTCATCCCCAGATCACTGAGGCCAGGCC
ATGTTTGGGGCCCTTGTTCTGACAGCATTCTGGCTGAGGCTGGTCGGTAGCACTCCTGGCTGGTTTTTTTCTGTT
CCTCCCCGAGAGGCCCTCTGGCCCCCAGGAAACCTGTTGTGCAGAGCTCTTCCCCGGAGACCTCCACACACCCTG
GCTTTGAAGTGGAGTCTGTGACTGCTCTGCATTCTCTGCTTTTAAAAAAACCATTGCAGGTGCCAGTGTCCCATA
TGTTCCTCCTGACAGTTTGATGTGTCCATTCTGGGCCTCTCAGTGCTTAGCAAGTAGATAATGTAAGGGATGTGG
CAGCAAAAGGAAATGACTACAAACACTCTCCTATCAATCACTTCAGGCTACTTTTATGAGTTAGCCAGATGCTTG
TGTATCCTCAGACCAAACTGATTCATGTACAAATAATAAAATGTTTACTCTTTTGTAAGATTATGTTTTACTTAT
CTCAAAGGAGATACATATAATTTATAATGATATGGGCAGTTGCTTCCAGGGACATCAACAAAGCTGCTTAGATAT
AATATTAGATAAATATAACAGACCACTCTGTATTAATGGATTAAAGCCAGCTAGTTAAACAACCCTTTTTAACCA
TAATCATGGAAGCTTTATTCTTGCAATAAAGATTTTTAGGCTGGGCGCAGTGGCTCACACCTGTAATCCCAGCAC
TTTGGGAAGCTAAGGCAGGCAGATCATTTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCCA
TCTCTGCTAAAATTACAAGAAAGTTAGCCGGGCATGGTGGTGTGCACCTGTAATCCCAGCTACTCGGGAGGCTGA
GGCAGGAGAATCACTTGAACCCGGGAGGCAGAGGTTGCAGTGAGCCGAGATCATGTCACTGCACTCTAGCTTGGG
AGACAGAGCGAGACTCCGTCTCAAAAAACAAACAAACAAATAAAACACCCATTTTTAACAAAACAACTTTATATA
GCATACAGCCATGATTCTAAATAGTATGATTATGGTTCTCAGGATCTGACTACATAGGTAAAAATATTTGCATAT
GTGTATGAAGTGTTGGGGGATGTAGGCTAGAATTGTAGTCTGTGTTCTAATTTTGGTTCTACCACCAATTAGCTG
TATGACCTTTAGCAAGTCCTTTAACTTTTCTTAGATTCCAGGGACTCATTTATAAAATGACATGGACAAAAGCAT
CTCTAATCACTCTAAAAGATTTGAAGTCTAGGACCTAAATTCTAAATACTCTTTTGAGGAGTGACTGAGTTTTCA
TTTTCATAATTATGTCTCTCAGAGGACAAATTTACATTTTCTTAACAGAGACATTTTCTTCTTCTTTTTTTTTGT
TTGAGACAGAGTCTCGCTCTGTCGTCCAGGCTGGAGTGCAGTGCTGCAATCTTGGCTCACTGCAACCTGCGCCTC
CTGGGTTCAAGTGATTCTTCTGCCTCAACCTCCCAAGTAGCTAGACCTATAGGCGCCTGCCACCATGCCCAGCTA
ATTTTTGTATTTTTAGTAGAGACAGGGTTTCATATTGGCCAGACTGGTCTCGAACTCCTGACCTTGTGATCCGCC

FIGURE 1940B

CACCTCGGCCTCCCAAAGTGCTGGGATTACAGGTGTGAGCCACCACACCCAGCCAACATTTTCCTCTTTTAAAAA
ATATCTTCTCACGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCAGGCGGATCATGAGGTCAGGAGATCAAGAC
CATCCTGGCTAACACGGTGAAACTCCATCTCTACTAAAAATACAAAAAAAATAGCCGGGCGTGGTGGCAGGCGCC
TGTAGTCCCAGCTACTGGGGAGGCTGAGGCAGGAAAATGGTGTCAACCCGGGAGGCGGAGCTTGCAGTGAGCCGA
GATTGCGCCACTGCACTCCAGCCTGGGCAATAGAGTGAGACTCCGTCTCAAAAAAAAAAAAAAAAAAAAAAACTT
CAACAATACCCTCAGGTTGATAATTTTGGATATCTATCTGTATCTATATATCTTGTTTACCTGGTCTCCAGAAAA
AGAACACATACACATATCCATATATAAAATATGTATACATGTATCAAATCTACGTAAACTATAAAGGTGGGATGG
CTTTAATTATGGCCCAAGCTACTAAGACAATGAAGACTTTTTGGGGCTGCAAGCTACTGCTTCCCTTCTTTATCT
ACTAGCCTCTTAAACAAGGCTCACTTGTGCTACAAGACAGTCCACCGTTTTGTTTTTTTTTTCTTTTTTTTGAGA
CAGGGTCTCACTCTTTCCCAGGCTGCAGTACAGTGACACAGTCTCAGCTCACTGCAGCTTTGACCTTGCCGGGCT
CAGGTGACCCTTACACTTCAGCCTCCCAAGTAGCAGGGACTATAGGTGTGCACCAACATGCTTGGTTAATTTTTG
TATTTTTTGTAGAGACAGGGTTTTGCCATGTTGTCCAGGCTAGTCTCGAATTCCTGGGCTCAAGTGATTCACCTG
CCTTGGCCTCCCAAAGTGCTAGGATTACAGATGGGAGCCACCACGCCCAGCCCAGTCCAGCTCTTATATGTAGCA
CAGGGAAAGGACAAATACTTGTCAACTATAAATAAGAAACATTGCTAATGCATTGCAAAGAACACTAGTTTCATT
TACTTTATAACTTAGATGTCTACTGGGTGAGACGAATGTCTTTGTTCTTTAAAAAATAGGAAAAGAGAAGAAAAA
CTAGCATAACATAAGTACTCATTTGTAAGACTTTCTGACATGTAACATTAGTTCCGTAGTTTTGAGACCTGGTAG
AACTGACTTTCATATTTGGATAACCTGGAAAACACCCAAACACAAACTTCAAGTCTTCTTTCTCTTTTTTCATTA
TCTTTTTTAGTCTGAGGTGACACCATCATTAAGGATTCGACACCCGTTTGTAAATAAAATGACATCAG

FIGURE 1941

MNRSIPVEVDESEPYPSQLLKPIPEYSPEEESEPPAPNIRNMAPNSLSAPTMLHNSSGDFSQAHSTLKLANHQRP
VSRQVTCLRTQVLEDSEDSFCRRHPGLGKAFPSGCSAVSEPASESVVGALPAEHQFSFMEKRNQWLVSQLSAASP
DTGHDSDKSDQSLPNASADSLGGSQEMVQRPQPHRNRAGLDLPTIDTGYDSQPQDVLGIRQLERPLPLTSVCYPQ
DLPRPLRSREFPQFEPQRYPACAQMLPPNLSPHAPWNYHYHCPGSPDHQVPYGHDYPRAAYQQVIQPALPGQPLP
GASVRGLHPVQKVILNYPSPWDQEERPAQRDCSFPGLSRHQDQPHHQPPNRAGAPGESLECPAELRPQVPQPPSP
AAVPRPPSNPPARGTLKTSNLPEELRKVFITYSMDTAMEVVKFVNFLLVNGFQTAIDIFEDRIRGIDIIKWMERY
LRDKTVMIIVAISPKYKQDVEGAESQLDEDEHGLHTKYIHRMMQIEFIKQGSMNFRFIPVLFPNAKKEHVPTWLQ
NTHVYSWPKNKKNILLRLLREEEYVAPPRGPLPTLQVVPL

FIGURE 1942

GGCACACACGAGGAGGAGGGTTGAGCTGCTGCCGCCGCCGCCTCTGTCGTCGTCGCGAGTGTGGAGTCGGGACTG
GAGCTGCTGCCGCGGCGACGCCGGGGATCTTTGTCGCTAGCTCCCGGCCCTTCTGCCCCGCCGCCTTCCCTCAGT
CAGCGTTGCCCACTCCTCTCCGGCCGGGCGCCCCTGCCTCCATTTCTCGCTCTCTGTCCACCACACACACGGCCC
CCCCGATCATGGATCCGGGCAGTGGCGGCGGCGGCGGCGGCGGCGGCGGCGGGAGCAGCAGCGGCAGCAGCA
GCAGCGACTCGGCGCCTGACTGCTGGGACCAGGCGGACATGGAAGCCCCCGGGCCGGGCCCTTGCGGCGGCGGCG
GCTTCCCTGGCGGCGGCGGCCGAGGCCCAGCGGGAGAACCTCAGCGCGGCCTTCAGCCGGCAACTCAACGTCAAC
GCCAAGCCCTTCGTGCCCAACGTCCACGCCGCCGAGTTCGTGCCGTCCTTCCTGCGGGGCCCGGCAGCGCCGCCA
CCCCCAGCTGGCGGCGCCGCCAATAACCACGGAGCCGGCAGCGGCGCGGGAGGCCGTGCGGCACCTGTGGAATCC
TCTCAAGAGGAACAGTCATTGTGTGAAGGTTCAAATTCAGCTGTTAGC**ATG**GAACTTTCAGAACCTATTGTAGAA
AATGGAGAGACAGAAATGTCTCCAGAAGAATCATGGGAGCACAAAGAAGAAATAAGTGAAGCAGAGCCAGGGGGT
GGTTCCTTGGGAGATGGAAGGCCGCCAGAGGAAAGTGCCCATGAAATGATGGAGGAGGAAGAGGAAATCCCAAAA
CCTAAGTCTGTGGTTGCACCGCCAGGTGCTCCTAAGAAAGAGCATGTAAATGTAGTATTCATTGGGCACGTAGAT
GCTGGCAAGTCAACCATTGGAGGACAAATAATGTATTTGACTGGAATGGTTGACAAAAGGACGCTTGAAAAGTAT
GAAAGAGAAGCTAAAGAGAAAAACAGAGAAACTTGGTACTTGTCTTGGGCCTTAGACACAAATCAGGAAGAACGA
GACAAGGGTAAAACAGTAGAAGTGGGTCGTGCCTATTTTGAAACCGAAAAGAAGCATTTCACAATTCTAGATGCC
CCTGGCCACAAGAGTTTTGTCCCAAATATGATTGGTGGTGCCTCTCAAGCTGATTTGGCTGTGCTGGTAATCTCA
GCCAGGAAAGGAGAGTTTGAAACTGGATTTGAAAAAGGAGGACAGACAAGAGAACATGCAATGTTGGCAAAGACA
GCAGGTGTAAAACACCTAATTGTGCTAATTAATAAGATGGATGATCCAACAGTAAATTGGAGCAATGAGAGATAT
GAAGAATGTAAGGAGAAACTAGTGCCATTTTTGAAAAAAGTTGGCTTCAATCCCAAAAAGGACATTCACTTTATG
CCCTGCTCAGGACTTACTGGAGCAAATCTCAAAGAGCAGTCGGATTTCTGTCCTTGGTACATTGGATTACCGTTT
ATTCCATATCTGGATAATTTGCCGAACTTCAATAGATCAGTTGATGGACCAATCAGGCTGCCAATTGTGGATAAG
TACAAGGATATGGGCACTGTGGTCCTGGGAAAGCTGGAATCAGGATCTATTTGTAAAGGCCAGCAGCTTGTGATG
ATGCCAAACAAGCACAACGTGGAAGTTCTTGGAATACTTTCCGATGATGTAGAGACTGATACCGTAGCCCCAGGT
GAAAACCTCAAAATCAGACTGAAAGGAATTGAAGAAGAGGAGATTCTTCCAGGGTTTATACTTTGTGATCCTAAT
AATCTTTGTCATTCTGGACGCACATTTGATGCCCAGATAGTGATTATAGAGCACAAATCCATCATCTGCCCAGGC
TATAATGCGGTGCTGCATATTCATACCTGTATTGAGGAGGTGGAAATAACAGCCTTAATCTGCTTGGTAGACAAA
AAATCAGGAGAAAAAAGTAAGACCCGACCCCGTTTTGTGAAACAAGATCAAGTATGCATTGCTCGCTTAAGGACA
GCAGGAACCATCTGCCTTGAGACCTTTAAAGACTTCCCTCAGATGGGTCGTTTCACCTTAAGAGATGAGGGTAAG
ACCATTGCAATTGGAAAAGTTCTGAAACTGGTTCCAGAGAAAGAC**TAA**GCATTTTCTTGATGACCCTGCACAATA
CTGTGAGGAAAATTGACTGCAGAAGCCTACTTCACACCGCCTTCTCTTATTTTCTGCCCATTGATAAACCTCTCC
CCATATTTTGCAAAGAGGAAATTCACAGCAAAAGTCCACATTATGTCAGCTTTCTCATATTGAGAGCTCTGCTAT
GCCACTGTTGAATTTTTCCCAAGATTCCTGTCCCTAGCCCTCACTTCAAACTCTGCTTCCTTGGACAGATTTGGC
AATAGCTTTGTAAGTGATGTGGACATAATTGCCTACAATAATGAAAACCTACAGGAATTTTTTTATTTTTCATTT
TCCCCTTAGGCATATTTAGTATTTTTCCCCCAGGCCAGATCATTCGTGAGTGTGCGAGTGTGTGTGCACATGTTA
CAAAGGCAACTACCATGTTAATAAAATATTCAATTTG

FIGURE 1943

MELSEPIVENGETEMSPEESWEHKEEISEAEPGGGSLGDGRPPEESAHEMMEEEEEIPKPKSVVAPPGAPKKEHV
NVVFIGHVDAGKSTIGGQIMYLTGMVDKRTLEKYEREAKEKNRETWYLSWALDTNQEERDKGKTVEVGRAYFETE
KKHFTILDAPGHKSFVPNMIGGASQADLAVLVISARKGEFETGFEKGGQTREHAMLAKTAGVKHLIVLINKMDDP
TVNWSNERYEECKEKLVPFLKKVGFNPKKDIHFMPCSGLTGANLKEQSDFCPWYIGLPFIPYLDNLPNFNRSVDG
PIRLPIVDKYKDMGTVVLGKLESGSICKGQQLVMMPNKHNVEVLGILSDDVETDTVAPGENLKIRLKGIEEEEIL
PGFILCDPNNLCHSGRTFDAQIVIIEHKSIICPGYNAVLHIHTCIEEVEITALICLVDKKSGEKSKTRPRFVKQD
QVCIARLRTAGTICLETFKDFPQMGRFTLRDEGKTIAIGKVLKLVPEKD

FIGURE 1944

GTCGTGGCTCGTTCCATTCTCGGCGGTGGTACCTGCTCCCGGTGGCCCTGAGGACGTGTGGGCCAGGGGCGGCCC
CGAAATTAGGAAGCGGAGGGGGAGCAGTCTGCAGGTCTGCGGGGCTAAGTGTCGCGGCGGCGCACCTCGCGTCAA
GAATCCGGAGGAGGAGACTGCAAGGATAGGCCCAGGAGTA**ATG**GAGTCCAAAGAGGAACTAGCGGCAAACAATCT
CAACGGGGAAAATGCCCAACAAGAAAACGAAGGAGGGGAGCAGGCCCCCACGCAGAATGAAGAAGAATCCCGCCA
TTTGGGAGGGGGTGAAGGCCAGAAGCCTGGAGGAAATATCAGGCGGGGGCGAGTTAGGCGACTTGTCCCTAATTT
TCGATGGGCCATACCTAATAGGCATATTGAGCACAATGAAGCGAGAGATGATGTAGAAAGGTTTGTAGGGCAGAT
GATGGAAATCAAGAGAAAGACTAGGGAACAGCAGATGAGGCACTATATGCGCTTCCAAACTCCTGAACCTGACAA
CCATTATGACTTTTGCCTCATACCT**TGA**ATCCTAAAAGTTTTCGCTGAGGTTAATGTGAACACTGCTTTACAAGC
TTGTATTTTTGTGATTTACTTTTTCTGTAAGCCTTTTGGTGTTTACACTTACCAGTTTCTAATGGAAATTAGAAT
TCTAATTGAATATTGTTTTGTCTCAGCCTAAAAGTTACGGTCAGCATGGCAATTCACCTATTTTAGGAAAAATAC
TCTTTTCATAATATGAAATGCATAAAGCAGTTCAAAAAGCAGTCTGTATTCCATCATCTTCCTTTTTCATTCCAG
TCCTTATTTTTGTAAGTATTACTTTTCCTCCTCCGGCTACCTGGACTCAAAATCTCAGTTGTCTTTGACAGTTTT
TTTCTTGTCCCTGACCAAAAAAGAATGATCATACCCAGAATTCAATGTTTGATATTTTAAGAATGTATGTTCTAG
TGTTTTTCAGAGTGAGTCTACCATCTGTATAAAAACACCTTGGGGGCAGGCAGGGGCATTTAAAAATGTAGGACC
TATCGTCCAGACTCACAGAGTGGGGCTCCAGAATCTCCATTTTTAACAAACTCTCTTAAGTAATTCTGATGTGTA
CCAAAATCAGTGCCATTGGTGTGTGTGTACGTAACTATATACATATGTGTGTGTGTGTATATATATAATGTGTCA
TAACCGTAAACAATAAACAATATCAAGAT

FIGURE 1945

MESKEELAANNLNGENAQQENEGGEQAPTQNEEESRHLGGGEGQKPGGNIRRGRVRRLVPNFRWAIPNRHIEHNE
ARDDVERFVGQMMEIKRKTREQQMRHYMRFQTPEPDNHYDFCLIP

FIGURE 1946

CCTCGTGCCATGAGCATTTAGAAATGGAGACCACTTCTGGTGAATTGTCAGATGTTTCCAATGATCCCACCACAT
CTGTCTGTGTAGCTAGTGCCCCAACAAAAGAAGCAATTGACAATACCCTGCTTGAACACAAAGAAAGAAGTGAGA
ATATAAATCTTAATGAAAAGCAAATTCCTTTTCAGGTGCCTAATATTGAAAGGAACTTTAGACAGTCACAGCCTA
AATCCTATCTTTGCCATTATGAACTGGCTGAGGCCCTTCCACAAGGAAAGATGAATGAGACACCAACTGAGTGGC
TGCGTTATAATTCAGGAATCCTTAACACACAACCCACCCATTACCATTCAAAGAAGCACATGTCAGTGGTCATAC
TTTTGTAACAGCTGAGCAAATCCTGGCTCCATTAGCTTTACCAGAGCAAGCATTATTGATCCCACTAGAAAACCA
TGACAAATTCAAAAATGTACCATGTGAGGTCTACCAGCACATTCTGCAGCCAAAC**ATG**CTGGCCAACAAGGTTAA
ATTTACCTTTCCTCCAGCTGCCCTCCCACCCCCTAGCACACCTCTGCAGCCTTTGCCTTTGCAGCAGTCCTTATG
TTCTACCTCTGTAACCACTATCCATCACACTGTTTTGCAGCAGCACGCTGCAGCTGCTGCAGCTGCAGCTGCAGC
CGCAGCTGCAGGAACCTTTAAAGTGCTTCAGCCACACCAACAGTTTCTTTCCCAAATCCCAGCTCTCACCAGAAC
CTCATTACCTCAGCTCTCAGTAGGACCAGTAGGACCGAGGCTTTGTCCTGGGAACCAGCCAACTTTTGTTGCTCC
TCCTCAGATGCCAATCATTCCAGCTTCCGTTCTTCATCCTAGCCATCTGGCTTTCCCATCTTTACCCCATGCACT
CTTTCCTTCACTGCTTTCCCCACACCCTACTGTCATCCCTTTGCAACCTCTCTTC**TAG**TCATCACCATAATGGGA
AAAAAATACTCTTGTGAAAACTATTGCTATATGCGTTAAGTGTTCATCTATGTGGGTACATGGCTATTTAACTGG
TGGAAATAAACTGGCCGATACATGGCGTCATTGGTTTGAAATCATTTACTGTAAGTGCAATGATGCAAATAAATC
CCTAAGTTTCTGATATATAATATTATTAAAGCACTGAATAGTTTGAAAATCAATACAATATATGCTATATATTAA
AATGATGTCTTAAGAGTATGTATAATGTACATAAAATATATTTATAGTACTCTAATTTATGTTGTAAAGTATGCT
CCCTTGGTTTTTCTTAATCTTTGTGTATTTGCACCTATTTAATGTTTAGACAAAGCTGATGGCACTATGTTTTGT
ATCATGTTCCTTGAAACTGTAAATTCAGTGAAAAATATCTCTTGCAATAAATTTTTGTTAACTATTT

FIGURE 1947

MLANKVKFTFPPAALPPPSTPLQPLPLQQSLCSTSVTTIHHTVLQQHAAAAAAAAAAAAAAGTFKVLQPHQQFLSQ
IPALTRTSLPQLSVGPVGPRLCPGNQPTFVAPPQMPIIPASVLHPSHLAFPSLPHALFPSLLSPHPTVIPLQPLF

FIGURE 1948A

CGCCCCGGCGCGGGGCCCTGCGGTAGCCTCAGGCCCCTCCCCTGGACCCGCCGCAGAGCCAGTGCAGAATACAGA
AACTGCAGCCATGACCACGCACGTCACCCTGGAAGATGCCCTGTCCAACGTGGACCTGCTTGAAGAGCTTCCCCT
CCCCGACCAGCAGCCATGCATCGAGCCTCCACCTTCCTCCATCATGTACCAGGCTAACTTTGACACAAACTTTGA
GGACAGGAATGCATTTGTCACGGGCATTGCAAGGTACATTGAGCAGGCTACAGTCCACTCCAGCATGAATGAGAT
GCTGGAGGAAGGACATGAGTATGCGGTCATGCTGTACACCTGGCGCAGCTGTTCCCGGGCCATTCCCCAGGTGAA
ATGCAACGAGCAGCCCAACCGAGTAGAGATCTATGAGAAGACAGTAGAGGTGCTGGAGCCGGAGGTCACCAAGCT
CATGAAGTTCATGTATTTTCAGCGCAAGGCCATCGAGCGGTTCTGCAGCGAGGTGAAGCGGCTGTGCCATGCCGA
GCGCAGGAAGGACTTTGTCTCTGAGGCCTACCTCCTGACCCTTGGCAAGTTCATCAACATGTTTGCTGTCCTGGA
TGAGCTAAAGAACATGAAGTGCAGCGTCAAGAATGACCACTCTGCCTACAAGAGGGCAGCACAGTTCCTGCGGAA
GATGGCAGATCCCCAGTCTATCCAGGAGTCGCAGAACCTTTCCATGTTCCTGGCCAACCACAACAGGATCACCCA
GTGTCTCCACCAGCAACTTGAAGTGATCCCAGGCTATGAGGAGCTGCTGGCTGACATTGTCAACATCTGTGTGGA
TTACTACGAGAACAAGATGTACCTGACTCCCAGTGAGAAACATATGCTCCTCAAGGTGATGGGCTTTGGCCTCTA
CCTAATGGATGGAAATGTCAGTAACATTTACAAACTGGATGCCAAGAAGAGAATTAATCTTAGCAAAATTGATAA
ATTCTTTAAGCAGCTGCAGGTGGTGCCCCTTTTCGGCGACATGCAGATAGAGCTGGCCAGATACATTGAGACCAG
TGCTCACTATGAAGAGAACAAGTCCAAGTGGACGTGCACCCAGAGCAGCATCAGCCCCCAGTACAATATCTGCGA
GCAGATGGTTCAGATCCGGGATGACCACATCCGCTTCATCTCCGAGCTCGCTCGCTACAGCAACAGTGAGGTGGT
GACGGGCTCAGGGCTGGACAGCCAGAAGTCAGACGAGGAGTATCGCGAGCTCTTCGACCTAGCCCTGCGGGGTCT
GCAGCTTCTATCCAAGTGGAGCGCCCACGTCATGGAGGTGTACTCTTGGAAGCTGGTTCATCCCACAGACAAGTT
CTGCAACAAGGACTGTCCTGGCACCGCGGAGGAATATGAGAGAGCCACACGCTACAATTACACCAGTGAGGAAAA
ATTTGCCTTCGTTGAGGTGATCGCCATGATCAAAGGCCTGCAGGTGCTCATGGGCAGGATGGAGAGCGTCTTCAA
CCAGGCCATCAGGAACACCATCTACGCGGCATTGCAGGACTTCGCCCAGGTGACGCTGCGTGAGCCCCTGCGGCA
GGCGGTACGGAAGAAGAAGAATGTCCTCATCAGCGTCCTACAGGCAATTCGAAAGACCATCTGTGACTGGGAGGG
AGGGCGAGAGCCCCCTAATGACCCATGCTTGAGAGGGGAGAAGGACCCCAAAGGTGGATTTGATATCAAGGTGCC
CCGGCGTGCTGTGGGGCCATCCAGCACACAGCTGTACATGGTGCGGACCATGCTTGAATCACTCATTGCAGACAA
AAGCGGCTCCAAGAAGACCCTGAGGAGCAGCCTGGATGGACCCATTGTCCTCGCCATAGAGGACTTTCACAAACA
GTCCTTCTTCTTCACACATCTGCTCAACATCAGTGAAGCCCTGCAGCAGTGTTGTGACCTCTCCCAGCTCTGGTT
CCGAGAATTCTTCCTGGAGTTAACCATGGGCCGACGAATCCAGTTCCCCATCGAGATGTCCATGCCCTGGATTCT
AACGGACCATATCCTGGAAACCAAAGAACCTTCCATGATGGAGTATGTCCTCTACCCTCTGGATCTGTACAACGA
CAGCGCCTACTATGCTCTGACCAAGTTTAAAAAGCAGTTCCTGTACGATGAGATAGAAGCTGAGGTGAACCTGTG
TTTTGATCAGTTTGTCTACAAGCTGGCAGACCAGATCTTTGCTTACTACAAAGCCATGGCTGGCAGTGTCCTGTT
GGATAAACGTTTTCGAGCTGAGTGTAAGAATTATGGCGTCATCATTCCGTATCCACCGTCCAATCGCTATGAAAC
ACTGCTGAAGCAGAGACACGTCCAGCTGTTGGGTAGATCAATTGACTTGAACAGACTCATTACCCAGCGCATCTC
TGCCGCCATGTATAAATCCTTGGACCAAGCTATCAGCCGCTTTGAGAGTGAGGACCTGACCTCCATTGTGGAGCT
GGAGTGGCTGCTGGAGATTAACCGGCTCACGCATCGGCTGCTCTGTAAGCATATGACGCTGGACAGCTTCGATGC
CATGTTCCGAGAGGCCAATCACAATGTGTCCGCCCCCTATGGCCGTATCACCCTGCATGTCTTCTGGGAACTGAA
CTTTGACTTTCTCCCCAACTACTGCTACAATGGGTCCACTAACCGTTTTGTGCGGACTGCCATTCCTTTCACCCA
AGAACCACAACGAGACAAACCTGCCAACGTCCAGCCTTATTACCTCTATGGATCCAAGCCTCTCAACATTGCCTA
CAGCCACATCTACAGCTCCTACAGGAATTTCGTGGGGCCACCTCATTTCAAGACTATCTGCAGACTCCTGGGTTA
TCAGGGCATCGCTGTGGTCATGGAGGAACTGCTAAAGATTGTGAAGAGCTTGCTCCAAGGAACCATTCTCCAGTA
TGTGAAAACACTGATAGAGGTGATGCCCAAGATATGCCGCTTGCCCCGACATGAGTATGGCTCCCCAGGGATCCT
GGAGTTCTTCCACCACCAGCTGAAGGACATCATTGAGTACGCAGAGCTCAAAACAGACGTGTTCCAGAGCCTGAG
GGAAGTGGGCAATGCCATCCTCTTCTGCCTCCTCATAGAGCAAGCTCTGTCTCAGGAGGAGGTCTGCGATTTGCT
CCATGCCGCACCCTTCCAAAACATCTTGCCTAGAGTCTACATCAAAGAGGGGGAGCGCCTGGAGGTCCGGATGAA
ACGTCTGGAAGCCAAGTATGCCCCGCTCCACCTGGTCCCTCTGATCGAGCGGCTGGGGACCCCTCAGCAAATCGC
CATTGCTCGCGAGGGTGACCTCCTGACCAAGGAGCGGCTGTGCTGTGGCCTGTCCATGTTCGAGGTCATCCTGAC
CCGCATTCGGAGCTACCTGCAGGACCCCATCTGGCGGGGCCCACCGCCCACCAATGGCGTCATGCACGTCGATGA
GTGTGTGGAGTTCCACCGGCTGTGGAGCGCCATGCAGTTCGTGTACTGCATCCCTGTGGGAACCAACGAGTTCAC
AGCTGAGCAGTGTTTCGGCGATGGCTTGAACTGGGTTGGTTGCTCCATCATTGTCCTGCTGGGCCAGCAGCGTCG

FIGURE 1948B

CTTTGACCTGTTCGACTTCTGTTACCACCTGCTAAAAGTGCAGAGGCAGGACGGGAAGGATGAAATCATTAAGAA
TGTGCCCCTGAAGAAGATGGCCGACCGGATCAGGAAGTATCAGATCTTGAACAATGAGGTTTTTGCCATCCTGAA
CAAATACATGAAGTCCGTGGAGACAGACAGTTCCACTGTGGAGCATGTGCGCTGCTTCCAGCCACCCATCCACCA
GTCCTTGGCCACCACTTGC**TAA**GCAGAAGATCCTGCAGACCCTTATCTGGAGGAGGAAGAGAAGCAGGAGAGAGA
AAGCCACAGCCAGCCTGCCATAGGATCCAACTGGACAACGTGTGGGATGGACCTGGAAACAAGCACCTCCCCAAA
CACATCACCACTCCCTAGGGCGGGGCCTGTGCATGCTCTCCCATGACATCTCCATGCTGGTTTCTCCATAGCATA
AATG

FIGURE 1949

APARGPAVASGPSPGPAAEPVQNTETAAMTTHVTLEDALSNVDLLEELPLPDQQPCIEPPPSSIMYQANFDTNFE
DRNAFVTGIARYIEQATVHSSMNEMLEEGHEYAVMLYTWRSCSRAIPQVKCNEQPNRVEIYEKTVEVLEPEVTKL
MKFMYFQRKAIERFCSEVKRLCHAERRKDFVSEAYLLTLGKFINMFAVLDELKNMKCSVKNDHSAYKRAAQFLRK
MADPQSIQESQNLSMFLANHNRITQCLHQQLEVIPGYEELLADIVNICVDYYENKMYLTPSEKHMLLKVMGFGLY
LMDGNVSNIYKLDAKKRINLSKIDKFFKQLQVVPLFGDMQIELARYIETSAHYEENKSKWTCTQSSISPQYNICE
QMVQIRDDHIRFISELARYSNSEVVTGSGLDSQKSDEEYRELFDLALRGLQLLSKWSAHVMEVYSWKLVHPTDKF
CNKDCPGTAEEYERATRYNYTSEEKFAFVEVIAMIKGLQVLMGRMESVFNQAIRNTIYAALQDFAQVTLREPLRQ
AVRKKKNVLISVLQAIRKTICDWEGGREPPNDPCLRGEKDPKGGFDIKVPRRAVGPSSTQLYMVRTMLESLIADK
SGSKKTLRSSLDGPIVLAIEDFHKQSFFFTHLLNISEALQQCCDLSQLWFREFFLELTMGRRIQFPIEMSMPWIL
TDHILETKEPSMMEYVLYPLDLYNDSAYYALTKFKKQFLYDEIEAEVNLCFDQFVYKLADQIFAYYKAMAGSVLL
DKRFRAECKNYGVIIPYPPSNRYETLLKQRHVQLLGRSIDLNRLITQRISAAMYKSLDQAISRFESEDLTSIVEL
EWLLEINRLTHRLLCKHMTLDSFDAMFREANHNVSAPYGRITLHVFWELNFDFLPNYCYNGSTNRFVRTAIPFTQ
EPQRDKPANVQPYYLYGSKPLNIAYSHIYSSYRNFVGPPHFKTICRLLGYQGIAVVMEELLKIVKSLLQGTILQY
VKTLIEVMPKICRLPRHEYGSPGILEFFHHQLKDIIEYAELKTDVFQSLREVGNAILFCLLIEQALSQEEVCDLL
HAAPFQNILPRVYIKEGERLEVRMKRLEAKYAPLHLVPLIERLGTPQQIAIAREGDLLTKERLCCGLSMFEVILT
RIRSYLQDPIWRGPPPTNGVMHVDECVEFHRLWSAMQFVYCIPVGTNEFTAEQCFGDGLNWVGCSIIVLLGQQRR
FDLFDFCYHLLKVQRQDGKDEIIKNVPLKKMADRIRKYQILNNEVFAILNKYMKSVETDSSTVEHVRCFQPPIHQ
SLATTC

FIGURE 1950

AAGAACCAAATGTTATAAATATTTGCTGAAGTTTATACATTTTAATCTGCATTAAGGTAATGGTTAGTTGGTCAA
TGCTGCCTCTGCCTCAGTCTGCAGCGAGAACATTGTGTTTTCATTTGGTAAATACAGTTGAGCATCCACCGGNGT
NNCAAGTGGCTGGTATTAGGTGCTAAGGATGCAGGGGTGAACAAAACAGGCCCCTGCCTCC**ATG**CAATTCTCATT
CTCTGGGTGGCACAGTTTTATGCAAGTTATCACATGTGAAAGAATTTATAGTTTTTATTATGCAAGTTTTCAAAT
AAATCCAATTGCTGTTATCTTTTGTTTTTCATGGAATATCTCGCATCTCAGAACACAGTTTGGGAATCATATTTT
ATTTAGTGTTTTCAGATGCTATCTATTATATCTAAGATATTTCACATTTAGCCATTCGTTTTATAAAAAACTCCA
GGCAAACTCAGCTGGACTTTTCTTGCTTTAATAACAGCTTTATTGAGGATACAATTCACATATCTACGAAATTCT
TTTTAAAAATTTTACACGTTCAGGCCGGGCGCGGTGGCTCATGCC

FIGURE 1951

MQFSFSGWHSFMQVITCERIYSFYYASFQINPIAVIFCFSWNISHLRTQFGNHILFSVFRCYLLYLRYFTFSHSF
YKKLQANSAGLFLLNNSFIEDTIHISTKFFLKILHVQAGRGGSC

FIGURE 1952

AAAGCATCCAGTTCCTTTGCGGTCCTCTTCTTCAGCACATGCCAAAGCTGTTCCTCACGGCCTGTGAGACAAGAG
CATCTTGGATGTAGGACA**ATG**GAAGAGTTAGATGCCTTATTGGAGGAACTGGAACGCTCCACCCTTCAGGACAGT
GATGAATATTCCAACCCAGCTCCTCTTCCCCTGGATCAGCATTCCAGAAAGGAGACTAACCTTGATGAGACTTCG
GAGATCCTTTCTATTCAGGATAACACAAGTCCCTTGCCGGCGCAGCTCGTGTATACTACCAATATCCAGGAGCTC
AATGTCTACAGTGAAGCCCAAGAGCCAAAGGAATCACCACCACCTTCTAAAACGTCAGCAGCTGCTCAGTTGGAT
GAGCTCATGGCTCACCTGACTGAGATGCAGGCCAAGGTTGCAGTGAGAGCAGATGCTGGCAAGAAGCACTTACCA
GACAAGCAGGATCACAAGGCCTCCCTGGACTCAATGCTTGGGGGTCTGGAGCAGGAATTGCAGGACCTTGGCATT
GCCACAGTGCCCAAGGGCCATTGTGCATCCTGCCAGAAACCGATTGCTGGGAAGGTGATCCATGCTCTAGGGCAA
TCATGGCATCCTGAGCATTTTGTCTGTACTCATTGCAAAGAAGAGATTGGCTCCAGTCCCTTCTTTGAGCGGAGT
GGCTTGGCCTACTGCCCCAACGACTACCACCAACTTTTTTCTCCACGCTGTGCTTACTGCGCTGCTCCCATCCTG
GATAAAGTGCTGACAGCAATGAACCAGACCTGGCACCCAGAGCACTTCTTCTGCTCTCACTGCGGAGAGGTGTTT
GGTGCAGAAGGCTTTCATGAGAAGGACAAGAAGCCATATTGCCGAAAGGATTTCTTAGCCATGTTCTCACCCAAG
TGTGGTGGCTGCAATCGCCCAGTGTTGGAAAACTACCTTTCAGCCATGGACACTGTCTGGCACCCAGAGTGCTTT
GTTTGTGGGGACTGCTTCACCAGTTTTTCTACTGGCTCCTTCTTTGAACTGGATGGACGTCCATTCTGTGAGCTC
CATTACCATCACCGCCGGGGAACGCTCTGCCATGGGTGTGGGCAGCCCATCACTGGCCGTTGTATCAGTGCCATG
GGGTACAAGTTCCATCCTGAGCACTTTGTGTGTGCTTTCTGCCTGACACAGTTGTCGAAGGGCATTTTCAGGGAG
CAGAATGACAAGACCTATTGTCAACCTTGCTTCAATAAGCTCTTCCCACTG**TAA**TGCCAACTGATCCATAGCCTC
TTCAGATTCCTTATAAAATTTAAACCAAGAGAGGAGAGGAAAGGGTAAATTTTCTGTTACTGACCTTCTGCTTAA
TAGTCTTATAGAAAAAGGAAAGGTGATGAGCAAATAAAGGAACTTCTAGACTTTACATGACTAGGCTGATAATCT
TATTTTTTAGGCTTCTATACAGTTAATTCTATAAATTCTCTTTCTCCCTCTCTTCTCCAATCAAGCACTTGGAGT
TAGATCTAGGTCCTTCTATCTCGTCCCTCTACAGATGTATTTTCCACTTGCATAATTCATGCCAACACTGGTTTT
CTTAGGTTTCTCCATTTTCACCTCTAGTGATGGCCCTACTCATATCTTCTCTAATTTGGTCCTGATACTTGTTTC
TTTTCACGTTTTCCCATTTGCCCTGTGGCTCACTGTCTTACAATCACTGCTGTGGAATCATGATACCACTTTTAG
CTCTTTGCATCTTCCTTCAGTGTATTTTTGTTTTTCAAGAGGAAGTAGATTTTAACTGGACAACTTTGAGTACTG
ACATCATTGATAAATAAACTGGCTTGTGGTTTCAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1953

MEELDALLEELERSTLQDSDEYSNPAPLPLDQHSRKETNLDETSEILSIQDNTSPLPAQLVYTTNIQELNVYSEA
QEPKESPPPSKTSAAAQLDELMAHLTEMQAKVAVRADAGKKHLPDKQDHKASLDSMLGGLEQELQDLGIATVPKG
HCASCQKPIAGKVIHALGQSWHPEHFVCTHCKEEIGSSPFFERSGLAYCPNDYHQLFSPRCAYCAAPILDKVLTA
MNQTWHPEHFFCSHCGEVFGAEGFHEKDKKPYCRKDFLAMFSPKCGGCNRPVLENYLSAMDTVWHPECFVCGDCF
TSFSTGSFFELDGRPFCELHYHHRRGTLCHGCGQPITGRCISAMGYKFHPEHFVCAFCLTQLSKGIFREQNDKTY
CQPCFNKLFPL

FIGURE 1954

GGCACGAGGGTCTACCCGCCCCTGCCCTGAGGACCCTAGTCCAAC**ATG**GCGGCGCCCAGCGGAGGGTGGAACGGC
GTCGGCGCGAGCTTGTGGGCCGCGCTGCTCCTAGGGGCCGTGGCGCTGAGGCCGGCGGAGGCGGTGTCCGAGCCC
ACGACGGTGGCGTTTGACGTGCGGCCCGGCGGCGTCGTGCATTCCTTCTCCCATAACGTGGGCCCGGGGGACAAA
TATACGTGTATGTTCACTTACGCCTCTCAAGGAGGGACCAATGAGCAATGGCAGATGAGTCTGGGGACCAGCGAA
GACCACCAGCACTTCACCTGCACCATCTGGAGGCCCCAGGGGAAGTCCTATCTGTACTTCACACAGTTCAAGGCA
GAGGTGCGGGGCGCTGAGATTGAGTACGCCATGGCCTACTCTAAAGCCGCATTTGAAAGGGAAAGTGATGTCCCT
CTGAAAACTGAGGAATTTGAAGTGACCAAAACAGCAGTGGCTCACAGGCCCGGGGCATTCAAAGCTGAGCTGTCC
AAGCTGGTGATTGTGGCCAAGGCATCGCGCACTGAGCTG**TGA**CCAGCAGCCCTGTTGCGGGTGGCACCTTCTCAT
CTCCGGTGAAGCTGAAGGGGCCTGTGTCCCTGAAAGGGCCAGCACATCACTGGTTTTCTAGGAGGGACTCTTAAG
TTTTCTACCTGGGCTGACGTTGCCTTGTCCGGAGGGGCTTGCAGGGTGGCTGAAGCCCTGGGGCAGAGAACAGAG
GGTCCAGGGCCCTCCTGGCTCCCAACAGCTTCTCAGTTCCCACTTCCTGCTGAGCTCTTCTGGACTCAGGATCGC
AGATCCGGGGCACAAAGAGGGTGGGGAACATGGGGGCTATGCTGGGGAAAGCAGCCATGCTCCCCCCGACCTCCA
GCCGAGCATCCTTCATGAGCCTGCAGAACTGCTTTCCTATGTTTACCCAGGGGACCTCCTTTCAGATGAACTGGG
AAGAGATGAAATGTTTTTTCATATTTAAATAAATAAGAACATTAAAAAGCAAAAAAAAAAAAAAAAAA

FIGURE 1955

MAAPSGGWNGVGASLWAALLLGAVALRPAEAVSEPTTVAFDVRPGGVVHSFSHNVGPGDKYTCMFTYASQGGTNE
QWQMSLGTSEDHQHFTCTIWRPQGKSYLYFTQFKAEVRGAEIEYAMAYSKAAFERESDVPLKTEEFEVTKTAVAH
RPGAFKAELSKLVIVAKASRTEL

FIGURE 1956

CTAACCCAGAAACATCCAATTCTCAAACTGAAGCTCGCACTCTCGCCTCCAGC**ATG**AAAGTCTCTGCCGCCCTTC
TGTGCCTGCTGCTCATAGCAGCCACCTTCATTCCCCAAGGGCTCGCTCAGCCAGATGCAATCAATGCCCCAGTCA
CCTGCTGTTATAACTTCACCAATAGGAAGATCTCAGTGCAGAGGCTCGCGAGCTATAGAAGAATCACCAGCAGCA
AGTGTCCCAAAGAAGCTGTGATCTTCAAGACCATTGTGGCCAAGGAGATCTGTGCTGACCCCAAGCAGAAGTGGG
TTCAGGATTCCATGGACCACCTGGACAAGCAAACCCAAACTCCGAAGACT**TGA**ACACTCACTCCACAACCCAAGA
ATCTGCAGCTAACTTATTTTCCCCTAGCTTTCCCCAGACACCCTGTTTTATTTTATTATAATGAATTTTGTTTGT
TGATGTGAAACATTATGCCTTAAGTAATGTTAATTCTTATTTAAGTTATTGATGTTTTAAGTTTATCTTTCATGG
TACTAGTGTTTTTTAGATACAGAGACTTGGGGAAATTGCTTTTCCTCTTGAACCACAGTTCTACCCCTGGGATGT
TTTGAGGGTCTTTGCAAGAATCATTAATACAAAGAATTTTTTTTAACATTCCAATGCATTGCTAAAATATTATTG
TGGAAATGAATATTTTGTAACTATTACACCAAATAAATATATTTTTGTACAAAAAAAAAAAAAA

FIGURE 1957

MKVSAALLCLLLIAATFIPQGLAQPDAINAPVTCCYNFTNRKISVQRLASYRRITSSKCPKEAVIFKTIVAKEIC
ADPKQKWVQDSMDHLDKQTQTPKT

FIGURE 1958

CCCCAGCCACCCTGAACCAGTTACCTCTGTACTTTTACGCTCGGGATGCAAGCTGTCTTGTACTAACTAAGAAGT
TAAGCCTAATCTTTTTGTACTGTTGACACGTATGCTTATTTATCACAATCAGGAAATGCTTTCTCATTTTAGCTC
AAGGATCTAAATTTACTTGATCGCTGTATAAAAGAAACATTAAGACTTAGACCTCCTATA**ATG**ATCATGATGAGA
ATGGCCAGAACTCCTCAGGTGAGTATCTTGGCTACATCTTCCCCTCTATACCCCCAGTTATTTATCAAAAAGAAG
AAATA

FIGURE 1959

MIMMRMARTPQVSILATSSPLYPQLFIKKK

FIGURE 1960

AGCGACCGCAGCCGGGGGGACGCGGGAGG**ATG**GAGCAAGTGGAGATCCTGAGGAAATTCATCCAGAGGGTCCAGG
CCATGAAGAGTCCTGACCACAATGGGGAGGACAACTTCGCCCGGGACTTCATGCGGTTAAGAAGATTGTCTACCA
AATATAGAACAGAAAAGATATATCCCACAGCCACTGGAGAAAAAGAAGAAAATGTTAAAAAGAACAGATACAAGG
ACATACTGCCATTTGATCACAGCCGAGTTAAATTGACATTAAAGACTCCTTCACAAGATTCAGACTATATCAATG
CAAATTTTATAAAGGGCGTCTATGGGCCAAAAGCATATGTAGCAACTCAAGGACCTTTAGCAAATACAGTAATAG
ATTTTTGGAGGATGATATGGGAGTATAATGTTGTGATCATTGTAATGGCCTGCCGAGAATTTGAGATGGGAAGGA
AAAAATGTGAGCGCTATTGGCCTTTGTATGGAGAAGACCCCATAACGTTTGCACCATTTAAAATTTCTTGTGAGG
ATGAACAAGCAAGAACAGACTACTTCATCAGGACACTCTTACTTGAATTTCAAAATGAATCTCGTAGGCTGTATC
AGTTTCATTATGTGAACTGGCCAGACCATGATGTTCCTTCATCATTTGATTCTATTCTGGACATGATAAGCTTAA
TGAGGAAATATCAAGAACATGAAGATGTTCCTATTTGTATTCATTGCAGTGCAGGCTGTGGAAGAACAGGTGCCA
TTTGTGCCATAGATTATACGTGGAATTTACTAAAAGCTGGGAAAATACCAGAGGAATTTAATGTATTTAATTTAA
TACAAGAAATGAGAACACAAAGGCATTCTGCAGTACAAACAAAGGAGCAATATGAACTTGTTCATAGAGCTATTG
CCCAACTGTTTGAAAAACAGCTACAACTATATGAAATTCATGGAGCTCAGAAAATTGCTGATGGAGTGAATGAAA
TTAACACTGAAAACATGATCAGCTCCATAGAGCCTGAAAAACAAGATTCTCCTCCTCCAAAACCACCAAGGACCC
GCAGTTGCCTTGTTGAAGGGGATGCTAAAGAAGAAATACTGCAGCCACCGGAACCTCATCCAGTGCCACCCATCT
TGACACCTTCTCCCCCTTCAGCTTTTCCAACAGTCACTACTGTGTGGCAGGACAATGATAGATACCATCCAAAGC
CAGTGTTGCATATGGTTTCATCAGAACAACATTCAGCAGACCTCAACAGAAACTATAGTAAATCAACAGAACTTC
CAGGGAAAAATGAATCAACAATTGAACAGATAGATAAAAAATTGGAACGAAATTTAAGTTTTGAGATTAAGAAGG
TCCCTCTCCAAGAGGGACCAAAAAGTTTTGATGGGAACACACTTTTGAATAGGGGACATGCAATTAAAATTAAAT
CTGCTTCACCTTGTATAGCTGATAAAATCTCTAAGCCACAGGAATTAAGTTCAGATCTAAATGTCGGTGATACTT
CCCAGAATTCTTGTGTGGACTGCAGTGTAACACAATCAAACAAAGTTTCAGTTACTCCACCAGAAGAATCCCAGA
ATTCAGACACACCTCCAAGGCCAGACCGCTTGCCTCTTGATGAGAAAGGACATGTAACGTGGTCATTTCATGGAC
CTGAAAATGCCATACCCATACCTGATTTATCTGAAGGCAATTCCTCAGATATCAACTATCAAACTAGGAAAACTG
TGAGTTTAACACCAAGTCCTACAACACAAGTTGAAACACCTGATCTTGTGGATCATGATAACACTTCACCACTCT
TCAGAACACCCCTCAGTTTTACTAATCCACTTCACTCTGATGACTCAGACTCAGATGAAAGAAACTCTGATGGTG
CTGTGACCCAGAATAAAACTAATATTTCAACAGCAAGTGCCACAGTTTCTGCTGCCACTAGTACTGAAAGCATTT
CTACTAGGAAAGTATTGCCAATGTCCATTGCTAGACATAATATAGCAGGAACAACACATTCAGGTGCTGAAAAAG
ATGTTGATGTTAGTGAAGATTCACCTCCTCCCCTACCTGAAAGAACTCCTGAATCGTTTGTGTTAGCAAGTGAAC
ATAATACACCTGTAAGATCGGAATGGAGTGAACTTCAAAGTCAGGAACGATCTGAACAAAAAAAGTCTGAAGGCT
TGATAACCTCTGAAAATGAGAAATGTGATCATCCAGCGGGAGGTATTCACTATGAAATGTGCATAGAATGTCCAC
CTACTTTCAGTGACAAGAGAGAACAAATATCAGAAAATCCAACAGAAGCCACAGATATTGGTTTTGGTAATCGAT
GTGGAAAACCCAAAGGACCAAGAGATCCACCTTCAGAATGGACA**TGA**TTCAGGGAGCTAGAAGACACTTTAAGTT
ATACTGGAAAATTCAGGTGCCACTGAAAGCCAGATTTATAGTATTCCATCTTTAATATGTGGGACTAACAGCAGT
GTAGATTGTTACCTTAATATTTTTTGCTGGGACCATCTACCTGCCTTATACTACACTTAGGAAAAAGTATTACAT
ATGGTTTATTTTGAAACTTCAAGTATTATTGCCTTAATGTCTCTTAACCCTGTTACACGCTGCTTGTAGACATGT
TAATATAGTAATACCTTTATGATATATTGAGTTTAAGGACTACTCTTTTTCTGTTTTATCATGTATGCATTATTT
TGTATATGTACAGGGCAAGTAGGTATATAATTTGATAAAGTTGCAATTGAAATATTATTAACAGAAGATGTAAGA
AATTTCTGCATGGTCTAAATCTTTGTGTACTTTATTTGTAAATTATTTGCCCTGGAGTTTTAGAAAATAGTTTCT
GAATTTTAAACTTGCTGGATTCATGCAGCCAGCTTTGCAGGTTATCAGAGATCAAAGATTGTAATAATAATTTTG
TAAATTGTAAGCAAAAAGTTATTTTTATATTATATACAGTCTAATTGTTCATCCTAATTGTTCCTGTTTTCATCT
AGTCAGAGATTCAGTAAGTGCCTTGGAACAATATTGAATTCTCTTAGCTTGTGTGTGTTTCTTTAATATTTGAAC
TCAAGTGGGATTAGAAGACTATCAAAATACATGTATGTTTCAGGATATTTGACCTGTCATTAAAAAAAACAAACA
GTTTTACAGTG

FIGURE 1961

MEQVEILRKFIQRVQAMKSPDHNGEDNFARDFMRLRRLSTKYRTEKIYPTATGEKEENVKKNRYKDILPFDHSRV
KLTLKTPSQDSDYINANFIKGVYGPKAYVATQGPLANTVIDFWRMIWEYNVVIIVMACREFEMGRKKCERYWPLY
GEDPITFAPFKISCEDEQARTDYFIRTLLLEFQNESRRLYQFHYVNWPDHDVPSSFDSILDMISLMRKYQEHEDV
PICIHCSAGCGRTGAICAIDYTWNLLKAGKIPEEFNVFNLIQEMRTQRHSAVQTKEQYELVHRAIAQLFEKQLQL
YEIHGAQKIADGVNEINTENMISSIEPEKQDSPPPKPPRTRSCLVEGDAKEEILQPPEPHPVPPILTPSPPSAFP
TVTTVWQDNDRYHPKPVLHMVSSEQHSADLNRNYSKSTELPGKNESTIEQIDKKLERNLSFEIKKVPLQEGPKSF
DGNTLLNRGHAIKIKSASPCIADKISKPQELSSDLNVGDTSQNSCVDCSVTQSNKVSVTPPEESQNSDTPPRPDR
LPLDEKGHVTWSFHGPENAIPIPDLSEGNSSDINYQTRKTVSLTPSPTTQVETPDLVDHDNTSPLFRTPLSFTNP
LHSDDSDSDERNSDGAVTQNKTNISTASATVSAATSTESISTRKVLPMSIARHNIAGTTHSGAEKDVDVSEDSPP
PLPERTPESFVLASEHNTPVRSEWSELQSQERSEQKKSEGLITSENEKCDHPAGGIHYEMCIECPPTFSDKREQI
SENPTEATDIGFGNRCGKPKGPRDPPSEWT

FIGURE 1962

CGACGAGCC**ATG**GTTGCTGGGAGCGACGCGGGGCGGGCCCTGGGGGGTCCTCAGCGTGGTCTGCCTGCTGCACTGC
TTTGGTTTCATCAGCTGTTTTTCCCAACAAATATATGGTGTTGTGTATGGGAATGTAACTTTCCATGTACCAAGC
AATGTGCCTTTAAAAGAGGTCCTATGGAAAAAACAAAAGGATAAAGTTGCAGAACTGGAAAATTCTGAATTCAGA
GCTTTCTCATCTTTTAAAAATAGGGTTTATTTAGACACTGTGTCAGGTAGCCTCACTATCTACAACTTAACATCA
TCAGATGAAGATGAGTATGAAATGGAATCGCCAAATATTACTGATACCATGAAGTTCTTTCTTTATGTGCTTGAG
TCTCTTCCATCTCCCACACTAACTTGTGCATTGACTAATGGAAGCATTGAAGTCCAATGCATGATACCAGAGCAT
TACAACAGCCATCGAGGACTTATAATGTACTCATGGGATTGTCCTATGGAGCAATGTAAACGTAACTCAACCAGT
ATATATTTTAAGATGGAAAATGATCTTCCACAAAAAATACAGTGTACTCTTAGCAATCCATTATTTAATACAACA
TCATCAATCATTTTGACAACCTGTATCCCAAGCAGCGGTCATTCAAGACACAGATATGCACTTATACCCATACCA
TTAGCAGTAATTACAACATGTATTGTGCTGTATATGAATGGTATTCTGAAATGTGACAGAAAACCAGACAGAACC
AACTCCAAT**TGA**TTGGTAACAGAAGATGAAGACAACAGCATAACTAAATTATTTTAAAAACTAAAAAGCCATCTG
ATTTCTCATTTGAGTATTACAATTTTTGAACAACTGTTGGAAATGTAACTTGAAGCAGCTGCTTTAAGAAGAAAT
ACCCACTAACAAAGAACAAGCATTAGTTTTGGCTGTCATCAACTTATTATATGACTAGGTGCTTGCTTTTTTTGT
CAGTAAATTGTTTTTACTGATGATGTAGATACTTTTGTAAATAAATGTAAATATGTACACAAGTG

FIGURE 1963

MVAGSDAGRALGVLSVVCLLHCFGFISCFSQQIYGVVYGNVTFHVPSNVPLKEVLWKKQKDKVAELENSEFRAFS
SFKNRVYLDTVSGSLTIYNLTSSDEDEYEMESPNITDTMKFFLYVLESLPSPTLTCALTNGSIEVQCMIPEHYNS
HRGLIMYSWDCPMEQCKRNSTSIYFKMENDLPQKIQCTLSNPLFNTTSSIILTTCIPSSGHSRHRYALIPIPLAV
ITTCIVLYMNGILKCDRKPDRTNSN

FIGURE 1964A

GTTGCTGTCGGAGAGAGAAAGCCGCACCCGAGAGGAGGTGTGGGTGTTCCGCTTCCATCCTAACGGAACGAGCTC
CCTCTTCGCGGACATGGGATTACCCAGCGGCTGCTAACCCCTCTCCTCGCCCTGCTCCCCCAAACCGGCGTGGCT
CCCCGGGCACCAAGGAGCTGACTACAGAGGAGCAGGATTTGCACCCCTCGCTGGGCTTGCTTTGGCAACAGAGTG
CCTGACCCAGGTCAGGATTTTCAAGAAAGAC**ATG**TCTGACAAAATGTCTAGCTTCCTACATATTGGAGACATTTG
TTCTCTGTACGCGGAGGGATCGACAAATGGATTTATTAGCACCTTGGGCCTGGTTGATGATCGTTGTGTTGTACA
GCCAGAAACCGGGGACCTTAACAATCCACCTAAGAAATTCAGAGACTGCCTCTTTAAGCTATGTCCCATGAACCG
CTACTCTGCCCAAAAGCAGTTCTGGAAAGCCGCTAAGCCTGGGGCCAACAGCACCACAGACGCAGTGCTACTCAA
CAAACTGCACCACGCTGCAGACTTGGAAAAGAAGCAGAATGAGACAGAAAACAGGAAATTGCTGGGGACCGTAAT
CCAGTATGGCAATGTGATCCAGCTCCTGCATTTGAAAAGTAATAAATACCTAACAGTGAATAAGAGGCTTCCTGC
TCTGTTGGAGAAGAATGCCATGAGAGTCACATTGGACGAGGCTGGAAATGAAGGGTCCTGGTTTTATATTCAGCC
ATTCTACAAGCTGCGATCCATTGGAGACAGCGTGGTCATAGGTGACAAGGTGGTTCTGAACCCCGTCAATGCTGG
TCAGCCCCTACATGCTAGCAGCCATCAACTGGTAGATAACCCAGGCTGCAATGAGGTCAATTCCGTCAACTGCAA
TACAAGCTGGAAAATAGTCCTTTTCATGAAATGGAGTGATAACAAAGACGACATATTAAAGGGGGGTGACGTGGT
GAGGCTGTTTCATGCTGAGCAGGAGAAGTTTCTCACCTGTGACGAACACAGGAAGAAGCAGCACGTCTTCCTGAG
AACCACGGGCCGGCAGTCGGCCACATCTGCCACCAGTTCAAAAGCCCTGTGGGAGGTGGAGGTGGTCCAGCATGA
CCCATGTCGGGGCGGAGCAGGGTATTGGAACAGCCTTTTCCGTTTCAAGCATCTGGCCACGGGGCATTACTTGGC
AGCAGAGGTGGACCCTGATCAGGACGCCTCTCGAAGTAGGTTGCGGAATGCCCAAGAAAAGATGGTATACTCCCT
GGTCTCTGTGCCTGAAGGCAATGACATCTCCTCCATTTTCGAGCTAGATCCCACCACTCTGCGTGGAGGTGACAG
CCTTGTCCCAAGGAACTCTTATGTTCGGCTCAGACACCTATGTACTAATACCTGGGTTCACAGCACAAATATTCC
TATTGACAAGGAAGAAGAAAAGCCCGTGATGCTGAAAATTGGCACCTCTCCTGTGAAGGAGGATAAGGAAGCATT
TGCCATAGTTCCGGTTTCTCCTGCTGAAGTTCGGGACCTGGACTTTGCCAATGATGCCAGCAAGGTGCTGGGCTC
CATTGCTGGGAAGCTAGAGAAGGGCACCATCACCCAGAATGAAAGGAGGTCTGTAACCAAGCTGCTAGAAGATTT
GGTTTACTTCGTCACTGGTGGAACTAATTCTGGTCAAGATGTTCTCGAAGTTGTCTTCTCCAAGCCCAACAGAGA
ACGGCAGAAACTGATGAGAGAACAGAATATTCTCAAGCAGATCTTCAAGTTGTTACAAGCCCCATTCACAGACTG
CGGTGATGGCCCAATGCTTCGGCTGGAAGAGCTCGGGGACCAGCGGCACGCTCCTTTCAGACACATCTGCCGGCT
CTGCTACAGGGTGCTGAGACACTCGCAGCAAGACTACAGGAAGAACCAGGAGTATATAGCCAAGCAGTTTGGCTT
CATGCAGAAGCAGATTGGCTATGATGTGTTGGCTGAAGACACTATCACTGCCCTGCTCCACAATAATCGGAAACT
CCTGGAAAAACACATTACCGCGGCAGAGATTGACACATTTGTCAGCCTGGTGCGAAAGAACAGGGAGCCCAGATT
CTTAGATTACCTCTCCGACCTCTGTGTCTCCATGAACAAATCAATTCCAGTGACCCAGGAACTGATATGTAAAGC
TGTGCTGAACCCCACCAACGCTGACATCCTGATTGAGACCAAATTGGTTCTTTCTCGTTTTGAATTTGAAGGTGT
CTCTTCCACTGGAGAGAATGCTCTGGAGGCAGGAGAAGACGAGGAAGAGGTGTGGCTGTTTTGGAGGGACAGCAA
CAAAGAGATTCGCAGCAAGAGTGTGAGGGAATTGGCTCAGGATGCTAAAGAAGGGCAGAAGGAGGACCGAGACGT
TCTCAGCTACTACAGATATCAGCTGAACCTCTTTGCGAGGATGTGTCTGGACCGCCAATACCTGGCCATCAACGA
AATCTCAGGCCAGCTGGATGTCGATCTCATTCTCCGCTGCATGTCTGACGAGAACCTGCCCTATGACCTCAGGGC
GTCCTTCTGCCGCCTCATGCTTCACATGCATGTGGACCGAGATCCCCAGGAACAAGTCACCCCCGTGAAATATGC
CCGCCTCTGGTCGGAGATTCCCTCGGAGATCGCCATTGACGACTATGATAGTAGTGGAGCTTCCAAAGATGAAAT
TAAGGAGAGATTTGCTCAGACCATGGAGTTTGTGGAGGAGTATTTAAGAGATGTGGTTTGTCAGAGGTTCCCTTT
CTCTGATAAAGAGAAGAATAAGCTTACGTTTGAGGTTGTAAATTTAGCTAGGAATCTCATATACTTTGGTTTCTA
CAACTTCTCTGACCTTCTCCGATTAACTAAGATCCTTCTGGCCATATTGGACTGTGTACATGTGACAACAATCTT
CCCCATTAGCAAGATGGCGAAAGGAGAAGAGAATAAAGGCAGTAACGTGATGAGATCTATTCATGGCGTGGGAGA
GCTGATGACCCAGGTGGTGCTCCGGGGAGGAGGCTTTTTGCCCATGACTCCCATGGCTGCTGCCCCTGAAGGCAA
TGTGAAGCAGGCAGAGCCTGAGAAGGAGGACATCATGGTCATGGACACCAAGCTGAAGATCATTGAGATACTCCA
GTTTATTTTGAATGTGAGGTTGGATTATAGGATCTCCTGCCTCCTGTGTATATTTAAGCGAGAGTTTGATGAAAG
CAATTCCCAGACTTCAGAAACATCCTCCGGAAACAGCAGCCAAGAAGGGCCAAGTAATGTACCAGGTGCTCTTGA
CTTTGAACACATTGAAGAACAAGCAGAAGGCATCTTTGGAGGAAGTGAGGAGAACACCCCACTGGACTTGGATGA
CCACGGCGGCAGAACCTTTCTCCGTGTCCTGCTCCACTTGACGATGCATGACTACCCACCCCTGGTGTCAGGGGC
CCTGCAGCTCCTCTTCCGGCACTTCAGCCAGAGGCAGGAGGTGCTCCAGGCCTTCAAACAGGTTCAACTGCTGGT
TACCAGCCAAGATGTGGACAACTACAAACAGATCAAACAAGACTTGGATCAACTGAGGTCCATCGTGGAAAAGTC

FIGURE 1964B

AGAGCTTTGGGTGTACAAAGGGCAGGGCCCCGATGAGACTATGGATGGTGCATCTGGAGAAAATGAACATAAGAA
AACGGAGGAGGGAAATAACAAGCCACAAAAGCATGAAAGCACCAGCAGCTACAACTACAGAGTGGTCAAAGAGAT
TTTGATTCGGCTTAGCAAACTCTGTGTTCAAGAGAGTGCCTCAGTGAGAAAGAGCAGGAAGCAGCAACAGCGTCT
GCTCCGGAACATGGGCGCGCACGCCGTGGTGCTGGAGCTGCTGCAGATTCCCTATGAGAAGGCCGAAGATACCAA
GATGCAAGAGATAATGAGGTTGGCTCATGAATTTTTGCAGAATTTCTGCGCAGGCAACCAGCAGAATCAAGCTTT
GCTACATAAACACATAAACCTGTTTCTCAACCCAGGGATCCTGGAGGCAGTAACCATGCAGCACATCTTCATGAA
CAATTTCCAGCTTTGCAGTGAGATCAACGAGAGAGTTGTTCAGCACTTCGTTCACTGCATAGAGACTCACGGTCG
GAATGTCCAGTATATAAAGTTCTTACAGACAATTGTCAAGGCAGAAGGGAAATTTATTAAAAAATGCCAAGACAT
GGTTATGGCCGAGCTGGTCAATTCGGGAGAGGATGTCCTCGTGTTCTACAACGACAGAGCCTCTTTCCAGACTCT
GATCCAGATGATGCGGTCAGAACGGGATCGGATGGATGAGAACAGCCCTCTCATGTACCACATCCACTTGGTCGA
GCTCCTGGCTGTGTGCACGGAGGGTAAGAATGTCTACACAGAGATCAAGTGCAACTCCCTGCTCCCGCTGGATGA
CATCGTTCGCGTGGTGACCCACGAGGACTGCATCCCTGAGGTTAAAATTGCATACATTAACTTCCTGAATCACTG
CTATGTGGATACAGAGGTGGAAATGAAGGAGATTTATACCAGCAATCACATGTGGAAATTGTTTGAGAATTTCCT
TGTAGACATCTGCAGGGCCTGTAACAACACTAGTGACAGGAAACATGCAGACTCGATTTTGGAGAAGTATGTCAC
CGAAATCGTCATGAGTATTGTTACTACTTTCTTCAGCTCTCCCTTCTCAGACCAGAGTACGACTTTGCAGACTCG
CCAGCCTGTCTTTGTGCAACTGCTGCAAGGCGTGTTCAGGGTTTACCACTGCAACTGGTTAATGCCAAGCCAAAA
AGCCTCCGTGGAGAGCTGTATTCGGGTGCTGTCTGATGTAGCCAAGAGCCGGGCCATTGCCATTCCCGTGGACCT
GGACAGCCAAGTCAACAACCTCTTTCTCAAGTCCCACAGCATTGTGCAGAAAACAGCCATGAACTGGCGGCTCTC
AGCCCGCAATGCCGCACGCAGGGACTCTGTTCTGGCAGCTTCCAGAGACTACCGGAATATCATTGAGAGATTGCA
GGACATCGTCTCCGCGCTGGAGGACCGTCTCAGGCCCCTGGTGCAGGCAGAGTTATCTGTGCTCGTGGATGTTCT
CCACAGACCCGAGCTGCTTTTCCCAGAGAACACAGACGCCAGAAGGAAATGTGAAAGTGGCGGTTTCATTTGCAA
GTTAATAAAGCATACAAAACAGCTGCTAGAAGAAAATGAAGAGAAGCTCTGCATTAAGGTCCTACAGACCCTGAG
GGAAATGATGACCAAAGATAGAGGCTATGGAGAAAAGGGTGAGGCGCTCAGGCAAGTTCTGGTCAACCGTTACTA
TGGAAACGTCAGACCTTCGGGACGAAGAGAGAGCCTTACCAGCTTTGGCAATGGCCCACTGTCAGCAGGAGGACC
CGGCAAGCCCGGGGGAGGAGGGGGAGGTTCCGGATCCAGCTCTATGAGCAGGGGTGAGATGAGTCTGGCCGAGGT
TCAGTGTCACCTTGACAAGGAGGGGGCTTCCAATCTAGTTATCGACCTCATCATGAACGCATCCAGTGACCGAGT
GTTCCATGAAAGCATTCTCCTGGCCATTGCCCTTCTGGAAGGAGGCAACACCACCATCCAGCACTCCTTTTTCTG
TCGCTTGACAGAAGATAAGAAGTCAGAGAAATTCTTTAAGGTGTTTTATGACCGGATGAAGGTGGCCCAGCAAGA
AATCAAAGCAACAGTGACAGTGAACACCAGTGACTTGGGAAATAAAAAGAAAGACGATGAGGTAGACAGGGATGC
CCCATCACGGAAAAAAGCTAAAGAGCCCACAACACAGATAACAGAAGAGGTCCGGGATCAGCTCCTGGAGGCCTC
CGCTGCCACCAGGAAAGCCTTCACCACTTTCAGGAGGGAGGCTGATCCCGACGACCACTACCAGCCTGGAGAGGG
CACCCAGGCCACTGCCGACAAGGCCAAGGACGACCTGGAGATGAGCGCGGTCATCACCATCATGCAGCCCATCCT
CCGCTTCCTTCAGCTCCTGTGTGAAAACCACAACCGAGACCTGCAGAACTTCCTCCGTTGCCAAAATAACAAGAC
CAACTACAATTTGGTATGTGAGACCCTGCAGTTTCTGGACTGTATTTGTGGAAGCACAACTGGAGGCCTTGGTCT
TCTGGGCTTGTATATAAATGAAAAGAACGTAGCGCTTATCAACCAAACCCTGGAAAGTCTGACCGAATACTGTCA
AGGACCTTGCCATGAGAACCAGAACTGCATAGCCACCCATGAATCCAATGGCATTGACATCATCACAGCCCTGAT
CCTCAATGATATCAATCCTTTGGGAAAGAAGAGGATGGACCTTGTGTTAGAACTGAAGAACAATGCCTCGAAGTT
GCTCCTGGCCATCATGGAAAGCAGGCACGACAGTGAAAACGCAGAGAGGATACTTTATAACATGAGGCCCAAGGA
ACTGGTGGAAGTGATCAAGAAAGCCTACATGCAAGGTGAAGTGGAATTTGAGGATGGAGAAAACGGTGAGGATGG
GGCGGCGTCCCCCAGGAACGTGGGGCACAACATCTACATATTAGCCCATCAGTTGGCTCGGCATAACAAAGAACT
TCAGAGCATGCTGAAACCTGGTGGCCAAGTGGACGGAGATGAAGCCCTGGAGTTTTATGCCAAGCACACGGCGCA
GATAGAGATTGTCAGATTAGACCGAACAATGGAACAGATAGTCTTTCCCGTGCCCAGCATATGTGAATTCCTAAC
CAAGGAGTCAAAACTACGAATTTACTATACTACAGAGAGAGACGAACAAGGCAGCAAAATCAATGATTTCTTTCT
GCGGTCTGAAGACCTCTTCAATGAAATGAATTGGCAGAAGAAACTGAGAGCCCAGCCCGTGTTGTACTGGTGTGC
CCGCAACATGTCTTTCTGGAGCAGCATTTCGTTTAACCTGGCCGTCCTGATGAACCTGCTGGTGGCGTTTTTCTA
CCCGTTTAAGGGAGTCCGAGGAGGAACCCTGGAGCCCCACTGGTCGGGACTCCTGTGGACAGCCATGCTCATCTC
TCTGGCCATCGTCATTGCCCTCCCCAAGCCCCATGGCATCCGGGCCTTAATTGCCTCCACAATTCTACGACTGAT
ATTTTCAGTCGGGTTACAACCCACGTTGTTTCTTCTGGGCGCTTTCAATGTATGCAATAAAATCATCTTTCTAAT

FIGURE 1964C

GAGCTTTGTGGGCAACTGTGGGACATTCACAAGAGGCTACCGAGCCATGGTTCTGGATGTTGAGTTCCTCTATCA
TTTGTTGTATCTGGTGATCTGTGCCATGGGGCTCTTTGTCCATGAATTCTTCTACAGTCTGCTGCTTTTTGATTT
AGTGTACAGAGAAGAGACTTTGCTTAATGTCATTAAAAGTGTCACTCGCAATGGACGGTCCATCATCCTGACAGC
AGTTCTGGCTCTGATCCTCGTTTACCTGTTCTCAATAGTGGGCTATCTTTTCTTCAAGGATGACTTTATCTTGGA
AGTAGATAGGCTGCCCAATGAAACAGCTGTTCCAGAAACCGGCGAGAGTTTGGCAAGCGAGTTCCTGTTCTCCGA
TGTGTGTAGGGTGGAGAGTGGGGAGAACTGCTCCTCTCCTGCACCCAGAGAAGAGCTGGTCCCTGCAGAAGAGAC
GGAACAGGATAAAGAGCACACATGTGAGACGCTGCTGATGTGCATTGTCACCGTGCTGAGTCACGGGCTGCGGAG
CGGGGGTGGAGTAGGAGATGTACTCAGGAAACCGTCCAAAGAGGAACCCCTGTTTGCTGCTAGAGTTATTTATGA
CCTCTTGTTCTTCTTCATGGTCATCATCATTGTTCTTAACCTGATTTTTGGGGTTATCATTGACACTTTTGCTGA
CCTGAGGAGTGAGAAGCAGAAGAAGGAAGAGATCTTGAAGACCACGTGCTTTATCTGTGGCTTGGAAAGAGACAA
GTTTGACAACAAGACTGTCACCTTTGAAGAGCACATCAAGGAAGAACACAACATGTGGCACTATCTGTGCTTCAT
CGTCCTGGTGAAAGTAAAGGACTCCACCGAATATACTGGGCCTGAGAGTTACGTGGCAGAAATGATCAAGGAAAG
AAACCTTGACTGGTTCCCCAGGATGAGAGCCATGTCATTGGTCAGCAGTGATTCTGAAGGAGAACAGAATGAGCT
GAGAAACCTGCAGGAGAAGCTGGAGTCCACCATGAAACTTGTCACGAACCTTTCTGGCCAGCTGTCGGAATTAAA
GGATCAGATGACAGAACAAAGGAAGCAGAAACAAAGAATTGGTCTTCTAGGACATCCTCCTCACATGAATGTCAA
CCCACAACAACCAGCATAAGCAAATGAAAGAAAGGAATTGTATTTACCTTTTATAATTATTATTAGTGTGGGTAT
GGCTAATGAGTTCTGATTCACCCACGAAGGTTACATTTATGCTGAATACATTTGTAAATACTCAGTTTTATACTG
TATGTATATGATTGCTACTCTAAAGGTTTGGATATATGTATTGTAATTAGAATTGTTGGCATGATGACATTTCAT
TTGTGCCAAAAATATTAAAAATGCCTTTTTTGGAAGGACTAACAGAAAGCACCTGATTTGCACTTGAACCAGATT
ATAGATTTAAAAGTATATGACATGTATTTTGTATTTAAAACTAGAATAGCCAGTATTTATGTTTTTTATAAAACT
GTGCAATACGAATTATGCAATCACAATACATTTGTAGCTCCCGAGTGTCCTAAAGGGAGTGCACTTCTTTGAAGC
TGGTGTGTTAATACTATGTAATAAATGGTTAACTTTCAAATGATGCTGCTGCCAAAATTATATTAATAGTGAGTT
TCAGGCCCCTGGGCATTTTGTACCATGTAATTATCCTCTGGTGATGCTGTTTCTCGTTAGTGGCAGTAGTGCCTC
CGTCTCCTAGTGATAATGCTCCAAGTCTATGAACTGTTAAATCAGCATTCATTTTAAGAAAAGCAACTTTAGTTT
CAAAGATACTTTTAAGCTTCTAAATTGATCATTTAAACTATTTCTTTAAATAAGAGAGCCAAATTAGAGGCTCAT
ACTTTAGCTTGTGAAGAAGATAATGAATTTTTTAAAGGGAACTTTCTATGCAATGTTCAGGATAAATCGATACTG
CTGGCCAATCAGTGTCATCTCCTGGGTAAATTTTGATGTCGCATTATAAAGACATGCATAATTGATGGTTTCTAG
ATTATCTAGTCCAAACAATAGAGTTTATTTTTTCTTCATCTGAACCAACATGCTACAGTAGCTAAGAAGTATTAA
AACTATATACATCCATATAAAGATGAAATATGAACTATCTCATTAGAAGTCATAGTTGACCACAGACATGTTATT
CTTCTGAAAGAGCCACATTTTGGTTTTATTTCTTGTCACATGATTTCTTTTCTTGATGGATGAAAAATATGAAAT
GAAATCTTTTATATCTGTTGCCTAGTTTTGTACATGGATCTCATTTTACAAGAGAATCTCTCTGCTA

FIGURE 1965

MSDKMSSFLHIGDICSLYAEGSTNGFISTLGLVDDRCVVQPETGDLNNPPKKFRDCLFKLCPMNRYSAQKQFWKA
AKPGANSTTDAVLLNKLHHAADLEKKQNETENRKLLGTVIQYGNVIQLLHLKSNKYLTVNKRLPALLEKNAMRVT
LDEAGNEGSWFYIQPFYKLRSIGDSVVIGDKVVLNPVNAGQPLHASSHQLVDNPGCNEVNSVNCNTSWKIVLFMK
WSDNKDDILKGGDVVRLFHAEQEKFLTCDEHRKKQHVFLRTTGRQSATSATSSKALWEVEVVQHDPCRGGAGYWN
SLFRFKHLATGHYLAAEVDPDQDASRSRLRNAQEKMVYSLVSVPEGNDISSIFELDPTTLRGGDSLVPRNSYVRL
RHLCTNTWVHSTNIPIDKEEEKPVMLKIGTSPVKEDKEAFAIVPVSPAEVRDLDFANDASKVLGSIAGKLEKGTI
TQNERRSVTKLLEDLVYFVTGGTNSGQDVLEVVFSKPNRERQKLMREQNILKQIFKLLQAPFTDCGDGPMLRLEE
LGDQRHAPFRHICRLCYRVLRHSQQDYRKNQEYIAKQFGFMQKQIGYDVLAEDTITALLHNNRKLLEKHITAAEI
DTFVSLVRKNREPRFLDYLSDLCVSMNKSIPVTQELICKAVLNPTNADILIETKLVLSRFEFEGVSSTGENALEA
GEDEEEVWLFWRDSNKEIRSKSVRELAQDAKEGQKEDRDVLSYYRYQLNLFARMCLDRQYLAINEISGQLDVDLI
LRCMSDENLPYDLRASFCRLMLHMHVDRDPQEQVTPVKYARLWSEIPSEIAIDDYDSSGASKDEIKERFAQTMEF
VEEYLRDVVCQRFPFSDKEKNKLTFEVVNLARNLIYFGFYNFSDLLRLTKILLAILDCVHVTTIFPISKMAKGEE
NKGSNVMRSIHGVGELMTQVVLRGGGFLPMTPMAAAPEGNVKQAEPEKEDIMVMDTKLKIIEILQFILNVRLDYR
ISCLLCIFKREFDESNSQTSETSSGNSSQEGPSNVPGALDFEHIEEQAEGIFGGSEENTPLDLDDHGGRTFLRVL
LHLTMHDYPPLVSGALQLLFRHFSQRQEVLQAFKQVQLLVTSQDVDNYKQIKQDLDQLRSIVEKSELWVYKGQGP
DETMDGASGENEHKKTEEGNNKPQKHESTSSYNYRVVKEILIRLSKLCVQESASVRKSRKQQQRLLRNMGAHAVV
LELLQIPYEKAEDTKMQEIMRLAHEFLQNFCAGNQQNQALLHKHINLFLNPGILEAVTMQHIFMNNFQLCSEINE
RVVQHFVHCIETHGRNVQYIKFLQTIVKAEGKFIKKCQDMVMAELVNSGEDVLVFYNDRASFQTLIQMMRSERDR
MDENSPLMYHIHLVELLAVCTEGKNVYTEIKCNSLLPLDDIVRVVTHEDCIPEVKIAYINFLNHCYVDTEVEMKE
IYTSNHMWKLFENFLVDICRACNNTSDRKHADSILEKYVTEIVMSIVTTFFSSPFSDQSTTLQTRQPVFVQLLQG
VFRVYHCNWLMPSQKASVESCIRVLSDVAKSRAIAIPVDLDSQVNNLFLKSHSIVQKTAMNWRLSARNAARRDSV
LAASRDYRNIIERLQDIVSALEDRLRPLVQAELSVLVDVLHRPELLFPENTDARRKCESGGFICKLIKHTKQLLE
ENEEKLCIKVLQTLREMMTKDRGYGEKGEALRQVLVNRYYGNVRPSGRRESLTSFGNGPLSAGGPGKPGGGGGGS
GSSSMSRGEMSLAEVQCHLDKEGASNLVIDLIMNASSDRVFHESILLAIALLEGGNTTIQHSFFCRLTEDKKSEK
FFKVFYDRMKVAQQEIKATVTVNTSDLGNKKKDDEVDRDAPSRKKAKEPTTQITEEVRDQLLEASAATRKAFTTF
RREADPDDHYQPGEGTQATADKAKDDLEMSAVITIMQPILRFLQLLCENHNRDLQNFLRCQNNKTNYNLVCETLQ
FLDCICGSTTGGLGLLGLYINEKNVALINQTLESLTEYCQGPCHENQNCI

FIGURE 1966

GCGGCCGCCTCCTCTTCGGGGTCATTAAAGCCAATGAGCCGCGCGCCTCTGCCGAGCGCAGCCAACTAAATCGGC
TTGGATGATTCGCGACCTGAGCAAGATGTACCCGCAGACCAGACACCCGGCACCGCATCAGCCTGCTCAACCCTT
TAAATTTACAATTTCCGAATCCTGTGATCGGATTAAGGAAGAGTTTCAGTTTTTACAGGCTCAATACCACAGTCT
GAAGCTGGAATGTGAGAAACTCGCCAGTGAGAAGACAGAGATGCAGCGGCATTATGTCATGTATTATGAAATGTC
CTATGGGTTGAATATAGAAATGCACAAGCAGGCAGAGATTGTCAAGAGGCTGAATGCTATCTGTGCACAAGTCAT
TCCTTTCCTGTCCCAAGAGCACCAGCAACAAGTGGTGCAGGCTGTGGAACGGGCCAAGCAGGTGACCATGGCAGA
ACTGAACGCCATCATTGGGCAACAACTCCAGGCCCAGCATTTATCACATGGACATGGTCTCCCCGTACCTCTGAC
TCCACACCCTTCAGGGCTCCAGCCCCCTGCCATTCCACCCATCGGTAGCAGTGCCGGGCTTCTGGCCCTCTCCAG
TGCTCTAGGAGGTCAGTCCCATCTTCCAATTAAAGATGAGAAGAAGCACCATGACAATGATCACCAAAGAGACAG
AGACTCCATCAAGAGCTCTTCAGTATCCCCATCAGCCAGTTTCCGAGGTGCTGAGAAGCACAGAAACTCCGCAGA
CTACTCCTCAGAGAGCAAAAAGCAGAAAACTGAAGAAAAGGAAATTGCAGCTCGTTATGACAGCGATGGTGAGAA
AAGTGATGACAACTTGGTGGTTGACGTTTCCAATGAGGATCCATCTTCCCCTCGAGGGAGCCCAGCACATTCCCC
CAGAGAGAATGGCCTAGACAAGACACGCCTGCTCAAGAAAGATGCCCCGATTAGTCCAGCCTCTATTGCATCTTC
CAGCAGTACTCCCTCCTCCAAATCCAAAGAACTTAGCCTTAATGAAAAATCTACTACTCCCGTCTCAAAGTCCAA
TACCCCTACTCCACGAACTGATGCGCCCACCCCAGGCAGTAACTCTACTCCCGGATTGAGGCCTGTACCTGGAAA
ACCACCAGGAGTTGACCCTTTGGCCTCAAGCCTAAGGACCCCAATGGCAGTACCTTGTCCATATCCAACTCCATT
TGGGATTGTGCCCCATGCTGGAATGAACGGAGAGCTGACCAGCCCCGGAGCGGCCTACGCTGGGCTCCACAACAT
CTCCCCTCAGATGAGCGCAGCTGCTGCCGCCGCCGCTGCTGCTGCTGCCTATGGGAGATCACCAGTGGTGGGATT
TGATCCACACCATCACATGCGTGTGCCAGCAATACCTCCAAACCTGACAGGCATTCCAGGAGGAAAACCAGCATA
CTCCTTCCATGTTAGCGCAGATGGTCAGATGCAGCCTGTCCCTTTTCCACCCGACGCCCTCATCGGACCTGGAAT
CCCCCGGCATGCTCGCCAGATCAACACCCTCAACCACGGGGAGGTGGTGTGCGCGGTGACCATCAGCAACCCCAC
GAGACACGTGTACACGGGTGGGAAGGGCTGCGTCAAGGTCTGGGACATCAGCCACCCAGGCAATAAGAGTCCTGT
CTCCCAGCTCGACTGTCTGAACAGGGATAACTACATCCGTTCCTGCAGATTGCTCCCTGATGGTCGCACCCTAAT
TGTTGGAGGGGAAGCCAGTACTTTGTCCATTTGGGACCTGGCGGCTCCAACCCCACGCATCAAGGCAGAGCTGAC
ATCCTCGGCCCCCGCCTGCTATGCCCTGGCCATCAGCCCCGATTCCAAGGTCTGCTTCTCATGCTGCAGCGACGG
CAACATCGCTGTGTGGGATCTGCACAACCAGACCTTGGTGAGGCAATTCCAGGGCCACACAGATGGAGCCAGCTG
TATTGACATTTCTAATGATGGCACCAAGCTCTGGACAGGTGGTTTGGACAACACGGTCAGGTCCTGGGACCTGCG
CGAGGGGCGGCAGCTGCAGCAGCACGACTTCACCTCCCAGATCTTTTCTCTGGGCTACTGCCCAACTGGAGAGTG
GCTTGCAGTGGGGATGGAGAACAGCAATGTGGAAGTTTTGCATGTCACCAAGCCAGACAAATACCAACTACATCT
TCATGAGAGCTGTGTGCTGTCGCTCAAGTTTGCCCATTGTGGCAAATGGTTTGTAAGCACTGGAAAGGACAACCT
TCTGAATGCCTGGAGAACACCTTATGGGGCCAGTATATTCCAGTCCAAAGAATCCTCATCGGTGCTTAGCTGTGA
CATCTCCGTGGACGACAAATACATTGTCACTGGCTCTGGGGATAAGAAGGCCACAGTTTATGAAGTTATTTATTA
AAGACAAATCTTCATGCAGACTGGACTTCTCCTCCTGGTAGCACTTTGCTCTGTCATCCTTTTTGTTCACCCCCA
TCCCCGCATCTAAAACCAAGGATTTCAGATACTCATTGCAGTTGTGGAGTTTAATCCCCTTTCTTAACCTCACTT
CCCACTTGCTATTGAATTGTGAATAGTCATTAAAAACCTGTGATACCAAATCTTCAGCTGTCTACTTGGAAGAAC
ATGGAATAAGCATACTTAACAGTGAAAAGAATCTTTAATTATGTATTATATCTGTAATATATTTATTTTGTTTAA
AGAAGGCTTTCTAACAATGACTGACTAAATAAAGCTGTCTGCTCCTGCATTGAT

FIGURE 1967

AARLCRAQPTKSAWMIRDLSKMYPQTRHPAPHQPAQPFKFTISESCDRIKEEFQFLQAQYHSLKLECEKLASEKT
EMQRHYVMYYEMSYGLNIEMHKQAEIVKRLNAICAQVIPFLSQEHQQQVVQAVERAKQVTMAELNAIIGQQLQAQ
HLSHGHGLPVPLTPHPSGLQPPAIPPIGSSAGLLALSSALGGQSHLPIKDEKKHHDNDHQRDRDSIKSSSVSPSA
SFRGAEKHRNSADYSSESKKQKTEEKEIAARYDSDGEKSDDNLVVDVSNEDPSSPRGSPAHSPRENGLDKTRLLK
KDAPISPASIASSSSTPSSKSKELSLNEKSTTPVSKSNTPTPRTDAPTPGSNSTPGLRPVPGKPPGVDPLASSLR
TPMAVPCPYPTPFGIVPHAGMNGELTSPGAAYAGLHNISPQMSAAAAAAAAAAAAYGRSPVVGFDPHHHMRVPAIP
PNLTGIPGGKPAYSFHVSADGQMQPVPFPPDALIGPGIPRHARQINTLNHGEVVCAVTISNPTRHVYTGGKGCVK
VWDISHPGNKSPVSQLDCLNRDNYIRSCRLLPDGRTLIVGGEASTLSIWDLAAPTPRIKAELTSSAPACYALAIS
PDSKVCFSCCSDGNIAVWDLHNQTLVRQFQGHTDGASCIDISNDGTKLWTGGLDNTVRSWDLREGRQLQQHDFTS
QIFSLGYCPTGEWLAVGMENSNVEVLHVTKPDKYQLHLHESCVLSLKFAHCGKWFVSTGKDNLLNAWRTPYGASI
FQSKESSSVLSCDISVDDKYIVTGSGDKKATVYEVIY

FIGURE 1968A

GCCGGAAGCTGGCGTACTCCGGCAGCGAAAGCGGTGCAGACGGGAGGAAGGCAGCTGAGCCTGAGGTGGAGGTGG
AGGTGTACCGGCGGGACTCCAAGAAGCTGCCAGGCCTGGGAGACCCTGACATCGACTGGGAGGAGAGCGTCTGCC
TGAATCTCATCCTGCAGAAGCTGGACTACATGGTGACCTGTGCGGTGTGCACACGTGCTGACGGCGGGGACATTC
ACATCCATAAGAAGAAATCTCAGCAAGTGTTCGCGTCCCCCAGTAAACACCCCATGGACAGCAAGGGGGAGGAGT
CCAAGATCAGCTACCCCAACATCTTCTTCATGATTGACAGCTTCGAGGAGGTGTTCAGCGACATGACCGTAGGGG
AAGGAGAGATGGTCTGTGTGGAGCTGGTGGCTAGTGACAAAACCAACACGTTCCAGGGGGTCATCTTTCAGGGCT
CCATCCGCTACGAGGCGCTCAAGAAGGTGTATGACAACCGGGTGAGCGTGGCCGCCCGCATGGCACAGAAGATGT
CGTTTGGCTTCTACAAGTACAGCAACATGGAGTTTGTGCGCATGAAGGGCCCCCAGGGCAAGGGCCACGCCGAGA
TGGCGGTCAGCCGAGTGTCTACAGGTGACACATCCCCCTGTGGGACTGAAGAGGACTCCAGCCCAGCTTCGCCCA
TGCACGAGCGGGTGACCTCCTTCAGCACACCCCCCACCCCAGAACGGAACAACCGGCCTGCCTTCTTCTCCCCAT
CCCTCAAGAGGAAGGTGCCCCGGAACCGGATCGCTGAGATGAAGAAGTCGCACTCGGCCAACGACAGCGAGGAGT
TCTTCCGGGAGGACGACGGTGGAGCCGATCTGCACAATGCAACCAACCTGCGGTCTCGGTCCCTGTCGGGCACAG
GACGGTCCCTGGTCGGGTCCTGGCTGAAGCTGAACAGAGCAGATGGAAACTTCCTTCTCTATGCACACTTAACCT
ACGTCACGTTGCCGCTGCATCGGATTTTAACAGACATCCTGGAAGTTCGGCAGAAGCCCATCCTGATGACC**TAG**C
CGCGTGCGGAGCCTGCGCAGAGCCCCGGCCGGGCCCAGCCCTCGGAGTGCTGCCAAGTGCCTACCTGTCCACCGC
CACCGGGGTCTGCGATGGCACGCCAGTGCTGGAGCCGCAGCCAGGCGAGGCCACTCGACTCCCGGGGCCGGGGCC
GACTCCACGAACACCAGCCCAAACTGAAGTGCCTCTTCCCTCCCCTGCTGGCGCTGCTCCGCCCTGTGCCCCCCG
CCCATCGCCCCCCACCCATCTCTGGAGAGCCCTCTGCACCCAAAGAGGACTAGAGATGCCGAGCGGCCATGAGAG
AGAGCGGAAGGAGCAGCTGATGCCCAGAGCGGGGCCAGAGCGGCGGGTCTATGTTCACGTCCCCCCAGCAGCAGG
CGGAACCACCCAGCCAGGGCACTCAGTGCATTGGACTGTCCACATGTTCTTGAGGAAAGCCGGTGGAAGATTCTG
GAATGCCGTGCGGATGAACTTCAGCGCCCGAGTCAGTCCCAGCTCATCCTCCCCAGTTTACCACTTTGTTCTAAT
AGGAGATGGGAACACGAGAAGTTTGATGGCTTTGCCCTGGGCTGGGAATACCTCACCCACGCCCAGTTCCAGAAA
GGCCTCCAGCTGAGCAGACGGCCCCGATCCCGCCAGAACGGCCTTTTGCTTCCAGCCAAAGAACACCGCCAACAC
GCACACCTCCAACCTGGGACATCCCACGCTGGGCCTCGCACGGAGGAACCTGCAGAATTTGGATTCTGAGGGTAG
TCGGGAGGCCTCGGTAGCCAGGCAGAACAGGATATCTGCCAAAGGGTGTCTGATGTGGGGTGGGGCTGGCATCCT
CCCAGGAAGGTTCTAGGTGGGACCCCGTCTTCTGGGGGCGGGGGTGTCTTTTCATCTTCCCTGGTTTCCTAGAAC
TCACTTCCTTTGACGGCGTGTGTTGGTCCCATCTCTCAGACCAGCTCACTGAGGCAGAGGAGTTGCTCAGAGGCT
CACATGGGCACCCCCATTGGTTCGTGTGAGCAGCTGCCCAGCCCCAGGCCTGCCCTCGGCCTGGTCCAGCATGAA
GGCGTTTCCATCTGCAAGGATGCACGGTACCCTCCCCGAGAGCAGGCCTGTCCCCTACCCAACTGGGAATAAACT
GGAAGCTGGGTCTCTTTGTTGCTATGTTTTTTTGTTTGAAGTTCCCAGGAATATTTGAGGGGTTCCGGTGATGTG
TTTAGGGATCTTCTCTGTGGGGGAAAAGGAAGAGGAGGGTCTTGTTCTCCCATCTGTTTATTCTTTGGGCTCTGG
GAACAGGGGACTACTTTGGGGCTTTCTCCAGACTTTTGTATGTTGTTATTAAAAGCGAGCTATTGCATTTCATTC
TGCCTCAGTTTGCCCACCTGTGAAATGGGGCTGATACCACCTACCTCACTGAAGTCCCAGGGTTCAAGTGTGTGG
CTGGGTCAGGGCGTGGTCACCCGTCATTCTGCATAGGTCGGGTTGGATGTTAGACTCCTGGGATGCCCTCCTCCC
CCCTCGCCCTTTGTAATAACCTAATCTGAGACCGTGCTTGGTGGGGGGATGTGAACTTTCTCTCTCCCCCAGCAG
TGTCTGCTCAGGCCTGACAGCTCAGCTCTGCACGATTTCATGTTCCTAAACCCATGTCTTAGGGCAGCACAGAGC
CAGGTCATGTCATGCCCCAAAGTGTGGGGACAGAGCCTCAGGGAGCCCCGAGCATGGTCCAGCCCCATTTGAGTG
CTCTCCGGGGATGCCAAATGCTGCTTCCAAGTTTGAGTCCATGTGGCTAAAATACACCCATTTCTTCAGGAACTC
TTCCCCTGGTTGTTCTGGGGATCTTGGGAGAAACACAGCCCTGACAGCTCGTCCGTGGGAAGATGAGGCAGTCCA
GGTTGTGAGGAGCACAGCGGCCCGCCCTCTGTTCTCAGAGGTGAGGGGCGGGAGAAGGTTGTCTCCTCTGGGGCC
AGCATTTGGCCAAGCTCGGAGGCTTGGCCAGCACTGCTGGATGGCTCAGAGCAAGCTGGGCTCCCCGTCTGTAAG
ATGGCAAAAATGCTGCCCCCCTCACAGGGTGACCATGAGGACCAGTCACAGTGATGTGTGAAAGGGCTCGCTGGT
CACAGAAACGTGTACAAATCATGCTATTTTAGAGATCAGCCCTCAATTTGTAAGGCATGTGAACAGGGCACGCGG
TGGGCTGGTGGTTTCATAGCCGACACACAGCGCCTACCATGTGCAGCTGCCTGTCCGACCCCATCTTACAGACGA
GAAAACCAGCACACAGGCACCAAGGAACTGTCCGGAACTAACAGCAGGGGCCGGCGATGGGAGTCAAACCCAGGC
ACGCGGCCTGGCCTGCATGCTGAGCCACATGGTGCTGTCCGGACAGATGGACAGACACTCGGTGGAGTCTGCCTT
TCTCAGGCCCTAAATCCCTCTCCAAAGGGTACTTGCGATGCCGGATTTAAAACTTGCTCAGAGCCACTTAGCCAC
TTGAGAACCAGACAGTAAGGTGTTACTCCCAGGTTTGTTTTTCCAAAGTAACAGATGACATGTGGAATAAAGTAA

FIGURE 1968B

TAGAGTAACAAGTGGCAGGGCCAGAACCAGGGTCCCCAAAGTCCTGGTGTTGGCACATTTGTACTTCTTGTAAGA
CCATCTTTAATTTTTCTGGGAACACACCTGCCTTTTGTGTAATGCGGGGAAGACTAATGCATGGTGACACCTGGT
TTTCCTCAACAGGACACTTGATCCCAAAACCCCTTTAAGACCTTAGGTTTCCTCAGCGGAAAACTGTACTTTAAT
CCCAAACCCCCTTTAAGACATATTGGGGCTGGGCGCAGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCTG
AGATGGGTGGATCACCTGAGATCAGGAGTTCAAGACCAGCCTGACTAACATGCTGAAACCCCATGTCTACTAAAG
ATAGAAAAATTAGCCGGACATGGTGGCAGGCACCTGTAATCCCAGCTACTCGGAAGGCTGAGGAAGGAGAATCAC
TTGAACCTAGTAGGCAGAGGTTGCAGTGAGCCGAGATCACGCCATTGCATTCTAGCCTGGGCAACGAGAGCGAAA
CTCTGTCTC

FIGURE 1969

RKLAYSGSESGADGRKAAEPEVEVEVYRRDSKKLPGLGDPDIDWEESVCLNLILQKLDYMVTCAVCTRADGGDIH
IHKKKSQQVFASPSKHPMDSKGEESKISYPNIFFMIDSFEEVFSDMTVGEGEMVCVELVASDKTNTFQGVIFQGS
IRYEALKKVYDNRVSVAARMAQKMSFGFYKYSNMEFVRMKGPQGKGHAEMAVSRVSTGDTSPCGTEEDSSPASPM
HERVTSFSTPPTPERNNRPAFFSPSLKRKVPRNRIAEMKKSHSANDSEEFFREDDGGADLHNATNLRSRSLSGTG
RSLVGSWLKLNRADGNFLLYAHLTYVTLPLHRILTDILEVRQKPILMT

FIGURE 1970A

ACCTCATTCCAGGAGCTCCCTCTCTGGCACCAAGCTCCCTGGGGTGAGTTTTCTTTTTGAAGAGTCCAGGAGAAC
AGGTAAGCAGTGGGGAAGCAGGGAGTCCATTTCAGGGACAGGAATTCCCGGATGAAAAGTGAAAGGAGAGGGACG
GGGCCCAAGCTGAGGGTTTCTTCCTGGTTTCTCGGACAGCTCCTGGACCAAGACTCAGGGAACATTGAGACAGAG
CGTTTGTCACAGGAGGAGCGGGGTCAGGGCGAAGTCCCAGAGCCCCAGGCATGGCTCTCAGGGTCTCAGGCCCCG
AAGGCGGTGCATGGGCTGGGGAGGTGCAGCATTGGGGATTCCCCATCTCCGCAGAGTTTCTCTTCTCCCTCTCCC
AGCCTGCGACGGGTCCTTCTTCCTGGACACTCACGACGCGGACCCAGTTCTCACTCCCACTGAGTGTCGGGTTTC
TAGGGAAGCCAATCAGCGTCGCGCGGCCCCGGTTCTAAAGTCCCCACGCACCACCGGGACTCGGAGTCTCCCCAG
ACGCCGACGATGGGGTCATGGCGCCCCGAACCCTCCTCCTGCTGCTCTCGGGACCCTGCCCTGGCCGAGACCTGG
GCGGGTGAGTGCGGGGTCAGGAGGGAAACGGCCTCTGCCGTGAGGAGCGAAAGGTCCACCTGGCTGGGGCGCAGG
ACCCGGGGAGCCGCGCCGGGAGGAGGGTCGGGCGGGTCTCAGCCCCTCCTCGCCCCCAGGCTCCCACTCCATGAG
GTATTTCAGCACCGCCGTTTCCTGGCCGGGCCGCGGGGAGCCCAGCTTCATTGCCGTGGGCTACGTGGACGACAC
GCAGTTCGTGCGGGTCGACAGTGACGCCGTGAGTCTGAGGATGAAGACGCGGGCGCGGTGGGTGGAGCAGGAGGG
GCCGGAGTATTGGGACCTACAGACACTGGGCGCCAAGGCCCAGGCACAGACTGACCGAGTGAACCTGCGGACCCT
GCTCCGCTACTACAACCAGAGCGAGGCGGGTGAGTGACCCCGGCCCGGGGCGCAGATCACTTACTCCCCGCTCCA
TGCCTCACGGACGGCCCTGGTCCCCTGAGTCTCCGGGTCCAAGATCGACCCCGAGGCTGCGGACCTGCAGAGATC
CTCGACCCGGGAGAGCCCCAGGCGCCTTTACCTGGTTTCATCTTCAGTTGAGGCCAAAATCTCCGCAGGTTGCTA
GGGTCCGGGCCAGGGCTCGGTGGGCGGGGCTGACCGCGGGAACTGGGCCAGGGTATCACATCCTCCAGGGAATGT
TTGGCTGCGACCTGGGGCCCGACGGGCGTCTCCTCCGCGGGTATGAGCAGTATGCCTACGACGGCAAGGATTACA
TCGCCCTGAACGAGGACCTGCGCTCCTGGACCGCCGCGGATACCGCGGCTCAGATTACCCAGCGCAAGTATGAGG
CGGCCAATGTGGCTGAGCAAAGGAGAGCCTACCTGGAGGGCACCTGCATGGAGTGGCTCCGCAGACACCTGGAGA
ACGGGAAGGAGACGCTGCAGCGCGCGGGTACCAGGGGCCATGGGGAGCCTGCTCGATCTCCTGTAGATCTCCCGG
GCTGGCCTCGCACAAGGAGGGGAAGAAAATGGAAACACCACCAGAATATCGCCCTCCCTCCTGTCCTGACGGAGA
GGAATCCTCCTGGGTTTCCAGATCCTGTATCAGAGATTGACTCTGAGGGCCCACCCTGCTCTTCCTGGGACAATT
AAGGGATGAAGTCTCTGAGGGAGTGGAGGGGAAGACAATCCCTGGAAGACTGATCCGCGGTCCCCTTTCACCCCA
CAGCAACCTTGGGCACCAGGACTTTTCCTCCCGGGCCTTGTTCTCTGCCTCACACTCAATGTGTCGGAGTCTGAC
TCCAGCTCCTCTGAGTCCCTTGGCCTCCACTCAGATCAGGACCAGAAGTCCCTGCTACCCTGCTCAGAGACTAGA
ACTTTCCAAGGAATAGGAGATTATCCCAGGCGCCTGTGTCCAGGCTGGTGTCTGGGCTCTGTGCTCCCTTCCCCA
CCCCAGGTGTCCTATTCATCAGGATGGTCACATGGGCGCTGCTGGGGTGTCCCATGAGGAATGCAAAGTGCCTGA
GTTTTCCGACTCTTCCTTTCAGACCCCCCCCAAGACACACGTGACCCACCCCCCTCTCTGAACATGAGGCATAAC
GAGGTCCTGGGTTCTGGGCTTCTACCCTGCGGAGATCACATTGACCTGGCAGCGGGATGGGGAGGACCAGACCCA
GGACATGGAGCTCGTGGAGACCAGGCCCACAGGGGATGGAACCTTCCAGAAGTGGGCGGTTGTGGTAGTGCCTTC
TGGAGAGGAACAGAGATACACATGCCATGTGCAGCACAAGGGGCCTGCCCAAGCCCCTCATCCTGAGATGGGGTA
AGGAGAGAGATGGGGGCGGCCATGTCTCTTAGGGAAAGCAGGAGCCCCTCTGGAGACCTTTAGCAGGGTCGGGGC
TGGGTCCTGGAGGTCAGAACCCTCACATTCCCCTCCTTTCCCAGAGCCCTCTCCCCAGCCCACCATCCCCATTGT
GGGTATCATTGCTGGCCTGGTTCTCCTTGGAGCTGTGGTCACTGGAGCTGTGGTCACTGCTGTGATGTGGAGGAA
GAAGAGCTCAGGTGGGGAAGGGGTGAGGAGTCGGGTTTGAGTTTTCTTGTCCCACTGGGGGTTTCAAGCTCCAGG
TAGAAATGTGTTCTGCCTGGTTACCGGGAAGCACCATCCACATTCATGGGCCTACCCAGCCTGGGCCCTGTGTGC
CAGCACTTACTCTTTTGTAAGCACCTGTGACAATGAAGGACAGATTTCTCACCTTGATGATTGTAGTGATGGGGA
TCTGACCCCAGTAATCACAGGTCAGGGGAAGGTCCTGCTGAGGACAGACCTTAGGAGGGCAGTTGGTCAGGACCA
CATCTGCTTTCTTGTTTTCTGATCCTGCCCTTGGTTTGCAGTCACACATTTCTGGAAACTTCTCGAGGTTCCAAG
ACTAGGAGGTTCCTCTAGGACCTCATGGCCCTGCTACCTTCCTGGCCTCTCACAGGACGTTTTCTTCCCGCAGAT
AGAAAAGGAGGGAGCTACTCTCAGGCTGCAAGTAAGTATGAAGGAGGCTGATCCCTGAGATCCTTGGGATATTGT
GGTTGGGAGCCATGGGGGAGCTCACCCACCCCACAATTCCTCCTCTAGCCACATCTCCTGTGGGATCTGACCAGG
TTCTGTTTTTGTTCTACCCCAGGCAGCCAAAGTGCCCAGGGCTCTGATGTGTCTCTCACGGCTTGTAAAGCTGAG
ACCCTGGGGAGGCTGATGTGTGTGGGTTGTTGGGGTAACAGTGGATATAGCTGTGCTATGGGGTTTCTTTGACTT
GGATGTATTCAGCACATGATGGGCTGTTGAAGGTGTGACCCCTCACTGTGAGTGATATGAATTTGTTCATGAATA
TTTTTTCTATAGTGTGAGACAGCTGCCTTGTGTGGGACTGAGAGGCAAGATTTGTTCATGCCTTCCCTTTGTGAC
TTCAAGAACCCTGACTTCTCTTTCTGCAAAGGCATCTGAATGTGTCTGTGTCCCTATAGGCXTAATGTGAGGTGG

FIGURE 1970B

TGGGGAGACCAGCCCACACCCGTGTCCACCATGACCCTGTTCCCCACACTGACCTACATTCCTTCCCCGATCACC
TTTCCTGTTCCAGAGAAGTGGTGCTGGGATGTCTCCATCTCTGTCTCAACTTCATGGTGCACTGAGCTGTAACTT
CTTACTTCCCTATTAAAATTAGAATCTGAGTATAAATTTACTTTTTTCAAATTATTTCCATGACGGGTTGATGGG
TTAATTAAAGGAGAAGATTCCTAAAATTTGAGAGACAAAATAAATGGAAGACATGAGAACCTTCCAGAGTCCACG
TGTTTCTTGTGCTGATTTGTTGCAGGGGAGGAGAGTAGATGGGGCTGTGCCCAGTGTGTGCTCAGGCCACCATGG
GCTTTATGTGGTCACAGCTCACCTGGGTCATCTTTGCTGCTCCACTGTCCTTGGCCCTTCAGTAGAACCTTGTCC
CACCAGGACCTGTGATCACAGGGACTTGGATGTCACCTAGGGTGGTCCCTACACATCGAAGTCCTTCCGGTATGA
AGAGACAAATTTTCAGTCCCCTGTATCTTTTGCCCTCCTTCCAGGTCTCTTTCCTGGATTGTATTTTCCATCTTT
TTCCCCAGCCTTCTTAAAGGAAGCAGATTCTGAAATTTGCAGAGAGGAGGGGTCCCATAGTTTCTCATCGTAGGT
AACTTTCTGTTGGAACTCCTCTTCTGCTTTCCTACTCTTCTTCCTGCCTGAGTTGTAGTAATCCCAGTGCTGGCT
CCAATCCAAACTCATGCATTTATAAAGCAGAGTCTGATTTAGATTTATATGGGGTTGGAAAATTGGACCCACAAG
GCTAGGATTATCTTTCCTGAACAGAAAAATATGGCTGTGCGCTGCAGTGTGCAGGAGGGTTGGTGTGGGAGGAGG
TGGGAAGGACACACAAGCAGCCCTGGTGAGAAAAGCACTGGCAGCACTGATGTTGGTGTGAGATGATGTTGTTCT
TTAGCTACGTTAATAAAGATATTGCCTTTAGAATACAGAGGTGCTCTACAGTGATCATTCATTCAACTGACATTT
GTTGTCTGCTAGGTATATGACTGTTTTTGCATTTAGAAAACATCATTAAAGTAAAAACAGAAAATTTCTGGCCTT
GTGGTGTATACGXCTAGATG

FIGURE 1971A

AAGACAGGAACATGGTGTTTATAAGCTGCCCTTAATGGCAGAGAACACAGACAGAAACGAGGGAAGAGAGAGAAA
TTGGGGACCCTGAAGAAAGGGGGCCAGCAGCAGGTAGGTGCCATCAGGGACAAGAACAGCACCTCCCAGGGTGGG
AGACCCCAGGCCTTTCTGGCAGCAGGTCTGGATGGAAAGTGGACAGGAGGCTCACCCGTCTGCATCCCCTGCTCC
TGCCCCTGCTCGGCTACAAAAACCAAAGGGACAGCAGCTGACCACACCCCGGTAGCCACTCCTGCATAAAGCTCT
CCCCTCCTGTGACCAGCTGAGGACCTCAGGCTGCAGCGGAGCC**ATG**CCCAGATACACGGTGCACGTACGTGGGGA
ATGGCTGGCAGTGCCCTGCCAGGACGCGCAGCTCACTGTGGGCTGGCTGGGCCGGGAGGCCGTGAGGCGCTATAT
CAAGAATAAGCCCGACAATGGTGGCTTCACCTCCGTGGATGACGCGCACTTCCTTGTGCGCCGGTGCAAGGGCCT
GGGCCTGCTGGACAACGAGGACCGGCTCGAGGTGGCCCTAGAGAACAACGAGTTCGTGGAAGTGGTTATAGAGGG
TGATGCCATGTCTCCTGACTTCATTCCATCTCAACCAGAAGGAGTTTATCTATACAGCAAGTACCGGGAGCCTGA
AAAGTACATCGAGTTAGATGGAGACCGTCTGACCACGGAGGATCTGGTCAACTTGGGAAAGGGACGCTACAAAAT
AAAGCTCACCCCAACTGCTGAGAAGAGGGTGCAGAAATCCAGGGAGGTCATAGATAGCATCATAAAAGAGAAAAC
AGTTGTTTACGGTATTACTACAGGTTTTGGGAAATTTGCCAGAACTGTAATTCCTATCAATAAGCTACAGGAGCT
TCAGGTCAACTTAGTACGCTCACATTCTTCAGGTGTTGGGAAACCACTAAGTCCTGAGAGGTGTCGGATGCTCTT
GGCTTTAAGGATCAATGTCTTAGCCAAAGGATACAGTGGCATTTCCCTGGAGACCCTCAAACAAGTCATAGAAAT
GTTTAATGCCTCCTGCCTGCCCTATGTCCCAGAGAAAGGAACCGTTGGTGCCAGTGGAGACCTTGCCCCACTCTC
TCATCTTGCTCTTGGGCTAGTTGGAGAAGGGAAGATGTGGTCTCCGAAGAGTGGCTGGGCTGATGCTAAATACGT
GCTAGAAGCCCATGGATTGAAACCAGTTATTTTAAAACCAAAAGAGGGCCTGGCACTCATCAATGGGACGCAGAT
GATCACATCCCTGGGCTGTGAAGCTGTAGAGCGAGCCAGTGCTATTGCACGGCAGGCTGACATTGTGGCAGCCCT
GACCCTTGAGGTGCTGAAGGGCACCACCAAAGCCTTTGACACTGACATTCATGCTCTTCGACCTCACCGTGGGCA
AATTGAAGTTGCTTTTCGGTTTCGGTCACTCTTGGACTCAGATCACCACCCATCAGAAATAGCAGAGAGTCACAG
GTTCTGTGATCGCGTCCAGGATGCATACACCTTGCGCTGCTGTCCACAGGTCCATGGTGTGGTGAATGATACAAT
AGCATTTGTGAAGAACATCATTACCACAGAACTGAACAGCGCAACAGATAATCCTATGGTCTTTGCCAATAGGGG
AGAGACAATTTCTGGAGGAAACTTCCATGGTGAATACCCAGCCAAAGCCCTAGACTACTTGGCCATTGGCATCCA
TGAACTTGCTGCAATCAGTGAGAGAAGAATCGAGCGGCTCTGCAATCCCTCCCTCAGTGAGCTGCCTGCCTTCCT
GGTGGCTGAAGGTGGTCTGAACTCTGGGTTCATGATAGCTCACTGCACGGCAGCAGCCCTTGTTTCTGAGAACAA
GGCTCTGTGCCATCCCTCGTCTGTTGACTCCCTCTCCACCAGCGCAGCCACGGAGGACCACGTCTCCATGGGAGG
ATGGGCAGCAAGGAAAGCCCTCAGGGTCATCGAGCATGTGGAGCAAGTGCTGGCCATCGAGCTCCTTGCAGCCTG
CCAGGGCATAGAGTTTCTACGTCCCCTGAAAACAACCACTCCGCTGGAGAAGGTCTATGACCTGGTGCGCTCTGT
TGTAAGGCCCTGGATAAAAGATCGCTTCATGGCCCCGGACATCGAGGCAGCCCACAGGCTGCTCCTGGAGCAGAA
GGTTTGGGAAGTAGCTGCTCCATACATTGAAAAATACAGAATGGAGCATATTCCAGAATCAAGACCTCTTTCTCC
AACAGCCTTTTCACTGCAATTTCTGCACAAGAAATCCACCAAAATCCCGGAGTCTGAGGACCTT**TAA**TGGGCTTT
GTCATGAAGTAGCAGATGAGAGGGCAGTCAGTTTAGCACAAAGCAATACTAGGCTGAAGGAGAGACCTGAGAACT
TTCCTAGGTAGATCAATCCATTGTATCATTCAGTTCTTCTAAAGCCTACGTTGGTTAGGCTGATGGCAGTATTAT
AGTTGCTAAATTCAGCACTGTGTTCCTGTTGTCGTGGTTCAAGACCCACCAGGTATTTTCAGATTATAAAACTTT
TCTTTCTTTCTTAACAGTTTCAACAGGCCACTCACTCTTAAGGGTGAGAAGAATAACCACAATTGTATGTGCCTG
TTTTTTACTCTTAGCATTAGATGAATTCAAATTTGGAAACAGATTGATAGCAATTTTTTCTAAAAACATTAGACT
TTTGTTAACCTTTTTTTTTTTTTTAAATTTGCTTCAACAAGCTCTCCACCAGTTGACTTTCTTTGGCTAATTTTA
CTTTGCATGATATGCCTTAATATGCCTTCATAAATAACCATTTTAAGTCATAATTTGTCCTTAAGCTGCTTTTTT
CTTCTATTAATTGGATCATAGTAAAGAGTAGTCAATAGGGTCTTCAGCTATTAATTGTAGAGGTGATTAAAACCA
ACAAGGAGTTTCATGTGCAAAGGAGATAAGGAATGAATATAAAGATTGCTATTTGGGTGGCTCTTATTAAACTGT
GTATTTTGTACTTATCACTACACGTATCCCCCAAATGCTTACATGGGAGTTTGAGGTTAGTATTTTCACTTCCTT
GGTGTTAGTACTCTATTCACATTCTTATTGTAACCTTCCTCATTTCACAGATAAGGAATCTTTGGGGATTAACCA
ACCTCCTTTCTGTAATGGTAATCATTAAAATAAGTCCTATTGATAAAGGTCAGATGGAGCCCTAGAGTGTATTAC
TGCATCTATTTTTTTCCCCGAGAAGATAAAGGACCTTCAGGGATGGCTTAAGTGTATCTGTCCAGATGAAGGATG
GGTCACATGACCTCTTGGCTTCCCAAGTCTAAGCTCTGTGACTTTGCACCAGTGTGTGCATATATGTGCAAGGCC
CTTCAAGTGGTCTGAAACCGTGGCTCTAAAAACCACAGCTGGTGGAGAGGAGGACAGACACACTTGCCACCTTGC
CTACCTAATTGCCATCTAAAATGGGCCGAACAGTGGATTTCACAATAGAGTTTTCACCCTTTAGATTTACAACCT
GTCAGGTGGAAACTGAAGTGAAAACTGCTGCACACAGCAATTCAGGGAGCAAAAAATGTGCTGAGGAGACTGTTT

FIGURE 1971B

ACCTAAAGGTTGTTCTTGGTGCTATTCCTTGTCAAAATGTGAACACACACAAATGAGGTTTGTGCATTGTCATCC
GTGGGCTGCCATTGAGCCAGTAACCCCCAGTGGTCTCATGGTGCTCTTCGCTCCAGTTTGGGGAATGCTGGATTC
TTTCAGCCCCTGCAGCCCTCCAGGTCAAAATGACACTTTGTCACTGAGTTTTCTACACAGCTCTATTAGTAACTG
ACAGCACACGCCTTCAAGGGAACTTCAAGGGAAACATGGAATAAACTAAGTCTCAATTGCAA

FIGURE 1972

MPRYTVHVRGEWLAVPCQDAQLTVGWLGREAVRRYIKNKPDNGGFTSVDDAHFLVRRCKGLGLLDNEDRLEVALE
NNEFVEVVIEGDAMSPDFIPSQPEGVYLYSKYREPEKYIELDGDRLTTEDLVNLGKGRYKIKLTPTAEKRVQKSR
EVIDSIIKEKTVVYGITTGFGKFARTVIPINKLQELQVNLVRSHSSGVGKPLSPERCRMLLALRINVLAKGYSGI
SLETLKQVIEMFNASCLPYVPEKGTVGASGDLAPLSHLALGLVGEGKMWSPKSGWADAKYVLEAHGLKPVILKPK
EGLALINGTQMITSLGCEAVERASAIARQADIVAALTLEVLKGTTKAFDTDIHALRPHRGQIEVAFRFRSLLDSD
HHPSEIAESHRFCDRVQDAYTLRCCPQVHGVVNDTIAFVKNIITTELNSATDNPMVFANRGETISGGNFHGEYPA
KALDYLAIGIHELAAISERRIERLCNPSLSELPAFLVAEGGLNSGFMIAHCTAAALVSENKALCHPSSVDSLSTS
AATEDHVSMGGWAARKALRVIEHVEQVLAIELLAACQGIEFLRPLKTTTPLEKVYDLVRSVVRPWIKDRFMAPDI
EAAHRLLLEQKVWEVAAPYIEKYRMEHIPESRPLSPTAFSLQFLHKKSTKIPESEDL

FIGURE 1973

ACAGAGAGACTTTGTCTCAAAAAAAAAAGAAAATTTTAATTTTAATGTAGACAGTATGAATTATCTTGTTCTGCA
GTTGGTTGCTTTT**TGA**TTGCTTATTTAATAGAGTTGTTAAGATATTTTACATCTTCTCCTGTTAGCTGTTCAGCT
TTTCCTTTCATATTGAGAACACTACACAGTGCTGAAGTCCAGCTGGTACACACCGGGGGTGACACCTTGGCTGCAT
CTGTTCTCAACAGTCAGACACTTCTTCTAATTGGTTGATGCTGGGCTGTACTGGTTGCTAAATATTGCACATCAT
TTTAAAACTATTTGAGATGCACTTTTGTACTCAGGAGGCCAAGGCAGGAGGATTGCT

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FIGURE 1974

QRDFVSKKKENFNFNVDSMNYLVLQLVAF

FIGURE 1975A

CCCAGGCCGGCTCTGGCCTCCTGACCCAGACAGCGCAGGGCGCGAGGGATCGCGCGGCCGAGCCCGGGTCGCGCC
GCTCCCAGCATCGGGGCCGCTAGCCAAGAGTTCGAGGCCTTCCCGATCCGGATGTGATGAAAAAGAGCAACAGAG
GGAGAAGTGTTTCAGGATTGTAGGAGTGGAAGAGGGGAAAGAGAGGCAGAGAGGGGGAAGGCCCCCTCGCAGGGG
AGCCGGCTGGAGTGAGCTGGCTGGAAAGAGGGGGCGGAGTGCGCGGAGTCAGAGCCGCCACCGCTGCCGCAGTTG
CCGCCACTGCGGCGTCTGGGCTGAGCCGGAGGGAGGCGGGAGGACGCGCAGGGGCGGCCGCCGCCGTCGTCAGGC
CACCGGGGCGAAAATGCGGCCGCTGCCGGAGGCTCGCTAACTTTCCGGGGCGGAAGAGGAGGAGGAGGAGGAGGA
AGGGGCTTGGAGCGACTACGGGGGGATGCGGAGAAGCAGTCAGTTCCCTGCACCCAGCACCTCACAGCCCTTCCT
CCGTGCGCCCTGCCGGGCGGCGAGCTAGGCGGCAGCGGCGCGGCGCGGGCTCGGCGGAGCGGCCCATGTCCGGCG
CGGGCGAAGCCCTCGCTCCCGGGCCCGTGGGGCCGCAGCGCGTGGCCGAGGCGGGCGGCGGCCAGCTGGGCTCCA
CAGCCCAGGGAAAATGTGATAAAGACAATACTGAGAAAGATATAACTCAAGCTACCAATAGCCACTTCACACATG
GAGAGATGCAAGACCAGTCCATTTGGGGAAATCCTTCGGATGGTGAACTCATTAGAACCCAACCTCAGCGCTTGC
CTCAGCTTCAGACTTCAGCACAGGTGCCAAGTGGTGAGGAAATAGGCAAGATAAAGAACGGCCACACAGGTCTGA
GCAATGGAAATGGAATTCACCACGGGGCCAAACACGGATCCGCAGATAATCGCAAACTTTCAGCACCTGTTTCTC
AAAAAATGCATAGAAAAATTCAGTCCAGCTTGTCTGTAAACAGCGATATCAGTAAGAAGAGCAAAGTAAATGCTG
TCTTTTCCCAAAAGACAGGCTCTTCACCTGAAGATTGTTGTGTCCACTGTATCCTGGCTTGCTTGTTCTGCGAAT
TCCTGACCCTTTGCAACATTGTCCTGGGACAAGCGTCATGTGGCATCTGCACCTCAGAAGCCTGCTGCTGTTGCT
GTGGTGACGAGATGGGGGATGATTGTAACTGCCCTTGTGATATGGACTGTGGCATCATGGATGCCTGTTGTGAAT
CATCAGACTGCTTGGAAATCTGTATGGAATGCTGTGGAATTTGTTTTCCTTCA**TAA**ATATTTATCTTTTGTTTGT
GTTAAAACTGGAGAGTGTTTAAAAATTTCCTTTTGGGGGGAAGAAAAGCACATTGTAAGATTCTCATGAAACAAC
ATGGAATTTGCACTGTTAACTCATTATTGTAAGTAATCTCTGAAAGCCTTTTTACTTTAACCAAATCTACATGGT
TTAATATGTGAAATTTTAACTACTTTAACTAGTTTTATAAATTTCTTAATATGTTACAATAACTTAGGGACATTT
TGACACCCCCCTTCCCAAATGTTAAATGCCTTCTCCTTTTTACCGATATTTCTGTTTCTTTTAACCGTTCTCAGG
AGCACTTTGCTCCAAATATATTATTTTTCAGTGTGTATTTAAACGAGGCAGTTTATTTTGATATGTATCTATTCA
TGATTGAAAGGAAGCAGTCTTGGCCAGGCACGGTGGCTTACACCTGTAACCCTGGCATTTTGGGAGGCCAAGGTG
GGCAGATTGCCTGAGCTCAGGAGTTCGAGACCAGCCAGGGCAACATGGTGAAACCCCATCTCTACTAAAATACAA
AAAGTTAGCTGGGCTTGGCGGTGTGCGCCTGTAGTCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATTGCTTGAA
CCCGAGAGGCGGAAGTTGCAGTGAGCCGAGATTGTGCCACTGAACTCCAACCTGCACTCCAGCCTGGGCAACAGA
GCGAGACTCCATCTCTAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAACAAACCAGTCTT
TATTTTAAAAGAAACTTTAGGAAACAAACCCACATAATAGTTGGGAACCAGTGTTGATCTCTCTCCCTTACCTTC
TCCACTTGTTCAACAGACTCTGAATGCCGACTGTGTGGACTCTCTTCCTCAGACTGTGGGGACAGATACAATTCC
ACTCCTGTCCACAGGAACATGAGATTTAGCAGACTAAGGAGATCTGTAAAGAATGAACCATACCACAAGGCATAC
TGAAGTGAGGATTATAAGAGAAATAAACTCAAAATGCTGTTGGAATATGCAGAGAATTGCTACCAGAATATTCAG
TAAGGTTTCAGGGAGAATGTGGCATTTGAGGACTCTCTTAGAATGAGTGATTCACCTGCTATTTAAATGAATTAT
TTAGATTTTTGACAAAGATTTAGGTGGACACCCTAAACTGTGTGTGCCTTTAACCAGTTAAAAGAACAGTGCCTT
CAGCATACTTTTTTATTAGTTGTAGGAATACAGCTTTTTGAAAAAGCTATAAAGTTTAAATTAACTAAAAATATG
CATTTTCTTACACATAATTTAAATGTTATCATACTTTTTTGATGAAAACATAATGCCTTAGTAAAATAGCTCTAT
TTAATAAAGAAGATTGAGTACTCTGACACATTTCATTTAAATTAGGAAATTTTTAATATTAAAATCCCAGTGTTC
TGAGTTATTGAAAGGCTTTCTTTTATTTTGAGAGCTTTAGGTCTTTTTGGGATGAGAACATTTTAGTTGTTTAGT
TTGTTTCTTAAGCAGTGCTATTTTTTGTAAACACAGATAAATGGAAACCATTCTTTTCAATGCAGAAGAAATCTA
GATATCCCCTACTGTGACCAAATTTCTGTATTACGATTTTATGTTAAATTAAACTAATATGGCAGGTTATAATGA
TCCTTAAGTGTAAAGAAATCAGTCAATTACAAGAGTAATTGTATAGTTATTGAGACCTATAGTGTGTGGCTTAGA
TGAAAGGGAGAGTAAATTTTCATACCATGCTCTCTCCTACTCAGTTTGATCTCTCTAAAATTGTAGTTTGGTTTG
ATTTAATATAATTCTTAGTAGAAATTTTGAAAGTATGCTTTGGGATTAATAATTATTTTTAATTTTTCTGGCTGA
ATATCAAATTGATAGTAACAACAGAAGCATAATTTTAGGAAGGCTTTCGCAAACCTAGCCTTTTAAGAGAGGTTT
TTAACCTGAAGCATGAGAATATATCACCTGTGGTTTTTCCTTTGAGATGAAACGTAGTTTCTAGTTATATCATTA
CTTAAAGGGCTTAAAAAGAAAAAACTTAGCAAACTTTTGAATCTTTCTTTTATTGCTATTTACACATACATACAC
ACATACAAAACCTTTAAATTTTGGGATCTGAATATAATTCTGGTAAACAGCTGTCTTCATTTTTCTCCTCTAAAG
AACTTAATTCATTTGTTACATAAAATATAAGGAAATCTTTATACTATTTTACAGTAACCACAATCTAAATATTTA

FIGURE 1975B

CATATACCCAAAATTAACTTATGCTCATATATTAGGATGTGAGAATATCATCTGTTTATGGACACATGAAACCTC
CTAATGACCTGGAATTGTTAGAATATTTGACTTTTTATATGCAAAGTTTTTCAACCAAGTGGTTTGTCTAATATT
TAAACATGTACTGGCACAATTTGTGATGAAAATATTAGCACATTTGCAATAATGTTTCTCCATAACAGAGAATGT
TAATGGATACCAGAATTTTATTTTTGTATTTATGTTCATAGTACTTTTCCTCTTGTCTACTCCAGACAGTTATTC
CATAAAGCATTTGTATAATTAAAAGGAAAACAGAAAAAGGAAAAGTAGGCAAATGTGAAAATAGTTTCAATATAT
CTTATGATTTCTTAATGTAAAATGTTTTGTTGAAGTATATGGCTATCATGACTAAGTGCTAGAATTTATAGTTAC
AGGCGGTGTCCTTTTAAATGTGGAAAGGCTTTTAAAATATTTTAAAACTGGACCTGTATTATCCTGAATACACTA
TTTTGAAAATTTTTAAGAAAAAAAAAA

FIGURE 1976

VRGVRAATAAAVAATAASGLSRREAGGRAGAAAAVVRPPGRKCGRCRRLANFPGRKRRRRRRKGLGATTGGCGEA
VSSLHPAPHSPSSVRPAGRRARRQRRGAGSAERPMSGAGEALAPGPVGPQRVAEAGGGQLGSTAQGKCDKDNTEK
DITQATNSHFTHGEMQDQSIWGNPSDGELIRTQPQRLPQLQTSAQVPSGEEIGKIKNGHTGLSNGNGIHHGAKHG
SADNRKLSAPVSQKMHRKIQSSLSVNSDISKKSKVNAVFSQKTGSSPEDCCVHCILACLFCEFLTLCNIVLGQAS
CGICTSEACCCCCGDEMGDDCNCPCDMDCGIMDACCESSDCLEICMECCGICFPS

FIGURE 1977

GCGGCCGCCGGTCCTCCCTCCACCTCCTCCTCGGCCCCCCCTCGCTTCCCTCCTCCCACTTCCCGAGCTCCGGCG
TCGTCCCGGCCACGCTCGACGCTGCTGCAGGAACAAAGGAAGACCCCGCGGCGGCGGCGGCGCCACCTCCGCCTG
CTGCTCCGACCCGCTCCCGGCCCGCGGCGGCGGCACCAGGGCGCCCGGCTCAGCCTTCCCGGAGGCCTCGGCCCG
GCCTCATCGTGCCGGCTTCGCGCGCGAACCCGGCTTTCGCATTTGGGACCCTGCAGGAAAAAT**ATG**GCTCAGGAG
ACTAACCAGACCCCGGGGCCCATGCTGTGTAGCACAGGATGTGGCTTTTATGGAAATCCTAGGACAAATGGAATG
TGTTCAGTTTGCTACAAAGAACATCTTCAGAGGCAGCAAAATAGTGGCAGAATGAGCCCAATGGGGACAGCTAGT
GGTTCCAACAGTCCTACCTCAGATTCTGCATCTGTACAGAGAGCAGACACTAGCTTAAACAACTGTGAAGGTGCT
GCTGGCAGCACATCTGAAAAATCAAGAAATGTGCCTGTGGCTGCCTTGCCTGTAACTCAGCAAATGACAGAAATG
AGCATTTCAAGAGAGGACAAAATAACTACCCCGAAAACAGAGGTGTCAGAGCCAGTTGTCACTCAGCCCAGTCCA
TCAGTTTCTCAGCCCAGTACTTCTCAGAGTGAAGAAAAAGCTCCTGAATTGCCCAAACCAAAGAAAAACAGATGT
TTCATGTGCAGAAAGAAAGTTGGTCTTACAGGGTTTGACTGCCGATGTGGAAATTTGTTTTGTGGACTTCACCGT
TACTCTGACAAGCACAACTGTCCGTATGATTACAAAGCAGAAGCTGCAGCAAAAATCAGAAAAGAGAATCCAGTT
GTTGTGGCTGAAAAAATTCAGAGAATA**TAA**ATTACTTCTTGTGAAGAGACTGAAACTTTGTTTTTATTTTAATAT
ATCGTAGGAAAACATTAAAGAGCAGATGCATGGCCATTTTTCTTTGATGTTCTCCAGAGTTTTACATTACACTTG
TCTGTCTTATAATTGATATTTTAGGATGTTTGGGTGTTTGTTACAGGCAGAATTGGATAGATACAGCCCTACAAA
TGTATATGCCCTCCCCTGAAAAAAATTGGATGAAAATCTGCACAGCAAAGTGAAACACACAGATAATAGGAACAA
AATGTAGTTCCCATGTGCCAAACAAAATAAATGAAATCTCTGCATGTTTGCAGCATATCTGCCTTTTGGGAATGT
AATCAAGGTATAATCTTTGGCTAGTGTTATGTGCCTGTATTTTTTTAAAATGGTACACCAGAAAAGGACTGGCAG
TCTACTTCTACCATAGTTAAACTTCACCCTCTTTAATTTCACAACATATTCTTTGGAAGCAGGAAGAAATGCTCA
TAAAGAGGATCAGACCTTCTTTCCCGTGAAACCAGTATTTGGCGCCATATATAAGCCTGGTTAAATTGGTCATCT
AAAGCTGTCAAATAAGACATTCTGTGAAAGGTAAACATCGAAACTGGTTATAAGTAAAACCATCAAGCCAACAAC
AGGGTCTTGAGATAACCTTTGAAGCTTATTGTACTGGCCTGCACCAGAAGATGTCTGCATTACTCATTGCTAAAA
ATGTGTAGCACAGAACTGCACTAGGATTAATTTGTTTACAAGAAGAAATTTAAACTCTACGTTTGGTTTTCACAT
ACAGCAGCTCTATTGAATAACATGCATCTGAATTTTAAGTTGCAAAGGTATCTGAATAATTTTTCATGTGCATCT
TTTGTCGAATGTTTTGGTTCAAGAAAGAATGTTTAAAGCTTTTTAAAAGACTTCAGTTCTTAATGTAACTGTACC
CTTCTGCATGGAAAATCATAACCAACATGGCTGCAGTAGACTTCTTAGTGGTATCCAGCGCCACTTGCAGAGGGC
TGCTTTATCATATTGTACTTGGGTGTAGGACTCTAGTGTTCTTGGGTGTATTGCATGGGCTGCATTATCTACAGC
ATTGTACAATAACAACTAGAAAAGGCAGTATACTTCACTGATGCTTGTCTGGTAATAATCACTTCTGTGTTATAA
TGGAAGGTTTTTTGTGATGTATGAAACTTGTGTTTTTTATATATAAATGAGTATAGTTAGTGTTGTGGTAATGCC
TGTTTTCATCTGTAAATAGTTAAGTATGTACACGAGGCACTACTTCTGATTTATTGCAATGTTCAGTCCTAGTTT
TTACTTTTATTCTTAAAGCATTCAGTTTTGCTTTCAATTTTATGTACCTTAGTTCTGAGTTAGACCTGCAGATGT
GTACAGATAGTTCATATTTATGTATTGCACATAATCATGCTATTCAGCATTGATGCTATATTGTATTATGTAAAT
AATAAAAGCCATGTACAGAGGGAAA

FIGURE 1978

MAQETNQTPGPMLCSTGCGFYGNPRTNGMCSVCYKEHLQRQQNSGRMSPMGTASGSNSPTSDSASVQRADTSLNN
CEGAAGSTSEKSRNVPVAALPVTQQMTEMSISREDKITTPKTEVSEPVVTQPSPSVSQPSTSQSEEKAPELPKPK
KNRCFMCRKKVGLTGFDCRCGNLFCGLHRYSDKHNCPYDYKAEAAAKIRKENPVVVAEKIQRI

FIGURE 1979

TGAAAATAAGGATTTTTGAAAGAATTATACCAATTAAAATTATTAAAGGCAAACATAGAATTCATAAAAAATGTC
CAAAGTAGAAATGATGACCTATAATTTGGAGCATTTCCAATTCAGTAATTTCAATTTTGCTCTTGAAAACATTTA
ATATATATCCAAGACTGACATTTCTTTAGCTGAACCTAACGTTTGGGTCTCTGAGTGAATTTATAATAACTCCTT
CCTTCCTTAGCATAGGGTTTTCAAAATTTGATTTATAATTCCTATTTCCAGTAAATATTGTTCATTTGTCCACAT
CTCTCCCTATGATATGTTGCTGGAGGTAAGAATTTCTTTCATATTCCTATTTTTTTTTTCCCCATAGACTAGGCT
CATAGAATTTAAACAAGCAAATTTTCCTGAGCTTTTTCTTGCCAAATGAAAGAAGACTGGTAAATTCTCATAGAG
AGGTTTGTGTAGTTCTTGGCTCTTCCTGGGGTTAATGTGCTTATATTCACAGTGGCAAATTGGTCTCAGACTTTA
ATTTATTTATTTTTGATTTGAATTTCTCTTTAAAAGTATCAATTTAAAAGGTAACTAGAATTATTCTTTCTCATT
TTCAAAAGTGATTTTTGCATTATTAAATTTCCCTGCCATTGTAATGCCATTTCACGCAGAAAAAAAGTCAGCCAG
TAATTAAGAAAAAAAGTGATGGAGATTAAGTAGTATTTTGGCTTATTTTTAGGACTCATCATGAGAAGACACAGT
TCCTTTAATCAGGAAATTAATATCCATAATTTTCACTCAAAATTGCAGTATGTAAAGCAGATTCTCAAAAACTCT
CCTGAACACTTATTTATATATATGTTTTTATATAAGTAAAATTTTTCTCATATTTTTATACGATATGNNNNNNNNN
NNNNNNNNNNNNNNNNNNTACTTACTACATGTTCTGTACTTGTACTTTGTACCATGCATATTCAAATGTTTATATA
CATAAGTTTATTATAACATAAACAGTAAAAGTAATGAATACTGTTTAAAATAACTAATATAGTATTTTTTAATTT
TTGTGGGGATGGATTCTCAAATACTTGTGATTTTAAAAGATTCTAAAGCTAAAACACAACTTGATTTTAAAAAGA
ATGATTCTCCTTACACAATTATAAATATTTGCAGTAAATATTTTCCTTATAATACTGTTTTGACCCCATTTAAAA
AGTATTAGATTATATTCCTTTGATCCAATGAAAACTGAACCTTATAAATGGTTAGCTGAAAGTAGACCTTATTCT
TGTCCTTCTTTAGAAGAGTAAAGATTTGTCCTAGGGAAGATGGCTGACTTCGGTTCCCAACATGCGTATGCATTT
AGACTGTAGCTCCTCAGCCCTGTGGACACAAAATTTGGACAGCTTATTAGGTTACGTTAGCAATGCATGACGGTT
TCTCCAACACTAAGATATTCACGTTGAAACAGATTTCCTGTTCGTCTTATGTGTCTGGTAAAATTGTTTCCCCAA
TTACAATTTGACATATCAATAGAGGGTTAACAAGAGTATAATTACATAACAGAATTCCTCATGAACTGTAATCAG
TCTACAGGAAAATCATTATTTTATCTTGATTTGCAGATGAATATACTGCTAAGAAAGGGAGCAACTCTGACCTTT
GTTAAAGTTGATCTTTTGTAATTGAGGTATAAGGTATGAAAAGATAAAAAACCGAAGGCCAGAGAATCAGGAAAT
GAAAGATAGTATGGACTGAAGGTAACAATATTTTAATGTTATGCAATATAGCCAGAGAAATATTAAAAATTAGTT
GTTTGCTGTGCATAGGTGGATCTCGCAGGAAGCTAATGAAACCTAAGCTTCAGTGCCTCTCACTTAGACATGTTC
CATTCGAGGTCCTGAACCTAACTTTGTATTAGGAATTCTGTACTAATTTTGTTGAAGAAGACCAGCAAAGTTGTG
TACACTTCTACCCCCACAAAATCTGCATTGTCCATGTGAGTAAAGTAAAATAATTCCTGTTATTTTTTTCTGTTA
GAAATAAGTATGGAGGATATGTTTTTAAAAATTTATGAGTTAATTGAAATATCCATATATAACAAGTGACTTTCT
CACAATATATATGATGTGATATATAGGGAGATAGTTTCACTTTCATCATATTTTATACGTTGATTCTGAACTATA
GAAAAATAATAAATGGGATTTTAATTATAGCTCTTAGTTGGGAAAGAAATATAGAGAGATGTGGGATTTGAATGC
CCATGAAAGACATTTTATTTTACTTGAATATATTCTTGCTTCACTTTACCCTCCATAATATGTTGTACATTAGTG
CTGATCAAGTTTACAGAGTTACATTTTGCTTTCCTAACCATTCAGTCAGGAATTAAAATATGGCATTGTATAACA
ACTGGGAAGAAGCTCATAGTGGATATAAATTAGAGTAGATAATGGGTCACCTTGATAGCCTCTGTTTACATTACT
TGTATATGGGCAAAATAATTATTACCTATACGTGTATTTAAGCTTAATTTTCATATAAACAGTATTTTTAATCTA
TGTTAAAATAGATAATATCTAAAAGTGTGATCTCTAGGTAGTCCTTAGTTTATTAGTACTGTACTTCAAAAAGAT

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FIGURE 1980

KIRIFERIIPIKIIKGKHRIHKKCPK

FIGURE 1981

GGCACGAGGGGAACGCTCCGTCTGGAACGGCGCAGGTCCCAGCAGCTGGGGTTCCCCCTCAGCCCGTGAGCAGCC
ATGTCCAACCCCAGCGCCCCACCACCATATGAAGACCGCAACCCCCTGTACCCAGGCCCTCTGCCCCCTGGGGGC
TATGGGCAGCCATCTGTCCTGCCAGGAGGGTATCCTGCCTACCCTGGCTACCCGCAGCCTGGCTACGGTCACCCT
GCTGGCTACCCACAGCCCATGCCCCCCACCCACCCGATGCCCATGAACTACGGCCCAGGCCATGGCTATGATGGG
GAGGAGAGAGCGGTGAGTGATAGCTTCGGGCCTGGAGAGTGGGATGACCGGAAAGTGCGACACACTTTTATCCGA
AAGGTTTACTCCATCATCTCCGTGCAGCTGCTCATCACTGTGGCCATCATTGCTATCTTCACCTTTGTGGAACCT
GTCAGCGCCTTTGTGAGGAGAAATGTGGCTGTCTACTACGTGTCCTATGCTGTCTTCGTTGTCACCTACCTGATC
CTTGCCTGCTGCCAGGGACCCAGACGCCGTTTCCCATGGAACATCATTCTGCTGACCCTTTTTACTTTTGCCATG
GGCTTCATGACGGGCACCATTTCCAGTATGTACCAAACCAAAGCCGTCATCATTGCAATGATCATCACTGCGGTG
GTATCCATTTCAGTCACCATCTTCTGCTTTCAGACCAAGGTGGACTTCACCTCGTGCACAGGCCTCTTCTGTGTC
CTGGGAATTGTGCTCCTGGTGACTGGGATTGTCACTAGCATTGTGCTCTACTTCCAATACGTTTACTGGCTCCAC
ATGCTCTATGCTGCTCTGGGGGCCATTTGTTTCACCCTGTTCCTGGCTTACGACACACAGCTGGTCCTGGGGAAC
CGGAAGCACACCATCAGCCCCGAGGACTACATCACTGGCGCCCTGCAGATTTACACAGACATCATCTACATCTTC
ACCTTTGTGCTGCAGCTGATGGGGGGATCGCAAT**TAA**GGAGCAAGCCCCCATTTTCACCCGATCCTGGGCTCTCCC
TTCCAAGCTAGAGGGCTGGGCCCTATGACTGTGGTCTGGGCTTTAGGCCCCTTTCCTTCCCCTTGAGTAACATGC
CCAGTTTCCTTTCTGTCCTGGAGACAGGTGGCCTCTCTGGCTATGGATGTGTGGGTACTTGGTGGGGACGGAGGA
GCTAGGGACTAACTGTTGCTCTTGGTGGGCTTGGCAGGGACTAGGCTGAAGATGTGTCTTCTCCCCGCCACCTAC
TGTATGACACCACATTCTTCCTAACAGCTGGGGTTGTGAGGAATATGAAAAGAGCCTATTCGATAGCTAGAAGGG
AATATGAAAGGTAGAAGTGACTTCAAGGTCACGAGGTTCCCCTCCCACCTCTGTCACAGGCTTCTTGACTACGTA
GTTGGAGCTATTTCTTCCCCCAGCAAAGCCAGAGAGCTTTGTCCCCGGCCTCCTGGACACATAGGCCATTATCCT
GTATTCCTTTGGCTTGGCATCTTTTAGCTCAGGAAGGTAGAAGAGATCTGTGCCCATGGGTCTCCTTGCTTCAAT
CCCTTCTTGTTTCAGTGACATATGTATTGTTTATCTGGGTTAGGGATGGGGGACAGATAATAGAACGAGCAAAGT
AACCTATACAGGCCAGCATGGAACAGCATCTCCCCTGGGCTTGCTCCTGGCTTGTGACGCTATAAGACAGAGCAG
GCCACATGTGGCCATCTGCTCCCCATTCTTGAAAGCTGCTGGGGCCTCCTTGCAGGCTTCTGGATCTCTGGTCAG
AGTGAACTCTTGCTTCCTGTATTCAGGCAGCTCAGAGCAGAAAGTAAGGGGCAGAGTCATACGTGTGGCCAGGAA
GTAGCCAGGGTGAAGAGAGACTCGGTGCGGGCAGGGAGAATGCCTGGGGGTCCCTCACCTGGCTAGGGAGATACC
GAAGCCTACTGTGGTACTGAAGACTTCTGGGTTCTTTCCTTCTGCTAACCCAGGGAGGGTCCTAAGAGGAAGGTG
ACTTCTCTCTGTTTGTCTTAAGTTGCACTGGGGGATTTCTGACTTGAGGCCCATCTCTCCAGCCAGCCACTGCCT
TCTTTGTAATATTAAGTGCCTTGAGCTGGAATGGGGAAGGGGGACAAGGGTCAGTCTGTCGGGTGGGGGCAGAAA
TCAAATCAGCCCAAGGATATAGTTAGGATTAATTACTTAATAGAGAAATCCTAACTATATCACACAAAGGGATAC
AACTATAAATGTAATAAAATTTATGTCTAGAAGTTAAAACCCAAAAAAAAAAAAAAAAAAAA

FIGURE 1982

MSNPSAPPPYEDRNPLYPGPLPPGGYGQPSVLPGGYPAYPGYPQPGYGHPAGYPQPMPPTHPMPMNYGPGHGYDG
EERAVSDSFGPGEWDDRKVRHTFIRKVYSIISVQLLITVAIIAIFTFVEPVSAFVRRNVAVYYVSYAVFVVTYLI
LACCQGPRRRFPWNIILLTLFTFAMGFMTGTISSMYQTKAVIIAMIITAVVSISVTIFCFQTKVDFTSCTGLFCV
LGIVLLVTGIVTSIVLYFQYVYWLHMLYAALGAICFTLFLAYDTQLVLGNRKHTISPEDYITGALQIYTDIIYIF
TFVLQLMGDRN

FIGURE 1983

GAAAGGTCACAGCGCGGCAGCGGGTCTGGCTGGCGGCAGCGGCGGGAGGGAGCCGAGAGACCCGAGTGCACGTGT
GGAGAAGCGGCGGCACAAGCGCGGCGGCGGGAGACACTCCCGCCCCCACCAGACTCAAGCCCTCACTCGACTCTC
GCGGCCTTCGTTGCTCGCACAGCTCCCTGCCCAGGCTAGGAGGCCGGCTTGCGGGGTTGAGTGGCCCGAGCTAAG
GGTGCGGAGACCTAAGGGCGGCGACTACGACGGCGTTGATATCGGTGGTAACGACGGCCTCAGCAGGCGGGGAAG
ATGAAAGGTAGCCGGATCGAGCTGGGAGATGTGACACCACACAATATTAAACAGTTGAAAAGATTGAATCAGGTC
ATCTTTCCAGTCAGCTACAATGACAAGTTCTACAAGGATGTGCTGGAGGTTGGCGAGCTAGCAAAACTTGCCTAT
TTCAATGATATTGCTGTAGGTGCAGTATGCTGTAGGGTGGATCATTCACAGAATCAGAAGAGACTTTACATCATG
ACACTAGGATGTCTGGCACCTTACCGAAGGCTAGGAATAGGAACTAAAATGTTAAATCATGTCTTAAACATCTGT
GAAAAAGATGGTACTTTTGACAACATTTATCTGCATGTCCAGATCAGCAATGAGTCGGCAATTGACTTCTACAGG
AAGTTTGGCTTTGAGATTATTGAGACAAAGAAGAACTACTATAAGAGGATAGAGCCCGCAGATGCTCATGTGCTG
CAGAAAAACCTCAAAGTTCCTTCTGGTCAGAATGCAGATGTGCAAAAGACAGACAAC**TGA**ACAAATTACAAATGA
ACTTTCTTGCACTTGCTTGTCGCCAAATAAAAGAGAGGCCCATTGATTCCTCCCCCACCCCAACACTTTTCTTTT
AAAGCTTTTCTCCCTCCTTGTTCTTGTTTTTCTTTCTTCCTTTCCTTTTCTCTGAGAGTTTTAATACTTTCAAGG
ACTTTAAAAAAATAATCATGTTTGAATTGTTTTCTCTTATTTTTGTGAGGTGGTTTGAAGGAAGGACAAGGTAGA
TCTGTTTAGTTTTGCAGTTGAAGTTAGATGGTCCTAAACATTTAATTGTCAAATAATTTCAAATTTAATGTCCTG
CTTTCACATTGAAGGGCAGAGCCTACAAAACATTGTATATTTCAAAAGACAAAAAGAAGCAGCAGCAGTATCTTG
TTCTCTAATTCATAGACAAGTTGAGTGTGTTTGTGGTACTTTGGGTTTTTAAACACTTTGGGATACTAATCCCTA
GACATTGCCTTCACTCCACCTTTAGTCCTTCTGAGCACTCTCTCGGGAGTTGGAACATTGTTATCCTTGTAAGAA
ATACTAAGCTTATGTTGATTTTTAAGTAATTATATCTTCTCTTCTTGCTGGTGGGTGGGGCAGTTTGGTTTAGTG
TTATACTTTGGTCTAAGTATTTGAGTTAAACTGCTTTTTTGCTAATGAGTGGGCTGGTTGTTAGCAGGTTTGTTT
TTCCTGCTGTTGATTGTTACTAGTGGCATTAACTTTTAGAATTTGGGCTGGTGAGATTAATTTTTTTTAATATCC
CAGCTAGAGATATGGCCTTTAACTGACCTAAAGAGGTGTGTTGTGATTTAATTTTTTCCCGTTCCTTTTTCTTCA
GTAAACCCAACAATAGTCTAACCTTAAAAATTGAGTTGATGTCCTTATAGGTCACTACCCCTAAATAAACCTGAA
GCAGGTGTTTTCTCTTGGACATACTAAAAAATACCTAAAAGGAAGCTTAGATGGGCTGTGACACAAAAAATTCAA
TTACTGTCATCTAATGCCAGCTGTTAAAAGTGTGGCCACTGAGCATTTGATTTTATAGGAAAAAATAGTATTTTT
GAGAATAACATAGCTGTGCTATTGCACATCTGTTGGAGGACATCCCAGATTTGCTTATACTCAGTGCCTGTGATA
TTGAGTTTAAGGATTTGAGGCAGGGGTAATTATTAAACATATTGCTTCTATTCTTGGAAAAATAGAAGTGTAAAA
TGTTAATAATACAAATGTCACTGTGACCTCCTCCACTGTGAGGACTGGTTTATGCCAGATCATTTTCCGGCACAC
ACGGAGTGGCTTTGACAGATTGATAACTTTGTAAGATGGGAGACATCTGAAATATTCATGTTTTCCTTTTGTAGT
CCCATCTCCACTATTTAGAAATGTTCTCAGACTTTAAAATAATGCACAGGGCTTGAGCTTTCTGTCATTTGACTT
TAAAAGGAAGTTTCATTCATATTTATCCTCTTATGTAAAATTGCGGTATAAAGTCTCATTTCCAAATATGTTAAA
TGACAAAATTATTTTATAAAATGTTTATGCACACTTTATAACCTTAAGTTTTTATTTGAGAATGTGAAAGTACAA
AGTGCAGTAGACTTCAACAATCTTGAGTGCCAAGAATAATACAGAAAAAGAAGACAGTTGATGAATGAGTTTATA
GGGTTCTAATCTTAAGATGGTAAAAATGTAGAAAGACCTTGCTGGTTTTTTGGGGGTATTCGTTTCTTAAACAAT
CCAAATCTAAGCTTAGAAGAAAAGTTTAGCGTTAAGCACCTTTATCTTCATGAATAAGCTTCAGCTTGCTCTTGG
CAAGAGAAGAGTGCTTGAGTTACAGAAGGCATAAGTAGTTTGAAGAATGCAGCAGCCTTTTTGTAAACTTCCCAG
ATATCAAAATAGACTTTGATATATAAATGGTTTTCTGAGATGACACTGCCTCTATTTCTATAACCATTTCACCTG
GACTATCTAACCAGTCCTATGAATGTATCCCTAAATGTGGTTATTGAAAACCTAATAGCTGCCTCATGACAAGTA
CATGTTATTTAAGGAGGAAAAAATATTAAATTTTGAATTGAGTGTGTAGGCTCCCTATCATTATATATAGAGTTT
CTTTTTCCACGGTAGTCAGTGACTTAACCTGAATTGTAAATGTTTGTAAAGGGTTAATTGTCCTACATCAAACTT
AGTTAAATAATTCCATCCACTTATGGAGGAGGAGGAGAATGTGGAAGAGGTAAAAAGCTGGGCACAAGTTCATAT
GCCTATGAGTCAGTAAAGACTGAAGTAATGTCCTATGTTGAGCTGGTTATTTTGATATATGATAATAATTATCTT
TGAAGTAGAACAATTCTGTTAACTGGAAAATCACAGGATATATCCATCATATTTTTCAGGACAGATAGTTTTTAC
TGTGGGGCAAATAGGTTAAAATTACACTATGTTAGTTGCATTTAGGTTTTAAAGCAAAGAATCTGTAGAGAAATC
TATGCAATATATAGTTTGTCCAGATTAGCTTTCATTTGGGGAATGAAGTTCTGAAATATCTAAAGCAGTTTACTC
ATCAATTGAAAAGTCCTCCAAAAAGAGAACTATTGGGAAACCATGGTGTGGTGGTGGAAAAGAAAAGCTCCCTCA
GTTTTTTGGAGGGAATAACTTAAAAAAATACTTAAATGGCTAAGTTTACTTGGTGCAGTTAAGAATTAAACTTGT
CAATTTTAACATTGCTGTTACATCTGAAATAAACTTATGTGATGTTCTGGT

FIGURE 1984

MKGSRIELGDVTPHNIKQLKRLNQVIFPVSYNDKFYKDVLEVGELAKLAYFNDIAVGAVCCRVDHSQNQKRLYIM
TLGCLAPYRRLGIGTKMLNHVLNICEKDGTFDNIYLHVQISNESAIDFYRKFGFEIIETKKNYYKRIEPADAHVL
QKNLKVPSGQNADVQKTDN

FIGURE 1985A

GCTACAATCCATCTGGTCTCCTCCAGCTCCTTCTTTCTGCAAC**ATG**GGGAAGAACAAACTCCTTCATCCAAGTCT
GGTTCTTCTCCTCTTGGTCCTCCTGCCCACAGACGCCTCAGTCTCTGGAAAACCGCAGTATATGGTTCTGGTCCC
CTCCCTGCTCCACACTGAGACCACTGAGAAGGGCTGTGTCCTTCTGAGCTACCTGAATGAGACAGTGACTGTAAG
TGCTTCCTTGGAGTCTGTCAGGGGAAACAGGAGCCTCTTCACTGACCTGGAGGCGGAGAATGACGTACTCCACTG
TGTCGCCTTCGCTGTCCCAAAGTCTTCATCCAATGAGGAGGTAATGTTCCTCACTGTCCAAGTGAAAGGACCAAC
CCAAGAATTTAAGAAGCGGACCACAGTGATGGTTAAGAACGAGGACAGTCTGGTCTTTGTCCAGACAGACAAATC
AATCTACAAACCAGGGCAGACAGTGAAATTTCGTGTTGTCTCCATGGATGAAAACTTTCACCCCCTGAATGAGTT
GATTCCACTAGTATACATTCAGGATCCCAAAGGAAATCGCATCGCACAATGGCAGAGTTTCCAGTTAGAGGGTGG
CCTCAAGCAATTTTCTTTTCCCCTCTCATCAGAGCCCTTCCAGGGCTCCTACAAGGTGGTGGTACAGAAGAAATC
AGGTGGAAGGACAGAGCACCCTTTCACCGTGGAGGAATTTGTTCTTCCCAAGTTTGAAGTACAAGTAACAGTGCC
AAAGATAATCACCATCTTGGAAGAAGAGATGAATGTATCAGTGTGTGGCCTATACACATATGGGAAGCCTGTCCC
TGGACATGTGACTGTGAGCATTTGCAGAAAGTATAGTGACGCTTCCGACTGCCACGGTGAAGATTCACAGGCTTT
CTGTGAGAAATTCAGTGGACAGCTAAACAGCCATGGCTGCTTCTATCAGCAAGTAAAAACCAAGGTCTTCCAGCT
GAAGAGGAAGGAGTATGAAATGAAACTTCACACTGAGGCCCAGATCCAAGAAGAAGGAACAGTGGTGGAATTGAC
TGGAAGGCAGTCCAGTGAAATCACAAGAACCATAACCAAACTCTCATTTGTGAAAGTGGACTCACACTTTCGACA
GGGAATTCCCTTCTTTGGGCAGGTGCGCCTAGTAGATGGGAAAGGCGTCCCTATACCAAATAAAGTCATATTCAT
CAGAGGAAATGAAGCAAACTATTACTCCAATGCTACCACGGATGAGCATGGCCTTGTACAGTTCTCTATCAACAC
CACCAACGTTATGGGTACCTCTCTTACTGTTAGGGTCAATTACAAGGATCGTAGTCCCTGTTACGGCTACCAGTG
GGTGTCAGAAGAACACGAAGAGGCACATCACACTGCTTATCTTGTGTTCTCCCCAAGCAAGAGCTTTGTCCACCT
TGAGCCCATGTCTCATGAACTACCCTGTGGCCATACTCAGACAGTCCAGGCACATTATATTCTGAATGGAGGCAC
CCTGCTGGGGCTGAAGAAGCTCTCCTTTTATTATCTGATAATGGCAAAGGGAGGCATTGTCCGAACTGGGACTCA
TGGACTGCTTGTGAAGCAGGAAGACATGAAGGGCCATTTTTCCATCTCAATCCCTGTGAAGTCAGACATTGCTCC
TGTCGCTCGGTTGCTCATCTATGCTGTTTTACCTACCGGGGACGTGATTGGGGATTCTGCAAAATATGATGTTGA
AAATTGTCTGGCCAACAAGGTGGATTTGAGCTTCAGCCCATCACAAAGTCTCCCAGCCTCACACGCCCACCTGCG
AGTCACAGCGGCTCCTCAGTCCGTCTGCGCCCTCCGTGCTGTGGACCAAAGCGTGCTGCTCATGAAGCCTGATGC
TGAGCTCTCGGCGTCCTCGGTTTACAACCTGCTACCAGAAAAGGACCTCACTGGCTTCCCTGGGCCTTTGAATGA
CCAGGACGATGAAGACTGCATCAATCGTCATAATGTCTATATTAATGGAATCACATATACTCCAGTATCAAGTAC
AAATGAAAAGGATATGTACAGCTTCCTAGAGGACATGGGCTTAAAGGCATTCACCAACTCAAAGATTCGTAAACC
CAAAATGTGTCCACAGCTTCAACAGTATGAAATGCATGGACCTGAAGGTCTACGTGTAGGTTTTTATGAGTCAGA
TGTAATGGGAAGAGGCCATGCACGCCTGGTGCATGTTGAAGAGCCTCACACGGAGACCGTACGAAAGTACTTCCC
TGAGACATGGATCTGGGATTTGGTGGTGGTAAACTCAGCAGGGGTGGCTGAGGTAGGAGTAACAGTCCCTGACAC
CATCACCGAGTGGAAGGCAGGGGCCTTCTGCCTGTCTGAAGATGCTGGACTTGGTATCTCTTCCACTGCCTCTCT
CCGAGCCTTCCAGCCCTTCTTTGTGGAGCTTACAATGCCTTACTCTGTGATTCGTGGAGAGGCCTTCACACTCAA
GGCCACGGTCCTAAACTACCTTCCCAAATGCATCCGGGTCAGTGTGCAGCTGGAAGCCTCTCCCGCCTTCCTTGC
TGTCCCAGTGGAGAAGGAACAAGCGCCTCACTGCATCTGTGCAAACGGGCGGCAAACTGTGTCCTGGGCAGTAAC
CCCAAAGTCATTAGGAAATGTGAATTTCACTGTGAGCGCAGAGGCACTAGAGTCTCAAGAGCTGTGTGGGACTGA
GGTGCCTTCAGTTCCTGAACACGGAAGGAAAGACACAGTCATCAAGCCTCTGTTGGTTGAACCTGAAGGACTAGA
GAAGGAAACAACATTCAACTCCCTACTTTGTCCATCAGGTGGTGAGGTTTCTGAAGAATTATCCCTGAAACTGCC
ACCAAATGTGGTAGAAGAATCTGCCCGAGCTTCTGTCTCAGTTTTGGGAGACATATTAGGCTCTGCCATGCAAAA
CACACAAAATCTTCTCCAGATGCCCTATGGCTGTGGAGAGCAGAATATGGTCCTCTTTGCTCCTAACATCTATGT
ACTGGATTATCTAAATGAAACACAGCAGCTTACTCCAGAGGTCAAGTCCAAGGCCATTGGCTATCTCAACACTGG
TTACCAGAGACAGTTGAACTACAAACACTATGATGGCTCCTACAGCACCTTTGGGGAGCGATATGGCAGGAACCA
GGGCAACACCTGGCTCACAGCCTTTGTTCTGAAGACTTTTGCCCAAGCTCGAGCCTACATCTTCATCGATGAAGC
ACACATTACCCAAGCCCTCATATGGCTCTCCCAGAGGCAGAAGGACAATGGCTGTTTCAGGAGCTCTGGGTCACT
GCTCAACAATGCCATAAAGGGAGGAGTAGAAGATGAAGTGACCCTCTCCGCCTATATCACCATCGCCCTTCTGGA
GATTCCTCTCACAGTCACTCACCCTGTTGTCCGCAATGCCCTGTTTTGCCTGGAGTCAGCCTGGAAGACAGCACA
AGAAGGGGACCATGGCAGCCATGTATATACCAAAGCACTGCTGGCCTATGCTTTTGCCCTGGCAGGTAACCAGGA
CAAGAGGAAGGAAGTACTCAAGTCACTTAATGAGGAAGCTGTGAAGAAAGACAACTCTGTCCATTGGGAGCGCCC

FIGURE 1985B

TCAGAAACCCAAGGCACCAGTGGGGCATTTTTACGAACCCCAGGCTCCCTCTGCTGAGGTGGAGATGACATCCTA
TGTGCTCCTCGCTTATCTCACGGCCCAGCCAGCCCCAACCTCGGAGGACCTGACCTCTGCAACCAACATCGTGAA
GTGGATCACGAAGCAGCAGAATGCCCAGGGCGGTTTCTCCTCCACCCAGGACACAGTGGTGGCTCTCCATGCTCT
GTCCAAATATGGAGCCGCCACATTTACCAGGACTGGGAAGGCTGCACAGGTGACTATCCAGTCTTCAGGGACATT
TTCCAGCAAATTCCAAGTGGACAACAACAATCGCCTGTTACTGCAGCAGGTCTCATTGCCAGAGCTGCCTGGGGA
ATACAGCATGAAAGTGACAGGAGAAGGATGTGTCTACCTCCAGACCTCCTTGAAATACAATATTCTCCCAGAAAA
GGAAGAGTTCCCCTTTGCTTTAGGAGTGCAGACTCTGCCTCAAACTTGTGATGAACCCAAAGCCCACACCAGCTT
CCAAATCTCCCTAAGTGTCAGTTACACAGGGAGCCGCTCTGCCTCCAACATGGCGATCGTTGATGTGAAGATGGT
CTCTGGCTTCATTCCCCTGAAGCCAACAGTGAAAATGCTTGAAAGATCTAACCATGTGAGCCGGACAGAAGTCAG
CAGCAACCATGTCTTGATTTACCTTGATAAGGTGTCAAATCAGACACTGAGCTTGTTCTTCACGGTTCTGCAAGA
TGTCCCAGTAAGAGATCTCAAACCAGCCATAGTGAAAGTCTATGATTACTACGAGACGGATGAGTTTGCAATCGC
TGAGTACAATGCTCCTTGCAGCAAAGATCTTGGAAATGCT**TGA**AGACCACAAGGCTGAAAAGTGCTTTGCTGGAG
TCCTGTTCTCTGAGCTCCACAGAAGACACGTGTTTTTGTATCTTTAAAGACTTGATGAATAAACACTTTTTCTGG
TC

FIGURE 1986

MGKNKLLHPSLVLLLLVLLPTDASVSGKPQYMVLVPSLLHTETTEKGCVLLSYLNETVTVSASLESVRGNRSLFT
DLEAENDVLHCVAFAVPKSSSNEEVMFLTVQVKGPTQEFKKRTTVMVKNEDSLVFVQTDKSIYKPGQTVKFRVVS
MDENFHPLNELIPLVYIQDPKGNRIAQWQSFQLEGGLKQFSFPLSSEPFQGSYKVVVQKKSGGRTEHPFTVEEFV
LPKFEVQVTVPKIITILEEEMNVSVCGLYTYGKPVPGHVTVSICRKYSDASDCHGEDSQAFCEKFSGQLNSHGCF
YQQVKTKVFQLKRKEYEMKLHTEAQIQEEGTVVELTGRQSSEITRTITKLSFVKVDSHFRQGIPFFGQVRLVDGK
GVPIPNKVIFIRGNEANYYSNATTDEHGLVQFSINTTNVMGTSLTVRVNYKDRSPCYGYQWVSEEHEEAHHTAYL
VFSPSKSFVHLEPMSHELPCGHTQTVQAHYILNGGTLLGLKKLSFYYLIMAKGGIVRTGTHGLLVKQEDMKGHFS
ISIPVKSDIAPVARLLIYAVLPTGDVIGDSAKYDVENCLANKVDLSFSPSQSLPASHAHLRVTAAPQSVCALRAV
DQSVLLMKPDAELSASSVYNLLPEKDLTGFPGPLNDQDDEDCINRHNVYINGITYTPVSSTNEKDMYSFLEDMGL
KAFTNSKIRKPKMCPQLQQYEMHGPEGLRVGFYESDVMGRGHARLVHVEEPHTETVRKYFPETWIWDLVVVNSAG
VAEVGVTVPDTITEWKAGAFCLSEDAGLGISSTASLRAFQPFFVELTMPYSVIRGEAFTLKATVLNYLPKCIRVS
VQLEASPAFLAVPVEKEQAPHCICANGRQTVSWAVTPKSLGNVNFTVSAEALESQELCGTEVPSVPEHGRKDTVI
KPLLVEPEGLEKETTFNSLLCPSGGEVSEELSLKLPPNVVEESARASVSVLGDILGSAMQNTQNLLQMPYGCGEQ
NMVLFAPNIYVLDYLNETQQLTPEVKSKAIGYLNTGYQRQLNYKHYDGSYSTFGERYGRNQGNTWLTAFVLKTFA
QARAYIFIDEAHITQALIWLSQRQKDNGCFRSSGSLLNNAIKGGVEDEVTLSAYITIALLEIPLTVTHPVVRNAL
FCLESAWKTAQEGDHGSHVYTKALLAYAFALAGNQDKRKEVLKSLNEEAVKKDNSVHWERPQKPKAPVGHFYEPQ
APSAEVEMTSYVLLAYLTAQPAPTSEDLTSATNIVKWITKQQNAQGGFSSTQDTVVALHALSKYGAATFTRTGKA
AQVTIQSSGTFSSKFQVDNNNRLLLQQVSLPELPGEYSMKVTGEGCVYLQTSLKYNILPEKEEFPFALGVQTLPQ
TCDEPKAHTSFQISLSVSYTGSRSASNMAIVDVKMVSGFIPLKPTVKMLERSNHVSRTEVSSNHVLIYLDKVSNQ
TLSLFFTVLQDVPVRDLKPAIVKVYDYYETDEFAIAEYNAPCSKDLGNA

FIGURE 1987A

CTCCTCCCCATCCTCTCCCTCTGTCCCTCTGTCCCTCTGACCCTGCACTGTCCCAGCACC**ATG**GGACCCACCTCA
GGTCCCAGCCTGCTGCTCCTGCTACTAACCCACCTCCCCCTGGCTCTGGGGAGTCCCATGTACTCTATCATCACC
CCCAACATCTTGCGGCTGGAGAGCGAGGAGACCATGGTGCTGGAGGCCCACGACGCGCAAGGGGATGTTCCAGTC
ACTGTTACTGTCCACGACTTCCCAGGCAAAAAACTAGTGCTGTCCAGTGAGAAGACTGTGCTGACCCCTGCCACC
AACCACATGGGCAACGTCACCTTCACGATCCCAGCCAACAGGGAGTTCAAGTCAGAAAAGGGGCGCAACAAGTTC
GTGACCGTGCAGGCCACCTTCGGGACCCAAGTGGTGGAGAAGGTGGTGCTGGTCAGCCTGCAGAGCGGGTACCTC
TTCATCCAGACAGACAAGACCATCTACACCCCTGGCTCCACAGTTCTCTATCGGATCTTCACCGTCAACCACAAG
CTGCTACCCGTGGGCCGGACGGTCATGGTCAACATTGAGAACCCGGAAGGCATCCCGGTCAAGCAGGACTCCTTG
TCTTCTCAGAACCAGCTTGGCGTCTTGCCCTTGTCTTGGGACATTCCGGAACTCGTCAACATGGGCCAGTGGAAG
ATCCGAGCCTACTATGAAAACTCACCACAGCAGGTCTTCTCCACTGAGTTTGAGGTGAAGGAGTACGTGCTGCCC
AGTTTCGAGGTCATAGTGGAGCCTACAGAGAAATTCTACTACATCTATAACGAGAAGGGCCTGGAGGTCACCATC
ACCGCCAGGTTCCTCTACGGGAAGAAAGTGGAGGGAACTGCCTTTGTCATCTTCGGGATCCAGGATGGCGAACAG
AGGATTTCCCTGCCTGAATCCCTCAAGCGCATTCCGATTGAGGATGGCTCGGGGGAGGTTGTGCTGAGCCGGAAG
GTACTGCTGGACGGGGTGCAGAACCTCCGAGCAGAAGACCTGGTGGGGAAGTCTTTGTACGTGTCTGCCACCGTC
ATCTTGCACTCAGGCAGTGACATGGTGCAGGCAGAGCGCAGCGGGATCCCCATCGTGACCTCTCCCTACCAGATC
CACTTCACCAAGACACCCAAGTACTTCAAACCAGGAATGCCCTTTGACCTCATGGTGTTCGTGACGAACCCTGAT
GGCTCTCCAGCCTACCGAGTCCCCGTGGCAGTCCAGGGCGAGGACACTGTGCAGTCTCTAACCCAGGGAGATGGC
GTGGCCAAACTCAGCATCAACACACACCCCAGCCAGAAGCCCTTGAGCATCACGGTGCGCACGAAGAAGCAGGAG
CTCTCGGAGGCAGAGCAGGCTACCAGGACCATGCAGGCTCTGCCCTACAGCACCGTGGGCAACTCCAACAATTAC
CTGCATCTCTCAGTGCTACGTACAGAGCTCAGACCCGGGGAGACCCTCAACGTCAACTTCCTCCTGCGAATGGAC
CGCGCCCACGAGGCCAAGATCCGCTACTACACCTACCTGATCATGAACAAGGGCAGGCTGTTGAAGGCGGGACGC
CAGGTGCGAGAGCCCGGCCAGGACCTGGTGGTGCTGCCCCTGTCCATCACCACCGACTTCATCCCTTCCTTCCGC
CTGGTGGCGTACTACACGCTGATCGGTGCCAGCGGCCAGAGGGAGGTGGTGGCCGACTCCGTGTGGGTGGACGTC
AAGGACTCCTGCGTGGGCTCGCTGGTGGTAAAAAGCGGCCAGTCAGAAGACCGGCAGCCTGTACCTGGGCAGCAG
ATGACCCTGAAGATAGAGGGTGACCACGGGGCCCGGGTGGTACTGGTGGCCGTGGACAAGGGCGTGTTCGTGCTG
AATAAGAAGAACAAACTGACGCAGAGTAAGATCTGGGACGTGGTGGAGAAGGCAGACATCGGCTGCACCCCGGGC
AGTGGGAAGGATTACGCCGGTGTCTTCTCCGACGCAGGGCTGACCTTCACGAGCAGCAGTGGCCAGCAGACCGCC
CAGAGGGCAGAACTTCAGTGCCCGCAGCCAGCCGCCCGCCGACGCCGTTCCGTGCAGCTCACGGAGAAGCGAATG
GACAAAGTCGGCAAGTACCCCAAGGAGCTGCGCAAGTGCTGCGAGGACGGCATGCGGGAGAACCCCATGAGGTTC
TCGTGCCAGCGCCGGACCCGTTTCATCTCCCTGGGCGAGGCGTGCAAGAAGGTCTTCCTGGACTGCTGCAACTAC
ATCACAGAGCTGCGGCGGCAGCACGCGCGGGCCAGCCACCTGGGCCTGGCCAGGAGTAACCTGGATGAGGACATC
ATTGCAGAAGAGAACATCGTTTCCCGAAGTGAGTTCCCAGAGAGCTGGCTGTGGAACGTTGAGGACTTGAAAGAG
CCACCGAAAAATGGAATCTCTACGAAGCTCATGAATATATTTTTGAAAGACTCCATCACCACGTGGGAGATTCTG
GCTGTCAGCATGTCGGACAAGAAAGGGATCTGTGTGGCAGACCCCTTCGAGGTCACAGTAATGCAGGACTTCTTC
ATCGACCTGCGGCTACCCTACTCTGTTGTTCGAAACGAGCAGGTGGAAATCCGAGCCGTTCTCTACAATTACCGG
CAGAACCAAGAGCTCAAGGTGAGGGTGGAACTACTCCACAATCCAGCCTTCTGCAGCCTGGCCACCACCAAGAGG
CGTCACCAGCAGACCGTAACCATCCCCCCCAAGTCCTCGTTGTCCGTTCCATATGTCATCGTGCCGCTAAAGACC
GGCCTGCAGGAAGTGGAAGTCAAGGCTGCCGTCTACCATCATTTCATCAGTGACGGTGTCAGGAAGTCCCTGAAG
GTCGTGCCGGAAGGAATCAGAATGAACAAAACTGTGGCTGTTCGCACCCTGGATCCAGAACGCCTGGGCCGTGAA
GGAGTGCAGAAAGAGGACATCCCACCTGCAGACCTCAGTGACCAAGTCCCGGACACCGAGTCTGAGACCAGAATT
CTCCTGCAAGGGACCCCAGTGGCCCAGATGACAGAGGATGCCGTCGACGCGGAACGGCTGAAGCACCTCATTGTG
ACCCCCTCGGGCTGCGGGGAACAGAACATGATCGGCATGACGCCCACGGTCATCGCTGTGCATTACCTGGATGAA
ACGGAGCAGTGGGAGAAGTTCGGCCTAGAGAAGCGGCAGGGGGCCTTGGAGCTCATCAAGAAGGGGTACACCCAG
CAGCTGGCCTTCAGACAACCCAGCTCTGCCTTTGCGGCCTTCGTGAAACGGGCACCCAGCACCTGGCTGACCGCC
TACGTGGTCAAGGTCTTCTCTCTGGCTGTCAACCTCATCGCCATCGACTCCCAAGTCCTCTGCGGGGCTGTTAAA
TGGCTGATCCTGGAGAAGCAGAAGCCCGACGGGGTCTTCCAGGAGGATGCGCCCGTGATACACCAAGAAATGATT
GGTGGATTACGGAACAACAACGAGAAAGACATGGCCCTCACGGCCTTTGTTCTCATCTCGCTGCAGGAGGCTAAA
GATATTTGCGAGGAGCAGGTCAACAGCCTGCCAGGCAGCATCACTAAAGCAGGAGACTTCCTTGAAGCCAACTAC

FIGURE 1987B

ATGAACCTACAGAGATCCTACACTGTGGCCATTGCTGGCTATGCTCTGGCCCAGATGGGCAGGCTGAAGGGGCCT
CTTCTTAACAAATTTCTGACCACAGCCAAAGATAAGAACCGCTGGGAGGACCCTGGTAAGCAGCTCTACAACGTG
GAGGCCACATCCTATGCCCTCTTGGCCCTACTGCAGCTAAAAGACTTTGACTTTGTGCCTCCCGTCGTGCGTTGG
CTCAATGAACAGAGATACTACGGTGGTGGCTATGGCTCTACCCAGGCCACCTTCATGGTGTTCCAAGCCTTGGCT
CAATACCAAAAGGACGCCCCTGACCACCAGGAACTGAACCTTGATGTGTCCCTCCAACTGCCCAGCCGCAGCTCC
AAGATCACCCACCGTATCCACTGGGAATCTGCCAGCCTCCTGCGATCAGAAGAGACCAAGGAAAATGAGGGTTTC
ACAGTCACAGCTGAAGGAAAAGGCCAAGGCACCTTGTCGGTGGTGACAATGTACCATGCTAAGGCCAAAGATCAA
CTCACCTGTAATAAATTCGACCTCAAGGTCACCATAAAACCAGCACCGGAAACAGAAAAGAGGCCTCAGGATGCC
AAGAACACTATGATCCTTGAGATCTGTACCAGGTACCGGGGAGACCAGGATGCCACTATGTCTATATTGGACATA
TCCATGATGACTGGCTTTGCTCCAGACACAGATGACCTGAAGCAGCTGGCCAATGGTGTTGACAGATACATCTCC
AAGTATGAGCTGGACAAAGCCTTCTCCGATAGGAACACCCTCATCATCTACCTGGACAAGGTCTCACACTCTGAG
GATGACTGTCTAGCTTTCAAAGTTCACCAATACTTTAATGTAGAGCTTATCCAGCCTGGAGCAGTCAAGGTCTAC
GCCTATTACAACCTGGAGGAAAGCTGTACCCGGTTCTACCATCCGGAAAAGGAGGATGGAAAGCTGAACAAGCTC
TGCCGTGATGAACTGTGCCGCTGTGCTGAGGAGAATTGCTTCATACAAAAGTCGGATGACAAGGTCACCCTGGAA
GAACGGCTGGACAAGGCCTGTGAGCCAGGAGTGGACTATGTGTACAAGACCCGACTGGTCAAGGTTCAGCTGTCC
AATGACTTTGACGAGTACATCATGGCCATTGAGCAGACCATCAAGTCAGGCTCGGATGAGGTGCAGGTTGGACAG
CAGCGCACGTTCATCAGCCCCATCAAGTGCAGAGAAGCCCTGAAGCTGGAGGAGAAGAAACACTACCTCATGTGG
GGTCTCTCCTCCGATTTCTGGGGAGAGAAGCCCAACCTCAGCTACATCATCGGGAAGGACACTTGGGTGGAGCAC
TGGCCTGAGGAGGACGAATGCCAAGACGAAGAGAACCAGAAACAATGCCAGGACCTCGGCGCCTTCACCGAGAGC
ATGGTTGTCTTTGGGTGCCCCAAC**TGA**CCACACCCCCATTCC

FIGURE 1988

MGPTSGPSLLLLLLTHLPLALGSPMYSIITPNILRLESEETMVLEAHDAQGDVPVTVTVHDFPGKKLVLSSEKTV
LTPATNHMGNVTFTIPANREFKSEKGRNKFVTVQATFGTQVVEKVVLVSLQSGYLFIQTDKTIYTPGSTVLYRIF
TVNHKLLPVGRTVMVNIENPEGIPVKQDSLSSQNQLGVLPLSWDIPELVNMGQWKIRAYYENSPQQVFSTEFEVK
EYVLPSFEVIVEPTEKFYYIYNEKGLEVTITARFLYGKKVEGTAFVIFGIQDGEQRISLPESLKRIPIEDGSGEV
VLSRKVLLDGVQNLRAEDLVGKSLYVSATVILHSGSDMVQAERSGIPIVTSPYQIHFTKTPKYFKPGMPFDLMVF
VTNPDGSPAYRVPVAVQGEDTVQSLTQGDGVAKLSINTHPSQKPLSITVRTKKQELSEAEQATRTMQALPYSTVG
NSNNYLHLSVLRTELRPGETLNVNFLLRMDRAHEAKIRYYTYLIMNKGRLLKAGRQVREPGQDLVVLPLSITTDF
IPSFRLVAYYTLIGASGQREVVADSVWVDVKDSCVGSLVVKSGQSEDRQPVPGQQMTLKIEGDHGARVVLVAVDK
GVFVLNKKNKLTQSKIWDVVEKADIGCTPGSGKDYAGVFSDAGLTFTSSSGQQTAQRAELQCPQPAARRRRSVQL
TEKRMDKVGKYPKELRKCCEDGMRENPMRFSCQRRTRFISLGEACKKVFLDCCNYITELRRQHARASHLGLARSN
LDEDIIAEENIVSRSEFPESWLWNVEDLKEPPKNGISTKLMNIFLKDSITTWEILAVSMSDKKGICVADPFEVTV
MQDFFIDLRLPYSVVRNEQVEIRAVLYNYRQNQELKVRVELLHNPAFCSLATTKRRHQQTVTIPPKSSLSVPYVI
VPLKTGLQEVEVKAAVYHHFISDGVRKSLKVVPEGIRMNKTVAVRTLDPERLGREGVQKEDIPPADLSDQVPDTE
SETRILLQGTPVAQMTEDAVDAERLKHLIVTPSGCGEQNMIGMTPTVIAVHYLDETEQWEKFGLEKRQGALELIK
KGYTQQLAFRQPSSAFAAFVKRAPSTWLTAYVVKVFSLAVNLIAIDSQVLCGAVKWLILEKQKPDGVFQEDAPVI
HQEMIGGLRNNNEKDMALTAFVLISLQEAKDICEEQVNSLPGSITKAGDFLEANYMNLQRSYTVAIAGYALAQMG
RLKGPLLNKFLTTAKDKNRWEDPGKQLYNVEATSYALLALLQLKDFDFVPPVVRWLNEQRYYGGGYGSTQATFMV
FQALAQYQKDAPDHQELNLDVSLQLPSRSSKITHRIHWESASLLRSEETKENEGFTVTAEGKGQGTLSVVTMYHA
KAKDQLTCNKFDLKVTIKPAPETEKRPQDAKNTMILEICTRYRGDQDATMSILDISMMTGFAPDTDDLKQLANGV
DRYISKYELDKAFSDRNTLIIYLDKVSHSEDDCLAFKVHQYFNVELIQPGAVKVYAYYNLEESCTRFYHPEKEDG
KLNKLCRDELCRCAEENCFIQKSDDKVTLEERLDKACEPGVDYVYKTRLVKVQLSNDFDEYIMAIEQTIKSGSDE
VQVGQQRTFISPIKCREALKLEEKKHYLMWGLSSDFWGEKPNLSYIIGKDTWVEHWPEEDECQDEENQKQCQDLG
AFTESMVVFGCPN

FIGURE 1989

GGGGGGAAACGGAAGTGAGCGGCGGGGTCGACTGACGGTAACGGGGCAGAGAGGCTGTTCGCAGAGCTGCGGAAG
ATGAATGCCAGAGGACTTGGATCTGAGCTAAAGGACAGTATTCCAGTTACTGAACTTTCAGCAAGTGGACCTTTT
GAAAGTCATGATCTTCTTCGGAAAGGTTTTTCTTGTGTGAAAAATGAACTTTTGCCTAGTCATCCCCTTGAATTA
TCAGAAAAAAATTTCCAGCTCAACCAAGATAAAATGAATTTTTCCACACTGAGAAACATTCAGGGTCTATTTGCT
CCGCTAAAATTACAGATGGAATTCAAGGCAGTGCAGCAGGTTCAGCGTCTTCCATTTCTTTCAAGCTCAAATCTT
TCACTGGATGTTTTGAGGGGTAATGATGAGACTATTGGATTTGAGGATATTCTTAATGATCCATCACAAAGCGAA
GTCATGGGAGAGCCACACTTGATGGTGGAATATAAACTTGGTTTACTG**TAA**TAGTGTGCTGTTCATGGAAACCGA
GGGCTGCATCTTGTTTATAGTCATCTTTGTACTGTAATTTGATGTACACAACATTAAAAGTACTGACACCTGAGA
ATTTCTGCTCAAGTAGTATCAGTGATCATTTAAAATTTGGAGGGGTCTTTGGTTTACAGCCATGTGACAATTAAA
AGCACTAAAGGGAGATCATGTTAAAGCTCTTAATTTATATTAAAACAGTAGCCTTTGTCTTTAAAAAAGTTGTTG
CTCATGAATATTATAAAATGATCTACAGGTTTCAATTCAACCTGTTTCTAGGTTTTTTTGTAAATTTAGTTTTGA
TTAAGCATTATAAGCATTTGAGTCTATAAACTTTATAGTAGCATCTTTCAGAATAAACATTTTTAATTGATTTCA
GTGGCAACTCTCAAATTGATTACAATATGAGATATATCAGTGTCGTCCATTAACACTCATAAGAATAATATTTAC
TGTGTCAGTGCTATTTTAGGATTATAGTTATTGTTTGATTATTTCAGGTTGAAAAGTAGAAGTTCCAAGGTTTTG
ATTTTGGTCTGGTCTTTAAGTGAAAAATTAAAGCAACCAGTAGATGTAGGTTAAACTTTTACTTCATAGACTTAA
TATGTGATTAATATATTGCCAAGCAACACTGTTAAAGAAAAGTAAAACTCATTTTTTCTTGTTCTTAATTTATAT
ATTACAAGATACTGTAAGGTATTCTTTATGAAGTTGATATATAAAAATTTACATTTTTAGAACATTAGTGAATGG
ATCATCTTTTACAATTAAAAGTATATTTTGATTATCAGTTTCTTAGCAAAAAAAAAAAAAAAAAAAAAAAAAAA
AA

FIGURE 1990

MNARGLGSELKDSIPVTELSASGPFESHDLLRKGFSCVKNELLPSHPLELSEKNFQLNQDKMNFSTLRNIQGLFA
PLKLQMEFKAVQQVQRLPFLSSSNLSLDVLRGNDETIGFEDILNDPSQSEVMGEPHLMVEYKLGLL

FIGURE 1991

CGGGAGCGTGGGGTATCTCGAGGTGCCGGGTTGCAGGCGCTCAGGGGCGCTAGGGTTTGAGGCCTGCTTTCTGCT
CGCGCCAGCAGAGCACTACCTGAGGCAGCGAGGCGCAGCGAGCCTAGCCTCCCCGCGCCCTGGGCAGTGTGGCC**A**
TGGAGAATCAGGTGTTGACGCCGCATGTCTACTGGGCTCAGCGACACCGCGAGCTATATCTGCGCGTGGAGCTGA
GTGACGTACAGAACCCTGCCATCAGCATCACTGAAAACGTGCTGCATTTCAAAGCTCAAGGACATGGTGCCAAAG
GAGACAATGTCTATGAATTTCACCTGGAGTTCTTAGACCTTGTGAAACCAGAGCCTGTTTACAAACTGACCCAGA
GGCAGGTAAACATTACAGTACAGAAGAAAGTGAGTCAGTGGTGGGAGAGACTCACAAAGCAGGAAAAGCGACCAC
TGTTTTTGGCTCCTGACTTTGATCGTTGGCTGGATGAATCTGATGCGGAAATGGAGCTCAGAGCTAAGGAAGAAG
AGCGCCTAAATAAACTCCGACTGGAAAGCGAAGGCTCTCCTGAAACTCTTACAAACTTAAGGAAAGGATACCTGT
TTATGTATAATCTTGTGCAATTCTTGGGATTCTCCTGGATCTTTGTCAACCTGACTGTGCGATTCTGTATCTTGG
GAAAAGAGTCCTTTTATGACACATTCCATACTGTGGCTGACATGATGTATTTCTGCCAGATGCTGGCAGTTGTGG
AAACTATCAATGCAGCAATTGGAGTCACTACGTCACCGGTGCTGCCTTCTCTGATCCAGCTTCTTGGAAGAAATT
TTATTTTGTTTATCATCTTTGGCACCATGGAAGAAATGCAGAACAAAGCTGTGGTTTTCTTTGTGTTTTATTTGT
GGAGTGCAATTGAAATTTTCAGGTACTCTTTCTACATGCTGACGTGCATTGACATGGATTGGAAGGTGCTCACAT
GGCTTCGTTACACTCTGTGGATTCCCTTATATCCACTGGGATGTTTGGTGGAAGCTGTCTCAGTGATTCAGTCCA
TTCCAATATTCAATGAGACCGGACGATTCAGTTTCACATTGCCATATCCAGTGAAAATCAAAGTTAGATTTTCCT
TTTTTCTTCAGATTTATCTTATAATGATATTTTTAGGTTTATACATAAATTTTCGTCACCTTTATAAACAGCGCA
GACGGCGCTATGGAAAAAAAAGAAAAAGATCCACTAAAAAGAAAGATTTAGATGGCTTCTTGCCAGTT**TGA**GCCT
AATCTGATTCTTACAGTTTTACCTTCTTGAACCAATGTAAAAGTTTTTTTAATGTTAAATGATTAAATTCTCAGT
GAGGCTATCTTCCTTTTCCCCAGTAACATTCCTGAATTTACTGTTATCTTATTGTAGTACTTGCATGACATGGAT
TCCTGATATCTGATGAGAGGTTCATTCTTGTGTATTCAGTTAATGACACCAAAAGGCTCAGCCCACCCCAACCCT
ATCTCATGTTCAGTCTGTCTAATACATGCCAGAGATTTTTTTTTCAAAAAGTGCTTTATCCCTACAATGTACTGA
CAGTTCTTACAGTTGAGGATTTGGTTCTTTTCAGCTAATTGCTTGGTGGATTAAAAAAAGCAAGACTAATGTCAA
CTCTAATGGAAGGCTGGTTAAAAGTGGACTCAGGCAAGG

FIGURE 1992

MENQVLTPHVYWAQRHRELYLRVELSDVQNPAISITENVLHFKAQGHGAKGDNVYEFHLEFLDLVKPEPVYKLTQ
RQVNITVQKKVSQWWERLTKQEKRPLFLAPDFDRWLDESDAEMELRAKEEERLNKLRLESEGSPETLTNLRKGYL
FMYNLVQFLGFSWIFVNLTVRFCILGKESFYDTFHTVADMMYFCQMLAVVETINAAIGVTTSPVLPSLIQLLGRN
FILFIIFGTMEEMQNKAVVFFVFYLWSAIEIFRYSFYMLTCIDMDWKVLTWLRYTLWIPLYPLGCLVEAVSVIQS
IPIFNETGRFSFTLPYPVKIKVRFSFFLQIYLIMIFLGLYINFRHLYKQRRRRYGKKRKRSTKKKDLDGFLPV

FIGURE 1993

CCAGGGCCTGACTAAACCTGGAGACTCGGGTGGCCGAGGGGCTTCATACCAGCTGAAGAGCGACAAGCCGCTGGC
AGCCGCGGATCTCACCGCCGCTCAGGGTTTTTAGAACTTCAGCCATAAAA**ATG**GGCAGAATTTTCCTTGATCATA
TCGGTGGTACCCGTCTGTTTTCTTGTGCAAACTGTGATACGATCCTGACCAACCGCTCAGAACTCATCTCCACTC
GTTTCACAGGCGCCACTGGCAGAGCATTTCTTTTTAACAAGGTAGTTAACCTGCAGTACAGCGAAGTTCAAGATC
GGGTCATGCTCACTGGCCGCCACATGGTTCGAGATGTGAGCTGCAAAAACTGCAATAGCAAACTGGGATGGATCT
ATGAGTTTGCCACTGAAGACAGCCAGCGATATAAGGAAGGCCGCGTGATCCTGGAACGTGCTCTAGTTCGAGAGA
GTGAGGGCTTTGAGGAGCATGTACCATCTGATAACTCT**TGA**AGATACAGAGAGAAATCCATCTTTTCCCAGGTCT
CCTTCACTGAAAACAAAAATCTACTTACATACACTGTCACCTTAGCATCAGAGTCGGATTAATGAACTGCGGAAC
AAGAGGTTGTGAGAATCTAAGATGGAACCTTTCTTTCTTTCTTTCTTTTTTTTTAAATTTTGTATTTTCCATCCA
ACAGCAGTGTGTAGAGAGAATATTATGCAGATGCCGTTAATTTTTTACCCTATGTTTACATCTTGAGGCAGCAGA
GTCTGTCTGCAGCTATGTGGTGAGCTATGTAAGGAAAAAAATCTGGGCTGTTAGAGTGAAAAAGTGTGTTTTATG
TCAATTGTGAAAGGAAAATGTTAGGAGTATGGTTTTTAAACTTGGGCTTCATTTTAAACTTTTTTTTTTAAACCC
AGTTATTTCACTTGATTTGCTAGCTTCAGAGAAGAGATCCGAATCTGTGCCCAGCGCTAAAGGCTCAGTGTTAGC
ATGGCTTGTGCTGGCCGGTGTGCCATATTCTTGTTGGAGATGAACCGTAGCACCAGAGCCCATTCTTCCTTGTCA
GTCTTGGCCCAAAGATGTCACCATTCCTAGTTATTTGTCACCACATAATTGGTGTTGATTGGAAACTTTTTCTGA
GATGGGACAGAACTGCTGGGTTGTCTTTTTCCATGTAACTTAAGCATAGTAATATAAATAAAGTAATAGTTGGAT
GCTTTTGGTCCTGTGTTGCTTTTAAAAACACCTTATAAAAGAGGAGAGTATTTGATAAGCAATTTTCATAGTAGT
AAAGTTTTTTTTCATCTCTTAAACTAAATTGACCATGCATATAATATTCTTTGTTTAAATGAAAGCATACTGTTG
AAACCCGCAGTGTTGCATTTAGAAAACAGTTGAACAGAATGTCAATGTGCATTCATGCAAAAAAACATTTAATCT
GCATCTGTTTTAGAAAAGGGGGAAATGAAGCAACTTGTCTAAAAATACTGCTTTACAAAGCATTTCAGCCTTTCC
CCCTCAGTTTTGCATTGATTTTTTGACAAGTCTGTAGAGCCTAATAGTTTCCATCAAAGGCCTAGATCTCTTATT
TAGCATTTTTTTCAGCTCTTCTCTCAGAAGTTCAGCTGTTGAAACGAAAACTGTACTTTGTACCCTCACATACAA
AGGGATCAAATTTGACCTGGTGTTATTTTAGCCCCAAATTTATGACATTACACAATATTAAAATGTAAATGTTTC
TTTACCCAAACTACTTCTAGATATTCTAGTATTTGCTTCTGGTGGAATTAAATGACGGTAAAATTGGCTAATTAT
TTGAATGAATGAATGGATGGATGTTTTGCATGCTCAATTTCTAGGTCCTTTGTCTAGAAAGGAAATTTGCCTCAG
TTGAATTAGTGAAATATTTCTGTCGTTGATATTAAAAGTGACTTCTGAGTACAGTTAAGTTCCTCCTATTTGCCA
CTGGGCTGTTGGTTAGAAGCATAGGTAACTGATTAAGTAGGTATGATACTGCATTTGAAATAAGTGGACACAAAC
TATCCTTTCTCCACCATGGACTCAATCTGAGAACAACAGCATTCATTTCCATTCATTTCCATACTGGCTTTTGAT
TATATGCAGATTCCTAGTAGCATGCCTTACCTACAGCACTATGTGCATTTGCTGTCACAATAAAGTATATTTTGT
CTTGCAAA

FIGURE 1994

MGRIFLDHIGGTRLFSCANCDTILTNRSELISTRFTGATGRAFLFNKVVNLQYSEVQDRVMLTGRHMVRDVSCKN
CNSKLGWIYEFATEDSQRYKEGRVILERALVRESEGFEEHVPSDNS

FIGURE 1995

GGCGGCGGTCCCGAGGGGCGGCGGCCGCGCTGCTCCCTGAGAACGGGTCCCGCAGCTGGGCAGGCGGGCGGCCTG
AGGGCGCGGAGCC**ATG**AAGCTGTACAGCCTCAGCGTCCTCTACAAAGGCGAGGCCAAGGTGGTGCTGCTCAAAGC
CGCATACGATGTGTCTTCCTTCAGCTTTTTCCAGAGATCCAGCGTTCAGGAATTCATGACCTTCACGAGTCAACT
GATTGTGGAGCGCTCATCGAAAGGCACTAGAGCTTCTGTCAAAGAACAAGACTATCTGTGCCACGTCTACGTCCG
GAATGATAGTCTTGCAGGTGTGGTCATTGCTGACAATGAATACCCATCCCGGGTGGCCTTTACCTTGCTGGAGAA
GGTACTAGATGAATTCTCCAAGCAAGTCGACAGGATAGACTGGCCAGTAGGATCCCCTGCTACAATCCATTACCC
AGCCCTGGATGGTCACCTCAGTAGATACCAGAACCCACGAGAAGCTGATCCCATGACTAAAGTGCAGGCCGAACT
AGATGAGACCAAAATCATTCTGCACAACACCATGGAGTCTCTGTTAGAGCGAGGTGAGAAGCTAGATGACTTGGT
GTCCAAATCCGAGGTGCTGGGAACACAGTCTAAAGCCTTCTATAAAACTGCCCGGAAACAAAACTCATGCTGTGC
CATCATG**TGA**TGCAGCCTGCCAGAGGCCCAATGCTGGAATGGCACCATCATTCACATCAGAACTGCAGCCCCTGG
AAAAGAAGAGACAGCCATAGACGAGGAGCCAGAGTGGGGGCAGACTGGCCATTTTTATTTTGAAGTTCCTGCGAG
AAATGGATGGTGGAAGGGTGGCGAATGTTCAAATTCATATGTGTGGTAGTGATTCTTGGAAAGAATTTGAGGTCC
CCAAAGGTGTATTTTTGGGCAAATGAAACCATAAACTCCGACTGGCTTCTGTAGATGCCAAAGGGCTCTTTTTCA
GCTAACCCTGGGAAGGCTCTGTGGGAGGGAGGTCGGAGCCAGCTGTTTCTCGATCTTTGGTATATCTTTGGATCT
TATTTGTACATTAATGATATTAACACTCCAGTGGGGGGTGGGGAGTCCCTGATGCTAGGGCTGGGGTGGGTGGAG
TTTGAAGACTCTTGGGAAAGCCTCTCCTGGGGCCACTGTTGGGGGTGGGAGTGAGCCCACCACAGAGGCCACAGG
CAGGCCCCCACTTCAGGCCCAAGGCCTGGGGCGGGGGGAACAGTCACTGGGTCTCAGATTCTGAGACTGTTGTTT
AGCTTACCTTTCTGCTAGGATTGGCTTCCCGCAGAGGGCAGGGCCCATCCTAAGCAGCTTCCAAGTCCCACAAAG
GTGGCTTGTGGGAGGATTTGGAAGGAGCTGCATTGTGGGCGGGGAGTGTGTGGGTTGGGTTCGTACCAGCAAGTA
GACTAGGAACTGAGCCCAGGAAAGGGGGATGTTTTCCTGGTGTTTGGATGGTCAGCTGGGAGTGTCCATCATCAG
GGGAAGATCAAACACAGGTGCACTCAGCTGCCCAGGGCCTCTGGGACACTTGCCTTGACTTGCAACTTGCCTTGA
ACATCACGATCAAAGCAGCAGGTGCTGTGGTCTCTCAAAATTGATTTTTATTTGACTCTGTGGCTCTAAGACTGC
CTTGAACCGCCTGAGGCCTATGCATCTGAACAAGTGGGTCTCTCCCTTGAGCACCAGGAGTGGGTGCCAGCCGGC
CCCGAGGATTCCCAGCACCCCACCTATGGTCTTGCCAGCATAGGCTTGCTAGTTCCTTCTTGGTCAGAGGTAGCT
GCAGAGGGGGGAGGCCAAGGGTTTGGTCTAAGCTGTGCCCTGCCACCTGGCAGGAGGCCCACTCACTGCCCAAGT
CATGGCAACAGGCTGGAGCAGCCCAGGAGATGGGCCTAAAATGTTCTGGATCCCTTGGGTCCTAGTGTTATGTTC
CAGTCTGCCCACCTGTGCTCAGGATGCAGCCCTGGGATCCAGCACCCATGGAAGCTTCTGCTGGGATGGTGTCAC
CTATGGGTTTTGAACCAGTGTGGTATGGTCCTTGGGAGCTCTGCTCTGAGCTTGCCACACTGCTGAGAGCACCCA
CTGTCCTGACCAGAGTCTCAGTGGTCCTGACCCCCAATGTGGGCAGGGGCTGGGCAGGAGGGTGGGGTCTGCTGT
GGGTTCAGAGGACTCCACCTCCTGGCTGGTTTACCTGCTGCTGCCCATTTTCTCTGGGTACTGCTGGCCAGAGGA
CTTTAGCCTACCCCTGAAGAGCCTGTCCATGTCATTTTCCTACTGCCATAGATACCCTAAGCCCAGGGCCCCTTG
AGGCCCAGACTCAGCCTGCCCACTGGTGCCGGAGACGGAGTGGAGTGGGCCTGGATCCGAGGGATGCTACCTCTC
CCTTTCCCACTTGAGGACCCTGGGGAGAGATGGGGGCGGGGAAAATGGAGGTATGAATTTGGGGTAAGAGGAAGT
GAGATCTCCGCTTGCAGGTCAGCCCCTGCCTTGCAGGGCGGGCTGGCTTGACTCAGGCCCTGTGAGATAGAGGGC
CCAGCCCAGCCCCACCCACAGATCCCCTGCTCCTGTTGTGTTCTGTTGTAAATCATTTGGCGAGACTGTATTTTA
GTAACTGCTGCCTAACTTCCCTGTGTTCTATTTGAGAGGCGCCTGTCTGGATAAAGTTGTCTTGAAATTTCAAAA
AAAAAAAAAAAAAA

FIGURE 1996

MKLYSLSVLYKGEAKVVLLKAAYDVSSFSFFQRSSVQEFMTFTSQLIVERSSKGTRASVKEQDYLCHVYVRNDSL
AGVVIADNEYPSRVAFTLLEKVLDEFSKQVDRIDWPVGSPATIHYPALDGHLSRYQNPREADPMTKVQAELDETK
IILHNTMESLLERGEKLDDLVSKSEVLGTQSKAFYKTARKQNSCCAIM

FIGURE 1997

GGCACGAGGGAGAGAACTAGTCTCGAGTTTTTTTTTTTTTTTTTTGACAAG**ATG**GCGGCAGGAGGCAGTGGCGT
TGGTGGGAAGCGCAGCTCGAAAAGCGATGCCGATTCTGGTTTCCTGGGGCTGCGGCCCACTTCGGTGGACCCAGC
GCTGAGGCGGCGGCGGCGAGGCCCAAGAAATAAGAAGCGGGGCTGGCGGCGGCTTGCTCAGGAGCCGCTGGGGCT
GGAGGTTGACCAGTTCCTGGAAGACGTGCGGCTACAGGAGCGCACGAGCGGTGGCTTGTTGTCAGAGGCCCCAAA
TGAAAAACTCTTCTTCGTGGACACTGGCTCCAAGGAAAAAGGGCTGACAAAGAAGAGAACCAAAGTCCAGAAGAA
GTCACTGCTTCTCAAGAAACCCCTTCGGGTTGACCTCATCCTCGAGAACACATCCAAAGTCCCTGCCCCCAAAGA
CGTCCTCGCCCACCAGGTCCCCAACGCCAAGAAGCTCAGGCGGAAGGAGCAGCTATGGGAGAAGCTGGCCAAGCA
GGGCGAGCTGCCCCGGGAGGTGCGCAGGGCCCAGGCCCGGCTCCTCAACCCTTCTGCAACAAGGGCCAAGCCCGG
GCCCCAGGACACCGTAGAGCGGCCCTTCTACGACCTCTGGGCCTCAGACAACCCCCTGGACAGGCCGTTGGTTGG
CCAGGATGAGTTTTTCCTGGAGCAGACCAAGAAGAAAGGAGTGAAGCGGCCAGCACGCCTGCACACCAAGCCGTC
CCAGGCGCCCGCCGTGGAGGTGGCGCCTGCCGGAGCTTCCTACAATCCATCCTTTGAAGACCACCAGACCCTGCT
CTCAGCGGCCCACGAGGTGGAGTTGCAGCGGCAGAAGGAGGCGGAGAAGCTGGAGCGGCAGCTGGCCCTGCCCGC
CACGGAGCAGGCCGCCACCCAGGAGTCCACATTCCAGGAGCTGTGCGAGGGGCTGCTGGAGGAGTCGGATGGTGA
GGGGGAGCCAGGCCAGGGCGAGGGGCCGGAGGCTGGGGATGCCGAGGTCTGTCCCACGCCCGCCCGCCTGGCCAC
CACAGAGAAGAAGACGGAGCAGCAGCGGCGGCGGGAGAAGGCTGTGCACAGGCTGCGGGTACAGCAGGCCGCGTT
GCGGGCCGCCCGGCTCCGGCACCAGGAGCTGTTCCGGCTGCGCGGGATCAAGGCCCAGGTGGCCCTGAGGCTGGC
GGAGCTGGCGCGGCGGCGGAGGCGGCGGCAGGCGCGGCGGGAGGCTGAGGCTGACAAGCCCCGAAGGCTGGGACG
GCTCAAGTACCAGGCACCTGACATCGACGTGCAGCTGAGCTCGGAGCTGACAGACTCGCTCAGGACCCTGAAGCC
CGAGGGCAACATCCTTCGAGACCGGTTCAAGAGCTTCCAGAGGAGGAATATGATCGAGCCTCGAGAGAGAGCCAA
GTTCAAACGCAAGTACAAGGTGAAGCTGGTGGAGAAGCGGGCGTTCCGTGAGATCCAGTTG**TAG**CTGCCATCAGA
TGCCGGAGACTCGCCCTTCAATAAAAAATCTCTTCTAGCTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 1998

MAAGGSGVGGKRSSKSDADSGFLGLRPTSVDPALRRRRRGPRNKKRGWRRLAQEPLGLEVDQFLEDVRLQERTSG
GLLSEAPNEKLFFVDTGSKEKGLTKKRTKVQKKSLLLKKPLRVDLILENTSKVPAPKDVLAHQVPNAKKLRRKEQ
LWEKLAKQGELPREVRRAQARLLNPSATRAKPGPQDTVERPFYDLWASDNPLDRPLVGQDEFFLEQTKKKGVKRP
ARLHTKPSQAPAVEVAPAGASYNPSFEDHQTLLSAAHEVELQRQKEAEKLERQLALPATEQAATQESTFQELCEG
LLEESDGEGEPGQGEGPEAGDAEVCPTPARLATTEKKTEQQRRREKAVHRLRVQQAALRAARLRHQELFRLRGIK
AQVALRLAELARRRRRRQARREAEADKPRRLGRLKYQAPDIDVQLSSELTDSLRTLKPEGNILRDRFKSFQRRNM
IEPRERAKFKRKYKVKLVEKRAFREIQL

FIGURE 1999

GGCACGAGGGTGCGGCTCGGGGTAATAGGGCTGCTGCTCGGCCGGCCGGCGGCGGCGAGCAGCAGGGGCATGAGG
GCTAACCCGGGAAGCGGCAGCTGAGCGGGCCGGGAGGAGCGCCGGTCCCCGTGGATCCCGAGAGTGCAGAGCTCG
GGGCAGGGGCCGGGAGGCGTGGGGGAGCCGGGCCCTCCCCTCAGGAACGTGTCCAGGGGCCGACCCGGCCCGTAG
TGTGGAAGCAGCTTCAGGTAGGTGAGCTCGTGAAACAATATGAAGAGGAGAAAATAGCCTTTTAAGGAAATTGGC
CCACAGAAAGG**ATG**GCCTTCTTGGACAATCCAACTATCATTCTAGCTCATATTCGACAGTCACATGTGACCAGTG
ATGACACGGGAATGTGTGAGATGGTTCTCATTGATCATGATGTTGACCTAGAGAAGATTCATCCTCCTTCAATGC
CTGGAGACAGTGGGTCAGAAATTCAGGGAAGCAATGGTGAGACTCAGGGCTATGTATATGCCCAGTCAGTCGATA
TTACCTCAAGTTGGGACTTTGGTATTAGAAGACGCTCAAACACAGCTCAAAGATTAGAACGACTCCGAAAAGAGA
GACAAAACCAGATCAAATGCAAAAATATTCAGTGGAAAGAAAGAAATTCTAAGCAATCAGCCCAGGAGTTAAAGT
CACTGTTTGAAAAAAAATCTCTCAAAGAGAAGCCTCCAATTTCTGGGAAGCAGTCGATATTATCTGTACGCCTAG
AACAGTGCCCTCTGCAGCTGAATAACCCTTTTAACGAGTATTCCAAATTTGATGGCAAGGGTCATGTAGGTACAA
CAGCAACCAAGAAGATCGATGTCTACCTCCCTCTGCACTCGAGCCAGGACAGACTGCTGCCAATGACCGTGGTGA
CAATGGCCAGCGCCAGGGTGCAGGACCTGATCGGGCTCATCTGCTGGCAGTATACAAGCGAAGGACGGGAGCCGA
AGCTCAATGACAATGTCAGTGCCTACTGCCTGCATATTGCTGAGGATGATGGGGAGGTGGACACCGATTTCCCCC
CGCTGGATTCCAATGAGCCCATTCATAAGTTTGGCTTCAGTACTTTGGCCCTGGTTGAAAAGTACTCATCTCCTG
GTCTGACATCCAAAGAGTCACTCTTTGTTCGAATAAATGCTGCTCATGGATTCTCCCTTATTCAGGTGGACAACA
CAAAGGTTACCATGAAGGAAATCTTACTGAAGGCAGTGAAGCGAAGAAAAGGATCCCAGAAAGTTTCAGGTTCAA
GGGCAGACGGGGTTTTTGAGGAGGATTCGCAAATTGACATAGCCACAGTACAGGATATGCTTAGCAGCCACCATT
ACAAGTCATTCAAAGTCAGCATGATCCACAGACTGCGATTCACAACCGACGTACAGCTAGGTATCTCTGGAGACA
AAGTAGAGATAGACCCTGTTACGAATCAGAAAGCCAGCACTAAGTTTTGGATTAAGCAGAAACCCATCTCAATCG
ATTCCGACCTGCTCTGTGCCTGTGACCTTGCTGAAGAGAAAAGCCCCAGTCACGCAATATTTAAACTCACGTATC
TAAGCAATCACGACTATAAACACCTCTACTTTGAATCGGACGCTGCTACCGTCAATGAAATTGTGCTCAAGGTTA
ACTACATCCTGGAATCGCGAGCTAGCACTGCCCGGGCTGACTACTTTGCTCAAAAACAAAGAAAACTGAACAGAC
GTACGAGCTTCAGCTTCCAGAAGGAGAAGAAATCCGGGCAGCAG**TGA**CACTGGCCTCCAGCCTCAATCTGTTCCG
TAGCTCAGAGCCTGCCTGCCAGGGCCAAGTGCCCTAGAGCCCACCCGGTGTCCTGAAGTCCTCGGGGGGGAGGCCA
GCCCCTGGCTCACTGGCACAGGGCAGGTGGGCTCTCGGGGAAGGTGTCGGGGGCCCCCTAGGAGGGAGCGCTGGG
GACATTGCCATGGGACGGAAGTCTGCTTGGCAGTGGCTTTGATAAGCGATGCTTGGGGGTCAGACCACCCCCTAG
AGGAGCCACGTGCCGCCCAGCCACCTTCAATGCCTGCCACCCTGCCCGAGGATGTACAGAGCCGTGCCCACACAT
TTCCTTGCAACTTGATCAAATTTCTTAAAGCAAACAACAAAAATGTACATTTCTGTTTTTCCTTTTAATAAACAG
GTGTACTCTTTAAAAAAAAAAAAAAAAAA

FIGURE 2000

MAFLDNPTIILAHIRQSHVTSDDTGMCEMVLIDHDVDLEKIHPPSMPGDSGSEIQGSNGETQGYVYAQSVDITSS
WDFGIRRRSNTAQRLERLRKERQNQIKCKNIQWKERNSKQSAQELKSLFEKKSLKEKPPISGKQSILSVRLEQCP
LQLNNPFNEYSKFDGKGHVGTTATKKIDVYLPLHSSQDRLLPMTVVTMASARVQDLIGLICWQYTSEGREPKLND
NVSAYCLHIAEDDGEVDTDFPPLDSNEPIHKFGFSTLALVEKYSSPGLTSKESLFVRINAAHGFSLIQVDNTKVT
MKEILLKAVKRRKGSQKVSGSRADGVFEEDSQIDIATVQDMLSSHHYKSFKVSMIHRLRFTTDVQLGISGDKVEI
DPVTNQKASTKFWIKQKPISIDSDLLCACDLAEEKSPSHAIFKLTYLSNHDYKHLYFESDAATVNEIVLKVNYIL
ESRASTARADYFAQKQRKLNRRTSFSFQKEKKSGQQ

FIGURE 2001

ACCCGTGGGCCTGTGGACTGCAGCCTCGGCGATCAGAGAGTGCTTGTGATTTCACGTATTTTTGCTGAACTCGTA
AAAGAGACACTTGGATGGTGGATTAACCAGAACACTAACATTCTGTGAAAAGTTTCAAATTGGAGAATATTGAAT
TTTCACCCTAGTCCAGCAGCTCCGCTGTCACTTAAATACAGATGAATGAAGACCCCATTCGGAAAGACACCTGGC
CAGCGGTCCAGAGCTG**ATG**CAGGCCATGCTGGAAGTATCTGCCAACATGATGAAGAAGAGGACATCCCACAAAAA
ACATCGGAGCAGTGTGGGTCCGAGCAAACCTGTTTCCCAGCCCCGGCGGAACATCGTAGGCTGCAGGATTCAGCA
TGGGTGGAAAGAGGGGAATGGCCCTGTTACCCAGTGGAAAGGGACCGTTCTGGACCAGGTGCCTGTAAATCCTTC
TTTGTATCTTATAAAATACGATGGATTTGACTGTGTTTATGGACTAGAACTTAATAAAGATGAAAGAGTTTCTGC
GCTTGAAGTCCTCCCTGATAGAGTTGCGACATCTCGAATCAGCGATGCACACTTGGCAGACACAATGATTGGCAA
AGCAGTGGAACATATGTTTGAGACAGAGGATGGTTCTAAAGATGAGTGGAGGGGAATGGTCTTAGCACGTGCACC
TGTCATGAACACATGGTTTTACATTACCTATGAGAAAGACCCTGTCTTGTACATGTACCAACTCTTAGATGATTA
CAAAGAAGGCGACCTTCGCATTATGCCTGATTCCAATGATTCACCTCCAGCAGAAAGGGAACCAGGAGAAGTTGT
GGACAGCCTGGTAGGCAAACAAGTGGAATATGCCAAAGAAGATGGCTCGAAAAGGACTGGCATGGTCATTCATCA
AGTAGAAGCCAAGCCCTCCGTCTATTTCATCAAGTTTGATGATGATTTCCATATTTATGTCTACGATTTGGTGAA
AACATCC**TAG**ATGTCATCACAAACTCTGCCAAATTTGTGGAACTATGAAATGTATTATTTGTAGACATAAAGACT
TGATTGCTTTCCAGTTTAATGAAAGCTTAAATGTCCCTGCGAACCCACAATCTCTGCCAGCAGAACTGGTTTTGT
TCTGAATAGTACAGATTGATGTGAACACAAAGCATTTTGTGTAAGGAGAACCCCTTTCTTTTAAAAGAAGTCTGT
CTATTTCGAGGGGAGTTACAGGCAAGTTTGGTAAAAGTTAAGCTAGTATCATAGTCATTTAAAATTGTAATAGAT
CTTAACCATTTTCCCCCTCACCCTAACTCTCTTATTCTGCCGCCACAATGCAAGCATAGTTTGATGTTTTCGTTA
TTGCCTTTTTTGAGATGTATGTATCTGTATCTACCTATATCTATATGTGTGTATACATATATAATATATACACAC
AGATACAAGTGTACACACACACACCACACACCACACACACCCCACTGGCAGCTTTGTGGATTAGGATGGGGGTGC
GGGGTT

FIGURE 2002

MQAMLEVSANMMKKRTSHKKHRSSVGPSKPVSQPRRNIVGCRIQHGWKEGNGPVTQWKGTVLDQVPVNPSLYLIK
YDGFDCVYGLELNKDERVSALEVLPDRVATSRISDAHLADTMIGKAVEHMFETEDGSKDEWRGMVLARAPVMNTW
FYITYEKDPVLYMYQLLDDYKEGDLRIMPDSNDSPPAEREPGEVVDSLVGKQVEYAKEDGSKRTGMVIHQVEAKP
SVYFIKFDDDFHIYVYDLVKTS

FIGURE 2003

GAAG**ATG**GCGGCGGAGCGACAGGAGGCGCTGAGGGAGTTCGTGGCGGTGACGGGCGCCGAGGAGGACCGGGCCCG
CTTCTTTCTCGAGTCGGCCGGCTGGGACTTGCAGATCGCGCTAGCGAGCTTTTATGAGGACGGAGGGGATGAAGA
CATTGTGACCATTTCGCAGGCAACCCCCAGTTCAGTGTCCAGAGGCACAGCCCCCAGTGATAATAGAGTGACATC
CTTCAGAGACCTCATTCATGACCAAGATGAAGATGAGGAGGAAGAGGAAGGCCAGAGGTTTTATGCTGGGGGCTC
AGAGAGAAGTGGACAGCAGATTGTTGGCCCTCCCAGGAAGAAAAGTCCCAACGAGCTGGTGGATGATCTCTTTAA
AGGTGCCAAAGAGCATGGAGCTGTAGCTGTGGAGCGAGTGACCAAGAGCCCTGGAGAGACCAGTAAACCGAGAGT
TCATGTAGTATTGAAACTCTGGAAGAGTGGATTCAGCCTGGATAATGGAGAACTCAGAAGCTACCAAGACCCATC
CAATGCCCAGTTTCTGGAGTCTATCCGCAGAGGGGAGGTGCCAGCAGAGCTTCGGAGGCTAGCTCACGGTGGACA
GGTGAACTTGGATATGGAGGACCATCGGGACGAGGACTTTGTGAAGCCCAAAGGAGCCTTCAAAGCCTTCACTGG
CGAGGGTCAGAAACTGGGCAGCACTGCCCCCCAGGTGTTGAGTACCAGCTCTCCAGCCCAACAGGCAGAAAATGA
AGCCAAAGCCAGCTCTTCCATCTTAATCGACGAATCAGAGCCTACCACAAACATCCAAATTCGGCTTGCAGACGG
CGGGAGGCTGGTGCAGAAATTTAACCACAGCCACAGGATCAGCGACATCCGACTCTTCATCGTGGATGCCCGGCC
AGCCATGGCTGCCACCAGCTTTATCCTCATGACTACTTTCCCGAACAAAGAGCTGGCTGATGAGAGCCAGACCCT
GAAGGAAGCCAACCTGCTCAATGCTGTCATCGTGCAGCGGTTAACA**TAA**CCGCCCAGCCAGCTGCCTGGCCTCCC
TCCTGTGTTTCCCATGGCCAGTGGCCATGCCCCATGGGGATCGCCCCTCCTGCCCCCTTGTGCACACCCAGCAGT
CCAGTGCAACGTCTCCTCCATAGCTCTGGGTTCTTAGATCTTGGTTGGACGTTTGTTTTCTCCTTAGTTGCATTT
CCTGGGTTTTTGTGATGATCAATGGACTTTAATGAAAAAAAAATAAAAACAACCAAAAAAATTGAAGGAATATCA
CCAGCATGTTGTACGGAAACTCTCCCACTGAAGCAGGCTTTAATTGCTTTAAAATTATATTTATCTTGGGGCCTG
TGGGAGGAAACTTCCTTCCATCTTCTCTGCATAAAAACTTGTGGCACACAATGCTTATTCACTAGTGTGTCCCAC
CCGCCAGCCCCACAGATGACTGGAGGAAGGAGGGGAAATGTGTAGAAAGAGGCTTCGCCACCACTTGTTCCCACG
AGAATATATCACTTGCCCAGATAAAACTGGGCGGCAGCCAGAGTTCCCTGAAGTGGGAAGTCAGAGCTACATGCA
CACAGTGTCTTCAGAAGGTGAAAATAAATATTTCCCTGTGCTCCTTTTACTCAACCCCTGGGGTATCTAATCTTG
CCAGGTCTTGGCCAGTTGAGATTCTGTTCCACCTGCCTGCCTGGCCCTTTCCTCCATTACCATCCAGACTGCTCG
CCTCCTGGGGATTCTCAGGGGCTCCATTATGGCTTGATTTACTCCACGTGCAGAAGTCTTGAGTGGACCTAGGAG
GTAGGTGGGATATTTTTTTTCACTAGGATACAGCTCATGCCAACCCATCCTAAGTGAGTTCAGAATCAGGGTATC
TTGCCCTAAAAGATAAACAGTCAAAATGCCACCGAGCTGTTCACTAGTGATGTGTGGCAAATCAAATCAACTGTT
GAAGAAGGGGTGAGTTTTCTGTGCTACAAGCACCTGTCACTGTTGGTACTTGCAGGAGGCTTCTGCTGGGTATGT
TTTGGAAGTGAGTGTCACTACTTGGCTTTGCTTAGCAGGTTCTGCTTCACACTTGTTCTTTGACCTGCTGACTTG
TGACTTGCAGAAACATAGGCAGTAGTCCTAGCCTGGTAAAGACCCTCCACCACCCCTATAAGTTTGATTGCTATG
CAGGTTTGGGAGAGGAGGCCTATTGGGCTCTTGGATGGAACCCTTTCCCGTATTAAACAAACCAGAGACAGAATC
AGTGCTGACTCAGGATCTCCTGGTTTGGAATCGTAATGTGCCTCAATCCTCTTTCCAAGCAGGCCTCACCAGTCT
CTTTCTCTTTCCTGCTTCACCCCTGCAATGAGCCAAGAACCAACACTACATCCACCTAGAACTGCAGAAGGGCTT
GTGGTTTCAACCAAGACCCATCCTGAGCAAGGGACTTGGCTTGGTGCTTTTGATCCCAAAGTTCCCACACCGGCA
GTGGCCTGCTGGGGCAATGGCATCTGTCACGGTGTTTTCTCCAGCAGGTGGAGATTATGGAACCTACATATGGGT
CTGGAAAAACTGTACACTGTTGTCACCTTGACCATTAAAAACCAGAATGAGG

FIGURE 2004

MAAERQEALREFVAVTGAEEDRARFFLESAGWDLQIALASFYEDGGDEDIVTISQATPSSVSRGTAPSDNRVTSF
RDLIHDQDEDEEEEEGQRFYAGGSERSGQQIVGPPRKKSPNELVDDLFKGAKEHGAVAVERVTKSPGETSKPRVH
VVLKLWKSGFSLDNGELRSYQDPSNAQFLESIRRGEVPAELRRLAHGGQVNLDMEDHRDEDFVKPKGAFKAFTGE
GQKLGSTAPQVLSTSSPAQQAENEAKASSSILIDESEPTTNIQIRLADGGRLVQKFNHSHRISDIRLFIVDARPA
MAATSFILMTTFPNKELADESQTLKEANLLNAVIVQRLT

FIGURE 2005

GGCACGAGTGGGAGTACAGGACTCGCCTCCTCAGGGTTCCCTGTGCTGCCACTTTTCAGCC**ATG**GCCACAAGTGA
ACAGAGTATCTGCCAAGCCCGGGCTTCCGTGATGGTCTACGATGACACCAGTAAGAAATGGGTACCAATCAAACC
TGGCCAGCAGGGATTCAGCCGGATCAACATCTACCACAACACTGCCAGCAACACCTTCAGAGTCGTTGGAGTCAA
GTTGCAGGATCAGCAGGTTGTGATCAATTATTCAATCGTGAAAGGGCTGAAGTACAATCAGGCCACGCCAACCTT
CCACCAGTGGCGAGATGCCCGCCAGGTCTACGGCTTAAACTTTGCAAGTAAAGAAGAGGCAACCACGTTCTCCAA
TGCAATGCTGTTTGCCCTGAACATCATGAATTCCCAAGAAGGAGGCCCCTCCAGCCAGCGTCAGGTGCAGAATGG
CCCCTCTCCTGATGAGATGGACATCCAGAGAAGACAAGTGATGGAGCAGCACCAGCAGCAGCGTCAGGAATCTCT
AGAAAGAAGAACCTCGGCCACAGGGCCCATCCTCCCACCAGGACATCCTTCATCTGCAGCCAGCGCCCCCGTCTC
ATGTAGTGGGCCTCCACCGCCCCCCCCACCCCCAGTCCCACCTCCACCCACTGGGGCTACCCCACCTCCCCCACC
CCCACTGCCAGCCGGAGGAGCCCAGGGGTCCAGCCACGACGAGAGCTCCATGTCAGGACTGGCCGCTGCCATAGC
TGGGGCCAAGCTGAGAAGAGTCCAACGGCCAGAAGACGCATCTGGAGGCTCCAGTCCCAGTGGGACCTCAAAGTC
CGATGCCAACCGGGCAAGCAGCGGGGGTGGCGGAGGAGGCCTCATGGAGGAAATGAACAAACTGCTGGCCAAGAG
GAGAAAAGCAGCCTCCCAGTCAGACAAGCCAGCCGAGAAGAAGGAAGATGAAAGCCAAATGGAAGATCCTAGTAC
CTCCCCCTCTCCGGGGACCCGAGCAGCCAGCCAGCCACCTAACTCCTCAGAGGCTGGCCGGAAGCCCTGGGAGCG
GAGCAACTCGGTGGAGAAGCCTGTGTCCTCGATTCTGTCCAGAACCCCGTCTGTGGCAAAGAGCCCCGAAGCTAA
GAGCCCCCTTCAGTCGCAGCCTCACTCTAGGATGAAGCCTGCTGGGAGCGTGAATGACATGGCCCTGGATGCCTT
CGACTTGGACCGGATGAAGCAGGAGATCCTAGAGGAGGTGGTGAGAGAGCTCCACAAGGTGAAGGAGGAGATCAT
CGACGCCATCAGGCAGGAGCTGAGTGGGATCAGCACCACG**TAA**GGGGCCGGCCTCGCTGCGCTGATTCGTCGAGC
CCATCCGGCGACAGAGGACAGCCAGAAGCCCAGCCAGCCCCAGACTCCAGTGCACCAGAGCACGCACAGGAGCCT
GGGCGCGCTGCTGTGAAACGTCCTGACCTGTGATCACACATGACAGTGAGGAAACCAAGTGCAACTCCTGGGTTT
TTTTAGATTCTGCCTGACACGGAACACCAGGTCTGCTCGTCTTTTTTGTGTTTTATATTTGCTTATTTAAGGTAC
ATTTCTTTGGGTTTCTAGAGACGCCCCTAAGTCACCTGCTTCATTAGACGGTTTCCAGGTTTTCTCCCAGGTGAC
GCTGTTAGCGCCTCAGCTGGCGGTGACAGCCGGCCCAGCGTGGCGCCACCACACACCGCAGAGCTGTCCAGGCAC
AGCTCCGTCCCCAGCGCTCATGGTGTTGAAACTGTCTGTCATGCACCACGGTGTCTGTGTCCACACAGTAATAAA
CGGTTTACTGTCCGCAAAAAAAAAAAAAAAAA

FIGURE 2006

MATSEQSICQARASVMVYDDTSKKWVPIKPGQQGFSRINIYHNTASNTFRVVGVKLQDQQVVINYSIVKGLKYNQ
ATPTFHQWRDARQVYGLNFASKEEATTFSNAMLFALNIMNSQEGGPSSQRQVQNGPSPDEMDIQRRQVMEQHQQQ
RQESLERRTSATGPILPPGHPSSAASAPVSCSGPPPPPPPPVPPPPTGATPPPPPPLPAGGAQGSSHDESSMSGL
AAAIAGAKLRRVQRPEDASGGSSPSGTSKSDANRASSGGGGGGLMEEMNKLLAKRRKAASQSDKPAEKKEDESQM
EDPSTSPSPGTRAASQPPNSSEAGRKPWERSNSVEKPVSSILSRTPSVAKSPEAKSPLQSQPHSRMKPAGSVNDM
ALDAFDLDRMKQEILEEVVRELHKVKEEIIDAIRQELSGISTT

FIGURE 2007

GGGGGGGAGGACTGGGTGCGCCTGCAGGGATCGGAAGCCGGTTGGGGTGTGAGAGGTTTTCTCGCTCTAGGGAGA
TTCTTCAAGCAATCACT**ATG**TCAACAGACACAGGTGTTTCCCTTCCTTCATATGAGGAAGATCAGGGATCAAAAC
TCATTCGAAAAGCTAAAGAGGCACCATTCGTACCCGTTGGAATAGCGGGTTTTGCAGCAATTGTTGCATATGGAT
TATATAAACTGAAGAGCAGGGGAAATACTAAAATGTCCATTCATCTGATCCACATGCGTGTGGCAGCCCAAGGCT
TTGTTGTAGGAGCAATGACTGTTGGTATGGGCTATTCCATGTATCGGGAATTCTGGGCAAAACCTGAGCCT**TAG**A
AGAAGAGATGCTGTCTTGGTCTTGTTGGAGGAGCTTGCTTTAGTTAGATGTCTTATTATTAAAGTTACCTATTAT
TGTTGGAAATAAACTAATTTGTATGGGTTTAGATGGTAACATGGCATTTTGAATATTGGCTTCCTTTCTTGCAGG
CTTGATTTGCTTGGTGACCGAATTACTAGTGACTAGTTTACTAACTAGGTCATTCAAGGAAGTCAAGTTAACTTA
AACATGTCACCTAAATGCACTTGATGGTGTTGAAATGTCCACCTTCTTAAATTTTTAAGATGAACTTAGTTCTAA
AGAAGATAACAGGCCAATCCTGAAGGTACTCCCTGTTTGCTGCAGAATGTCAGATATTTTGGATGTTGCATAAGA
GTCCTATTTGCCCCAGTTAATTCAACTTTCGTCTGCCTGTTTTGTGGACTGGCTGGCTCTGTTAGAACTCTGTCC
AAAAAGTGCATGGAATATAACTTGTAAAGCTTCCCACAATTGACAATATATATGCATGTGTTTAAACCAAATCCA
GAAAGCTTAAACAATAGAGCTGCATAATAGTATTTATTAAAGAATCACCAACTGTAAACATGAGAATAACTTAAG
GTTCTAGTTTAGTTTTTTGTAATTGCAAATTATATTTTTGCTGCTGATATATTAGAATAATTTTAAAATGTCATC
TTGAAATAGAAATATGTATTTTAAGCACTCACGCAAAGGTAAATGAACACGTTTTAAATGTGTGTGTTGCTAATT
TTTTCCATAAGAATTGTAAACATTGAACTGAACAAATTACCTATAATGGATTTGGTTAATGACTTATGAGCAAGC
TGGTTTGGCCAGACAGTATACCCAAACTTTTATATAATATACAGAAGGCTATCACACTTGTGAAATTCTCTTGTC
TAATCTGAATTTGCATTCCATGGTGTTAACATGGTATATGTATTGTTATTAAAGTAAGTGACCCATGAAAAAAAA
AAAAAAAAAAAA

FIGURE 2008

MSTDTGVSLPSYEEDQGSKLIRKAKEAPFVPVGIAGFAAIVAYGLYKLKSRGNTKMSIHLIHMRVAAQGFVVGAM
TVGMGYSMYREFWAKPEP

FIGURE 2009

ATATGATCCGCTCGGCTTCCTGGGTCTGGCTGCTGCCGCCCGCCGGTGTCCGCCCGTGTCGCGCCGGGGCACCAA
GGAGCCGTTGGAGGGTCCGGGCGGAGGCCCGCTCGTGTGGAAGTCGTCGACGCCGCCGCTCGTCCGTCCTCCCGT
CCGTTCTCGCTCCCGGCCGCCATC**ATG**CTGGCGCTCATCTCCCGCCTGCTGGACTGGTTCCGTTCGCTCTTCTGG
AAGGAAGAGATGGAGCTGACGCTCGTGGGGCTGCAGTACTCGGGCAAGACCACCTTCGTCAATGTCATCGCGTCA
GGTCAATTCAGTGAAGATATGATACCCACAGTGGGCTTCAACATGAGGAAGGTAACTAAAGGTAACGTCACAATA
AAGATCTGGGACATAGGAGGACAACCCCGATTTCGAAGCATGTGGGAGCGGTATTGCAGAGGAGTCAATGCTATT
GTTTACATGATAGATGCTGCAGATCGTGAAAAGATAGAAGCTTCCCGAAATGAGCTACATAATCTTCTAGATAAA
CCACAGTTACAAGGAATTCCAGTGCTAGTGCTTGGAAACAAGAGAGATCTTCCTAATGCCTTGGATGAGAAACAG
CTAATTGAAAAAATGAATCTGTCTGCTATTCAGGATAGAGAAATTTGCTGCTATTCAATTTCTTGCAAAGAAAAG
GATAATATAGATATCACACTTCAGTGGCTTATTCAGCATTCAAAATCTAGAAGAAGC**TGA**AGCATCTCTTGAAGT
CTTCCAGTCCTTCTTGGCTATAATCCTAGAATTATTGTCCGTTCCTCTGAAGTAATTCCCAGAATACGGTCCTTC
CTAAACCCCAGAAATTGCCTTTTTCAGAGTCTATTTCTCATGTGCACTGCTGAAGATGAATATCCCTAATCCTTC
ATAAAGAATCAGCTAGAGTTGTCATGATAAAGTCAGCACACACAAAAAGGCTTCTTACACATACCAAAAAAAATG
TCTTAAACCATGTGTAGAGCTTTAAAAACAGAAAAAAAACCCCATATACTTATGACCATCTTAAATCAAGAAAAT
TGCATATTTCCATTCTGGTCTTTCTGGGCCAGATTTTTATATTGGTTTTCAGTAAATGTCTATCTATAATATTTC
ATTATAGAGTCCAGTAGCTTAATACTGACACTGACTTGATACAGCACGAAGTTTCTAGTGCCACACACAGTATTT
AGAAAACCTTTAGGCGTGAATGACTCATGTGGGATATATGTAAACATAATGTTTATTTTATCTCACAAATGCATG
TGAAATGTATAATTACATCTTAGGAATCCAAAATGGTCTGCAGAGAGTGAGCGGAGGCACCAGATCAATGTTGGT
TCTTTGCACTGGTGAGATTCTGCCTGATGAATATTAAAGATATCCTGCTTTCTGAGAACTCTATCACCAGATGGC
AGTTGGGATATGGGAGGAACTAAAGCATCCTGTTTTGTATCTGTCCAGATCATTATTTCTGTCTCTTGTTTTTTC
TTCCTGGTTCAGGATACTTTTTTAAGGGGTTGAGAATTGAAGATTTTCCAAAAGCGTTCATGAATTTAGAGCATT
CCACCCAATATAATAAAACCTGTTAAGAATGTCAGTCTTTGTTCAAACATCTGTTTGTTCTATCTCCAGTCATTA
AATCAGTGCTGCTGCATGACACTCTTAACTCCTGACTTTTTATATCCAGTCATAAAGTTGACTTTCAGCACAAAA
GATACTTATAAACAAATAAAAAATTTTTATTTTTCTCTCTTACTGATGTAAGCTTTGGCACTCTTTTGACTGGTG
CCATTAGACATCTTGATTATTGTGACAACTCTAGACCTGCCTGCTTTATCTAATGTAATCATGCTCAATGTCTAC
AGGTTGTTTAATAATCAGTCACACAGAGAACTGAGGAACTGATGCTGTTTGTTTGCTTCTATGATACAGAGATGT
CTAAAAACTTCAAATGGACATGTTTTGTAGTTTAGCGACTTCCGTATACATAAAGGGACATATTAATACTGGTTC
ATTTGTAAATTATTATTCATATAGACCACTGTAGTAGATAAAACTCTATGGTACACCTGCTTATGTGTTGCCTCA
CACTGTGTGTGATTTTGTTTCTTTTGTTAAGCAGCACTTATGTAGACTGCATTTCCAAATGTGTTGAGCACTCGG
AGTGTAGTCAACAGTAAGTTCTTTTAATGAATATCAGTTTTAATTTATAGACTGCCATGGCCTTAAAAATATTCT
GTACAATATACTGCACTGTGTTGCACAGACACTACTTGCTTTTCTCCATTCATATTTTTATGAGTAGAATCTGGG
CTTTTAAATTTCTCTTCTTATTCTTTGAAGCATGTTGCATACTACCCTGGTGGGATGGATGGTTCTGTAAATGAA
GGGATATTTAAACTTGCTACTGTTGTTCAACACCATTAATGGTCAGTGTGAACCATTACAAAGAATGTGGCAACT
TGCTTGTGCCTAAAAGGAGGAATTGGAACTAGAATGTGTGACTCTGTGGGGACTGCATAGGTTTGTTAATTGACC
TATAGCTAAACCTTAATGTGTTTGTGTGTCTATACATTGCTTTCCGCATTTCAAGACATCCAGACGCTATTACCA
ACATTTTCCTGTGCATTAACCTCTGCATGTGAAAACTTTTAACAGTTACTGAACTATGTAAATATGTGAATTTTT
TTATTTAGGTGGATGCATTTTTTGTCTGTTTACTGCTCTTCTCAGCTTTATTCAATAAACTTGCATTTTAAGGGT
TGTATTGGCAATTTTAACTTAAAATGTGCATCATGATGGAAGGTGCAGACTTTTTTGGAAGTTTCCGAGAGGAGG
GTCTATAGACCATTTGTCAGAAATCAGATCAGCCCTCAAAGAATGGGGTCTGTGGGCTAGTTAAAATAGAAATAA
ACTTTTAAAATATCCACAG

FIGURE 2010

MLALISRLLDWFRSLFWKEEMELTLVGLQYSGKTTFVNVIASGQFSEDMIPTVGFNMRKVTKGNVTIKIWDIGGQ
PRFRSMWERYCRGVNAIVYMIDAADREKIEASRNELHNLLDKPQLQGIPVLVLGNKRDLPNALDEKQLIEKMNLS
AIQDREICCYSISCKEKDNIDITLQWLIQHSKSRRS

FIGURE 2011A

CCCCGACTAGCCCGACAGTCCCCGACTAGCCCGACAGCCCCAGCAGGATCTGCATCGTCATCGAGCCGGCCCAGC
TTCTGAAGGGAGATGTC**ATG**GTGAAATGCTACCACAAGAAATACCGCTCGGCCACCCGTGACGTCATTTTCCGCC
TGCAGTTTCACACTGGGGCTGTGCAGGGCTACGGGCTGGTGTTTGGGAAGGAGGATCTGGACAATGCCAGCAAAG
ATGACCGTTTTCCTGACTATGGGAAGGTTGAATTAGTCTTCTCTGCCACGCCTGAGAAGATTCAAGGGTCCGAAC
ACTTGTACAACGACCACGGTGTGATTGTGGACTACAACACAACAGACCCACTGATACGCTGGGACTCGTACGAGA
ACCTCAGTGCAGATGGAGAAGTGCTACACACGCAGGGCCCTGTCGATGGCAGCCTTTACGCGAAGGTGAGGAAGA
AAAGCTCCTCGGATCCTGGCATCCCAGGTGGCCCCCAGGCAATCCCGGCCACCAACAGCCCAGACCACAGTGACC
ACACCTTGTCTGTCAGCAGTGACTCCGGCCACTCTACAGCCTCTGCCAGGACGGATAAGACGGAAGAGCGCCTGG
CCCCAGGAACCAGGAGGGGCCTGAGTGCCCAGGAGAAGGCAGAGTTGGACCAGCTGCTCAGTGGCTTTGGCCTGG
AAGATCCTGGAAGCTCCCTCAAGGAAATGACTGATGCTCGAAGCAAGTACAGTGGGACCCGCCACGTGGTGCCAG
CCCAGGTTCACGTGAATGGAGACGCTGCTCTGAAGGATCGGGAGACAGACATTCTGGATGACGAGATGCCCCACC
ACGACCTGCACAGTGTGGACAGCCTTGGGACCCTGTCCTCCTCGGAAGGGCCTCAGTCGGCCCACCTGGGTCCCT
TCACCTGCCACAAGAGCAGCCAGAACTCACTCCTATCTGACGGTTTTGGCAGCAACGTTGGTGAAGATCCGCAGG
GCACCCTCGTTCCGGACCTGGGCCTTGGCATGGACGGCCCCTATGAGCGGGAGCGGACTTTTGGGAGTCGAGAGC
CCAAGCAGCCCCAGCCCCTGCTGAGAAAGCCCTCAGTGTCCGCCCAGATGCAGGCCTATGGGCAGAGCAGCTACT
CCACACAGACCTGGGTGCGCCAGCAGCAGATGGTTGTAGCTCACCAGTATAGCTTCGCCCCAGATGGGGAGGCCC
GGCTGGTGAGCCGCTGCCCTGCAGACAATCCTGGCCTCGTCCAGGCCCAGCCCAGAGTGCCACTCACCCCCACCC
GAGGGACCAGCAGTAGGGTGGCTGTCCAGAGGGGTGTAGGCAGTGGGCCACATCCCCCTGACACACAGCAGCCCT
CTCCCAGCAAAGCGTTCAAACCCAGGTTTCCAGGAGACCAGGTTGTGAATGGAGCCGGCCCAGAGCTGAGCACAG
GCCCCTCCCCAGGCTCGCCCACCCTGGACATCGACCAGTCCATCGAGCAGCTCAACAGGCTGATCCTGGAGCTGG
ATCCCACCTTCGAGCCCATCCCTACCCACATGAACGCCCTCGGTAGCCAGGCCAATGGCTCTGTGTCTCCAGACA
GCGTGGGAGGTGGGCTCCGGGCAAGCAGCAGGCTGCCTGACACAGGAGAGGGCCCCAGCAGGGCCACCGGGCGGC
AAGGCTCCTCTGCTGAACAGCCCCTGGGCGGGAGACTCAGGAAGCTGAGCCTGGGGCAGTACGACAACGATGCTG
GGGGGCAGCTGCCCTTCTCCAAATGTGCATGGGGAAAGGCTGGTGTGGACTATGCCCCAAACCTGCCGCCATTCC
CCTCACCAGCGGACGTCAAAGAGACGATGACCCCTGGCTATCCCCAGGACCTCGATATTATCGATGGCAGAATTT
TAAGTAGCAAGGAGTCCATGTGTTCAACTCCAGCATTTCCTGTGTCTCCAGAGACACCGTATGTGAAAACAGCGC
TGCGCCATCCTCCGTTCAGCCCACCTGAGCCCCCGCTGAGCAGCCCAGCCAGTCAGCACAAAGGAGGACGTGAAC
CACGAAGCTGCCCTGAGACGCTCACTCACGCTGTGGGGATGTCAGAGAGCCCCATCGGACCCAAATCCACGATGC
TCCGGGCTGATGCGTCCTCGACGCCCTCCTTTCAGCAGGCTTTTGCTTCTTCCTGCACCATTTCCAGCAACGGCC
CTGGGCAGAGGAGAGAGAGCTCCTCTTCTGCAGAACGCCAGTGGGTGGAGAGCAGCCCCAAGCCCATGGTTTCCC
TGCTGGGGAGCGGCCGGCCCACCGGAAGTCCCCTCAGCGCTGAGTTCTCCGGTACCAGGAAGGACTCCCCAGTGC
TGTCCTGCTTCCCGCCGTCAGAGCTCCAGGCTCCTTTCCACAGCCATGAGCTGTCCCTAGCAGAGCCACCGGACT
CCCTGGCGCCTCCCAGCAGCCAGGCCTTCCTGGGCTTCGGCACCGCCCCAGTGGGAAGTGGCCTTCCGCCCGAGG
AGGACCTGGGGGCCTTGCTGGCCAATTCTCATGGAGCGTCACCGACCCCCAGCATCCCGCTGACAGCGACAGGGG
CTGCCGACAATGGCTTCCTGTCCCACAACTTTCTCACGGTGGCGCCTGGACACAGCAGCCACCACAGTCCAGGCC
TGCAGGGCCAGGGTGTGACCCTGCCCGGGCAGCCACCCCTCCCTGAGAAGAAGCGGGCCTCGGAGGGGGATCGTT
CTTTGGGCTCAGTCTCTCCCTCCTCCAGTGGCTTCTCCAGCCCGCACAGCGGGAGCACCATCAGTATCCCCTTCC
CAAATGTCCTTCCCGACTTTTCCAAGGCTTCAGAAGCGGCCTCACCTCTGCCAGATAGTCCAGGTGATAAACTTG
TGATCGTGAAATTTGTTCAAGACACTTCCAAGTTCTGGTACAAGGCGGATATTTCAAGAGAACAAGCCATCGCCA
TGTTGAAGGACAAGGAGCCGGGCTCATTCATTGTTCGAGACAGCCATTCCTTCCGAGGGGCCTATGGCCTGGCCA
TGAAGGTGGCCACGCCCCCACCTTCAGTCCTGCAGCTGAACAAGAAAGCTGGAGATTTGGCCAATGAACTCGTCC
GGCACTTTTTGATCGAGTGTACCCCGAAGGGAGTGCGGTTGAAAGGGTGCTCGAATGAACCATATTTCGGGAGCC
TGACGGCCTTGGTGTGCCAGCATTCCATCACGCCCTTGGCCTTGCCGTGCAAGCTGCTTATCCCAGAGAGAGATC
CATTGGAGGAAATAGCAGAAAGTTCTCCCCAGACGGCAGCCAATTCAGCAGCTGAGCTGTTGAAGCAGGGGGCAG
CCTGCAACGTGTGGTACTTGAACTCTGTGGAGATGGAGTCCCTCACCGGCCACCAGGCGATCCAGAAGGCCCTGA
GCATCACCCTGGTCCAGGAGCCTCCACCTGTGTCCACAGTTGTGCACTTCAAGGTGTCAGCCCAGGGCATCACCC
TGACAGACAATCAGAGGAAGCTCTTCTTCCGGAGGCATTACCCCGTGAACAGTGTGATTTTCTGTGCCTTGGACC
CACAAGACAGGAAGTGGATCAAAGATGGCCCTTCCTCAAAAGTCTTTGGATTTGTGGCCCGGAAGCAGGGCAGTG

FIGURE 2011B

CCACGGATAATGTGTGCCACCTGTTTGCAGAGCATGACCCTGAGCAGCCTGCCAGTGCCATTGTCAACTTCGTAT
CAAAGGTCATGATTGGTTCCCCAAAGAAGGTC**TGA**GAACTCCCCTCCCTCCCTGGACCCACCGATGCCTCTCGAA
GCCCTGGAGACAGCCGTTGGGTGAGGGTGGGGCCCCCACTTTTTACCAAACTAGTAAACCTGACATTCCAGGCCC
ATGAGGGGAAAGAGGATCTTCCAGCTCTGCAAAAACAAGAACAAACAACATCACCGTGAATTGGCCTTTCCTGAA
AGTGACTTATCTGACACATCTCTGTAGCCACATGCTTTTTGGGTAGAAGAAGCTGGGCATGGGTGCACCCCACCC
CCTAGGGTCCCCATGGGAAAGGGACATGCAAGGAAACAGCACAGAACACGAGGTGGTCCCCATGTCCCTGGCACA
CTAGCATTCCGGGGGGATGAGGAATCCCCAGCCCTTGAGGCAGAGGTGCCGAGTGACTGCCATGCTTCGCCCGTCC
GCATGGGCGCTTCTGTCCAGCTGCACCCGAGGCCGGGGGTTTCCCTCACCTCGGTCTTCCCAAGATGGAGATGCT
AACGAAACTGAGAAGGGGGCGTATGTTTGACGAAGGTTTGTGCAAGTCAGGCCCTTCTGGAACACAGCAGGGCCT
ACAACGAGGGGCCTTTGCGATGGGCTGTGAGGATGGGGGTGGTGGGAAGAATTGGCCACGTTAGAGACCCCATGC
CACCCCACCATGGTGAGTGCTCTGTGCCTCCTGCTCACCTGTGGTGAGCTGGGCGAGCTGGGCGAGCTGGGCGAG
CTGGGCTGGGGAGAGCCTGTGAGGACCGAGAGGAGAAATGAGAAGAAGGAACAAAAATATTATTTCTATGTAATT
TATATTTTACTTATGCCAAATTATTTATGATAATTTGCCATTGCTATACTGTACCAGTGTCAAATGCTGCAGCCT
GCCAAGCTGTGATTTTGTGAGGCTTGTCCCTATGTAGGATGCACCGCAGGCCCCTGGCCACTGAAAGAGTGTGCA
GTGGACTGTGGGTCTCCCATATGCGGTGCCGCCCAAAGGTGGCTTTGCCTCAAGCAACCTACCCTGATGTTTTAC
TCATTGGAATGTTTTTCCCCGATTGTGGATGACTTCTTTTCTGATGGAGAGAGTCCAGGAGGGATGGAAAACTCC
TGGATTTAAGCTCAGCATCCCCCACATGGGCTTTTCGATCATCTTCAGGCCTGAAGCTGCACGACCTGAAGTTCG
CCTGCATTTATCAGCCCTCTTTGTGCTGCTCCTTGCCACCTTGGGGTTCCTGCTGGGGACCATGTGTGGTTGTGG
CATGTGTGAGCAGAAGGGAGGATGAGGAAAAAGAGAAGAAACCCCGGTACTGACAAGCTGTTTTTGAGTGCCACT
GTTTGCCATCATCTAAGCCACTGAATCAAGTGTATTTCAGGCTTATTTCAACATTCCAATGCCCTGGTTTTCCTG
CTTGAATCTGTTCGTGGTCAAAGGTTTGGGGGAATTTGTGACCCTGGAACATCCCCAGAGTGAAAGATGGAGCTG
GGCCACATCAGAATAAGGCCTTGGCCCCATCCTCTCACAGCCTAGGTGCTCTGCAGGCATGCTGACTGTCCTGAT
TGCGATCCAGCCCGAAATTCCCTCCTCTGCTTTCAAAAGTCAAATCCCCCATTCTTAGGCCACACTGGTGTCACA
AGCTCCTGTCAGGGAGCTGGGGTTTGGGAATGTGCTTTGTGAACTCTGCTTTAAAGTGAGGGGCCGAGGAAAACT
TAGAAACAGGCAGAGTTGGAAGCAGCCAAATCACAGTGGGTGTTGTGTGTGTGTGCGTGTGTGCATGCGTGCGTG
TATGCGTGTGTGAAAGCAGGTGGACCATTCCACTTTTTAGCTCCTATTGATGCACCAAACCAAGTGCCTCATTTC
TGTGCCAAATGTTTGCCTTGGTCGTTGTGGACCTCCTTCTCTAACTTGCGGTGGCATGACTGTCAGGAGGTGCTG
GCATTTTCAGCAGATCCTCATGTGTTGACCCTGATGTCTTTAGCAGAGGCCTCTAGCATCTCGGTTTTTCATCCA
CTGCAGGAATGTGGCCACAGGGAGCAGAGGTTTGTACTTTCCCCAAGAGGTCCTCATCCTGAGACGGTCTCTACC
CATGTTTAACCCAAAGAGTGCAGGCCAGGTTCCTTATCCTTCTGATGAAGGATGAGAGAGCTCATTTAGAAGTCA
GAGCAAACTAGGGTCTCAGTATTGAGAAACGCAGCCTGCCAGGGAATCACAGAGACATCGGGGTGCCCGCGATGG
CCCTCATGAAGCCATGCCTCGACGGCATTCAGGAAGCCCTGCAAACGTGCTTTTTGAACTCATTGGCCAGGTGTG
ATTTTTACACAAGGTAAACGTGGTCAAGGGCATCGGGGAATTTGCTCCAAGCAGATAGCTCCCTCTGAGGAACCA
AAGGAAGCAAGTTTCCACGATTTCTGAAGAGCTGGTATAGGAAGTTTCTTTCTTCCTTTTGTGTTACATGTGCAT
TAAACAGAACAAGCTGTGTGTCATCACAGATTGTACTGTGGGCTCAGAAACCGTGAGAGAGCCCCCACCGTGGAC
ACCGGCTCTAGGGCCACAGGAAAAGGAACGTTTCCAGGCATTTTGTCTCCAGGGCTCCCGCTGGACAGGCACGTA
CTGCCCTGGGGAGTAAATGCGGAGAGTTCACGAACTGTGCCCAACGCATGTTATAGCCAGGGTCCTACTAACTAC
TCAGTAAAAGAACGTATTGTTGTATTCCTCCAGTGTTAAGCTATAGCCATGTTAAAAGTCACTGTGCATTTATTC
TCAGCATCAAATACCTTGTAACGTCTTCTCTGCCTTGTTAGTGCATATTTTTACTTTTCTGATACTGTAAAGAAT
ATATCCAGTATGTAAATGAATGTTCTATAAATCTTTTGTATAGTCATTTTCTCTGCTCCTTAAATATCATCTCTA
TTCAGAGTATAATAAAATTATGAACTTGGTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2012

MVKCYHKKYRSATRDVIFRLQFHTGAVQGYGLVFGKEDLDNASKDDRFPDYGKVELVFSATPEKIQGSEHLYNDH
GVIVDYNTTDPLIRWDSYENLSADGEVLHTQGPVDGSLYAKVRKKSSSDPGIPGGPQAIPATNSPDHSDHTLSVS
SDSGHSTASARTDKTEERLAPGTRRGLSAQEKAELDQLLSGFGLEDPGSSLKEMTDARSKYSGTRHVVPAQVHVN
GDAALKDRETDILDDEMPHHDLHSVDSLGTLSSSEGPQSAHLGPFTCHKSSQNSLLSDGFGSNVGEDPQGTLVPD
LGLGMDGPYERERTFGSREPKQPQPLLRKPSVSAQMQAYGQSSYSTQTWVRQQQMVVAHQYSFAPDGEARLVSRC
PADNPGLVQAQPRVPLTPTRGTSSRVAVQRGVGSGPHPPDTQQPSPSKAFKPRFPGDQVVNGAGPELSTGPSPGS
PTLDIDQSIEQLNRLILELDPTFEPIPTHMNALGSQANGSVSPDSVGGGLRASSRLPDTGEGPSRATGRQGSSAE
QPLGGRLRKLSLGQYDNDAGGQLPFSKCAWGKAGVDYAPNLPPFPSPADVKETMTPGYPQDLDIIDGRILSSKES
MCSTPAFPVSPETPYVKTALRHPPFSPPEPPLSSPASQHKGGREPRSCPETLTHAVGMSESPIGPKSTMLRADAS
STPSFQQAFASSCTISSNGPGQRRESSSSAERQWVESSPKPMVSLLGSGRPTGSPLSAEFSGTRKDSPVLSCFPP
SELQAPFHSHELSLAEPPDSLAPPSSQAFLGFGTAPVGSGLPPEEDLGALLANSHGASPTPSIPLTATGAADNGF
LSHNFLTVAPGHSSHHSPGLQGQGVTLPGQPPLPEKKRASEGDRSLGSVSPSSSGFSSPHSGSTISIPFPNVLPD
FSKASEAASPLPDSPGDKLVIVKFVQDTSKFWYKADISREQAIAMLKDKEPGSFIVRDSHSFRGAYGLAMKVATP
PPSVLQLNKKAGDLANELVRHFLIECTPKGVRLKGCSNEPYFGSLTALVCQHSITPLALPCKLLIPERDPLEEIA
ESSPQTAANSAAELLKQGAACNVWYLNSVEMESLTGHQAIQKALSITLVQEPPPVSTVVHFKVSAQGITLTDNQR
KLFFRRHYPVNSVIFCALDPQDRKWIKDGPSSKVFGFVARKQGSATDNVCHLFAEHDPEQPASAIVNFVSKVMIG
SPKKV

FIGURE 2013

CCTTTGCCCTGAAGGGGGCTGGATGGGCAAGGCGGCCGCGATGGCTCGAGCTCGGGCGGTGGCGGCGGTGGCCGG
AGGCGGCGGTGCCTCCTCCTCCTCGCCCCGGCGCCGGCGGTGATCCGAGCGAGCGGCCGCGGCCCCCGATGAGAC
TGCTGGCGGGCTGGCTGTGCCTGAGCCTGGCGTCCGTGTGGCTGGCGCGGAGGATGTGGACGCTGCGGAGCCCGC
TCACCCGCTCCCTGTACGTGAAC**ATG**ACTAGCGGCCCGGGTGGGCCGGCGGCGGCCGCGGGCGGCAGGAAGGAGA
ACCACCAGTGGTATGTGTGCAACAGAGAGAAATTATGCGAATCACTCCAGGCTGTCTTTGTTCAGAGTTACCTTG
ATCAAGGAACACAGATCTTCTTAAACAACAGCATTGAGAAATCGGGCTGGCTATTTATCCAATTATATCATTCTT
TTGTGTCATCTGTTTTTAGCCTGTTTATGTCTAGAACATCTATCAATGGGTTGCTAGGAAGAGGCTCAATGTTTG
TGTTTTCACCAGATCAGTTTCAGAGACTGCTTAAAATTAATCCAGACTGGAAAACCCACAGACTTCTTGATTTAG
GTGCTGGAGATGGAGAAGTCACAAAAATCATGAGCCCTCATTTTGAAGAAATCTATGCCACTGAGCTTTCTGAAA
CTATGATATGGCAGCTTCAGAAAAAGAAATACAGAGTCCTTGGTATAAATGAATGGCAGAATACGGGGTTCCAGT
ATGATGTCATCAGCTGCCTGAACTTGCTGGACCGCTGTGATCAGCCCCTGACTTTGTTAAAAGATATCAGAAGTG
TCTTGGAGCCAACTAGAGGCAGGGTCATCCTTGCCCTTGTCCTCCCCTTTCATCCCTATGTGGAAAACGTAGGTG
GCAAGTGGGAGAAACCATCAGAAATTTTGGAAATCAAAGGACAGAACTGGGAAGAACAAGTGAATAGTCTGCCTG
AAGTTTTCAGAAAAGCTGGTTTTGTTATCGAAGCTTTCACCAGACTACCATACCTGTGTGAAGGCGACATGTATA
ATGACTACTACGTTCTGGATGACGCTGTCTTTGTTCTCAAACCAGTA**TAA**ACACGTGGAGGTCGAAGTCTTCAGA
GTCCGCACCCTCCGGGATGTGCCCTTGGAAGAGGGTCTGTGTTCACAATTACGTGAAGGGAGGACCCTTGGGGAC
CGCCATTCTAAATATCATGTAGGAATTTAAAAAGCCAAAATACTAATTATTTCTTTGTAGTGTGTAAAGGAATGT
TTTTAAAAGACAAAAACCCAACTCTTTGTGGATTTTTATCAACTCTTTACTCAGAGCCACTCTCCAATGCAGGTC
ACACTCCAATTATGATGGAAGATATTTTTTATACTTAATTGCAGTAGGGACTCATTCCCAGACAAAGCAATAGTC
ACGACTTCATGGAACCAATCAATGGATTGTTTTTTGAAGACTGGCAATAAAGCTGTCCATTCAATTCCAAATACT
GGTTTTAAGGTATAGCCACTGATATTCTTTCATGTTTAGAAATTCTTTCTGTTATTATTCAAGAAAATGTTTTTA
ATCATGCTAATAAACTTTTTTGGAGATGACTTTGGCATCATGTTTGAATTCATATAAAGCTCCCCTAGCATTTTT
TATTGGTTTGGCTTCAGGAGTACCCAAATAGTAGCATTATGAGAATGACGCAGACAATTTGAATAGGGGGGAAGG
AAGGCTTCAGACTTGGGGGAAGGGGAGATTATTGCAAATTGCAGTGAACACTGAGTCAGTAAAAAAAAAAAACAG
AAACAAAAACCCAGCCTCATTCAGATACAGAACTTCAGGGACCCCTCCCCCCACCCCCCCAGTTAATGCTGCTGT
GAAAAATGCAAAATAACCTGGTTCTGACTTTGTGATCACTCATGTCCCATACACTGAACTTTGTTTTTTTCTGGA
CAATCTCAGGTTCTCAGAATTGAAACATTCAGTTTTGTCTACTGACAAAATGCAACTAAAAATGTTTTAATTCAA
CTTCTTACTCTACACTTATATACCTCTCTCCCAGAGCTTGGCTCTTCCCTGAAATCCTTAAAGGAGTTTATTATT
TGCCAAGAATATGGTTTGATGAAGACCGTGTCAGACTCATGCATTCTGGAATCCGTGAGTGCCTCCAACCATAAA
CCCAGAAATGCTGCCATAGAGGAACCCATTAGCAAGATCAATAACCATCGTGGATATTCCAAAGAGCAGAGCATT
TAACCCAGAATCTGAAATCTCAGTAATAACAGAAATGTCAATATGAGATTGTGGTTATTAACAATATGTTATCCT
CACTACTTTATTTCTTTTTTCATCCAGGTGTTTCATTAAGTATTCTCATTTATATGCTCATAGAAGTCATCAGAT
CAACACATTCACTCCAACACCTGGGTATAAAGGCGAATTAAAACCTGAAGAATTACTTTATTATTCATTAAGAAC
TGCATTCCCACATCCTCACACCAATATCTTCCACTGTTACTGTGCAGTCATAATAAGAGTTGGGTTATGTGATTT
ATGCAAAATTGTTATTGGTGTGTTCTAATGATTTTTTTCCAGGAATTCAAGTAAGTGAAGTACAAATACTTAGCA
CCATAGATTGTAAAAATAGAAAGAGGAAATGAGAAAACTTAATGTCGTTCTTGTACAGTTGAGTTTTGCTTCTTT
ATAAACTGTCTGTTAAAATCAGGGGTTGCTGTTAGACTGTCAAGCAGAAGTGATGGATGTTCAAGGAGGCAGGTT
GCCCCAAAGTGTTTTCTAACTTTCAAGTAGAGAACTTTATGCTCTAATAAGAAAAATACAACTCATTCTTAACCA
CCCCCCCAAAACAGAGAAAACACATACATTTATGCATTTTAAAGATAAAAAGTAGTTTCTCAAAAAAATCTGAAG
TTCTCTGAAAACCAGCTTATTAAAAGTGCTGTTTTGTGGTGAAAATTGAAACCAAATCCACTCACATTTCCTATC
GGGTCTTGAAATTCTTGGTGGTGTGTCACCATTCCACTAGATGGCAGTGTTGCTTACTGAGTGTCAATGGCTTTT
TTCCCCGTAAATGGAATCATGTTTTTCTCCCCCAAAGTACAATAAAGCTGCCTTGTCTGCACCAAAAACAAAAAA
AAAAAAAAAAAA

FIGURE 2014

MTSGPGGPAAAAGGRKENHQWYVCNREKLCESLQAVFVQSYLDQGTQIFLNNSIEKSGWLFIQLYHSFVSSVFSL
FMSRTSINGLLGRGSMFVFSPDQFQRLLKINPDWKTHRLLDLGAGDGEVTKIMSPHFEEIYATELSETMIWQLQK
KKYRVLGINEWQNTGFQYDVISCLNLLDRCDQPLTLLKDIRSVLEPTRGRVILALVLPFHPYVENVGGKWEKPSE
ILEIKGQNWEEQVNSLPEVFRKAGFVIEAFTRLPYLCEGDMYNDYYVLDDAVFVLKPV

FIGURE 2015

GGCCGGCGCCTCCTCCTGGATTCATTCACTCGCTCTTTTCATTCACGAAGGTAGTGAGGCCTAGTGGAAAGCCATG
GAGAGCGCTCTCCCCGCCGCCGGCTTCCTGTACTGGGTCGGCGCGGGCACCGTGGCCTACCTAGCCCTGCGTAT
TTCGTACTCGCTCTTCACGGCCCTCCGGGTCTGGGGAGTGGGGAATGAGGCGGGGGTCGGCCCGGGGCTCGGAGA
GTGGGCAGTTGTCACAGGTAGTACTGATGGAATTGGAAAATCATATGCAGAAGAGTTAGCAAAGCATGGAATGAA
GGTTGTCCTTATCAGCAGATCAAAGGATAAACTTGACCAGGTTTCCAGTGAAATAAAAGAAAAATTCAAAGTGGA
GACAAGAACCATTGCTGTTGACTTTGCATCAGAAGATATTTATGATAAAATTAAAACAGGCTTGGCTGGTCTTGA
AATCGGCATCTTAGTGAACAACGTGGGAATGTCGTATGAGTATCCTGAATACTTTTTGGATGTTCCTGACTTGGA
CAATGTGATCAAGAAAATGATAAATATTAATATTCTTTCTGTTTGTAAGATGACACAATTGGTACTGCCTGGCAT
GGTGGAAAGATCCAAAGGGGCTATTCTGAACATTTCATCTGGCAGTGGCATGCTCCCTGTCCCACTCTTGACCAT
CTATTCTGCAACCAAGACTTTTGTAGATTTCTTCTCTCAGTGCCTCCATGAGGAGTATAGGAGCAAGGGCGTCTT
TGTGCAGAGTGTCCTGCCATACTTCGTAGCTACAAAACTGGCTAAAATCCGGAAGCCAACTTTGGATAAGCCCTC
TCCGGAGACGTTTGTGAAGTCTGCAATTAAAACAGTCGGCCTGCAATCCCGAACCAATGGATACCTGATCCATGC
TCTTATGGGCTCGATAATCTCAAACCTGCCTTCTTGGATTTATTTGAAAATAGTCATGAATATGAACAAGTCTAC
ACGGGCTCACTATCTGAAGAAAACCAAGAAGAACTAAGCATGATAACTGCATTGTAACTTGGCCAGATGCTCCAG
CATATGCACGTTCACTGCAAAGCACCCTACTGGTTTTGAAAATCTGACCTTGTCATTTCAATAGTTATTAACATG
ACTAAATATTATCTTAATTAAGAGGAAAATAGAAGTTGCTTTTAGGGGTTTCTGACATATATTCTGGATACTATC
CGAGGTAATTTTGAAGTTTAATATAAATGCTCATATCAAATGAATATAGAACTAATATTGTCGGGAACACCTAAT
AGAAAGGAATACTATTATAGCAAATCACAGAATGATAGACTCAAGCATAAAACTTGGCAGTTTTATCTGCTTCAA
AATGCCATTGATCATTATTCCTGTATTTTCTCTGAAACTGATTATAAAAACCAATGTCCAGCTACTCTTTTGTTT
TTGACACTTGAAGAAATGGAGATCGATTTGATTTGTTTATAAGCAGACACACTGCAATTTACAAAGATCTCTTTA
CGGTTTTATAAAATTATCTTCCAGTTTGTACATTTATATGGAATTGTTCTTTATCAAGGGTAGCTAATGACATGA
AAATAATTGTGAAATATGGAATTATTTCTGACACATGAAGCCCACTAAACTATGCTTTCCTATAATGCATATTTC
TTCTCAGTTTAAATGTATGTAAATATCGAAGCTATATGGTATGATTTATAAAGATAAATGGGCCAAAGTGTACAT
TGAGACTGGCAGCCATCTATGGTACCACTGAAACCCTGACCCAGAAAAGTGGCTTGCTTGGACACCCAGCTGCCT
TTGTTTCTGCATTAAACCAATATTGATCACACATATGACACAGGCTAGTCCTATAAAAGTAATGACTTCATAGAA
ATGGCATTATAATTTTTAAGTTGATACTCTACAGGTAGCTATTGATATAATTAGTTTTAATAAAACATGCTGCAA
CCATGGTATACAACAAAAATACATTTCTTTGGTGATTGAAATTAAGGCCGTATTTACAATGACTTAATATAAGAC
TGACTTTTATCCTGCTTCATAACTTGTATGGAGAACTCACCAAGAAAGAATTCAATACTGTGAAATATGCAGCAA
GAAGATTGGTCTTTACCTAGGCTGTGTTTCCTAAGCTCTGAGTTTTCAGCACCAGTAGATTTGTATTAAAAGAAA
AAAAAATGGGGCCTTAGCTTCTGGCTTTTAATTTTGCCAGCTAAGGACATAAAACAAAAATAAACAAACAAAAAC
AAATAGCCATCTGCTATCAGCATCATTATGTAAAAGAAAATATATTTTAGCCCCTAAAATTAGGAAGAATGTAAT
CTCAGAATAAAGGTTGTCATTTAAGTTGAATAAATATATAGCTTTATGAAAAACACAAAAAAAAAAAA

FIGURE 2016

MESALPAAGFLYWVGAGTVAYLALRISYSLFTALRVWGVGNEAGVGPGLGEWAVVTGSTDGIGKSYAEELAKHGM
KVVLISRSKDKLDQVSSEIKEKFKVETRTIAVDFASEDIYDKIKTGLAGLEIGILVNNVGMSYEYPEYFLDVPDL
DNVIKKMININILSVCKMTQLVLPGMVERSKGAILNISSGSGMLPVPLLTIYSATKTFVDFFSQCLHEEYRSKGV
FVQSVLPYFVATKLAKIRKPTLDKPSPETFVKSAIKTVGLQSRTNGYLIHALMGSIISNLPSWIYLKIVMNMNKS
TRAHYLKKTKKN

FIGURE 2017

ACCACAGTGGTGTCCGAGAAGTCAGGCACGTAGCTCAGCGGCGGCCGCGGCGCGTGCGTCTGTGCCTCTGCGCGG
GTCTCCTGGTCCTTCTGCCATC**ATG**CCGATGTTCATCGTAAACACCAACGTGCCCCGCGCCTCCGTGCCGGACGG
GTTCCTCTCCGAGCTCACCCAGCAGCTGGCGCAGGCCACCGGCAAGCCCCCCCCAGTACATCGCGGTGCACGTGGT
CCCGGACCAGCTCATGGCCTTCGGCGGCTCCAGCGAGCCGTGCGCGCTCTGCAGCCTGCACAGCATCGGCAAGAT
CGGCGGCGCGCAGAACCGCTCCTACAGCAAGCTGCTGTGCGGCCTGCTGGCCGAGCGCCTGCGCATCAGCCCGGA
CAGGGTCTACATCAACTATTACGACATGAACGCGGCCAATGTGGGCTGGAACAACTCCACCTTCGCC**TAA**GAGCC
GCAGGGACCCACGCTGTCTGCGCTGGCTCCACCCGGGAACCCGCCGCACGCTGTGTTCTAGGCCCGCCCACCCCA
ACCTTCTGGTGGGGAGAAATAAACGGTTTAGAGACT

FIGURE 2018

MPMFIVNTNVPRASVPDGFLSELTQQLAQATGKPPQYIAVHVVPDQLMAFGGSSEPCALCSLHSIGKIGGAQNRS
YSKLLCGLLAERLRISPDRVYINYYDMNAANVGWNNSTFA

FIGURE 2019

ACTGGAAGACCAGGCAGCCCAGCTGAAGGCAGTAAGCTCGGCTCACAGTCGCAGGAGAGTTCTGGGGTACACGGG
CAAAGGGGCTTGAGAAGGCCCGGAGGCGAAGCCGAAGAGAAGCAACTGTGCCCCGGAGAAGAGAAGCTCGCCCAT
TCCAGACTGGGAACCAGCTTTCAGTGAAG**ATG**GCAGGGCCAGAACTGTTGCTCGACTCCAACATCCGCCTCTGGG
TGGTCCTACCCATCGTTATCATCACTTTCTTCGTAGGCATGATCCGCCACTACGTGTCCATCCTGCTGCAGAGCG
ACAAGAAGCTCACCCAGGAACAAGTATCTGACAGTCAAGTCCTAATTCGAAGCAGAGTCCTCAGGGAAAATGGAA
AATACATTCCCAAACAGTCTTTCTTGACACGAAAATATTATTTCAACAACCCAGAGGATGGATTTTTCAAAAAAA
CTAAACGGAAGGTAGTGCCACCTTCTCCTATGACTGATCCTACTATGTTGACAGACATGATGAAAGGGAATGTAA
CAAATGTCCTCCCTATGATTCTTATTGGTGGATGGATCAACATGACATTCTCAGGCTTTGTCACAACCAAGGTCC
CATTTCCACTGACCCTCCGTTTTAAGCCTATGTTACAGCAAGGAATCGAGCTACTCACATTAGATGCATCCTGGG
TGAGTTCTGCATCCTGGTACTTCCTCAATGTATTTGGGCTTCGGAGCATTTACTCTCTGATTCTGGGCCAAGATA
ATGCCGCTGACCAATCACGAATGATGCAGGAGCAGATGACGGGAGCAGCCATGGCCATGCCCGCAGACACAAACA
AAGCTTTCAAGACAGAGTGGGAAGCTTTGGAGCTGACGGATCACCAGTGGGCACTAGATGATGTCGAAGAAGAGC
TCATGGCCAAAGACCTCCACTTCGAAGGCATGTTCAAAAAGGAATTACAGACCTCTATTTTT**TGA**AGACCGAGCA
GGGATTAGCTGTGTCAGGAACTTGGAGTTGCACTTAACCTTGTAACTTTGTTTGGAGCTGGCACCTCTTGAAATA
AAAAGGAGGATGCACGAGCTGGCAGGCATGCAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2020

MAGPELLLDSNIRLWVVLPIVIITFFVGMIRHYVSILLQSDKKLTQEQVSDSQVLIRSRVLRENGKYIPKQSFLT
RKYYFNNPEDGFFKKTKRKVVPPSPMTDPTMLTDMMKGNVTNVLPMILIGGWINMTFSGFVTTKVPFPLTLRFKP
MLQQGIELLTLDASWVSSASWYFLNVFGLRSIYSLILGQDNAADQSRMMQEQMTGAAMAMPADTNKAFKTEWEAL
ELTDHQWALDDVEEELMAKDLHFEGMFKKELQTSIF

FIGURE 2021A

GGCCTCGCCTGCGGCCGCTCCCTCCGCCTCCTCCCCGCCCCGAGCCCCAGTCAGCCCGTCTTCCTTCCCCTCCCT
TGCATGATGGAAACACCATGGCTGCGGCGGCCCAGCTCTCTCTGACACAGTTATCAAGTGGGAATCCTGTATATG
AAAAATACTATAGACAGGTTGATACAGGCAATACTGGAAGGGTGTTGGCTTCTGATGCTGCTGCTTTCCTGAAAA
AATCAGGGCTTCCAGACTTGATACTTGGAAAGATTTGGGATTTAGCCGACACAGATGGCAAAGGTATCCTGAACA
AACAAGAATTCTTTGTTGCTTTGCGTCTTGTGGCATGTGCCCAGAATGGATTGGAAGTTTCACTAAGTAGTTTGA
ACCTGGCTGTTCCTCCACCAAGATTTCATGATACCAGTAGTCCTTTGCTAATCAGTGGAACCTCTGCAGCTGAGC
TCCCATGGGCTGTAAAACCTGAAGATAAGGCCAAATATGATGCAATATTTGATAGTTTAAGCCCAGTGAATGGAT
TTCTGTCTGGTGATAAAGTGAAACCAGTGTTGCTCAACTCTAAGTTACCTGTGGATATCCTTGGAAGAGTAAGAT
ATTATTTACTCCGAAATGTTTGGGAGTTGAGTGATATTGACCATGATGGAATGCTTGACAGAGATGAGTTTGCAG
TTGCCATGTTTTTGGTATACTGTGCACTGGAGAAAGAACCTGTGCCAATGTCCTTGCCTCCAGCCTTGGTGCCAC
CATCTAAGAGAAAAACGTGGGTTGTATCCCCTGCAGAAAAAGCTAAATATGATGAAATCTTCCTGAAAACTGATA
AAGATATGGACGGATTTGTGTCTGGATTGGAGGTCCGTGAAATATTCTTGAAAACAGGTTTACCTTCTACCTTAC
TAGCCCATATATGGTCATTATGCGACACAAAGGACTGTGGGAAGCTTTCAAAGGATCAGTTTGCCTTGGCTTTTC
ACTTAATCAGTCAGAAGTTAATCAAGGGCATTGATCCTCCTCACGTTCTTACTCCTGAAATGATTCCACCATCAG
ACAGGGCCAGTTTACAAAAGAACATCATAGGATCAAGTCCTGTTGCAGATTTCTCTGCTATTAAGGAACTAGATA
CTCTTAACAATGAAATAGTTGACCTACAGAGGGAAAAGAATAATGTGGAACAGGACCTTAAGGAGAAGGAAGATA
CTATTAAACAGAGGACAAGTGAGGTTCAGGATCTTCAAGATGAAGTTCAAAGGGAGAATACTAATCTGCAAAAAC
TACAGGCCCAGAAACAGCAGGTACAGGAACTCCTTGATGAACTGGATGAGCAGAAAGCCCAGCTGGAGGAGCAAC
TCAAGGAAGTCAGAAAGAAATGTGCTGAGGAGGCCCAACTGATCTCTTCTCTGAAAGCTGAATTAACTAGTCAGG
AATCGCAGATCTCCACTTATGAAGAAGAATTGGCAAAAGCTAGAGAAGAGCTGAGCCGTCTACAGCAAGAAACAG
CAGAATTGGAGGAGAGTGTAGAGTCAGGGAAGGCTCAGTTGGAACCTCTTCAGCAGCACCTACAAGATTCACAAC
AGGAAATTAGTTCAATGCAAATGAAACTGATGGAAATGAAAGATTTGGAAAATCATAATAGTCAGTTAAATTGGT
GCAGTAGCCCACACAGCATTCTTGTAAACGGAGCTACAGATTATTGCAGCCTCAGCACCAGCAGCAGTGAAACAG
CCAACCTTAATGAACATGTTGAAGGCCAGAGCAACCTAGAGTCTGAGCCCATACACCAGGAATCTCCAGCAAGAA
GTAGTCCTGAACTACTGCCTTCTGGTGTGACTGATGAAAATGAGGTGACTACAGCTGTTACTGAAAAAGTTTGTT
CTGAACTCGACAATAATAGACATTCAAAAGAGGAAGATCCATTTAATGTAGACTCAAGTTCGCTGACAGGTCCAG
TTGCAGATACAAACTTGGATTTTTTCCAGTCTGATCCTTTTGTTGGCAGTGATCCTTTCAAGGATGATCCTTTTG
GAAAAATCGATCCATTTGGTGGTGATCCTTTCAAAGGTTCAGATCCATTTGCATCAGACTGTTTCTTCAGGCAAT
CTACTGATCCTTTTGCCACTTCAAGCACTGACCCTTTCAGTGCAGCCAACAATAGCAGTATTACATCGGTAGAAA
CGTTGAAGCACAATGATCCTTTTGCTCCTGGTGGAACAGTTGTTGCAGCAAGCGATTCAGCCACAGACCCCTTTG
CTTCTGTTTTTGGGAATGAATCATTTGGAGGTGGATTTGCTGACTTCAGCACATTGTCAAAGGTCAACAATGAAG
ATCCTTTTCGTTCAGCCACATCGAGCTCTGTCAGCAACGTAGTGATTACAAAAAATGTATTTGAGGAAACATCGG
TCAAAAGTGAAGATGAACCCCCAGCACTGCCACCAAAGATCGGAACTCCAACAAGACCCTGCCCTCTACCACCTG
GGAAAAGATCCATCAACAAATTGGATTCTCCTGATCCCTTTAAACTGAATGATCCATTTCAGCCTTTCCCAGGCA
ACGATAGCCCCAAAGAAAAAGATCCTGAAATATTTTGTGATCCATTCACTTCTGCTACTACCACTACCAATAAAG
AGGCTGATCCAAGCAATTTTGCCAACTTCAGTGCTTATCCCTCTGAAGAAGATATGATCGAATGGGCCAAGAGGG
AAAGTGAGAGAGAGGAAGAGCAGAGGCTTGCCCGACTAAATCAGCAGGAACAAGAAGACTTAGAACTGGCTATTG
CACTCAGCAAATCTGAGATATCAGAAGCA**TGA**AGAATTCTCTTGTTCTTTGGCAACAATATAGTATTCTTCTTCC
TGAATACTGAAACTATTTACAATGTGTATCAAAACTACCTGTGAGCATGGGAATACAAAAGGTTTGAGATTCCTG
TAAATGTGACAAAATTTTAGGATTTTTTTTTTTCTTCATTACAGATTCGTCTTTTTTTTTTTTCTTATAAAAG
CCGTAACCCAGTCAGACAAATTCACCTTCACTTAGGCCCCTGTTCTGGTATACATTTACTGTGAGCTTTTGCCTG
CCTGTGCTATTTTACTTGTAAAGCTAGAGCACCCAAGCTTCTGCCTTCTGGAATATAGAGAAATAGTTTCACCCT
GCACTACCCTGTTCTGTAGTTATTCTGATGATAGCCAGTGAGGTTCTTAAAGTTTGCAGTATTCTCCCCTGATTG
GAATGGTTGAGTGAGGGTAAGGGAAAGAATATCTTATTTCTTTTATGATTGGTGCAAATTGGCTAAAGTGCATTT
TTAAATTTCCTCTACTTAATTTGTTTTTCAGAGATAAGGAAAAATATTTTGCACAGATTTACTCCACTATGGAAA
AGGGATGCTGTAGGTTGAACCATTATAGCCTCAGATTCGATCTTTTCCTAACTAAAAATATTAAAGCCTCATGTG
TGAAATAAATTTTTAAAAAGATTTATCTGGATTTAGAGAATTTTAGATCAACAGATACCTCTCAGTGTGTTTGCT
AATTAATAAAAATCAGTTTCTTACAAATAAAGTTTGTAAGAAAATGTTCATTTTAAGTGATAGATAGTGGAGAAA

FIGURE 2021B

ATTTATCACCTAAAATATACCCATCAGTATAAGGCAAGCAAAAGTCTTAACATGGCAGCCATTCTGCCTTTGCCG
TGGCCCTGTCCTGTTTAGTTCTTAGTGGGTTAATTTTTGTACTTTTGCAGAAGAAACTTCAGCAAGCTAGAACTG
GAAGGTACTTTAATTTTTCATATATATTTGTTTTTTTTTTTTTAATGAAGGCTCATTTACTTGAAATGTAAAAAC
TTTCACTGAATACAAATAGAAAAAGTGATGTGTTTTATATCATATTGCTTTTTGTCCATCTTTGTGGTTTAGTTT
ATTTACTCACTTCATGTTTTTCACCTATAAAATTGTCAAGCTAGCAAAAAAACTCTTGTTTTTTTAATTGGGAGA
GAAGAGACCTGCCAGATTATCAGACCTCTTCATGTTAAAAGACCATCTCCTGTAAAACTGACCTAGTGGACAAGC
TGAATTTGAAATAGACTGTGAAGTAAGCTGTAACTTGTCATTTTAATTTTGTTTAACACGGTTACTGACTTAGAT
GATGTATTAAATACCAAGATAAAGAAAAATGCACCTAAAATCTAATTAGAATTCTCTGGGTCACCAAGTCAAGGT
GGTATTGATCTGTGTTAATCTGAGTAACTTATTGCCTAGCCTATAAATAAATTCCAAAATATCCAATTCATTTCT
TCTTGAAATGGTGCTTGTTTTGTTTTCTTTCCATTACACAATTAGACTCCTACAGTTTAAAACAAACTTTAAACC
ACTATCTTGCACTGCTAACTTTTTTCTACCTTTGTAAATAGAAACATTTCTGCATAAAAGTCATACATATGAAGC
AAGGGCTGAATCATAATCACAAGGCTTAATTTTGATAAACGAATCCAGTGACCTAAGGATTTTCTGCAAAATTTG
ACTGGGAGTTGTGATAGGTGGTATTTTTGTTTATTTTCTTCCTCTTACTCCTTAGGATAAAGGTAAGTTGACTTG
AACAACTTTCTTTTGCACTGGGAAAATAAGCAAATGTTTAAATGCTTCAAAAAAATTTTCAATTAAACTCAAATA
TTAAATATCTATAACTTATAAACACCAACTTTCAATGTAATAAATGTATCCTAATCTTATGTATGTTTAACTGGA
TTACATAGATTTTTATCTTTTGTTAAAATGTGTATACCCCGTGGACCAACATAATATTAAAGTATGTATATATTA
TATAAATATATATGTATATGTGCTCGCTTGTGTAGGATGAATGTCTTAGAGTCGTTTGTGGTATTTTATGTTGTT
GACTCTGGCTCCAGGGCCTGTGCTTGAAAAGGACAGATAAGTATTGCCCAGAGCTAAGTGGCACTACTTACAAAG
TTTTAAATGTCTTCTACATACTGATTCATGTTTATTTGAGCTCTCTTTATAGAATTTTCTCTTAAAGTTTCAAAC
CTCTAAGTTGTAGCCTGTAATTATGAGAACAGTAAACTTTAAGTAATAATAAAGAATCCCATCCATATATCCAAT
TTGCAATTGAGTTTTGCATGGTTCTCTGATTATGTCCATGCTGTGTCCAAGGAGGAGTAGGTACATACAATCAGC
ACAGATTAATATATGTAAAGGGTTTGGGACAGCACCTGGTATAGAATAAATAATAAATGTAAACTATTCAAAAAA
AATCTATGTCGGGTGCGGAGAAAGAGGTAATGAAATG

FIGURE 2022

PRLRPLPPPPPRPEPQSARLPSPPLHDGNTMAAAAQLSLTQLSSGNPVYEKYYRQVDTGNTGRVLASDAAAFLKK
SGLPDLILGKIWDLADTDGKGILNKQEFFVALRLVACAQNGLEVSLSSLNLAVPPPRFHDTSSPLLISGTSAAEL
PWAVKPEDKAKYDAIFDSLSPVNGFLSGDKVKPVLLNSKLPVDILGRVRYYLLRNVWELSDIDHDGMLDRDEFAV
AMFLVYCALEKEPVPMSLPPALVPPSKRKTWVVSPAEKAKYDEIFLKTDKDMDGFVSGLEVREIFLKTGLPSTLL
AHIWSLCDTKDCGKLSKDQFALAFHLISQKLIKGIDPPHVLTPEMIPPSDRASLQKNIIGSSPVADFSAIKELDT
LNNEIVDLQREKNNVEQDLKEKEDTIKQRTSEVQDLQDEVQRENTNLQKLQAQKQQVQELLDELDEQKAQLEEQL
KEVRKKCAEEAQLISSLKAELTSQESQISTYEEELAKAREELSRLQQETAELEESVESGKAQLEPLQQHLQDSQQ
EISSMQMKLMEMKDLENHNSQLNWCSSPHSILVNGATDYCSLSTSSSETANLNEHVEGQSNLESEPIHQESPARS
SPELLPSGVTDENEVTTAVTEKVCSELDNNRHSKEEDPFNVDSSSLTGPVADTNLDFFQSDPFVGSDPFKDDPFG
KIDPFGGDPFKGSDPFASDCFFRQSTDPFATSSTDPFSAANNSSITSVETLKHNDPFAPGGTVVAASDSATDPFA
SVFGNESFGGGFADFSTLSKVNNEDPFRSATSSSVSNVVITKNVFEETSVKSEDEPPALPPKIGTPTRPCPLPPG
KRSINKLDSPDPFKLNDPFQPFPGNDSPKEKDPEIFCDPFTSATTTTNKEADPSNFANFSAYPSEEDMIEWAKRE
SEREEEQRLARLNQQEQEDLELAIALSKSEISEA

FIGURE 2023

CAGAGCTGCTGTC**ATG**GCGGCCGCTCTGTGGGGCTTCTTTCCCGTCCTGCTGCTGCTGCTATCGGGGGATGT
CCAGAGCTCGGAGGTGCCCGGGGCTGCTGCTGAGGGATCGGGAGGGAGTGGGGTCGGCATAGGAGATCGCTTCAA
GATTGAGGGGCGTGCAGTTGTTCCAGGGGTGAAGCCTCAGGACTGGATCTCGGCGGCCCGAGTGCTGGTAGACGG
AGAAGAGCACGTCGGTTTCCTTAAGACAGATGGGAGTTTTGTGGTTCATGATATACCTTCTGGATCTTATGTAGT
GGAAGTTGTATCTCCAGCTTACAGATTTGATCCCGTTCGAGTGGATATCACTTCGAAAGGAAAAATGAGAGCAAG
ATATGTGAATTACATCAAAACATCAGAGGTTGTCAGACTGCCCTATCCTCTCCAAATGAAATCTTCAGGTCCACC
TTCTTACTTTATTAAAAGGGAATCGTGGGGCTGGACAGACTTTCTAATGAACCCAATGGTTATGATGATGGTTCT
TCCTTTATTGATATTTGTGCTTCTGCCTAAAGTGGTCAACACAAGTGATCCTGACATGAGACGGGAAATGGAGCA
GTCAATGAATATGCTGAATTCCAACCATGAGTTGCCTGATGTTTCTGAGTTCATGACAAGACTCTTCTCTTCAAA
ATCATCTGGCAAATCTAGCAGCGGCAGCAGTAAAACAGGCAAAAGTGGGGCTGGCAAAAGGAGG**TAG**TCAGGCCG
TCCAGAGCTGGCATTTGCACAAACACGGCAACACTGGGTGGCATCCAAGTCTTGGAAAACCGTGTGAAGCAACTA
CTATAAACTTGAGTCATCCCGACGTTGATCTCTTACAACTGTGTATGTTAACTTTTTAGCACATGTTTTGTACTT
GGTACACGAGAAAACCCAGCTTTCATCTTTTGTCTGTATGAGGTCAATATTGATGTCACTGAATTAATTACAGTG
TCCTATAGAAAATGCCATTAATAAATTATATGAACTACTATACATTATGTATATTAATTAAAACATCTTAATCCA
GAAAAAAAAAAAAAAAAAAAA

FIGURE 2024

MAAALWGFFPVLLLLLLSGDVQSSEVPGAAAEGSGGSGVGIGDRFKIEGRAVVPGVKPQDWISAARVLVDGEEHV
GFLKTDGSFVVHDIPSGSYVVEVVSPAYRFDPVRVDITSKGKMRARYVNYIKTSEVVRLPYPLQMKSSGPPSYFI
KRESWGWTDFLMNPMVMMMVLPLLIFVLLPKVVNTSDPDMRREMEQSMNMLNSNHELPDVSEFMTRLFSSKSSGK
SSSGSSKTGKSGAGKRR

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FIGURE 2025

GCGGAGCTCCGCATCCAACCCCGGGCCGCGGCCAACTTCTCTGGACTGGACCAGAAGTTTCTAGCCGGCCAGTTG
CTACCTCCCTTTATCTCCTCCTTCCCCTCTGGCAGCGAGGAGGCTATTTCCAGACACTTCCACCCCTCTCTGGCC
ACGTCACCCCCGCCTTTAATTCATAAAGGTGCCCGGCGCCGGCTTCCCGGACACGTCGGCGGCGGAGAGGGGCCC
ACGGCGGCGGCCCGGCCAGAGACTCGGCGCCCGGAGCCAGCGCCCCGCACCCGCGCCCCAGCGGGCAGACCCCAA
CCCAGC**ATG**AGCGCCGCCACCCACTCGCCCATGATGCAGGTGGCGTCCGGCAACGGTGACCGCGACCCTTTGCCC
CCCGGATGGGAGATCAAGATCGACCCGCAGACCGGCTGGCCCTTCTTCGTGGACCACAACAGCCGCACCACTACG
TGGAACGACCCGCGCGTGCCCTCTGAGGGCCCCAAGGAGACTCCATCCTCTGCCAATGGCCCTTCCCGGGAGGGC
TCTAGGCTGCCGCCTGCTAGGGAAGGCCACCCTGTGTACCCCCAGCTCCGACCAGGCTACATTCCCATTCCTGTG
CTCCATGAAGGCGCTGAGAACCGGCAGGTGCACCCTTTCCATGTCTATCCCCAGCCTGGGATGCAGCGATTCCGA
ACTGAGGCGGCAGCAGCGGCTCCTCAGAGGTCCCAGTCACCTCTGCGGGGCATGCCAGAAACCACTCAGCCAGAT
AAACAGTGTGGACAGGTGGCAGCGGCGGCGGCAGCCCAGCCCCCAGCCTCCCACGGACCTGAGCGGTCCCAGTCT
CCAGCTGCCTCTGACTGCTCATCCTCATCCTCCTCGGCCAGCCTGCCTTCCTCCGGCAGGAGCAGCCTGGGCAGT
CACCAGCTCCCGCGGGGGTACATCTCCATTCCGGTGATACACGAGCAGAACGTTACCCGGCCAGCAGCCCAGCCC
TCCTTCCACCAAGCCCAGAAGACGCACTACCCAGCGCAGCAGGGGGAGTACCAGACCCACCAGCCTGTGTACCAC
AAGATCCAGGGGGATGACTGGGAGCCCCGGCCCCTGCGGGCGGCATCCCCGTTCAGGTCATCTGTCCAGGGTGCA
TCGAGCCGGGAGGGCTCACCAGCCAGGAGCAGCACGCCACTCCACTCCCCCTCGCCCATCCGTGTGCACACCGTG
GTCGACAGGCCTCAGCAGCCCATGACCCATCGAGAAACTGCACCTGTTTCCCAGCCTGAAAACAAACCAGAAAGT
AAGCCAGGCCCAGTTGGACCAGAACTCCCTCCTGGACACATCCCAATTCAAGTGATCCGCAAAGAGGTGGATTCT
AAACCTGTTTCCCAGAAGCCCCCACCTCCCTCTGAGAAGGTAGAGGTGAAAGTTCCCCCTGCTCCAGTTCCTTGT
CCTCCTCCCAGCCCTGGCCCTTCTGCTGTCCCCTCTTCCCCCAAGAGTGTGGCTACAGAAGAGAGGGCAGCCCCC
AGCACTGCCCCTGCAGAAGCTACACCTCCAAAACCAGGAGAAGCCGAGGCTCCCCCAAAACATCCAGGAGTGCTG
AAAGTGGAAGCCATCCTGGAGAAGGTGCAGGGGCTGGAGCAGGCTGTAGACAACTTTGAAGGCAAGAAGACTGAC
AAAAAGTACCTGATGATCGAAGAGTATTTGACCAAAGAGCTGCTGGCCCTGGATTCAGTGGACCCCGAGGGACGA
GCCGATGTGCGTCAGGCCAGGAGAGACGGTGTCAGGAAGGTTCAGACCATCTTGGAAAAACTTGAACAGAAAGCC
ATTGATGTCCCAGGTCAAGTCCAGGTCTATGAACTCCAGCCCAGCAACCTTGAAGCAGATCAGCCACTGCAGGCA
ATCATGGAGATGGGTGCCGTGGCAGCAGACAAGGGCAAGAAAAATGCTGGAAATGCAGAAGATCCCCACACAGAA
ACCCAGCAGCCAGAAGCCACAGCAGCAGCGACTTCAAACCCCAGCAGCATGACAGACACCCCTGGTAACCCAGCA
GCACCG**TAG**CCTCTGCCCTGTAAAAATCAGACTCGGAACCGATGTGTGCTTTAGGGAATTTTAAGTTGCATGCAT
TTCAGAGACTTTAAGTCAGTTGGTTTTTATTAGCTGCTTGGTATGCAGTAACTTGGGTGGAGGCAAAACACTAAT
AAAAGGGCTAAAAAGGAAAATGATGCTTTTCTTCTATATTCTTACTCTGTACAAATAAAGAAGTTGCTTGTTGTT
TGAGAAGTTTAACCCCGTTGCTTGTTCTGCAGCCCTGTCTACTTGGGCACCCCCACCACCTGTTAGCTGTGGTTG
TGCACTGTCTTTTGTAGCTCTGGACTGGAGGGGTAGATGGGGAGTCAATTACCCATCACATAAATATGAAACATT
TATCAGAAATGTTGCCATTTTAATGAGATGATTTTCTTCATCTCATAATTAAAATACCTGACTTTAGAGAGAGTA
AAATGTGCCAGGAGCCATAGGAATATCTGTATGTTGGATGACTTTAATGCTACATTTTAAAAAAAGAAAATAAAG
TAATAATATAACTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2026

MSAATHSPMMQVASGNGDRDPLPPGWEIKIDPQTGWPFFVDHNSRTTTWNDPRVPSEGPKETPSSANGPSREGSR
LPPAREGHPVYPQLRPGYIPIPVLHEGAENRQVHPFHVYPQPGMQRFRTEAAAAAPQRSQSPLRGMPETTQPDKQ
CGQVAAAAAAQPPASHGPERSQSPAASDCSSSSSSASLPSSGRSSLGSHQLPRGYISIPVIHEQNVTRPAAQPSF
HQAQKTHYPAQQGEYQTHQPVYHKIQGDDWEPRPLRAASPFRSSVQGASSREGSPARSSTPLHSPSPIRVHTVVD
RPQQPMTHRETAPVSQPENKPESKPGPVGPELPPGHIPIQVIRKEVDSKPVSQKPPPPSEKVEVKVPPAPVPCPP
PSPGPSAVPSSPKSVATEERAAPSTAPAEATPPKPGEAEAPPKHPGVLKVEAILEKVQGLEQAVDNFEGKKTDKK
YLMIEEYLTKELLALDSVDPEGRADVRQARRDGVRKVQTILEKLEQKAIDVPGQVQVYELQPSNLEADQPLQAIM
EMGAVAADKGKKNAGNAEDPHTETQQPEATAAATSNPSSMTDTPGNPAAP

FIGURE 2027

GGCACGAGGGTTTTCTCCGCGGGCGCCTCGGGCGGAACCTGGAGATA**ATG**GGCAGCACCTGGGGGAGCCCTGGCT
GGGTGCGGCTCGCTCTTTGCCTGACGGGCTTAGTGCTCTCGCTCTACGCGCTGCACGTGAAGGCGGCGCGCGCCC
GGGACCGGGATTACCGCGCGCTCTGCGACGTGGGCACCGCCATCAGCTGTTCGCGCGTCTTCTCCTCCAGGTGGG
GCAGGGGTTTCGGGCTGGTGGAGCATGTGCTGGGACAGGACAGCATCCTCAATCAATCCAACAGCATATTCGGTT
GCATCTTCTACACACTACAGCTATTGTTAGGTTGCCTGCGGACACGCTGGGCCTCTGTCCTGATGCTGCTGAGCT
CCCTGGTGTCTCTCGCTGGTTCTGTCTACCTGGCCTGGATCCTGTTCTTCGTGCTCTATGATTTCTGCATTGTTT
GTATCACCACCTATGCTATCAACGTGAGCCTGATGTGGCTCAGTTTCCGGAAGGTCCAAGAACCCCAGGGCAAGG
CTAAGAGGCAC**TGA**GCCCTCAACCCAAGCCAGGCTGACCTCATCTGCTTTGCTTTGGCATGTGAGCCTTGCCTAA
GGGGGCATATCTGGGTCCCTAGAAGGCCCTAGATGTGGGGCTTCTAGATTACCCCCTCCTCCTGCCATACCCGCA
CATGACAATGGACCAAATGTGCCACACGCTCGCTCTTTTTTACACCCAGTGCCTCTGACTCTGTCCCCATGGGCT
GGTCTCCAAAGCTCTTTCCATTGCCCAGGGAGGGAAGGTTCTGAGCAATAAAGTTTCTTAGATCAATCAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2028

MGSTWGSPGWVRLALCLTGLVLSLYALHVKAARARDRDYRALCDVGTAISCSRVFSSRWGRGFGLVEHVLGQDSI
LNQSNSIFGCIFYTLQLLLGCLRTRWASVLMLLSSLVSLAGSVYLAWILFFVLYDFCIVCITTYAINVSLMWLSF
RKVQEPQGKAKRH

FIGURE 2029

TCCCTGCTCACGAGTTCAGGGCTCCTGGGCGGCCGCTTTTTCCAGTTCCAGGTGTGCAGAAGTGTCCTCTCCCCA
CGCGCGGCGGGCTGCACTTGGTCGCTGGCTCCGAGATCGCGCGGGGCCGCCGGAAGCCCAAGACGGTACCGGGGG
CCGCAGCGCAGCCGGCGCCGCCCTCCGCCCTCCCCAACAGCAGGCCGAGTCCCGTAGCATCCGGTAGGGAA**ATG**G
TCGTGCTTTCGGTCCCCGCCGAAGTCACCGTGATCCTGTTAGATATCGAAGGTACCACAACCCCGATTGCTTTCG
TGAAGGACATTTTATTTCCTTACATCGAAGAAAATGTTAAAGAGTATCTGCAGACACATTGGGAAGAAGAGGAGT
GCCAGCAGGATGTCAGTCTTTTGAGGAAACAGGCTGAAGAGGACGCCCACCTGGATGGGGCTGTTCCTATCCCTG
CAGCATCTGGGAATGGAGTGGATGATCTGCAACAGATGATCCAGGCCGTGGTAGATAATGTGTGCTGGCAGATGT
CCCTGGATCGAAAGACCACTGCACTCAAACAGCTGCAGGGCCACATGTGGAGGGCGGCATTCACAGCTGGGCGCA
TGAAAGCAGAGTTCTTTGCAGATGTAGTTCCAGCAGTCAGGAAGTGGAGAGAGGCCGGAATGAAGGTGTACATCT
ATTCCTCAGGGAGTGTGGAGGCACAGAAACTGTTATTCGGGCATTCTACGGAGGGAGATATTCTTGAGCTTGTTG
ATGGTCACTTTGATACCAAGATTGGACACAAAGTAGAGAGTGAAAGTTACCGAAAGATTGCAGACAGCATTGGGT
GCTCAACCAACAACATTTTGTTTCTGACAGATGTTACTCGAGAGGCCAGTGCTGCTGAGGAAGCAGATGTGCACG
TAGCTGTGGTGGTGAGACCAGGCAACGCAGGATTAACAGATGATGAGAAGACTTACTACAGCCTCATCACATCCT
TCAGTGAACTATACCTGCCTTCCTCAACC**TAG**AGAAGGGTTGTTAAGGCAGACCGCCCTGTTCCCCAGAGTTGTC
CCTGTAGTGTCTAGGTTTATTCTAATGGTAAAAGTAACTTACTTAAAAAACATATGTACACATATGTATGCAAGT
ATGTATATATGTGTATGCTCAGATTAACTTCCATAGGTACATAAGTGAAAGAGTCTCAGTTCAGTGAACACAAAA
CTTATTTAAAGATGCTTTATATGTAGAAATTGTTTCAAATCATACTCTACCCTTAGTGAGGGCAAAGTGTAGTTG
GTAGAAGAAATTGCTAAATACCTATCTAATGTGCTATGTTTATCAAATCGTGTACTAAAATGGAAAGCTAGTTTT
GAGAAATTATTCAGAAGCCTTGTTATTTTAAAAATGAAATATTTCAAAGACTGAATATTTTCAAAGAAAATGAAT
AATTCATTGCCCTTGTGATTTAGAAGATTATAACAGCTGTATTTCATATTTGCCTCCTTATATATATCAAAGACC
AAGGTATTTCCTTCTGCTTCAAAAGAACAAAATTGGGAAAGAAAACTCACTTGAGTCTTGATCAAACAAGTGTCT
TTTACTTAAGAAGAAACTTGGTAATCATTGTGGCACCCACAGCAAGCAGTTGCCTTACCAGTGAAAAAGGTGCAC
TGAGGTAACATCTAAAACAGAGATGTGGTTCTTAATGTTTAACAGAACAGTTCTAATCCTGCCACGTGTTATCAT
TATAGATTTTATAGTTGCCTTTCTAACTACTTAGCACAGTTTGAGAATACGTTAATTGCTATTTACTATTTAAAA
AGTTTTACTGAAATCAGTCCATAACATTAAGATGAGCCCTAATATGTAAGATTTTCCTCTGGAATGGATGTGAGA
AATGTAAATTTTATAACAGCAGTATTTATCCTGGTTTAATTCTAATACGATGTCATGTTAATTTCATGTTGTGAT
TAATAAAAGCATTTTTTCTTCAAAAAAAAAAAAAAAAAAAA

FIGURE 2030

MVVLSVPAEVTVILLDIEGTTTPIAFVKDILFPYIEENVKEYLQTHWEEEECQQDVSLLRKQAEEDAHLDGAVPI
PAASGNGVDDLQQMIQAVVDNVCWQMSLDRKTTALKQLQGHMWRAAFTAGRMKAEFFADVVPAVRKWREAGMKVY
IYSSGSVEAQKLLFGHSTEGDILELVDGHFDTKIGHKVESESYRKIADSIGCSTNNILFLTDVTREASAAEEADV
HVAVVVRPGNAGLTDDEKTYYSLITSFSELYLPSST

FIGURE 2031

TGACGCATACTATAGCGCTGTTTTCCTGCACTGATAAACGAAAAGCAATCCACCAGGTCTCGGCAGCTAACTTTC
CGGCACTACTTATGCCCGAGCGTGTCGTCCCAGTGCGCAAGTGCAGCAGGTGGCTACGGAGGGGCGCGGGAGGAA
GAGGAGGAGGAGGAGGAGGCTGGGTTGGGCCGGCGCAAGTGCTGTGATGCGGTTCCGGGCAGGGTTCTGTAGAAT
CTGAATACCAGTTTCCGAGCGGCAAGGCAGCG**ATG**GCGATTTTTAGTGTGTATGTGGTGAACAAAGCTGGCGGCT
TGATTTACCAGTTGGACAGCTACGCGCCACGGGCTGAGGCTGAGAAAACTTTCAGTTATCCGCTGGATCTGCTGC
TCAAGCTACACGATGAGCGTGTGTTGGTTGCTTTCGGCCAGCGGGACGGCATCCGAGTGGGTCATGCAGTGCTGG
CCATCAATGGCATGGACGTGAATGGCAGGTACACGGCCGACGGGAAAGAGGTGCTGGAGTATCTGGGTAACCCTG
CTAATTACCCGGTGTCCATTCGATTTGGCCGGCCCCGCCTCACTTCTAATGAGAAGCTTATGCTGGCCTCCATGT
TCCACTCGCTCTTTGCCATCGGCTCCCAGCTGTCTCCTGAACAGGGAAGCTCAGGCATTGAGATGCTGGAGACAG
ACACATTCAAATTGCACTGCTACCAGACACTGACAGGGATCAAGTTTGTGGTTCTAGCAGATCCTAGGCAAGCTG
GAATAGATTCTCTTCTCCGAAAGATTTATGAGATTTACTCAGACTTTGCCCTCAAGAATCCATTCTATTCCTTAG
AAATGCCTATCAGGTGTGAGCTCTTTGACCAGAACCTGAAGCTAGCTCTGGAGGTGGCAGAGAAGGCTGGAACTT
TTGGACCTGGGTCA**TAG**GCTGAACCTGTTATGGACCCCCAAATTCTGAGAGTTCCTGCAACAAGAATACTGCTGT
TGACACTCCAGTGGAAATCCCAGCAGCCTTGTTAGTGCACTTGAAAGTGGGAGAATGCTGACCCTGATGACTTGT
ACTGATTCCTGAGCCTTAACACTGTGCTCTTTCCTTCTGTATATACCATGGTCTTACTTTCCAACTCTGTACAGA
TTTATTTATGGAGGAGCTAGGTCCATAAATGTTGTAATAAATATTCCTTTGATCTTGGTGTTTGCGTAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAA

FIGURE 2032

MAIFSVYVVNKAGGLIYQLDSYAPRAEAEKTFSYPLDLLLKLHDERVLVAFGQRDGIRVGHAVLAINGMDVNGRY
TADGKEVLEYLGNPANYPVSIRFGRPRLTSNEKLMLASMFHSLFAIGSQLSPEQGSSGIEMLETDTFKLHCYQTL
TGIKFVVLADPRQAGIDSLLRKIYEIYSDFALKNPFYSLEMPIRCELFDQNLKLALEVAEKAGTFGPGS

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FIGURE 2033

GGCCACGAGGGGAAATTGACGAACACGTGACGCGGTCGGGCGGACCACTGCAGACTGAGCGGTGGACCGAATTGG
GACCGCTGGCTTATAAGCGATC**ATG**TTTCTCCAGTATTACCTCAACGAGCAGGGAGATCGAGTCTATACGCTGAA
GAAATTTGACCCGATGGGACAACAGACCTGCTCAGCCCATCCTGCTCGGTTCTCCCCAGATGACAAATACTCTCG
ACACCGAATCACCATCAAGAAACGCTTCAAGGTGCTCATGACCCAGCAACCGCGCCCTGTCCTC**TGA**GGGTCCCT
TAAACTGATGTCTTTTCTGCCACCTGTTACCCCTCGGAGACTCCGTAACCAAACTCTTCGGACTGTGAGCCCTGA
TGCCTTTTTGCCAGCCATACTCTTTGGCATCCAGTCTCTCGTGGCGATTGATTATGCTTGTGTGAGGCAATCATG
GTGGCATCACCCATAAAGGGAACACATTTGACTTTTTTTTCTCATATTTTAAATTACTACAAGATTATTAAAGAT
AAAATGATTTTGAAAAACAAAAAAAAAAAAA

FIGURE 2034

MFLQYYLNEQGDRVYTLKKFDPMGQQTCSAHPARFSPDDKYSRHRITIKKRFKVLMTQQPRPVL

FIGURE 2035

GAAGTCCTGGTAATCTGGTCCTTGTTCCCGTCTGGATACCAGCTTCCTTCAGCAGCGCAGGCGGTCGGTCCCTGA
GGCCCGTGGAAGGAGTCAAACTTGCGGGAATTTTGCAGTTTATCTGCAGGGCTGTTGTTTCCAGCAAGACCCAAA
GCTAGAAAAGGAGGAGGAAGAAACTGACCCGATCAGTGCCAGAAGTCATTGTATTCAAAGAAGAATAAGCAAGAA
AGAAAAGAAGGAAGGAAGAGAGGTAGACAGATACAAG**ATG**AAATCCTGTCAAAAAATGGAAGGAAAACCAGAAAA
TGAGAGTGAACCAAAGCATGAGGAAGAGCCAAAGCCTGAGGAAAAGCCAGAAGAGGAGGAGAAGCTAGAGGAGGA
GGCCAAAGCAAAAGGAACTTTTAGAGAAAGGCTGATTCAATCTCTCCAGGAGTTTAAAGAAGATATACACAACAG
GCATTTAAGCAATGAAGATATGTTTAGAGAAGTGGATGAAATAGATGAGATAAGGAGAGTCAGAAACAAACTTAT
AGTGATGCGTTGGAAGGTTAATCGAAACCATCCTTACCCCTATTTAATG**TAG**TTTACCTTGATTTTTATCTGATA
TTAACAATACCATATAGCTTGCTTTTTATTAGCATTTCCTGATATTCCTTTGTCCATATTTCTACTTATAACCTG
TTGCTATTAATGGTTTTAGATGTATCTCTTGTTATCTGCATCTCATTGTTTATTGTATTTTGAACCAATCTACAA
GTCTCTGTCTTTTAATAAAAGAACTTTACACATTTGTAAAAAAGAGGTTCTTGGTAAGATATAAAATGGAAAAAG
GCTAAGTAATATGTGAATATCATATTTTTGAAAGGTAAAAAGTACATTTGTATATTACATATATGGACATAACTT
GTGAAGGATGAAAGAAAGTCAGCCTCTCGGTGGTGGGATTATGAATGATTTTTCTCCTTTTGCTTGTTAGTATTT
TCTATATTCTAAAATTAACACACATTATTATAGCTAGAATATAAAAGTTTTATAAAAAAAAAA

FIGURE 2036

MKSCQKMEGKPENESEPKHEEEPKPEEKPEEEEKLEEEAKAKGTFRERLIQSLQEFKEDIHNRHLSNEDMFREVD
EIDEIRRVRNKLIVMRWKVNRNHPYPYLM

FIGURE 2037

GAATTCCGAGCTTTTTATTCCTAAGAGGAGAAAATCAGTAACGGGAGAAGCAGGAGGATGTCCAGAAGAAATTTC
ATCCCTTGCTCTCGCCCCTACTCTTTCTGGTGTTAGATCGAGCTACCCTCTAAAAGCAGTTTAGAGTGGTAAAAA
AAAAAAAAACACACCAAACGCTCGCAGCCACAAAAGGGATGAAATTTCTTCTGGACATCCTCCTGCTTCTCCCGT
TACTGATCGTCTGCTCCCTAGAGTCCTTCGTGAAGCTTTTTATTCCTAAGAGGAGAAAATCAGTCACCGGCGAAA
TCGTGCTGATTACAGGAGCTGGGCATGGAATTGGGAGACTGACTGCCTATGAATTTGCTAAACTTAAAAGCAAGC
TGGTTCTCTGGGATATAAATAAGCATGGACTGGAGGAAACAGCTGCCAAATGCAAGGGACTGGGTGCCAAGGTTC
ATACCTTTGTGGTAGACTGCAGCAACCGAGAAGATATTTACAGCTCTGCAAAGAAGGTGAAGGCAGAAATTGGAG
ATGTTAGTATTTTAGTAAATAATGCTGGTGTAGTCTATACATCAGATTTGTTTGCTACACAAGATCCTCAGATTG
AAAAGACTTTTGAAGTTAATGTACTTGCACATTTCTGGACTACAAAGGCATTTCTTCCTGCAATGACGAAGAATA
ACCATGGCCATATTGTCACTGTGGCTTCGGCAGCTGGACATGTCTCGGTCCCCTTCTTACTGGCTTACTGTTCAA
GCAAGTTTGCTGCTGTTGGATTTCATAAAACTTTGACAGATGAACTGGCTGCCTTACAAATAACTGGAGTCAAAA
CAACATGTCTGTGTCCTAATTTCGTAAACACTGGCTTCATCAAAAATCCAAGTACAAGTTTGGGACCCACTCTGG
AACCCGAGGAAGTGGTAAACAGGCTGATGCATGGGATTCTGACTGAGCAGAAGATGATTTTTATTCCATCTTCTA
TAGCTTTTTTAACAACATTGGAAAGGATCCTTCCTGAGCGTTTCCTGGCAGTTTTAAAACGAAAAATCAGTGTTA
AGTTTGATGCAGTTATTGGATATAAAATGAAAGCGCAATAAGCACCTAGTTTTCTGAAAACTGATTTACCAGGTT
TAGGTTGATGTCATCTAATAGTGCCAGAATTTTAATGTTTGAACTTCTGTTTTTTCTAATTATCCCCATTTCTTC
AATATCATTTTTGAGGCTTTGGCAGTCTTCATTTACTACCACTTGTTCTTTAGCCAAAAGCTGATTACATATGAT
ATAAACAGAGAAATACCTTTAGAGGTGACTTTAAGGAAAATGAAGAAAAAGAACCAAAATGACTTTATTAAAATA
ATTTCCAAGATTATTTGTGGCTCACCTGAAGGCTTTGCAAAATTTGTACCATAACCGTTTATTTAACATATATTT
TTATTTTTGATTGCACTTAAATTTTGTATAATTTGTGTTTCTTTTTCTGTTCTACATAAAATCAGAAACTTCAAG
CTCTCTAAATAAAATGAAGGACTATATCTAGTGGTATTTCACAATGAATATCATGAACTCTCAATGGGTAGGTTT
CATCCTACCCATTGCCACTCTGTTTCCTGAGAGATACCTCACATTCCAATGCCAAACATTTCTGCACAGGGAAGC
TAGAGGTGGATACACGTGTTGCAAGTATAAAAGCATCACTGGGGGGATTTAAGGAGAATTGAGAGAATGTACCCAC
AAATGGCAGCAATAATAAATGGATCACACTTAACG

FIGURE 2038

MKFLLDILLLLPLLIVCSLESFVKLFIPKRRKSVTGEIVLITGAGHGIGRLTAYEFAKLKSKLVLWDINKHGLEE
TAAKCKGLGAKVHTFVVDCSNREDIYSSAKKVKAEIGDVSILVNNAGVVYTSDLFATQDPQIEKTFEVNVLAHFW
TTKAFLPAMTKNNHGHIVTVASAAGHVSVPFLLAYCSSKFAAVGFHKTLTDELAALQITGVKTTCLCPNFVNTGF
IKNPSTSLGPTLEPEEVVNRLMHGILTEQKMIFIPSSIAFLTTLERILPERFLAVLKRKISVKFDAVIGYKMKAQ

FIGURE 2039

GGCACGAGGAAGGTTTTTGCTGCGCCAACGCAGTGACCGAAGGCTCCGCTCACGCCCGGCCTGATCCTGCCTGAA
G**ATG**GTGCCACTGGTGGCTGTGGTATCAGGGCCCCGTGCCCAGCTCTTTGCCTGCCTGCTCAGGCTGGGCACTCA
GCAGGTCGGCCCCCTTCAGCTGCACACCGGGGCCAGCCATGCGGCCAGGAACCATTATGAGGTGCTGGTGCTGGG
TGGGGGCAGTGGCGGAATCACCATGGCTGCCCGCATGAAGAGGAAAGTGGGTGCAGAGAATGTGGCCATTGTTGA
GCCCAGTGAGAGACATTTCTACCAGCCAATCTGGACACTGGTGGGTGCTGGTGCCAAACAATTGTCCTCATCTGG
TCGTCCCACGGCAAGTGTGATTCCATCTGGTGTAGAATGGATCAAAGCTAGAGTGACTGAGTTGAACCCAGACAA
GAACTGCATTCACACAGATGACGACGAGAAGATCTCCTACCGATATCTTATTATTGCTCTCGGAATCCAGCTGGA
CTATGAGAAGATTAAAGGCCTACCTGAAGGTTTCGCTCATCCCAAAATAGGGTCGAATTATTCAGTTAAGACTGT
AGAGAAGACATGGAAAGCTCTGCAGGACTTCAAAGAGGGCAATGCCATCTTCACCTTCCCAAATACTCCAGTGAA
GTGTGCTGGAGCCCCTCAGAAGATCATGTACTTATCAGAAGCCTACTTCAGGAAGACAGGGAAGCGATCCAAGGC
CAATATCATTTTCAACACTTCTCTTGGAGCCATTTTCGGGGTTAAGAAGTATGCAGATGCCCTGCAGGAGATCAT
CCAGGAGCGGAACCTCACTGTTAACTACAAGAAAAACCTCATTGAAGTCCGAGCCGATAAACAAGAGGCTGTATT
TGAGAACCTGGACAAACCAGGAGAGACCCAAGTGATTTCATATGAAATGCTTCATGTCACACCTCCAATGAGCCC
ACCAGATGTCCTCAAGACCAGTCCTGTGGCTGATGCTGCTGGTTGGGTGGATGTGGATAAAGAAACTCTGCAACA
CAGGAGGTACCCAAATGTGTTTGGGATTGGGGACTGCACCAACCTTCCTACGTCAAAGACCGCTGCTGCAGTAGC
TGCCCAGTCAGGAATACTTGATAGGACAATTTCTGTAATTATGAAGAATCAAACACCAACAAAGAAGTATGATGG
CTACACATCATGTCCACTGGTGACCGGCTACAACCGTGTGATTCTTGCTGAGTTTGACTACAAAGCAGAGCCGCT
AGAAACCTTCCCCTTTGATCAAAGCAAAGAGCGCCTTTCCATGTATCTCATGAAAGCTGACCTGATGCCTTTCCT
GTATTGGAATATGATGCTAAGGGGTTACTGGGGAGGACCAGCGTTTCTGCGCAAGTTGTTTCATCTAGGTATGAG
T**TAA**GGATGGCTCAGCACTTGCTCATCTTGGATGGCTTCTGGGCCAAAACTGCAGTCACTGAATGACCAAGAGCA
GCACGAAGGACTTGGAACCTATCCTTGTAAAGAGTTCCTTGATGGGTAATGGTGACCAAATGCCTCCCTTTTCAG
TACCTTTGAACAGCAACCATGTGGGCTACTCATGATGGGCTTGATTCTTTGGGAATAATAAAATGAAATAATACT
TTTATTTTCTGAATAAAAGTTTGTCACTGAAAAAAAAAAA

FIGURE 2040

MVPLVAVVSGPRAQLFACLLRLGTQQVGPLQLHTGASHAARNHYEVLVLGGGSGGITMAARMKRKVGAENVAIVE
PSERHFYQPIWTLVGAGAKQLSSSGRPTASVIPSGVEWIKARVTELNPDKNCIHTDDDEKISYRYLIIALGIQLD
YEKIKGLPEGFAHPKIGSNYSVKTVEKTWKALQDFKEGNAIFTFPNTPVKCAGAPQKIMYLSEAYFRKTGKRSKA
NIIFNTSLGAIFGVKKYADALQEIIQERNLTVNYKKNLIEVRADKQEAVFENLDKPGETQVISYEMLHVTPPMSP
PDVLKTSPVADAAGWVDVDKETLQHRRYPNVFGIGDCTNLPTSKTAAAVAAQSGILDRTISVIMKNQTPTKKYDG
YTSCPLVTGYNRVILAEFDYKAEPLETFPFDQSKERLSMYLMKADLMPFLYWNMMLRGYWGGPAFLRKLFHLGMS

FIGURE 2041

GGCACGAGGGTGAGCGCTCGCAAGAGGACGGCAGAGGCCCGGCAGCTCGGAGCTCCGGGACCTTGTGGCGCATCA
GGACGCGGCTGTCCCTCTGCCGGGACCCAGAGCCGCCGCCGCCGCTCTGCCTCCTGCGTGTTAGCCTCCTCTGCG
CGCTCCGGGCAGGCGGCCGTGGGAGCCGCTGGGGCGAGGACGGCGCGAGGCTGCTGCTGCTGCCCCCGGCCCGCG
CGGCTGGAAACGGAGAGGCCGAGCCAAGCGGCGGCCCCTCTTATGCTGGGAGG**ATG**CTGGAGAGTAGCGGCTGCA
AAGCGCTGAAGGAGGGCGTGCTGGAGAAGCGCAGCGACGGGTTGTTGCAGCTCTGGAAGAAAAAGTGTTGCATCC
TCACCGAGGAAGGGCTGCTGCTTATCCCGCCCAAGCAGCTGCAACACCAGCAGCAGCAGCAACAGCAGCAGCAGC
AGCAGCAACAACAGCCCGGGCAGGGGCCGGCCGAGCCGTCCCAACCCAGTGGCCCCGCTGTCGCCAGCCTCGAGC
CGCCGGTCAAGCTCAAGGAACTGCACTTCTCCAACATGAAGACCGTGGACTGTGTGGAGCGCAAGGGCAAGTACA
TGTACTTCACTGTGGTGATGGCAGAGGGCAAGGAGATCGACTTTCGGTGCCCGCAAGACCAGGGCTGGAACGCCG
AGATCACGCTGCAGATGGTGCAGTACAAGAATCGTCAGGCCATCCTGGCGGTCAAATCCACGCGGCAGAAGCAGC
AGCACCTGGTCCAGCAGCAGCCCCCCTCGCAGCCGCAGCCGCAGCCGCAGCTCCAGCCCCAACCCCAGCCTCAGC
CTCAGCCGCAACCCCAGCCCCAATCACAACCCCAGCCTCAGCCCCAACCCAAGCCTCAGCCCCAGCAGCTCCACC
CGTATCCGCATCCACATCCACATCCACACTCTCATCCTCACTCGCACCCACACCCTCACCCGCACCCGCATCCGC
ACCAAATACCGCACCCACACCCACAGCCGCACTCGCAGCCGCACGGGCACCGGCTTCTCCGCAGCACCTCCAACT
CTGCC**TGA**AAGGGGCAGCTCCCGGGCAAGACAAGGTTTTGAGGACTTGAGGAAGTGGGACGAGCACATTTCTATT
GTCTTCACTTGGATCAAAAGCAAAACAGTCTCTCCGCCCCGCACCAGATCAAGTAGTTTGGACATCACCCTACTG
AAAACTTGCGATTCTTCTTAGTTTTCTGCATACTTTTCATCACGATGCAGGAAACGATTTCGAGTCAAGAAGACT
TTTATTTATGAACCTTTGAAAGGATCGTCTTGTATGGTGAATTTTCTAGGAGCGATGATGTACTGTAATTTTATT
TTAATGTATTTTGATTTATGATTATTTATTAGTTTTTTTTAAATGCTTGTTCTAAGACATTTCTGAATGTAGACC
ATTTTCCAAAAAGGAAACTTTATTTTCAAAAACCTAATCCGTAGTAATTCCTAATCTTGGAGAATAAAAAAGGGC
GGTGGAGGGGAAAACATTAAGAATTTATTCATTATTTCTCGAGTACTTTCAGAAAGTCTGACACTTTCATTGTTG
TGCCAGCTGGTTGAAATTAAAACTCTGATATTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAA

FIGURE 2042

MLESSGCKALKEGVLEKRSDGLLQLWKKKCCILTEEGLLLIPPKQLQHQQQQQQQQQQQQQQPGQGPAEPSQPSG
PAVASLEPPVKLKELHFSNMKTVDCVERKGKYMYFTVVMAEGKEIDFRCPQDQGWNAEITLQMVQYKNRQAILAV
KSTRQKQQHLVQQQPPSQPQPQPQLQPQPQPQPQPQPQPQSQPQPQPQPKPQPQQLHPYPHPHPHPHSHPHSHPH
PHPHPHPHQIPHPHPQPHSQPHGHRLLRSTSNSA

FIGURE 2043

CCCGTATCCGCATCCACATCCACATCCACACTCTCATCCTCACTCGCACCCACACCCTCACCCGCACCCGCATCC
GCACCAAATACCGCACCCACACCCACAGCCGCACTCGCAGCCGCACGGGCACCGGCTTCTCCGCAGCACCTCCAA
CTCTGCCTGAAAGGGGCAGCTCCCGGGCAAGACAAGGTTTTGAGGACTTGAGGAAGTGGGACGAGCACATTTCTA
TTGTCTTCACTTGGATCAAAAGCAAAACAGTCTCTCCGCCCCGCACCAGATCAAGTAGTTTGGACATCACCCTAC
TGAACAACTTGGCGATTCTTCTTAGTTTTCTGCATACTTTTCATCACCGATGCAGGAAACGATTTCGAGTCAAGA
AGACTTTTATTTATGAACCTTTGAAAGGATCGTCTTGTATGGTGAATTTTCTAGGAGCGATGATGTACTGTAATT
TTATTTTAATGTATTTTGATTTATGATTATTTATTAGTTTTTTTTAAATGCTTGTTCTAAGACATTTCTGAATGT
AGACCATTTTCCAAAAAGGAAACTTTATTTTCAAAAACCTAATCCGTAGTAATTCCTAATCTTGGAGAATAAAAA
AGGGCGGTGGAGGGGAAAACATTAAGAATTTATTCATTATTTCTCGAGTACTTTCAGAAAGTCTGACACTTTCAT
TGTTGTGCCAGCTGGTTGAAATTAAAACTCTGATATTACTTTTTTTGAGGATTTTTATTTTTGTTTTTGCTTAAA
CACTATAGTTTGTCTAGAAGTTTAAAAAGCTAAAAGTTAAAAATGGTGTAATTATGAAAATCTAACACTCAAGAT
AGTTTCTAAAAGGAAATCAGTAGTTAAGGATACCTGATTTCAAAATATTTAAAGCATAACCTAACTGATGGTAGG
ATGATTGTATCTTGAATATGTGGTAGGGCCACATCTATTGTAGGAAAACCTTGCTTTTATCATCTGTGTGTAAAG
GGCTTAATAAGGAGAAGAGGCCTTTTGACTGATTTGTGAGTATAAATGCATTTGCTGTTTCATTTCAAAAATGTT
GTGGAGGAAAAGAGTACATTTAACTTGTATAAGAGAATATTTGTACTCCTGTCCAGGCTGCAGGACCTTTCTTCG
AGAGCTTTGCACACTTGACTTGAACCACATTTTCTGATCCCTTTACTTTGTTTTAGAAGCACACTGAAAAATCTC
GTTGTTTAAAGTACAATTTGTAAATATTTCAAAGGTCTAGGAGTCATAACTTTTGTTTTCATACTGAAAATGATG
TTGATCAGAGAAACCAACTGTTTTGCTTTTCATTGCTCTGTGAGAAATTGAGGATTCTGTTTTGCTGTTAGGTAA
GCTAACTCAGAAATTGAAAGGAAAGACTGGATAAACACCGGATTTTCAGTAAGAAAACAACCCCAGTCTTGTCTT
AGAAGCCACTTGTTGAGGAGTCTGTTGGGGGAAAAAAGAGGATATGCTTTTAAAGGTAGAACAAACCTTCTTCTG
TGTTAAATCAAAAGGATGTTCAAAATCCACCAGGACAGATGCTACTTGGGTTTAAATGGAGCCATAGATGATACA
AAGTCCTCTTGGGGCTGAAAATCACTTCCTATTTGCATGGCTTTACTAACTGGTTTCTGTTTTCCATTATCTTTT
TCACAGAAAGTCTTGGTCAGTATTTTTCCAGCATTTAAATTGAAACGGTCAGTATTAGACCACTGCTAGGTTATG
TAGTCAAGAAATAAAAATAGAATTACATGCTACAGATGTCTTTATTCTCCTTCCATCTAGAAAGGAGTTCCAAGG
TCAAATTACTTTTTAGTGCAATAGTTAAATGACATTTTGAGATCATAACTCATATCCAAAAAGTTGCAGGGAAAA
TTAAAATAGCTTTCCCCTATTAAGCTAATGGCAAACAAAACTTAAGTGGACCCCCACTTCCAGTGGTTGTTTAGG
TTGCAGTTGTGAAAATATGCTGCCAACATTTAAAAACTTGTTTCATATGTATATATGTATACACATATATGAATA
TGTATGTATATATACATATATGAGAACATGTGTGTACACATATATGAATATGTATATATGTGTATGTATGTATAT
ATGTATATGAAATGAGAGCCACATCTAAAGATTTCTTAAATCAAGTTTGGTTCAGCTTCCTTAGAACTGTGGCTG
TACTTTTTGAGGAGTACCTCATAGTACTATATTTTTAATGCATGCAAATCATAATAGCTCCAAATGAACCACAGT
TTTTTCCCAATGGAGGATTTTTTTTTAATTCTTGTACTAAAAAAAAAAAAATCCATACCAAATATTTTTACAAATT
AAGATTGATGTAGGTTTTAAAAAAGGCATTTGTATGTTGTTAGCTTACATATGGGGCTAGGTAATTTCATTGCTT
AAAAAGATGCGCCTAGGCTCCCTCTTGGTGGCTGGATTTCTTTTTCTTCGCCCGTGGTGGCCATGGTTTTTAATA
GGGCCACCGGAATCATGGTTTCTTTTTTTTTTTTTTTTTTGGAGATGGAGTCTCGCCCTGTGACCCAGGCTGGAG
TGCAGTGGCACGATCTCGGCTCACTGCAACCTCTGCCTCTTGGGTTCACGCCATTCTCCTGTGTCAGCCTCCTGA
GTAGCTGGGACTACAGGTGAATGCCACCACGCCCGGCTGATTTTTGTATTTTTAGTAGAGATGGGGTTTCACCAT
AGTGGTCAGGCTGTTCTCGAACTCCTGACCTCAGGTGATCCACCTGCCTTGGCCTCCCAAAGTGCTAGGATTACA
GGTGTGAGCCACCACACCCGGCCCCAGAGTAATGGTTTCTTGACTTTCTGTAGCCCTTGTTCCTTAGTCTGCTGT
GATATTTATGTTGACCTTTATCATTTTCTATTCTGAACCCCTCTTAGCATTTAATGTGAAATCTAAGAAATTAGA
AGTAGAATGGCTTTTATTGTTTTGACACCTTTGAAATTATTATTAATAATTTTTCCAGAGCAAAAAAGCAAACAC
GCTCAATAAGACTAAACAAAACAAAATATAAATGTACATCATTTAATGTCCCAGTGGCTCTATTCTACCTGTAAG
AAAATGATACAAAACCACCTAAGATATTTTGAAGCCTGACAAATCAGCTTCATGGAAAAAGGTAAAAAATGCATT
TTTCAACCGAAAGGGCAGATCCAATAGAAGACCCGCTCCTTAAATAAACATAAAATGTAAAAAGTTGGAAAAAAA
AA

FIGURE 2044

GCAGATCGCTTGCAGCTTGCTAGCTGTGTGGGCTGGGAGGTCTGGTAGGGCTGAGCTTGCAAGAGGATCAAC**ATG**

CCTTTGGCTAGAGATTTACTACATCCGTCCTTGGAAGAGGAAAAGAAAAAACATAAAAAGAAACGCCTAGTACAA
AGTCCAAATTCTTACTTTATGGATGTAAAATGTCCAGGTTGCTACAAGATCACCACGGTTTTCAGCCATGCTCAG
ACAGTGGTTCTTTGTGTAGGTTGTTCAACAGTGTTGTGCCAGCCTACAGGAGGAAAGGCCAGACTCACAGAAGGG
TGTTCATTTAGAAGAAAGCAACAC**TAA**TGATTCAAACAGCTTCCTGAATTTTAATTTTGTGTTGTCTCACAGAAA
GCCTTATCATAAATTCCATAATTCTAATTAATTTACCAAGATAATGTAATTACATTTGGTTTTGTAAGGTATACA
GCAGTAATCTCCTATTTTGGTGTCAGTTTTTCAATAAAGTTTTGATTATGGGCAAAAAAAAAAAAAAAAAAAA

FIGURE 2045

MPLARDLLHPSLEEEKKKHKKKRLVQSPNSYFMDVKCPGCYKITTVFSHAQTVVLCVGCSTVLCQPTGGKARLTE
GCSFRRKQH

FIGURE 2046

AGACAGCACCTCAGTCTCTGACTCCAGCCGCACACCTCCTGCCTCTACCAGCAGGGGTTGCCGCCAGACCAGAGC
CAGGGCCAGGTCCCTGCGTCCATCCCCCCCGGTAGGATGGACGTGAGCCATCCTTCTAGGGGACTTTTTTCAGTG
TGCGACTCGTCTCTGTTAGGTGGTAGGAGCCAGTTTGTGTGGCCTGTGCCACGCTCCACAGTGCGTGGCTGGGCT
CTGTGTGTGGCCTGTGTCCCCTGTCCCTGCAGGACCCAGCAGGCATCGTGGCGTGACAGCTGTGTCCAAGCCACT
GCCCGGGCATCCCATCACCCACCAGGGTGCACAGTCTCTCCTGCTGGGGGCTTTCTGTCGCATGTGTGTCTCCTG
TCGACTCTGCAGTTTGTTCTCAGAGCAGAATGTTTCCTGTTCTCAGTGCACAAAGACACTGGTTTTCAATCGGCG
TCTAAAACCACGTTCCTGCCTTTCATTGCAACACGGTGTGTTCATTTGTTTAAAACAGTTTAATGAGTAAGTTTA
GATGACTGGTCAATATCTTAAAAATGTATATTAGTAAGAAGTTCTTCCTGGAATTTTTCTTTCGATTCTGGCAGA
ATAAACAGGTGTTTTTAGTTTTCCCACTGTCTGAGCCAAGCAGGACCCTGTCCCAGAGCAAGAG**ATG**TCCCCTTC
CATCTCTGACCCTTGCCTGGGACAAGCTTTGATGGGGGGCCCCAGCTTCAAGGCTGTGGTGGGAACAGCACCCCC
AAATGCCAGCCTCTCCTTTCTTCCCATCCACCAGTATACTGCGGGGCCATTTCTGGTCTTTGTGCAACAGGAAAC
CCATTTCTGGTGGGATATGCCTTCCAGTGCCACAGGGCCACTCACCCCATGCATCTCTGTCCTGCCCGTCAGTGC
TGGGACGGACAGCAAGGGCAAGCCCAGTGTCTGGCGGATAGGTGGGTGGGAACAGAGAGGGGAGAATGCCGTCCT
AAGCTTCTGCTTGGGGATCCCCCACACGACCTGGGTACTGCCTGGGAAACCTGTCCTAAGTAAAACTATGGACCT
CGCCTCGCCCACCGGCCTGCGAAGCCAGCATCTCCGTGAAGGTGGATGGAAGCGCCTTTGTCCTCATTTTGAGCT
GCAAGCTGGGTCAGCGGCTCTGAAGCCCTCGAGTGACTTTCTAACCCAAGACCCAGCCCCTGGCAGGAGGAGGGT
GGGTGCAGGGCTGGTGGGACAAAAAGAGGCCTCAGCAGGCCTGGAAGACCCTTCCAGTACATCCCACAGCGTGTC
GAGCAGCTGGGAGAACCTGTGTCAAGCTCGAGCCGTCATAGATCCCCATGAGGTGTCTGAAGCCCCTTCTTGG**TG**
ATGGGAGGCAGAGGTGCTGACGTTCTGGAGCATGGACGTGAGTCCTCAGCTGGCTCCGCGTGGGCCCTTGGAGGG
TGCCAGGTGTGTGGTGACCTTCTGGATGCCTTTAACTTCATGGCTGCGTCATTCCTGATTTAGAACTTTAACCGG
AGCTTCATCTAGTGATTGCAAAACTGGACCAATGGGAGGACGGCGGCGCAGCCCGCTCCCTCCGTGGAATGGAGC
TCAGCTCTTCGGAGGCATCAAAGCACCTGTCGCCTCCGTGGTCCCCCTGCCGAGGGAGTGCGGCCTCTGCAAGGT
TCGGGGGTGGCTTCGTTTGCCTGGAGTGGCCGGCCCTGCTTGTGCCATGTGGATGTTTGTGAGCCTCGGTCCTAC
AGCACTGTGTAGGCTGCATCTGTTTCGTGCTGGTCCTGTTGACTTGTATGATATCCACAAATAAATATTTTCATG
GCAAAAAAAAAAAAAAAAA

FIGURE 2047

MSPSISDPCLGQALMGGPSFKAVVGTAPPNASLSFLPIHQYTAGPFLVFVQQETHFWWDMPSSATGPLTPCISVL
PVSAGTDSKGKPSVWRIGGWEQRGENAVLSFCLGIPHTTWVLPGKPVLSKTMDLASPTGLRSQHLREGGWKRLCP
HFELQAGSAALKPSSDFLTQDPAPGRRRVGAGLVGQKEASAGLEDPSSTSHSVSSSWENLCQARAVIDPHEVSEA
PSW

FIGURE 2048

CCCGAGACCACGTGGCCTCCGAGCAGCTCAGGGCGCCCTTGAAAGTTCTTGGATCTGCGGGTT**ATG**GCCGGTCCC
TTGCAGGGCGGTGGGGCCCGGGCCCTGGACCTACTCCGGGGCCTGCCGCGTGTGAGCCTGGCCAACTTAAAGCCG
AATCCCGGCTCCAAGAAACCGGAGAGAAGACCAAGAGGTCGGAGAAGAGGTAGAAAATGTGGCAGAGGCCATAAA
GGAGAAAGGCAAAGAGGAACCCGGCCCCGCTTGGGCTTTGAGGGAGGCCAGACTCCATTTTACATCCGAATCCCA
AAATACGGGTTTAACGAAGGACATAGTTTCAGACGCCAGTATAAGCCTTTGAGTCTCAATAGACTGCAGTATCTT
ATTGATTTGGGTCGTGTTGATCCTAGTCAACCTATTGACTTAACCCAGCTTGTCAATGGGAGAGGTGTGACCATC
CAGCCACTTAAAAGGGATTATGGTGTCCAGCTGGTTGAGGAGGGTGCTGACACCTTTACGGCAAAAGTTAATATT
GAAGTACAGTTGGCTTCAGAACTAGCTATTGCTGCCATTGAAAAAAATGGTGGTGTTGTTACTACAGCCTTCTAT
GATCCAAGAAGTCTGGACATTGTATGCAAACCTGTTCCATTCTTTCTTCGTGGACAACCCATTCCAAAAAGAATG
CTTCCACCAGAAGAACTGGTACCATATTACACTGATGCAAAGAACCGTGGGTACCTGGCGGATCCTGCCAAATTT
CCTGAAGCACGACTTGAACTCGCCAGGAAGTATGGTTATATCTTACCTGATATCACTAAAGATGAACTCTTCAAA
ATGCTCTGTACTAGGAAGGATCCAAGGCAGATTTTCTTTGGTCTTGCTCCAGGATGGGTGGTGAATATGGCCGAT
AAGAAAATCCTAAAACCTACAGATGAAAATCTCCTTAAGTATTATACCTCA**TGA**ATTCCCGTCCAAGGAAGCAGA
GTTGTTAAAGAGTACTGGAATAGGGGCTGAAGGATCTATATTCCCTTATTGCATTTTCCTTATGTATAATTTTCC
AGATGGTGATGTTACTTTTCAGTGTACTCATATGTCTCATTTTCATCTAAAATTAAATGGCAGGAAACAAGGACT
GCATAGAGAAAAAAAAAAAAAAAAAAAAA

FIGURE 2049

MAGPLQGGGARALDLLRGLPRVSLANLKPNPGSKKPERRPRGRRRGRKCGRGHKGERQRGTRPRLGFEGGQTPFY
IRIPKYGFNEGHSFRRQYKPLSLNRLQYLIDLGRVDPSQPIDLTQLVNGRGVTIQPLKRDYGVQLVEEGADTFTA
KVNIEVQLASELAIAAIEKNGGVVTTAFYDPRSLDIVCKPVPFFLRGQPIPKRMLPPEELVPYYTDAKNRGYLAD
PAKFPEARLELARKYGYILPDITKDELFKMLCTRKDPRQIFFGLAPGWVVNMADKKILKPTDENLLKYYTS

FIGURE 2050

GCGGATCATCCGCTTCCGGAGTCGAGGTTTTCGGGCTTGTACCGCTTGGCGGTGCGGCCTGGTGTCGGCTTGCAG
GTTCTTTCTGTGTTTGTTCTCTGCCCTGCCAAGGCCGTAGAGCTGGTGCGTGCGGGTAGCGGGGCTCTCCGAGGA
GCGCGGCACGCCGCGCACC**ATG**GTCCACCTCACTACTCTCCTCTGCAAGGCCTACCGTGGGGGCCACTTAACCAT
CCGCCTTGCCCTGGGTGGCTGCACCAATCGGCCGTTCTACCGCATTGTGGCTGCTCACAACAAGTGTCCCAGGGA
TGGCCGTTTCGTAGAGCAGCTGGGCTCCTATGATCCATTGCCCAACAGTCATGGAGAAAAACTCGTTGCCCTCAA
CCTAGACAGGATCCGTCATTGGATTGGCTGCGGGGCCCACCTCTCTAAGCCTATGGAAAAGCTTCTGGGTCTTGC
TGGCTTTTTCCCTCTGCATCCTATGATGATCACAAATGCTGAGAGACTGCGAAGGAAACGGGCACGTGAAGTCCT
GTTAGCTTCTCAGAAAACAGATGCAGAAGCTACAGATACAGAGGCTACAGAAACA**TAA**ATGAGCTGACTTTAGTG
AGCATAGCAGTGGGAACAAGGTCAAGGTCCTTTTGAAACACTGCAGCGATCTTAATTTTGTTAGATTTGGAGTTC
AATAAATGGAGTATCCTGAAAAAAAAAAA

FIGURE 2051

MVHLTTLLCKAYRGGHLTIRLALGGCTNRPFYRIVAAHNKCPRDGRFVEQLGSYDPLPNSHGEKLVALNLDRIRH
WIGCGAHLSKPMEKLLGLAGFFPLHPMMITNAERLRRKRAREVLLASQKTDAEATDTEATET

FIGURE 2052

GTCGGCTGGAAATTATGTCCTCCGTCGGTTTTCCGCAGTTTTTCCACCAAGCGAGATATTTTTGGGAGTTATTCC
CTAAATAACTGCATTATATGCTCCTTTCATGACGAAATTGCTGCCGTGGAGAAGACTGGAGGAAACTCGAGGAAG
AGGGAGAAGCCGACAAGTGCTCGACGGGCTAGGAACTGTCCTGCTTGGGTGTTAGCGTTTCCCGCCGGGCCAGTA
AGGCTGAGTGACCCGGCGTGGCTACTAGGAGAAGGACGTACGGTCCTGCTAGTAGAGGAATATGTCGAGTTTCTC
TAGGGCGCCCCAGCAATGGGCCACTTTTGCTAGAATATGGTATCTCTTAGATGGGAAAATGCAGCCACCTGGCAA
ACTTGCTGCTATGGCATCTATAAGACTTCAGGGATTACATAAACCTGTGTACCATGCACTGAGTGACTGTGGGGA
TCATGTTGTTATAATGAACACAAGACACATTGCATTTTCTGGAAACAAATGGGAACAAAAAGTATACTCTTCGCA
TACTGGCTACCCAGGTGGATTTAGACAAGTAACAGCTGCTCAGCTTCACCTGAGGGATCCAGTGGCAATTGTAAA
ACTAGCTATTTATGGCATGCTGCCAAAAAACCTTCACAGAAGAACAATGATGGAAAGGTTGCATCTTTTTCCAGA
TGAGTATATTCCAGAAGATATTCTTAAGAATTTAGTAGAGGAGCTTCCTCAACCACGAAAAATACCTAAACGTCT
AGATGAGTACACACAAGAAGAAATAGACGCCTTCCCAAGATTGTGGACTCCACCTGAAGATTATCGGCTATAAGA
GAATAAGAATTGCAGAAAATAACAGTGAAGTGATTGAAACTTTCTTCTGATGAGTTTCTCTAACCTACAGGATGG
AGTAAAACAACTGCTACAGTTCAGCACCTGTTTTATGTGCCGAATCACTGTGGGGAAAGGTCAGGAAGGTATAGT
CCTTCAATAGGAAATTGTAATTAAAATATAATTTTATAGAACCATTTTTATGTAATCTGATTTGAATGTTATAGT
TGATAATAATAAAATCACTTACTTGGTTGACTAAAA

FIGURE 2053

MSSFSRAPQQWATFARIWYLLDGKMQPPGKLAAMASIRLQGLHKPVYHALSDCGDHVVIMNTRHIAFSGNKWEQK
VYSSHTGYPGGFRQVTAAQLHLRDPVAIVKLAIYGMLPKNLHRRTMMERLHLFPDEYIPEDILKNLVEELPQPRK
IPKRLDEYTQEEIDAFPRLWTPPEDYRL

FIGURE 2054

CTCGTTTTCCCCTCCTGAGCGGGTGGAGGAGGCCCAAGCGTGCTGGGCGCGCTCCCCCTTCCTTTCCCTCCGGCG
TCCTCTCCCGGCCCTCTCGCGCTGCACTGTCTCTCCGACGCAAGACTGTCCCGGCCCGGATATGGCTCGTGGACA
GCAGAAAATTCAGTCTCAGCAGAAAAATGCCAAAAAGCAAGCTGGACAAAAGAAGAAACAAGGACATGACCAAAA
GGCTGCTGCCAAAGCTGCCTTAATATATACCTGCACTGTCTGTAGGACACAAATGCCAGACCCTAAGACCTTCAA
GCAGCACTTTGAGAGCAAGCATCCTAAGACTCCACTTCCTCCAGAATTAGCTGATGTTCAGGCATAAGGTTGTTT
ACAGGTGAATTCATGACACCTTTGACTCTTCTACTGTCTCAGACCTTAGGTAACATACCTGCGCTGCTTTTCTAA
CAAACTGTTGATCAGCAAAAATAAAGGGGCTACAGAAACACTCATTTTTATGCTGTTCCCTCTTGGGCTTCATGC
AAAGACAATTCTGTGTAAATGTACAGTTGACTCTGATTTGGAAATATGAAAATCAGTCCATCCTTGTTATAAAAA
ATTTTTTTACAATTGTAATTATATTGATGTTCATATTGTGTAAAATAACTCATTTAATAAAATAGTACTTTGATT
TACGACATCACAGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 2055

MARGQQKIQSQQKNAKKQAGQKKKQGHDQKAAAKAALIYTCTVCRTQMPDPKTFKQHFESKHPKTPLPPELADVQ
A

FIGURE 2056

ATTGTGGGAAGGGCGGCCGGTGCAGCCGCAGCTGCCATCTTAGGGGCGCCTGGCGCTACGGGTTTCTCGTTGGAG
GCGGCCTTCGTGGCAGCTGTAGACGCCGGGAAAAGGCATAAAGTCCGTTGGCCGACACCTTTCTTTCCTCCGGCC
TCGGTAGAACCGCCAGCCCGCGTCCGAAGGCGGAGGCGAGGGGAACTGGCCGCGTGAGGGGCCTGAGGCGAGCGG
TTAGAGCGTCTCCCGGAAGG**ATG**GGCCGGTCTCGGAGCCGGAGCTCGTCCCGCTCCAAGCACACCAAGAGCAGCA
AGCACAACAAGAAGCGCAGCCGGTCCCGGTCGCGATCCCGGGACAAGGAGCGCGTGCGGAAGCGTTCCAAATCTC
GGGAAAGTAAACGGAACCGGCGGCGGGAGTCGCGGTCCCGTTCGCGCTCCACCAACACGGCCGTGTCCCGGCGCG
AGCGGGACCGGGAGCGCGCCTCGTCCCCGCCCGACCGCATCGACATCTTCGGGCGCACGGTGAGCAAGCGCAGCA
GCCTGGACGAGAAGCAGAAGCGAGAGGAGGAGGAGAAGAAAGCGGAGTTCGAGCGGCAGCGAAAAATTCGACAGC
AAGAAATAGAAGAAAAACTCATCGAGGAAGAAACAGCACGAAGAGTAGAAGAATTGGTAGCAAAAAGGGTGGAGG
AAGAACTGGAGAAAAGGAAGGATGAAATTGAACGAGAAGTTCTCCGAAGGGTGGAGGAAGCCAAACGCATCATGG
AAAAGCAGTTGCTCGAAGAACTCGAGCGACAGAGACAAGCTGAGCTTGCCGCACAAAAAGCTAGAGAGGAGGAAG
AACGTGCAAAACGTGAGGAGCTAGAGCGAATACTGGAAGAGAATAACCGAAAAATTGCAGAAGCACAAGCCAAAC
TGGCCGAAGAACAGTTGAGAATTGTTGAAGAACAAAGAAAGATTCATGAGGAAAGGATGAAACTAGAACAAGAAC
GACAACGTCAACAGAAAGAAGAACAAAAAATTATCCTGGGCAAGGGGAAGTCCAGGCCAAAACTGTCCTTCTCAT
TAAAAACCCAGGAT**TAA**ATTGCAAACTCTGAACTTTTTACAAAGAAAAATGGAAAAACTTTGTATGGTAGCTTCA
TGTTGAAGTGGTTTTTTGTTTTTGTTTTTGTTTTTTTAATTTGTAAAATCTGGAAAGTTAGCTTGTTCTAATAGG
GGCTATGCTCTGCAATTCCCTTTTTTTTTTTTTTTCCTTCCACTAAGTCAAATCCTTATCAGATCATTGTTGTA
TTCTAAGGAGTGACGTATTTTTCACCTGTTTGGATTCTATATTAGTGGTCTGAGGAAGAGCAGATCACATTGTAA
AACTATGGATGGTCTGATAAGGCTTTTACTGACCCCACTGACTTCAGAGTTATACTCTGCTTGCTACATCATAAT
GCTGGTTTTGCTGACTTTTTGTTTTTTTATATATTTATAAAAAAAGAAAAAGTTGGTGATTGCATTGGGAAATTC
CCAGGGTATTACTGGACCTATGTGGTGTATTGTTAAACCAGTGTCCTTGTGATACTGTCGCTCTTGATGTTCCTG
ATACAGGTAAGGAAACAGTTGGTCAACTCTGATACAAAGTATATATACAGTTCAGTATTGTCTCTGTTCATTTTG
TTTTTATTTCATTGACAAAATCAAACCAGCATTCCCCATTGTGTAAATAAATGATTTTGCTGAATAAAGTAAAGT
CTTAAATTC

FIGURE 2057

MGRSRSRSSSRSKHTKSSKHNKKRSRSRSRSRDKERVRKRSKSRESKRNRRRESRSRSRSTNTAVSRRERDRERA
SSPPDRIDIFGRTVSKRSSLDEKQKREEEEKKAEFERQRKIRQQEIEEKLIEEETARRVEELVAKRVEEELEKRK
DEIEREVLRRVEEAKRIMEKQLLEELERQRQAELAAQKAREEEERAKREELERILEENNRKIAEAQAKLAEEQLR
IVEEQRKIHEERMKLEQERQRQQKEEQKIILGKGKSRPKLSFSLKTQD

FIGURE 2058

GGCACGAGGCAGAGGGCGGTTCCTGGAGTTACAGCCGCGTTTGCGGGACGTGTCTGCGCGGCAGTCCTGGCCTGT
TGAGCTTGTCCAGACGAAGCCTCGCAGGGATGGGTTGGAGCCTGGGCCGGGCTTCGCTCAGGCAGCGTTTGAGGC
AGACCCAGCAGGGTCCTCCTGGGGCCTTCCTGCCTTTGAACTGCGGTGGCGGGCGGGCGCACGGTCTCCTGTACG
CCCTAGACTAGGGGCCGCCATCTCC**ATG**GCCACGGCCGTGAGCCGGCCCTGCGCCGGCAGGTCGCGGGACATACT
GTGGCGCGTTTTGGGCTGGAGGATAGTTGCAAGTATTGTTTGGTCAGTGCTATTTCTACCCATCTGCACCACAGT
ATTTATAATTTTCAGCAGGATTGATTTGTTTCATCCTATACAGTGGCTGTCTGATTCTTTCAGTGACCTGTATAG
TTCCTATGTAATCTTTTACTTCCTGCTGCTGTCAGTGGTAATAATAATAATAAGTATTTTCAATGTGGAGTTCTA
TGCAGTTGTGCCTTCTATTCCTTGCTCCAGACTAGCTCTGATAGGGAAGATCATTCATCCTCAGCAACTCATGCA
CTCATTTATTCATGCTGCAATGGGAATGGTGATGGCCTGGTGTGCTGCAGTGATAACCCAGGGCCAGTACAGCTT
TCTTGTGGTTCCCTGCACTGGTACTAACAGCTTTGATAGCCCTGCTGCGCAAACCTGCTTAAATGAATATCATCT
TTTTTTCCTACTGACTGGAGCATTTATGGGCTATAGCTATAGCCTCCTGTATTTTGTTAACAACATGAACTATCT
TCCATTTCCCATCATACAGCAATACAAGTTCTTGCGTTTTAGGAGATCTCTGCTCTTATTAGTTAAACACAGTTG
TGTGGAATCACTGTTCCTGGTTAGAAATTTCTGCATTTTATATTATTTTCTTGGCTATATTCCCAAAGCTTGGAT
TAGCACTGCTATGAACCTTCACATAGATGAGCAGGTTCATAGGCCACTTGACACAGTGAGTGGCCTCTTAAATCT
CTCGTTACTCTACCATGTCTGGCTGTGTGGTGTCTTTCTCCTGACGACTTGGTATGTCTCATGGATACTCTTCAA
AATCTATGCCACAGAGGCTCATGTGTTTCCTGTTCAACCACCATTTGCAGAAGGGTCAGATGAGTGCCTTCCAAA
AGTGTTAAATAGCAATCCTCCCCCCATCATAAAGTATTTAGCCTTGCAGGACCTGATGTTGCTTTCTCAATATTC
TCCTTCACGAAGACAAGAAGTTTTCAGCCTCAGCCAACCAGGTGGACATCCCCACAATTGGACAGCCATTTCAAG
GGAGTGTTTGAATCTTTTAAATGGTATGACTCAGAAACTGATTCTCTATCAAGAAGCTGCTGCTACGAATGGGAG
AGTGTCTTCATCTTACCCAGTGGAACCTAAGAAATTAAATTCTCCAGAAGAAACTGCTTTTCAGACACCAAAATC
TAGCCAGATGCCTCGGCCTTCAGTGCCACCATTAGTTAAAACATCACTGTTTTCTTCAAAATTATCTACACCTGA
TGTTGTGAGCCCATTTGGGACCCCATTTGGCTCTAGTGTAATGAATCGGATGGCTGGAATTTTTGATGTAAACAC
CTGCTATGGGTCACCGCAAAGTCCTCAGCTAATAAGAAGGGGGCCAAGATTGTGGACATCAGCTTCTGATCAGCA
AATGACTGAATTTTCTAATCCTTCTCCATCTACCTCTATTAGTGCTGAGGGTAAGACAATGAGACAACCCAGTGT
GATTTATTCATGGATTCAGAATAAACGTGAACAGATTAAGAATTTCTTGTCAAAACGGGTGCTGATAATGTATTT
TTTCAGTAAGCACCCAGAGGCCTCCATTCAGGCTGTTTTTTCAGATGCCCAAATGCATATTTGGGCATTAGAAGG
TCTGTCGCACTTAGTAGCAGCATCATTTACAGAGGATAGATTTGGAGTTGTCCAGACGACACTACCAGCTATCCT
TAATACTTTGTTGACACTGCAAGAGGCAGTCGACAAGTACTTTAAGCTTCCTCATGCTTCCAGTAAACCACCCCG
GATTTCAGGAAGCCTTGTGGACACTTCATATAAAACATTAAGATTTGCATTCAGAGCATCACTGAAAACTGCCAT
CTATCGAATAACTACTACATTTGGTGAACATCTGAATGCTGTGCAAGCATCTGCAGAACATCAGAAAAGACTTCA
ACAGTTCTTGGAGTTCAAAGAA**TAG**TTAAGTAATATAAACTGTGTTCATTACACTGCTGATACAACTACAGATGG
GACAGTAAATGTTCAGCATTCTTGGATCAGAAGAAAACGGACTAATTAGATGCTTCCTTTGTCGTGGTGGTTGCT
TTGAAAACTATACTTTAATGGGAGAAATCATGGAAAGAAATTCTCAACAGAATAACTGAAAACTGCCTTTTCTGT
ACCGATTGCTTTTTGTGTGTGTGGTATAATAAAATCTTTATTCAATTTTACAGAAAAAAAAAAAAAAAAAAAAA

FIGURE 2059

MATAVSRPCAGRSRDILWRVLGWRIVASIVWSVLFLPICTTVFIIFSRIDLFHPIQWLSDSFSDLYSSYVIFYFL
LLSVVIIIISIFNVEFYAVVPSIPCSRLALIGKIIHPQQLMHSFIHAAMGMVMAWCAAVITQGQYSFLVVPCTGT
NSFDSPAAQTCLNEYHLFFLLTGAFMGYSYSLLYFVNNMNYLPFPIIQQYKFLRFRRSLLLLVKHSCVESLFLVR
NFCILYYFLGYIPKAWISTAMNLHIDEQVHRPLDTVSGLLNLSLLYHVWLCGVFLLTTWYVSWILFKIYATEAHV
FPVQPPFAEGSDECLPKVLNSNPPPIIKYLALQDLMLLSQYSPSRRQEVFSLSQPGGHPHNWTAISRECLNLLNG
MTQKLILYQEAAATNGRVSSSYPVEPKKLNSPEETAFQTPKSSQMPRPSVPPLVKTSLFSSKLSTPDVVSPFGTP
FGSSVMNRMAGIFDVNTCYGSPQSPQLIRRGPRLWTSASDQQMTEFSNPSPSTSISAEGKTMRQPSVIYSWIQNK
REQIKNFLSKRVLIMYFFSKHPEASIQAVFSDAQMHIWALEGLSHLVAASFTEDRFGVVQTTLPAILNTLLTLQE
AVDKYFKLPHASSKPPRISGSLVDTSYKTLRFAFRASLKTAIYRITTTFGEHLNAVQASAEHQKRLQQFLEFKE

FIGURE 2060A

CGCCGTGGGGCCGAGGTGTCGCTTCCTGACGGGGCGGCGCGGACGGACGCGGCCGGTGCCGGCCGGGACGCCGGG
CCCGCAGCCTAGCTCGCCATCTCGCTCACGCCGCCCGCCCGCGGGGCCGTCAGCCCCCGCCGGGCCGGGGCC**ATG**

CAGGAGAGCCAGACCAAGAGCATGTTCGTGTCCCGGGCCCTGGAGAAGATCCTAGCCGACAAGGAGGTGAAGCGG
CCCCAGCACTCCCAGCTGCGCAGGGCCTGCCAGGTGGCGCTCGATGAAATTAAAGCAGAAATAGAAAAGCAGAGG
CTTGGCACTGCTGCACCACCAAAGGCAAACTTCATTGAAGCTGACAAGTATTTTCTTCCATTCGAGCTAGCTTGC
CAGTCCAAGTCCCCAAGGGTAGTCAGCACATCCCTTGACTGCTTGCAGAAACTCATCGCATACGGGCACATCACT
GGCAACGCCCCTGACAGTGGAGCCCCTGGGAAGCGGCTGATCGACAGAATTGTTGAAACCATTTGCAGTTGTTTT
CAGGGCCCTCAGACTGATGAAGGGGTTCAGTTACAAATAATTAAGGCTCTTCTGACTGCAGTGACTTCCCCACAC
ATTGAAATTCATGAGGGTACTATCCTGCAGACAGTGAGAACATGTTACAATATCTATTTGGCCAGCAAAAATCTC
ATCAATCAAACCACTGCCAAGGCTACCCTTACTCAGATGCTGAACGTCATTTTCACCCGCATGGAAAACCAAGTG
TTGCAGGAGGCCAGAGAACTGGAAAAACCAATCCAGTCAAAACCCCAGTCCCCTGTGATCCAAGCTGCAGCAGTA
TCCCCAAAGTTCGTTCGTTTGAAGCACAGTCAGGCACAAAGCAAACCAACAACTCCCGAAAAAACAGATTTAACC
AACGGTGAACATGCCAGGAGTGATTCTGGAAAAGTAAGCACAGAAAATGGAGACGCACCCAGAGAAAGAGGCTCA
TCACTGTCAGGGACTGATGACGGAGCCCAGGAGGTGGTGAAGGACATCTTGGAAGATGTAGTCACATCTGCCATT
AAAGAAGCAGCGGAAAAGCATGGTCTGACAGAACCTGAGAGAGTTCTAGGTGAACTGGAGTGCCAGGAATGTGCT
ATTCCCCCAGGAGTTGATGAAAACTCACAGACCAACGGGATAGCCGATGACAGGCAGTCCTTGTCGTCAGCAGAT
AATCTGGAATCGGATGCACAAGGACATCAAGTGGCTGCCAGGTTCTCCCACGTTCTGCAGAAGGATGCCTTCCTT
GTGTTCCGCTCCCTGTGCAAGCTGTCCATGAAACCCCTTGGTGAAGGCCCTCCAGACCCAAAATCCCATGAGCTG
CGTTCCAAGGTGGTTTCCCTGCAGCTGCTCCTCTCTGTGTTGCAAAATGCTGGCCCCGTATTCAGGACTCACGAG
ATGTTCATCAATGCAATCAAGCAATATCTCTGTGTGGCCTTGTCCAAAAACGGCGTCTCTTCAGTGCCTGATGTC
TTTGAGCTCTCTCTTGCCATTTTTCTTACTCTTCTTTCAAACTTTAAAATGCACTTGAAAATGCAGATAGAGGTC
TTTTTCAAAGAGATTTTCCTGAACATTTTAGAAACATCAACAAGTTCTTTTGAGCACAGGTGGATGGTCATTCAG
ACTCTGACGAGGATCTGTGCAGATGCCCAGTGTGTTGTGGATATTTATGTCAACTACGACTGTGATTTAAATGCT
GCTAACATTTTTGAGCGCCTTGTAAATGATTTATCCAAAATTGCTCAGGGAAGAAGTGGACATGAGCTGGGAATG
ACACCTCTGCAGGAGCTCAGCCTGAGGAAGAAAGGCCTGGAGTGCCTCGTGTCCATTCTCAAGTGCATGGTGGAG
TGGAGCAAAGACCTGTATGTGAATCCCAACCACCAGACCAGCCTCGGTCAGGAGAGGCTCACGGATCAGGAAATA
GGGGATGGGAAAGGCCTTGACATGGCAAGACGGTGTAGTGTGACGTCCATGGAGTCCACAGTGTCCTCGGGGACC
CAGACAACTGTTCAGGATGACCCTGAGCAATTTGAGGTCATCAAGCAAAAAAAAAAAATCATTGAACACGGCATC
GAGCTGTTCAACAAGAAACCCAAGAGGGGGATCCAGTTTCTCCAGGAGCAGGGCATGCTGGGAACGTCAGTTGAA
GACATAGCCCAATTCCTGCACCAGGAGGAGCGCCTGGATTCCACCCAAGTAGGCGATTTTCTGGGAGATAGCGCA
AGGTTCAACAAGGAGGTGATGTATGCCTACGTGGACCAACTTGACTTCTGTGAAAAAGAATTTGTCTCAGCCCTG
CGGACATTCCTAGAAGGTTTCCGCCTACCTGGAGAAGCCCAAAAGATTGACCGATTAATGGAGAAGTTTGCCGCA
AGATACATAGAATGCAACCAAGGGCAAACTCTGTTTGCTAGTGCTGACACTGCTTATGTCCTAGCGTATTCAATT
ATTATGCTGACTACAGACTTGCACAGTCCTCAGGTAAAAAATAAAATGACGAAAGAGCAGTATATTAAAATGAAT
CGGGGTATCAATGATAGTAAAGATCTGCCAGAAGAGTATCTCTCAAGCATCTATGAAGAGATAGAAGGCAAGAAA
ATTGCAATGAAAGAAACAAAAGAGCTAACGATTGCAACCAAATCTACTAAGCAGAATGTAGCTAGTGAAAAGCAG
CGGCGGCTGCTGTACAACTTAGAGATGGAGCAAATGGCTAAAACAGCCAAAGCTCTGATGGAGGCTGTGAGCCAT
GCCAAAGCCCCGTTTACCAGTGCCACTCACCTGGACCATGTCCGGCCAATGTTCAAACTGGTGTGGACGCCACTA
TTGGCAGCCTACAGCATCGGACTCCAGAACTGTGATGACACTGAAGTGGCCTCCTTGTGTTTGGAAGGCATCCGA
TGTGCAATCCGAATCGCCTGCATCTTTGGAATGCAGCTGGAACGAGATGCCTATGTTCAGGCTCTTGCTCGCTTC
TCCCTACTCACAGCCAGCTCCAGCATCACAAAAATGAAGCAGAAAAACATCGACACCATTAAGACGCTTATCACA
GTGGCTCACACCGATGGCAACTACCTTGGGAATTCCTGGCATGAGATCTTGAAATGCATCAGCCAGCTGGAGCTC
GCTCAGCTGATAGGAACCGGTGTGAAGACGCGCTACCTGTCTGGATCTGGGCGTGAAAGAGAAGGGAGCCTGAAG
GGCCACACATTGGCAGGAGAAGAGTTCATGGGCCTTGGCCTCGGTAATTTGGTGAGTGGCGGAGTGAATAAAAGA
CAGATGGCCAGCTTCCAAGAATCGGTTGGTGAGACCAGCTCGCAGAGTGTGGTTGTAGCTGTGGACAGGATTTTT
ACTGGGTCTACCAGACTGGATGGAAATGCAATAGTTGACTTTGTCCGCTGGCTGTGTGCTGTGTCCATGGATGAA
CTGGCTTCCCCCCACCATCCTCGCATGTTCAGCTTGCAGAAGATTGTGGAGATATCATACTACAACATGAATCGG
ATCCGACTACAGTGGTCTCGAATATGGCATGTGATTGGAGATCACTTCAATAAGGTTGGCTGCAACCCTAATGAA

FIGURE 2060B

GATGTGGCTATCTTTGCTGTTGACTCATTAAGGCAACTCTCCATGAAGTTTCTTGAGAAGGGTGAATTAGCCAAC
TTCCGTTTCCAGAAAGATTTTCTGAGGCCCTTTGAGCATATTATGAAGAAAAACAGGTCTCCCACCATCCGGGAC
ATGGCGATCCGCTGCATTGCCCAGATGGTGAACTCCCAGGCGGCCAACATCCGCTCAGGTTGGAAGAACATCTTT
GCCGTGTTCCACCAGGCAGCCTCTGATCATGATGGGAACATTGTGGAGCTGGCCTTCCAGACCACTTGCCACATT
GTCACAACTATTTTCCAGCACCATTTTCCTGCAGCCATCGATTCCTTTCAGGATGCTGTGAAGTGCTTATCAGAG
TTCGCCTGCAACGCCGCTTTCCCTGACACGAGCATGGAAGCGATTCGGCTCATCCGCTTCTGTGGCAAATACGTC
TCTGAGAGGCCTCGGGTGCTACAAGAATACACAAGTGATGACATGAATGTAGCTCCTGGTGACAGAGTCTGGGTC
CGAGGCTGGTTCCCCATCTTATTCGAACTCTCCTGCATCATTAATAGATGCAAGTTAGATGTACGAACAAGGGGA
CTCACAGTCATGTTTGAGATCATGAAGAGCTATGGCCACACCTTTGAAAAGCACTGGTGGCAGGACCTGTTCAGA
ATCGTGTTTCGGATTTTTGACAATATGAAACTCCCTGAGCAACTGTCAGAGAAATCTGAGTGGATGACAACAACC
TGCAATCACGCACTTTATGCTATTTGTGATGTTTTTACCCAGTTTTATGAAGCTTTGAATGAAGTTCTTCTTTCT
GATGTATTTGCACAATTGCAGTGGTGTGTCAAACAAGATAATGAACAGTTGGCGCGATCAGGTACAAATTGCTTA
GAAAACTTAGTAATATCCAATGGAGAGAAATTCAGTCCTGAAGTCTGGGATGAAACCTGCAACTGTATGTTGGAT
ATTTTCAAAACAACCATCCCACATGTTTTGCTGACATGGAGACCTGTAGGAATGGAGGAAGATTCATCAGAAAAG
CATTTGGATGTGGATCTGGACCGCCAGTCTTTAAGCAGCATAGATAAAAATCCCTCTGAGAGGGGACAGAGCCAG
CTCTCTAACCCAACAGATGACAGCTGGAAGGGTAGACCATACGCAAATCAGAAACTGTTTGCCAGCCTCCTCATC
AAGTGTGTGGTCCAGTTGGAATTGATACAGACCATTGACAACATTGTGTTCTACCCTGCGACGAGCAAAAAGGAG
GATGCAGAGCACATGGTTGCCGCCCAGCAAGACACGCTGGATGCAGATATCCACATAGAGACGGAGGATCAGGGC
ATGTATAAGTACATGTCTTCCCAGCACCTCTTCAAGCTGTTGGACTGTTTGCAGGAATCCCATTCATTCTCAAAG
GCCTTCAACTCCAATTACGAGCAGCGGACTGTCCTGTGGCGAGCAGGTTTTAAGGGCAAGTCTAAACCCAATCTT
CTAAAACAAGAAACCAGCAGCCTGGCCTGTTGTTTGAGGATCCTGTTTCGAATGTATGTTGATGAGAACCGCAGG
GATTCCTGGGAAGAAATACAGCAGAGACTTTTAACTGTTTGCAGTGAAGCTCTTGCCTATTTCATCACTGTGAAT
TCTGAGAGCCATCGGGAGGCCTGGACAAGTCTCTTGTTGTTACTTCTAACTAAAACCCTCAAAATAAATGATGAA
AAGTTCAAAGCACATGCTTCAATGTACTACCCCTACTTGTGTGAAATTATGCAGTTTGACCTGATCCCTGAGCTC
CGAGCAGTTCTGCGGAAGTTCTTCCTACGGATAGGTGTTGTGTATAAGATATGGATACCAGAAGAGCCATCACAG
GTACCAGCAGCACTGTCACCAGTGTGG**TAG**CCCTGGCTGCCCAGGCCAGTGCTGCAGCTCTGCAGAATGTTCAGC
ATGCCATTTCTGACTGGCACATCTCGTGAAGTTTCATAGAAACAAGGAGTTGGCATCTTGGATCTCAGAATGGCC
TGGAAACGGATGGCCTCTACGCTGTTCCATCACAGTCTCCAACTAAGGCTTATGGTATTTCATTAAACTGTTGCA
TACCCAGTTAGCACAGTAGGTGGGGAGTCTGCTTCATTTCTATCATTCCATTTTTCTGATTAAACTGTCAAATCT
GTCATTGCATATGCCATCGTTTTCTAGCAAAATCCCATGATTGGCTATAAACGTTTTGTAAGAAGTCACTCTCCT
TGAAAATACTGAACATAGCTGTATAGGTTTGTGATTATTAGAGAATATGTTAATAAAACTTCTTGTAACGGCTAA
CTGCCACCTAAAATATGCTGGGTTTTCTGTTGTTTGAGTGTGTTAGAGAAATTTGAATGTTTTTGTCAGTTACGA
GTCAGCCGTAATTAGATTAGTTTAAGGACAGGTCAGGATTAGAGAAGAGTTGTTTTTGTGTTTTGTTAATGTCTG
AGTGATTTTTAAAGTATTTTACAAAAAGATATTGAAAATTTGGTTGAAGGCAGAGTTTAGTAATTAAGTTAGAAT
TAAGAGTTTTGCGAGGTTAAAAAAATGTGCCTCGTGGATCTCCCTGTTTTAGTAACATGGAGAGAAAAAGTCTAC
ACGAAAAAGTGAACAATTTAATGAAGATGATTAGCCTTCCTTGAAATAAGTATTTGTGGATGGGTGTTAAATTAA
AATTTCCAGAATACACTGTCCATCTCACACACTCTGAAATCTAATATATGAAGTAGTAATGAAAATGAAGTAGTA
ATTTAACCAGAGTTCATTTATCCTTGAATAAACCTTTTTATTTTCACCTCAGAAAAGTGAGTGTACTGGCAGTTA
GTGTCACTGCTTTGCACAGTCCCCATTAAAGGACCCTCCAGAGAGGGACAGTAACTGTGCATGAGAAGCCGCTCC
CATAAGCCTCCTCAGCCAGATGTCATGGGTGGAACTGGAGCTGTGTCGGGGCCAGCACAGCTGAACTGTGACAAT
GGCAGGAGGTGGCATGTGCCCAGCACTTCCATTAATCTGAGCCTAGGAGTTGAATTCTTTGGCAAGGTTGGATTC
TGAGGTCCTTATTATGTTAATGATGGTGCAATACTCTCACCTGCAGTAGAACTGAGTTCTGCTGCAGCTTGTGTA
AAAGTGGGCAGTACACAAGTACGTCCCAAAGCCTGTGAGCAGTATACGTGGATGCTCACCCATGAGAAGGAGCAC
ACACGCCTCATTCTCTGCCCTCACCCACTGCTCACCTAGAGCATCGCTGAGCGTTAGACAAAGTGTTACACAGAA
TGATTAAAACTTTCAGACTTCTACCTATGCTCTTTAGTCCTGTAAATTGGGTTGTATTGATGTCAACTCTGGTGC
CTTAGAAGTTAGTAGTTTGGGAACCTATCTGTAAAATCAGATGTTTTTTCTTTGTAGAGAAGGATTTCTGGTGCT
TTTGCTTACTAAGAGACCGATATTCTTAAGTTGTTTTCTTGTTTTAACAGCCTTGAGAAATGTTTGGTTTTGGCC
AGCAGAATTCTTGTCTACTTTTTTCTTTCCCAAAAAGTGTTTTTTAATTTCTCTACCAAAGAAAAAATGAGCAGG

FIGURE 2060C

TTTAGGTTTTTACATGACTTATATACATTAGATAAAAGGAGCTGTATAATTTAGCAGGAAAGGACTATGGGAGAA
TACTTTACTGTGAGTGGAAAATGTTAGCACATTTGACTGGTTTGCCCTGGAATCCACTGCACCTTTACACTGCAC
CATGAAACCTACACTCCCTGGTATCATAGCGCGTCATCACCTCAACAAGTCAGTCGTCTCCATTGATATTTGTAC
AAAAGGTATACATGGGGAACACGTGTTCATTCATTAAGTCCATCTTGCGTGCAGCTATATCCCTGATTGGTTATT
TTTCCTTTCCTTCTGAGGTTCTCATGTCATTTTCTTCATCGGATGTGACTAAAATTTTTCTGGTGTCTTCTGCCC
TCTCTTTAATTTTGCCTCTTGAGGGGTAGCAGATGTGTCAGTGCATTTTATTACTTGCTGAAACATTCAGGCTTA
CATTTCTTATTAGTTTAGTATTTTAAAAGATTTAATTTTCTGAATGAGGCATTTGAATTGTACCAGCAATGGACT
TTTAAAAAATTGGATGTAAAACCATTCAGGGTGATTTTTCTTGTCAGTGGACAGTGACGAACAGAGATTTGAAAT
CCCTTACCTCCAATAATAAGCCATTCAGCCTAAATTCATTTTTATGAATAAATCTCTTCTTTCTCATGGTAAATG
TGGCTTGTGCCACTCAAACACTAGTGAAAGGGTATGTACAACCGCAACATCAGGCCAGGACACCATTTATTTAAC
CAAGTAATGGAGGAGAGTGAAACATTTTCCAAGGCCTTATTTCTTTTTCATAATGCTTTAAGTGTTGATTATATG
TGCTGGGTCTCTAGAGAAGTTTTTATTTGTTACAATACTGCTGCTTTGAGCAATTTTGTTTCTCTTCATTGTCTG
TTAGGGGAATCACCAGCTTTGGCATCTTAACAACAGACAGTGGATGGGTAATTTTTATTTCTGATACGCATCTTT
AGAGTCAAATATATCTTTTCCCTGTACTCCTCATGTACAACCAAAGAACATACATTATGAAAATTGTATTATAAT
ATCTGGAAACACAACATTTTCCTCTGGCAGGTGACTTTTGTACGAAATGAAAAAAAAAAACCTGTATTTTTTTTG
TTGTTCTTTTGTGATTAAGGATATACATTTAGTAGTCTTTGTTATTAAAGGAACCTGCTGATAAGTACAAGTGTG
ACCATCTCATTCAAATGTTTGTTGTTATGATGCAAATGGATATTGGTTTCAATAGAAGCTGGATCCTTAATACTG
CATTTTCTGAATTCTGTTTTAATATTTGTGTTAAAGTAGACATAGCTGAACTCACATGGAATCCTGGAGTTTTGT
TATCAGCAGCTTTGCAGTTTGGGAAACAAAGAAACCAAAGCTGAGTGTTTTAAAGAATGAACATATCTGGAAATC
CTTGCTCTCAAAACAAAACAATATAATCTATCAAAGGTGTTTTACTCAGTGTTCTAATTTTTAAAAAATTTTATC
TGCATATTTGCATCAAATATTTATGTGTAAAATGTATGTTTTACCTCCTTAAAATGCCTAAAAGTTAGTTAATAG
TTACTTTGGTTTAACCTATACACAATGATTAAGTGCATTTAATATTGGTAATTTAATGAAAACCATTCCTTGCCC
AATGGATGTATAAATTTTTGAAAGAATAAGCAGAATTATATAATATGAAATGCTATGTAAAGTTTTCTATGTAAA
AATATTATGTATAATACTATTAAAATATCCCATGCTTTGATCAGGTGGTACATCAATAAAATTTTAAAAAGT

FIGURE 2061

MQESQTKSMFVSRALEKILADKEVKRPQHSQLRRACQVALDEIKAEIEKQRLGTAAPPKANFIEADKYFLPFELA
CQSKSPRVVSTSLDCLQKLIAYGHITGNAPDSGAPGKRLIDRIVETICSCFQGPQTDEGVQLQIIKALLTAVTSP
HIEIHEGTILQTVRTCYNIYLASKNLINQTTAKATLTQMLNVIFTRMENQVLQEARELEKPIQSKPQSPVIQAAA
VSPKFVRLKHSQAQSKPTTPEKTDLTNGEHARSDSGKVSTENGDAPRERGSSLSGTDDGAQEVVKDILEDVVTSA
IKEAAEKHGLTEPERVLGELECQECAIPPGVDENSQTNGIADDRQSLSSADNLESDAQGHQVAARFSHVLQKDAF
LVFRSLCKLSMKPLGEGPPDPKSHELRSKVVSLQLLLSVLQNAGPVFRTHEMFINAIKQYLCVALSKNGVSSVPD
VFELSLAIFLTLLSNFKMHLKMQIEVFFKEIFLNILETSTSSFEHRWMVIQTLTRICADAQCVVDIYVNYDCDLN
AANIFERLVNDLSKIAQGRSGHELGMTPLQELSLRKKGLECLVSILKCMVEWSKDLYVNPNHQTSLGQERLTDQE
IGDGKGLDMARRCSVTSMESTVSSGTQTTVQDDPEQFEVIKQKKKIIEHGIELFNKKPKRGIQFLQEQGMLGTSV
EDIAQFLHQEERLDSTQVGDFLGDSARFNKEVMYAYVDQLDFCEKEFVSALRTFLEGFRLPGEAQKIDRLMEKFA
ARYIECNQGQTLFASADTAYVLAYSIIMLTTDLHSPQVKNKMTKEQYIKMNRGINDSKDLPEEYLSSIYEEIEGK
KIAMKETKELTIATKSTKQNVASEKQRRLLYNLEMEQMAKTAKALMEAVSHAKAPFTSATHLDHVRPMFKLVWTP
LLAAYSIGLQNCDDTEVASLCLEGIRCAIRIACIFGMQLERDAYVQALARFSLLTASSSITKMKQKNIDTIKTLI
TVAHTDGNYLGNSWHEILKCISQLELAQLIGTGVKTRYLSGSGREREGSLKGHTLAGEEFMGLGLGNLVSGGVNK
RQMASFQESVGETSSQSVVVAVDRIFTGSTRLDGNAIVDFVRWLCAVSMDELASPHHPRMFSLQKIVEISYYNMN
RIRLQWSRIWHVIGDHFNKVGCNPNEDVAIFAVDSLRQLSMKFLEKGELANFRFQKDFLRPFEHIMKKNRSPTIR
DMAIRCIAQMVNSQAANIRSGWKNIFAVFHQAASDHDGNIVELAFQTTCHIVTTIFQHHFPAAIDSFQDAVKCLS
EFACNAAFPDTSMEAIRLIRFCGKYVSERPRVLQEYTSDDMNVAPGDRVWVRGWFPILFELSCIINRCKLDVRTR
GLTVMFEIMKSYGHTFEKHWWQDLFRIVFRIFDNMKLPEQLSEKSEWMTTTCNHALYAICDVFTQFYEALNEVLL
SDVFAQLQWCVKQDNEQLARSGTNCLENLVISNGEKFSPEVWDETCNCMLDIFKTTIPHVLLTWRPVGMEEDSSE
KHLDVDLDRQSLSSIDKNPSERGQSQLSNPTDDSWKGRPYANQKLFASLLIKCVVQLELIQTIDNIVFYPATSKK
EDAEHMVAAQQDTLDADIHIETEDQGMYKYMSSQHLFKLLDCLQESHSFSKAFNSNYEQRTVLWRAGFKGKSKPN
LLKQETSSLACCLRILFRMYVDENRRDSWEEIQQRLLTVCSEALAYFITVNSESHREAWTSLLLLLLTKTLKIND
EKFKAHASMYYPYLCEIMQFDLIPELRAVLRKFFLRIGVVYKIWIPEEPSQVPAALSPVW

FIGURE 2062

TCATGTCACAGCCAAAGCAGAGGGCTGGCAGGCAGCGTGCGGCAGAAGATGCTTCTCGACTACAGCGTGTACATG
GGCAGGTGTGTCCCCCAGGAAAGCCGAAGCCCCCAGAGGAGCCCCCTGCAGAGTGCGGAGAGCAGCCCCACAGCT
GGGAAGAAGTTGCCAGAGGTTCCACCCTCTGAGGAGGAAGAACAGGAAGCCTGGGTGAATGCCTTGCTTGGAAGA
ATATTTTGGGACTTCTTAGGAGAGAAATACTGGTCTGATCTGGTGTCTAAGAAGATCCAAATGAAACTCAGCCAA
ATAAAGCTCCCCTACTTTAGGAATGAGCTCACTCTGACGGAACTTGACATGTGCGTGGCTTTGCCAAAAAATCCT
CCGGGCCTTCAAGCCTTACGTTGATCACCAAGGACTCTGGATTGATTTGGAA**ATG**TCCTACAATGGGTCCTTTCT
GATGACTCTCGAGACCAAAATGAATTTGCCTAAACTAGGTAAAGAGCCTCTTGTTGAAGCCCTGAAGGTTGGAGA
AATTGGCAAAGAAGGTTGCAGGCCCCGGGCATTCTGTCTGGCGGACAGCGATGAGGAATCCTCCAGCGCTGGCTC
CTCCGAGGAAGACGATGCCCCAGAGCCCAGCGGGGGAGACAAACAGCTCCTCCCAGGGGCTGAAGGGTACGTTGG
AGGTCATCGAACAAGTAAGATTATGAGGTTTGTTGATAAAATTACCAAGTCAAAATATTTCCAAAAAGCAACAGA
GACAGAGTTTATTAAAAAGAAGATCGAAGAAGTCTCCAACACACCCCTGCTGCTCACTGTTGAAGTACAAGAATG
TAGAGGAACCTTGGCGGTCAACATTCCACCACCCCCGACTGACCGAGTATGGTATGGTTTCCGAAAGCCACCACA
TGTGGAGCTGAAAGGGCCAAAACTTGGAGAGAGAGAAGTGACTTTAGTTCATGTGACAGACTGGATAGAGAAGAA
ACTGGAGCAAGAGTTTCAGAAAGTTTTTGTCATGCCAAACATGGATGATGTTTATATCACTATAATGCACTCAGC
CATGGACCCTCGCTCTACTTCCTGCCTCCTGAAAGACCCACCTGTGGAGGCTGCTGATCAGCCA**TGA**TGGGTGAT
GTCAGATGTTCCCCATATTGTACATCGAGCTGGATGTGTGGGGTTCTTGGCCGCCATCTGTACTGTAGCACTGGC
CTCTGTGCCACAGCTACTGTTTCTTAAGGACTGCTTCTGCCCTCTGCCTGCCAGTGCCCATTCCACTGTGAGGTG
TCATTCCCTGCATCTAGTGACAACTGTCTGGATTGCCTGCTGCAAACGTTTGATTTGGCAAAGGAGACCATGGAA
GAATCATGGTGGATCCAGAAGTTATACGTGACCCACACCATGGCTTTTAAAAGTCTACCCATGTTTGTGGCAGCA
AATGAGCACAGTAAGAGCAAAGCTGAACAACTTGCCTCCTCTACTCCTCCAAAGCTTTTCTTCAGGCAGCCGGTG
CACAGTGGACTTTTTCACTTCTATACTTTGTATGCGGCCTTCCACACTTCCAGAGAATGTCAGTGTGCAATGTGT
CTGGAGGGTGGGGAGAGGAATTCTGTGGAGGCCTTTTCATTTCGGTGACAGAAGAGATGGGCAGAXAACTTATTT
TCCACATTAAATTGTGCATTTGGGAAGCAAGTAGCCATAGTACACACACAACACGCTATCAGCTTGGGTAAGGAC
AGTGGGATTTATGTGAACATCATGGCAAAGCAXTGAGATCAAACCATCCCAAGCCTTTCACCAATGAGGTACAAC
CACCTGGGGGCTAGCTAATCTTGAATGTTTTCCTGAGACAGGAGCGTATGTGAAAACATCAAACACTGCACATGA
CAGGATGGGTCCTCTCATACAGXTGGGATGGGGTTAAGAAAGCCAGAGCCAGTTTTTCCATCTGGCGTTTCTGTG
TCCTCCAGGTTTATATGGGAATCGAAACAGTTTGTTAATCTGATTGGGAGAGTTCCATGGGCAGATTTCCCTTCC
TGAAGGCCAAAACGGAGAACTGCTCTCTTTAATTATTTCAAGAGTCAAGACCAAAAGTTTGCTCAGCATCACACT
ACATCTCAAAATTAATGTTGCCAACTTAATTTTGTGCATTTGTGTCAGAATGTTTAGTTTACAAGGTTGGGGGCT
CTCTTTGCTTCGAGAAGTAAACCTAATACCATTTTTTTATTGTTTAAAGCTGCATTCAACGTCAAAATTACCTTG
GGTAACTTTTGATAACTTACATGTGTGGACAAAGCTAATAGTGGTTTTTTAAACAGCACCTTGCCTGAACATGAC
TTTAAAGAAATTAATATATTGAAAACATGTTTGAACCCTTATTTTAATTGCACCATTAAAACATTTGACTTAAAA
AAAAAAAAAAAAA

FIGURE 2063

MSYNGSFLMTLETKMNLPKLGKEPLVEALKVGEIGKEGCRPRAFCLADSDEESSSAGSSEEDDAPEPSGGDKQLL
PGAEGYVGGHRTSKIMRFVDKITKSKYFQKATETEFIKKKIEEVSNTPLLLTVEVQECRGTLAVNIPPPPTDRVW
YGFRKPPHVELKGPKLGEREVTLVHVTDWIEKKLEQEFQKVFVMPNMDDVYITIMHSAMDPRSTSCLLKDPPVEA
ADQP

FIGURE 2064

GATCGGGCGGCGCCGAGCTGAGGTGGTGAGGGACTAGCTCCCGGATGTGGAGAAGCTGGGGAGAAGGCGTGGGAG
GAAG**ATG**GACTCGGTGGAGAAGGGGGCCGCCACCTCCGTCTCCAACCCGCGGGGGCGACCGTCCCGGGGCCGGCC
GCCGAAGCTGCAGCGCAACTCTCGCGGCGGCCAGGGCCGAGGTGTGGAGAAGCCCCCGCACCTGGCAGCCCTAAT
TCTGGCCCGGGGAGGCAGCAAAGGCATCCCCCTGAAGAACATTAAGCACCTGGCGGGGGTCCCGCTCATTGGCTG
GGTCCTGCGTGCGGCCCTGGATTCAGGGGCCTTCCAGAGTGTATGGGTTTCGACAGACCATGATGAAATTGAGAA
TGTGGCCAAACAATTTGGTGCACAAGTTCATCGAAGAAGTTCTGAAGTTTCAAAAGACAGCTCTACCTCACTAGA
TGCCATCATAGAATTTCTTAATTATCATAATGAGGTTGACATTGTAGGAAATATTCAAGCTACTTCTCCATGTTT
ACATCCTACTGATCTTCAAAAAGTTGCAGAAATGATTCGAGAAGAAGGATATGATTCTGTTTTCTCTGTTGTGAG
ACGCCATCAGTTTCGATGGAGTGAAATTCAGAAAGGAGTTCGTGAAGTGACCGAACCTCTGAATTTAAATCCAGC
TAAACGGCCTCGTCGACAAGACTGGGATGGAGAATTATATGAAAATGGCTCATTTTATTTTGCTAAAAGACATTT
GATAGAGATGGGTTACTTGCAGGGTGGAAAAATGGCATACTACGAAATGCGAGCTGAACATAGTGTGGATATAGA
TGTGGATATTGATTGGCCTATTGCAGAGCAAAGAGTATTAAGATATGGCTATTTTGGCAAAGAGAAGCTTAAGGA
AATAAAACTTTTGGTTTGCAATATTGATGGATGTCTCACCAATGGCCACATTTATGTATCAGGAGACCAAAAAGA
AATAATATCTTATGATGTAAAAGATGCTATTGGGATAAGTTTATTAAAGAAAAGTGGTATTGAGGTGAGGCTAAT
CTCAGAAAGGGCCTGTTCAAAGCAGACGCTGTCTTCTTTAAAACTGGATTGCAAAATGGAAGTCAGTGTATCAGA
CAAGCTAGCAGTTGTAGATGAATGGAGAAAAGAAATGGGCCTGTGCTGGAAAGAAGTGGCATATCTTGGAAATGA
AGTGTCTGATGAAGAGTGCTTGAAGAGAGTGGGCCTAAGTGGCGCTCCTGCTGATGCCTGTTCTACTGCCCAGAA
GGCTGTTGGATACATTTGCAAATGTAATGGTGGCCGTGGTGCCATCCGAGAATTTGCAGAGCACATTTGCCTACT
AATGGAAAAGGTTAATAATTCATGCCAAAAA**TAG**AAATTAGCGTAATATTGAGAAAAAAATGATACAGCCTTCTT
CAGCCAGTTTGCTTTTATTTTTGATTAAGTAAATTCCATGTTGTAATGTTACAGAGAGTGTGATTTGGTTTGTGA
TATATATATATTGTGCTCTACTTTTCTCTTTACGCAAGATAATTATTTAGAGACTGATTACAGTCTTTCTCAGAT
TTTTAGTAAATGCAAGTAAGAACATCATCAAAGTTCACTTTGTATTGTACCCTGTAAAACTGTGTGTTTGTGTGC
TTTCAAAGATGTTGGGATTTTATTTATCTGGGGACAGTGTGTATGGTAAGACATGCCCTTCTATTAATAAAACTA
CATTTCTCAAACTTGA

FIGURE 2065

MDSVEKGAATSVSNPRGRPSRGRPPKLQRNSRGGQGRGVEKPPHLAALILARGGSKGIPLKNIKHLAGVPLIGWV
LRAALDSGAFQSVWVSTDHDEIENVAKQFGAQVHRRSSEVSKDSSTSLDAIIEFLNYHNEVDIVGNIQATSPCLH
PTDLQKVAEMIREEGYDSVFSVVRRHQFRWSEIQKGVREVTEPLNLNPAKRPRRQDWDGELYENGSFYFAKRHLI
EMGYLQGGKMAYYEMRAEHSVDIDVDIDWPIAEQRVLRYGYFGKEKLKEIKLLVCNIDGCLTNGHIYVSGDQKEI
ISYDVKDAIGISLLKKSGIEVRLISERACSKQTLSSLKLDCKMEVSVSDKLAVVDEWRKEMGLCWKEVAYLGNEV
SDEECLKRVGLSGAPADACSTAQKAVGYICKCNGGRGAIREFAEHICLLMEKVNNSCQK

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FIGURE 2066

GGGCTGACTGGAGGCTGGCGGACAGGCGACAGACCTGCGGCAGGACCAGAGGAGCGAGACGAGCAAGAACCACAC
CCAGCAGCA**ATG**TCAGCGGAAGTGGAAACCTCAGAGGGGGTAGACGAGTCAGAAAAAAAGAACTCTGGGGCCCTA
GAAAAGGAGAACCAAATGAGAATGGCTGACCTCTCGGAGCTCCTGAAGGAAGGGACCAAGGAAGCACACGACCGG
GCAGAAAACACCCAGTTTGTCAAGGACTTCTTGAAAGGCAACATTAAGAAGGAGCTGTTTAAGCTGGCCACCACG
GCACTTTACTTCACATACTCAGCCCTCGAGGAGGAAATGGAGCGCAACAAGGACCATCCAGCCTTTGCCCCTTTG
TACTTCCCCATGGAGCTGCACCGGAAGGAGGCGCTGACCAAGGACATGGAGTATTTCTTTGGTGAAAACTGGGAG
GAGCAGGTGCAGTGCCCCAAGGCTGCCCAGAAGTACGTGGAGCGGATCCACTACATAGGGCAGAACGAGCCGGAG
CTACTGGTGGCCCATGCATACACCCGCTACATGGGGGATCTCTCGGGGGGCCAGGTGCTGAAGAAGGTGGCCCAG
CGAGCACTGAAACTCCCCAGCACAGGGGAAGGGACCCAGTTCTACCTGTTTGAGAATGTGGACAATGCCCAGCAG
TTCAAGCAGCTCTACCGGGCCAGGATGAACGCCCTGGACCTGAACATGAAGACCAAAGAGAGGATCGTGGAGGAG
GCCAACAAGGCTTTTGAGTATAACATGCAGATATTCAATGAACTGGACCAGGCCGGCTCCACACTGGCCAGAGAG
ACCTTGGAGGATGGGTTCCCTGTACACGATGGGAAAGGAGACATGCGTAAATGCCCTTTCTACGCTGCTGAACAA
GACAAAGGTGCCCTGGAGGGCAGCAGCTGTCCCTTCCGAACAGCTATGGCTGTGCTGAGGAAGCCCAGCCTCCAG
TTCATCCTGGCCGCTGGTGTGGCCCTAGCTGCTGGACTCTTGGCCTGGTACTACATG**TGA**AGCACCCATCATGCC
ACACCGGTACCCTCCTCCCGACTGACCACTGGCCTACCCCTTTCTCCAGCCCTGACTAAACTACCACCTCAGGTG
ACTTTTTAAAAAATGCTGGGTTTAAGAAAGGCAACCAATAAAAGAGATGCTAGAGCCTCGTCTGACAGCATCCTC
TCTATGGGCCATATTCCGCACTGGGCACAGGCCGTCACCCTGGGAGCAGTCGGCACAGTGCAGCAAGCCTGGCCC
CCGACCCAGCTCTACTCCAGGCTTCCACACTTCTGGGCCCTAGGCTGCTTCCGGTAGTCCCTGTTTTTGCAGTAC
ATGGGTGACTATCTCCCCTGTTGGAGGTGAGTGGCCTGTAAGTCCAAGCTGTGCGAGGGGGCCTTGCTGGATGCT
GCTGTACAACTTCTGGGCCTCTCTTGGACCCTGGGAGTGAGGGTGGGTGTGGGTGGAAGCCTCAGAGGCCTTGGG
AGCTCATCCCTCTCACCCAGAATCCCTCTAACCCTTGGGTGCGGTTTGCTCAGCCCCAGCTTATCTCCTCCTCCG
CCTGTGTAAATGCTCCAGCACTCAATAAAGTGGGCTTTGCAAGCTAAAAAAAAAAAAAAAA

FIGURE 2067

MSAEVETSEGVDESEKKNSGALEKENQMRMADLSELLKEGTKEAHDRAENTQFVKDFLKGNIKKELFKLATTALY
FTYSALEEEMERNKDHPAFAPLYFPMELHRKEALTKDMEYFFGENWEEQVQCPKAAQKYVERIHYIGQNEPELLV
AHAYTRYMGDLSGGQVLKKVAQRALKLPSTGEGTQFYLFENVDNAQQFKQLYRARMNALDLNMKTKERIVEEANK
AFEYNMQIFNELDQAGSTLARETLEDGFPVHDGKGDMRKCPFYAAEQDKGALEGSSCPFRTAMAVLRKPSLQFIL
AAGVALAAGLLAWYYM

FIGURE 2068

GACGTCACGGTCACTGACAGCGTGAGCCCGCGGCGGCTGCTGCCATGGTGGCTGGCGGCCGGGTAAGGGTCTGAG
TGGATCTCCTGCCAGGCCAGAGCGCCTTCGGGGGCCGCGGCGGAAGGCCAGGAGTTTGCAGCCAGGGCGCCGGGT
TTGTGGTCTGCAGTGTCGTGAGGCTGAGGTGCAGC**ATG**TCTAGACTGGGAGCCCTGGGTGGTGCCCGTGCCGGGC
TGGGACTGTTGCTGGGTACCGCCGCCGGCCTTGGATTCCTGTGCCTCCTTTACAGCCAGCGATGGAAACGGACCC
AGCGTCATGGCCGCAGCCAGAGCCTGCCCAACTCCCTGGACTATACGCAGACTTCAGATCCCGGACGCCACGTGA
TGCTCCTGCGGGCTGTCCCAGGTGGGGCTGGAGATGCCTCAGTGCTGCCCAGCCTTCCACGGGAAGGACAGGAGA
AGGTGCTGGACCGCCTGGACTTTGTGCTGACCAGCCTTGTGGCGCTGCGGCGGGAGGTGGAGGAGCTGAGAAGCA
GCCTGCGAGGGCTTGCGGGGGAGATTGTTGGGGAGGTCCGATGCCACATGGAAGAGAACCAGAGAGTGGCTCGGC
GGCGAAGGTTTCCGTTTGTCCGGGAGAGGAGTGACTCCACTGGCTCCAGCTCTGTCTACTTCACGGCCTCCTCGG
GAGCCACGTTCACAGATGCTGAGAGTGAAGGGGGTTACACAACAGCCAATGCGGAGTCTGACAATGAGCGGGACT
CTGACAAAGAAAGTGAGGACGGGGAAGATGAAGTGAGCTGTGAGACTGTGAAGATGGGGAGAAAGGATTCTCTTG
ACTTGGAGGAAGAGGCAGCTTCAGGTGCCTCCAGTGCCCTGGAGGCTGGAGGTTCCTCAGGCTTGGAGGATGTGC
TGCCCCTCCTGCAGCAGGCCGACGAGCTGCACAGGGGTGATGAGCAAGGCAAGCGGGAGGGCTTCCAGCTGCTGC
TCAACAACAAGCTGGTGTATGGAAGCCGGCAGGACTTTCTCTGGCGCCTGGCCCGAGCCTACAGTGACATGTGTG
AGCTCACTGAGGAGGTGAGCGAGAAGAAGTCATATGCCCTAGATGGAAAAGAAGAAGCAGAGGCTGCTCTGGAGA
AGGGGGATGAGAGTGCTGACTGTCACCTGTGGTATGCGGTGCTTTGTGGTCAGCTGGCTGAGCATGAGAGCATCC
AGAGGCGCATCCAGAGTGGCTTTAGCTTCAAGGAGCATGTGGACAAAGCCATTGCTCTCCAGCCAGAAAACCCCA
TGGCTCACTTTCTTCTTGGCAGGTGGTGCTATCAGGTCTCTCACCTGAGCTGGCTAGAAAAAAAAACTGCTACAG
CCTTGCTTGAAAGCCCTCTCAGTGCCACTGTGGAAGATGCCCTCCAGAGCTTCCTAAAGGCTGAAGAACTACAGC
CAGGATTTTCCAAAGCAGGAAGGGTATATATTTCCAAGTGCTACAGAGAACTAGGGAAAAACTCTGAAGCTAGAT
GGTGGATGAAGTTGGCCCTGGAGCTGCCAGATGTCACGAAGGAGGATTTGGCTATCCAGAAGGACCTGGAAGAAC
TGGAAGTCATTTTACGAGAC**TAA**CCACGTTTCACTGGCCTTCATGACTTGATGCCACTATTTAAGGTGGGGGGGC
GGGGAGGCTTTTTTCCTTAGACCTTGCTGAGATCAGGAAACCACACAAATCTGTCTCCTGGGTCTGACTGCTACC
CACTACCACTCCCCATTAGTTAATTTATTCTAACCTCTAACCTAATCTAGAATTGGGGCAGTACTCATGGCTTCC
GTTTCTGTTGTTCTCTCCCTTGAGTAATCTCTTAAAAAAATCAAGATTCACACCTGCCCCAGGATTACACATGGG
TAGAGCCTGCAAGACCTGAGACCTTCCAATTGCTGGTGAGGTGGATGAACTTCAAAGCTATAGGAACAAAGCACA
TAACTTGTCACTTTAATCTTTTTCACTGACTAATAGGACTCAGTACATATAGTCTTAAGATCATACCTTACCTAC
CAAGGTAAAAAGAGGGATCAGAGTGGCCCACAGACATTGCTTTCTTATCACCTATCATGTGAATTCTACCTGTAT
TCCAGGGCTGGACCACTTGATAACTTCCAGTGTCCTGGCAGCTTTTGGAATGACAGCAGTGGTATGGGGTTTATG
ATGCTATAAAACAATGTCTGAAAAGTTGCCTAGAATATATTTTGTTACAAACTTGAAATAAACCAAATTTGATGT
T

FIGURE 2069

MSRLGALGGARAGLGLLLGTAAGLGFLCLLYSQRWKRTQRHGRSQSLPNSLDYTQTSDPGRHVMLLRAVPGGAGD
ASVLPSLPREGQEKVLDRLDFVLTSLVALRREVEELRSSLRGLAGEIVGEVRCHMEENQRVARRRRFPFVRERSD
STGSSSVYFTASSGATFTDAESEGGYTTANAESDNERDSDKESEDGEDEVSCETVKMGRKDSLDLEEEAASGASS
ALEAGGSSGLEDVLPLLQQADELHRGDEQGKREGFQLLLNNKLVYGSRQDFLWRLARAYSDMCELTEEVSEKKSY
ALDGKEEAEAALEKGDESADCHLWYAVLCGQLAEHESIQRRIQSGFSFKEHVDKAIALQPENPMAHFLLGRWCYQ
VSHLSWLEKKTATALLESPLSATVEDALQSFLKAEELQPGFSKAGRVYISKCYRELGKNSEARWWMKLALELPDV
TKEDLAIQKDLEELEVILRD

FIGURE 2070

AGCTTTTATTTTCTCCTCTCCAGTGGGGTTGGCTTTTATTGTTTCTTGTTTGGGTTTGGAATGGAAATATGGATA
GCAGCATAAAGTACTTTTATTTTGACAAAATTCATTTTTTTCAACAATGGAGACATAGATTTGACCCACAATAAC
TTCTCCCCCTCTCTTTTTACTCTGCTCAAAAAGCATCTCTCCTCCCATTACCCAACCTTGGTCATAAGTGTGCCT
GGCTGGTTTGCAGATATTTGTTCTGCTTTGTAAAAATTGGCCATTAGTGCATTTATTGAGATGATCTCTAAAGAG
CTATGCCCTGACCTACCCCTGATTCTATGACATTGGGGCCCTTCTTTTGCTGAAACTGCCTTACGTA**ATG**GTTTT
ACTCCTTGAAAGAGATTTGACGGAATCCATTTTATGCCAAGTGCTGCCCTGCACTGTTTCTGCAATATGTGGTGT
ATGCTGTGGTGATCTTGCTGGGAATGATTATAAGTGTGTGTGTGATGGGGGAGTGGGTATTACATGCATTGCTGA
AGAGTCATCCTGGTGTTCCTCATTCCTCCCACCTTCCCGTGGTCATTTTAATTACGGGGCAGTGTCACCGCAAAG
GGAGGAAACTCAAAGCCGAAAGCAAAATTCCAGGCCTGATTCTGGCTTT**TGA**GGTTCCTGGTTCTTGAAGCCAGG
CCTGACCCGACTCTCAGATGGGGTCAGTCCCGTCGCTTTGCAGACTGACCCTGGAAATCTACAAAATGCAGATTT
TCCTGATTTCCTCTTCTCTTGCCCAGTTTTTTTTTTTTTTTTTTTTTTTTTTTTAAAGCCTGGATTGTAACCAG
ATTTTCTTTTTTCCCCCTTCTCAGCTGTAGATATGATATCTCCTTTCAGGGCCCCAGCTTAAGGGCAAAGTGAGT
TAATGTGTAGACAAAGGCGAGGGACAAGAGAGAGTTAACATCTAGACAGTGGAAAAAGCCATGGTGTGTGGTTTC
TGGGAACCACCAACACTTGCAGGTTTAGCTTTTTCCCAGGGTTGACTACAAGAAAGAAAACCATGTTTTTGCAAG
ATTAAAATGTGGTTGAGTGTGCCTAAATTAACCATCCCCATTTTTATCATATTTCCACCATCACTTCAGGGTTTT
AAGAGTCAGTGCTCACCTGGGCGGAGCTGGTAGTACATTTTGCTTCTTAGAAAGCTAAGTCCTGGGTTCCGTCTG
ATTTTAGGTTCCAGGAACTTCCTGAGAACACCCGATCGCAGAGGGTAATTTTCTGGAGTTTGTTTTGCAGGGATA
GCTGGGAGTATGGCCACCCTGCTCCACGATGCGGTAATGAATCCAGCAGAAGTGGTGAAGCAGCGCTTGCAGATG
TACAACTCGCAGCACCGGTCAGCAATCAGCTGCATCCGGACGGTGTGGAGGACCGAGGGGTTGGGGGCCTTCTAC
CGGAGCTACACCACGCAGCTGACCATGAACATCCCCTTCCAGTCCATCCACTTCATCACCTATGAGTTCCTGCAG
GAGCAGGTCAACCCCCACCGGACCTACAACCCGCAGTCCCACATCATCTCAGGCGGGCTGGCCGGGGCCCTCGCC

FIGURE 2071

MVLLLERDLTESILCQVLPCTVSAICGVCCGDLAGNDYKCVCDGGVGITCIAEESSWCSSFLPPSRGHFNYGAVS
PQREETQSRKQNSRPDSGF

FIGURE 2072

GGCGAAGGAGATCAGCAGGACGCTGCGCACAAC**ATG**GGCAACCACCTGCCGCTCCTGCCTGCAGAGAGTGAGGAA
GAAGATGAAATGGAAGTTGAAGACCAGGATAGTAAAGAAGCCAAAAAACCAAACATCATAAATTTTGACACCAGT
CTGCCGACATCACATACATACCTAGGTGCTGATATGGAAGAATTTCATGGCAGGACTTTGCACGATGACGACAGC
TGTCAGGTGATTCCAGTTCTTCCACAAGTGATGATGATCCTGATTCCCGGACAGACATTACCTCTTCAGCTTTTT
CACCCTCAAGAAGTCAGTATGGTGCGGAATTTAATTCAGAAAGATAGAACCTTTGCTGTTCTTGCATACAGCAAT
GTACAGGAAAGGGAAGCACAGTTTGGAACAACAGCAGAGATATATGCCTATCGAGAAGAACAGGATTTTGGAATT
GAGATAGTGAAAGTGAAAGCAATTGGAAGACAAAGGTTCAAAGTCCTTGAGCTAAGAACACAGTCAGATGGAATC
CAGCAAGCTAAAGTGCAAATTCTTCCCGAATGTGTGTTGCCTTCAACCATGTCTGCAGTTCAATTAGAATCCCTC
AATAAGTGCCAGATATTTCCTTCAAAACCTGTCTCAAGAGAAGACCAATGTTCATATAAATGGTGGCAGAAATAC
CAGAAGAGAAAGTTTCATTGTGCAAATCTAACTTCATGGCCTCGCTGGCTGTATTCCTTATATGATGCTGAGACC
TTAATGGACAGAATCAAGAAACAGCTACGTGAATGGGATGAAAATCTAAAAGATGATTCTCTTCCTTCAAATCCA
ATAGATTTTTCTTACAGAGTAGCTGCTTGTCTTCCTATTGATGATGTATTGAGAATTCAGCTCCTTAAAATTGGC
AGTGCTATCCAGCGACTTCGCTGTGAATTAGACATTATGAATAAATGTACTTCCCTTTGCTGTAAACAATGTCAA
GAAACAGAAATAACAACCAAAAATGAAATATTCAGTTTATCCTTATGTGGGCCGATGGAGCTTATG**TGA**ATCCTC
ATGGATATGTGCATGAGACACTTACTGTGTATAAGGCTTGCAACTTGAATCTGATAGGCCGGCCTTCTACAGAAC
ACAGCTGGTTTCCTGGGTATGCCTGGACTGTTGCCCAGTGTAAGATCTGTGCAAGCCCATATTGGATGGGAAGTT
TACGGCCACCAAAAAAAGACATGTCACCTCAAAAATTTTGGGGCTTAACGCGATCTGCTCTGTTGCCCACGATCCC
AGACACTGAAGATGAAATAAGTCCAGACAAAGTAATACTTTGCTTGTAAACAGATGTGATAGAGATAAAGTTATC
TAACAAATTGGTTATATTCTAAGATCTGCTTTGGAAATTATTGCCTCTGATACATACCTAAGTAAACATAACATT
AATACCTAAGTAAACATAACATTACTTGGAGGGTTGCAGTTTCTAAGTGAAACTGTATTTGAAACTTTTAAGTAT
ACTTTAGGAAACAAGCATGAACGGCAGTCTAGAATACCAGAAACATCTACTTGGGTAGCTTGGTGCCATTATCCT
GTGGAATCTGATATGTCTGGTAGCATGTCATTGATGGGACATGAAGACATCTTTGGAAATGATGAGATTATTTCC
TGTGTTAAAAAAAAAAAA

FIGURE 2073

MGNHLPLLPAESEEEDEMEVEDQDSKEAKKPNIINFDTSLPTSHTYLGADMEEFHGRTLHDDDSCQVIPVLPQVM
MILIPGQTLPLQLFHPQEVSMVRNLIQKDRTFAVLAYSNVQEREAQFGTTAEIYAYREEQDFGIEIVKVKAIGRQ
RFKVLELRTQSDGIQQAKVQILPECVLPSTMSAVQLESLNKCQIFPSKPVSREDQCSYKWWQKYQKRKFHCANLT
SWPRWLYSLYDAETLMDRIKKQLREWDENLKDDSLPSNPIDFSYRVAACLPIDDVLRIQLLKIGSAIQRLRCELD
IMNKCTSLCCKQCQETEITTKNEIFSLSLCGPMELM

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FIGURE 2074

AGTCGTAGGCGCTGGCCGCTGACATGTTGAGGACTACGCGCGGCCCAGGCCTGGGCCCCCCGCTGCTCCAGGCCG
CGCTGGGCCTTGGGCGGGCTGGGTGGCACTGGCCTGCGGGCCGGGCGGCGAGCGGGGGGCGCGGGCGGGCCTGGC
TGCAGCCCACGGGCCGGGAGACGGGTGTGCAGGTGTACAACAGCCTCACCGGGAGGAAGGAACCCCTAATCGTGG
CGCACGCCGAAGCCGCCTCCTGGTATAGCTGTGGACCAACTGTATATGATCATGCGCACCTTGGCCATGCTTGCT
CATATGTTAGATTTGATATCATTCGAAGGATCCTAACCAAGGTTTTTGGATGCAGCATAGTCATGGTGATGGGTA
TTACAGATGTAGATGATAAAATCATCAAAAGAGCCAATGAGATGAATATTTCCCCCGCTTCCCTCGCCAGTCTTT
ATGAGGAAGACTTCAAGCAGGACATGGCAGCCCTGAAGGTTCTCCCACCCACGGTGTACCTGAGGGTAACCGAAA
ATATTCCTCAGATAATTTCTTTCATTGAAGGAATCATTGCTCGTGGGAACGCTTATTCAACGGCAAAAGGCAATG
TCTACTTCGATCTGAAGTCTAGAGGAGACAAGTATGGCAAATTGGTCGGCGTGGTCCCTGGTCCAGTCGGAGAGC
CAGCGGACTCTGACAAGCGTCATGCCAGTGACTTCGCCCTGTGGAAGGCGGCCAAACCCCAGGAGGTGTTCTGGG
CCTCTCCCTGGGGACCCGGGAGGCCGGGCTGGCACATCGAGTGCTCTGCCATCGCTAGTATGGTATTTGGAAGTC
AACTGGATATCCATTCAGGTGGGATAGATTTAGCTTTTCCACATCATGAGAACGAAATTGCACAGTGCGAAGTCT
TTCATCAGTGCGAGCAGTGGGGAAATTATTTTCTGCATTCTGGGCATTTGCACGCCAAAGGCAAAGAAGAAAAAA
TGTCCAAATCATTAAAGAACTACATTACTATTAAGGACTTTCTGAAGACCTTTTCCCCCGATGTCTTCCGGTTCT
TCTGCCTGCGGAGCAGCTACCGCTCAGCCATCGACTACAGTGACAGCGCCATGCTCCAAGCTCAGCAGCTGCTCC
TGGGGCTGGGCTCTTTCCTGGAGGACGCACGTGCCTACATGAAGGGGCAGCTGGCCTGCGGCTCCGTCAGGGAAG
CGATGCTGTGGGAGAGGCTCTCCAGCACCAAGAGGGCCGTGAAGGCGGCCTTGGCAGATGATTTTGACACACCCA
GGGTGGTTGATGCCATCCTGGGCCTTGCACACCACGGGAATGGACAGCTCAGGGCGTCCCTGAAGGAACCTGAAG
GGCCGAGAAGTCCTGCTGTGTTTGGTGCCATCATCTCTTACTTTGAACAGTTTTTTGAAACTGTTGGAATTTCTC
TGGCAAATCAACAGTACGTTTCAGGAGACGGCAGCGAGGCTACCTTGCATGGTGTGGTGGACGAGCTGGTGCGGT
TCCGGCAGAAGGTCCGGCAGTTTGCGCTGGCCATGCCCGAGGCCACGGGGGACGCCCGGCGGCAGCAGCTCCTAG
AAAGGCAGCCCCTGCTGGAAGCATGCGACACCCTGCGCCGGGGCCTGACTGCCCACGGCATCAACATCAAGGACA
GAAGCAGTACAACATCCACGTGGGAACTGCTGGATCAAAGGACAAAAGACCAAAAATCAGCGGGCTGAGGATGGA
GCACAGCCATGAACCTGCTCACGACAAGACGCACCCATGCTTCTCAGGGTCAAGGCTTTATGTTAAAGCTTCCTG
TCGGGGCTGCTAGGTCAGCATTAAAGTAAGGCAACCAACAGTG

FIGURE 2075

MLRTTRGPGLGPPLLQAALGLGRAGWHWPAGRAASGGRGRAWLQPTGRETGVQVYNSLTGRKEPLIVAHAEAASW
YSCGPTVYDHAHLGHACSYVRFDIIRRILTKVFGCSIVMVMGITDVDDKIIKRANEMNISPASLASLYEEDFKQD
MAALKVLPPTVYLRVTENIPQIISFIEGIIARGNAYSTAKGNVYFDLKSRGDKYGKLVGVVPGPVGEPADSDKRH
ASDFALWKAAKPQEVFWASPWGPGRPGWHIECSAIASMVFGSQLDIHSGGIDLAFPHHENEIAQCEVFHQCEQWG
NYFLHSGHLHAKGKEEKMSKSLKNYITIKDFLKTFSPDVFRFFCLRSSYRSAIDYSDSAMLQAQQLLLGLGSFLE
DARAYMKGQLACGSVREAMLWERLSSTKRAVKAALADDFDTPRVVDAILGLAHHGNGQLRASLKEPEGPRSPAVF
GAIISYFEQFFETVGISLANQQYVSGDGSEATLHGVVDELVRFRQKVRQFALAMPEATGDARRQQLLERQPLLEA
CDTLRRGLTAHGINIKDRSSTTSTWELLDQRTKDQKSAG

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FIGURE 2076

CATTAACCTGCTGGATTACCTGCCGGAGATCCTGGATGGACTCTTCCAGATCCTGGGTGACAATGGCAAAGAGAT
TCGCAAAATGTGTGAGGTTGTTCTTGGAGAATTCTTAAAAGAAATTAAGAAGAACCCCTCCAGTGTGAAGTTTGC
TGAG**ATG**GCCAACATCCTGGTGATCCACTGCCAGACAACAGATGACCTCATCCAGCTGACAGCCATGTGCTGGAT
GCGGGAGTTCATCCAGCTGGCGGGCCGCGTCATGCTGCCTTACTCCTCCGGGATCCTGACTGCTGTCTTGCCCTG
CTTGGCCTACGATGACCGCAAGAAAAGCATCAAAGAAGTGGCCAACGTGTGCAACCAGAGCCTGATGAAGCTGGT
CACCCCCGAGGACGACGAGCTGGATGAGCTGAGACCTGGGCAGAGGCAGGCAGAGCCCACCCCTGACGATGCCCT
GCCAAAGCAGGAGGGCACAGCCAGTGGAGGTCCAGATGGTTCCTGTGACTCCAGCTTCAGTAGCGGCATCAGTGT
CTTCACTGCAGCCAGCACTGAAAGAGCCCCAGTGACCCTTCACCTCGACGGGATCGTGCAGGTCCTAAACTGCCA
CCTCAGTGACACGGCCATTGGGATGATGACCAGGATTGCAGTTCTCAAGTGGCTCTACCACCTCTACATCAAAAC
TCCTCGGAAGATGTTCCGGCACACGGACAGCCTCTTTCCCATCCTACTGCAGACGTTATCGGATGAATCGGATGA
GGTGATCCTGAAGGACCTGGAGGTGCTGGCAGAAATCGCTTCCTCCCCCGCAGGCCAGACGGATGACCCAGGCCC
CCTCGATGGCCCTGACCTCCAGGCCAGCCACTCAGAGCTCCAGGTGCCCACCCCTGGCAGAGCCGGCCTACTGAA
CACCTCTGGTACCAAAGGCTTAGAATGTTCTCCTTCAACTCCCACCATGAATTCTTACTTTTATAAGTTCATGAT
CAACCTTCTCAAGAGATTCAGCAGCGAACGGAAGCTCCTGGAGGTCAGAGGCCCTTTCATCATCAGGCAGCTGTG
CCTCCTGCTGAATGCGGAGAACATCTTCCACTCAATGGCAGACATCCTGCTGCGGGAGGAGGACCTCAAGTTCGC
CTCGACCATGGTCCACGCCCTCAACACCATCCTGCTGACCTCCACAGAGCTCTTCCAGCTAAGGAACCAGCTGAA
GGACCTGAAGACCCTGGAGAGCCAGAACCTGTTCTGCTGCCTGTACCGCTCCTGGTGCCACAACCCAGTCACCAC
GGTGTCCCTCTGCTTCCTCACCCAGAACTACCGGCACGCCTATGACCTCATCCAGAAGTTTGGGGACCTGGAGGT
CACCGTGGACTTCCTCGCAGAGGTGGACAAGCTGGTGCAGCTGATTGAGTGCCCCATCTTCACATATCTGCGCCT
GCAGCTGCTGGACGTGAAGAACAACCCCTACCTGATCAAGGCCCTCTACGGCCTGCTCATGCTCCTGCCGCAGAG
CAGCGCCTTCCAGCTGCTCTCGCACCGGCTCCAGTGCGTGCCCAACCCTGAGCTGCTGCAGACCGAAGACAGTCT
AAAGGCAGCCCCCAAGTCCCAGAAAGCTGACTCCCCTAGCATCGACTACGCAGAGCTGCTGCAGCACTTTGAGAA
GGTCCAGAACAAGCACCTGGAAGTGCGGCACCAGCGGAGCGGGCGTGGGGACCACCTGGACCGGAGGGTTGTCCT
C**TGA**CAGGCCTGGCACGGAGGAGGGCCCACCGAGTGGTCCCATGAAACACTAAGGGTCGTCACGCCCTCCCGAGG
AGCTCAAGGACCTGCCTGTCAGGACCAGGGCTGGGCCTGCCAACCCAGGGCAGTGTTGGGGCCGGAGGCTGCTGT
GTCTGCCCAAGCTCCTCTCAGAGTCCAGTCCCCAGGCCTCCAGCGCTGTCAGCTGCACCCTGGCATTCTCACAGA
GCTGGCTGCCCACCCAGTGGGGGGCTATAGCCTCAGAGACCACTCATCCTCTGGAATCAACCTCTTTCTAATACC
CTCTTGGAAAAAGAGCTTGCCCCTCCTCCAGCACACTAGAGCTCTGGCCTTGTGTGTATATGTATACATACGTGA
ACACATGCCTGTGTGTGTGTGTGTGTGTGTGTACTTGTATGCACGTAGGCACCAGCACAAAGATCTGAATGATGC
ACCCCACCCCCACCCCAATAAAGAAATAACAGAAAACCCTCAAAAAAAAAAAAAAAAAAA

FIGURE 2077

MANILVIHCQTTDDLIQLTAMCWMREFIQLAGRVMLPYSSGILTAVLPCLAYDDRKKSIKEVANVCNQSLMKLVT
PEDDELDELRPGQRQAEPTPDDALPKQEGTASGGPDGSCDSSFSSGISVFTAASTERAPVTLHLDGIVQVLNCHL
SDTAIGMMTRIAVLKWLYHLYIKTPRKMFRHTDSLFPILLQTLSDESDEVILKDLEVLAEIASSPAGQTDDPGPL
DGPDLQASHSELQVPTPGRAGLLNTSGTKGLECSPSTPTMNSYFYKFMINLLKRFSSERKLLEVRGPFIIRQLCL
LLNAENIFHSMADILLREEDLKFASTMVHALNTILLTSTELFQLRNQLKDLKTLESQNLFCCLYRSWCHNPVTTV
SLCFLTQNYRHAYDLIQKFGDLEVTVDFLAEVDKLVQLIECPIFTYLRLQLLDVKNNPYLIKALYGLLMLLPQSS
AFQLLSHRLQCVPNPELLQTEDSLKAAPKSQKADSPSIDYAELLQHFEKVQNKHLEVRHQRSGRGDHLDRRVVL

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FIGURE 2078

ATGGGCCACGGGCCCCCACCGCCGCCCGCCGGGAGGACCGAGCCTAAGAGGGCAGCCGCCTGAAGGAACGCGACG
GCGGCGCCCGCAGTATTTTTCAGTGCTGTACAAGCGTCTTGAATTACTCTGGTAGCTTTTCCAGAAAGACCC**ATG**

ACTTCACCACATTTCTCGAGTTACGATGAAGGTCCTCTGGATGTCAGCATGGCAGCCACAAACCTGGAGAACCAG
CTGCACAGCGCACAGAAGAACCTCCTGTTCCTTCAGCGGGAGCATGCCAGCACGCTCAAGGGGCTGCACTCCGAG
ATCAGGCGGCTGCAGCAGCACTGCACAGATTTAACATATGAGCTGACAGTCAAAAGTTCGGAACAGACAGGAGAC
GGGACTTCTAAAAGCAGTGAATTAAAGAAAAGATGTGAAGAGCTGGAAGCCCAACTGAAAGTGAAAGAGAACGAA
AATGCTGAGTTGTTGAAAGAACTGGAGCAGAAAAACGCGATGATCACAGTGCTGGAGAACACCATCAAGGAGCGA
GAGAAGAAGTACCTGGAGGAGCTGAAGGCCAAGAGTCACAAGCTGACCCTGCTGTCTAGCGAGCTGGAGCAGCGG
GCCAGCACCATCGCCTACCTGACCTCCCAGCTGCACGCCGCCAAGAAGAAGCTCATGAGCTCCAGCGGGACCTCA
GATGCCAGCCCGTCAGGGAGCCCCGTGCTGGCCAGCTACAAGCCAGCGCCCCCCAAAGACAAGCTACCCGAAACG
CCTCGCCGCCGCATGAAAAAGAGCCTCTCAGCCCCCTTGCACCCGGAATTTGAAGAGGTCTACAGATTCGGGGCA
GAGAGCAGGAAACTCCTTTTGCGGGAACCAGTGGATGCTATGCCCGACCCCACCCCATTTCTGCTGGCTAGGGAG
TCCGCCGAGGTCCACCTCATCAAAGAGAGGCCCCTCGTCATCCCCCCCCATCGCCTCCGACCGAAGCGGCGAGCAG
CACAGCCCGGCCCGCGAAAAGCCGCACAAGGCCCACGTCGGGGTGGCACATCGGATCCACCACGCCACCCCGCCG
CAGGCCCAGCCCGAGGTGAAGACCCTGGCGGTCGACCAGGTGAACGGAGGCAAGGTGGTGAGGAAGCACTCAGGG
ACGGACAGAACTGTG**TGA**AGCCCGCCGTGCCCCACCCCGCGCTGTCCATGCACTGTGAGCACCACTGGGAAATCT
CAGCCACACCTTTTCTGTTTAATCCCATGCATGCCAAACACTTTTCACACCTACCGACCCATTCTCCTTCTGCTT
CTCTTGCCCTCTTCTTCACACCAAAATATGATCGTGTCCCTGCCGCAGAATATGTATTTCCTAATTGCTGTGGCC
AAGCGCCTGTGTGCCGAATCGCTTGCTTCTGATCCCGCTCCGTGTAACCTAAGTGCGCTGCAGGCAAAGCCCAGG
CCACGGCTGCGTCACTACTGATGTTCACGATGCCACACAGTCACACACCTAATTCATTCTCAAGTCGGAGCAACA
CATACCAACCTTGACCTTATCCTCAAGCTCCAGGGCAGCCTGGCCGAGCAGCCCCTGCTCCCTCCTGGAGACCCT
TGTCACCTCCCGAGCTCCTCCTGGAGACCCCTGTCACCTCCTGACCAACCTTTCCCAGGGCGGCACCGATCACCG
AGCAGCCGTGCGTGTATCTCAAGGAACTAAATAAGATGACGCTACTCCTCATAGCACCACAACCTGAATGTGTGT
TCATATTTTTTTGTTAGTTTTATCCAAAATGTTTAAGATCCCAACAAACTTTATTTTCTAAACCTGCCAAAAAAA
AAAAAAAAAAAAAA

FIGURE 2079

MTSPHFSSYDEGPLDVSMAATNLENQLHSAQKNLLFLQREHASTLKGLHSEIRRLQQHCTDLTYELTVKSSEQTG
DGTSKSSELKKRCEELEAQLKVKENENAELLKELEQKNAMITVLENTIKEREKKYLEELKAKSHKLTLLSSELEQ
RASTIAYLTSQLHAAKKKLMSSSGTSDASPSGSPVLASYKPAPPKDKLPETPRRRMKKSLSAPLHPEFEEVYRFG
AESRKLLLREPVDAMPDPTPFLLARESAEVHLIKERPLVIPPIASDRSGEQHSPAREKPHKAHVGVAHRIHHATP
PQAQPEVKTLAVDQVNGGKVVRKHSGTDRTV

FIGURE 2080

GGGGCGACGTTTAGCGACTATTGCGCCTGCGCCAGCGCCGGCTGCGAGACTGGGGCCGTGGCTGCTGGTCCCGGG
TG**ATG**CTAGGCGGCTCCCTGGGCTCCAGGCTGTTGCGGGGTGTAGGTGGGAGTCACGGACGGTTCGGGGCCCGAG
GTGTCCGCGAAGGTGGCGCAGCCATGGCGGCAGGGGAGAGCATGGCTCAGCGGATGGTCTGGGTGGACCTGGAGA
TGACAGGATTGGACATTGAGAAGGACCAGATTATTGAGATGGCCTGTCTGATAACTGACTCTGATCTCAACATTT
TGGCTGAAGGTCCTAACCTGATTATAAAACAACCAGATGAGTTGCTGGACAGCATGTCAGATTGGTGTAAGGAGC
ATCACGGGAGGTCTGGCCTTACCAAGGCAGTGAAGGAGAGTACAATTACATTGCAGCAGGCAGAGTATGAATTTC
TGTCCTTTGTACGACAGCAGACTCCTCCAGGGCTCTGTCCACTTGCAGGAAATTCAGTTCATGAAGATAAGAAGT
TTCTTGACAAATACATGCCCCAGTTCATGAAACATCTTCATTATAGAATAATTGATGTGAGCACTGTTAAAGAAC
TGTGCAGACGCTGGTATCCAGAAGAATATGAATTTGCACCAAAGAAGGCTGCTTCTCATAGGGCACTTGATGACA
TTAGTGAAAGCATCAAAGAGCTTCAGTTTTACCGAAATAACATCTTCAAGAAAAAAAATAGATGAAAAGAAGAGGA
AAATTATAGAAAATGGGGAAAATGAGAAGACCGTGAGT**TGA**TGCCAGTTATCATGCTGCCACTACATCGTTATCT
GGAGGCAACTTCTGGTGGTTTTTTTTTCTCACGCTGATGGCTTGGCAGAGCACCTTCGGTTAACTTGCATCTCCA
GATTGATTACTCAAGCAGACAGCACACGAAATACTATTTTTCTCCTAATATGCTGTTTCCATTATGACACAGCAG
CTCCTTTGTAAGTACCAGGTCATGTCCATCCCTTGGTACATATATGCATTTGCTTTTAAACCATTTCTTTTGTTT
AAATAAATAAATAAGTAAATAAAGCTAGTTCTATTGAAATGCAAAAAAAAAAAAAAAAAAAAA

FIGURE 2081

MLGGSLGSRLLRGVGGSHGRFGARGVREGGAAMAAGESMAQRMVWVDLEMTGLDIEKDQIIEMACLITDSDLNIL
AEGPNLIIKQPDELLDSMSDWCKEHHGRSGLTKAVKESTITLQQAEYEFLSFVRQQTPPGLCPLAGNSVHEDKKF
LDKYMPQFMKHLHYRIIDVSTVKELCRRWYPEEYEFAPKKAASHRALDDISESIKELQFYRNNIFKKKIDEKKRK
IIENGENEKTVS

FIGURE 2082

ATTTCCTTAATCTATTTAATCACACCCTGACCTGCTTTGAACATAACCTTCAGGGGA**ATG**CACATAGTCTTTTAC
AGACAAAAAATTATTCAGAAGTATGCAAAAAACTGCCGTGAAGCATACAAAACTCTGAGTAGTCTGTACAGTGAA
ATGCAAAAAATGAATGAACTTGAGAATAAGGCTGAACCTGGAACACATTTATGCATTGATGTGGAAGATGCAATG
AACATCACTCGAAAACTATGGAGTCGAACTTTCAACTGTTCAGTCCCTTGCAGTGACACAGTGCCTGTAATTGCT
GTTTCTGTGTTCATTCTCTTTCTACCTGTTGTCTTCTACCTTAGTAGCTTTCTTCACTCAGAGCAAAAGAAACGC
AAACTCATTCTGCCCAAACGTCTCAAGTCCAGTACCAGTTTTGCAAATATTCAGGAAAATTCAAAC**TGA**GACCTA
CAAAATGGAGAATTGACATATCACGTGAATGAATGGTGGAAGACACAACTTGGTTTCAGAAAGAAGATAAACTGT
GATTTGACAAGTCAAGCTCTTAAGAAATACAAGGACTTCAGATCCATTTTTAAATAAGAATTTTCGATTTTTCTT
TCCTTTTCCACTTCTTTCTAACAGATTTGGATATTTTTAATTTCCAGGCATAGCAATGTTATCTATTTTAATGTG
TATTTGTCACAATAACAGAACATGCAAGAACAATCATTATTTTATTTTATAGGCATTTGATTACTATTCTAGACT
TCTGGTATCTTCTTACTAACATAAATATCTCAAGTAGAAAAGTTTTTGAAAACTAACATTTAAAAATTAATCAGT
TACAGTAAAGACTTTGAAAAAGAAATGTACTTGTTAGGAAGTAGCTTAATTACCCCCCATTGCAGTATTATTGTT
ATATATATAGTTAATATGTTGTACATCACAATAATATATAATTCAGTCTCTAGTTTCCCTAGAGTCATTTTTGAA
ACCACTGATTGCAAACCTCCCTGACAATTTTTAAAAGTAGTAAGCCACATTACATTTATCTTTGTAAAAAGATTT
ATGGTAACTGGTTTCTTACTTGACTTTTATAAATAGTATTTTACATCTTATTTTTGCCTTTATTTCATAAGTAAT
TTAAAAATCACTGGATTGCTTTATTATATTCAGGGCAATATGGATTATTTTTATACCAAGGATTTGCATCGTGAA
TTACATTAAGTTATTTGGCAATTTATAATTTATTACTACTTTAAATCAAATGTAGCATTATCACACTGTATTTAA
ATTGTCATTTTTTAAAGGAATATTTTCTTCTTAAGATATATAGAGGATTTTGGAGAAGAGAGACAGGAGGGGTAA
AACCAGCTTAAGGTTCAGCGAGCAGAAAGGGACCTGAGAGGATGCTCACTGTAAGACTGTTGGACAGTGGTGTGT
ATTGAGGGGATGAATCGGAACGATAGTCTCATGCAGAAAATAGTGAGATTAAGATCATCCTTATTGTTTCTAAAT
TATTTCAATCAGATGAAAGTGATACGATTGAAATGAAATCACATAGTTCGTGCTCAGAAATTCTATTTTGGTATG
TTTGTATTAGCCTTTAGAAAAAACACTCCGTTTCAGAATTGTTCACAGTTTTATTTCTTAGGTTTTTAGAGTTCA
GGATTTCATTTATTAATTTCTTCTTGCTTTTTTGGTGGAAATAGGCTTTGTTGTAAACATTAAGAATATAAAATC
TCCTCTATATAGAAACAAGAATTTTGTTAAAAAGAGAATTTGAATCCCTTCCTATACTATAAAATGCTCTATAGG
GAGACAAAGTGTTTCTTTTTTCTTTTATGTTTACTGTTTATGTGGAGTGAAATATAAGGCTCTTGGATGTATAAC
ATACTCAAAAGCTGTTACACTTTCTCTGATCTGCTGTGATCCACTGAAAATGTGCTGGGGTTTGTTCTGCTGTCA
CTGTTTATGCTGCTGGAACTTAGCACTGTCTTGATTTGAAGCATATGATTGAGAGCCATTTGAAGCAATCTTCAT
TAATGCAGATAAAACAAGTTTACATGTGCAGAGTTAGAAAATGACATGTTCAATTCTGTAAGTGGTGACTTTTTG
AGCACCTTTCAGTATTATGTATTTGTAAAAACCATTGTTTTTGGATATAAAGCTAATAAGCACTTTAAAAAGGAA
AAGGCAGCCTTTACTATTTTTTCTGGTTGAGTCATTGCTCTTTAGACCTAGCATCAGCAATAGATTTCAAAGATA
AGTATTAAGCGCTACCCTAAAGTGTGTAAGTTTTTCATTTTGTCATATTGAAAAATGATTTGCATAGTACTGAAT
GTTGACACACAGCTTATATGTATTTACAAGAATATCTTTAAGTGTTTTTTTGACACATTAAAATAAAGGAAATAA
GGAAATTGTAA

FIGURE 2083

MHIVFYRQKIIQKYAKNCREAYKTLSSLYSEMQKMNELENKAEPGTHLCIDVEDAMNITRKLWSRTFNCSVPCSD
TVPVIAVSVFILFLPVVFYLSSFLHSEQKKRKLILPKRLKSSTSFANIQENSN

FIGURE 2084

GCTGGCGGGGCCCGGACAGAAG**ATG**GTGCAGAAGAAACCAGCCGAACTTCAGGGTTTCCACCGTTCGTTCAAGGG
GCAGAACCCCTTCGAGCTGGCCTTCTCCCTAGACCAGCCCGACCACGGAGACTCTGACTTTGGCCTGCAGTGCTC
AGCCCGCCCTGACATGCCCGCCAGCCAGCCCATTGACATCCCGGACGCCAAGAAGAGGGGCAAGAAGAAGAAGCG
CGGCCGGGCCACCGACAGCTTCTCGGGCAGGTTTGAAGACGTCTACCAGCTGCAGGAAGATGTGCTGGGGGAGGG
CGCTCATGCCCGAGTGCAGACCTGCATCAACCTGATCACCAGCCAGGAGTACGCCGTCAAGATCATTGAGAAGCA
GCCAGGCCACATTCGGAGCAGGGTTTTCAGGGAGGTGGAGATGCTGTACCAGTGCCAGGGACACAGGAACGTCCT
AGAGCTGATTGAGTTCTTCGAGGAGGAGGACCGCTTCTACCTGGTGTTTGAGAAGATGCGGGGAGGCTCCATCCT
GAGCCACATCCACAAGCGCCGGCACTTCAACGAGCTGGAGGCCAGCGTGGTGGTGCAGGACGTGGCCAGCGCCTT
GGACTTTCTGCATAACAAAGGCATCGCCCACAGGGACCTAAAGCCGGAAAACATCCTCTGTGAGCACCCCAACCA
GGTCTCCCCCGTGAAGATCTGTGACTTCGACCTGGGCAGCGGCATCAAACTCAACGGGGACTGCTCCCCTATCTC
CACCCCGGAGCTGCTCACTCCGTGCGGCTCGGCGGAGTACATGGCCCCGGAGTTAGTGGAGGCCTTCAGCGAGGA
GGCTAGCATCTACGACAAGCGCTGCGACCTGTGGAGCCTGGGCGTCATCTTGTATATCCTACTCAGCGGCTACCC
GCCCTTCGTGGGCCGCTGTGGCAGCGACTGCGGCTGGGACCGCGGCGAGGCCTGCCCTGCCTGCCAGAACATGCT
GTTTGAGAGCATCCAGGAGGGCAAGTACGAGTTCCCCGACAAGGACTGGGCCCACATCTCCTGCGCTGCCAAAGA
CCTCATCTCCAAGCTGCTGGTCCGTGACGCCAAGCAGAGGCTGAGTGCCGCCCAAGTCCTGCAACACCCCTGGGT
TCAGGGGTGCGCCCCGGAGAACACCTTGCCCACTCCCATGGTCCTGCAGAGGTGGGACAGTCACTTCCTCCTCCC
TCCCCACCCCTGTCGCATCCACGTGCGACCTGGAGGACTGGTCAGAACCGTTACTGTGAATGAG**TGA**AGATCCTG
GAGGACCCTGGCCCCAGGCCAGCTCCCATCGCTGGGGGACGGTGAACGGCCATGTGTTAATGTTACGATGTTTTT
AAAAGACAAAAAAAAAAAAAAAAACCTCAAAAGTTTTTTTAAAGTGGGGGAAAAACATCCAAGCACTTTAATTCCA
ATGTACCAGGTGAACTGACGGAGCTCAGAAGTTTTCCTTTACACCAACTGTCAATGCCGGAATTTTGTATTCTGT
TTTGTAAAGATTTAATAAAAGTCAAAAAACTTGCAAAAAAAAAAAAAAA

FIGURE 2085

MVQKKPAELQGFHRSFKGQNPFELAFSLDQPDHGDSDFGLQCSARPDMPASQPIDIPDAKKRGKKKKRGRATDSF
SGRFEDVYQLQEDVLGEGAHARVQTCINLITSQEYAVKIIEKQPGHIRSRVFREVEMLYQCQGHRNVLELIEFFE
EEDRFYLVFEKMRGGSILSHIHKRRHFNELEASVVVQDVASALDFLHNKGIAHRDLKPENILCEHPNQVSPVKIC
DFDLGSGIKLNGDCSPISTPELLTPCGSAEYMAPELVEAFSEEASIYDKRCDLWSLGVILYILLSGYPPFVGRCG
SDCGWDRGEACPACQNMLFESIQEGKYEFPDKDWAHISCAAKDLISKLLVRDAKQRLSAAQVLQHPWVQGCAPEN
TLPTPMVLQRWDSHFLLPPHPCRIHVRPGGLVRTVTVNE

FIGURE 2086

CTCTCCGAGAACTCTTGTCAGCTCACGGCAGCAAGGACGGACTCGTTGTGAAGGCGCCCACACACTTTTATGACC
ACCTCTTTCCCAGATTATTCGTTTTGATGAAGCTAAAATTTTAATCTAAAAAGAAATGCACCTCATGGAGAATTC
TTGTGAAGAACTGTGCTTCATCTGTGGATTTCTACACCCTTGATCATTTGCAAACCTGTAATTATTTCGTAAAGG
CGGGATGGTGCCGCTGTGCCAGGTTGAAGTATTGTATTTTGCAAAAAGTGCTGAAATAACAGGAGTTCGTTCAGA
GACCATTTCTGTGCCTCAAGAAATAAAAGCGTTGCAGCTGTGGAAGGAGATAGAAACTCGACATCCTGGATTGGC
TGATGTTAGAAATCAGATAATATTTGCTGTTCGTCAAGAAT**ATG**TCGAGCTTGGAGATCAGCTCCTCGTGCTTCA
GCCTGGAGACGAAATTGCCGTTATCCCCCCCATTAGTGGAGGATAGTGCTTTTGAGCCATCTAGGAAAGATATGG
ATGAAGTTGAAGAGAAATCTAAAGATGTTATAAACTTTACTGCCGAGAAACTTTCAGTAGATGAAGTCTCACAGT
TGGTGATTTCTCCGCTCTGTGGTGCAATATCCCTATTTGTAGGGACTACAAGAAATAACTTTGAAGGGAAAAAAG
TCATTAGCTTAGAATATGAAGCATATCTACCCATGGCGGAAAATGAAGTCAGAAAGATTTGTAGTGACATTAGGC
AGAAATGGCCAGTCAAACACATAGCAGTGTTCCATAGACTTGGCTTGGTTCCAGTGTCAGAAGCAAGCATAATCA
TTGCTGTGTCCTCAGCCCACAGAGCTGCATCTCTTGAAGCTGTGAGCTATGCCATTGATACTTTAAAAGCCAAGG
TGCCCATATGGAAAAAGGAAATATACGAAGAGTCATCAACTTGGAAAGGAAACAAAGAGTGCTTTTGGGCATCCA
ACAGT**TAA**TCACTTATGTTTTTAGAGCATGCAATCTTAACTTTGTTAAACTATTATTATTGATCACATTTTGATT
TTTTTCTCTCCACATCAGGATAGTTTACTGAAGCACAATCTCTTATACTAGTGGGACAAAAGGGAGAAAAAGGAA
GCAAGATAAATGGGTATGTAGGATGAAGGGTTATTTAAAATGGAACTAAAGATAGAAGGAGGACTGTAGGAAGAA
ATGGAATAATTTAAATGTGAGGAAAGATATCTGTGGTAGACATGTCCTTCCATGACTAATTTCTAATTGTAACTC
AACACACATTGAGGTATGGGCCCTCCTCAGTGACTTTAACTAGCTCAGAAACGTACTCCCCCACCAACCCCACCT
CACCGCCCCCCATCCCGGTTCTGGGAGAGCATTGTTATTAAGGATGCATGACAGGAATGTTGGCAGAACTGGAAA
GTATTAAAAAAGCATTATCAGACAGTCTTGATATTATACATTTTCAGAAATATATTAAAAATAATAAACTAAAAC
CCATGATTTCAAAAGTTTAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2087

MSSLEISSSCFSLETKLPLSPPLVEDSAFEPSRKDMDEVEEKSKDVINFTAEKLSVDEVSQLVISPLCGAISLFV
GTTRNNFEGKKVISLEYEAYLPMAENEVRKICSDIRQKWPVKHIAVFHRLGLVPVSEASIIIAVSSAHRAASLEA
VSYAIDTLKAKVPIWKKEIYEESSTWKGNKECFWASNS

FIGURE 2088

CCAGGCGCTGCGCGGCTGCTCTGGCGTCCAGTCCTACCCGCAACCCGCCGCGACGTTACTGCTCCTCTGCTGCCT
TCGTTTCTGGTCCTCGGCCGTCCTCGCCGCCCGCCCAGAGGAGTCCCCGCGCCCGCCAAGAAGCCGCTTTCCGCT
GGCCCGCAGCCGCCGCGACTTCGGCACAGTTTCTCCCTCTGGCTAGTCTCCCAAACGGCCGCTCCTCGCCCGCGG
GAAGACCAGGCTGCGACCGCGAACGCCCGATCCTCTCCAGGAGCCGCAGCGAGCGCCCGGCGGCCACGCCCCGCG
ACACACCCCGGCGGCTCTCGGCCCAGCGCGCCTGCCTTCGCCGCCGCCGTCGCTCCTCGCCCGCTGCACGACGAC
GCGACGCCCCTGCTGCAGGCGGCGGACCCGACCGGACCCAGACCCAGACGCAAGATGGCGACGGCCGCGTGACTG
CCTCAGCGTCCCCGAGCTCGGCTCCGAGTGCACCTACGGACTGACTGTGGGGGCAGAGAAGGGCGAGATCAGGAC
TCTGTCTTTGTTAATCGTGACTGCATGAAGGTCGCCTCCCTCGGGCCTACTTGGTGGGAGTGTCTGGTATTGTTC
TAAGGCCAGGAGCACGGTGAGCCACAGTCTGTTGGTAGAATTTGGCGTCTTGATAGTTGAGAAA**ATG**GCGATGAC
ACTGTTGGAAGACTGGTGCCGGGGGATGGATGTGAACTCCCAGAGAXCTCTGTTAGTCTGGGGCATCCCAGTGAA
CTGTGATGAGGCTGAAATCGAAGAGACCCTCCAGGCTGCGATGCCCCAGGTCTCCTACCGAATGCTTGGGAGAAT
GTTCTGGAGGGAAGAAAATGCGAAAGCAGCCTTATTAGAGCTCACTGGCGCTGTAGATTACGCCGCGATCCCCAG
GGAGATGCCGGGCAAAGGAGGGGTCTGGAAAGTGTTATTTAAGCCCCCAACTTCTGATGCTGAATTTTTAGAAAG
ATTGCACCTCTTCCTAGCTAGAGAGGGGTGGACCGTGCAAGATGTTGCCCGTGTCCTTGGGTTTCAGAACCCTAC
TCCGACCCCGGGCCCAGAGATGCCAGCAGAGATGCTAAACTATATTTTGGATAATGTTATTCAGCCTCTTGTTGA
GTCCATATGGTACAAGAGGCTGACACTTTTCTCGGGGAGGGACATCCCAGGGCCTGGAGAGGAAACCTTTGATCC
CTGGCTGGAGCACACTAATGAGGTCCTAGAGGAGTGGCAGGTGTCCGATGTAGAAAAGAGGCGGCGGTTGATGGA
GAGTCTTAGAGGCCCCGCCGCTGATGTTATTCGCATCCTTAAGTCCAACAACCCCGCGATAACCACTGCCGAATG
CCTGAAGGCGCTTGAGCAGGTGTTTGGGAGCGTTGAGAGCTCTAGGGATGCCCAGATCAAATTTCTGAACACTTA
TCAGAACCCGGGAGAAAAATTGTCTGCTTATGTCATTCGTCTGGAGCCTCTGCTACAGAAGGTGGTAGAGAAGGG
GGCCATTGATAAAGATAATGTGAACCAGGCCCGCCTAGAGCAGGTCATTGCCGGGGCCAACCACAGCGGGGCCAT
CCGAAGGCAGCTGTGGCTTACCGGGGCTGGGGAAGGGCCAGCCCCAAACCTCTTTCAGTTGCTGGTGCAGATCCG
TGAGGAGGAAGCCAAGGAGGAGGAGGAGGAGGCTGAGGCCACCCTTCTGCAGTTAGGCCTGGAAGGGCACTTC**TG**
AGTGCCAGGAAAGGCAGCTTTAGTGCAGACCTAGATCACAGCTACTTTTCTTGTCCCTGTGGGGTCTTACAGATG
TGTCTCTGAGTAGTAAAGGCTTAGCCTTGTTCTGTTTTGTTGTTTTTTGGAGGGGAAGGTTAGTCAGGCCTGAGT
ATTCATGTAACATTCTAAAATTGTGCCAGCGAGCACCGTGAACGACTGCAATGCAAGCGGGTCTTGCTGGCTAAA
ATGCCCAGGTAAAGGGTTGGTTGGACACAGCGCTTAGTGCACGCTGTCATCATGGACATCATAATCAGTTGTGAA
AAACACGCGAACCTATGACACTTCTTATTCCACACTGAATGTGAAATTGCATGTTCAGATGTTTXACTACGAGGC
CTGGCTCACAGGAAGTGTTCAGTAAAAGTATGCACTGTTAGATTACTGATAACGCGGATAGATTTTTGTTTACCA
TAAATTGTTCCAGATTTATATTAATGGAAGGAAGTGTGCATTTATTAGCTATTACTCAACTTTACAATGCAAACA
TCTTATTTCTCATCTTTAAACATGTCGACCAGTTTAATTGAAAAGTATTCTGAGACTGCAAAATGGGGTGTTAAA
AAATACTGCAGTTACGGAGCTGTGTAAACCAGTTTCTCATTGCATAAGATACAGATGTAAATTGCATGGAGAGGT
TGATATGCACCTGTACAGTAATTCACTCCCCCATTTCACTTCTTTGTCAGAGAATAGTTCTTGTTCATACTGAGT
GTTCTAAATTTGAAGTTATATATACAAATTAAAATATTTTAAAAAAAAAAAAAAG

FIGURE 2089

MAMTLLEDWCRGMDVNSQRXLLVWGIPVNCDEAEIEETLQAAMPQVSYRMLGRMFWREENAKAALLELTGAVDYA
AIPREMPGKGGVWKVLFKPPTSDAEFLERLHLFLAREGWTVQDVARVLGFQNPTPTPGPEMPAEMLNYILDNVIQ
PLVESIWYKRLTLFSGRDIPGPGEETFDPWLEHTNEVLEEWQVSDVEKRRRLMESLRGPAADVIRILKSNNPAIT
TAECLKALEQVFGSVESSRDAQIKFLNTYQNPGEKLSAYVIRLEPLLQKVVEKGAIDKDNVNQARLEQVIAGANH
SGAIRRQLWLTGAGEGPAPNLFQLLVQIREEEAKEEEEEAEATLLQLGLEGHF

FIGURE 2090

CTCCCAAG**ATG**TCGTTCCCAAAGTATAAGCCGTCGAGCCTGCGCACTCTGCCTGAGACCCTCGACCCAGCCGAAT
ACAACATATCTCCGGAAACCCGGCGGGCGCAAGCCGAGCGGTTGGCCATAAGAGCCCAGCTGAAACGAGAGTACC
TGCTTCAGTACAACGATCCCAACCGCCGAGGGCTCATCGAAAATCCTGCCTTGCTTCGTTGGGCCTATGCAAGAA
CAATAAATGTCTATCCTAATTTCAGACCCACTCCTAAAAACTCACTCATGGGAGCTCTGTGTGGATTTGGGCCCC
TCATCTTCATTTATTATATTATCAAAACTGAGAGGGATAGGAAAGAAAAACTTATCCAGGAAGGAAAATTGGATC
GAACATTTCACCTCTCATAT**TAA**GTCTGGCAATGATGACTATATGTATTCCTGCCTAAATAAATCATCTATTAAT
CATTAAAAAAAAAA

FIGURE 2091

MSFPKYKPSSLRTLPETLDPAEYNISPETRRAQAERLAIRAQLKREYLLQYNDPNRRGLIENPALLRWAYARTIN
VYPNFRPTPKNSLMGALCGFGPLIFIYYIIKTERDRKEKLIQEGKLDRTFHLSY

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FIGURE 2092

GGCAGAGGCATC**ATG**GAGGGTCCCCGGGGATGGCTGGTGCTCTGTGTGCTGGCCATATCGCTGGCCTCTATGGTG
ACCGAGGACTTGTGCCGAGCACCAGACGGGAAGAAAGGGGAGGCAGGAAGACCTGGCAGACGGGGGCGGCCAGGC
CTCAAGGGGGAGCAAGGGGAGCCGGGGGCCCCTGGCATCCGGACAGGCATCCAAGGCCTTAAAGGAGACCAGGGG
GAACCTGGGCCCTCTGGAAACCCCGGCAAGGTGGGCTACCCAGGGCCCAGCGGCCCCCTCGGGGCCCGTGGCATC
CCGGGAATTAAAGGCACCAAGGGCAGCCCAGGAAACATCAAGGACCAGCCGAGGCCAGCCTTCTCCGCCATTCGG
CGGAACCCCCCAATGGGGGGCAACGTGGTCATCTTCGACACGGTCATCACCAACCAGGAAGAACCGTACCAGAAC
CACTCCGGCCGATTCGTCTGCACTGTACCCGGCTACTACTACTTCACCTTCCAGGTGCTGTCCCAGTGGGAAATC
TGCCTGTCCATCGTCTCCTCCTCAAGGGGCCAGGTCCGACGCTCCCTGGGCTTCTGTGACACCACCAACAAGGGG
CTCTTCCAGGTGGTGTCAGGGGGCATGGTGCTTCAGCTGCAGCAGGGTGACCAGGTCTGGGTTGAAAAAGACCCC
AAAAAGGGTCACATTTACCAGGGCTCTGAGGCCGACAGCGTCTTCAGCGGCTTCCTCATCTTCCCATCTGCC**TGA**

GCCAGGGAAGGACCCCCTCCCCCACCCACCTCTCTGGCTTCCATGCTCCGCCTGTAAAATGGGGGCGCTATTGCT
TCAGCTGCTGAAGGGAGGGGGCTGGCTCTGAGAGCCCCAGGACTGGCTGCCCCGTGACACATGCTCTAAGAAGCT
CGTTTCTTAGACCTCTTCCTGGAATAAACATCTGTGTCTGTGTCTGCTGAAAAAAAAAAAAAAAAAA

FIGURE 2093

MEGPRGWLVLCVLAISLASMVTEDLCRAPDGKKGEAGRPGRRGRPGLKGEQGEPGAPGIRTGIQGLKGDQGEPGP
SGNPGKVGYPGPSGPLGARGIPGIKGTKGSPGNIKDQPRPAFSAIRRNPPMGGNVVIFDTVITNQEEPYQNHSGR
FVCTVPGYYYFTFQVLSQWEICLSIVSSSRGQVRRSLGFCDTTNKGLFQVVSGGMVLQLQQGDQVWVEKDPKKGH
IYQGSEADSVFSGFLIFPSA

FIGURE 2094

GGCTGCGAGAAGACGACAGAAGGGGGAAGGGGCTGATGCGAACTGGGGCCACGGTAGCCATCGCGCTTTGCAGTT
CGGTCTCCTGGTGTACGGCCAACGCCAAGTAGGGGATTGCGTTCCCTCCAGTCGCAGACCCTATCAGATTTGGAT
ATGTCCTTCATATTTGATTGGATTTACAGTGGTTTCAGCAGTGTGCTACAGTTTTTAGGATTATATAAGAAAACT
GGTAAACTGGTATTTCTTGGATTGGATAATGCAGGAAAAACAACATTGCTACACATGCTAAAAGATGACAGACTT
GGACAACATGTCCCAACATTACATCCCACTTCCGAAGAACTGACCATTGCTGGCATGACGTTTACAACTTTTGAT
CTGGGTGGACATGTTCAAGCTCGAAGAGTGTGGAAAAACTACCTTCCTGCTATCAATGGCATTGTATTTCTGGTG
GATTGTGCAGACCACGAAAGGCTGTTAGAGTCAAAAGAAGAACTTGATTCACTAATGACAGATGAAACCATTGCT
AATGTGCCTATACTGATTCTTGGGAATAAGATCGACAGACCTGAAGCCATCAGTGAAGAGAGGTTGCGAGAGATG
TTTGGTTTATATGGTCAGACAACAGGAAAGGGGAGTATATCTCTGAAAGAACTGAATGCCCGACCCTTAGAAGTT
TTCATGTGTAGTGTGCTCAAAAGACAAGGTTACGGAGAAGGCTTCCGCTGGATGGCACAGTACATTGAT**TAA**CAC
AAACTCACATTGGTTCCAGGTCTCAACGTTCAGGCTTACTCAGAGATTTGATTGCTCAACATGCATAACTTGAAT
TCAATAGACTTTTGCTGGTTATAAAACAGATGTTTTTTAGATTATTAATATTAAATCAACTTAATTTGAATGAGA
ATTGAAAACTGATTCAAGTAAGTTTGAGTATCACAATGTTAGCTTTCTAATTCCATAAAAGTACTTGGTTTTTAC
AGTTTATAATCTGACATCACCCCAGCGCCATTTGTAAAGAGCAACTTTCCAGCAGTACATTTGAAGCACTTTTTA
ACAACATGAAACTATAAACCATATTTAAAAGCTCATCATGTTAAATTTTTTATGTACTTTTCTGGAACTAGTTTT
TAAATTTTAGATTATATGTCCACCTATCTTAAGTGTACAGTTAATAATTAGCTTATTCAATGATTGCATGATGCC
TTACAGTTTTCAATAACTTTTTTTCTTATGCAAACGTCATGCAATAAAACAAACTCTAATGTTTGGCAAAAAAAA
AAAAA

FIGURE 2095

MSFIFDWIYSGFSSVLQFLGLYKKTGKLVFLGLDNAGKTTLLHMLKDDRLGQHVPTLHPTSEELTIAGMTFTTFD
LGGHVQARRVWKNYLPAINGIVFLVDCADHERLLESKEELDSLMTDETIANVPILILGNKIDRPEAISEERLREM
FGLYGQTTGKGSISLKELNARPLEVFMCSVLKRQGYGEGFRWMAQYID

FIGURE 2096

CACGGGGCTGCGTGGAAAGAGCGCCGAGCGGTGGCGTCGTTGTCGCCCCCTCCTCGTCGGGAAGAATCGTTTGGT
CTCCTGCCGTGCCCGGCCGGTGCTGCTGTCGCTGCTGCTGCCCGCGCGGGTTGTGG**ATG**TTGTCGGCTCCGTGTT
GTGATGACAGGAGAATGTGTGTGTGTCCCGGGCCCAGACGAATTGGAATCCCAGTCAGAAGTTCCAGCCTGCCAC
TGTTCTCTGATGCCATGCCAGCACCAACTCAACTGTTTTTTCCTCTCATCCGTAACTGTGAACTGAGCAGGATCT
ATGGCACTGCATGTTACTGCCACCACAAACATCTCTGTTGTTCCTCATCGTACATTCCTCAGAGTCGACTGAGAT
ACACACCTCATCCAGCATATGCTACCTTTTGCAGGCCAAAGGAGAACTGGTGGCAGTACACCCAAGGAAGGAGAT
ATGCTTCCACACCACAGAAATTTTACCTCACACCTCCACAAGTCAATAGCATCCTTAAAGCTAATGAATACAGTT
TCAAAGTGCCAGAATTTGACGGCAAAATGTCAGTTCTATCCTTGGATTTGACAGCAATCAAGCTGCCTGCAAATG
CACCCATTGAGGACCGGAGAAGTGCAGCAACCTGCTTGCAGACCAGAGGGATGCTTTTGGGGGTTTTTGATGGCC
ATGCAGGTTGTGCTTGGTCCCAGGCAGTCAGTGAAAGACTCTTTTATTATATTGCTGGCTCTTTGGTACCCCATG
AGACTTTGCTAGAGATTGAAAATGCAGTGGAGAGCGGCCGGGCACTGCTACCCATTCTCCAGTGGCACAAGCACC
CCAATGATTACTTTAGTAAGGAGGCATCCAAATTGTACTTTAACAGCTTGAGGACTTACTGGCAAGAGCTTATAG
ACCTCAACACTGGTGAGTCGACTGATATTGATGTTAAGGAGGCTCTAATTAATGCCTTCAAGAGGCTTGATAATG
ACATCTCCTTGGAGGCGCAAGTTGGTGATCCTAATTCTTTTCTCAACTACCTGGTGCTTCGAGTGGCATTTTCTG
GAGCCACTGCTTGTGTGGCCCATGTGGATGGTGTTGACCTTCATGTGGCCAATACTGGCGATAGCAGAGCCATGC
TGGGTGTGCAGGAAGAGGACGGCTCATGGTCAGCAGTCACGCTGTCTAATGACCACAATGCTCAAAATGAAAGAG
AACTAGAACGGCTGAAATTGGAACATCCAAAGAGTGAGGCCAAGAGTGTCGTGAAACAGGATCGGCTGCTTGGCT
TGCTGATGCCATTTAGGGCATTTGGAGATGTAAAGTTCAAATGGAGCATTGACCTTCAAAAGAGAGTGATAGAAT
CTGGCCCAGACCAGTTGAATGACAATGAATATACCAAGTTTATTCCTCCTAATTATCACACACCTCCTTATCTCA
CTGCTGAGCCAGAGGTAACTTACCACCGATTAAGGCCACAGGATAAGTTTCTGGTGTTGGCTACTGATGGGTTGT
GGGAGACTATGCATAGGCAGGATGTGGTTAGGATTGTGGGTGAGTACCTAACTGGCATGCATCACCAACAGCCAA
TAGCTGTTGGTGGCTACAAGGTGACTCTGGGACAGATGCATGGCCTTTTAACAGAAAGGAGAACCAAAATGTCCT
CGGTATTTGAGGATCAGAACGCAGCAACCCATCTCATTCGCCACGCTGTGGGCAACAACGAGTTTGGGACTGTTG
ATCATGAGCGCCTCTCTAAAATGCTTAGTCTTCCTGAAGAGCTTGCTCGAATGTACAGAGATGACATTACAATCA
TTGTAGTTCAGTTCAATTCTCATGTTGTAGGGGCGTATCAAAACCAAGAAAAG**TGA**GTGGCTCTTTACTGGCAAT
TCTCAAATGATTACATTTAAAGGGCAGATTTTTTAAAAGATCTACTATAATAAACATTTTCAGGTGGCATTCTAA
GCATTTACCCTTTTGATACTCTAGGGGCGCTCCAAATTGACTTTGCAGCAGGGTGGCAGGGCAGAAGAGTCTGGT
CCTGCCTAGCTCAGATTTCATGGCACCTGCACTTGAGGCAAGCACTTCTTTATCACAGGTGTCTTGAAACATTAG
CTTCTTTTACCAACCTGAGAAAATTAGGATGACCTGGCAAATAAGATCTTGAATAGCCAAAAGCAAGTATCTTGC
TGTGTGTAGTCTCTTGGTTAAAGTGAAGAACAGTACTGTTCACACCTTTCTTCACTGAGATTCCAGTGACATGAG
AACATATATTTATTGCATGATTTTCTAGTACACAGTCTATGCATTATTCATATACATTTATTTTAGCCTAAAGTG
GTTTTCAAATCCAGTTCTTCAAGCCATAAATGACCAAGATCCAAGCAATCTGAATTTGTTTTTGTGATTATTTGA
CTGGAATGCTTCTTAAGTGGAATAACTATACTCCGTTATCCACCCGATTTCCTAATGTAATTGAAACATTTTCTA
GTTTGCCACACACTTGGAGACCGTAAGGGTTTTTAGTTTGATCTACTCTTCTATTGAAGTTAAAAAAAAAAAAAA
AAAAA

FIGURE 2097

MLSAPCCDDRRMCVCPGPRRIGIPVRSSSLPLFSDAMPAPTQLFFPLIRNCELSRIYGTACYCHHKHLCCSSSYI
PQSRLRYTPHPAYATFCRPKENWWQYTQGRRYASTPQKFYLTPPQVNSILKANEYSFKVPEFDGKMSVLSLDLTA
IKLPANAPIEDRRSAATCLQTRGMLLGVFDGHAGCAWSQAVSERLFYYIAGSLVPHETLLEIENAVESGRALLPI
LQWHKHPNDYFSKEASKLYFNSLRTYWQELIDLNTGESTDIDVKEALINAFKRLDNDISLEAQVGDPNSFLNYLV
LRVAFSGATACVAHVDGVDLHVANTGDSRAMLGVQEEDGSWSAVTLSNDHNAQNERELERLKLEHPKSEAKSVVK
QDRLLGLLMPFRAFGDVKFKWSIDLQKRVIESGPDQLNDNEYTKFIPPNYHTPPYLTAEPEVTYHRLRPQDKFLV
LATDGLWETMHRQDVVRIVGEYLTGMHHQQPIAVGGYKVTLGQMHGLLTERRTKMSSVFEDQNAATHLIRHAVGN
NEFGTVDHERLSKMLSLPEELARMYRDDITIIVVQFNSHVVGAYQNQEK

FIGURE 2098

GTGGTAGCGGTTATTCGGCGGCCCGCGGCGGACCATGGCCCTGGCCCTGGCCCGGCGTCGCTGGGCTTTCCTCAC
GGCGTCCCCGAGCAGCGTCGCAGAGCGGGCCGACTTCCGGGAAGGAACTGACCAGCGACTGAGCGGCGGCCGGCG
CGCTTAGCGCCCTGAACATGCGGCAGTCCCTGCGGGCGACCCCGGGCTCCGGACAGGCGGCGGCGGAGGCGGCGG
CTCGGGAGGGAAGGAGGCGGCGGCGCCGGCGGAGGTGGCGGCGGAGACGGCCGGCGCCCGGCGCGGAGCCCTAGG
GAGGCAGTTCAGCGCGGCCTCGGGCCTCGTCGAGAAGG**ATG**CTGTCCCGAAAGAAAACCAAAAACGAAGTGTCCA
AGCCGGCCGAGGTGCAGGGGAAGTACGTGAAGAAGGAGACGTCGCCTCTGCTTCGGAATCTTATGCCTTCATTCA
TCCGGCATGGTCCAACAATTCCAAGACGAACTGATATCTGTCTTCCAGATTCAAGCCCTAATGCCTTTTCAACTT
CTGGAGATGTAGTTTCAAGAAACCAGAGTTTCCTTAGAACTCCAATTCAAAGAACACCTCATGAAATAATGAGAA
GAGAAAGCAACAGATTATCTGCACCTTCTTATCTTGCCAGAAGTCTAGCAGATGTCCCTAGAGAGTATGGTTCTT
CTCAGTCATTTGTAACGGAAGTTAGTTTTGCTGTTGAAAATGGAGACTCTGGTTCCCGATATTATTATTCAGACA
ATTTTTTTGATGGTCAGAGAAAGCGGCCACTTGGAGATCGTGCACATGAAGACTACAGATATTATGAATACAACC
ATGATCTCTTCCAAAGAATGCCACAGAATCAGGGGAGGCATGCTTCAGGTATTGGGAGAGTTGCTGCTACATCTT
TAGGAAATTTGACTAACCATGGTTCTGAAGATTTACCCCTTCCTCCTGGCTGGTCTGTGGACTGGACAATGAGAG
GGAGAAAATATTATATAGATCATAACACAAATACAACTCACTGGAGCCATCCTCTTGAGCGAGAAGGACTTCCTC
CTGGATGGGAACGAGTTGAGTCATCCGAATTTGGAACCTATTATGTAGATCACACAAATAAGAAGGCCCAATACA
GGCATCCCTGTGCTCCTAGTGTACCTCGGTATGATCAACCACCTCCTGTCACATACCAGCCACAGCAAACTGAAA
GAAATCAGTCCCTTCTGGTACCTGCAAATCCATATCATACTGCAGAAATTCCTGACTGGCTTCAGGTTTACGCAC
GAGCCCCTGTGAAATATGACCACATTCTGAAGTGGGAACTCTTCCAGCTGGCTGACCTGGATACATACCAGGGAA
TGCTAAAGTTGCTCTTCATGAAAGAATTGGAGCAGATTGTTAAAATGTATGAAGCATACAGACAAGCCCTTCTTA
CAGAGTTGGAAAACCGAAAGCAGAGACAGCAGTGGTATGCCCAACAACATGGAAAAAATTTT**TGA**GCTGATTTTT
TAAAAATTTAAGTTTTGTAAGAGCTTTAAAATATTTTCACAGATAAAAAATTGCAAACAAGTACTCTGGTTAATA
AATGCTGCTTCCTTTGTGGAAATTATAAAATTCTAACTTTACATGTATTTTGTTATTAGAAATTTTCTTTTATTG
AATGAGAAAAATTAGTCTATCATTTTAAGAGCCAATATGGCAAACACTTTCAAATACTGTATATTAGGAAACTGT
TTTGGTATTCTTGATGGAAAAAAACGCAGCGGAAATGTCATTATGAACAGATGTTAAATAGGAAATTATTACTTG
TTAACTTCTTACAGCAGTAGTACCTTCTTTAAAAAAAAAAAAGAATCTGCGGTATTTTTTTAAAAAAAAAGTTTA
CCGCTGTAGTGTGAAATATTGTCTGGAAAGGGATGGTTTAAATATTACCATGATGTAGTTGAAATATAAAATAGG
ATTTGGAACCTTATTGTGATAAATATTTATATATGATGTATGTTTGTCTCCCCTCTCCAAAGTAAGGAACCCAGC
TGGGCGTGGTGGCTCACTCCTGTAATCCCAGCATTTTGGGAGGCCGAGGTGGGTGGACCGCTTGAGTCCACGAGT
TTAAGACCAGCCTGGGCAACATGGTGAAGCCCCATCTCTACAAAAAATACAAAAAAATTAGCCGGGTATGATGGT
GTGTGCCTCTAGTCCCAGCTACTTGGGAGGCTGAGGTCAGAGGATGGCTTGAGCCCAAGAGGCAGAGGTTGCAGG
GTCAAGATCGCACCACTTGCACTGCAGCCTGAGAGAGAGAGAGCCAGACCTTGTCTCAAAAAATAAAAAATAAAA
AAATAAAAACAAAATAAGGAATCCTTTTAAAGCATGTTGAGAAAGTATTTTTTGGTATGAATGGGTGACGGGCCT
TTTAATCTTTCAGGAATACATATAAGCAGGAATACTTAGCCTGTATTGGGAAGGTGCGTGAAACTCAAAGTTGCT
AACATCATCTTCCTTATTTTCAGCCAGTGCTGTTACTGCATTTAGCATGGCTCTGACGAGGCAGTGGAGAGTTCC
TGACAGCATAGCATACTGCCTTCTGACAGACTGGGTTAAGCTACCAAAAATGACAACCAGGGATTCAAAAAAAAT
TTTTGGTCATTAAATCGAATGTATATTATTACTTTTTAATTTTCTAAGTATTTATCACAGGACTTTAACACCATA
TATTTCCCTCCCAGTTTTTCTCCCCTTTTGGTTTAATAGTTAAAACATTTTTCATAATTAGTGCTGTACATTTGA
TTGCAAACAAATTGGTGATACTTCTAAACTATAACTATAAATCTCTAGAATTCTGTGAATTTCAACATTATTTGA
AGTAGTTCTTCAGTTATATTTACATGTGTTGTAAATATGTAAATATACTTTTAGCTTAGGAAGTCTTCCAGAATA
CAAACTACTCCCAGTTAGATATCAGTGAGTTTGAATAACTGAAGAAATGTTGACAATGTTAAGTGTTTGATTTTA
TATAACAAGCTTATTAAATATATTTTTGTGG

FIGURE 2099

MLSRKKTKNEVSKPAEVQGKYVKKETSPLLRNLMPSFIRHGPTIPRRTDICLPDSSPNAFSTSGDVVSRNQSFLR
TPIQRTPHEIMRRESNRLSAPSYLARSLADVPREYGSSQSFVTEVSFAVENGDSGSRYYYSDNFFDGQRKRPLGD
RAHEDYRYYEYNHDLFQRMPQNQGRHASGIGRVAATSLGNLTNHGSEDLPLPPGWSVDWTMRGRKYYIDHNTNTT
HWSHPLEREGLPPGWERVESSEFGTYYVDHTNKKAQYRHPCAPSVPRYDQPPPVTYQPQQTERNQSLLVPANPYH
TAEIPDWLQVYARAPVKYDHILKWELFQLADLDTYQGMLKLLFMKELEQIVKMYEAYRQALLTELENRKQRQQWY
AQQHGKNF

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FIGURE 2100

CGACTTTCCCGATCGCCAGGCAGGAGTTTCTCTCGGTGACTACTATCGCTGTC**ATG**TCTGGTCGTGGCAAGCAAG
GAGGCAAGGCCCGCGCCAAGGCCAAGTCGCGCTCGTCCCGCGCTGGCCTTCAGTTCCCGGTAGGGCGAGTGCATC
GCTTGCTGCGCAAAGGCAACTACGCGGAGCGAGTGGGGGCCGGCGCGCCCGTCTACATGGCTGCGGTCCTCGAGT
ATCTGACCGCCGAGATCCTGGAGCTGGCGGGCAACGCGGCTCGGGACAACAAGAAGACGCGCATCATCCCTCGTC
ACCTCCAGCTGGCCATCCGCAACGACGAGGAACTGAACAAGCTGCTGGGCAAAGTCACCATCGCCCAGGGCGGCG
TCTTGCCTAACATCCAGGCCGTACTGCTCCCTAAGAAGACGGAGAGTCACCACAAGGCAAAGGGCAAG**TGA**GGCT
GACGTCCGGCCCAAGTGGGCCCAGCCCGGCCCGCGTCTCGAAGGGGCACCTGTGAACTCAAAAGGCTCTTTTCAG
AGCCACCCA

FIGURE 2101

MSGRGKQGGKARAKAKSRSSRAGLQFPVGRVHRLLRKGNYAERVGAGAPVYMAAVLEYLTAEILELAGNAARDNK
KTRIIPRHLQLAIRNDEELNKLLGKVTIAQGGVLPNIQAVLLPKKTESHHKAKGK

FIGURE 2102

GTGTGTTCTGATCTTCAGTGCGGTAGCACATTCTCCATTTAGAAAAGAGTGGTCAGAATAATTGTGGACGGCACA
GTGGCTTTTTAAAACTACAGTCTTTAGGTGTAAGGTTTGGCCGCCGGGAGCAATTTTATGATCAAATATGATGAA
CTCCTAAGTCACTGAGGTGTGATTGGGCCAATGTTGGCATGAGGTTCTTGCTCTACTTCCAGTGTTTTGATTCCA
CTGGGAGAATTTGGCCTAGTGTGTGGCTTTGGATGAATCCGTGTAGAGAGAGGTGAGCTTGTCCTGTTACAGATG
CTGTCAGACATAGCGGTAGTAGGCACCTAGGGAGGAAGTGGCCGTTAGTTTTACACTGACTTTTTAAGAATGGAG
AATGCACGTGGGTTTCTGTTGCGGATGATTCATAGTAAGCAAGCGGTTGATGCTGTTAATACCGGCCCCACCCGA
TTGACATTAAGTTTATTCAGCTTTTAAAAAGATGAAGAACTAAGGGGAACAAATTTAAGTTTGTTGCAACTTAGC
CACACATGCTTCCCTGGTACCAGCTGGAATCAGCAGCTCACAGGCATCTTCAGGACACTTCAGTGTATATGACAC
AGTACTTTGTTAGCGTCTGCGTGTGTATGGAAAGTTGACAAAAAATGGCATGAAAAGATCATGATTGGATTTTCT
TTTAAACCTGCCCTTCTGTAAAAAATAGTTTATATATTTTTAAATTAGTAGGTATGTGTGGCTTCCTTTTTTCCT
AACATTCCCAGCAAATTTTTGCTGCTAAGACTATCACTGTTAAAGTGAAAATTACAGGGAAAAATGTGATGAATA
TACCGTAACTCAAAATGTGATATTTTCTTAAAATCACTCTTTTATGCTTTAGGAACTGGGTTGGGTCTCCACTTT
GGATTATTAGTGTTAAAGGGCCTGAGTATACGTGGATTTCATTGTAAAATTTAACTCCTTGTCTTTTACTTGGGG
CACGGGGCCCTGGGAGGGCTTTCCCTACTTTCCCCACTATGTTAACAGGTAATTCTGATTTATGCCTTTAGTTTG
ACTTATTTTTAACAAAATATTAGAAGTTATGCTTTAAAATGTTTAA**ATG**TGGACTGAAATTTTCATCTTTTGTTT
GAGAATCTATGAAGTGTATCATATACGTGGCCTAAAGCAAGGTGTGTATTTTGTTATTCTGAAATTGTTTTGCAT
CTGGACAAATACTAAATATCCCAGTGGCCTTTTTTTTTTTTTTTTAAACCTGTGTATCCATCTCATCCTTTTGCG
CATTCCTAGTAAGCAAAAAAATTTGTTATGCCATCTTCATTATTCGAATTACAGACTGAAAAAATATGGCCAGTT
TTTAAAGAAGTTTAGATTATGTTTTCCATGGAAGGACAAGTCTGACTGTTCA**TAG**GCTGATTTTCTTTAAGAGGA
TTATTCTGTTTTACAATTTCAATTCTAGATCACATTTTATATATGCTGCATGCCAAAAAA

FIGURE 2103

MWTEIFIFCLRIYEVYHIRGLKQGVYFVILKLFCIWTNTKYPSGLFFFFLNLCIHLILLRIPSKQKNLLCHLHYS
NYRLKKYGQFLKKFRLCFPWKDKSDCS

FIGURE 2104A

GAGCCGGCCGCGGCGCCCTCTCTCCGTGTGGCCCCCTGAGCGGCCCCCCTCCCCTGCCCGGGAGGGAGGCGGGGG
GCACCTGGGGCCCGCC**ATG**AACCCCGGCTTCGATTTGTCCCGCCGGAACCCGCAGGAGGACTTCGAGCTGATTCA
GCGCATCGGCAGCGGCACCTACGGCGACGTCTACAAGGCACGGAATGTTAACACTGGTGAATTAGCAGCAATTAA
AGTAATAAAATTGGAACCAGGAGAAGACTTTGCAGTTGTGCAGCAAGAAATTATTATGATGAAAGACTGTAAACA
CCCAAATATTGTTGCTTATTTTGGAAGCTATCTCAGGCGAGATAAGCTTTGGATTTGCATGGAGTTTTGTGGAGG
TGGTTCTTTACAGGATATTTATCACGTAACTGGACCTCTGTCAGAACTGCAAATTGCATATGTTAGCAGAGAAAC
ACTGCAGGGATTATATTATCTTCACAGTAAAGGAAAAATGCACAGAGATATAAAGGGAGCTAACATTCTATTAAC
GGATAATGGTCATGTGAAATTGGCTGATTTTGGAGTATCTGCACAGATAACAGCTACAATTGCCAAACGGAAGTC
TTTCATTGGCACACCATATTGGATGGCTCCAGAAGTTGCAGCTGTTGAGAGGAAGGGGGGTTACAATCAACTCTG
TGATCTCTGGGCAGTGGGAATCACTGCCATAGAACTTGCAGAGCTTCAGCCTCCTATGTTTGACTTACACCCAAT
GAGAGCATTATTTCTAATGACAAAAAGCAATTTTCAGCCTCCTAAACTAAAGGATAAAATGAAATGGTCAAATAG
TTTTCATCACTTTGTGAAAATGGCACTTACCAAAAATCCGAAAAAAAGACCTACTGCTGAAAAATTATTACAGCA
TCCTTTTGTAACACAACATTTGACACGGTCTTTGGCAATCGAGCTGTTGGATAAAGTAAATAATCCAGATCATTC
CACTTACCATGATTTCGATGATGATGATCCTGAGCCTCTTGTTGCTGTACCACATAGAATTCACTCAACAAGTAG
AAACGTGAGAGAAGAAAAAACACGCTCAGAGATAACCTTTGGCCAAGTGAAATTTGATCCACCCTTAAGAAAGGA
GACAGAACCACATCATGAACTTCCCGACAGTGATGGTTTTTTGGACAGTTCAGAAGAAATATACTACACTGCAAG
ATCTAATCTGGATCTGCAACTGGAATATGGACAAGGACACCAAGGTGGTTACTTTTTAGGTGCAAACAAGAGTCT
TCTCAAGTCTGTTGAAGAAGAATTGCATCAGCGAGGACACGTCGCACATTTAGAAGATGATGAAGGAGATGATGA
TGAATCTAAACACTCAACTCTGAAAGCAAAAATTCCACCTCCTTTGCCACCAAAGCCTAAGTCTATCTTCATACC
ACAGGAAATGCATTCTACTGAGGATGAAAATCAAGGAACAATCAAGAGATGTCCCATGTCAGGGAGCCCAGCAAA
GCCATCCCAAGTTCCACCTAGACCACCACCTCCCAGATTACCCCCACACAAACCTGTTGCCTTAGGAAATGGAAT
GAGCTCCTTCCAGTTAAATGGTGAACGAGATGGCTCATTATGTCAACAACAGAATGAACATAGAGGCACAAACCT
TTCAAGAAAAGAAAAGAAAGATGTACCAAAGCCTATTAGTAATGGTCTTCCTCCAACACCTAAAGTGCATATGGG
TGCATGTTTTTCAAAAGTTTTTAATGGGTGTCCCTTGAAAATTCACTGTGCATCATCATGGATAAACCCAGATAC
AAGAGATCAGTACTTGATATTTGGTGCCGAAGAAGGGATTTATACCCTCAATCTTAATGAACTTCATGAAACATC
AATGGAACAGCTATTCCCTCGAAGGTGTACATGGTTGTATGTAATGAACAATTGCTTGCTATCAATATCTGGTAA
AGCTTCTCAGCTTTATTCCCATAATTTACCAGGGCTTTTTGATTATGCAAGACAAATGCAAAAGTTACCTGTTGC
TATTCCAGCACACAAACTCCCTGACAGAATACTGCCAAGGAAATTTTCTGTATCAGCAAAAATCCCTGAAACCAA
ATGGTGCCAGAAGTGTTGTGTTGTAAGAAATCCTTACACGGGCCATAAATACCTATGTGGAGCACTTCAGACTAG
CATTGTTCTATTAGAATGGGTTGAACCAATGCAGAAATTTATGTTAATTAAGCACATAGATTTTCCTATACCATG
TCCACTTAGAATGTTTGAAATGCTGGTAGTTCCTGAACAGGAGTACCCTTTAGTTTGTGTTGGTGTCAGTAGAGG
TAGAGACTTCAACCAAGTGGTTCGATTTGAGACGGTCAATCCAAATTCTACCTCTTCATGGTTTACAGAATCAGA
TACCCCACAGACAAATGTTACTCATGTAACCCAACTGGAGAGAGATACCATCCTTGTATGCTTGGACTGTTGTAT
AAAAATAGTAAATCTCCAAGGAAGATTAAAATCTAGCAGGAAATTGTCATCAGAACTCACCTTTGATTTCCAGAT
TGAATCAATAGTGTGCCTACAAGACAGTGTGCTAGCTTTCTGGAAACATGGAATGCAAGGTAGAAGTTTTAGATC
TAATGAGGTAACACAAGAAATTTCAGATAGCACAAGAATTTTCAGGCTGCTTGGATCTGACAGGGTCGTGGTTTT
GGAAAGTAGGCCAACTGATAACCCCACAGCAAATAGCAATTTGTACATCCTGGCGGGTCATGAAAACAGTTAC**TG**
AGAATTGTTGTGCTTTGACAGTTAACTCTAGAAAGAAAGAACACTACCACTGCAACATTAATGGATGCTTGAAGC
TGTACAAAAGCTGCAGTAACCTGTCTTCAGTTACTTTGTAATTTATTGTGGCATGAGATAAGATGGGGAAAATTT
TGTTTTAAGTGGTATGGATATATTTAGCATATTGAACCACACAAGTGCTTAATTCATTGTTATGTAATCTTTGTA
CATATAGGCAGTATTTTTTCTGTGAAACTTCATATTGCTGAAGACATACACTAAGAATTTATGTAGATAATGTAC
TTTTATGAGATGTACAAGTAAGTGTCTTATCTGTACAGATGTAAATGTTGATGAAAATGCAATTGGGGTTAATAT
TTTAAGAATTCTTTAGTATATTCTTGGGTGTGGCTATATTACAAAATGGGATGCTGGCAATGAAACAATACATTT
AACACTATTGTATTTTTATTATATGTAATTTAGTAATATGAATATAAATCTTGTAACTTTTAAAATTGTAATGGA
GGCTGTAATCATTTTATAATCTTTTTAATTTTAATGCAAGTACACTGGTGTTTATATTTGCACAAAGTATTGATA
TGTGATGTATTAAGTCACAAAAGTAAGCTGTGACATTGTCTATAAGCATTTGGCTCCACAAATGTATTTGGATTG
TTTTCTATGTGAAGCAAACCAATTATAATTAACCACATGTTGTAGTAACTGGTCTTTTTATATTTAAGCAGAATC
CTGTAAGATTGCTTGTCTTTGCTTAAAAACAATACCTTTGAACATTTTTGAATCACAGAATAGCGGTACCATGAT

FIGURE 2104B

AGAATACTGCAATTGTGGTCAGAATTACAGTATGCACAAAGAATTAATTAGCATTATTAAAGAGTCCTCACTAAA
CATTTCATATGATCACACTGAAGAACTGTAACATTCCATAGAGTGAAGTGGTTCAAATTTCTCTTGGAATTTTTA
CTTTTGTTGGCCTTATTTTATGATCCTTTTCATATTTCTTTTGACTTAGAGTATTAATACATGGCCAAAATAATT
TAGTTACTACCTCATACAAACAATATAATGGTTACTACACATCACAGGAACTTAGTTTTGGTTTAAGTCATTTTT
GATTGCTTTTTTCCAATGGAATATGTATATACCAGGTTTTAGCAAAATGCACACTTTTGGCTCTTTTTGGTATAT
GTTCTTTATATTTTAATGTGAGTATATACACTAAGAACAAACTAAATTGTGATTTATGATCTTCATTTATTTTAA
TGATAATGGTTTTAAAATATGTTCCTGATTGTACATATTGTAAAATAAACATGTTTTTTAACAAAAAAAAAAAAA
AAAAAAAAAAAAAAAA

FIGURE 2105

MNPGFDLSRRNPQEDFELIQRIGSGTYGDVYKARNVNTGELAAIKVIKLEPGEDFAVVQQEIIMMKDCKHPNIVA
YFGSYLRRDKLWICMEFCGGGSLQDIYHVTGPLSELQIAYVSRETLQGLYYLHSKGKMHRDIKGANILLTDNGHV
KLADFGVSAQITATIAKRKSFIGTPYWMAPEVAAVERKGGYNQLCDLWAVGITAIELAELQPPMFDLHPMRALFL
MTKSNFQPPKLKDKMKWSNSFHHFVKMALTKNPKKRPTAEKLLQHPFVTQHLTRSLAIELLDKVNNPDHSTYHDF
DDDDPEPLVAVPHRIHSTSRNVREEKTRSEITFGQVKFDPPLRKETEPHHELPDSDGFLDSSEEIYYTARSNLDL
QLEYGQGHQGGYFLGANKSLLKSVEEELHQRGHVAHLEDDEGDDDESKHSTLKAKIPPPLPPKPKSIFIPQEMHS
TEDENQGTIKRCPMSGSPAKPSQVPPRPPPPRLPPHKPVALGNGMSSFQLNGERDGSLCQQQNEHRGTNLSRKEK
KDVPKPISNGLPPTPKVHMGACFSKVFNGCPLKIHCASSWINPDTRDQYLIFGAEEGIYTLNLNELHETSMEQLF
PRRCTWLYVMNNCLLSISGKASQLYSHNLPGLFDYARQMQKLPVAIPAHKLPDRILPRKFSVSAKIPETKWCQKC
CVVRNPYTGHKYLCGALQTSIVLLEWVEPMQKFMLIKHIDFPIPCPLRMFEMLVVPEQEYPLVCVGVSRGRDFNQ
VVRFETVNPNSTSSWFTESDTPQTNVTHVTQLERDTILVCLDCCIKIVNLQGRLKSSRKLSSELTFDFQIESIVC
LQDSVLAFWKHGMQGRSFRSNEVTQEISDSTRIFRLLGSDRVVVLESRPTDNPTANSNLYILAGHENSY

FIGURE 2106A

GCTTATATTTTTTCCAGCTCCCAAATTCCCTTTATTCCACTTTAGTCCCTTCATTTTCAGAGATGAGGAAACAGA
TTGCTTTGTTCAAAGACAGCTAGAACTAGAACACAGGCTAATACTTGCTAGCCATGTGATATACTAATGTCAGCC
AAATACGGGCATTTACACTTTCAGATGTTTGCCATATCTGTGCACTTACTAATTCTGTTTAATACAATTTAAATT
GACTCCTTTAAATAAGCTTATTTTAAAGGAAATTTTTTGCTACTATAAATAGAAAACCATTATATCCTTTAAATA
GTAACTCTAAATAGGAATTCAAAACAAAGCAACGTTATTAAAATTTAATTTAAAATTAATTTAAATTTAATTGTT
ATTAAATTTTTAATTATTGCTGTTCTTCGTCAGAAATGTGTCAAAGCATTGTTTTCATGTTTGATGTCAGTTCCT
TAATTGTCTAAACAGAAAAAGCACAGCTAATGCCTCTAGTTAAGCTTCTGTATAACTTTTTTAAATGAAATGCTT
CTTAGAGGGGAAATGAGAGGGCATGAATACATGTTTATATACTAAAGTATGATTTCATGTATATCAGAAGATCTT
ATTATATGGAACCAAAATTATTCTTTGGTTGATTTAATTGTTCTTGAAACTTCAGTTTTTACCTTGAAGGTTTTA
GTTAGCTTAGCATAAGTTTATTTTTCTAAATAAGGAATCTGATTGCCTCACAACTCAGATGTATCACAGTTATGG
TGAAATAGCAATATATTGGTTTCTGTAACCTTTTAAATACCGTAATGAATTAAAATCTCTTCAGCAAAAGCAAAT
ATATCTAGGGTGACGAGAGGTGTTTTTAGTGTATTTGAATGATGGAAATGTTTTTCTTAAAATATTTCTGAAGCA
TTTTTTAAAATAATTTTTTGAATTTATTGATGATAGTAGTTGTGTGTTAGTGTGAATGACTGGTCTAAATGTGTA
TGTCACTTCCAAGGGATTAGTAGGGGTCAGAATGATTTGTTTTATTCATTGACTTTTCCTTTGACGTGTTCTTAT
TCATTGGGCTACATACATTCCCTGTTGCCTTCTCACCAAAAGTGCCACTACACAGGCTGTATTTCATTGTACTGT
AGAAAAAGACAAGTAGACCTTTTTCATTCATGAGATTCCTATGAAATCTGTTGGTGGAGGTATAAAATGAGGAGA
CTTTTATGGGCTAGCTAGTAGGAGTTTTGCTGTGAAACCTTTGTAACAGGTCTATCAGGAACTAGGGAGAGAAAT
AAATGCAGGAAATACTTGATCCCATTAAACTGAGGATGAAAAAGACATGATAATATTTTGGGGATTATTTATTGT
GTGATTTTCCGGCTGATCAGAAGTGTTAATTTTTTGTTATACTTGTGTCAAATACATATATATATATATTTTG
AAATGGAGTCTTGCTCTGTCACCCAGGCTGGAGTGCAGTGGTGCGATCTGGGTTCACTGCAACCTCTGCCTCCAG
GTTCAAGTGATCCTCCTGCCTCAGCCTCCCGAGTAGCTAGGACTACAGGCACGTGCCACCACGCCCTGCTAATTT
TTGTATTCTTAGTGGAGATGGGGTTTCACCATGTTGGCCAGGCTGGTCTTGAACTCCTGACCTCAAGTGATCTTC
CCACCTTGGCCTTTCTGAACTATTTCCTTTACACACATTTAGAACTACATCTAACTGTATTATAGTTTTCACTTT
CACCATCAGACAAAATTCAGAAGATTCAAGAGAAGGAAAGTCGATTGTATTTACTCATATTTTTGCTACCGTGTT
TTTACATCTCATATTTTAAGGCTCTCTTAATTATTTATTTTCTGTTTAGTTAATTTCCTCTAGCCATTCTTTATT
TATAGTGGGTCTGCTGGTAACAAATTCTCTCAATTTTTCCTCGTCTGAGAATGTCTTGACTTCCCTTCCATTTTT
GTCAGCACCTGAAAAATACTATGCCACTATCTTCTGGGTTCTGTGGTTTCTGATGAGAACTCCACTGTCAGTCTA
ATTGTCGTTATAAATGCAGTGTTCTCTCTCTCTCTCTGCTTCCAGGATATTTTTTCTTTTTTTTTTTTTTTTTT
TCTTGAGACGGAGTCTCACTCTGTCGCCCAGGCTGGAGTGCAGTGGCGCAATTTTGGCTCACTGCAAGCTCTGCC
TCCCGGGTTCAAGCGATTACTCCCACTTTAGCCTCCCAAGTAGCTAGGACTACAAGGCACACCACCATGCCTGGC
TAATTTTTGTATTTTTAGTAGAGACGGGGTTTCACCATGTTGCCCAGGCTGGTCTCGAACTCCTGACATCAAGTG
ATCTTCCTGCCTCCGCTTCCCAAAGTGCTGGAATTACAGGCGTGAGCCACTGCTCCCAGCCTCTTTATTTTTTCA
GCTTTACTCTTTCTTCTGTCTTTTTGACATGTGTGTCCAGTGACACACGTGTTAGATTTTGCTATAGTCTCACGC
ACGGGTCTATAAGGCTCTGTTTTTTGTTTCATTTTGTTTTTCCTATTTTCTCTCTATTCAGATCGAGTAATTTCC
ACTGTTCAGTTTTATCATAGCTGCTTTTAAATCTTTGTCAGGTAATTCTGTCATCTAAGTTTTGGCACCTATTGA
TTATCTTTTGCATTGTTTTTGTTTTTGTTTCTGTTTTTGTTTTGAGATGGAGTCTTGCTCTGTTGCCCAGGTTGG
AGTGCAGTGGCACTGATCTCGGCTCACTGCAACCTCCTCCTCCCGGGTTCAAGTGGTTCTCCTGCCTCAACCTCC
TTAGTAGCTGGGATTACAGGCATGTGCCACCACGCCCGGCTAATTTTGTATTTTTAGTAGAGACCAGGTTTATCC
ATGTTGGTCAGGCTGGTCTCAAACTCCCAACCTCAAGTGATCCGCCTGCCTCGACCTCCCAAAGTGCTGGGATTA
CAGGCGTGAACCACTGCACCCAGCCTATCTTTTGCATTGTTTTAAATCTTGTTCTTGCTAGGATGAATGATTTTC
TGTTAAAACTAGATATTTTCATATTATGTTCCTAGGCTCTGGATATTATCTAAACCTTCTGTTTCCACTGGCTTT
TATTGACACTGCTTTGGCAAGGTCATAGGGGGTGCCTCATTACTGCCAGGTGGACATAGAAGTCAAGGGTCCCTA
CTCAGCCTCTACTGATGCCTCAGGAAGAGGATCCTTCTTGTTATTGCTGGGTGGGGGTGGAAGTCTAGCTGACAC
CTACTGAGGTAGGTGCTGGGGCATGCCCGGCCATCAGGGTGAAAGTCCTGGCTCCCTAGTTGGCCTACTTTTACA
TTGCCCTAATAGGGCATTGGAGCTCCTCACTATGGTTTATGAGCTGGAAGTCAAGGCTCCTCACTTAGCTTTCGT
TGGTGTGGGTGGTGGTGGGGCAAAACTGTTTTCTGGGTTTGGCTGGAGTGGAGCAGTTACTGTCAAAAGTTTTCT
GTCTTGCCAGGCTGTCCCTTTCTTGTTTCTTTGGCTAGAGAGAGCAAGCTTTTGTTGTGGCTCTTTTTGTCTGTG
CCAGTTGGCATTTCCAGGTTGCTGCCTTCTTTAGCTCCAAGTCTGGGATATATTAGGCAAAAAGAAAACCCAGAG

FIGURE 2106B

AATTTACACCACCGTGTCATTCCATGGGTCCTGAGGTCCCTTACTTAGTCTGCCTTCTCTCCACTTTTCACAGTC
TTCTCATGTTTTGTATATAATGTCCAGGGTCTTTAGTTATACTTAGCAGAAATAAAAGGGAAAAGTATGTCTGCT
CTATGCTTCTGTAAGTGGAAGTCTTCAAATTTGCATTTTTGATTCCTTTAAACAGTTTTGTAAAATATATAATCA
TTATTGGGCAAAATGTCCCATAAAATGTATATACCTTGTGATGGTTTGCATAATATTGTGTTCAAGAGGACTGCT
GAAAAATAACATCTTTATTTAAACTGAAACGAATTGTTCACATTATTAATGAAAACTTTTCCCCTCTAGGAAATA
ATGCAAAAGGTGTCCCAAGGCTCCTGACCAGTGAACAAAGATTTGAGAAAGACAGCCAAGCTC**ATG**TTTTCTCCT
GATCAAGAAAATCATCCATCTAAAGCACCAGTAAAATATGGTGAACTCATTGTCTTAGGCTATAATGGGTCTCTC
CCAAATGGCGATAGAGGAAGGAGGAAAAGTAGGTTTGCTTTGTTTAAAAGACCTAAGGCAAATGGGGTGAAGCCC
AGCACTGTGCATATTGCTTGTACTCCTCAGGCTGCAAAGGCAATAAGCAACAAAGACCAGCATAGCATATCATAT
ACTTTGTCTCGGGCCCAGACTGTGGTGGTTGAATATACTCATGACAGCAACACAGATATGTTTCAGATTGGCCGG
TCGACTGAAAGCCCCATTGATTTTGTAGTAACTGACACGGTTCCTGGAAGTCAAAGTAATTCTGATACACAGTCA
GTACAAAGCACTATATCAAGATTTGCCTGCAGAATCATATGTGAACGGAATCCTCCCTTTACAGCACGGATTTAT
GCTGCAGGATTTGACTCATCAAAAAACATCTTTCTTGGGGAGAAGGCTGCCAAATGGAAGACATCAGATGGACAG
ATGGATGGCTTGACCACTAATGGTGTTCTTGTGATGCATCCACGCAATGGGTTCACAGAAGACTCCAAGCCTGGA
ATATGGAGAGAAATATCGGTGTGTGGAAATGTATTTAGCCTACGTGAAACCAGATCGGCTCAGCAGAGAGGAAAA
ATGGTGGAAATTGAAACCAATCAGTTACAAGATGGCTCGTTAATTGACCTCTGTGGTGCAACATTGTTATGGCGT
ACTGCAGAAGGCCTTTCCCACACTCCTACCGTGAAGCATTTAGAAGCTTTAAGACAGGAAATCAATGCAGCACGA
CCTCAGTGCCCTGTAGGGTTCAACACACTAGCATTTCCTAGTATGAAGAGGAAAGACGTTGTAGATGAAAAACAA
CCATGGGTATATCTAAACTGCGGCCATGTACATGGCTATCATAACTGGGGAAACAAAGAAGAACGTGATGGAAAA
GATCGTGAATGTCCTATGTGTAGGTCTGTTGGTCCCTATGTTCCTCTGTGGCTTGGATGTGAAGCTGGATTTTAT
GTGGACGCCGGCCCTCCAACCCATGCGTTTAGCCCGTGTGGGCATGTGTGTTCAGAAAAGACAACTGCCTATTGG
TCCCAGATCCCACTTCCTCATGGTACTCATACTTTTCATGCAGCCTGTCCCTTTTGTGCACATCAGTTGGCTGGT
GAACAAGGCTACATCAGACTTATTTTTCAAGGACCTCTAGAC**TAA**CAGACCATTGTCTTGCAGGACTACATTATA
AATTTATAAGCTAAGTGAGTTGGGTTTTCGAACCTGTTGTCCACGTCACAGTTTTTCTGCTCTGGTCATTTGCAT
TAAGATGAAGAATTTTTTAAAACATTTATAATAAATAGTAGCAATTTCTGAGCAAAAATCTGGGAAACTCAAGCA
AAGGAATTTCTGAAAGTATCAGTCTTCTGAATTCTGAGTTTTGAAAATATATTTTGAGGAGAAAAAGACATAGTC
TAATTTGATGCCTTCCTTTTAGTGTTTTTGAATCACCTATCCTCAGTGCTGAAATTGTTTTGTATAACTGAGGGT
ACTGTTGGTTCAAACTATGTTAGTTTACAGTTTGTTGCAAACATTGTAAAATACAGCGACATGTATATTAACTTT
TTTCTATTTATCTTTATTATAGAAAATACCTTAGAATGTTCTTGATAGAGTAGCATGGTAACGATGGTGTCACAC
CCTTGGTGTGAATGGTAGCTTAGTGAGCAACCTAGCTCAAGGATTTGCAAAGTTAGGAAGAAGGACGAGAGAGCC
TCTCTCCCCACCCCAATCTAAATATGGAATTTGGTAAATTAGAATACTTTGTAATTTGTAAGACCAAATTCATAC
TAATTACCCGCGTGAAAGGTGTTTGTTTTTAACAACATTGAAGATAATCAGGAAAGATTTTTTCTTAATGTTTCT
CTCGAGCGTAGTACTATAACAAAAACTTAATGCTAAGAAACATTTTATATGCTCCTTTGGATATGCAATTTAATC
TAGATTATCTATTTTTCTCCCATGATAACTAATCTGTTTTTAGTATCAGCAGCATTTGGCAAGTTTATTTTTTGG
ATATAAACTGTGGTTCATCTGTTCACTGTTTCTAGAAAAAAATCATTGCCATAAGAAAAAGTATAAATTAGCAAG
AAAGGAGAGTGACTTGATTTGCTTTTGGAAAAAGAAATGCTTAATTAATTATTCTGTATTTGGCCTTATTCGGGC
ATTAGGAAATCTAGAGATCTAAAGGGTTGAATGACAATAGTGCCCCCGTTTTTAGCAGACCAGCCTTAACTCTGG
GTTTGAATCCTAAGGAGATTGCCACAGTGAGACTTAAGGAAATGTTTGGTTGGCAGATGAGCACCAATGACTGCA
GCGTGGAGTGACGCACTGCATGGTCTGTTTATTCTCTAATTCCAATATGTCTTTTGCTTCCAGAAGCAAGAAAAG
TTTCTTCTCTCCCCTCCTTCCCACCCTTTTTTCAAAGGCACCACAAGTATAGACAGTTGCACTACATCAAATCTT
TTTTTGACACTTGTAGAAACCAGTACACTTTTAGATTAGACAGTATCTTCTTTTAATATTTTGATTTGTTTTCCT
TTAGTTTGAAAAGTTGTATAATACTTAACTGACTGTAGCAAAGTTTTATATGTGGTAGCATACCTTTAATTTATC
CTATTACAAAACTGTTCTGAATTTTCTTTTGGTTTTTAAAAAACAAAACTTGTTGCTTAGAAGCCATGAATTATT
TTATTTTACTTCAACTGTCGAAACTTCCTTGTTTTAAAAAATGATCATTTGGGTTCACTCAGGAAATGCATGTCA
GGAAACTTGTATTATAAGTTTATTAGTTGTGATGTATCAGTAACTGCTGTTACCCCTTTTTCAAAGAAATGTAAT
TGATTTTGAAGTTTTCTAGATTGTCACATGCTTTGTGACTAATGCAAGAAAGCAAGTCCTGTGTTGTATTTGTTC
TAGTCATTTTTATTCAGGCTATATATTGTAGCTTAATTTTTATTTGCAATTAATTTATTTAAACTAAGTAAATAC
TTTTCAAAATA

FIGURE 2107

MFSPDQENHPSKAPVKYGELIVLGYNGSLPNGDRGRRKSRFALFKRPKANGVKPSTVHIACTPQAAKAISNKDQH
SISYTLSRAQTVVVEYTHDSNTDMFQIGRSTESPIDFVVTDTVPGSQSNSDTQSVQSTISRFACRIICERNPPFT
ARIYAAGFDSSKNIFLGEKAAKWKTSDGQMDGLTTNGVLVMHPRNGFTEDSKPGIWREISVCGNVFSLRETRSAQ
QRGKMVEIETNQLQDGSLIDLCGATLLWRTAEGLSHTPTVKHLEALRQEINAARPQCPVGFNTLAFPSMKRKDVV
DEKQPWVYLNCGHVHGYHNWGNKEERDGKDRECPMCRSVGPYVPLWLGCEAGFYVDAGPPTHAFSPCGHVCSEKT
TAYWSQIPLPHGTHTFHAACPFCAHQLAGEQGYIRLIFQGPLD

FIGURE 2108

GTTCGGAGCGGGCGAGCGGAGTTAGCAGGGCTTTACTGCAGAGCGCGCCGGGCACTCCAGCGACCGTGGGGATCA
GCGTAGGTGAGCTGTGGCCTTTTGCGAGGTGCTGCAGCCATAGCTACGTGCGTTCGCTACGAGGATTGAGCGTCT
CCACCCAGTAAGTGGGCAAGAGGCGGCAGGAAGTGGGTACGCAGGGGCGCAAGGCGCACAGCCTCTAGACGACTC
GCTTTCCCTCCGGCCAACCTCTGAAGCCGCGTCCTACTTTGACAGCTGCAGGGCCGCGGCCTGGTCTTCTGTGCT
TCACCATCTACATA**ATG**AATCCCAGTATGAAGCAGAAACAAGAAGAAATCAAAGAGAATATAAAGAATAGTTCTG
TCCCAAGAAGAACTCTGAAGATGATTCAGCCTTCTGCATCTGGATCTCTTGTTGGAAGAGAAAATGAGCTGTCCG
CAGGCTTGTCCAAAAGGAAACATCGGAATGACCACTTAACATCTACAACTTCCAGCCCTGGGGTTATTGTCCCAG
AATCTAGTGAAAATAAAAATCTTGGAGGAGTCACCCAGGAGTCATTTGATCTTATGATTAAAGAAAATCCATCCT
CTCAGTATTGGAAGGAAGTGGCAGAAAAACGGAGAAAGGCGCTGTATGAAGCACTTAAGGAAAATGAGAAACTTC
ATAAAGAAATTGAACAAAAGGACAATGAAATTGCCCGCCTGAAAAAGGAGAATAAAGAACTGGCAGAAGTAGCAG
AACATGTACAGTATATGGCAGAGCTAATAGAGAGACTGAATGGTGAACCTCTGGATAATTTTGAATCACTGGATA
ATCAGGAATTTGATTCTGAAGAAGAAACTGTTGAGGATTCTCTAGTGGAAGACTCAGAAATTGGCACGTGTGCTG
AAGGAACTGTATCTTCCTCTACGGATGCAAAGCCATGTATA**TGA**AATGCATTAATATTTGACTGTTGAGAATTTT
ACTGCCGAAGTTTACCTCCACTAGTTCTTTGTAGCAGAGTACATAACTACATAATGCCAACTCTGGAATCAAATT
TCCTTGTTTGAATCCTGGGACCCTATTGCATTAAAGTACAAATACTATGTATTTTTAATCTATGATGGTTTATGT
GAATAGGATTTTCTCAGTTGTCAGCCATGACTTATGTTTATTACTAAATAAACTTCAAACTCCTGTGGAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2109

MNPSMKQKQEEIKENIKNSSVPRRTLKMIQPSASGSLVGRENELSAGLSKRKHRNDHLTSTTSSPGVIVPESSEN
KNLGGVTQESFDLMIKENPSSQYWKEVAEKRRKALYEALKENEKLHKEIEQKDNEIARLKKENKELAEVAEHVQY
MAELIERLNGEPLDNFESLDNQEFDSEEETVEDSLVEDSEIGTCAEGTVSSSTDAKPCI

FIGURE 2110

GCGGACGCGTGGGCGGACGCGTGGGGAAAGTTACGAGGTTCGTGGCCGCGGTTTCCCCAGGCAGCTGGCGCTGGA
GGCTTCGGCGTCACGTGCTGGTCTGGATTTTTCTCGATGCACTGGGGAAAGCGGTGGACTCTTATCGTGGGAGGG
CTCTTGATCTGTGATTTATAGATAGGCACAGCTACTCCCGTTCGGGAACCCAACGGCAGACAGGTCCTAGTGCCC
ATCAGATACCCGCGGCCGGGACTCGGAGCTGTGGGGTGTGGGGAGGCGGAGGCACCAACTAAGAGCGACCTAGCA
TCGCAAAGCCGCCCTCGGGGCGCTC**ATG**GCGGGACGCCTCCTGGGAAAGGCTTTAGCCGCGGTGTCTCTCTCTCT
GGCCTTGGCCTCTGTGACTATCAGGTCCTCGCGCTGCCGCGGCATCCAGGCGTTCAGAAACTCGTTTTCATCTTC
TTGGTTTCATCTTAATACCAACGTCATGTCTGGTTCTAATGGTTCCAAAGAAAATTCTCACAATAAGGCTCGGAC
GTCTCCTTACCCAGGTTCAAAAGTTGAACGAAGCCAGGTTCCTAATGAGAAAGTGGGCTGGCTTGTTGAGTGGCA
AGACTATAAGCCTGTGGAATACACTGCAGTCTCTGTCTTGGCTGGACCCAGGTGGGCAGATCCTCAGATCAGTGA
AAGTAATTTTTCTCCCAAGTTTAACGAAAAGGATGGGCATGTTGAGAGAAAGAGCAAGAATGGCCTGTATGAGAT
TGAAAATGGAAGACCGAGAAATCCTGCAGGACGGACTGGACTGGTGGGCCGGGGGCTTTTGGGGCGATGGGGCCC
AAATCACGCTGCAGATCCCATTATAACCAGATGGAAAAGGGATAGCAGTGGAAATAAAATCATGCATCCTGTTTC
TGGGAAGCATATCTTACAATTTGTTGCAATAAAAAGGAAAGACTGTGGAGAATGGGCAATCCCAGGGGGGATGGT
GGATCCAGGAGAGAAGATTAGTGCCACACTGAAAAGAGAATTTGGTGAGGAAGCTCTCAACTCCTTACAGAAAAC
CAGTGCTGAGAAGAGAGAAATAGAGGAAAAGTTGCACAAACTCTTCAGCCAAGACCACCTAGTGATATATAAGGG
ATATGTTGATGATCCTCGAAACACTGATAATGCATGGATGGAGACAGAAGCTGTGAACTACCATGACGAAACAGG
TGAGATAATGGATAATCTTATGCTAGAAGCTGGAGATGATGCTGGAAAAGTGAAATGGGTGGACATCAATGATAA
ACTGAAGCTTTATGCCAGTCACTCTCAATTCATCAAACTTGTGGCTGAGAAACGAGATGCACACTGGAGCGAGGA
CTCTGAAGCTGACTGCCATGCGTTG**TAG**CTGATGGTCTCCGTGTAAGCCAAAGGCCCACAGAGGAGCATATACTG
AAAAGAAGGCAGTATCXCAGAATTTATACTATAAAAAGGGCAGGGTAGGCCACTTGGCCTATTTACTTTCAAAAC
AATTTGCATTTAGAGTGTTTCGCATCAGAATAACATGAGTAAGATGAACTGGAACACAAAATTTTCAGCTCTTTG
GTCAAAAGGAATATAAGTAATCATATTTTGTATGTATTCGATTTAAGCATGGCTTAAATTAAATTTAAACAACTA
ATGCTCTTTGAAGAATCATAATCAGAATAAAGATAAATTCTTGATCAGCTATAAAAAAAAAAAAAAAA

FIGURE 2111

MAGRLLGKALAAVSLSLALASVTIRSSRCRGIQAFRNSFSSSWFHLNTNVMSGSNGSKENSHNKARTSPYPGSKV
ERSQVPNEKVGWLVEWQDYKPVEYTAVSVLAGPRWADPQISESNFSPKFNEKDGHVERKSKNGLYEIENGRPRNP
AGRTGLVGRGLLGRWGPNHAADPIITRWKRDSSGNKIMHPVSGKHILQFVAIKRKDCGEWAIPGGMVDPGEKISA
TLKREFGEEALNSLQKTSAEKREIEEKLHKLFSQDHLVIYKGYVDDPRNTDNAWMETEAVNYHDETGEIMDNLML
EAGDDAGKVKWVDINDKLKLYASHSQFIKLVAEKRDAHWSEDSEADCHAL

FIGURE 2112

GGCTGACCCACCTACCCGCGATCCTGCCCATGGCTGACGGGCTCTTTCGGCGCAGACCCTGGGGTCTCGAGCAGA
TTCGCCCGGACCCCGAGTCCGAAGGCCTGTTTGACAAGCCTCCCCCGGAAGACCCTCCCGCTGCCCGCGGGCCCA
GGTCGGCGTCGGCCGCGGGCAAGAAGGCTGGTCGGCGCGCGGGCGGGAGGGCGCAGGGGGGCCGCGCCGGGCAGC
CCCCGAAGGCCGCATCGCACCCCCCGCCCAAGAAGGAGGCGCCTCCACTGGACGAGGGCTGCTATCTCGACCATT
TTCCGCACCTCTCCATCTTCATCTACGCAGCCATCGCCTTCTCCATCACCTCCTGCATCTTTACCTATATCCATT
TACAGCTTGCCTGAGTGGCCAGCGCGGGACGGGGTGGGCGCAGGACCGAGCGGGGAGGGAAAGGGAAAACGGGGC
TCGGCATTTTGTGTTTTAGAACAGCGCTGCACCCCCTTCATGTAGCTTTCGATGCTTGTTTCTTTCCGTCTTTGT
TGTCACTATCTTTGTCTATCAGTACGAAAGTACAAAGTAGCTGCCGGCAATGAAATAGGGGTGCTGTTTGCACCT
GCAGGTTAGGGGTGGAGGCGTTTAGAATTTTGGGGTGTGATTGAGCCCCGTTTATAATTAGA**ATG**CCCCTGGACC
CCTACCACTCTGTGACGTGGGGGCACGCGCAGGGATCCCATCATTTTGTGTTTGGGGAGCTCAGAGTGCGCCCAA
TCTTGGAATCTTTAAGGGATGAGCCAGACCCAGACCCGCGGCCTTCTAGAGAGGGTCCGGCAGGGAGGGTCGGCG
CCCTGGCCCGGGATGGGCCGGAGCCCTGTGATGCTGCATCGCCCCCAGGAGGAGCCAGCTGTGCCCCAGAGTTGG
CGCGGCCGAGAGAGGACAAGAGCGCGCAGCAGGCGAAGCTGGAGGGCGGGACTCGACTTTGTTGTCGCTGCCCGG
AGGAGTCGAGACTGGTACCCGGAGGAGCTGTCTCACCAGGAGACCACGTCCTGGAAGTGTCCGGGACTCGCGGGA
CCTGTGGCTGCAGACCCCGCCGGCACGCAGGCCCAGAGCTGGCGCACTCC**TGA**GGATGAGACTCTGGGGGCCCTA
GCCGGGGTCCACGGGAGGGCTGTCCTTGGGGACTCTAGGATGGCTTCGTTCTGGCCCGGCTCACTTCTGGAGCTG
TGAGACCCAAGACAAAAGGGGCTGAGGGATTTCTCATTGACAAGAGTTCGTGCGGGAAAACCACCTGACCCCTAG
GGATTTGTCATCTTAAGACTCAAAAGGCTTAATACCAGGAACCACCTTGGCAAGATATTTACCCACCGGCCATCT
CTGTTTACTCATGAATGTTAAATGTTAAAACGCAGCGCTCTAACCCTGCATATTATTTACTTGCAAATGTCTGTA
ATCTGTAATTGTGATGCCTCTGATGGAATAAATTATCTTTTTCAGTCTCCTCTAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2113

MPLDPYHSVTWGHAQGSHHFVFGELRVRPILESLRDEPDPDPRPSREGPAGRVGALARDGPEPCDAASPPGGASC
APELARPREDKSAQQAKLEGGTRLCCRCPEESRLVPGGAVSPGDHVLEVSGTRGTCGCRPRRHAGPELAHS

FIGURE 2114

GGCACGAGGCTCACC**ATG**GTGGGCCCCGCGCCGCGGCGGCGGCTGCGGCCGCTGGCAGCGCTGGCCCTGGTCCTG
GCGCTGGCCCCGGGGCTGCCCACAGCCCGGGCCGGGCAGACACCGCGCCCTGCCGAGCGGGGGCCCCCAGTGCGG
CTTTTCACCGAGGAGGAGCTGGCCCGCTATGGCGGGGAGGAGGAAGATCAGCCCATCTACTTGGCAGTGAAGGGA
GTGGTGTTTGATGTCACCTCCGGAAAGGAGTTTTATGGACGAGGAGCCCCCTACAATGCCTTGACGGGGAAGGAC
TCCACTAGAGGGGTAGCCAAGATGTCCTTGGATCCTGCAGACCTCACCCATGACACTACGGGTCTCACGGCCAAG
GAACTGGAGGCCCTGGATGAGGTCTTCACCAAAGTGTACAAAGCCAAATACCCCATCGTCGGCTACACTGCCCGG
AGAATTCTCAATGAGGATGGCAGCCCTAACCTGGACTTCAAGCCTGAAGACCAGCCCCATTTTGACATCAAGGAT
GAGTTC**TGA**TGTTCCCCCTGCAGGAGCAGGTTCTTGGGAGCGTGAGGCAGGAAGACACTAGGTGCTGAATCTCCT
GCAAAACTGGCTGCCTGGAGGCCCTGAGCCACCCAGATCTGAATAAAACAGATGCTTACCCTGGAAGAGCAAATG
CCTCCTGTTGTCTTTGGTCAGGGGTTCTGTCTACCTGGGGACCCCTGTCTGCACACCAGGGATCAATAAGAGCCA
AAGTGGGACACCTCCTAGATGTCAGTATCAGCTGGCTGGGCAGTGGAATTTTGAGCGACCTTTACTTTATACTTT
TCTGTGCTTGACAGATTTTCAGCCATGACCATGTTCACTTTATAATCAAAACAAAAATAAAGGTCCCATTTTTAC
AAAAGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2115

MVGPAPRRRLRPLAALALVLALAPGLPTARAGQTPRPAERGPPVRLFTEEELARYGGEEEDQPIYLAVKGVVFDV
TSGKEFYGRGAPYNALTGKDSTRGVAKMSLDPADLTHDTTGLTAKELEALDEVFTKVYKAKYPIVGYTARRILNE
DGSPNLDFKPEDQPHFDIKDEF

FIGURE 2116

TAAATGGCAGCCAATGGAGGGTGGTGTTGCGCGGGGCTGGGATTAGGGCCGGGGCGAATGGCTGGCAATCTTACT
GGGATTACAGAACAAAGAGCCTCCCCGCGCTCCCGCTCTCCGCTCCTCTCCCCGCGCCGCCCCGCCCTCCGCCGC
AGCCCGCGCCGGGGGTGGGGGCCGCCGAGCGCCAGCCCCCCGGCCGGCCGATTCCCCCCCCGCGCCCCCTCCCCG
CGCCTCCCTCCCCGCCCTCGCCGCGCCGCCGTCCTCGCCTCCCTCTGCCTCTCCTTCCCCCATTCTCCCGGATTA
ATTAAGGAGGCAGCGGCAGGAGGCTGAGTCCTGGCCGCGGGCCGGGGCCGGGGCGCCGCTGGCAGGAGCGCTTGG
GGATCCTCCAAGGCGACC**ATG**GCCTTGCTGGGTAAGCGCTGTGACGTCCCCACCAACGGCTGCGGACCCGACCGC
TGGAACTCCGCGTTCACCCGCAAAGACGAGATCATCACCAGCCTCGTGTCTGCCTTAGACTCCATGTGCTCAGCG
CTGTCCAAACTGAACGCCGAGGTGGCCTGTGTCGCCGTGCACGATGAGAGCGCCTTTGTGGTGGGCACAGAGAAG
GGGAGAATGTTCCTGAATGCCCGGAAGGAGCTACAGTCAGACTTCCTCAGGTTCTGCCGAGGGCCCCCGTGGAAG
GATCCGGAGGCAGAGCACCCCAAGAAGGTGCAGCGGGGCGAGGGTGGAGGCCGTAGCCTCCCTCGGTCCTCCCTG
GAACATGGCTCAGATGTGTACCTTCTGCGGAAGATGGTAGAGGAGGTGTTTGATGTTCTTTATAGCGAGGCCCTG
GGAAGGGCCAGTGTGGTGCCACTGCCCTATGAGAGGCTGCTCAGGGAGCCAGGGCTGCTGGCCGTGCAGGGGCTG
CCCGAAGGCCTGGCCTTCCGAAGGCCAGCCGAGTATGACCCCAAGGCCCTCATGGCCATCCTGGAACACAGCCAC
CGCATCCGCTTCAAGCTCAAGAGGCCACTTGAGGATGGCGGGCGGGACTCGAAGGCCCTGGTGGAGCTGAACGGT
GTCTCCCTGATTCCCAAGGGGTCACGGGACTGTGGCCTGCATGGCCAGGCCCCCAAGGTGCCACCCCAGGACCTG
CCCCCAACCGCCACCTCCTCCTCCATGGCCAGCTTCCTGTACAGCACGGCGCTCCCCAACCACGCCATCCGAGAG
CTCAAGCAGGAAGCACCTTCCTGCCCCCTTGCCCCCAGCGACCTGGGCCTGAGTCGGCCCATGCCAGAGCCCAAG
GCCACCGGTGCCCAAGACTTCTCCGACTGTTGTGGACAGAAGCCCACTGGGCCTGGTGGGCCTCTCATCCAGAAC
GTCCATGCCTCCAAGCGCATTCTCTTCTCCATCGTCCATGACAAGTCAGAGAAGTGGGACGCCTTCATAAAGGAA
ACCGAGGACATCAACACGCTCCGGGAGTGTGTGCAGATCCTGTTTAACAGCAGATATGCGGAAGCCCTGGGCCTG
GACCACATGGTCCCCGTGCCCTACCGGAAGATTGCCTGTGACCCGGAGGCTGTGGAGATCGTGGGCATCCCGGAC
AAGATCCCCTTCAAGCGCCCCTGCACTTATGGAGTCCCCAAGCTGAAGCGGATCCTGGAGGAGCGCCATAGTATC
CACTTCATCATTAAGAGGATGTTTGATGAGCGAATTTTCACAGGGAACAAGTTTACCAAAGACACCACGAAGCTG
GAGCCAGCCAGCCCGCCAGAGGACACCTCTGCAGAGGTCTCTAGGGCCACCGTCCTTGACCTTGCTGGGAATGCT
CGGTCAGACAAGGGCAGCATGTCTGAAGACTGTGGGCCAGGAACCTCCGGGGAGCTGGGCGGGCTGAGGCCGATC
AAAATTGAGCCAGAGGATCTGGACATCATTCAGGTCACCGTCCCAGACCCCTCGCCAACCTCTGAGGAAATGACA
GACTCGATGCCTGGGCACCTGCCATCGGAGGATTCTGGTTATGGGATGGAGATGCTGACAGACAAAGGTCTGAGT
GAGGACGCGCGGCCGGAGGAGAGGCCCGTGGAGGACAGCCACGGTGACGTGATCCGGCCCCTGCGGAAGCAGGTG
GAGCTGCTCTTCAACACACGATACGCCAAGGCCATTGGCATCTCGGAGCCCGTCAAGGTGCCGTACTCCAAGTTT
CTGATGCACCCGGAGGAGCTGTTTGTGGTGGGACTGCCTGAAGGCATCTCCCTCCGCAGGCCCAACTGCTTCGGG
ATCGCCAAGCTCCGGAAGATTCTGGAGGCCAGCAACAGCATCCAGTTTGTCATCAAGAGGCCCGAGCTGCTCACT
GAGGGAGTCAAAGAGCCCATCATGGATAGTCAAGGAACTGCCTCCTCACTTGGCTTCTCTCCCCCTGCCCTGCCC
CCAGAGAGGGATTCCGGGGACCCTCTGGTGGACGAGAGCCTGAAGAGACAGGGCTTTCAAGAAAATTATGACGCG
AGGCTCTCACGGATCGACATCGCCAACACACTAAGGGAGCAGGTCCAGGACCTTTTCAATAAGAAATACGGGGAA
GCCTTGGGCATCAAGTACCCGGTCCAGGTCCCCTACAAGCGGATCAAGAGTAACCCCGGCTCCGTGATCATCGAG
GGGCTGCCCCCAGGAATCCCGTTCCGAAAGCCCTGTACCTTCGGCTCCCAGAACCTGGAGAGGATTCTTGCTGTG
GCTGACAAGATCAAGTTCACAGTCACCAGGCCTTTCCAAGGACTCATCCCAAAGCCTGATGAAGATGACGCCAAC
AGACTCGGGGAGAAGGTGATCCTGCGGGAGCAGGTGAAGGAACTCTTCAACGAGAAATACGGTGAGGCCCTGGGC
CTGAACCGGCCGGTGCTGGTCCCTTATAAACTAATCCGGGACAGCCCAGACGCCGTGGAGGTCACGGGTCTGCCT
GATGACATCCCCTTCCGGAACCCCAACACGTACGACATCCACCGGCTGGAGAAGATCCTGAAGGCCCGAGAGCAT
GTCCGCATGGTCATCATTAACCAGCTCCAACCCTTTGCAGAAATCTGCAATGATGCCAAGGTGCCAGCCAAAGAC
AGCAGCATTCCCAAGCGCAAGAGAAAGCGGGTCTCGGAAGGAAATTCCGTCTCCTCTTCCTCCTCGTCTTCCTCT
TCCTCGTCCTCTAACCCGGATTCAGTGGCATCGGCCAACCAGATCTCACTCGTGCAATGGCCAATGTACATGGTG
GACTATGCCGGCCTGAACGTGCAGCTCCCGGGACCTCTTAATTAC**TAG**ACCTCAGTACTGAATCAGGACCTCACT
CAGAAAGACTAAAGGAAATGTAATTTATGTACAAAATGTATATTCGGATATGTATCGATGCCTTTTAGTTTTTCC
AATGATTTTTACACTATATTCCTGCCACCAAGGCCTTTTTAAATAAGTAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2117

MALLGKRCDVPTNGCGPDRWNSAFTRKDEIITSLVSALDSMCSALSKLNAEVACVAVHDESAFVVGTEKGRMFLN
ARKELQSDFLRFCRGPPWKDPEAEHPKKVQRGEGGGRSLPRSSLEHGSDVYLLRKMVEEVFDVLYSEALGRASVV
PLPYERLLREPGLLAVQGLPEGLAFRRPAEYDPKALMAILEHSHRIRFKLKRPLEDGGRDSKALVELNGVSLIPK
GSRDCGLHGQAPKVPPQDLPPTATSSSMASFLYSTALPNHAIRELKQEAPSCPLAPSDLGLSRPMPEPKATGAQD
FSDCCGQKPTGPGGPLIQNVHASKRILFSIVHDKSEKWDAFIKETEDINTLRECVQILFNSRYAEALGLDHMVPV
PYRKIACDPEAVEIVGIPDKIPFKRPCTYGVPKLKRILEERHSIHFIIKRMFDERIFTGNKFTKDTTKLEPASPP
EDTSAEVSRATVLDLAGNARSDKGSMSEDCGPGTSGELGGLRPIKIEPEDLDIIQVTVPDPSPTSEEMTDSMPGH
LPSEDSGYGMEMLTDKGLSEDARPEERPVEDSHGDVIRPLRKQVELLFNTRYAKAIGISEPVKVPYSKFLMHPEE
LFVVGLPEGISLRRPNCFGIAKLRKILEASNSIQFVIKRPELLTEGVKEPIMDSQGTASSLGFSPPALPPERDSG
DPLVDESLKRQGFQENYDARLSRIDIANTLREQVQDLFNKKYGEALGIKYPVQVPYKRIKSNPGSVIIEGLPPGI
PFRKPCTFGSQNLERILAVADKIKFTVTRPFQGLIPKPDEDDANRLGEKVILREQVKELFNEKYGEALGLNRPVL
VPYKLIRDSPDAVEVTGLPDDIPFRNPNTYDIHRLEKILKAREHVRMVIINQLQPFAEICNDAKVPAKDSSIPKR
KRKRVSEGNSVSSSSSSSSSSSNPDSVASANQISLVQWPMYMVDYAGLNVQLPGPLNY

FIGURE 2118A

ACCGCCTTCGCCGCGGACCTTCAGCTGCCGCGGTCGCTCCGAGCGGCGGGCCGCAGAGGTTCAAGCGATTCTCCT
GCTTCAGCCTCCGGAGTAGCTGGGATTACAGGCACGTGCCAACACACCCAGCCACCAAA**ATG**CCAGAAGAGATGG
ACAAGCCACTGATCAGCCTCCACCTGGTGGACAGCGATAGTAGCCTTGCCAAGGTCCCCGATGAGGCCCCCAAAG
TGGGCATCCTGGGTAGCGGGGACTTTGCCCGCTCCCTGGCCACACGCCTGGTGGGCTCTGGCTTCAAAGTGGTGG
TGGGGAGCCGCAACCCCAAACGCACAGCCAGGCTGTATCCCTCAGCGGCCCAAGTGACTTTCCAAGAGGAGGCAG
TGAGCTCCCCGGAGGTCATCTTTGTGGCTGTGTTCCGGGAGCACTACTCTTCACTGTGCAGTCTCAGTGACCAGC
TGGCGGGCAAGATCCTGGTGGATGTGAGCAACCCTACAGAGCAAGAGCACCTTCAGCATCGTGAGTCCAATGCTG
AGTACCTGGCCTCCCTCTTCCCCACTTGCACAGTGGTCAAGGCCTTCAATGTCATCTCTGCCTGGACCCTGCAGG
CTGGCCCAAGGGATGGTAACAGGCAGGTGCCCATCTGCGGTGACCAGCCAGAAGCCAAGCGTGCTGTCTCGGAGA
TGGCGCTCGCCATGGGCTTCATGCCCGTGGACATGGGATCCCTGGCGTCAGCCTGGGAGGTGGAGGCCATGCCCC
TGCGCCTCCTCCCGGCCTGGAAGGTGCCCACCCTGCTGGCCCTGGGGCTCTTCGTCTGCTTCTATGCCTACAACT
TCGTCCGGGACGTTCTGCAGCCCTATGTGCAGGAAAGCCAGAACAAGTTCTTCAAGCTGCCCGTGTCCGTGGTCA
ACACCACACTGCCGTGCGTGGCCTACGTGCTGCTGTCACTCGTGTACTTGCCCGGCGTGCTGGCGGCTGCCCTGC
AGCTGCGGCGCGGCACCAAGTACCAGCGCTTCCCCGACTGGCTGGACCACTGGCTACAGCACCGCAAGCAGATCG
GGCTGCTCAGCTTCTTCTGCGCCGCCCTGCACGCCCTCTACAGCTTCTGCTTGCCGCTGCGCCGCGCCCACCGCT
ACGACCTGGTCAACCTGGCAGTCAAGCAGGTCTTGGCCAACAAGAGCCACCTCTGGGTGGAGGAGGAGGTCTGGC
GGATGGAGATCTACCTCTCCCTGGGAGTGCTGGCCCTCGGCACGTTGTCCCTGCTGGCCGTGACCTCACTGCCGT
CCATTGCAAACTCGCTCAACTGGAGGGAGTTCAGCTTCGTTCAGTCCTCACTGGGCTTTGTGGCCCTCGTGCTGA
GCACACTGCACACGCTCACCTACGGCTGGACCCGCGCCTTCGAGGAGAGCCGCTACAAGTTCTACCTGCCTCCCA
CCTTCACGCTCACGCTGCTGGTGCCCTGCGTCGTCATCCTGGCCAAAGCCCTGTTTCTCCTGCCCTGCATCAGCC
GCAGACTCGCCAGGATCCGGAGAGGCTGGGAGAGGGAGAGCACCATCAAGTTCACGCTGCCCACAGACCACGCCC
TGGCCGAGAAGACGAGCCACGTA**TGA**GGTGCCTGCCCTGGGCTCTGGACCCCGGGCACACGAGGGACGGTGCCCT
GAGCCCGTTAGGTTTTCTTTTCTTGGTGGTGCAAAGTGGTATAACTGTGTGCAAATAGGAGGTTTGAGGTCCAAA
TTCCTGGGACTCAAATGTATGCAGTACTATTCAGAATGATATACACACATATGTGTATATGTATTTACATATATT
CCACATATATAACAGGATTTGCAATTATACATAGCTAGCTAAAAAGTTGGGTCTCTGAGATTTCAACTTGTAGAT
TTAAAAACAAGTGCCGTACGTTAAGAGAAGAGCAGATCATGCTATTGTGACATTTGCAGAGATATACACACACTT
TTTGTACAGAAGAGGCTTGTGCTGTGGTGGGTTCGATTTATCCCTGCCCACCCCATCCCCACAACTTCCCTTTTG
CTACTTCCCCAAGGCTCTTGCAGAGCTAGGGCTCTGAAGGGGAGGGAAGGCAACGGCTCTGCCCAGAGCCATCCC
TGGAGCATGTGAGCAGCGGCTGGTCTCTTCCCTCCACCTGGGGCAGCAGCAGGAGGCCTGGGGGGGAGGAAAATC
AGGCAGTCGGCCTGGAGTCTGTGCCTGGTCCTTTGCCCGGTGGTGGGAGGATGGAGGGATTGGGCTGAAGCTGCT
CCACCTCATCCTTGCTGAGTGGGGGAGACATTTTCCCTGAAAGTCAGAAGTCACCATAGAGCCTGCAAATGGATC
CTCCTGTGAGAGTGACGTCACCTCCTTTCCAGAGCCATTAGTGAGCCTGGCTTGGGAACAAGTGTAATTTCCTTC
CCTCCTTTAACCTGGCGATGAGCGTCCTTTAAACCACTGTGCCTTCTCACCCTTTCCATCTTCAGTTTGAACGAC
TCCCAGGAAGGCCTAGAGCAGACCCTTTAGAAATCAGCCCAAGGGGGAGAGCAAGAGAAAACACTCTAGGGAGTA
AAGCTCCCCGGGCGTCAGAGTTGAGCCCTGCCTGGGCTGAAGGACTGTCTTCACGAAGTCAGTCCTGAGGAAAAA
TATTGGGGACTCCAAATGTCCTCTGGCAGAGGACCCAGAAAACCACACTGGCTCCAACTTCCTCCTCATGGGGCA
TTACACTTCAAAACAGTGGGGAGCAACTTTTCCACCAAAGCTACAAACCTAAAATGCTGCTGCCCCAAAGCACAA
GAGGGAAGAGCACCGCCGGGGCCACAGGACGTCTGTCCTCCAGTCACAGGCCATCCTTGCTGCTCCCTACTGACT
CTAGCTTACTTCCCCTGTGAAGAAACAGGTGTTCTCGGCTGAGCCCCCAACCCTCTGCAGAACCAGGTTGATCTG
CCACAGAAAAAGCATCTTTGAAGACAAAGAGGGTGAGGTCTTCATGAGTCTCCTGGGCCCAAAGCCATCTTCTGA
TGGAAGGAAGAGAGTAGGGCCAGTGAAGGCTGCCCAGAGAGAATGTCACAGATGAGGCTGCCCCTGCCCCCTCCC
CGCCAGGGAGGTTTCATGAGCTCATGTCTATGCAGCACATAAGGGTTCTTCAGTGAAAAGCAGGAGAAGAGCCCA
CTGCAAGGATAGCTCATTAGGCACATGACCGATGCAGGGAAGGCCATGCCGGGGAAGCTCTTCCTGCAGGTATTT
TCCATCTGCTGTGCCAAGGCTGAGCGGCAGAAACTTGTCTCATAAATTGGCACTGATGGAGCATCAGCTGTGGCC
CACAGAGAGCCTTGCTGAGAAGGGGGCAGGTAAAGCAGAGATTTTAGCATTGCCTTGGCATAACAAGGGCCCATC
GATTCCCTACTAATGAGAGGCAGGGAGAGCATGGGCAATGGAGACCCACCAATGATCCCCAACCCCGGTGGGTAC
TGGCTGCCTGCCCTGGGCCAGGGAATGGCTCCTTATACCAAAGATGCTGGCACATAGCAGAACCCAGTGCACGTC
CTCCCCTTCCCACCCACCTCTGGCTGAAGGTGCTCAAGAGGGAAGCAATTATAAGGTGGGTGGCAGGAGGGAACA

FIGURE 2118B

GGTGCCACCTGCTGGACAATCACACGAAAGGCAGGCGGGCTGTGTACTGGGCCCTGACTGTGCGTCCACTGCTGT
CTTCCCTACCTCACCAGGCTACTGGCAGCAGCATCCCGAGAGCACATCATCTCCACAGCCTGGTAAATTCCATGT
GCCTCTGGGTACAAAAGTGCCTCAACGACATGCTCTGGAAATCCCAAATGCCACAGTCTGAGGTTGATATCTAAA
ATCTATGCCTTCAAAAGAGTCTCTGTTTTTTTTTTTTAACCTGGTAGACGGTATAAAAGCAGTGCAAATAAACAC
CTAACCTTCTGC

FIGURE 2119

MPEEMDKPLISLHLVDSDSSLAKVPDEAPKVGILGSGDFARSLATRLVGSGFKVVVGSRNPKRTARLYPSAAQVT
FQEEAVSSPEVIFVAVFREHYSSLCSLSDQLAGKILVDVSNPTEQEHLQHRESNAEYLASLFPTCTVVKAFNVIS
AWTLQAGPRDGNRQVPICGDQPEAKRAVSEMALAMGFMPVDMGSLASAWEVEAMPLRLLPAWKVPTLLALGLFVC
FYAYNFVRDVLQPYVQESQNKFFKLPVSVVNTTLPCVAYVLLSLVYLPGVLAAALQLRRGTKYQRFPDWLDHWLQ
HRKQIGLLSFFCAALHALYSFCLPLRRAHRYDLVNLAVKQVLANKSHLWVEEEVWRMEIYLSLGVLALGTLSLLA
VTSLPSIANSLNWREFSFVQSSLGFVALVLSTLHTLTYGWTRAFEESRYKFYLPPTFTLTLLVPCVVILAKALFL
LPCISRRLARIRRGWERESTIKFTLPTDHALAEKTSHV

FIGURE 2120

GACAGCAAATACTTCCGTAAAACAGACCATCAAGCTTTCCACTTAGAGCCCAGTGTGGCCCCAATACCTTTCCTT
GTCGCTCCTGCGTGCCAGTCCGCCTCCGCGTGGTCCGGCCGCTGCGCCACGCCCCCGCTCGCCCCGCCCCTGGAT
TTGCTCCCTCAAAGCTGAAGTGAGGCCGGGCTGAGGCTCTTACAGTGGTCCCTGCTGGCCCTTGGTGACGGGTCG
CCTCAGTTCCGACCCGGACCCGTACGCTGCTGCGCTGACGTGGCTCCCGGAAGTAGGGCTGGCGTAGGGCCGCC**A**
TGTTGCAGCAGGATAGTAATGATGACACTGAAGATGTTTCACTGTTTGATGCGGAAGAGGAGACGACTAATAGAC
CAAGAAAAGCCAAAATCAGACATCCAGTAGCATCGTTTTTCCACTTATTCTTTCGAGTCAGTGCAATCATCGTCT
ATCTTCTCTGTGAGTTGCTCAGCAGCAGCTTTATTACCTGTATGGTGACAATTATCTTGTTGTTGTCGTGTGACT
TTTGGGCAGTGAAGAATGTCACAGGTAGACTAATGGTTGGCCTACGTTGGTGGAATCACATTGATGAAGATGGAA
AGAGCCATTGGGTGTTTGAATCTAGAAAGGAGTCCTCTCAAGAGAATAAAACTGTGTCAGAGGCTGAATCAAGAA
TCTTTTGGTTGGGACTTATTGCCTGTCCAGTACTGTGGGTGATATTTGCCTTTAGTGCACTCTTCTCCTTCAGAG
TAAAGTGGTTGGCGGTGGTTATCATGGGTGTGGTGCTACAAGGTGCCAACCTGTATGGTTACATCAGGTGTAAGG
TGCGCAAGAAAAGCATT**TAA**CCAGCATGGCTACTTCATATTTTGGAAAGCAGTTTTTAAGACAAAACACTGGAGA
TGATCAGACTTCCTGAATAGAGAAAGCTTATGTGCTTTGTTACATTGGGGAACAACTGAAGAGATTCTTGACTCA
ACCTTTTAGAGCTTAGTCCATGTTGCAACGAGGAGTGTTGGCTTTGTTTTTCCACTTAAAAACTTTATTTATAAA
AAGGAAAAGTAGTTTTCATATTAAGTTTTTATTTCCTTTCCAGCAGTTGGGGCTAGAAAGTATGTGTTGGCACTA
GAAACATTGTCAAGATTTGTTCTGTGGTGTAGGTATGCACATTCCATAGGTATGCACACGGCCATGTAATATCAG
TATATCCCAAGTTAATGAAAGTGTTCATTTACATAGGTAATGGAGACCTTTGCATTTTGATCCATAGAACATAGG
AGGATGTTCTTAGTCTGTCTCAAAGCTCTATATGTTTACATATTATTTCTGTAGGATTGTTTTCAGGAGAAAGTT
TTGCTTCTATGGGTAAGGAGTGAGGCACTTTGGGCTTATGTATAAGTTAGAAATAATTGTTAGTTTTTAATATGC
ACTTCGTGGGGAAATTTCTTAGACGTATGCAAGCAAGTGAAAACAATTAGGGCCAGTGGTATTAACTACTTTATA
AAATTTTATTTTTGTTTGTAAGAAGTCATCTACTTAAGGCCCAGTTAATATAAGTGGAATCATCATAGTTTAAGG
AATACCCAGAGATTGCTGCTGTTCTATTTATTTTACAGAAAGGGTAGCTAGATTGAAAGCTCTTCAGTGGACCTT
GAGCTAATAGATCTTTTACCACTAAAAGAGCATTATTCTCATGTCATAATGAGAATAATAATTTACATACTTGGC
ATAATAAATGCCTAAAAGACATTTTATTTTCTGAATCTATTTTTTTCTTGCTATAATGGGGATATTGTAAATTAT
GCATTTGTATTAATGGTATTTCTTAAAGCAATCTATGTAACTGTAAATTAAACCAATCTACAAACTATTGTAGGC
ATCTGTAAATTCTGTTGTAGGTATTATAAACTTTGTTGAAGTCTTAATCAGCAGATTATGTTGTGAATATATTTG
TACATTGTTAAAATAGTTTTTAAGATTATTTGTTTAATTGAATAAGTGTCTTATTGGAGTGATAGCTTTGAAGGT
GCAAAACTTTATATTTGTATAAAATTCTACTATTTACAAGGCAAA

FIGURE 2121

MLQQDSNDDTEDVSLFDAEEETTNRPRKAKIRHPVASFFHLFFRVSAIIVYLLCELLSSSFITCMVTIILLLSCD
FWAVKNVTGRLMVGLRWWNHIDEDGKSHWVFESRKESSQENKTVSEAESRIFWLGLIACPVLWVIFAFSALFSFR
VKWLAVVIMGVVLQGANLYGYIRCKVRKKSI

FIGURE 2122

ACGGTGGAGCGGTGGAGGGCGTCACTGGGTTTCGGCGTCTGGCAAGCGGTTCAGCTGTCTGCTCCCTAGCAGCCG
GCCTTCGGGTCGGGCGTCTCCGCGGCTACTGCCGCTTCAGTTCTCCCGGTGTGGCCACGAGTCGGGTTGCACTGC
TGTGATCCATCCTCATCTCCTAAAG**ATG**CATCCTGACTTATCTCCACACTTGCACACTGAAGAATGCAACGTCTT
GATTAACTTGCTTAAGGAATGTCACAAAAATCACAACATTCTGAAATTTTTTGGTTATTGTAATGATGTTGATCG
GGAGTTGAGAAAATGCCTGAAGAATGAGTACGTAGAAAACAGGACCAAGAGCAGGGAGCATGGCATTGCAATGCG
AAAGAAACTTTTTAATCCTCCAGAGGAATCCGAAAAA**TAA**ATTGTATTTTCACTCGATGCCTTGGCTGAGAGAAG
ACCTAAAGACTCTGGGTTGATACCTGAAAGAATCCTGTCTTATTTGGTCTCCATAATCCTTTGAATGGAAAGTGA
CCTGTGAGAGATTGAACCATGGAGAAATATGAAAACCCTGGATTCTGAGTATTTGTTGGGCAGGGCGTTTAGTAC
TGTCTCCCCTTTACCAGCAAACCTGACTTCACCATGTTTATTCCCTTTGCCTACAACCAGTTAATATCTGAGTAA
CTTATCTCCTTCAATAAAATAATTTAAATAAAAAAAAAAAA

FIGURE 2123

MHPDLSPHLHTEECNVLINLLKECHKNHNILKFFGYCNDVDRELRKCLKNEYVENRTKSREHGIAMRKKLFNPPE
ESEK

FIGURE 2124

TAGCCCCGCCTCTCGCCTCGCCGCCTCGCCGTCCCGCCGCCTTGCCGCCCTGCCACCCTGCCGCCCTGCCGCCCT
GCCGCCCTGCCGCCCTGCCGCCCTGCCGCCCTGCCGCCCTGCCGCCGGTGGTCGCTGCCCGTGGTGCTCCGTCGCCCCCGCCA
CCTCACGTCCTCCCGTGCGTCGGGAGCGTCTCGGCTACAAC**ATG**TTGGGCATGATCAAGAACTCGCTGTTCGGAA
GCGTAGAGACGTGGCCTTGGCAGGTCCTAAGCAAAGGGGACAAGGAAGAAGTTGCCTATGAAGAAAGGGCCTGTG
AAGGCGGCAAATTTGCCACAGTAGAAGTGACAGATAAGCCTGTGGATGAGGCTCTACGGGAAGCAATGCCCAAGG
TCGCAAAGTATGCGGGGGGCACCAATGACAAGGGAATTGGGATGGGGATGACAGTCCCTATTTCCTTTGCTGTGT
TCCCCAATGAAGATGGCTCTCTGCAGAAGAAATTAAAAGTCTGGTTCCGGATTCCAAACCAATTTCAAAGCGACC
CACCAGCTCCCAGTGACAAAAGCGTTAAGATTGAGGAACGGGAAGGCATCACTGTCTATTCCATGCAGTTTGGTG
GTTATGCCAAGGAAGCAGACTACGTAGCACAAGCCACCCGTCTGCGTGCTGCCCTGGAGGGCACAGCCACCTACC
GGGGGGACATCTACTTCTGCACGGGTTATGACCCTCCCATGAAGCCCTACGGACGGCGCAATGAGATCTGGCTGT
TGAAGACA**TGA**GTGACCCACTGAACCAAGAACTTACTGGAAGTGTGCCTCTGTGTCTCCTTCCTCGGGGGTAAGG
AGGGGACAGTGCTTCCCAAGTTCCAGCTGCAAGTCCAACTTAACCAACTTTCCTTCAAAGTCAGTTACTGCCAAT
TTTCTGAAAAAAGCATGTTCCATATACTAAGTCTCTTTTCTCACGGTAGGAAATAATACAGCCAAGATATGCAGC
ATCCTTCTCATTGATGTAGAAAATTCTGCGATAGACCAGAAAAATCCTGGCAGCTTTTCTCCAGGCATCTGGGTC
ACTAAAAACTGATTTTCTAAAATTATTGGATTTGTATTTTGTTATTAAGGGGGAAAATGTGATTTGTGCCTGATC
TTTCATCTGTGATTCTTATAAGAGCTTTGTCTTCAGAAAAACTAAAAATAAAAGGCATTGACTTAAACAGCTGA

FIGURE 2125

MLGMIKNSLFGSVETWPWQVLSKGDKEEVAYEERACEGGKFATVEVTDKPVDEALREAMPKVAKYAGGTNDKGIG
MGMTVPISFAVFPNEDGSLQKKLKVWFRIPNQFQSDPPAPSDKSVKIEEREGITVYSMQFGGYAKEADYVAQATR
LRAALEGTATYRGDIYFCTGYDPPMKPYGRRNEIWLLKT

FIGURE 2126

AATAACCTGGAGCCGGCGGCGTAGGTTGGCTCTTTAGGGCTTCACCCCGAAGCTCCACCTTCGCTCCCGTCTTTC
TGGAAACACCGCTTTGATCTCGGCGGTGCGGGACAGGTACCTCCCGGCTGCTGCGGGTGCCCTGGATCCAGTCGG
CTGCACCAGGCGAGCGAGACCCTTCCCTGGTGGAGGCTCAGAGTTCCGGCAGGGTGCATCCGGCCTGTGTGTGGC
GCGAGGCAGGGAAGCCGGTACCCGGGTCCTGGCCCCAGCGCTGACGTTTTCTCTCCCCTTTCTTCTCTCTTCGCG
GTTGCGGCGTCGCAGACGCTAGTGTGAGCCCCC**ATG**GCAGATACGACCCCGAGCGGCCCCCAAGGGGCGGGCGCT
GTGCAATTCATGATGACCAATAAACTGGACACGGCAATGTGGCTTTCTCGCTTGTTCACAGTTTACTGCTCTGCT
CTGTTTGTTCTGCCTCTTCTTGGGTTGCATGAAGCAGCAAGCTTTTACCAACGTGCTTTGCTGGCAAATGCTCTT
ACCAGTGCTCTGAGGCTGCATCAAAGATTACCACACTTCCAGTTAAGCAGAGCATTCCTGGCCCAGGCTTTGTTA
GAGGACAGCTGCCACTACCTGTTGTATTCACTCATCTTTGTAAATTCCTATCCAGTTACAATGAGTATCTTCCCA
GTCTTGTTATTCTCTTTGCTTCATGCTGCCACATATACGAAAAAGGTCCTTGACGCAAGGGGCTCAAATAGTTTA
CCTCTGCTGAGATCTGTCTTGGACAAATTAAGTGCTAATCAACAAAATATTCTGAAATTCATTGCTTGCAATGAA
ATATTCCTGATGCCTGCGACAGTTTTTATGCTTTTTAGTGGTCAAGGAAGTTTGCTCCAACCTTTTATATACTAT
AGATTTCTTACCCTTCGATATTCGTCTCGAAGAAACCCATATTGTCGGACCTTATTTAATGAACTGAGGATTGTT
GTTGAACACATAATAATGAAACCTGCTTGCCCACTGTTTGTGAGAAGACTTTGTCTCCAGAGCATTGCCTTTATA
AGCAGATTGGCACCAACAGTTCCA**TAG**TTTAACATCTAGTTAAGCTACAAATATAGTATAAGCATTATTAGCAGC
TGGTACTTCTGCTAGGGGTTGTAAATTCCAGGTGTTACACTGACCTCAATCCAATTTACATAATTTACATAAATG
CATCTCGGTGGAAAAATAATCATTTTCTTGGCATGTTAAATCAAGCTTAAAAAGTTTTGAGAAAATTTTACTGTG
CTGTGTTGCTAATGGTTAAAGAAGTCTGTATCTAGTGATAAATATACCAGTTTTTTTAAAAAGATGCTGTTGTGC
CTATATCATGAAGTACATTAATTTCTCATGTAAAAAAAATAGCTCTAAAATTTGTTTCAACCTAATTGGTAACCT
GAGTTTATATCTGGCATGAATTCATTATGGTGATACACATATGTGAATTCAGTACATTTTGAGACAGTATTCTAC
CATTCAGTAATTTTGGTTAATGATTTTAACACTTCTCAGTGTATTTAATTTCAAATTGTTTTTTTAATTGGTTTT
ATGCTGCTTTGTTAGGACAGATGTGTTTTGAATGTACCATTATAAGAAGAATTCTATGTATCTTAAACTATGATC
TTCTAAAATTTTATTTCCGTAAGTACTTCTGTGGCCTTGAGTATTTTTTAAAAGGCTCAACTGTAAGCCTCTTAG
CCAGTTGGATAAATATTTGGGGTCACCTAGCCATTGAAAGCAGAAAGCAGTAGTGACACAGCTTTCCCTTCAAAG
AGCCATTGAGAAACATTTCTCAAACAGGAAATCCTTCTTTTACTAATGTGGACATATAGATTATTCGTATTATAG
TTTGTAGAACTACCTAGTTCAGAATCTTGACTGCCAGTTTTCTTGGTTTCTTAGGCTTGAATTTTCATAGACAAT
TGCAACAGTTTAGATGCCTTTTGAAAGGAATGTAATGAAGATTCAGCATCTGACTATATGTGTGTCTATCCTGAA
ATAATAATGGAGAGTATACTGTAGATTACATGTTTACCCATCAAATCTGACTTAAAAGGTTAAATGGAAGGTTTT
ATAGGTAAGGTAATTGATTGGGAATGGGGTAGGGGGAGGAGTTGTGGGGGAATAATGTGCATTTCAGTCTCAACG
CATAGATAAATTTAGGGGAATTGGATGCATTATTCAACTTTGATTTGGGTTGTAAAATGTGTTAAATCCTGTTCA
TTGAACTCCCATCAACTCTTATGAAATTCATGCTGATCTTCATTACCGTTGCATGATTGGAAATGTTTAAAACAT
TGTACAGTTTTAGTATAGAGAAATGTAATGGTTTTTGTGACCAGTTTCTGTCTGCATGTAATTTGGATTTCTCAA
ATACATTCATTAGTAATTTATCAGTAACATTAGTTTTATTTTTGTTCATCTCCTTATCTATAAAAAGGGGATATT
CTTAGGATAAATACATGAAAAATTATACTTGATAGCTTAACTATAATCAGCTATTTTTGTATTTTTGTAATATTT
GTCCACTAAGCTGGAGAAGCAGCCTCATACAGTTGATTTTGTGTATGTGGCTAGTCTTATTGTCACTATGTAAGT
AATCCAATGGTTTTAGAAACTAAACTTTCTAGAGCAATAAAATGACTATAATGTTAAGT

FIGURE 2127

MADTTPSGPQGAGAVQFMMTNKLDTAMWLSRLFTVYCSALFVLPLLGLHEAASFYQRALLANALTSALRLHQRLP
HFQLSRAFLAQALLEDSCHYLLYSLIFVNSYPVTMSIFPVLLFSLLHAATYTKKVLDARGSNSLPLLRSVLDKLS
ANQQNILKFIACNEIFLMPATVFMLFSGQGSLLQPFIYYRFLTLRYSSRRNPYCRTLFNELRIVVEHIIMKPACP
LFVRRLCLQSIAFISRLAPTVP

FIGURE 2128

ATAATAATTAGGCCAAGCGTTGAATAGTACGGGGGGGGGGGGGGGGCGAGCCCCGGCGGCTCTGGCCGCGGCCGC
ACTCAGCGCCACGCGTCGAAAGCGCAGGCCCCGAGGACCCGCCGCACTGACAGT**ATG**AGCCGCACAGCCTACACG
GTGGGAGCCCTGCTTCTCCTCTTGGGGACCCTGCTGCCGGCTGCTGAAGGGAAAAAGAAAGGGTCCCAAGGTGCC
ATCCCCCCGCCAGACAAGGCCCAGCACAATGACTCAGAGCAGACTCAGTCGCCCCAGCAGCCTGGCTCCAGGAAC
CGGGGGCGGGGCCAAGGGCGGGGCACTGCCATGCCCGGGGAGGAGGTGCTGGAGTCCAGCCAAGAGGCCCTGCAT
GTGACGGAGCGCAAATACCTGAAGCGAGACTGGTGCAAAACCCAGCCGCTTAAGCAGACCATCCACGAGGAAGGC
TGCAACAGTCGCACCATCATCAACCGCTTCTGTTACGGCCAGTGCAACTCTTTCTACATCCCCAGGCACATCCGG
AAGGAGGAAGGTTCCTTTCAGTCCTGCTCCTTCTGCAAGCCCAAGAAATTCACTACCATGATGGTCACACTCAAC
TGCCCTGAACTACAGCCACCTACCAAGAAGAAGAGAGTCACACGTGTGAAGCAGTGTCGTTGCATATCCATCGAT
TTGGAT**TAA**GCCAAATCCAGGTGCACCCAGCATGTCCTAGGAATGCAGACCCAGGAAGTCCCAGACCTAAAACAA
CCAGATTCTTACTTGGCTTAAACCTAGAGGCCAGAAGAACCCCCAGCTGCCTCCTGGCAGGAGCCTGCTTGTGCG
TAGTTCGTGTGCATGAGTGTGGATGGGTGCCTGTGGGTGTTTTTAGACACCAGAGAAAACACAGTCTCTGCTAGA
GAGCACTTCCTATTTTGTAAACCTATCTGCTTTAATGGGGATGTACCAGAAACCCACCTCACCCCGGCTCACATC
TAAAGGGGCGGGGCCGTGGTCTGGTTCTGACTTTGTGTTTTTGTGCCCTCCTGGGGACCAGAATCTCCTTTCGGA
ATGAATGTTCATGGAAGAGGCTCCTCTGAGGGCAAGAGACCTGTTTTAGTGCTGCATTCGACATGGAAAAGTCCT
TTTAACCTGTGCTTGCATCCTCCTTTCCTCCTCCTCCTCACAATCCATCTCTTCTTAAGTTGACAGTGACTATGT
CAGTCTAATCTCTTGTTTGCCAGGGTTCCTAAATTAATTCACTTAACCATGATGCAAATGTTTTTCATTTGGTGA
AGACCTCCAGACTCTGGGAGAGGCTGGTGTGGGCAAGGACAAGCAGGATAGTGGAGTGAGAAAGGGAGGGTGGAG
GGTGAGGCCAAATCAGGTCCAGCAAAAGTCAGTAGGGACATTGCAGAAGCTTGAAAGGCCAATACCAGAACACAG
GCTGATGCTTCTGAGAAAGTCTTTTCCTAGTATTTAACAAAACCCAAGTGAACAGAGGAGAAATGAGATTGCCAG
AAAGTGATTAACTTTGGCCGTTGCAATCTGCTCAAACCTAACACCAAACTGAAAACATAAATACTGACCACTCCT
ATGTTCGGACCCAAGCAAGTTAGCTAAACCAAACCAACTCCTCTGCTTTGTCCCTCAGGTGGAAAAGAGAGGTAG
TTTAGAACTCTCTGCATAGGGGTGGGAATTAATCAAAAACCTCAGAGGCTGAAATTCCTAATACCTTTCCTTTAT
CGTGGTTATAGTCAGCTCATTTCCATTCCACTATTTCCCATAATGCTTCTGAGAGCCACTAACTTGATTGATAAA
GATCCTGCCTCTGCTGAGTGTACCTGACAGTAGTCTAAGATGAGAGAGTTTAGGGACTACTCTGTTTTAACAAGA
AATATTTTGGGGGTCTTTTTGTTTTAACTATTGTCAGGAGATTGGGCTAAAGAGAAGACGACGAGAGTAAGGAAA
TAAAGGGAATTGCCTCTGGCTAGAGAGTAGTTAGGTGTTAATACCTGGTAGAGATGTAAGGGATATGACCTCCCT
TTCTTTATGTGCTCACTTGAGGATCTGAGGGGACCCTGTTAGGAGAGCATAGCATCATGATGTATTAGCTGTTCA
TCTGCTACTGGTTGGATGGACATAACTATTGTAACTATTCAGTATTTACTGGTAGGCACTGTCCTCTGATTAAAC
TTGGCCTACTGGCAATGGCTACTTAGGATTGATCTAAGGGCCAAAGTGCAGGGTGGGTGAACTTTATTGTACTTT
GGATTTGGTTAACCTGTTTTCCTCAAGCCTGAGGTTTTATATACAAACTCCCTGAATACTCTTTTTGCCTTGTTA
CTTCTCAGCCTCCTAGCCAAGTCCTATGTAATATGGAAAACAAACACTGCAGACTTGAGATTCAGTTGCCGATCA
AGGCTCTGGCATTCAGAGAACCCTTGCAACTCGAGAAGCTGTTTTTGATTTCGTTTTTGTTTTGAACCGGTGCTC
TCCCATCTAACAACTAACAAGGACCATTTCCAGGCGGGAGATATTTTAAACACCCAAAATGTTGGGTCTGATTTC
CAAACTTTTAAACTCACTACTGATGATTCTCACGCTAGGCGAATTTGTCCAAACACATAGTGTGTGTGTTTTGTA
TACACTGTATGACCCCACCCCAAATCTTTGTATTGTCCACATTCTCCAACAATAAAGCACAGAGTGGATTTAATT
AAGCACACAAATGCTAAGGCAGAATTTTGAGGGTGGGAGAGAAGAAAAGGGAAAGAAGCTGAAAATGTAAAACCA
CACCAGGGAGGAAAAATGACATTCAGAACCACCAAACACTGAATTTCTCTTGTTGTTTTAACTCTCCCACAAGAA
TGCAATTTCGTTAATGGAGATGACTTAAGTTGGCAGCAGTAATCTTCTTTTAGGAGCTTGTACCACAGTCTTGCA
CATAAGTGCAGATTTGCCCCAAGTAAAGAGAATTTCCTCAACACTAACTTCACGGGGATAATCACCACGTAACTA
CCCTTAAAGCATATCACTAGCCAAAGAGGGGAATATCTGTTCTTCTTACTGTGCCTATATTAAGACTAGTACAAA
TGTGGTGTGTCTTCCAACTTTCATTGAAAATGCCATATCTATACCATATTTTATTCGAGTCACTGATGATGTAAT
GATATATTTTTTCATTATTATAGTAGAATATTTTTATGGCAAGAGATTTGTGGTCTTGATCATACCTATTAAAAT
AATGCCAAACACCAAATATGAATTTTATGATGTACACTTTGTGCTTGGCATTAAAAGAAAAAAACACACACGCC

FIGURE 2129

MSRTAYTVGALLLLLGTLLPAAEGKKKGSQGAIPPPDKAQHNDSEQTQSPQQPGSRNRGRGQGRGTAMPGEEVLE
SSQEALHVTERKYLKRDWCKTQPLKQTIHEEGCNSRTIINRFCYGQCNSFYIPRHIRKEEGSFQSCSFCKPKKFT
TMMVTLNCPELQPPTKKKRVTRVKQCRCISIDLD

FIGURE 2130A

GCGGCCGCACTCAGCGCCACGCGTCGAAAGCGCAGGCCCCGAGGACCCGCCGCACTGACAGT**ATG**AGCCGCACAG
CCTACACGGTGGGAGCCCTGCTTCTCCTCTTGGGGACCCTGCTGCCGGCTGCTGAAGGGAAAAAGAAAGGGTCCC
AAGGTGCCATCCCCCCGCCAGACAAGGCCCAGCACAATGACTCAGAGCAGACTCAGTCGCCCCAGCAGCCTGGCT
CCAGGAACCGGGGGCGGGGCCAAGGGCGGGGCACTGCCATGCCCGGGGAGGAGGTGCTGGAGTCCAGCCAAGAGG
CCCTGCATGTGACGGAGCGCAAATACCTGAAGCGAGACTGGTGCAAAACCCAGCCGCTTAAGCAGACCATCCACG
AGGAAGGCTGCAACAGTCGCACCATCATCAACCGCTTCTGTTACGGCCAGTGCAACTCTTTCTACATCCCCAGGC
ACATCCGGAAGGAGGAAGGTTCCTTTCAGTCCTGCTCCTTCTGCAAGCCCAAGAAATTCACTACCATGATGGTCA
CACTCAACTGCCCTGAACTACAGCCACCTACCAAGAAGAAGAGAGTCACACGTGTGAAGCAGTGTCGTTGCATAT
CCATCGATTTGGAT**TAA**GCCAAATCCAGGTGCACCCAGCATGTCCTAGGAATGCAGCCCCAGGAAGTCCCAGACC
TAAAACAACCAGATTCTTACTTGGCTTAAACCTAGAGGCCAGAAGAACCCCCAGCTGCCTCCTGGCAGGAGCCTG
CTTGTGCGTAGTTCGTGTGCATGAGTGTGGATGGGTGCCTGTGGGTGTTTTTAGACACCAGAGAAAACACAGTCT
CTGCTAGAGAGCACTCCCTATTTTGTAAACATATCTGCTTTAATGGGGATGTACCAGAAACCCACCTCACCCCGG
CTCACATCTAAAGGGGCGGGGCCGTGGTCTGGTTCTGACTTTGTGTTTTTGTGCCCTCCTGGGGACCAGAATCTC
CTTTCGGAATGAATGTTCATGGAAGAGGCTCCTCTGAGGGCAAGAGACCTGTTTTAGTGCTGCATTCGACATGGA
AAAGTCCTTTTAACCTGTGCTTGCATCCTCCTTTCCTCCTCCTCCTCACAATCCATCTCTTCTTAAGTTGATAGT
GACTATGTCAGTCTAATCTCTTGTTTGCCAAGGTTCCTAAATTAATTCACTTAACCATGATGCAAATGTTTTTCA
TTTTGTGAAGACCCTCCAGACTCTGGGAGAGGCTGGTGTGGGCAAGGACAAGCAGGATAGTGGAGTGAGAAAGGG
AGGGTGGAGGGTGAGGCCAAATCAGGTCCAGCAAAAGTCAGTAGGGACATTGCAGAAGCTTGAAAGGCCAATACC
AGAACACAGGCTGATGCTTCTGAGAAAGTCTTTTCCTAGTATTTAACAGAACCCAAGTGAACAGAGGAGAAATGA
GATTGCCAGAAAGTGATTAACTTTGGCCGTTGCAATCTGCTCAAACCTAACACCAAACTGAAAACATAAATACTG
ACCACTCCTATGTTCGGACCCAAGCAAGTTAGCTAAACCAAACCAACTCCTCTGCTTTGTCCCTCAGGTGGAAAA
GAGAGGTAGTTTAGAACTCTCTGCATAGGGGTGGGAATTAATCAAAAACCKCAGAGGCTGAAATTCCTAATACCT
TTCCTTTATCGTGGTTATAGTCAGCTCATTTCCATTCCACTATTTCCCATAATGCTTCTGAGAGCCACTAACTTG
ATTGATAAAGATCCTGCCTCTGCTGAGTGTACCTGACAGTAAGTCTAAAGATGARAGAGTTTAGGGACTACTCTG
TTTTAGCAAGARATATTKTGGGGGTCTTTTTGTTTTAACTATTGTCAGGAGATTGGGCTARAGAGAAGACGACGA
GAGTAAGGAAATAAAGGGRATTGCCTCTGGCTAGAGAGTAAGTTAGGTGTTAATACCTGGTAGAAATGTAAGGGA
TATGACCTCCCTTTCTTTATGTGCTCACTGAGGATCTGAGGGGACCCTGTTAGGAGAGCATAGCATCATGATGTA
TTAGCTGTTCATCTGCTACTGGTTGGATGGACATAACTATTGTAACTATTCAGTATTTACTGGTAGGCACTGTCC
TCTGATTAAACTTGGCCTACTGGCAATGGCTACTTAGGATTGATCTAAGGGCCAAAGTGCAGGGTGGGTGAACTT
TATTGTACTTTGGATTTGGTTAACCTGTTTTCTTCAAGCCTGAGGTTTTATATACAAACTCCCTGAATACTCTTT
TTGCCTTGTATCTTCTCAGCCTCCTAGCCAAGTCCTATGTAATATGGAAAACAAACACTGCAGACTTGAGATTCA
GTTGCCGATCAAGGCTCTGGCATTCAGAGAACCCTTGCAACTCGAGAAGCTGTTTTTATTTCGTTTTTGTTTTGA
TCCAGTGCTCTCCCATCTAACAACTAAACAGGAGCCATTTCAAGGCGGGAGATATTTTAAACACCCAAAATGTTG
GGTCTGATTTTCAAACTTTTAAACTCACTACTGATGATTCTCACGCTAGGCGAATTTGTCCAAACACATAGTGTG
TGTGTTTTGTATACACTGTATGACCCCACCCCAAATCTTTGTATTGTCCACATTCTCCAACAATAAAGCACAGAG
TGGATTTAATTAAGCACACAAATGCTAAGGCAGAATTTTGAGGGTGGGAGAGAAGAAAAGGGAAAGAAGCTGAAA
ATGTAAAACCACACCAGGGAGGAAAAATGACATTCAGAACCAGCAAACACTGAATTTCTCTTGTTGTTTTAACTC
TGCCACAAGAATGCAATTTCGTTAATGGAGATGACTTAAGTTGGCAGCAGTAATCTTCTTTTAGGAGCTTGTACC
ACAGTCTTGCACATAAGTGCAGATTTGGCTCAAGTAAAGAGAATTTCCTCAACACTAACTTCACTGGGATAATCA
GCAGCGTAACTACCCTAAAAGCATATCACTAGCCAAAGAGGGAAATATCTGTTCTTCTTACTGTGCCTATATTAA
GACTAGTACAAATGTGGTGTGTCTTCCAACTTTCATTGAAAATGCCATATCTATACCATATTTTATTCGAGTCAC
TGATGATGTAATGATATATTTTTTCATTATTATAGTAGAATATTTTTATGGCAAGATATTTGTGGTCTTGATCAT
ACCTATTAAAATAATGCCAAACACCAAATATGAATTTTATGATGTACACTTTGTGCTTGGCATTAAAAGAAAAAA
ACACACATCCTGGAAGTCTGTAAGTTGTTTTTTTGTTACTGTAGGTCTTCAAAGTTAAGAGTGTAAGTGAAAAATC
TGGAGGAGAGGATAATTTCCACTGTGTGGAATGTGAATAGTTAAATGAAAAGTTATGGTTATTTAATGTAATTAT
TACTTCAAATCCTTTGGTCACTGTGATTTCAAGCATGTTTTCTTTTTCTCCTTTATATGACTTTCTCTGAGTTGG
GCAAAGAAGAAGCTGACACACCGTATGTTGTTAGAGTCTTTTATCTGGTCAGGGGAAACAAAATCTTGACCCAGC
TGAACATGTCTTCCTGAGTCAGTGCCTGAATCTTTATTTTTTAAATTGAATGTTCCTTAAAGGTTAACATTTCTA

FIGURE 2130B

AAGCAATATTAAGAAAGACTTTAAATGTTATTTTGGAAGACTTACGATGCATGTATACAAACGAATAGCAGATAA
TGATGACTAGTTCACACATAAAGTCCTTTTAAGGAGAAAATCTAAAATGAAAAGTGGATAAACAGAACATTTATA
AGTGATCAGTTAATGCCTAAGAGTGAAAGTAGTTCTATTGACATTCCTCAAGATATTTAATATCAACTGCATTAT
GTATTATGTCTGCTTAAATCATTTAAAAACGGCAAAGAATTATATAGACTATGAGGTACCTTGCTGTGTAGGAGG
ATGAAAGGGGAGTTGATAGTCTCATAAAACTAATTTGGCTTCAAGTTTCATGAATCTGTAACTAGAATTTAATTT
TCACCCCAATAATGTTCTATATAGCCTTTGCTAAAGAGCAACTAATAAATTAAACCTATTCTTTCAAAAAAAAA

FIGURE 2131

MSRTAYTVGALLLLLGTLLPAAEGKKKGSQGAIPPPDKAQHNDSEQTQSPQQPGSRNRGRGQGRGTAMPGEEVLE
SSQEALHVTERKYLKRDWCKTQPLKQTIHEEGCNSRTIINRFCYGQCNSFYIPRHIRKEEGSFQSCSFCKPKKFT
TMMVTLNCPELQPPTKKKRVTRVKQCRCISIDLD

FIGURE 2132

GCCCGCTGTTGCGTGCTGCCAGCGGGAACTGTGTAGGGGTAGATTTTCGCTGCAGTGTTCCCCGAGCCTGTTAGA
CGCAGCGCGCCGGGAGACTGAGAGAGGAAAGGATAGAGGAAGTGCTGCCCTAGGCTGCATGAGTCGAAGCAAGCG
TGTTTCCTTCCCGCCAGGCAAGTGCCCTTAGAAACCGGGCCCCGCCCCCTTCCTGGCCTGCATTCCCATCCCCTC
TCCCGGGGCGGAGGTGAGGACCTCTTTGGTTCCTTTGGTTCTGTCAGTGAGCCCCTTCCTTGGCC**ATG**AAGCTCG
TGAGGAAGAACATCGAGAAGGACAATGCGGGCCAGGTGACCCTGGTCCCCGAGGAGCCTGAGGACATGTGGCACA
CTTACAACCTCGTGCAGGTGGGCGACAGCCTGCGCGCCTCCACCATCCGCAAGGTACAGACAGAGTCCTCCACGG
GCAGCGTGGGCAGCAACCGGGTCCGCACTACCCTCACTCTCTGCGTGGAGGCCATCGACTTCGACTCTCAAGCCT
GCCAGCTGCGGGTTAAGGGGACCAACATCCAAGAGAATGAGTATGTCAAGATGGGGGCTTACCACACCATCGAGC
TGGAGCCCAACCGCCAGTTCACCCTGGCCAAGAAGCAGTGGGATAGTGTGGTACTGGAGCGCATCGAGCAGGCCT
GTGACCCAGCCTGGAGCGCTGATGTGGCGGCTGTGGTCATGCAGGAAGGCCTCGCCCATATCTGCTTAGTCACTC
CCAGCATGACCCTCACTCGGGCCAAGGTGGAGGTGAACATCCCTAGGAAAAGGAAAGGCAATTGCTCTCAGCATG
ACCGGGCCTTGGAGCGGTTCTATGAACAGGTGGTCCAGGCTATCCAGCGCCACATACACTTTGATGTTGTAAAGT
GCATCCTGGTGGCCAGCCCAGGATTTGTGAGGGAGCAGTTCTGCGACTACATGTTTCAACAAGCAGTGAAGACCG
ACAACAAACTGCTCCTGGAAAACCGGTCCAAATTTCTTCAGGTACATGCCTCCTCCGGACACAAGTACTCCCTGA
AAGAGGCCCTTTGTGACCCTACTGTGGCTAGCCGCCTTTCAGACACTAAAGCTGCTGGGGAAGTCAAAGCCTTGG
ATGACTTCTATAAAATGTTACAGCATGAACCGGATCGAGCTTTCTATGGACTCAAGCAGGTGGAGAAGGCCAATG
AAGCCATGGCAATTGACACATTGCTCATCAGCGATGAGCTCTTCAGGCATCAGGATGTAGCCACACGGAGCCGGT
ATGTGAGGCTGGTGGACAGTGTGAAAGAGAATGCAGGCACCGTTAGGATATTCTCTAGTCTTCACGTTTCTGGGG
AACAGCTCAGCCAGTTGACTGGGGTAGCTGCCATTCTCCGCTTCCCTGTTCCCGAACTTTCTGACCAAGAGGGTG
ATTCCAGTTCTGAAGAGGAT**TAA**TGATTGAAACTTAAAATTGAGACAATCTTGTGTTTCCTAAACTGTTACAGTA
CATTTCTCAGCATCCTTGTGACAGAAAGCTGCAAGAAGGGCACTTTTTGATTCATACAGGGATTTCTTATGTCTT
TGGCTACACTAGATATTTTGTGATTGGCAAGACATGTATTTAAACATAAACTAAAAGGAAATAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2133

MKLVRKNIEKDNAGQVTLVPEEPEDMWHTYNLVQVGDSLRASTIRKVQTESSTGSVGSNRVRTTLTLCVEAIDFD
SQACQLRVKGTNIQENEYVKMGAYHTIELEPNRQFTLAKKQWDSVVLERIEQACDPAWSADVAAVVMQEGLAHIC
LVTPSMTLTRAKVEVNIPRKRKGNCSQHDRALERFYEQVVQAIQRHIHFDVVKCILVASPGFVREQFCDYMFQQA
VKTDNKLLLENRSKFLQVHASSGHKYSLKEALCDPTVASRLSDTKAAGEVKALDDFYKMLQHEPDRAFYGLKQVE
KANEAMAIDTLLISDELFRHQDVATRSRYVRLVDSVKENAGTVRIFSSLHVSGEQLSQLTGVAAILRFPVPELSD
QEGDSSSEED

FIGURE 2134

GGCATCACTCGAGCCCAGGTCCCAGTCATCACCACTCACAGCGCTCGGCGTTCAGGAAGAGGAGCACCAGCGGAG
CGCGGCTGCTTCAGCGGCGGGCGGGCGCCAGAAAGGCCCCGATCGAAAAGCCTGGGAGGGCCGCCGAACTACCCC
CGGAGGGAGGAGCCAGTCCGAACCCAAGGCGCCACCGCCGCAGAAGCGGAGCGAGGCAGCATTCGCCTCC**ATG**GC
CCACTCGCCGGTGGCTGTCCAAGTGCCTGGGATGCAGAATAACATAGCTGATCCAGAAGAACTGTTCACAAAATT
AGAGCGCATTGGGAAAGGCTCATTTGGGGAAGTTTTCAAAGGAATTGATAACCGTACCCAGCAAGTCGTTGCTAT
TAAAATCATAGACCTTGAGGAAGCCGAAGATGAAATAGAAGACATTCAGCAAGAAATAACTGTCTTGAGTCAATG
TGACAGCTCATATGTAACAAAATACTATGGGTCATATTTAAAGGGGTCTAAATTATGGATAATAATGGAATACCT
GGGCGGTGGTTCAGCACTGGATCTTCTTCGAGCTGGTCCATTTGATGAGTTCCAGATTGCTACCATGCTAAAGGA
AATTTTAAAAGGTCTGGACTATCTGCATTCAGAAAAGAAAATTCACCGAGACATAAAAGCTGCCAATGTCTTGCT
CTCAGAACAAGGAGATGTTAAACTTGCTGATTTTGGAGTTGCTGGTCAGCTGACAGATACACAGATTAAAAGAAA
TACCTTTGTGGGAACTCCATTTTGGATGGCTCCTGAAGTTATTCAACAGTCAGCTTATGACTCAAAAGCTGACAT
TTGGTCATTGGGAATTACTGCTATTGAACTAGCCAAGGGAGAGCCACCTAACTCCGATATGCATCCAATGAGAGT
TCTGTTTCTTATTCCCAAAAACAATCCTCCAACTCTTGTTGGAGACTTTACTAAGTCTTTTAAGGAGTTTATTGA
TGCTTGCCTGAACAAAGATCCATCATTTCGTCCTACAGCAAAAGAACTTCTGAAACACAAATTCATTGTAAAAAA
TTCAAAGAAGACTTCTTATCTGACTGAACTGATAGATCGTTTTAAGAGATGGAAGGCAGAAGGACACAGTGATGA
TGAATCTGATTCCGAGGGCTCTGATTCGGAATCTACCAGCAGGGAAAACAATACTCATCCTGAATGGAGCTTTAC
CACCGTACGAAAGAAGCCTGATCCAAAGAAAGTACAGAATGGGGCAGAGCAAGATCTTGTGCAAACCCTGAGTTG
TTTGTCTATGATAATCACACCTGCATTTGCTGAACTTAAACAGCAGGACGAGAATAACGCTAGCAGGAATCAGGC
GATTGAAGAACTCGAGAAAAGTATTGCTGTGGCTGAAGCCGCCTGTCCCGGCATCACAGATAAAATGGTGAAGAA
ACTAATTGAAAAATTTCAAAAGTGTTCAGCAGACGAATCCCCC**TAA**GAAACTTATTATTGGCTTCTGTTTCATAT
GGACCCAGAGAGCCCCACCAAACCTACGTCAAGATTAACAATGCTTAACCCATGAGCTCCATGTGCCTTTTGGAT
CTTTGCAACACTGAAGATTTGGAAGAAGCTATTAAACTATTTTGTGATGGCGTTTATCATTTTATATTTTGAAAG
GATTATTTTGTAAGGAATAACTTTTAATACTATAGTTTCACCTGTATTCTAGTAAATGTTGAGACACCGTTTTGC
TTTTAAGTATCCCTATTTCTTAAGTTACGAGGATGAATACCTTTCACATTTTGATCTTTAGTTGACTCTACAGTC
ATGAAACATACAGGTCTTTCAAAGTCATTCTCAATATTCAGCTTTTGTAAATTATCAAGCTTCAAAAAGCTTTTT
TTTTAAAAAAAAAAAACATGCATATTCTAAAAATGACTATTGGTGGGGAGGTGTAAATAAGTCATACCTTCTTAAA
ACAGAAAATTTAAGTAAAGTCTTTTAAATGAAACCTGTAAAAGTATTGACTCTTCTACCAAGTTGGTATGATATT
CCAGGCAGCTCAATGATTATCACATTTGAGACCCTGTGTTTGAAGCATTTACAGGCAATGTACAGCAACAGAGGT
ACCTCTTGGTGTATAGTATTTACATTCTCTTTTAGGTAGAAGAGGCAATTTTACCCTTATTTCACATGGTTAGAA
ATTTAAAGCAAGATCATTTACCCAAGGATAGGTGTTTGGTAATGTTGAAGGAGTTAGTCTGGCTTCATGTTTTAC
ATCTTCAACTAAAATCCCATACTATCTGCTTGGATTTGGAGAGCCAAAAAATAAAGCTGATTGTCATGTGATTAA
ATATCTGATCAACAGGTATGAATATAACTTAAATCAGCATATTTTTGCCATGGTAATAAATTGTCCTATAAACTA
TTTATATATTTTTGTTCTTCATAATTATCACTAATAAGCATCAGTTTGTTGTTTTTAAAAGGATATTTAAGTGAG
CATTTTCTAGTTCATATGAAAATAACCATAGTACAGGATGATTTCTGTCCACACAAAGGTTAAATTAGATTGCAC
AGTTAATTTTCACTTATATTTATGGTACTATTATGTGGGTGATGCCTTTTTCTTTTAAGCCCAGTACATATATTA
TGCCTGCCTAAGTTCTGAACTGGGGCTGTATTTCAGTAGTTGTAGAATTATTGATATTTAGTTTTGATAGCTAAT
GTTTAATTGTTTGGATCTGCACAGTTTGGTTTTTGCACAAAAGTCATTTAAAAAAATCTGAGTAATTGTCAAATA
TTAAAAGAAAGATATTCTTCCTGTAAGGAATACAGTTTTTAGTCAAAGTGGCCATTACATCCTCTTTTTAATTTA
CATAATACAGATACTTGAGAAAGTTGTTGTGGTGTTGTATGCCAAGAAAATTCTTTTTATTGGTGCCTATATTGT
AACAATTATTTTTAATGCATTGTATTTTGAAGTAACGGTTCAGTTAAATTTTTCACCTGCTGTGTAACTGAAGCA
CAATTACAGTTTATAATCATCTGTAGAAGTCTGGAGATAATTTTGCAACTCATGTTATGGGTTAAATGAATATTT
TTGTAAAAGTAAAAGCAACAAATTTATAAATTGATTATTTGAAACTTTACAACACAATTGCATCCCAAATACAAA
TTGTATTGCTTATTCATTATAGCTATTCGTCCTGTAATCTGTTTCTAGGTGAAGCATACTCCAGTGTTTTAGGGG
TTTTGAAAATAAATATTTAAATTTCACAGTCAAAAAAA

FIGURE 2135

MAHSPVAVQVPGMQNNIADPEELFTKLERIGKGSFGEVFKGIDNRTQQVVAIKIIDLEEAEDEIEDIQQEITVLS
QCDSSYVTKYYGSYLKGSKLWIIMEYLGGGSALDLLRAGPFDEFQIATMLKEILKGLDYLHSEKKIHRDIKAANV
LLSEQGDVKLADFGVAGQLTDTQIKRNTFVGTPFWMAPEVIQQSAYDSKADIWSLGITAIELAKGEPPNSDMHPM
RVLFLIPKNNPPTLVGDFTKSFKEFIDACLNKDPSFRPTAKELLKHKFIVKNSKKTSYLTELIDRFKRWKAEGHS
DDESDSEGSDSESTSRENNTHPEWSFTTVRKKPDPKKVQNGAEQDLVQTLSCLSMIITPAFAELKQQDENNASRN
QAIEELEKSIAVAEAACPGITDKMVKKLIEKFQKCSADESP

FIGURE 2136

GGCAGACTTAATGAAGTCATTAGAACCTTAACTCAGGTCATTAGTGTCTCTGGGGTGATTGGTCTCCAGTCAAAT
GCAGTCTGGCTTCTTGGACATCTTCATCTATCTACTCTATCCTCAAGTCAAAGTAGAGCCTCTGTTCCTACTGAC
TATAGCTACTTGCCTGAAAGCAGTTTTATTGGAGCAGCTATTGGCTTCTTCATTGCAGGAGGAAAAAAAGGTCCT
GAATCTGTGCCTCCTTCCCTTCTTAAAGTAGTG**ATG**AAACCCATAGCAACTGTTGGAGAAAGCTACCAATATCCT
CCTGTGAACTGGGCTGCACTTCTCTCTCCACTTATGAGGCTAAATTTTGGTGAAGAGATCCAGCAACTGTGCCTT
GAAATTATGGTGACCCAGGCACAGTCATCCCAGAATGCAGCTGCACTATTGGGCTTGTGGGTGACACCACCACTG
ATCCACAGTCTGAGTCTGAATACCAAGAGATATCTCCTGATATCTGCACCTCTGTGGATAAAACACATCTCTGAT
GAACAGATCCTGGGTTTTGTTGAAAATTTAATGGTGGCAGTTTTTAAAGCAGCTTCCCCACTTGGAAGTCCTGAG
CTATGCCCAAGTGCTTTACACGGTCTGAGCCAGGCCATGAAACTGCCCAGCCCTGCCCACCACCTCTGGAGTCTG
CTCTCTGAAGCTACTGGGAAAATTTTTGACCTCCTGCCAAATAAGATTCGGAGAAAGGATCTAGAGCTGTATATC
AGCATAGCAAAATGCCTCTTAGAAATGACAGATGATGATGCCAATCGGATCGCCCAGGTTACTAAGAGCAACATA
GAAAAAGCTGCCTTTGTCAAACTGTACTTAGTCTCTCAAGGACGATTCCCCTTGGTGAACCTGACCGATATGCTG
AGCGTTGCTGTGCAGCACCGTGAGAAAGAGGTGTTGGCCTGGATGATTCTGCACAGCTTATACCAGGCACGGATT
GTGAGCCATGCCAATACGGGCGTTTTGAAGAGAATGGAGTGGCTCTTGGAACTGATGGGTTATATGAAATGTTGC
TTACCAGTCAACATCCTTTCACAATACGGCTCT**TGA**CGAGGCTTTGGACTTCTTCTTGCTGATATTTGCAACCGC
AGTGGTTGCATGGGCTGACCACACTGCCCCTCTCCTCCTCGGCCTCAGTGCCAGTTGGTTGCCATGGCATCAGGA
GAATGGCCCGGCTGGGCCAGTACCAAGCTTCCTTGGCAGGAGTCCAATGCACAGGGTCACTCTGCAGGAGGTTCT
CACTCTCCTTCCCAATAGCATGGCTCTGCTGCTGCAGAAAGAGCCATGGAAGGAACAGACCCAGAAGTTCATTGA
CTGGCTATTCAGCATCATGGAAAGCCCTAAAGAAGCCCTCTCAGCACAGTCCAGGGATCTTTTGAAAGCCACCCT
GCTGTCCTTGAGAGTTCTCCCAGAGTTTAAGAAGAAAGCTGTATGGACCAGAGCATATGGTTGGTGAACAGTTTT
GCAGTAACCAGCAGCATTCTCAGCTGGATGAGGAAAACCATATAAGTGGAAGAAGTTTTTCAGAATTCATGCCTG
GTATTGCTGAGACATGATGCAGAGAGTTAAGGGTCATGAAAAGATGGCCACATCACTGACAGCTTGACACATGCC
TCCTAAGAGAGGAGTGCATTGCTTTAGTACCCGGGCCAGTTGAGACTGAAACAGGAACTTGGATTTTCTTTATTT
GGCTTGAGTTCAATGTGGAGATTTTCTTTGTGAAAGCTTGAAGATATTATCTTCTCCCTGCTAAATTCCAGTAAA
ATAATGTTGTCAAAAAAAAAAAAAAAAA

FIGURE 2137

MKPIATVGESYQYPPVNWAALLSPLMRLNFGEEIQQLCLEIMVTQAQSSQNAAALLGLWVTPPLIHSLSLNTKRY
LLISAPLWIKHISDEQILGFVENLMVAVFKAASPLGSPELCPSALHGLSQAMKLPSPAHHLWSLLSEATGKIFDL
LPNKIRRKDLELYISIAKCLLEMTDDDANRIAQVTKSNIEKAAFVKLYLVSQGRFPLVNLTDMLSVAVQHREKEV
LAWMILHSLYQARIVSHANTGVLKRMEWLLELMGYMKCCLPVNILSQYGS

FIGURE 2138

AGAAGGGCAACCTCGTGCTTTCTGCAGAGGAGACCGGAGGGCAGAAGGCAGAGTCCAGGCTTAGACTGCAGTTCC
TCGCTTACCTGTGCAGTCTAATTTTGAGCTGCCTCTTTGTAGTCTTAAAAGGCAGGAGCTTCGTGTTGTGGGTCT
GCTAACCCGTACGTTTCCGTGGGCAAGTCGTGTGTACTCCTCGCC**ATG**GCTCAGCTCCAAACACGCTTCTACACT
GATAACAAGAAATATGCCGTAGATGATGTTCCCTTCTCAATCCCTGCTGCCTCTGAAATTGCCGACCTTAGTAAC
ATCATCAATAAACTACTAAAGGACAAAAATGAGTTCCACAAACATGTGGAGTTTGATTTCCTTATTAAGGGCCAG
TTTCTGCGAATGCCCTTGGACAAACACATGGAAGTGGAGAACATCTCATCAGAAGAAGTTGTGGAAATAGAATAC
GTGGAGAAGTGTACCGCACCCCAGCCAGAGCAATGCATGTTCCATGATGACTGGATCAGTTCAATTAAAGGGGCA
GAGGAATGGATCTTGACTGGTTCTTATGATAAGACTTCTCGGATCTGGTCCTTGGAAGGAAAGTCAATAATGACA
ATTGTGGGACATACGGATGTTGTAAAAGATGTGGCCTGGGTGAAAAAAGATAGTTTGTCCTGCTTATTATTGAGT
GCTTCTATGGATCAGACTATTCTCTTATGGGAGTGGAATGTAGAGAGAAACAAAGTGAAAGCCCTACACTGCTGT
AGAGGTCATGCTGGAAGTGTAGATTCTATAGCTGTTGATGGCTCAGGAACTAAATTTTGCAGTGGCTCCTGGGAT
AAGATGCTAAAGATCTGGTCTACAGTCCCTACAGATGAAGAAGATGAAATGGAGGAGTCCACAAATCGACCAAGA
AAGAAACAGAAGACAGAACAGTTGGGACTAACAAGGACTCCCATAGTGACCCTCTCTGGCCACATGGAGGCAGTT
TCCTCAGTTCTGTGGTCAGATGCTGAAGAAATCTGCAGTGCATCTTGGGACCATACAATTAGAGTGTGGGATGTT
GGGTCTGGCAGTCTTAAGTCAACTTTGACAGGAAATAAAGTGTTTAATTGTATTTCCTATTCTCCACTTTGTAAA
CGTTTAGCATCTGGAAGCACAGATAGGCATATCAGACTGTGGGATCCCCGAACTAAAGATGGTTCTTTGGTGTCG
CTGTCCCTAACGTCACATACTGGTTGGGTGACATCAGTAAAATGGTCTCCTACCCATGAACAGCAGCTGATTTCA
GGATCTTTAGATAACATTGTTAAGCTGTGGGATACAAGAAGTTGTAAGGCTCCTCTCTATGATCTGGCTGCTCAT
GAAGACAAAGTTCTGAGTGTAGACTGGACAGACACAGGGCTACTTCTGAGTGGAGGAGCAGACAATAAATTGTAT
TCCTACAGATATTCACCTACCACTTCCCATGTTGGGGCA**TGA**AAGTGAACAATAATTTGACTATAGAGATTATTT
CTGTAAATGAAATTGGTAGAGAACCATGAAATTACATAGATGCAGATGCAGAAAGCAGCCTTTTGAAGTTTATAT
AATGTTTTCACCCTTCATAACAGCTAACGTATCACTTTTTCTTATTTTGTATTTATAATAAGATAGGTTGTGTTT
ATGAAATACAAACTGTGGCATACATTCTCTATACAAACTTGAAATTAAACTGAGTTTTACATTTCTCTTT

FIGURE 2139

MAQLQTRFYTDNKKYAVDDVPFSIPAASEIADLSNIINKLLKDKNEFHKHVEFDFLIKGQFLRMPLDKHMEVENI
SSEEVVEIEYVEKCTAPQPEQCMFHDDWISSIKGAEEWILTGSYDKTSRIWSLEGKSIMTIVGHTDVVKDVAWVK
KDSLSCLLLSASMDQTILLWEWNVERNKVKALHCCRGHAGSVDSIAVDGSGTKFCSGSWDKMLKIWSTVPTDEED
EMEESTNRPRKKQKTEQLGLTRTPIVTLSGHMEAVSSVLWSDAEEICSASWDHTIRVWDVGSGSLKSTLTGNKVF
NCISYSPLCKRLASGSTDRHIRLWDPRTKDGSLVSLSLTSHTGWVTSVKWSPTHEQQLISGSLDNIVKLWDTRSC
KAPLYDLAAHEDKVLSVDWTDTGLLLSGGADNKLYSYRYSPTTSHVGA

FIGURE 2140

CACCTCGCGGCCGTAGGCTAACGTGGAAGTCGGACCAGCCGGCCGGCGGAAGAACCTAGAGCGCGCTGCCTGGCG
AGTCAGGCGCGCGGGGCGGCGTTGGTGGTCTTCGCGGCGTAACTCGGCCTTTCCTGGGAGGGAGTGATGGGGCGC
ACCGGGGCCGGGGAGCGGGCGCCAGTGTAGCCCGCGCGGCGCCTGGCCCGGAGCGCGGCGGCTGCGGCGGCGGCG
GCGGCGGGCGCTGGAGGCCTGTGAGAGCCGCAGCCCGGAGCGCCCGGCTTCCCACGCC**ATG**GCCCCCATGGGCAT
CCGCCTTTCCCCACTGGGGGTGGCAGTGTTTTGTCTGCTGGGGCTCGGCGTGCTCTACCACCTCTACTCGGGCTT
CTTGGCCGGCCGCTTCAGCCTCTTCGGCCTGGGCGGCGAGCCTGGCGGCGGCGCGGCGGGGCCCGCGGCCGCGGC
CGATGGGGGCACCGTGGACTTGCGCGAGATGCTGGCTGTGTCAGTGCTGGCCGCAGTCCGCGGCGGCGACGAGGT
GAGGCGCGTCCGCGAGAGCAACGTCCTCCACGAGAAGTCCAAGGGGAAGACGCGCGAGGGAGCCGAGGACAAGAT
GACCAGCGGCGACGTGCTGTCCAACCGCAAGATGTTCTACCTGCTCAAGACCGCCTTCCCCAGCGTCCAGATTAA
TACTGAGGAACACGTGGATGCAGCTGATCAGGAGGTTATCTTGTGGGATCATAAGATTCCTGAGGATATCCTAAA
GGAAGTAACTACTCCTAAAGAGGTACCAGCAGAAAGTGTTACTGTCTGGATTGACCCACTTGATGCTACACAGGA
ATATACAGAGGATCTTCGAAAGTACGTCACTACTATGGTGTGTGTGGCTGTAAATGGTAAACCCATGCTAGGAGT
TATACATAAGCCATTTTCCGAATATACAGCTTGGGCAATGGTAGATGGTGGTTCAAATGTGAAAGCCCGCTCTTC
CTACAATGAGAAGACCCCAAGGATCGTTGTGTCTCGTTCCCATTCAGGGATGGTCAAACAGGTCGCTCTTCAGAC
TTTTGGAAACCAGACTACAATTATCCCAGCTGGTGGTGCTGGTTATAAAGTTTTAGCACTTTTGGATGTGCCTGA
TAAGAGTCAAGAAAAAGCTGATTTATACATCCATGTGACATACATCAAAAAGTGGGATATATGTGCTGGTAATGC
CATCTTAAAAGCCCTAGGGGGGCATATGACTACCCTGAGTGGTGAAGAAATCAGTTACACTGGTTCAGACGGCAT
TGAAGGGGGACTCCTTGCTAGCATCAGAATGAACCACCAGGCCCTGGTCAGAAAACTCCCAGATCTAGAAAAGAC
AGGACATAAA**TGA**GCATAACTGATTACAGGGTACAGTTCTTCACAGCTGAAATGGTTAGCCTGAGATGCTGGAAG
CTTCAAAGGATTGGTGGAGACTATGCATGGTTAAGGCCATCCCGAACTTTTTAAAGTATTTATGAAGCATCAGAG
ACTTATTTTCCCTGTAATAGAATGCAAAATCAGGGAAAATGGGTTGCTTTGTGTCTCAAGTATTGTCTTTATTTT
TGAGACTATTTTCATACAGTTGTCATACACAAGGCGCATATATATATTTGTGAATTAAAATCTGTAGCTGAGTCT
AAAAAAAAAAAAAAAAAA

FIGURE 2141

MAPMGIRLSPLGVAVFCLLGLGVLYHLYSGFLAGRFSLFGLGGEPGGGAAGPAAAADGGTVDLREMLAVSVLAAV
RGGDEVRRVRESNVLHEKSKGKTREGAEDKMTSGDVLSNRKMFYLLKTAFPSVQINTEEHVDAADQEVILWDHKI
PEDILKEVTTPKEVPAESVTVWIDPLDATQEYTEDLRKYVTTMVCVAVNGKPMLGVIHKPFSEYTAWAMVDGGSN
VKARSSYNEKTPRIVVSRSHSGMVKQVALQTFGNQTTIIPAGGAGYKVLALLDVPDKSQEKADLYIHVTYIKKWD
ICAGNAILKALGGHMTTLSGEEISYTGSDGIEGGLLASIRMNHQALVRKLPDLEKTGHK

FIGURE 2142

GCGGTAGCGACAGGTCAGAGCTGCGGCCTGAGCAGCCAGCGTCCGGCATGAAGGTCTGGGGTCTGGCTGCTGCCT
GCTTCTTGCTCCAGCACC**ATG**GAATGCCTGCGCAGTTTACCCTGCCTCCTGCCCCGCGCGATGAGACTTCCCCGG
CGGACGCTGTGTGCCCTGGCCTTGGACGTGACCTCTGTGGGTCCTCCCGTTGCTGCCTGCGGCCGCCGAGCCAAC
CTGATTGGAAGGAGCCGAGCGGCGCAGCTTTGCGGGCCCGACCGGCTCCGCGTGGCAGGTGAAGTGCACCGGTTT
AGAACCTCTGACGTCTCTCAAGCCACTTTAGCCAGTGTAGCCCCAGTATTTACTGTGACAAAATTTGACAAACAG
GGAAACGTTACTTCTTTTGAAAGGAAGAAAACTGAATTATACCAAGAGTTAGGTCTTCAAGCCAGAGATTTGAGA
TTTCAGCATGTAATGAGTATCACAGTCAGAAACAATAGGATTATCATGAGAATGGAGTATTTGAAAGCTGTGATA
ACTCCAGAGTGTCTTCTGATATTAGATTATCGTAATTTAAACTTAGAGCAATGGCTGTTCCGGGAACTCCCTTCA
CAGTTGTCTGGAGAGGGTCAACTCGTTACATACCCTTTACCTTTTGAGTTTAGAGCTATAGAAGCACTCCTGCAA
TATTGGATCAACACCCTTCAGGGGAAACTTAGCATTTTGCAGCCACTGATCCTTGAGACCTTGGATGCTTTGGTG
GACCCCAAACATTCTTCTGTAGACAGAAGCAAACTGCACATTTTACTACAGAATGGCAAAAGTCTATCAGAGTTA
GAAACAGATATTAAAATTTTCAAAGAGTCAATTTTGGAGATCTTGGATGAGGAAGAGTTGCTAGAAGAGCTCTGT
GTATCAAAATGGAGTGACCCACAAGTCTTTGAAAAGAGCAGTGCTGGGATTGACCATGCAGAAGAAATGGAGTTG
CTGTTGGAAAACTACTACCGATTGGCTGACGATCTCTCCAATGCAGCTCGTGAGCTTAGGGTGCTGATTGATGAT
TCACAAAGTATTATTTTCATTAATCTGGACAGCCACCGAAACGTGATGATGAGGTTGAATCTACAGCTGACCATG
GGAACCTTCTCTCTTTCGCTCTTTGGACTAATGGGAGTTGCTTTTGGAATGAATTTGGAATCTTCCCTTGAAGAG
GACCATAGAATTTTTTGGCTGATTACAGGAATTATGTTCATGGGAAGTGGCCTCATCTGGAGGCGCCTGCTTTCA
TTCCTTGGACGACAGCTAGAAGCTCCATTGCCTCCTATGATGGCTTCTTTACCTAAAAAGACTCTTCTGGCAGAT
AGAAGCATGGAATTGAAAAATAGCCTCAGACTGGATGGACTTGGATCAGGAAGGAGCATCCTAACAAACCGT**TAG**

GAACAGCCCCGTGGATACTGAAGTTTTTTTTATGGTAGTTACAGGAAACTTCTGATACTCTTTTTATTATTTTCT
TGTATAGAGTCAGACACTTGAAAAAAACTAATGTTTGAAGACAAAAATATTTTGGCAGTCACAATACCAGAACTG
GATTGCATTTCCAGAATTYTGAGTTAAAGAAACAAAGTATTTGCTTTGTAAAAGGCCAAAATTYTATTTCCTACA
AACTTTAAATGCTGTTTTTATAGATGTGATATGAGGCAACACAAGCACAGACAGTTGCATAGATTTTAATTTATA
CATATCAAGAAAAGTGCAATTTCATGCTGAATGAAGCGTAGGAACTTGACAAGCCCATAGGTAGCTATAGTTCTT
TGTCAGTATAGGGAATTATGTTCATGTGAATTTCCTGATTCTCAGGTGACTAAAAAGCTAGCATTYTATGTATTA
ACCTTACAACAGACTCTGTAAGTTTGAGCTTTAAAAACCAAACTTTGACATAACCTTATTTCTTGTATTTGCCCC
CTTTTTTTTATAAAAGGTGAATAAAAAGAAATAATTTAATATC

FIGURE 2143

MECLRSLPCLLPRAMRLPRRTLCALALDVTSVGPPVAACGRRANLIGRSRAAQLCGPDRLRVAGEVHRFRTSDVS
QATLASVAPVFTVTKFDKQGNVTSFERKKTELYQELGLQARDLRFQHVMSITVRNNRIIMRMEYLKAVITPECLL
ILDYRNLNLEQWLFRELPSQLSGEGQLVTYPLPFEFRAIEALLQYWINTLQGKLSILQPLILETLDALVDPKHSS
VDRSKLHILLQNGKSLSELETDIKIFKESILEILDEEELLEELCVSKWSDPQVFEKSSAGIDHAEEMELLLENYY
RLADDLSNAARELRVLIDDSQSIIFINLDSHRNVMMRLNLQLTMGTFSLSLFGLMGVAFGMNLESSLEEDHRIFW
LITGIMFMGSGLIWRRLLSFLGRQLEAPLPPMMASLPKKTLLADRSMELKNSLRLDGLGSGRSILTNR

FIGURE 2144

GTGGTGCTTGTCTGCAGAGTC**ATG**ACCTCTTTCCGCTTGGCCCTCATCCAGCTTCAGATTTCTTCCATCAAATCA
GATAACGTCACTCGCGCTTGTAGCTTCATCCGGGAGGCAGCAACGCAAGGAGCCAAAATAGTTTCTTTGCCGGAA
TGCTTTAATTCTCCATATGGAGCGAAATATTTTCCTGAATATGCAGAGAAAATTCCTGGTGAATCCACACAGAAG
CTTTCTGAAGTAGCAAAGGAATGCAGCATATATCTCATTGGAGGCTCTATCCCTGAAGAGGATGCTGGGAAATTA
TATAACACCTGTGCTGTGTTTGGGCCTGATGGAACTTTACTAGCAAAGTATAGAAAGATCCATCTGTTTGACATT
GATGTTCCTGGAAAAATTACATTTCAAGAATCTAAAACATTGAGTCCGGGTGATAGTTTCTCCACATTTGATACT
CCTTACTGCAGAGTGGGTCTGGGCATCTGCTACGACATGCGGTTTGCAGAGCTTGCACAAATCTACGCACAGAGA
GGCTGCCAGCTGTTGGTATATCCAGGAGCTTTTAATCTGACCACTGGACCAGCCCATTGGGAGTTACTTCAGCGA
AGCCGGGCTGTTGATAATCAGGTGTATGTGGCCACAGCCTCTCCTGCCCGGGATGACAAAGCCTCCTATGTTGCC
TGGGGACACAGCACCGTGGTGAACCCTTGGGGGGGAGGTTCTAGCCAAAGCTGGCACAGAAGAAGCAATCGTGTAT
TCAGACATAGACCTGAAGAAGCTGGCTGAAATACGCCAGCAAATCCCCGTTTTTAGACAGAAGCGATCAGACCTC
TATGCTGTGGAGATGAAAAAGCCC**TAA**AGTTTATGTTTCTAATGTGTCACAGAATAGGACGATATGATTCTACAA
CATAATCAACTCCCTATTAAATTCTTTAATGAAGAAAAAAAATTTAAAAAAAAAAAAAAAAA

FIGURE 2145

MTSFRLALIQLQISSIKSDNVTRACSFIREAATQGAKIVSLPECFNSPYGAKYFPEYAEKIPGESTQKLSEVAKE
CSIYLIGGSIPEEDAGKLYNTCAVFGPDGTLLAKYRKIHLFDIDVPGKITFQESKTLSPGDSFSTFDTPYCRVGL
GICYDMRFAELAQIYAQRGCQLLVYPGAFNLTTGPAHWELLQRSRAVDNQVYVATASPARDDKASYVAWGHSTVV
NPWGEVLAKAGTEEAIVYSDIDLKKLAEIRQQIPVFRQKRSDLYAVEMKKP

FIGURE 2146

CGGAAGCAGGAAGTGAGTTTGCGAACGGAGCAGCTGCTGCAGGGCCC**ATG**GCGGACACCCAGTACATCCTGCCCA
ATGACATCGGCGTGTCTAGCCTGGACTGCCGTGAGGCCTTCCGCCTGCTGTCACCCACAGAGCGCCTCTATGCCT
ACCACCTGTCCCGTGCCGCCTGGTACGGAGGCCTGGCTGTGCTGCTTCAGACCTCCCCTGAGGCCCCCTACATCT
ATGCTCTGCTCAGCCGCCTCTTCCGCGCCCAGGACCCCGACCAGCTGCGCCAACATGCCCTGGCTGAAGGCCTTA
CCGAGGAGGAGTATCAGGCGTTCCTGGTCTATGCCGCGGGTGTTTACTCCAACATGGGCAACTACAAGTCCTTTG
GTGACACCAAGTTTGTTCCCAACTTGCCCAAGGAAAAGCTGGAACGGGTGATCCTAGGGAGTGAGGCTGCTCAGC
AGCACCCAGAAGAAGTCAGGGGCCTCTGGCAGACCTGCGGGGAGCTTATGTTCTCTCTGGAGCCAAGGCTTCGAC
ACCTCGGACTGGGGAAGGAGGGAATCACCACCTATTTCTCTGGGAATTGTACCATGGAAGATGCCAAATTGGCCC
AGGACTTTCTGGACTCACAGAACCTCAGTGCCTACAACACCCGGCTCTTCAAAGAGGTCGATGGAGAAGGGAAGC
CCTACTACGAGGTGCGGCTGGCTTCTGTGCTTGGCTCAGAGCCTTCCCTGGACTCTGAGGTGACTTCCAAGCTGA
AGAGCTATGAATTCCGGGGAAGCCCTTTCCAGGTGACCCGGGGGGACTACGCGCCCATCCTCCAGAAGGTGGTGG
AGCAGCTGGAGAAAGCCAAGGCCTATGCAGCCAACAGCCACCAGGGGCAGATGCTGGCCCAGTATATAGAGAGCT
TCACCCAGGGCTCCATCGAGGCCCACAAGAGGGGCTCCCGCTTCTGGATCCAGGACAAAGGCCCCATCGTGGAGA
GTTACATCGGGTTCATCGAGAGCTACCGCGACCCCTTTGGTTCCCGAGGAGAATTTGAAGGTTTCGTAGCTGTGG
TGAACAAGGCCATGAGTGCCAAGTTTGAGCGGCTGGTGGCGAGCGCAGAGCAGCTGCTGAAGGAGCTGCCCTGGC
CCCCAACCTTTGAGAAGGACAAGTTCCTCACCCCTGACTTCACCTCCCTGGATGTTCTCACCTTCGCTGGCTCCG
GCATCCCTGCCGGCATCAACATCCCCAACTACGATGATCTGAGGCAGACGGAAGGCTTTAAGAACGTGTCGCTGG
GGAATGTGCTGGCTGTGGCCTACGCCACGCAGCGGGAGAAGCTTACCTTTCTGGAGGAGGATGACAAGGACCTGT
ACATCCTCTGGAAGGGGCCCTCCTTCGATGTGCAGGTGGGCCTGCACGAGCTGCTGGGCCATGGCAGTGGCAAGC
TCTTCGTACAGGACGAAAAAGGAGCATTCAACTTTGACCAGGAAACAGTGATCAACCCAGAGACGGGCGAGCAGA
TTCAGAGCTGGTATCGGAGCGGGGAGACCTGGGATAGCAAGTTCAGCACCATCGCCTCCAGCTACGAAGAGTGCC
GGGCTGAGAGCGTGGGTCTCTACCTCTGTCTCCACCCGCAAGTGCTGGAGATCTTTGGCTTTGAGGGGGCTGATG
CGGAGGACGTGATCTACGTGAACTGGCTCAACATGGTTCGGGCCGGGCTGCTCGCTCTGGAGTTCTACACACCTG
AGGCCTTCAACTGGCGACAGGCCCATATGCAGGCCCGGTTTGTGATCCTGAGAGTCTTGCTGGAGGCTGGCGAGG
GACTCGTTACCATCACTCCCACCACAGGCTCCGATGGGCGCCCAGATGCCCGGGTCCGCCTCGACCGCAGCAAGA
TCCGGTCTGTGGGCAAGCCTGCTCTAGAGCGCTTCCTGCGGAGACTTCAGGTGCTGAAGTCCACAGGGGATGTGG
CCGGAGGGCGGGCCCTGTACGAGGGGTATGCAACGGTCACTGATGCGCCCCCCGAGTGCTTCCTCACCCTCAGGG
ACACGGTGCTGCTGCGTAAGGAATCTCGGAAGCTCATTGTTCAGCCCAACACTCGCCTTGAAGGCTCAGACGTGC
AGCTTCTGGAATACGAGGCGTCAGCTGCTGGCCTCATCCGATCCTTCTCTGAGCGTTTCCCAGAGGATGGACCCG
AGTTGGAGGAGATCCTCACACAGCTGGCCACAGCCGATGCCCGATTCTGGAAGGGCCCCAGTGAGGCCCCATCTG
GCCAAGCT**TGA**GGAAGATGTGTGGCCTTGCCCCCAATTCCATCAGACCAAGGCTGCAAGTGGCCCTCCATTCGTG
TGTGTATTTAGGGGCTGGGGAGGGGGAGGGGCAGGAGCTTGGACCTTGGTACTACCTCAGCTGAGGGTGGTGACA
CAACCCCTTCCATTTGTCAGCACTTTCCAGCCTGCCAATTGCTTCCCCTCTGTGATCTCATTTCATCTGCACTGC
CATACGTGGAGTGAGCAAGACAGGGCTTACCATCCTGTCTACCAGATGAGGAAATGGCAGTTCTGAGAAGTCACT
GGTCTAGATCCCGCAGGTGGCACGTGACAGCTAGGGTTCAAAACGTTCTCACCAAATCCAATGCTCCTCACATAT
TAATTTTATAACCAGACAAATAAATATTAGAGACAACCAAAAAAAAAAAAAAAAAAAAA

FIGURE 2147

MADTQYILPNDIGVSSLDCREAFRLLSPTERLYAYHLSRAAWYGGLAVLLQTSPEAPYIYALLSRLFRAQDPDQL
RQHALAEGLTEEEYQAFLVYAAGVYSNMGNYKSFGDTKFVPNLPKEKLERVILGSEAAQQHPEEVRGLWHTCGEL
MFSLEPRLRHLGLGKEGITTYFSGNCTMEDAKLAQDFLDSQNLSAYNTRLFKEVDGEGKPYYEVRLASVLGSEPS
LDSEVTSKLKSYEFRGSPFQVTRGDYAPILQKVVEQLEKAKAYAANSHQGQMLAQYIESFTQGSIEAHKRGSRFW
IQDKGPIVESYIGFIESYRDPFGSRGEFEGFVAVVNKAMSAKFERLVASAEQLLKELPWPPTFEKDKFLTPDFTS
LDVLTFAGSGIPAGINIPNYDDLRQTEGFKNVSLGNVLAVAYATQREKLTFLEEDDKDLYILWKGPSFDVQVGLH
ELLGHGSGKLFVQDEKGAFNFDQETVINPETGEQIQSWYRSGETWDSKFSTIASSYEECRAESVGLYLCLHPQVL
EIFGFEGADAEDVIYVNWLNMVRAGLLALEFYTPEAFNWRQAHMQARFVILRVLLEAGEGLVTITPTTGSDGRPD
ARVRLDRSKIRSVGKPALERFLRRLQVLKSTGDVAGGRALYEGYATVTDAPPECFLTLRDTVLLRKESRKLIVQP
NTHLEGSDVQLLEYEASAAGLIRSFSERFPEDGPELEEILTQLATADARFWKGPSEAPSGQA

FIGURE 2148

GACCACTGGTAGCGGCAGCAGCTCGCGCCCGCGCCCTCCTCGTACCCGTGCGCCCCCGGAGACCGATCCCGCCCC
GCGGCCCAGGCCGGGCCTGAACCCAGCGGGTGCCGCTTCTCCACCCGAGGCTTCCACCTCCAACGAGCC**ATG**TTC
CAGGCTGCAGGAGCCGCCCAGGCCACCCCCTCTCATGACGCCAAAGGCGGCGGCAGCAGCACGGTGCAGCGCTCC
AAGTCCTTCAGCCTGCGGGCCCAGGTGAAGGAGACCTGCGCCGCCTGCCAGAAGACCGTGTACCCCATGGAGCGG
CTGGTGGCCGACAAGCTCATTTTCCACAACTCTTGCTTCTGCTGCAAGCACTGTCACACCAAGCTCAGCCTGGGC
AGCTACGCCGCGCTGCACGGGGAGTTCTACTGCAAACCCCACTTCCAGCAGCTGTTTAAGAGCAAAGGCAACTAC
GACGAGGGGTTTGGCCGCAAGCAGCACAAGGAGCTCTGGGCCCACAAGGAGGTGGACCCCGGCACCAAGACGGCC
TGAGGCCTCTGTAACCTTCCACCCCCTCTGCGGAAGGCCTGGAGCCGGCAGGGGGAAGGTGGGAAGGAGGTCGAG
CTGGGCTTGCGTGGGGGCCAGGTGGGAAGGGGATGAGGCTTGCTCAGGCGTAGGGGACCAGGGCAGGGCTCTGCT
CCAGGACTCCTTCCTTCTTCCTTCTCCCGCAGCCGGTGAGGGTTTGGAAACCAGGATTGGGGTCTGCCCACCACC
CTGCTTCCTGCTTCGTTCAGCCTCCCTCCCCACCTCACCCCAGGACCCCCTGGGAGGCCCCCAAGCCCAGCTCCC
CTATCTAGGTGCCTTTTCTCCAGCAAGGAGTCAGCATGCCCCCCTCAGGGTCCCAAGCTCCCTCACTGCCACCGG
AGACTGTGTGGCCCCCACGTCTCCCCATCTACCTCTACCCTTAACCTGTTTCTGAGCCACGGAGACAGGGAGGAA
GGAGCGCGACAGTGCCACCTGTTGGGCATCATAAATGCCCCTGCAGCCCATGGGGGAGGAGATGGGGAAGTGGAG
CCACCCTGCCTCTGCAGGGCAAGGCAGGGCCTGCCCCAGTGGGGCTTGGGACCATCTCGAACCACCAGCGTGGAG
AAGCAGAAGCAAAAGCACTCGCCAGGCTGCAGCCTCAGGCACTGGCAGGGGCTGGTGCGGCCCCACTCCCCTCCC
CCGCTCCCATTTGTGCCCATCCTGTTGTGACCAACCCCGTTTTAAACATGTTTCAATAGATCCAGATTCTCTATT
GTGTGGCCTGCTGGGGGGATCTGTCACAGGAAGGGTGCAGACTCACCATGGGGCGGGCATGGGGGGACAGGGCCAG
CCCCGACTACCTCGGCCCTGATGGGGGCAGGGAGCTAGAAGTGGGTGTCAGTTCCCTGACACACCATTGAGAAAT
GGGAGGGCTCCTCTTCACAGCGAGGGCTTCATGCTGTCACACCCACAGTGGTTTTGGAACTGAAACTCCACCTCA
CCCCTCAGTTCTGGGTTGGTTCAGACCCACCAACTTACCATATGCACCCCATTGTGAAGAGGCCTGAGAGCGGGA
GGGCCAGGCTGCCAGTGGGTGATGGCGCCTGTCCTCGCTGCACTTCAGTGCCTGGGGTGCAAGCTGCCGCGTTCC
CTGGCTGGTTCCAGCTGTCTAGCTCCCTCCCTTCTTCCCAGCCCTTTGACCTGGAAGTAAGTTAGCGAAGAATGG
CGGTAACCAGCAGACCCAGCAAGTGCTGCCCAAGGTTTTAGTGACCCCTGGATTGTCCCCCCTCATCATTACCCC
TCGCTGCTGTCATCATCCCCTTGCCTTTTCAAGCTCTGCGGAGGTGCAGTCACAGCTACTGTCTCAGGAAATCCA
AAGAGAAACTACCTCTGCTTCTCTGAAAACCCAGGGACAATGAGGGATGAGTTCACAGCAGAGCAAACCAGGCAA
GTTGGGAGGACCTGAGGGCGCCCCGGTGGGACACAGGCAGAAGTCTGGGTTGTCCTGCTCCAGATTCAACTTCCT
GATGTCTCCAGACATGGGATCGATGAGAACAGAGACTCCTGGAGGGTTTGCTGCCACCACACCATACAACTGCCT
GAGTTCCTAAGTGGCCTCCCCGTGGAACAGGGCAGGGAGCTGGGCCACAGGCTCCAGTGTCACATAAGTCACTAT
GCTGAGGCAGGCACTGCTCCTCGAGGGAGCAGAGCGAATACTCAGCAGAGATGGTGCCCCGGCCTGGATCCTCCC
AAGTGTGAAGTGAGCGCCTCAGAGCCTCTCAGGGCAGGCCAACTTCCTGCACCAGAGGTCTCAGATGGCAAGGAT
CATCTTGGTTCGGTTAAGCAACAGTAGCAGATGACCACAAGGGGGTACTGGAGAGGTGGCTCTTGGAGACACCTG
ACCCCTGCCCTGCAAAGATGGGGCTGAAGGAAGTCCTCTGGGCCAGGAAGACCCTACCAAATATCATGAAAGCTC
CGGGAACTCAGCCACTGGTGACGTTCAGGTTGTGAGGGCCAGCAGTGCCACCCTGGTAAATCAGCCCTGTTGGGA
CCACCCCAGTGGAGCTCCTGGAGGGGCAACTGGAGGAAAGGGGCAGACACCTCTGGACTGACAATGGTATCAGCC
AGATCACCCCAGGACCCCTCTACTTGGAGTCAAGTTCTCTTCTGCTTGAAAGGCCCAGGCTCGTTGCCAGGCACC
ATACCTGGCCCCTGCTAAGCAAAAACCTACCTCCACCCCCCACAACTGAAAGCACTGCCACAGGACCCCTCTGAT
ATAAATGATCCCTTTTATTGTAAGTAATGCGCAACACTGGCCTGGCTTTGCACTGCAAGCCCTCGGTCAAGATAT
AGTCAAATAACTATGGCTGCAGGTTCCACAGTTCCACAATAACCATGGCTGCACGATCCACAATTCAGACACAGA
CATAGAGCTGGGGTGGGTGGAAGGGGCAGGAGGGTGGCAGAGTGCGGACTGTCCCCAGCCCTGGCCTCTCCATGC
AGAGTTGGCCCAGGCAGACACACCCCATGGAATGATGAGAAAGTGACGGCACGGCCCCTTCCCACAGCAAGCCTG
GGGCTGCCAGGAACTGCCCTTCAGAACCTTTGGGCCCAGGTCACCCTGAAGCCCCACAACTTTTTATCTGGATTA
GTTATTAAAAAACAATAAATTAAGCAAC

FIGURE 2149

MFQAAGAAQATPSHDAKGGGSSTVQRSKSFSLRAQVKETCAACQKTVYPMERLVADKLIFHNSCFCCKHCHTKLS
LGSYAALHGEFYCKPHFQQLFKSKGNYDEGFGRKQHKELWAHKEVDPGTKTA

FIGURE 2150

GACCCGAAACGGGGAAGTTGTCTTGTTTGGAGAGGTTAGTAGAGCAGCGCGCGCGTCACCAGAGTCGTTTCTCTT
CGGAGTCTTAGGTGATCGAGGGTGTGCCCAGGGGGCGGACTTGTTTGCGCCTCCCGTTCCCTCCCAATTTCCAAA
CGTGTCACCCCGGCGCCGACGGCCCTGTGCAGGGGAAGCAG**ATG**GAGTTCAAGCTGGAGGCTCATCGCATCGTCA
GCATCTCTCTGGGCAAGATCTACAACTCGCGGGTCCAGCGCGGCGGCATCAAGCTGCATAAGAACCTCCTGGTCT
CGCTGGTGCTGCGCAGCGCCCGCCAAGTCTACCTGAGCGACCCGTGCCCCGGCCTCTACCTGGCCGGTCCCGCTG
GGACCCCGGCGCCGCCACCGCAGCAGCAGCCCGGGGAGCCGGCGGCCGGGCCACCCGCCGGCTGGGGAGAGCCGC
CCCCGCCCGCCGCTCGTGCCTCTTGGCCGGAGACCGAGCCGCAGCCGGAGCGCTCCTCCGTCTCAGACGCGCCGC
GGGTAGGGGACGAGGTGCCGGTGGCCACGGTGACTGGAGTCGGGGACGTTTTTCAGGGCGGAGAGGCGGACGCGA
CGGAAGCTGCCTGGAGCCGCGTGGAGGGGCCGCGCCAGGCGGCGGCCAGAGAAGCCGAGGGTACCGCCGGAGGCT
GGGGCGTCTTCCCCGAGGTATCTCGTGCCGCGCGCCGCCCCTGCGGCTGCCCCCTAGGCGGGGAGGACCCGCCGG
GTACACCGGCCGCGACCCCCCGCGCTGCCTGCTGCTGCGCGCCGCGACCAGCGGAGGACGAGCCCCCCGCGCCGC
CCGCGGTGTGCCCCAGGAAGCGCTGCGCGGCGGGGGTGGGCGGCGGCCCAGCGGGCTGCCCGGCGCCCGGCTCGA
CCCCGCTCAAGAAGCCCCGCCGGAACTTAGAGCAGCCGCCGAGTGGAGGAGAGGACGACGACGCGGAGGAGATGG
AGACCGGGAACGTGGCTAACCTCATCAGCATCTTCGGTTCCAGTTTCTCGGGACTCCTACGGAAAAGCCCCGGGG
GCGGCAGAGAGGAAGAGGAGGGAGAGGAGAGCGGTCCGGAAGCCGCCGAGCCCGGGCAGATCTGCTGCGATAAGC
CGGTGCTGAGAGACATGAACCCCTGGAGCACAGCCATCGTGGCCTTC**TGA**GCCCTTGGTCCCCCTGCGGGGAGGA
GGTGGAGCAGCGGGCGTCCCCGAAGTGAGGGCCAGGCCCTTCCCGGCTGCGAGGACGCCCAGAGACCGCGGGCGC
TGAGCGCGTTGGGCAGACTGGTTGCCTCTGGGCATCGCAAACTGCCCCCGGGCGCATCTGGCTTATCTGGAGACC
TGGGAGCTTGAGGCTCATTGGAAGAGGACGATCGTTAACTTTTGTGTTTGTGTATGTCTGTGTATGTAAGTTTGT
CTTGTGGCATTAAGACTATTTTGCTCTTCTGGAATGCACCACTCCTTCCCCAGGGTTTAAGAGATTGGGGGCAGA
CAGGGACTTTCCTCTGCCGGCTGCGTGGAGAAGGAAGCGGCTAAAAGGTTTGGGCCGGGGAGTTCCCCATTCGTT
CTCCGGGGAGGGAGGGACTTTACACCTACCCCTCACCGGAAAGCTAGACCCGCTTCAGGGCCAGGAGTGGCGTTT
CCGCACAGGATTTCCTAAGACGAGAGGGATTTAGCCAAGAGCACAGACTTGGATTCCTTCTGTCCCTCCCCACCT
TTCTCTCCCAATGAAGAAACGTTTATATCCTGTGATTACTCTAGGAAAGGGGCGTATTAACGGTCCTTTGCTTCC
CCGCAGGGGAGAAAAAGCTTGACGAACTTCACAGAAGAGTTCAAGCTTGGAAATAATGGAGTTTATAGAGAAAAG
ATATATTTTTAAAAGCTCTAGGTCAGAAGTACTACACAGTGCTTTTAAAAAGTGTTTAATGAGAGTTTACAGACA
GAAGCCCGAAGTGGAAAGACCTTATGGTTTTGTAGATATGGTGACTCCAGTCTTTGTTGTATAAAGGTTGGGGGA
GCTGATAAGGTTTTTGTACAGTATTTTCTCCTTCGTTGTATTGATTTTTGTATAAAAATGTAACTTCTACGTGTC
TAACACGTATTAAATATTTTGAAGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2151

MEFKLEAHRIVSISLGKIYNSRVQRGGIKLHKNLLVSLVLRSARQVYLSDPCPGLYLAGPAGTPAPPPQQQPGEP
AAGPPAGWGEPPPPAARASWPETEPQPERSSVSDAPRVGDEVPVATVTGVGDVFQGGEADATEAAWSRVEGPRQA
AAREAEGTAGGWGVFPEVSRAARRPCGCPLGGEDPPGTPAATPRAACCCAPRPAEDEPPAPPAVCPRKRCAAGVG
GGPAGCPAPGSTPLKKPRRNLEQPPSGGEDDDAEEMETGNVANLISIFGSSFSGLLRKSPGGGREEEEGEESGPE
AAEPGQICCDKPVLRDMNPWSTAIVAF

FIGURE 2152

TGTTTGGTATATTTAAAGCAGTGACTGAGTGTGTTTGAGTGAGTGGCTGAGTGCAGTGTCTTTTGTTTAAACACA
CTGCCTCGTGTCTTTGTAGCTGATTCAGAGAGTTTGAATTGTGGGGTGGGAGACTAACTTCAGCTCCAGGCTGCA
GTAATGTGTTGGTAGTTACACTTGAGGCATTTTTTTGTTGTTGTTAATTAACTCTATAGTCTCAAACTATTTTTG
CAAATATATCATTTTTCCTAATTGGTTCTTGACGTGCAGTGGACTGGCTCTGTGAATGATTGGCAGGGTCTTAGT
TTTGCGAGAGCATTTCCTTCTAAGAATTATTGTGATCTGCAGAAACAGCCATTTGATTCAAAAATCATGTAGAAA
AGGAGTAGGAGAAGCAAAACGTTTCATTTTTGGGCCTTAACCATTTGAAATGTTTGGACTTTAAACATAAAGCCA
TGGAGTTTATAAAGCCAAGTAACCATTTGATATGGATAATAATATCTACTCTAGAGAGAGTATATATATGCACAT
TGATTTTTAATGCTGTTAAGATACTTTTGTAAAACTGTAGGAACAAGAGTAATTAGACCAAATTGAAGCTTAGGG
GACAGTAAAGTGGTTGCTTTCCATTTAGGGTAACCATGCATGTGGTTAGTCCTCTCCTCCTGAGATTCAGAACCA
GTTGACTGTCCCCTTAGGTGTATAAGGAGAAAAGTTGACATGTCTGGGACCTCTGACATGTGTACACATGCTTGC
ACACATGCACACACAGTGAATGTTTTAAGTTATACAAACATAAGACCTTAAGATGCAAAGAGCCAGAATATTCTA
AAGAGGTGATGAACAGAGGGGGTGGAAACTGCATCACAGATGTTTTCCAAGGGCCAGGGTGGAATCTGAGCTCTA
GTGTCTGACTTTGAGATGCATTATATTTTTAACACATAAATGAGGGGATCCATATCACATTCTTTCTTGTGGACC
ACCAAATTGAAGGCTTTCTTGTAATTCACAAGCAGCAGCTCTCCAGCATCTCTCCGTAGCCTGGGTGAAGTCCCA
GAAGCTGGTGTGCATCATTTTCCAAGGTGGCAGAGCTGCTTGCTCTGCAGATCATTCCTTTGAGAGAGGAGTACA
AGTGAAGAAACAAGGAGGCACTTCCTGTAGGAGCACTGATGTGCCTTGTCCACACTCCCCTCTGAGCTTTACTGG
TAAGAGAGCTCCGACTGAACATGCTGAGCAGTTGAGCACTTTTCCATCAGCAACAACAGCGAGGATGGAAATGGA
AAGGAACCGAACTAAAATGCATTTCCCTTTGCAGGGCAGAGAGCTAAGCTCTTAGGAATAGTGTTATAGAAATAA
GCACCCTAACTTCAATTCCTGAAA**ATG**TTGGTTAATGGAGAGAATTTTGGAGTTTCACTTAATATTTTCCCATCG
GTCGCCATAAATAAGTCTTCAGGCGCTCCTAGAAGAGTCCCAGCCCAAGGCTCGATTAAGGACCACACTGCAGGT
CTGAGGCTCACTGCTCTGAGTCCTGAACACCAGAGCCCTGCAGAGAGTGGTGATAACACATCATCTCTGCAAAGA
GGAACCTCTCCCCCGGCCGCCACTTCACTCAGGCTTCTACTGAGCAGCAAGGACAGCCTGGGTTTCAAATGCCAC
TTCCCCTGCTTTAGGGATCCAGGTGTCCTGATAGCG**TGA**CCCTGCTGAGGCAAGGTATCAACTCCGAGAGTGACT
GAGTCACTGAGCGTGGCACATGAACAAACGTCATGACAAAGATTCTCTGAGTGAAGTTAACACCACGTATTTTAC
CTTTGCAAAAAACAAACTGGCACCCTGAGTTCTAACTACGGACGGACGATATCTTTGCCTCCACACCCAGATTCC
TGGAAATGGCTAACGTTTCCTTTCTAGGGGAAGGGTCGAGGAATACTCAAGTGCTAGCTTAGCAGCTTTGTTCAG
TCCAGATCAGAGCTGTTAGGTAAAGGCCTAACCACCTCCCTGCAGTCTCTTATATCTCAAGCTTTAGGAACCCAT
TTCTAAATGTACACTAGCGGAGAATTTATATTGTCAGCCTTGATTACCATAGGACAGGCAGAAAGGCGATAATTT
GTATCTTTTAATATAAAAGAAGCTTTTAACTTTTCCAGCCTATTATAATAACTGAGTTATATTCACTGTGGCTCA
AACTAATTGGCATTGTGGAACATTTCTTTACCTTCAAAGTTTTCTCCACCAATCATTTCAGTTCTATTGCAGTCC
TGGTGCCATATGTCCCCTGCAAATTGTGAAAGTAATTAGTGACAAAATAGCAGCCTGCTCCTTTTCAATGGCGAA
ACTGTCGGCATTAGCAGTTTTGGGTAAGCTGGCGGTACTATAACACGTACTGGAAACCTGTTCCTCATCACCACC
TACCAGATTCTGGAAATGCCGTCTTCTAGAAAACGATGGCGTTTGTGGTGGTCTTCTTTTGAAAGGAACAGTAAT
TTGTGTGGATATTGTTAAAGTGTTTAAAGAATATTTTGACAATTAAGTTTACATTTTACAATTGCTTTATTTTTT
ATTAAAATAGTTGTATATAAATATTACCCTATTTCACTGTTGTTCAAGTAAATCTAAACCTTGTAGACAAGTGAG
TCATCTGATATGTATAGAAGCTGTGATATATAGAGTACATTTATTGTGTAAATGTTTATGAATATAATTGTTCCT
GTGTTTTTATAAGTTGGGGATATTTTGTTGTTTTACGGCAACAAAATTTATTGCATTTAAATGGTTTTTATGTAA
TAGAAATCACGCAAAATAGTGAAGGATTTAAAATATGTATATGATACATGTAAATGTACAAACTTTAGAAAGAAA
TAAATCCAACAAATTTCAAAAAAAAAAAAAAAAAAA

FIGURE 2153

MLVNGENFGVSLNIFPSVAINKSSGAPRRVPAQGSIKDHTAGLRLTALSPEHQSPAESGDNTSSLQRGTSPPAAT
SLRLLLSSKDSLGFKCHFPCFRDPGVLIA

FIGURE 2154

CAGTTAGCTTCAAACAAAAACGAAAGTTAGACCAAGGGAACGTATTAGAT**ATG**GAAGTAAAGAAAAAGAAACATG
ATAAACAAGAACAGAAAGGAAGTGTGGGAGCTACATTCAAATTAGGTGACTCTTTGTCAAACCCAAACGAAAGAG
CCATTGTTAAAGAAAAGATGGTATCAAATACTAAGTCTGTAGACACGAAAGCGAGTTCATCTAAATTTAGTAGAA
TTCTAACTCCTAAGGAGTATTTACAAAGGCAGAAGCATAAAGAAGCTCCGAGTAATAAAGCATCGAAGAAAATCT
GTGTGAAAAACGTGCCATGTGATTCTGAACATATGAGACCAAGTAAACTTGCCGTGCAGGTTGAAAGTTGTGGGA
AATCAAATGAGAAACACAGCAGCGGCGTGCAGACCTCTAAAGAATCATTAAATGGCTTGACAAGCCATGGTAAAA
ACCTCAAAATCCACCATTCTCAGGAGTCTAAAACATACAACATTCTAAGGAATGTTAAAGAAAAAGTTGGTGGGA
AGCAGCCTGATAAAATATGGATTGATAAGACTAAATTAGACAAATTAACCAATATAAGCAACGAAGCTCAATTCA
GCCAAATGCCTCCCCAAGTAAAGGATCAAAAGAAATTATATCTGAATAGAGTTGGGTTTAAATGCACTGAACGTG
AAAGCATTTCTCTCACCAAATTAGAAAGTTCACCCAGGAAGCTTCATAAAGATAAGAGACAGGAAAATAAACATA
AGACCTTTTTACCGGTGAAAGGTAACACAGAAAAATCAAACATGCTGGAGTTTAAATTATGTCCAGATATCTTAC
TAAAGAATACAAACTCTGTGGAAGAACGGAAGGATGTAAAGCCTCATCCTAGGAAGGAGCAAGCCCCTCTGCAAG
TTTCAGGAATAAAAAGTACAAAAGAAGACTGGTTAAAATTTGTTGCTACAAAGAAAAGGACACAGAAAGACAGCC
AAGAGAGAGATAATGTTAATTCAAGACTCTCGAAGAGAAGCTTCAGTGCAGATGGATTTGAGATGCTACAAAACC
CAGTAAAAGATTCAAAAGAAATGTTTCAAACCTACAAACAGATGTACCTGGAGAAGAGAAGCAGAAGCCTTGGTA
GCAGTCCTGTAAAA**TAA**TTACAAGATGTGGTTTTGTAATTGCCACTGGGAAATTTCTTTCCTTTTCTGTTCAAAA
TATTTCGCTGAAACTAATGAGAAATGCCATGATAAAGATTTCTCAGAGTTTGGTTCCCACTTTCATTGTATTTCA
TTGAAAGTGCTTAATTAAAATGGCTTGAGAACTTTGGGTAGCCATGTGTAAGAAATGGATGGTATTCACCGGGGA
AACAAGGTATTTGAATTTCTACTTTATTGAACCAGATTTACCATTATTTTAAAAGGAATGCTTATACAAATCAAT
TTGAAATTCTACCCATCTTGAGGGAGGACCGTTCCTCAGTTAAGGACTTGTTTATTTAAATGGGACTGTAAATAT
GTTTTGGTTTCTAAGCTATATTAGCAAAATTTATTTTTCAAAAACGCCCACTGTGATGTGAATGTCAAAATATAT
TCTTAAGTGTTTTATAACTAATTGTAAACTTTTTTTCAGAAGTCTTATTTTATACTTGTGAAACTGAACACAATT
TTGGGACAACGTTTAAACATTACTTTTCATACTTGAAATAAACATTTATTTTTTAAAAAACT

FIGURE 2155

MEVKKKKHDKQEQKGSVGATFKLGDSLSNPNERAIVKEKMVSNTKSVDTKASSSKFSRILTPKEYLQRQKHKEAP
SNKASKKICVKNVPCDSEHMRPSKLAVQVESCGKSNEKHSSGVQTSKESLNGLTSHGKNLKIHHSQESKTYNILR
NVKEKVGGKQPDKIWIDKTKLDKLTNISNEAQFSQMPPQVKDQKKLYLNRVGFKCTERESISLTKLESSPRKLHK
DKRQENKHKTFLPVKGNTEKSNMLEFKLCPDILLKNTNSVEERKDVKPHPRKEQAPLQVSGIKSTKEDWLKFVAT
KKRTQKDSQERDNVNSRLSKRSFSADGFEMLQNPVKDSKEMFQTYKQMYLEKRSRSLGSSPVK

FIGURE 2156

TCTGAAGCGAATCAGTGGGAAGTGGCCTACAGTGGGTCGGCTACCGAATACACCTTCACCCACTTGAAACCAGGC
ACTTTGTACAAACTCCGAGCATGCTGCATCAGTACCGGCGGACACAGCCAGTGTTCTGAAAGTCTCCCTGTTCGC
ACACTAAGCATTGCACCAGGTCAATGTCGACCACCGAGGGTTTTGGGTAGACCAAAGCACAAAGAAGTCCACTTA
GAGTGGGATGTTCCTGCATCGGAAAGTGGCTGTGAGGTCTCAGAGTACAGCGTGGAG**ATG**ACGGAGCCCGAAGAC
GTAGCCTCGGAAGTGTACCATGGCCCAGAGCTGGAGTGCACCGTCGGCAACCTGCTTCCTGGAACCGTGTATCGC
TTCCGGGTGAGGGCTCTGAATGATGGAGGGTATGGTCCCTATTCTGATGTCTCAGAAATTACCACTGCTGCAGGG
CCTCCTGGACAATGCAAAGCACCTTGTATTTCTTGTACACCTGATGGATGTGTCTTAGTGGGTTGGGAGAGTCCT
GATAGTTCTGGTGCTGACATCTCAGAGTACAGGTTGGAATGGGGAGAAGATGAAGAATCCTTAGAACTCATTTAT
CATGGGACAGACACCCGTTTTGAAATAAGAGACCTGTTGCCTGCTGCACAGTATTGCTGTAGACTACAGGCCTTC
AATCAAGCAGGGGCAGGGCCGTACAGTGAACTTGTCCTTTGCCAGACGCCAGCGTCTGCCCCTGACCCCGTCTCC
ACTCTCTGTGTCCTGGAGGAGGAGCCCCTTGATGCCTACCCTGATTCACCTTCTGCGTGCCTTGTACTGAACTGG
GAAGAGCCGTGCAATAACGGATCTGAAATCCTTGCTTACACCATTGATCTAGGAGACACTAGCATTACCGTGGGC
AACACCACCATGCATGTTATGAAAGATCTCCTTCCAGAAACCACCTACCGGATCAGAATTCAGGCTATAAATGAA
ATTGGAGCTGGACCATTTAGTCAGTTCATTAAAGCAAAAACTCGGCCATTACCACCCTTGCCTCCTAGGCTAGAA
TGTGCTGCTGCTGGTCCTCAGAGCCTGAAGCTAAAATGGGGAGACAGTAACTCCAAGACACATGCTGCTGAGGAC
ATTGTGTACACACTACAGCTGGAGGACAGAAACAAGAGGTTTATTTCAATCTACAGAGGACCCAGCCACACCTAC
AAGGTCCAGAGACTGACGGAATTCACATGCTACTCCTTCAGAATCCAGGCAGCAAGCGAGGCTGGAGAAGGGCCC
TTCTCAGAAACCTATACCTTCAGCACAACCAAAAGTGTCCCCCCCACCATCAAAGCACCTCGAGTAACACAGTTA
GAAGGAAATTCATGTGAAATTTTATGGGAGACGGTACCATCAATGAAAGGTGACCCTGTTAACTACATTCTGCAG
GTATTGGTTGGAAGAGAATCTGAGTACAAACAGGTGTACAAGGGAGAAGAAGCCACATTCCAAATCTCAGGCCTC
CAGACCAACACAGACTACAGGTTCCGCGTATGTGCGTGTCGTCGCTGTTTAGACACCTCTCAGGAGCTAAGCGGA
GCCTTCAGCCCCTCTGCGGCTTTTGTATTACAACGAAGTGAGGTCATGCTTACAGGGGACATGGGGAGCTTAGAT
GATCCCAAAATGAAGAGCATGATGCCTACTGATGAACAGTTTGCAGCCATCATTGTGCTTGGCTTTGCAACTTTG
TCCATTTTATTTGCCTTTATATTACAGTACTTCTTAATGAAG**TAA**ACCCAACAAAACTAGAGGTATGAATTAATG
CTACACATTTTAATACACACATTTATTCAGATACTCCCCTTTTTAAAGCCCTTTTGTTTTTTGATTTATATACTC
TGTTTTACAGATTTAGCTAGAAAAAAAATGTCAGTGTTTTGGTGCACCTTTTTGAAATGCAAAACTAGGAAAAGG
TTAAACTGGATTTTTTTTTTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2157

MTEPEDVASEVYHGPELECTVGNLLPGTVYRFRVRALNDGGYGPYSDVSEITTAAGPPGQCKAPCISCTPDGCVL
VGWESPDSSGADISEYRLEWGEDEESLELIYHGTDTRFEIRDLLPAAQYCCRLQAFNQAGAGPYSELVLCQTPAS
APDPVSTLCVLEEEPLDAYPDSPSACLVLNWEEPCNNGSEILAYTIDLGDTSITVGNTTMHVMKDLLPETTYRIR
IQAINEIGAGPFSQFIKAKTRPLPPLPPRLECAAAGPQSLKLKWGDSNSKTHAAEDIVYTLQLEDRNKRFISIYR
GPSHTYKVQRLTEFTCYSFRIQAASEAGEGPFSETYTFSTTKSVPPTIKAPRVTQLEGNSCEILWETVPSMKGDP
VNYILQVLVGRESEYKQVYKGEEATFQISGLQTNTDYRFRVCACRRCLDTSQELSGAFSPSAAFVLQRSEVMLTG
DMGSLDDPKMKSMMPTDEQFAAIIVLGFATLSILFAFILQYFLMK

FIGURE 2158

GTACAGAAGCAAAATCAAACCTGCTATTTCAGCACTCCTGTTTTTAACTTGGTGTCTTTAGTGCTTGGATTGGTG
GGATGTTTCGGA**ATG**GGCATTGTCGCCAATTTTCAGGAGTTAGCTGTGCCAGTGGTTCATGACGGGGGCGCTCTT
TTGGCCTTTGTCTGTGGTGTCGTGTACACGCTCCTACAGTCCATCATCTCTTACAAATCATGTCCCCAGTGGAAC
AGTCTCTCGACATGCCACATACGGATGGTCATCTCTGCCGTTTCTTGCGCAGCTGTCATCCCCATGATTGTCTGT
GCTTCACTAATTTCCATAACCAAGCTGGAGTGGAATCCAAGAGAAAAGGATTATGTATATCACGTAGTGAGTGCG
ATCTGTGAATGGACAGTGGCCTTTGGTTTTATTTTCTACTTCCTAACTTTCATCCAAGATTTCCAGAGTGTCACC
CTAAGGATATCCACAGAAATCAATGGTGATATT**TGA**AGAAAGAAGAATTCAGTCTCACTCAGTGAATGTCGCAGG
CCATTTCTAAAAGTGCTACAGAGGACAGACAGGGTTTTGAGGCCACCCTGATTATTGGGATGCATCTGCAGCACA
TCCAGGACTTGAATTTCATTACGAGTTCCTAATAGTTGTATTTCTAAAGATGTGTTTCCTAGAGAATGTACAGCC
TTATGACACTGTAGTGATGTTTTTATAATTTTCTAAGTAGATTTTTTTATATTAACAAATTCATATACAGAAAAA
ATAAGGTGTTACAAAAAATGGAGAGCTCTTATTTTTGTACAGATTCTGTCGTTTTTTTTTATTTGTGTGAGATTT
ATGGAAATACACTAAATGAGTAATTCAGGTTCAGTACATTTATTACAAAGTGAAATCAGGGGATATTCATTTGTA
AATTTTATTCTTAGTGAATGAACTGTATAATTTTTTTTATCAGGAGAGCACTTATAAAATTCAATTTATAAAGAT
CATATACCCAAATCATAAAGATTTAGTTGATACATTAACACTAAGATACTCTGATTTTTAGCGAACTAAACAAAG
TGCTTCTACTGAGAGGCCTTTATACCACCATGTACAGTAACTCTAAGTGAATACGGAAGACCTTGGTTTTGAAAT
TCTGCCACCTTGTTTCTCCCTGCTCATGAGGTCGCACCTTTTGCTCTTGCTGCTAATTGCCCATTCGTAGTGGGT
GTAATGCCAGGTGGAATGGTTTCAACAAGTCAGGTGAAAACCATCCTTTATTGTTGCTGGCACAACTTGATATAT
AGTCTGACTCAGAACTGAAGCTCACATCTCAAATTCATTTCATGCCAGTAAATGTGGCAAAGAGAAGAAAGGCCC
AAGAGCGAGACAAGAAGAATGGAGAAGGGGGCAGCCAAGAAGAACTTCTGGGTTCAGGGTACTGTTTATTTGCTC
CTTCTCTTCATGCCTGTGGCTGGATGTCCCACAACACTATAAGAAATATAAGTCAAGCCCTTTGTGTTAAGCAAG
AACTACAGACTCCATCTTTTCACCCAAATCATGAATGACCAATAAAAAGCAAGTTATTCCAGAGGAAGAAGCAGC
CCTTGAAATGTTAAGGCTTAGGCTTGAAAGGTGAAGAGCAGGAATTCTCTCTTTCAAATCCTAGAGCATAAACCC
ATGTGTGGCCAAGTGAGATCAGCCCTCAAGGGCACATGCCAAGGGCAGAGCAGCCCATGTAGACAGCTTCGGAGG
GCATGGGGGTGTAGGGAGTTCGGGGTAGCTCCTCATTAACTATTTGTTGGGTGAGTAAAGGGGTGAGGCTCAGTG
GCAGGTACCTCTGCAATGACAAGCTGCCTCCCCTCTATGTGTTTAGCATATGTTATTAGAACATGTCCGACACCC
CTACCGCTGCCATTTGGGCCCTTTAATAAAGCCAAGTAGAGAAATCTGGCAATAAAAGGCAAATGTAAGCATGCT
TTCTTTAAGACGCATCATAAATGGTTTTCTTTAAGTGAATGGAAGAGTTTGACAGAGATACACCTTTGTAAGAAA
ACATTAAGAATGCTGGCTGGCTGTGGTGGCTCACACCTGTATTCCCAGCACTTTGGGAGGCCTAGGCAGGAGGAT
TGCTTGAGCCTGGGACTTCGAGACCAGACTGGGAAACATGGCAAAATCCCATCTCTACAACAAAAATACAAAAAT
TAGCCAAGTGCGGTGGTGTGCCTGTAGTCCTAGTTACTTGGGAGGCTGAGGTGGGAGAATCACCTGAGCCCAGGA
GGTGGAGGCTGCAGTGAGCCATGCCAATGCACTCCAGTCTGGGCAACAGAGTGAGACCCTGTCTCAAAAATAAAT
AAATAAATAAATGAATAAAGAGAATGCTAATCATTTCTGGGTTCACTGCGACTCACTGTAGTGCTGGGGATCCCC
CTTGTAACACTGGAACTGAAAGGCAGTGATGAAAGCTATGTCAAGCATTCATTATTCTGAAGAGGAGGAGAAATG
CCACATACCTTTCCCATGGGACCTGTGGTGGAATGAATCCATACTTCTGCCTCACTTCGAGCAGACTTTTGTTCT
CGGCGCTCCTCACGATGGAGTTTCATGCTTCATTTTCACATCTCTCTGCACAATTAGATTGGGAGCTCCTTGAGG
GCAGAGTACGTGCCTTAATCTTTATCTTTGTAATGCCACAATGAACAGAGTGCCTCCTGGTACACTGTAGGAGCT
TAAGAAATACTCACTGAATGCATGAATGAATGAATGAACAAATGAAGGAATGACTAAGGATGTTTGTAGTGCTAT
AATATAGAATGGGATTTACTCTGCTTTACCAGTTAGTTTCATAATAAACAAATAGTCTGT

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FIGURE 2159

MGIVANFQELAVPVVHDGGALLAFVCGVVYTLLQSIISYKSCPQWNSLSTCHIRMVISAVSCAAVIPMIVCASLI
SITKLEWNPREKDYVYHVVSAICEWTVAFGFIFYFLTFIQDFQSVTLRISTEINGDI

FIGURE 2160

TTCCGGGGCTAGGGAGCGCTTTCTCCCGGGAACCGCGGCTGTGACCCAAGTGGCCCGGACCAGTTTGGGGCTGCG
TGCGGCCTGCCTCAAGCAACCAGGTACGTAGGTCGGCGGCCCAGCTCGGCGCTGCGGTGGGAGCCGGAGGGCGAC
AGTCAGAGCCGGGGGTGCCAGCGGGACGCGACCGCCAGATCCACTTAGGACCCCGTCGTTCTGCGAAGCGGCCACG
TCTGAGTCCCGGGGGCCTCCTCGTGCTGCAGATGTCGCCTTAGGACCTCGGCCAGGATACCCTCTGCCATGCTCTT
GTGCTGCCCGTGATCACCGACTGGCCCTTGTAAGCACCTTCGCAGCAGGAAGCCCAGAGCTGCGCCTGCCCTTTC
TGAAGGCTGTGGAAGAGGTTGGAGTGGGCGCATCTTAGCTTGCCCCATCCCCATTTGAGGTCTGTCGGAGCTGCC
CTTCAGTGTGAGCATCCACA**ATG**GGTACCCCAGCCTCGGTGGTCAGTGAGCCACCCCCTTGGCAGGCCCCGATTG
AGGCCCGGGGCCGCAAGCAGGCCTCGGCCAACATCTTCCAGGACGCCGAGCTGCTGCAGATCCAAGGCCTGTTTC
AACGCAGCGGGGACCAGCTGGCCGAGGAACGGGCACAGATCATCTGGGAATGTGCAGGGGACCACCGTGTGGCTG
AGGCCCTCAAGAGGCTGCGCAGGAAGAGGCCCCCAAGGCAGAAACCCCTGGGCCACTCGCTACACCACTGCAGCC
GCCTCAGAATCCTGGAGCCCCACTCTGCACTGGCCAACCCACAGAGTGCCACAGAGACAGCCTCCAGTGAGCAGT
ATCTGCACTCTAGGAAGAAAAGTGCCAGGATCCGCCGGAACTGGAGGAAGTCAGGCCCCACAAGCTACCTCCACC
AGATCAGACAC**TGA**TCCAGGGAAAGAGCCAGGAATGGCAGTGTCTTCCCTCTTGCCAAAAGGCCTGGGGAGGTGA
AGGAAGAGAGACTTTAGGCAAGCAGCCCAAAGGGGTAAATGAAAGCAAGAGGCTGCTGCCACTGACCTGCTCCAT
TCAGAACAAGACTGGATGCTTCTGTTGAGCTCTCCATTATGTGGGACCCATTCCTCACCAAAATGAGGAGAGACA
GTGACTGTTCCTGCCACAGTCCTTCCCAGTCTAACACTATTCCTGGGCTGCATGATATTCCCCTGGGAGCAAAGT
GACAGGCACTTAGATGCAGCATTTCACCACTCATGCTACTAATCATCTACCTGCTACTACTGTAAACCATGGTTC
CAGCAGCCTGTTCCACACCCCCACACCATCAGGATAGCACAGGGAAACTGTAGTTTAAGTGGCAAATAAAAACAT
TTGCATCAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2161

MGTPASVVSEPPPWQAPIEARGRKQASANIFQDAELLQIQGLFQRSGDQLAEERAQIIWECAGDHRVAEALKRLR
RKRPPRQKPLGHSLHHCSRLRILEPHSALANPQSATETASSEQYLHSRKKSARIRRNWRKSGPTSYLHQIRH

FIGURE 2162

GCGGGCGGTGGGGCTCACGGCCTAGGGAGGCGCGGAGGCATCTGGCAGAGGCGGGTCGGGCTGGGCCAGCTGGGG
TAGAGCGGAGGAGCGGGTGCCGGCTGAAGCGGGGCGGTGGGCGCGGAGCGCGCTGGGGGCACCGACACCACCTCA
CCGGCAGCCGGGTGCTGAGGGCCGCGGTGTGGGTGCGCGGAGCAGTCAGGGCGCAGGTGGGCAGCGCGCACGGCC
TGCCAGCCCGGGGCGCCAGAATCCTGCGCTGCGGGGCCGAGAGGGGCGCCGCGCCCGCCGCAGCCTGGAGCTTTC
CGCGAACCTCGGGGCGCCC**ATG**ACGGCGGCGGCGACGGCTACCGTGCTCAAGGAGGGCGTGCTGGAGAAGCGCAG
CGGCGGGCTGCTGCAGCTGTGGAAGCGGAAGCGCTGCGTCCTCACCGAACGCGGGCTGCAGCTCTTCGAGGCCAA
GGGCACGGGCGGCCGGCCCAAGGAGCTCAGCTTCGCCCGCATCAAGGCCGTGGAGTGCGTGGAGAGCACCGGGCG
CCACATCTACTTCACGCTGGTGACCGAAGGGGGCGGCGAGATCGACTTCCGCTGCCCCCTGGAAGATCCCGGCTG
GAACGCCCAGATCACCCTAGGCCTGGTCAAGTTCAAGAACCAGCAGGCCATCCAGACAGTGCGGGCCCGGCAGAG
CCTCGGGACCGGGACCCTCGTGTCC**TAA**ACCACCGGGCGCACCATCTTTCCTTCATGCTACCCACCACCTCAGTG
CTGAGGTCAAGGCAGCTTCGTTGTTCCCTCTGGCTTGTGGGGGCACGGCTGTGCTCCATGTGGCAAGGTGGAAGG
CATGGACGTGTGGAGGAGGCGCTGGAGCTGAAGGAATGGACGAGCCCTGGGAGGAGGGCAGAAGGCTACGCAGGG
CTGAGGATGAAGATGCAGCCCCTGGATGGTCCCAGACTCTCAGGACATGCCCAGCTCAGGGGCTTCGAGCCACAG
GCCTGGCCTCATATGGCATGAGGGGGAGCTGGCATAGGAGCCCCCTCCCTGCTGTGGTCCTGCCCTCTGTCCTGC
AGACTGCTCTTAGCCCCCTGGCTTTGTGCCAGGCCTGGAGAGGGCAGTCCCCCATGGGGTGCCGAGCCAACGCCT
CAGGAATCAGGAGGCCAGCCTGGTACCAAAAGGAGTACCCAGGGCCTGGTACCCAGGCCCACTCCAGAATGGCCT
TGGACTCACCTTGAAAGGGGGAGCTGCTGGGCCTAAAGCCCACTCCTGGGGGTCTCCTGCTGCTTAGGTCCTTTT
GGGACCCCCACCCATCCAGGCCCTTTTTTGCACACTTTTCCCCCACCTTATGCATTTCCCCCCACTGCGGTGTTC
GGCCTAAGGTGGTGGGGGTGAGGGGGGGTTTGGCCATTAGCATTTCATGTCTTTCCCCAAATGAAATGCCCTGCA
AAGGGCAGTAACCCC

FIGURE 2163

MTAAATATVLKEGVLEKRSGGLLQLWKRKRCVLTERGLQLFEAKGTGGRPKELSFARIKAVECVESTGRHIYFTL
VTEGGGEIDFRCPLEDPGWNAQITLGLVKFKNQQAIQTVRARQSLGTGTLVS

FIGURE 2164

GCTGCCGCATCCCAGGCTAAGCGCCGCGCCGAAAGCCGTGCGGAGATTGGAGGCCGCGCGGGTCCCTGGTCTGGG
CC**ATG**TCTGGCTGTGATGCTGGGGAGGGAGACTGTTGTTCCCGGAGATGCGGCGCGCAGGACAAGGAGCATCCAA
GATACCTGATCCCAGAACTTTGCAAACAGTTTTACCATTTAGGCTGGGTCACTGGGACTGGAGGAGGAATTAGCT
TGAAGCATGGCGATGAAATCTACATTGCTCCTTCAGGAGTGCAAAAGGAACGAATTCAGCCTGAAGACATGTTTG
TTTGTGATATAAATGAAAAGGACATAAGTGGACCTTCGCCATCGAAGAAGCTAAAAAAAAGCCAGTGTACTCCTC
TTTTCATGAATGCTTACACAATGAGAGGAGCAGGTGCAGTGATTCATACCCACTCTAAAGCTGCTGTGATGGCCA
CACTTCTCTTTCCAGGACGGGAGTTTAAAATTACACATCAAGAGATGATAAAAGGAATAAAGAAATGTACTTCCG
GAGGGTATTATAGATATGATGATATGTTAGTGGTACCCATTATTGAGAATACACCTGAGGAGAAGACCCTCAAAG
ATAGAATGGCTCATGCAATGAATGAATACCCAGACTCCTGTGCAGTACTGGTCAGACGTCATGGAGTATATGTGT
GGGGGGAAACATGGGAGAAGGCCAAAACCATGTGTGAGTGTTATGACTATTTATTTGATATTGCCGTATCAATGA
AGAAAGTAGGACTTGATCCTTCACAGCTCCCAGTTGGAGAAAATGGAATTGTC**TAA**GCCAAAAGAAAGTCTAATT
ATATACAGAGATAAAGCTAAACGTAATTATTATTTAAATGAAAGCTATTTTTTTAAATGAATTGAAATTTTTCAT
GATGCTACTAATTTGCCACTAAATACTGCAAATGGTCACCCTGAATCTCTTCTGACATTGGATGTTATTTGCTTA
TATTCTTATAATTTTAAATGAGGGCACAGTGAAATGAAAATTTTATACTCTATGTTTCTGTTTATTTTTAAATCC
TTAACAGCAAAATATTTGCCTTTAATTTCTTTTTTATATATACTCTCGAGAGAATTCCTCTTAATTTTTAAAGAT
GCTGGTGATAATAAAATTCATTAGAAAATTTCCTCATTGTGGAATGAGCATTCTCTTGTTTTAATGTTGGTGTCA
GAAAATAAATATGAAACATTAAGTCC

FIGURE 2165

MSGCDAGEGDCCSRRCGAQDKEHPRYLIPELCKQFYHLGWVTGTGGGISLKHGDEIYIAPSGVQKERIQPEDMFV
CDINEKDISGPSPSKKLKKSQCTPLFMNAYTMRGAGAVIHTHSKAAVMATLLFPGREFKITHQEMIKGIKKCTSG
GYYRYDDMLVVPIIENTPEEKTLKDRMAHAMNEYPDSCAVLVRRHGVYVWGETWEKAKTMCECYDYLFDIAVSMK
KVGLDPSQLPVGENGIV

FIGURE 2166

GCGGCCGCGGCCGTGAGCCTGCCCCCAACTCGCCCTCAGCCGGCTGGCCGGCGCGGCC**ATG**GAGGTCTACATCCC
GTCCTTTCGCTATGAAGAGAGCGACCTGGAGCGGGGATACACGGTGTTTAAGATAGAAGTGCTAATGAATGGAAG
AAAACATTTTGTTGAAAAGAGATACAGCGAATTTCATGCTTTGCACAAAAAGCTTAAGAAATGTATAAAAACTCC
AGAAATCCCTTCTAAACATGTTAGGAACTGGGTCCCCAAAGTCTTGGAACAGCGACGACAAGGCTTGGAAACATA
CTTACAGGCTGTCATTTTAGAAAATGAAGAACTTCCCAAACTGTTTCTTGATTTCCTAAATGTGCGACACTTGCC
CTCTCTACCAAAGGCAGAAAGTTGTGGATCTTTTGATGAAACAGAGTCTGAAGAGTCAAGCAAACTGTCCCACCA
GCCTGTGCTGCTGTTCCTCAGGGATCCATATGTCTTGCCTGCAGCCAGCGATTTTCCAAATGTGGTTATTGAAGG
AGTCCTCCATGGGATATTTTACCCTCATCTACAGCCCAGG**TAG**AAATCCTACATGGCTAAAAGAAGCAGAAGCAA
GTTTCGAAGTCACAGTCAAGGAAATCAATACCTACCAATTTAACCTAAACGCTATGATATATAACAGCTCTAGCT
AGTGGTAAAGTGCACAGTCCCAGCTTAATTCAGGGCAGGGACATTTCCATTAGAATGGTGCTCTTAAAAATAGAA
ACTGAACCGGGGCGGTGGTCAGGCTAAGGCCAAGTGTTTAAGAAGTAGAGTGTAGCTGCCAGCGTAGAAACCCAT
GAAAAGGAGGCCACAGGAGATTCCTGGGAGCACTGGGTGTAGCAAAACAAAGCCACTCTCTGCTTCAGTCGCACC
ATTTGCTAATTGAAAATCATATCCTGAATCATACTGAGACTGATCAACTTTGGTAGCTTTTTTGTTCAGATCTTA
TGACACACTACTCTTCTCACCGTGAGATTTTCTCAGCCAGTGATAGTACATTCTGAAATGCTGGCACCAGGAGAC
GGCCACAGACACACACTGCTAAATGTGAAGATGGAACTAAACTGGAAATTAAATTATACTGACAATATTATGGCA
TTTTTAAGATCATGGCATTTTAATTTACATTAGAGTGGAGTTGCATCATACTCAGGGGTTAGCTTCCAAGGTCAG
TACATAGGTAAAATGGGCTATTAGGATGATCCTTGAAAGCCCTTTAGAAGGGTGCCATGTTGGAAACCTGTACAT
CACAACAAGTAGCTTTTCCTCCTATGTTGGAAAAAAAGACTGTTTCTTTGTTTGAAGACCAAGTGAAGTTGTTGG
TGTTTGTTTAGGGGCCATTTTGTTAAAAAAAAAAAGCACATAACTTTTAACACTAGAATCAGCCCGCAAGATGCT
TGCCCCGCTAGTGGCAGATGTGAACTGACAAGGAGTGAAGCGCCCACCCAGCGGATGGACAGCACCCACCTGGGT
TTACTCAAGGGTGTGCATTCATTTTAGGTGGGATCGCCACAGGATTTCATGTTATTTTCCTTACGGCTTCCTTTT
CACTGACCTCATTTGTTGAGTTAATGTAAGTTAAATGTGTCTATGATATAACTCCACTGTACATCATCCTTTGAG
TAGTAAAGGATAAAAGCATATATACTACCTATATGTATGTGCTGTATGTGGGCATTTCATTGAGATCTAATTAAT
AGCTAGCCTATTTATGGTTATTCGTTTTAGTAAGTTCTGTGGGAGCAAGGTATTTAAAATCAAAACTAATAACTA
CATCATGGTTTTTGATTAGGATCTAAATATTCAGGTTTTAAGCCTGCTGCAAACTTTTAAAATATTATGATAGAT
TCTGTACTACATGTGGGAAACAAGCAAGAACTAAATAATCAAATGTTGTCAACCAAAAGTAATAGTTGGGTATTG
GAGATTTTTTTAAAATGTTTTTATGTTATTAGCTATTTGGAGTTAAATAAAAACAGAACAAGGAAAAAAAAAAAA
AAAAAAAAAAAA

FIGURE 2167

MEVYIPSFRYEESDLERGYTVFKIEVLMNGRKHFVEKRYSEFHALHKKLKKCIKTPEIPSKHVRNWVPKVLEQRR
QGLETYLQAVILENEELPKLFLDFLNVRHLPSLPKAESCGSFDETESEESSKLSHQPVLLFLRDPYVLPAASDFP
NVVIEGVLHGIFYPHLQPR

FIGURE 2168

GCGGCCGCGTCGACCGGCGCGGCTGGAGCGCAGCGCCGAAGGGACTGGCAGGGCTGAAGTGTGCGGGACAGCAAG
CCCCCGAATAGCCCCGGCTGCCACCTCGCAGGACCCAAGGCCACGCGCGCCGGGCCCAGCTGAGCCGCCTC**ATG**A
AGCCGCCCGCGGAGGACCTGTCGGACGCGCTGTGCGAGTTTGACGCGGTGCTGGCCGACTTCGCGTCGCCCTTCC
ACGAGCGCCACTTCCACTACGAGGAGCACCTGGAGCGCATGAAGCGGCGCAGCAGCGCCAGTGTCAGCGACAGCA
GCGGCTTCAGCGACTCGGAGAGTGCAGATTCACTTTATAGGAACAGCTTCAGCTTCAGTGATGAAAAACTGAATT
CTCCAACAGACTCTACCCCAGCTCTTCTCTCTGCCACTGTCACTCCTCAGAAAGCTAAATTAGGAGACACAAAAG
AGCTAGAAGCCTTCATTGCTGATCTTGACAAAACTTTAGCAAGTATG**TGA**AACAAGAAGTTCTGGGTCCTTTCAT
CATAAGGGAGAAGCTTCAGAAAGTTCCGAGGACCTGCTAAAATCAGCTACTAGAATCTGCTGCCAGAGGGGACAA
AGACGTGCACTCAACCTTCTACCAGGCCACTCTCAGGCTCACCTTAAAATCAGCCCTTGATCCCATTTCTGGGCA
ATTTAGACAGTGAAACTGACTTTGTTTACCTGCTTGCAGCATATTAGAACAGACGATCCATGCTAATATTGTATT
TTCTCTTAAAACATAGCTTTCCTGTAATTTAAAGTGCTTTTATGAAAATATTTGTAATTAATTATATATAGTTGG
AAATAGCAGTAAGCTTTCCCATTATAATATATTTTTGTATACAAATAAAATTTGAACTGAACCTCGTGCC

FIGURE 2169

MKPPAEDLSDALCEFDAVLADFASPFHERHFHYEEHLERMKRRSSASVSDSSGFSDSESADSLYRNSFSFSDEKL
NSPTDSTPALLSATVTPQKAKLGDTKELEAFIADLDKTLASM

FIGURE 2170

AGAAGCAGTCAGCCCAGGGCTCTCGGATGCAGGGAGCCTGGGCCCAAACAGCAGCTTCCGGAGTCGGAAGGAGCT
GAGGAAGAAGACAGACTGAAGGAGCTTGCGACTTTTCCGCCTCGGCAACCGGACCCAGCAGCAAGCAGGACGGGC
GGCGCTCTGCTACTGGTCCCGTTAAGCCAGAGTAGCCCAAGCCCTGAAGTCACTGCTCATCCGGA**ATG**GAAATCC
CGCCGACCAACTACCCAGCCTCCAGGGCGGCCTTGGTGGCACAGAACTACATCAACTACCAGCAGGGGACCCCGC
ACAGGGTGTTTGAGGTGCAGAAGGTCAAACAAGCCAGCATGGAGGATATTCCAGGAAGAGGACATAAGTATCGCC
TTAAATTTGCTGTTGAAGAAATTATACAAAAACAAGTTAAGGTGAACTGCACAGCTGAAGTACTTTACCCTTCAA
CGGGACAAGAAACTGCACCAGAAGTCAACTTCACATTTGAAGGAGAAACTGGAAAGAATCCAGATGAAGAAGACA
ACACATTTTATCAAAGACTTAAGTCCATGAAGGAACCGCTAGAAGCACAAAATATTCCAGACAATTTTGGAAATG
TATCTCCAGAAATGACGCTCGTTCTACATTTAGCCTGGGTTGCCTGTGGTTATATAATATGGCAAAATTCTACTG
AAGACACATGGTATAAAATGGTAAAAATTCAAACTGTCAAGCAAGTGCAAAGAAATGATGACTTTATTGAATTAG
ACTACACCATTCTACTTCATAATATAGCATCTCAGGAGATTATTCCCTGGCAAATGCAAGTTCTCTGGCATCCAC
AATACGGCACTAAAGTAAAACATAATAGCCGTCTGCCAAAGGAAGTACAACTGGAA**TAA**ACAAAAACCCTAACAC
TGGAAGTGTAAACATGTCTATTGATGTGTATGCCAATTTCACTGGCATCTAGCTTATGAGGCCAAATAATCCCAA
AGTGTCACTTTATATAAATGTCTTGATTACAGTATAGAACTTTATAGAGTCCATAATACAAAGTATCACTACATA
AAAATGTCTTTAAAACAGTAATAGTGGTATGTATATCCAAAATAAAAAGCTTCAATTTCAGCCAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAA

FIGURE 2171

MEIPPTNYPASRAALVAQNYINYQQGTPHRVFEVQKVKQASMEDIPGRGHKYRLKFAVEEIIQKQVKVNCTAEVL
YPSTGQETAPEVNFTFEGETGKNPDEEDNTFYQRLKSMKEPLEAQNIPDNFGNVSPEMTLVLHLAWVACGYIIWQ
NSTEDTWYKMVKIQTVKQVQRNDDFIELDYTILLHNIASQEIIPWQMQVLWHPQYGTKVKHNSRLPKEVQLE

FIGURE 2172

GCTGGAGCCGGCGCGGAGGAGCGGGCGGCCGCGGCTGTGCCCTCTCCTACTCCTCACCGCGCGCGCGCGGGGAAC
CAGTAGCCGCGGCTGCTTCGGTTGCCGCGGTCGGTGGTCGTT**ATG**GATTCTCCATGGGACGAGTTGGCTCTGGCC
TTCTCCCGCACGTCCATGTTTCCCTTTTTTGACATCGCGCACTATCTAGTGTCAGTGATGGCGGTGAAACGTCAG
CCGGGAGCAGCTGCATTGGCATGGAAGAATCCTATTTCAAGCTGGTTTACTGCTATGCTCCACTGTTTTGGTGGA
GGAATTTTATCCTGTCTACTGCTTGCAGAGCCTCCATTGAAGTTTCTTGCAAACCACACTAACATATTACTGGCA
TCTTCAATCTGGTATATTACATTTTTTTGCCCGCATGACCTAGTTTCCCAGGGCTATTCATATCTACCTGTTCAA
CTACTGGCTTCGGGAATGAAGGAAGTGACCAGAACTTGGAAAATAGTAGGTGGAGTCACACATGCTAATAGCTAT
TACAAAAATGGCTGGATAGTCATGATAGCTATTGGATGGGCCCGAGGTGCAGGTGGTACCATTATAACGAATTTT
GAGAGGTTGGTAAAAGGAGATTGGAAACCAGAAGGTGATGAATGGCTGAAGATGTCATACCCTGCCAAGGTAACC
CTGCTGGGGTCAGTTATCTTCACATTCCAGCACACCCAGCATCTGGCAATATCAAAGCATAATCTTATGTTCCTT
TATACCATCTTTATTGTGGCCACAAAGATAACCATGATGACTACACAGACTTCTACTATGACATTTGCTCCTTTT
GAGGATACATTGAGTTGGATGCTATTTGGCTGGCAGCAGCCGTTTTCATCATGTGAGAAGAAAAGTGAAGCAAAG
TCACCTTCCAATGGCGTTGGGTCATTGGCCTCAAAGCCGGTAGATGTTGCCTCAGATAATGTTAAAAAGAAACAT
ACTAAGAAGAATGAA**TAA**ATTTACGTGATGAGCTCTACAAGGCCAAAAATTTTTTTTCTTATCTACCTGTTATAT
TGTGCTAATTTTTCTATGTATGTGATGTGAAATGAAGACTATATATATGGAATGGAGGTGACAGAAAGAAAGAAA
TTCTTTGTTTGAGGGAGACTTCCCCTTTCTGGATTGTATTTGTAGAGTGTTACGAGTGTATCATGTGATTATGCT
TTACCGGTATAAGAGATTCTGTTGTGATTATTTGAATAGTTTTATATTAATAAAAGAAGACAAAATTTTTTAAAT
GTTAGAAAAAGCAGATCTGTCATTGCAAAGTAACAAAAATTTTAAGCTTTTAAAAATGTAGATTTTTCATATTTT
TAAAATTTGAATCTATTTGAGCTTTAGTTCAGCAGAATTAAATTTTTACTTGACATTATCATTAAAATTGCTAGG
TATGGAGAACAATTCCTATTTTATTTTGAACACTGAGAAGAGTAAACTTTTCCTAAAACACTTTATATTATAAAT
GAAAATAAATTGCTAGTTTATATTTTAGATATAAACATCATATTTTTTATTAATACCTACATCAAATGGAAAATA
TCTGAAATTTTTTTTCCATAGCAGGTATTTTCTACTAGAAGTAGTTTTACTACTTTTCATTTAGAACAGAGTATG
AGTCTTAATCTGAAGTCTTTTTCATGCCCTTGTTTTAAAAAAACTACTTTTTTTGGCCTCAAAAAAATCAAGGGT
GTAATTTTTAATAAATTGTTAATCCTATGTTTTGTAATTTTCATTTTAGGAGCTTGACTTATTTTTTTCTCTCTC
ATAAAAACACATTTGTTTTAATTGTAGGAGAAATTTTCTCAGCATTTTGCATGTTCTTTCTAATCTTTGTTGGTC
TGAATATATTGGTAGTAATTACTGTAATTATTCAACAAAAAGCATATCCGTTCAAAAATTTTTCCACTATGTCTT
TTTTCTAGTGGCTACTGTTTTAGTTTTCTAGTTGAATATCTCTGACAAGCTTTCGTATGGTTTTGTTATATCTTC
ATCTACATGTAATGTGTTATTAATTTTATTAAATGAAAACTAATCACCTTC

FIGURE 2173

MDSPWDELALAFSRTSMFPFFDIAHYLVSVMAVKRQPGAAALAWKNPISSWFTAMLHCFGGGILSCLLLAEPPLK
FLANHTNILLASSIWYITFFCPHDLVSQGYSYLPVQLLASGMKEVTRTWKIVGGVTHANSYYKNGWIVMIAIGWA
RGAGGTIITNFERLVKGDWKPEGDEWLKMSYPAKVTLLGSVIFTTFQHTQHLAISKHNLMFLYTIFIVATKITMMT
TQTSTMTFAPFEDTLSWMLFGWQQPFSSCEKKSEAKSPSNGVGSLASKPVDVASDNVKKKHTKKNE

FIGURE 2174

AGGGGGCCGAGCGGCGGGCCGGGCCGGGCCGGGCAGGGCCGGGGCGTGGGCCGGCAGGAAGATGGCGAACGTGGG
GCTGCAGTTCCAGGCGAGCGCGGGGGACTCGGACCCACAGAGCCGGCCCCTGCTGCTGCTCGGGCAGCTGCACCA
CCTGCACCGCGTGCCCTGGAGCCACGTCCGCGGGAAGCTGCAGCCCCGGGTCACCGAGGAGCTCTGGCAGGCTGC
CCTGAGCACGCTCAACCCCAACCCCACGGACAGCTGTCCCCTCTACCTGAACTACGCCACCGTGGCTGCCCTGCC
CTGCAGGGTGAGCCGGCACAACAGCCCCTCGGCCGCCCACTTCATCACGCGGCTGGTGCGGACCTGCCTGCCGCC
CGGAGCGCATCGCTGCATTGTG**ATG**GTCTGCGAGCAGCCGGAGGTCTTTGCTTCCGCCTGTGCCCTGGCCCGGGC
CTTCCCGCTGTTCACCCACCGCTCAGGTGCCTCTCGGCGCTTGGAGAAGAAGACGGTCACCGTGGAGTTTTTCCT
GGTGGGACAAGACAACGGGCCGGTGGAGGTGTCCACATTGCAGTGCTTAGCGAATGCCACAGACGGCGTGCGGCT
AGCAGCCCGCATCGTGGACACACCCTGCAATGAGATGAACACCGACACCTTCCTCGAGGAGATTAACAAAGTTGG
AAAGGAGCTGGGGATCATCCCAACCATCATCCGGGATGAGGAACTGAAGACGAGAGGATTTGGAGGAATCTATGG
GGTTGGCAAAGCCGCCCTGCATCCCCCAGCCCTGGCCGTCCTCAGCCACACCCCAGATGGAGCCACGCAGACCAT
CGCCTGGGTGGGCAAAGGCATCGTCTATGACACTGGAGGCCTCAGCATCAAAGGGAAGACTACCATGCCGGGGAT
GAAGCGAGACTGCGGGGGTGCTGCGGCCGTCCTGGGGGCCTTCAGAGCCGCAATCAAGCAGGGTTTCAAAGACAA
CCTCCACGCTGTGTTCTGCTTGGCTGAGAACTCGGTGGGGCCCAATGCGACAAGGCCAGATGACATCCACCTGCT
GTACTCAGGGAAGACGGTGGAAATCAACAACACGGATGCCGAGGGCAGGCTGGTGCTGGCAGATGGCGTGTCCTA
TGCTTGCAAGGACCTGGGGGCCGACATCATCCTGGACATGGCCACCCTGACCGGGGCTCAGGGCATTGCCACAGG
GAAGTACCACGCCGCGGTGCTCACCAACAGCGCTGAGTGGGAGGCCGCCTGTGTGAAGGCGGGCAGGAAGTGTGG
GGACCTGGTGCACCCGCTGGTCTACTGCCCCGAGCTGCACTTCAGCGAGTTCACCTCAGCTGTGGCGGACATGAA
GAACTCAGTGGCGGACCGAGACAACAGCCCCAGCTCCTGTGCTGGCCTCTTCATCGCCTCACACATCGGCTTCGA
CTGGCCCGGAGTCTGGGTCCACCTGGACATTGCTGCACCGGTGCATGCTGGTGAGCGAGCCACAGGCTTCGGTGT
GGCCCTCCTGCTGGCGCTCTTCGGCCGTGCCTCTGAGGACCCTCTGCTGAACCTGGTGTCCCCACTGGGCTGTGA
GGTGGATGTCGAGGAGGGGGACCTGGGGAGGGACTCCAAGAGACGCAGGCTTGTG**TGA**GCCTCCTGCCTCGGCCC
TGACAAACGGGGATCTTTTACCTCACTTTGCACTGATTAATTTTAAGCAATTGAAAGATTGCCCTTCATATGGGT
TTTGGTTTGTCTTTCTGGTCGTCAGCGTGGTGGTGGAAACAGCTGAAGTTTTAGGAGACAGCTTAGGGTTTGGTG
CGGGCCACGGGGAGGGGACCGGGAAGCGCTGGGGCTTGTTTCTGTTTGTTACTTACAGGACTGAGACATCTTCTG
TAAACTGCTACCCCTGGGGCCTTCTGCACCCCGGGGTGAGGCCTCCTGCCTGCCTGGTGCCCTGTCCCAGCCCCA
GGTCCTGTGCAGGGCACCTGCGTGGCTGACAGCCAGGCTCTTACTCCAGCCGGGGCTGCCAGCGCATCCAGCCAG
CCCAGCCCTGTGAAAGATGGAGCTGACTTGCTGCAGGGGACCTGATTTATAGGGCAAGAGAAGTCACACTCCGGC
CTCTCAGAATTCACTTGAGGTTCAATTAAATACAGTCACACCGCCCCCTCAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAA

FIGURE 2175

MVCEQPEVFASACALARAFPLFTHRSGASRRLEKKTVTVEFFLVGQDNGPVEVSTLQCLANATDGVRLAARIVDT
PCNEMNTDTFLEEINKVGKELGIIPTIIRDEELKTRGFGGIYGVGKAALHPPALAVLSHTPDGATQTIAWVGKGI
VYDTGGLSIKGKTTMPGMKRDCGGAAAVLGAFRAAIKQGFKDNLHAVFCLAENSVGPNATRPDDIHLLYSGKTVE
INNTDAEGRLVLADGVSYACKDLGADIILDMATLTGAQGIATGKYHAAVLTNSAEWEAACVKAGRKCGDLVHPLV
YCPELHFSEFTSAVADMKNSVADRDNSPSSCAGLFIASHIGFDWPGVWVHLDIAAPVHAGERATGFGVALLLALF
GRASEDPLLNLVSPLGCEVDVEEGDLGRDSKRRRLV

FIGURE 2176

TACTTGCGTCATGGACAGCTCATTGTAAATGATGGCATTAATTTATTGGGTGTGTTAGAAGAAGCAAGATTTTTT
GGTATTGACTCATTGATTGAACACCTAGAAGTGGCAATAAAGAATTCTCAACCACCGGAGGATCATTCACCAATA
TCCCGAAAGGAATTTGTCCGATTTTTGCTAGCAACTCCAACCAAGTCAGAACTGCGATGCCAGGGTTTGAACTTC
AGTGGTGCTGATCTTTCTCGTTTGGACCTTCGATACATTAACTTCAAA**ATG**GCCAATTTAAGCCGCTGTAATCTT
GCACATGCAAATCTTTGCTGTGCAAATCTTGAACGAGCTGATCTCTCTGGATCAGTGCTTGACTGTGCGAATCTC
CAGGGAGTCAAGATGCTCTGTTCTAATGCAGAAGGAGCATCCCTGAAACTGTGTAATTTTGAGGATCCTTCTGGT
CTTAAAGCCAATTTAGAAGGTGCTAATCTGAAAGGTGTGGATATGGAAGGAAGTCAGATGACAGGAATTAACCTG
AGAGTGGCTACCTTAAAAAATGCAAAGTTGAAGAACTGTAACCTCAGAGGAGCAACTCTGGCAGGAACTGATTTA
GAGAATTGTGATCTGTCTGGGTGTGATCTTCAAGAAGCCAACCTGAGAGGGTCCAACGTGAAGGGAGCTATATTT
GAAGAGATGCTGACACCACTACACATGTCACAAAGTGTCAGA**TGA**GAATTTTAGGGGCTGGAGGAAGATGTAAAA
GATGAAAATGTTTTCCTTATCACTTTTCTTTCTCCACCCACTCAGTTGTCTAGAAGAAATAACACTGTAAGGAAA
TTTAAAAAAAAAAACATTTAGAGGATTATGCTTGTTTTGAGTGGTGCATAAGGGAAAAAACTGACTTTTTTTCCAT
ATTCTGATTTTTAACAGAAAAGCACTCATTTAATAGATGTAGGGAAACTAGATATTGCTGCCTTTTGAATGGGGT
AGGGGGGTTTACCTGGTTTTATGACCAGGCATAGTATCTATTATATTTGCTTTTAAATAGGCATGATGTGGAAAT
ACCATCTTGGTTTGAGATGCATTTGAGGATTTTAATTTATGGAAAGCACAACATATGCAATTATATTTATTGAAT
TCCTAGATGCAGTATGGATATTTAAATTGTTAAAACTTTATGAAAACTTGGAAAAGGTTGTTCAGGTTTATAAAT
AGCTTTAGTGATGCCTCCCCTCTTTAAATACCTGTCACACCGTATGAATATGGTGAGATCAGACTCCCTAAGACT
CTTTTCAGGTTCATTTTTATAATGTTTACTTTTTAGGACAGAACAGTAGCTAAATTAAAGTAATATCCAGTTCTT
ACTGATTGAGACAGAGTGGAAAGAAAGACATCATTGTACATCACTGTCATTCCAAAGGTACAGTGTAACTCTGGA
TGGAGGAATAACTTACCTATCACTACAACACTTACAAATGAGAATTTCTCAGAATTTCATTCTAGGCAAGTTCCA
CTCAACACCAGATCAAGCAATTCTATCTATTTACACTATTAGCCTAGTTTTCTCATACAGTCATCACAAGCATAG
GAAGATACTTCAAAACCAAAAAAACCAAGGTGCATCATTAATATTCATTTAATTCAAATGCCAAATAGTTTACAT
AGGGCCAGCTTAGAAATAGATACTAAATCCAGAGCTACTGCAATCAAAGCTTATATGAGTGAATATGGTAGAGTT
GCCTGCTAAAAGGCAATGTAATATAATTGCAGCTAGAACCCTACAGTGGGGAATGAGGAATTTTAAACACACATT
TGATTGCAGCCACCAAAAAAAATAGACGTAAAAATAAAGGCATTTGGCTGGTCCAAGATGTAATTATCAATCAGT
CAGCACCTGTGATTCTTTTACTTATTTTTTTGTGGTTTTTTTTTTTAAACAAATTTTAGCCCAATTTTCTTGAGT
CATTCTCTCTCTGCAGCAGCAGAGGAAGGGCCTGTACCTCCCTACCAATGACTTGGTGTCCTTATTTTCTACCCC
AAGAGCAGGGATATTAGCTGTGTCCAAATGGGTTCTGAATTCTACAGACTCATCAACATGAGGCAAGGAATCATT
GAAAACCACCTGTGTCTCCTTTGGGAGAATGACATATCTTTAGTATTTACGTAGCTTATTCTTCTATATCTACAT
ATGCAAAGCTTTCCTTAACAGTAAAGGGTACATATGCATAGTGGGAGGAGATCAGACCTTTACAAGTGAAGGAAA
GCAACTTCAGAAATGAATTATTTTCTTTGCTTTATTATTTTTACCAAGACAGAGAAGTATTGTATTGAGAGATAA
TCTATTTTCATAATCAATATGTGCCTAAATTATATTTAAATCATTTCACTCTGTACTATATTTTCAGGAATTACA
GAATGTGGTATTCATTCACTTAAAGGTACCTCTGTAGAAATAACCTAAAACTGCAGAAGGATCTGAAAGATCTAA
ACATGGTGTGCTTAGAAACTGCAGATTTTAGATCTAATGTATACTGCATTAATAAATGATATAAAGTGTTTGTTG
AAAAAAAAAAAAAAAAAAAA

FIGURE 2177

MANLSRCNLAHANLCCANLERADLSGSVLDCANLQGVKMLCSNAEGASLKLCNFEDPSGLKANLEGANLKGVDME
GSQMTGINLRVATLKNAKLKNCNLRGATLAGTDLENCDLSGCDLQEANLRGSNVKGAIFEEMLTPLHMSQSVR

FIGURE 2178

GGCACGAGGCCGAGCCTAGTGCCTCCCACGCCCGGCGGCCGCGAGCCGGGGTCCGCGAGGGCGGAGTGGGGCGCG
GCAGCCAGGAACCCGACTACGAATCCCAGGGTGCGGGCGGGCGGAGCGAGGAGGGACGCTGGGCCTGCCCGGTGC
GCACGGGGGCGGGGACCGGCAAGGCGGGACCATTTCCCGGCATAGGCTCCGGTGCCCCTGCCCGGCTCCCGCCGG
GAAGTTCTAGGCCGCCGCACAGAAAGCCCTGCCCTCCACGCCGGGTCTCTGGAGCGCCCTGGGTTGCCCGGCCGG
TCCCTGCCGCTGACTTGTTGACACTGCGAGCACTCAGTCCCTCCCGCGCGCCTCCTCCCCGCCCGCCCCGCCGCT
CCTCCTCCCTGTAACATGCCATAGTGCGCCTGCGACCACACGGCCGGGGCGCTAGCGTTCGCCTTCAGCCACC**ATG**GGGAATGGGATGAACAAGATCCTGCCCGGCCTGTACATCGGCAACTTCAAAGATGCCAGAGACGCGGAACAATT
GAGCAAGAACAAGGTGACACATATTCTGTCTGTCCATGATAGTGCCAGGCCTATGTTGGAGGGAGTTAAATACCT
GTGCATCCCAGCAGCGGATTCACCATCTCAAAACCTGACAAGACATTTCAAAGAAAGTATTAAATTCATTCACGA
GTGCCGGCTCCGCGGTGAGAGCTGCCTTGTACACTGCCTGGCCGGGGTCTCCAGGAGCGTGACACTGGTGATCGC
ATACATCATGACCGTCACTGACTTTGGCTGGGAGGATGCCCTGCACACCGTGCGTGCTGGGAGATCCTGTGCCAA
CCCCAACGTGGGCTTCCAGAGACAGCTCCAGGAGTTTGAGAAGCATGAGGTCCATCAGTATCGGCAGTGGCTGAA
GGAAGAATATGGAGAGAGCCCTTTGCAGGATGCAGAAGAAGCCAAAAACATTCTGGCCGCTCCAGGAATTCTGAA
GTTCTGGGCCTTTCTCAGAAGACTG**TAA**TGTACCTGAAGTTTCTGAAATATTGCAAACCCACAGAGTTTAGGCTG
GTGCTGCCAAAAAGAAAAGCAACATAGAGTTTAAGTATCCAGTAGTGATTTGTAAACTTGTTTTTCATTTGAAGC
TGAATATATACGTAGTCATGTTTATGTTGAGAACTAAGGATATTCTTTAGCAAGAGAAAATATTTTCCCCTTATC
CCCACTGCTGTGGAGGTTTCTGTACCTCGCTTGGATGCCTGTAAGGATCCCGGGAGCCTTGCCGCACTGCCTTGT
GGGTGGCTTGGCGCTCGTGATTGCTTCCTGTGAACGCCTCCCAAGGACGAGCCCAGTGTAGTTGTGTGGCGTGAA
CTCTGCCCGTGTGTTCTCAAATTCCCCAGCTTGGGAAATAGCCCTTGGTGTGGGTTTTATCTCTGGTTTGTGTTC
TCCGTGGTGGAATTGACCGAAAGCTCTATGTTTTCGTTAATAAAGGGCAACTTAGCCAAGTTTAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAA

FIGURE 2179

MGNGMNKILPGLYIGNFKDARDAEQLSKNKVTHILSVHDSARPMLEGVKYLCIPAADSPSQNLTRHFKESIKFIH
ECRLRGESCLVHCLAGVSRSVTLVIAYIMTVTDFGWEDALHTVRAGRSCANPNVGFQRQLQEFEKHEVHQYRQWL
KEEYGESPLQDAEEAKNILAAPGILKFWAFLRRL

FIGURE 2180

CCCAGCAGGCAGTGCAGCCTAGAGACGCTGACAAAGGAGCGGAGGAGCAGTCGCAGCTGCTTTCCGAGGAAGCCG
GTGTTGCCGAGATTGCCAAAATGCTTTGGAGTTTTTAACTGAATCTAAGAAAAGTCCAAAATAGATTTGAGACTG
TAAAAACAGAAACTGCAGCAAGGGGGATTCAGTGCCA**ATG**CATCAACAAAAAAGACAACCAGAGTTAGTGGAAGG
AAATCTTCCTGTTTTCGTGTTCCCCACGGAGCTCATATTTTATGCAGATGATCAGTCAACACATAAGCAAGTGTT
GACACTGTACAATCCCTATGAGTTTGCCTTAAAGTTCAAAGTTTTGTGTACTACTCCAAATAAGTATGTTGTCGT
TGATGCTGCAGGTGCAGTAAAGCCTCAGTGTTGTGTGGATATTGTGATTCGTCATCGAGATGTTCGATCCTGTCA
CTATGGTGTAATAGACAAATTCCGTCTCCAAGTTTCCGAGCAAAGCCAAAGGAAGGCTTTGGGAAGAAAAGAGGT
TGTTGCTACTCTTCTCCCATCAGCAAAAGAACAACAAAAGGAAGAAGAGGAAAAAAGATTAAAGGAACATTTAAC
TGAAAGTTTATTTTTTGAGCAGTCGTTTCAACCAGAAAACAGAGCTGTATCCTCAGGACCTAGTTTACTAACTGT
CTTCCTGGGAGTGGTGTGCATTGCAGCCCTGATGCTGCCTACACTGGGGGATGTGGAATCGCTGGTGCCTCTCTA
CCTCCACTTAAGTGTGAATCAAAAATTAGTGGCTGCTTATATCTTAGGTCTTATCACAATGGCCATACTTAGAAC
A**TGA**GCAAGGATTTCAATTGACTTCTGAAGTAAATCTGTCTTGAAAATATGAATGTGGACTGCCTTTTATCTCTA
TTTCACTCCATTAACATGCAACAAACTATTGAATGATTTCAAATAATTGCAAATGTATAATATATATTTTAAATT
ATAATTTAATTTGAAGGACTGCAGAACATTATTTTACAGACAGCAAGGATGCTTCTGAGTGACACCTAGGAAATT
ATTTGAAGAAATTCTTTTTATATCTATACCTGTTGTGTAAGAAACTTTAAAACATTTGTTATTTTCTCACCTTTT
TTTCTAATTCACTTTGATTGCTAGGGGTCATGTATGCTTCGAAGTTACAGGACTAAAAGAGCAAACTGACCGGCC
TAAAACTAAAATGACATTTATTCCCTAGCTACAAACATCAGCGTTATTATGTTAATTATACCTTGCCCTCTATCA
TTATAAATGGTTGCCATGGTGTTTCTAAAAATAAGTGTTTTACCATTAATGTGTAGAGGGCAAACAAAGCATAAA
GTACTAAGGGATCATGCTTATCCTAGGGTCTCACAGAAGAGAGGACATATTTAATTAATCTTGTGAATTACAGAA
CAGGTTGTGGTCCAGACACCAAGAATCATAGGGGTTTTTTTTTAAAAAACCTAATAGAAGTAGGGTGACCTCTCT
CTTTGGTCTAAGAGTTCTAAAGGAAGGTAGGCATCTGTTTAATTAGTTGGTTCACCCTGGCTTTACCTCTGGTTA
ATGCTTTGTGTTAATAGGAAGGAAAAATCACTTTATCTTTTCTTCCAAGCCCCTCCCTGCCTGACTTACCCAGAC
TGGGATTACCAGATACCAGGTGATTTATGTGGAGATGATTTTTCACCTTTAAACTCTAAGCCAAGTGTAAGAAAC
TCTTGATAGCTATGTCTATTTTATATCAGTCACTGAGACTTTTTTTTAAGTTTTTATTTATTATTAAGACAACTT
TGCCAAAAAAGTCCCCTAAGCACAACTATTTACATTTCTTTATAGCCTCTTCTGATCTCTAACACATATGCAGTT
TTAACTGTTATTTTCATAGTAACTGATCTTTTGTCTAAGGATTTTTACCTGAAAGCACAATGTATTGAGTCTCTT
GAAAATCATCTTTCAGATCTTTTTACAGAATGAACTTATGCACTGCTACTGTAGTATTCTCAAGGAATATATGTA
AACACAAATGTATGCCTGAGGTTGGTTTTTGCAGAAAACAGTCTCTGCTTCTAAAAACTTCTATGTCTAGTCTTC
CATAGGAAATCCTCACTGTTTAACCATGTGAGGAGCCTAAGTCATTAAACGGATCATGTCTGTACATTGTGTAAT
GAATGAAAAGCACATAAATGTAATCTACTTTGAACTTTGTAAAAATGATGTGTGGAGGCTATTCTTGTTTCTCCA
TCTCAAGTCCTGTGTGTGCACGTGTGTGCAAGTGCACATGTGTGTGTGTAATAACACATTGTAAAGAACAGAAAT
TACTTTAAAAAATAAACAGAAATGGAGACCTGA

FIGURE 2181

MHQQKRQPELVEGNLPVFVFPTELIFYADDQSTHKQVLTLYNPYEFALKFKVLCTTPNKYVVVDAAGAVKPQCCV
DIVIRHRDVRSCHYGVIDKFRLQVSEQSQRKALGRKEVVATLLPSAKEQQKEEEEKRLKEHLTESLFFEQSFQPE
NRAVSSGPSLLTVFLGVVCIAALMLPTLGDVESLVPLYLHLSVNQKLVAAYILGLITMAILRT

FIGURE 2182

GACTTTTCCCACACACTGGATTGTGAGGCTCTTCTTAAAAGTATAATGGCATCTTGTGAATCCTATAAGCAGTCT
TTATGTCTCTTAACATTCACACCTACTTTTTAAAAACAAATATTATTACTATTTTTATTATTGTTTGTCCTTTAT
AAATTTTCTTAAAGATTAAGAAAATTTAAGACCCCATTGAGTTACTGTA**ATG**CAATTCAACTTTGAGTTATCTTT
TAAATATGTCTTGTATAGTTCATATTCATGGCTGAAACTTGACCACACTATTGCTGATTGTATGGTTTTCACCTG
GACACCGTGTAGAATGCTTGATTACTTGTACTCTTCTTATGCTAATATGCTCTGGGCTGGAGAAATGAAATCCTC
AAGCCATCAGGATTTGCTATTTAAGTGGCTTGACAACTGGGCCACCAAAGAACTTGAACTTCACCTTTTAGGATT
TGAGCTGTTCTGGAACACATTGCTGCACTTTGGAAAGTCAAAATCAAGTGCCAGTGGCGCCCTTTCCATAGAGAA
TTTGCCCAGCTTTGCTTTAAAAGATGTCTTGTTTTTTATATACACA**TAA**TCAATAGGTCCAATCTGCTCTCAAGG
CCTTGGTCCTGGTGGGATTCCTTCACCAATTACTTTAATTAAAAATGGCTGCAACTGTAAGAACCCTTGTCTGAT
ATATTTGCAACTATGCTCCCATTTACAAATGTACCTTCTAATGCTCAGTTGCCAGGTTCCAATGCAAAGGTGGCG
TGGACTCCCTTTGTGTGGGTGGGGTTTGTGGGTAGTGGTGAAGGACCGATATCAGAAAAATGCCTTCAAGTGTAC
TAATTTATTAATAAACATTAGGTGTTTGTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2183

MQFNFELSFKYVLYSSYSWLKLDHTIADCMVFTWTPCRMLDYLYSSYANMLWAGEMKSSSHQDLLFKWLDNWATK
ELELHLLGFELFWNTLLHFGKSKSSASGALSIENLPSFALKDVLFFIYT

FIGURE 2184

AGATCCAGCAGGTGCGCGAAACCGCGGCGCGCCGCCCTCCGCCGTTAT**ATG**AGGCCCCGCTCCGGCCCCACGCGG
AACCCGCGGCTCCGAGCCTTCGCCGGCGTCCCGACCCGAGGCCGGACCCGAGGCCAGTCCCGCCGCTGCGCAGCC
GAAGCCAGTGCGGGGCCTGAGAGGGACGCGCGCCCCGGGGCCCCCGCCGCGGGCACCATGGGCGCTGCCCACTCC
GCGTCTGAGGAGGTGCGGGAGCTCGAGGGCAAGACCGGCTTCTCATCGGATCAGATCGAGCAGCTCCATCGGAGA
TTTAAGCAGCTGAGTGGAGATCAGCCTACCATTCGCAAGGAGAACTTCAACAATGTCCCGGACCTGGAGCTCAAC
CCCATCCGATCCAAAATTGTTCGTGCCTTCTTCGACAACAGGAACCTGCGCAAGGGACCCAGTGGCCTGGCTGAT
GAGATCAATTTCGAGGACTTCCTGACCATCATGTCCTACTTCCGGCCCATCGACACCACCATGGACGAGGAACAG
GTGGAGCTGTCCCGGAAGGAGAAGCTGAGATTTCTGTTCCACATGTACGACTCGGACAGCGACGGCCGCATCACT
CTGGAAGAATATCGAAATGTAAAGTGGTCGAGGAGCTGCTGTCGGGAAACCCTCACATCTAGAAGGAGTCCGCTC
GCTCCATCGCCGACGGGGCCA**TGA**TGGAGGCGGCCAGCGTGTGCATGGGGCAGATGGAGCCTGATCAGGTGTACG
AGGGGATCACCTTCGAGGACTTCCTGAAGATCTGGCAGGGGATCGACATTGAGACCAAGATGCACGTCCGCTTCC
TTAACATGGAAACCATGGCCCTCTGCCACTGACCCACCGCCACCTCCGCGGAGAGACTGCACTTTGCAATGGGGC
CGCCTCCCCGCGTAGCTGGAGCAGCCCAGGCCCGGCGGACAGCCTCTTCCTGCAGCGCCGGTACATAGCCAAGGC
TCGTCTGCGCACCTTGTGTCTTGTAGGGTATGGTATGTGGGACTTCGCTGTTTTTATCTCCAATAAAAAAAAAAA
AAAAAGGTTTGTTAATTAAAAAAAAAAAAAAAAAGAAAAAAAAAAAAAAAAAAAAAAAAAAAGAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2185

MRPRSGPTRNPRLRAFAGVPTRGRTRGQSRRCAAEASAGPERDARPGAPAAGTMGAAHSASEEVRELEGKTGFSS
DQIEQLHRRFKQLSGDQPTIRKENFNNVPDLELNPIRSKIVRAFFDNRNLRKGPSGLADEINFEDFLTIMSYFRP
IDTTMDEEQVELSRKEKLRFLFHMYDSDSDGRITLEEYRNVKWSRSCCRETLTSRRSPLAPSPTGP

FIGURE 2186

AAACCCAAAGCGGCCGCCGTAGGCGAAGGTGAAG**ATG**GCTGCCTCTGCCTTTGCTGGTGCAGTGAGAGCAGCTTC
AGGAATCCTACGGCCCCTGAATATTTTGGCATCTTCAACCTACCGCAACTGTGTCAAGAATGCCTCTCTTATTTC
TGCATTGTCCACTGGACGTTTTAGTCATATTCAGACACCAGTTGTTTCCTCCACTCCCAGACTTACCACATCTGA
GAGAAACCTGACATGTGGGCATACCTCAGTGATCCTTAATAGAATGGCCCCCGTGCTTCCAAGTGTCCTGAAGCT
GCCAGTCAGATCTCTAACATACTTCAGTGCAAGAAAAGGCAAGAGAAAGACCGTGAAAGCTGTCATCGATAGGTT
TCTTCGACTTCATTGTGGCCTTTGGG**TGA**GGAGAAAGGCTGGCTATAAGAAAAAATTATGGAAAAAGACACCTGC
AAGGAAGAAGCGATTGAGGGAATTTGTATTCTGCAATAAAACCCAGAGTAAACTCTTAGATAAAATGACGACGTC
CTTCTGGAAGAGGCGAAACTGGTACGTTGATGATCCTTATCAGAAGTATCATGATCGAACAAACCTGAAAGTATA
GATCAGAAGTTTCACTTGTTTCTCAGTTATTGGATATGTATCTTTGTGTACATATCTTTGCAAAAATGGATAAGT
ACAAAACTTGATGTAAATTGTACCAATGAATACGTAAACATACAGTGACAACATTAAACTTAGAAAAGTTTTAAA
ACTTAATGGATCAGACTTTGCCAGATTTGGTTAGGGAAACAGAAATTTAGAATGGTGCATTATTTTTAACAAATG
GTATTGGCTTAACTAGTTGTTTCAGTTATGCTCTTTTAGTTGCAAGGAATCTCAAGTGGGACAAACATAAAAAGA
CTCAAAAGCTACAAGTTAGCTCAAGCAATGTGACATTATTTCAAGGATATGTGCCAGGGAATTCAGGAACCACCT
CACCAACCCCATCTCCCACTCAGAAATCACCTCCCAGCCTCAGGAAGAGTAGAAATTGGGTGGTGCTCCTCAGCA
GGGGAAGGTGGATGTTTAGGCTTGGGCTCTGCATGCATGTGACTTGCTTCTTTTTGCATTGTTAACTCCATTCTC
TCTATTCACCAACTTCTCTACACAGCTTTTGCATACTTACAGTTTCTGTTCCTTTGTAATAACTTTAACTTGCAC
CTTTGAGGTTCTTTTCTACATGATGACCTTCAGCTCCTGCTGCTAGTCTCCAATTGCCAAGGGAATTTAACTGGG
CCAGACTACCTTTTTATACTAGGTCTGGTTGGGTCATTGTCTAGAGTAGGGATTGGCTGTCCTTAAGTCAGGAGC
CCGCTTTGTATTAGCAGGTTTGCATGCAGCAAAAAAACAGTTATGTGAGCAGTTTCACTTGGAGGTTCACATGGG
GTGGCAGCACACTTAACATCTAACACACCAGGTTCATTGTGTTCATAACACTTGTCATTTACTGTAACAACATTT
TTTCATAGGAGAGTAAATAGCCCTTCAGCATGCTCATTCATGAAACAGAAGAGGCTGTACAAGTGAAGACAAGGG
CTTTTTATGCAAGTTTTGAAAGATAGGTATTTATTTTTTCTAGAGACAGGAGTTTTGCTCTGTTGCCCAGGCTGG
AGTGCAGTGGTGCAATCATAGCTCATTGAAGCCTCGCACTCCTGGGCTCAAGTGGTCCTCCTGCCTCAGCTTACT
GAGTAAGGATATGTATTTCTTAAAAGTTAGTTTATCCACTTCAGATTTCATGTTTTCATTTGTAAGGATAAACTT
TTCCCACAAATTTTCAACAATCATTGTAGAAACTAAGGGGGAGAAAGTAATCTCAGTTGTTTTAGAAACGAAAAA
GTTAAGCATTGTTTACTTGAAGTGGGCAGGGAAGCAGCACTGAGTAAAGTTCAATTGAGTGGTTACAGTCTAGGG
CAGTGGTTCCCAACTCTCCGATCAGAATCATCTGGGAAGCATTTTCAAACAGCAAAGTACTTTGAAAACCATTAT
TAAATAGAATTATGCATGAATTACTGTTTCAGATCCTTTAATGTGGTAGTTGGTAATAATAAGATGAAATTCCTC
TGTTGTTAGTAAAATTATGAAATTGAAGTTCTGCAGCATGTCAGGCCAGGATTATTAGGGAGATTCCTCGAAACT
AGTGTGTGTTTATTAAAAGGAGAAAGGATAACAATAGAATGTTCTAAAACCAGAAGTCCAAGTGCGTGTCTACTT
ATGGGACCAATAAATAAAGAACAGACATTTGATTTGAGGTGAGGTAAAAGCCTGAAACATGGAATGGCATTCTGT
TTTGATGGATTTTCATTTCTTCGCACTTCTGAGACGGCAAAGCCAACCACTTAGAAGCCTTCCACATCTTTGTCA
CCTGCCTGGCTCCTGCTCTCTGATGTACCTCTGGGTAGTGAGATGGAAATGGTGCCTGCAGAAGTTGGGGAGAAG
GATACTTTTGCACAGCCTCCATGATGTCTTTATTGCAAATATGGATGACAAGGGTCTCTGTTACAGGGGCCTCAG
AGCACCTTCGTTTCTCCTCTAGACCAGGGACAGGTGTAGAGATAAGGACTGGCAACCAGAGCCTCAGCATCCAAA
GATGGACTGAAGTGGGATGGCTGACAGGCACATAACTTACGGGAAAGGGAATTTCATACATACGATTTTTGTTTT
GTGGGTAGGAGGGCTTATCATCAACACTGATTTTATAATCTGACAATAAATGTCTTTCATTAAAGAGTTTACCTA
AATGAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2187

MAASAFAGAVRAASGILRPLNILASSTYRNCVKNASLISALSTGRFSHIQTPVVSSTPRLTTSERNLTCGHTSVI
LNRMAPVLPSVLKLPVRSLTYFSARKGKRKTVKAVIDRFLRLHCGLG

FIGURE 2188

TAGTTATTAAAGTTCCTATGCAGCTCCGCCTCCGTCCGGCCTCATTTCCTCAAAAAATCCCTGCTTTCCCCGCTC
GCCACGCCCTCCTGCTACCCGGCTTTAAAGCTAGTGAGGCACAGCCTGCGGGGAACGTAGCTAGCTGCAAGCAGA
GGCCGGC**ATG**ACCACCGAGCAGCGACGCAGCCTGCAAGCCTTCCAGGATTATATCCGGAAGACCCTGGACCCTAC
CTACATCCTGAGCTACATGGCCCCCTGGTTTAGGGAGGAAGAGGTGCAGTATATTCAGGCTGAGAAAAACAACAA
GGGCCCAATGGAGGCTGCCACACTTTTTCTCAAGTTCCTGTTGGAGCTCCAGGAGGAAGGCTGGTTCCGTGGCTT
TTTGGATGCCCTAGACCATGCAGGTTATTCTGGACTTTATGAAGCCATTGAAAGTTGGGATTTCAAAAAAATTGA
AAAGTTGGAGGAGTATAGATTACTTTTAAAACGTTTACAACCAGAATTTAAAACCAGAATTATCCCAACCGATAT
CATTTCTGATCTGTCTGAATGTTTAATTAATCAGGAATGTGAAGAAATTCTACAGATTTGCTCTACTAAGGGGAT
GATGGCAGGTGCAGAGAAATTGGTGGAATGCCTTCTCAGATCAGACAAGGAAAACTGGCCCAAAACTTTGAAACT
TGCTTTGGAGAAAGAAAGGAACAAGTTCAGTGAACTGTGGATTGTAGAGAAAGGTATAAAAGATGTTGAAACAGA
AGATCTTGAGGATAAGATGGAAACTTCTGACATACAGATTTTCTACCAAGAAGATCCAGAATGCCAGAATCTTAG
TGAGAATTCATGTCCACCTTCAGAAGTGTCTGATACAAACTTGTACAGCCCATTTAAACCAAGAAATTACCAATT
AGAGCTTGCTTTGCCTGCTATGAAAGGAAAAAACACAATAATATGTGCTCCTACAGGTTGTGGAAAAACCTTTGT
TTCACTGCTTATATGTGAACATCATCTTAAAAAATTCCCACAAGGACAAAAGGGGAAAGTTGTCTTTTTTGCGAA
TCAGATCCCAGTGTATGAACAGCAGAAATCTGTATTCTCAAAATACTTTGAAAGACATGGGTATAGAGTTACAGG
CATTTCTGGAGCAACAGCTGAGAATGTCCCAGTGGAACAGATTGTTGAGAACAATGACATCATCATTTTAACTCC
ACAGATTCTTGTGAACAACCTTAAAAAGGGAACGATTCCATCACTATCCATCTTTACTTTGATGATATTTGATGA
ATGCCACAACACTAGTAAACAACACCCGTACAATATGATCATGTTTAATTATCTAGATCAGAAACTTGGAGGATC
TTCAGGCCCACTGCCCCAGGTCATTGGGCTGACTGCCTCGGTTGGTGTTGGGGATGCCAAAAACACAGATGAAGC
CTTGGATTATATCTGCAAGCTGTGTGCTTCTCTTGATGCGTCAGTGATAGCAACAGTCAAACACAATCTGGAGGA
ACTGGAGCAAGTTGTTTATAAGCCCCAGAAGTTTTTCAGGAAAGTGGAATCACGGATTAGCGACAAATTTAAATA
CATCATAGCTCAGCTGATGAGGGACACAGAGAGTCTGGCAAAGAGAATCTGCAAAGACCTCGAAAACTTATCTCA
AATTCAAAATAGGGAATTTGGAACACAGAAATATGAACAATGGATTGTTACAGTTCAGAAAGCATGCATGGTGTT
CCAGATGCCAGACAAAGATGAAGAGAGCAGGATTTGTAAAGCCCTGTTTTTATACACTTCACATTTGCGGAAATA
TAATGATGCCCTCATTATCAGTGAGCATGCACGAATGAAAGATGCTCTGGATTACTTGAAAGACTTCTTCAGCAA
TGTCCGAGCAGCAGGATTCGAAGAGATTGAGCAAGATCTTACTCAGAGATTTGAAGAAAAGCTGCAGGAACTAGA
AAGTGTTTCCAGGGATCCCAGCAATGAGAATCCTAAACTTGAAGACCTCTGCTTCATCTTACAAGAAGAGTACCA
CTTAAACCCAGAGACAATAACAATTCTCTTTGTGAAAACCAGAGCACTTGTGGACGCTTTAAAAAATTGGATTGA
AGGAAATCCTAAACTCAGTTTTCTAAAACCTGGCATATTGACTGGACGTGGCAAAACAAATCAGAACACAGGAAT
GACCCTCCCGGCACAGAAGTGTATATTGGATGCATTCAAAGCCAGTGGAGATCACAATATTCTGATTGCCACCTC
AGTTGCTGATGAAGGCATTGACATTGCACAGTGCAATCTTGTCATCCTTTATGAGTATGTGGGCAATGTCATCAA
AATGATCCAAACCAGAGGCAGAGGAAGAGCAAGAGGTAGCAAGTGCTTCCTTCTGACTAGTAATGCTGGTGTAAT
TGAAAAAGAACAAATAAACATGTACAAAGAAAAAATGATGAATGACTCTATTTTACGCCTTCAGACATGGGACGA
AGCAGTATTTAGGGAAAAGATTCTGCATATACAGACTCATGAAAAATTCATCAGAGATAGTCAAGAAAAACCAAA
ACCTGTCCCTGATAAGGAAAATAAAAAACTGCTCTGCAGAAAGTGCAAAGCCTTGGCATGTTACACAGCTGACGT
AAGAGTGATAGAGGAATGCCATTACACTGTGCTTGGAGATGCTTTTAAGGAATGCTTTGTGAGTAGACCACATCC
CAAGCCAAAGCAGTTTTCAAGTTTTGAAAAAAGAGCAAAGATATTCTGTGCCCGACAGAACTGCAGCCATGACTG
GGGAATCCATGTGAAGTACAAGACATTTGAGATTCCAGTTATAAAAATTGAAAGTTTTGTGGTGGAGGATATTGC
AACTGGAGTTCAGACACTGTACTCGAAGTGGAAGGACTTTCATTTTGAGAAGATACCATTTGATCCAGCAGAAAT
GTCCAAA**TGA**TATCAGGTCCTCAATCTTCAGCTACAGGGAATGAGTAACTTTGAGTGGAGAAGAAACAAACATAG
TGGGTATAATCATGGATCGCTTGTACCCCTGTGAAAATATATTTTTTAAAAATAAAAAAAAAAAA

FIGURE 2189

MTTEQRRSLQAFQDYIRKTLDPTYILSYMAPWFREEEVQYIQAEKNNKGPMEAATLFLKFLLELQEEGWFRGFLD
ALDHAGYSGLYEAIESWDFKKIEKLEEYRLLLKRLQPEFKTRIIPTDIISDLSECLINQECEEILQICSTKGMMA
GAEKLVECLLRSDKENWPKTLKLALEKERNKFSELWIVEKGIKDVETEDLEDKMETSDIQIFYQEDPECQNLSEN
SCPPSEVSDTNLYSPFKPRNYQLELALPAMKGKNTIICAPTGCGKTFVSLLICEHHLKKFPQGQKGKVVFFANQI
PVYEQQKSVFSKYFERHGYRVTGISGATAENVPVEQIVENNDIIILTPQILVNNLKKGTIPSLSIFTLMIFDECH
NTSKQHPYNMIMFNYLDQKLGGSSGPLPQVIGLTASVGVGDAKNTDEALDYICKLCASLDASVIATVKHNLEELE
QVVYKPQKFFRKVESRISDKFKYIIAQLMRDTESLAKRICKDLENLSQIQNREFGTQKYEQWIVTVQKACMVFQM
PDKDEESRICKALFLYTSHLRKYNDALIISEHARMKDALDYLKDFFSNVRAAGFEEIEQDLTQRFEEKLQELESV
SRDPSNENPKLEDLCFILQEEYHLNPETITILFVKTRALVDALKNWIEGNPKLSFLKPGILTGRGKTNQNTGMTL
PAQKCILDAFKASGDHNILIATSVADEGIDIAQCNLVILYEYVGNVIKMIQTRGRGRARGSKCFLLTSNAGVIEK
EQINMYKEKMMNDSILRLQTWDEAVFREKILHIQTHEKFIRDSQEKPKPVPDKENKKLLCRKCKALACYTADVRV
IEECHYTVLGDAFKECFVSRPHPKPKQFSSFEKRAKIFCARQNCSHDWGIHVKYKTFEIPVIKIESFVVEDIATG
VQTLYSKWKDFHFEKIPFDPAEMSK

FIGURE 2190

GGGGGGCACAGGGGAGACTAAAAAGGCCAGGGAAGTTGGCCTGCCGGAAGTTCCCAGGGAGAAGGCAGCGCGTTG
TACCCGAGTTACCTGTAGTCAACCACAGTCTGAAAATATTAAGGTATTTTAAGACAGAAAGAGAGAGAGGAGAGA
AACCGCATTCACAAAAAAGAAATCCTCTTTTTAGAACATCTCTTGGTGGTACCATCAGAA**ATG**TCTTCCTTAAGT
GGAAAAGTCCAAACCGTTTTGGGCCTTGTAGAGCCAAGCAAACTGGGCCGTACCCTGACCCATGAACACCTGGCC
ATGACCTTTGACTGCTGTTACTGTCCACCTCCCCCGTGCCAGGAAGCTATTTCCAAAGAACCTATCGTGATGAAA
AATTTATATTGGATTCAGAAAAACGCCTATTCCCATAAAGAAAACCTTCAATTAAATCAGGAGACAGAAGCCATA
AAGGAAGAACTGTTGTATTTTAAAGCTAATGGTGGAGGGGCTTTGGTGGAAAACACAACCACTGGGATTAGCCGA
GACACACAGACGTTGAAGAGGCTTGCAGAAGAGACTGGCGTCCATATCATATCTGGAGCCGGGTTTTATGTGGAT
GCAACTCACTCCTCAGAGACCAGGGCCATGTCAGTGGAGCAGCTTACCGATGTCCTTATGAATGAAATTCTCCAT
GGAGCTGATGGAACCAGTATCAAGTGTGGCATTATTGGAGAAATTGGTTGCTCCTGGCCTTTGACTGAGAGTGAA
AGAAAGGTTCTCCAGGCCACAGCTCATGCCCAGGCTCAGCTTGGTTGTCCTGTTATTATCCATCCTGGACGGAGC
TCCAGGGCACCATTTCAGATTATCCGAATATTGCAAGAAGCAGGCGCAGACATCTCCAAAACAGTCATGTCACAC
CTGGATAGGACTATTCTTGATAAGAAAGAGCTCTTGGAGTTTGCTCAACTTGGCTGCTACTTGGAATATGATCTC
TTTGGTACTGAACTACTTCATTACCAACTCGGCCCAGATATTGACATGCCTGATGATAACAAAAGAATTAGAAGG
GTGCGTCTCCTGGTGGAAGAGGGCTGTGAAGATCGAATTCTGGTAGCACATGACATACATACGAAAACCCGGCTG
ATGAAATATGGAGGTCACGGCTATTCTCATATACTCACCAATGTTGTTCCTAAAATGTTGCTGAGAGGCATAACT
GAGAATGTGCTTGATAAGATTCTAATAGAGAACCCTAAGCAATGGCTAACTTTCAAA**TAG**GATGGTTGCTTATGA
ATTCACACCTTGAGTATAAAACTTGCAGAGAACATTCAGCGATTTCCAGTCCACTGTGAGATATTAATCAGTTAC
CTAGGACTAATGACAGATCATTTCCTTCTGATGAGAACTAGGAGGGTTTGCCTTCTCTGAGACCAGCTATTACAA
CTGTGCCTCTAGGGAGTTACTCAGCCTAATTGAGCCCTATTATTTTAACTTAACAAAATAAATACAGAAGTACCT
ATTTCTAAACAATGATTTAAAGTCTATATCCCCTAAGCGGAGTTGTTGTTTTTCTCCCTAATCTATCAGCTGCAC
TACTTGAGAAAATTTAAAGTGTTTCTAGTTAAATTATTTCCTTCTTGAGCGATCTAATGTTTCTTGTAATATTGA
TGATCCTACTAATTATCCTGCTGTTCTTTAATTAATGCTTAATGAATAATATGGCACTGTAAAATAGCTTCTGCA
ACAAGGGAAGTTAAATTTTGAGACTTTTTTCCCCAAAGGATACTGACTGTAATACAATTACCAATTCACAATGAT
AAAAATATTTTGAAAGGTTAATTTTATACTGTCCACCTATCTATATATTCTTCTACTGAAATGATTTTGATATCT
TTGGCTTTCCGGTATCTATTTTTGCCATACATTTTGCTGTTTTGCAAAGTTTGTATAAGAACACATAACACTACT
GAATTATAAAAATTCAATCATAAAAGTCAAAATATATTACATAATATAGTTTAATGAATCATTACATTTATAATA
ACAAAGGCCACAATTTAATTAATTGGTAAGATATAATGCAAAAAAAAAAAAGAGAAATGTTTGCCTTATGTATATT
CCCTTTATTTCCTTTACCTTTTGTTTTTCCTTGGACCTAAACAGAGAAAATAATGCTTATGTATCTGAAGAAAAG
GTCAGATCTATTGGAAATGACAGCCCGATACTTGAGCCTCCTCTTTAAAAGGTATCCAGCCCTGATATTTTGTGT
AAATAAAATGTTTTTAAAACCTGTTAGTTAAAACACTTAGGTGATGGGCACTGCTGCTTATAAATTCATCTTTTG
GTTGAATCCTCACTATGCTATTTGGTACCTAAAAATATTCTCCAAACCCTTGCTGCCAGTTCCTCTTTGATAAAT
ATATAGTTAATTCGAAATAAAATCCATTGCAATTCATTTATGAGTTATCTTACATATCACAAAGACCAATTAGAA
TTAGTCATTATTCTTGATGAAGAGTCTGTTTTTAATCATAAAAATCATGACAGTTACTCAGACCCAGGCATTTCA
ACAGAGCTAACACCACCTTCAGATAGGCACACCATGCATAACTCTTGGGAAGTTGAGCTTTGCTAAATAAAAGAT
ATTTCTGCTGATCAAAGATGATCAAGCTTTCTGTGTATTGGAACAGAAAGTAACAAAGAGGAATGAGCCAGGAGA
ACAAACTAATTCCAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2191

MSSLSGKVQTVLGLVEPSKLGRTLTHEHLAMTFDCCYCPPPPCQEAISKEPIVMKNLYWIQKNAYSHKENLQLNQ
ETEAIKEELLYFKANGGGALVENTTTGISRDTQTLKRLAEETGVHIISGAGFYVDATHSSETRAMSVEQLTDVLM
NEILHGADGTSIKCGIIGEIGCSWPLTESERKVLQATAHAQAQLGCPVIIHPGRSSRAPFQIIRILQEAGADISK
TVMSHLDRAILDKKELLEFAQLGCYLEYDLFGTDLLHYQLGPDIDMPDDNKRIRRVRLLVEEGCEDRILVAHDIH
TKTRLMKYGGHGYSHILTNVVPKMLLRGITENVLDKILIENPKQWLTFK

FIGURE 2192

AACTGATCGCGGCCTAGTCCCGACGCGTGTGTGCTAGTGAGCCGGAGCCGGCGACGGCGGCAGTGGCGGCCCGGC
CTGCAGGAGCCCGACGGGGTCTCTGCCATGGGGGAGTGACGCGCCTGCACCCGCTGTTCCGCGGCAGCGGCGAGA
CATGAGGAGACCCCGCGACAGGGGCAGCGGCGGCGGCTCGTGAGCCCCGGGATGGAGGAGAAATACGGCGGGGAC
GTGCTGGCCGGCCCCGGCGGCGGCGGCGGCCTTGGGCCGGTGGACGTACCCAGCGCTCGATTAACAAAATATATT
GTGTTACTATGTTTCACTAAATTTTTGAAGGCTGTGGGACTTTTCGAATCATATGATCTCCTAAAAGCTGTTCAC
ATTGTTCAGTTCATTTTTATATTAAAACTTGGGACTGCATTTTTTATGGTTTTGTTTCAAAAGCCATTTTCTTCT
GGGAAAACTATTACCAAACACCAGTGGATCAAAATATTTAAACATGCAGTTGCTGGGTGTATTATTTCACTCTTG
TGGTTTTTTGGCCTCACTCTTTGTGGACCACTAAGGACTTTGCTGCTATTTGAGCACAGTGATATTGTTGTCATT
TCACTACTCAGTGTTTTGTTCACCAGTTCTGGAGGAGGACCAGCAAAGACAAGGGGAGCTGCTTTTTTCATTATT
GCTGTGATCTGTTTATTGCTTTTTGACAATGATGATCTC**ATG**GCTAAAATGGCTGAACACCCTGAAGGACATCAT
GACAGTGCTCTAACTCATATGCTTTACACAGCCATTGCCTTCTTAGGTGTGGCAGATCACAAGGGTGGAGTATTA
TTGCTAGTACTGGCTTTGTGTTGTAAAGTTGGTTTTCATACAGCTTCCAGAAAGCTCTCTGTCGACGTTGGTGGA
GCTAAACGTCTTCAAGCTTTATCTCATCTTGTTTCTGTGCTTCTCTTGTGCCCATGGGTCATTGTTCTTTCTGTG
ACAACTGAGAGTAAAGTGGAGTCTTGGTTTTCTCTCATTATGCCTTTTGCAACGGTTATCTTTTTTGTCATGATC
CTGGATTTCTACGTGGATTCCATTTGTTCAGTCAAAATGGAAGTTTCCAAATGTGCTCGTTATGGATCCTTTCCC
ATTTTTATTAGTGCTCTCCTTTTTGGAAATTTTTGGACACATCCAATAACAGACCAGCTTCGGGCTATGAACAAA
GCAGCACACCAGGAGAGCACTGAACACGTCCTGTCTGGAGGAGTGGTAGTGAGTGCTATATTCTTCATTTTGTCT
GCCAATATCTTATCATCTCCCTCTAAGAGAGGACAAAAAGGTACCCTTATTGGATATTCTCCTGAAGGAACACCT
CTTTATAACTTCATGGGTGATGCTTTTCAGCATAGCTCTCAATCGATCCCTAGGTTTATTAAGGAATCACTAAAA
CAAATTCTTGAGGAGAGTGACTCTAGGCAGATCTTTTACTTCTTGTGCTTGAATCTGCTTTTTACCTTTGTGGAA
TTATTCTATGGCGTGCTGACCAATAGTCTGGGCCTGATCTCGGATGGATTCCACATGCTTTTTGACTGCTCTGCT
TTAGTCATGGGACTTTTTGCTGCCCTGATGAGTAGGTGGAAAGCCACTCGGATTTTCTCCTATGGGTACGGCCGA
ATAGAAATTCTGTCTGGATTTATTAATGGACTTTTTCTAATAGTAATAGCGTTTTTTGTGTTTATGGAGTCAGTG
GCTAGATTGATTGATCCTCCAGAATTAGACACTCACATGTTAACACCAGTCTCAGTTGGAGGGCTGATAGTAAAC
CTTATTGGTATCTGTGCCTTTAGCCATGCCCATAGCCATGCCCATGGAGCTTCTCAAGGAAGCTGTCACTCATCT
GATCACAGCCATTCACACCATATGCATGGACACAGTGACCATGGGCATGGTCACAGCCACGGATCTGCGGGTGGA
GGCATGAATGCTAACATGAGGGGTGTATTTCTACATGTTTTGGCAGATACTCTTGGCAGCATTGGTGTGATCGTA
TCCACAGTTCTTATAGAGCAGTTTGGATGGTTCATCGCTGACCCACTCTGTTCTCTTTTTATTGCTATATTAATA
TTTCTCAGTGTTGTTCCACTGATTAAAGATGCCTGCCAGGTTCTACTCCTGAGATTGCCACCAGAATATGAAAAA
GAACTACATATTGCTTTAGAAAAGATACAGAAAATTGAAGGATTAATATCATACCGAGACCCTCATTTTTGGCGT
CATTCTGCTAGTATTGTGGCAGGAACAATTCATATACAGGTGACATCTGATGTGCTAGAACAAAGAATAGTACAG
CAGGTTACAGGAATACTTAAAGATGCTGGAGTAAACAATTTAACAATTCAAGTGGAAAAGGAGGCATACTTTCAA
CATATGTCTGGCCTAAGTACTGGATTTCATGATGTTCTGGCTATGACAAAACAAATGGAATCCATGAAATACTGC
AAAGATGGTACTTACATCATG**TGA**GATAACTCAAGAATTACCCCTGGAGAATAAACAATGAAGATTAAATGACTC
AGTATTTGTAATATTGCCAGAAGGATAAAAATTACACATTAACTGTACAGAAACAGAGTTCCCTACTACTGGATC
AAGGAATCTTTCTTGAAGGAAATTTAAATACAGAATGAAACATTAATGGTAAAAGTGGAGTAATTATTTAAATTA
TGTGTATAAAAGGAATCAAATTTTGAGTAAACATGATGTATTACATCATCTTCGAAAATAGATATGATGGATTCT
AGTGAAGACCAAAATTACTTCTGTTTACTTTCTATCAGGAAGCATCTCCATTGTAAATATGTATTTACATGTTTA
TTACAAAGACCCAAATGAAAAATTTTTAGTCCATTTTTTGCATAGCCTAAAGATAAAATAGGAATAAAAGTTCTA
TATTTATGGAAAAAAAAAAAAAAAAA

FIGURE 2193

MAKMAEHPEGHHDSALTHMLYTAIAFLGVADHKGGVLLLVLALCCKVGFHTASRKLSVDVGGAKRLQALSHLVSV
LLLCPWVIVLSVTTESKVESWFSLIMPFATVIFFVMILDFYVDSICSVKMEVSKCARYGSFPIFISALLFGNFWT
HPITDQLRAMNKAAHQESTEHVLSGGVVVSAIFFILSANILSSPSKRGQKGTLIGYSPEGTPLYNFMGDAFQHSS
QSIPRFIKESLKQILEESDSRQIFYFLCLNLLFTFVELFYGVLTNSLGLISDGFHMLFDCSALVMGLFAALMSRW
KATRIFSYGYGRIEILSGFINGLFLIVIAFFVFMESVARLIDPPELDTHMLTPVSVGGLIVNLIGICAFSHAHSH
AHGASQGSCHSSDHSHSHHMHGHSDHGHGHSHGSAGGGMNANMRGVFLHVLADTLGSIGVIVSTVLIEQFGWFIA
DPLCSLFIAILIFLSVVPLIKDACQVLLLRLPPEYEKELHIALEKIQKIEGLISYRDPHFWRHSASIVAGTIHIQ
VTSDVLEQRIVQQVTGILKDAGVNNLTIQVEKEAYFQHMSGLSTGFHDVLAMTKQMESMKYCKDGTYIM

FIGURE 2194

GGCAGCGGGCGAAAGGAGCCGGGGCCTGGAGGTTTGCGTACCGGTCGCCTGGTCCCGGCACCAGCGCCGCCCAGT
GTGGTTTCCCATAAGGAAGCTCTTCTTCCTGCTTGGCTTCCACCTTTAACCCTTCCACCTGGGAGCGTCCTCTAA
CACATTCAGACTACAAGTCCAGACCCAGGAGAGCAAGGCCCAGAAAGAGGTCAAA**ATG**GGGTTTATATTTTCAAA
ATCTATGAATGAAAGCATGAAAAATCAAAAGGAGTTCATGCTTATGAATGCTCGACTTCAGCTGGAAAGGCAGCT
CATCATGCAGAGTGAAATGAGGGAAAGACAAATGGCCATGCGGATTGCGTGGTCTCGGGAATTCCTCAAATATTT
TGGAACTTTTTTTGGCCTTGCAGCCATCTCTTTAACAGCTGGAGCGATTAAAAAAAAGAAGCCAGCCTTCCTGGT
CCCGATTGTTCCATTAAGCTTTATCCTCACCTACCAGTATGACTTGGGCTATGGAACCCTTTTAGAAAGAATGAA
AGGTGAAGCTGAGGACATACTGGAAACAGAAAAGAGTAAATTGCAGCTGCCAAGAGGAATGATCACTTTTGAAAG
CATTGAAAAAGCCAGAAAGGAACAGAGTAGATTCTTCATAGACAAA**TGA**AATCATGCTTACCAATCAAATCTCAA
AGCACAGAATTATTGACTTGAATCATGGTTTTTACAGTTTTTTAAATGCTCAAGATTTTGATATTATAGATTTTA
TTTTAAAATATTAAAATGCAAGATAGTTTTGAGCTATTTTAAAATAAAATTTATAACATTCAACACAAAATCATG
GAGGTGCTCTAAATAACTTTTAGATTTCCTCTCTCTGTGTGCATTACCAATATCTAAGTGTAAAATTAATAAATT
GTTTTGAATTCCTGGAAAAAAAAAAAA

FIGURE 2195

MGFIFSKSMNESMKNQKEFMLMNARLQLERQLIMQSEMRERQMAMRIAWSREFLKYFGTFFGLAAISLTAGAIKK
KKPAFLVPIVPLSFILTYQYDLGYGTLLERMKGEAEDILETEKSKLQLPRGMITFESIEKARKEQSRFFIDK

FIGURE 2196

TTAGCACCTGGCACTAGGCGGAGAGAGGCGGTAAGCCGCGAGGAGGAAAGGACTCACGTCCCGCTGTGGACCGAT
CCTGCTAAGCAGAGAATCGCTGTGGCCGGACGACGGGGCGTCGAGACAAGAAGAAAGACGTTGGCAACTCCCACA
AGGCCTAGGGCCACGTCCCGCCGTCCTCGGCTGCTGAGCCTGATGGGACAAGTAGTTTTGCGAACGGCTTAACCT
ACTGATTGAAGAGGTCGGAAGCTCTGAGGCCCGGGGCTTCCGGAGGTCGCGGAG**ATG**GAATTGGAGCAGAGAGAA
GGGACCATGGCAGCCGTGGGCTTTGAGGAGTTCTCAGCGCCGCCAGGCTCAGAGTTGGCGTTGCCTCCCCTATTT
GGTGGCCACATCCTGGAGAGCGAGCTGGAGACGGAAGTGGAGTTTGTGTCAGGTGGTCTGGGCGGCTCAGGGCTC
CGGGAGCGAGATGAAGAGGAAGAGGCAGCCCGGGGTCGGCGGCGGCGCCAGCGGGAATTAAATCGCAGAAAGTAC
CAGGCACTAGGTCGGCGCTGCCGGGAGATCGAGCAGGTGAACGAGCGGGTCCTGAACAGGCTCCATCAGGTGCAG
AGGATAACTCGGAGGCTGCAGCAGGAACGGAGGTTCCTCATGAGAGTGCTGGACTCCTACGGGGATGACTACCGG
GCCAGCCAGTTCACCATTGTGCTGGAGGATGAGGGCAGCCAGGGCACGGATGCCCCCACCCCAGGCAATGCGGAG
AATGAGCCTCCAGAGAAAGAGACACTGTCCCCGCCCAGAAGGACTCCTGCACCCCCAGAACCCGGCAGCCCAGCC
CCCGGTGAGGGGCCCAGTGGGCGGAAGAGGCGGCGAGTGCCACGGGATGGACGCCGAGCAGGAAATGCGCTGACT
CCAGAGCTGGCCCCGGTGCAGATTAAGGTTGAGGAAGACTTTGGCTTTGAAGCAGATGAGGCCCTGGATTCCAGT
TGGGTTTCTCGGGGTCCAGACAAACTGCTGCCCTACCCGACCCTGGCCAGCCCAGCCTCTGAC**TGA**CGCATGCCC
AATAAACTGACCCCACACCAAAAAAAA

FIGURE 2197

MELEQREGTMAAVGFEEFSAPPGSELALPPLFGGHILESELETEVEFVSGGLGGSGLRERDEEEEAARGRRRRQR
ELNRRKYQALGRRCREIEQVNERVLNRLHQVQRITRRLQQERRFLMRVLDSYGDDYRASQFTIVLEDEGSQGTDA
PTPGNAENEPPEKETLSPPRRTPAPPEPGSPAPGEGPSGRKRRRVPRDGRRAGNALTPELAPVQIKVEEDFGFEA
DEALDSSWVSRGPDKLLPYPTLASPASD

FIGURE 2198

AGAGAGCTGTTTACTAGGCACGACTGCGAAGGCAAGGGGGCACCAGCTCAGGACTGCATCTGCCTGCCATTTCCC
TTCCACTCCTCCTTTCTGGAGTCTGACATTAGAAAGCCAGCGAGAAGGAAGATTCAAACAACCAACCCTGATTTC
CTGCTTCTCCTTTTCATGAGTGTTCCTGTGGTCTCTGCACCTCCTTTCTGTCCCCCGGCAGAGGGCAGTAGAG**AT**
GGCCGGCCCAAGGCCTCGGTGGCGCGACCAGCTGCTGTTCATGAGCATCATAGTCCTCGTGATTGTGGTCATCTG
CCTGATGTTATACGCTCTTCTCTGGGAGGCTGGCAACCTCACTGACCTGCCCAACCTGAGAATCGGCTTCTATAA
CTTCTGCCTGTGGAATGAGGACACCAGCACCCTACAGTGTCACCAGTTCCCTGAGCTGGAAGCCCTGGGGGTGCC
TCGGGTTGGCCTGGGCCTGGCCAGGCTTGGCGTGTACGGGTCCCTGGTCCTCACCCTCTTTGCCCCCCAGCCTCT
CCTCCTAGCCCAGTGCAACAGTGATGAGAGAGCGTGGCGGCTGGCAGTGGGCTTCCTGGCTGTGTCCTCTGTGCT
GCTGGCAGGCGGCCTGGGCCTCTTCCTCTCCTATGTGTGGAAGTGGGTCAGGCTCTCCCTCCCGGGGCCTGGGTT
TCTAGCTCTGGGCAGCGCCCAGGCCTTACTCATCCTCTTGCTTATAGCCATGGCTGTGTTCCCTCTGAGGGCTGA
GAGGGCTGAGAGCAAGCTTGAGAGCTGC**TAA**AGGCTTACGTGATTGCAAGGGTTCAGTTCCAACCATAGTCAGAG
GTGGCACATCTGCTCAGCCATCTCATTTTACAGCTAACGCTGATCTCCAGCTCCAGCGATGGAACCCACTACAGA
GGAGGTGGGGCCCCTGTGTCAAAGAGGCCGAGGGGCAGCAAGGGCAGCCAGGGCACCTGTGACTTCTTAGTACAA
GATTGTCTGTCCTTCAGGACTTCCAAGGCTCCCAAAGACTCCCTAAACCATGCAGCTCATTGTCACACCAATTCC
TGCTTTAATTAATGGATCTGAGCAAATCTTCCTCTAGCTTCAGGAGGGTGGGGAGGGAGTGATTGCCGTCATGGG
GCCAGACTTCCAGGCTGATTTGCCAAATGCCAAAATGAAACCTAGCAAAGAACTTACGGCAACAAACGAGGACAT
TAAAAGAGCGAGCACCTCAGTGTCTCTGGGGACATGGTTAAGGAGCTTCCACTCAGCCCACCATAGTGAGTGGGC
CGCCATAAGCCATCACTGGAACTCCAACCCCAGAGGTCCAGGAGTGATCTCTGAGTGACTCAACAAAGACAGGAC
ACATGGGGTACAAAGACAAGGCTTGACTGCTTCAAAGCTTCCCTGGACCTGAAGCCAGACAGGGCAGAGGCGTCC
GCTGACAAATCACTCCCATGATGAGACCCTGGAGGACTCCAAATCCTCGCTGTGAACAGGACTGGACGGTTGCGC
ACAAACAAACGCTGCCACCCTCCACTTCCCAACCCAGAACTTGGAAAGACATTAGCACAACTTACGCATTGGGGA
ATTGTGTGTATTTTCTAGCACTTGTGTATTGGAAAACCTGTATGGCAGTGATTTATTCATATATTCCTGTCCAAA
GCCACACTGAAAACAGAGGCAGAGACATGT

FIGURE 2199

MAGPRPRWRDQLLFMSIIVLVIVVICLMLYALLWEAGNLTDLPNLRIGFYNFCLWNEDTSTLQCHQFPELEALGV
PRVGLGLARLGVYGSLVLTLFAPQPLLLAQCNSDERAWRLAVGFLAVSSVLLAGGLGLFLSYVWKWVRLSLPGPG
FLALGSAQALLILLLIAMAVFPLRAERAESKLESC

FIGURE 2200

GCTCCGGGTGTCCCGAGAGTTGTCCTGCGCCGGTGTTCCCACGTGCGGCCTGAACCTGAGCGCATAATGTTATGA
GGAG**ATG**GGAGCACTAGTGATTCGCGGTATCAGGAATTTCAACCTAGAGAACCGAGCGGAACGGGAAATCAGCAA
GATGAAGCCCTCTGTCGCTCCCAGACACCCCTCTACCAACAGCCTCCTGCGAGAGCAGATTAGTCTCTATCCAGA
AGTTAAAGGAGAGATTGCTCGTAAAGATGAAAAGCTGCTGTCGTTTCTAAAAGATGTGTATGTTGATTCCAAAGA
TCCTGTGTCTTCCTTGCAGGTAAAAGCTGCTGAAACATGTCAAGAGCCGAAGGAATTCAGATTGCCGAAAGACCA
TCATTTTGATATGATAAATATTAAGAGCATTCCCAAAGGCAAAATTTCCATTGTAGAAGCATTGACACTTCTCAA
TAATCATAAGCTTTTCCCAGAAACCTGGACTGCTGAGAAAATAATGCAAGAATACCAGTTAGAACAGAAAGATGT
GAATTCTCTTCTTAAATATTTTGTTACTTTTGAAGTCGAAATCTTCCCTCCTGAAGACAAGAAAGCAATACGATC
AAAA**TGA**AGAAAATCACAGAAATTTCCTATGTGTACTCCTCATCCCTCCTGCTGTATATTTTCTCATTTTTTGCG
TAATAAATTATGTTAATTACCAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2201

MGALVIRGIRNFNLENRAEREISKMKPSVAPRHPSTNSLLREQISLYPEVKGEIARKDEKLLSFLKDVYVDSKDP
VSSLQVKAAETCQEPKEFRLPKDHHFDMINIKSIPKGKISIVEALTLLNNHKLFPETWTAEKIMQEYQLEQKDVN
SLLKYFVTFEVEIFPPEDKKAIRSK

FIGURE 2202

GAGTTTTCATTTGTGGTGAGATTCTCTCCCAGGCCACAAGACATTTCCTGCTCGGAACCTTGTTTACTAATTTCC
ACTGCTTTTAAGGCCCTGCACTGAAA**ATG**CAAGCTCAGGCGCCGGTGGTCGTTGTGACCCAACCTGGAGTCGGTC
CCGGTCCGGCCCCCCAGAACTCCAACTGGCAGACAGGCATGTGTGACTGTTTCAGCGACTGCGGAGTCTGTCTCT
GTGGCACATTTTGTTTCCCGTGCCTTGGGTGTCAAGTTGCAGCTGATATGAATGAATGCTGTCTGTGTGGAACAA
GCGTCGCAATGAGGACTCTCTACAGGACCCGATATGGCATCCCTGGATCTATTTGTGATGACTATATGGCAACTC
TTTGCTGTCCTCATTGTACTCTTTGCCAAATCAAGAGAGATATCAACAGAAGGAGAGCCATGCGTACTTTC**TAA**A
AACTGATGGTGAAAAGCTCTTACCGAAGCAACAAAATTCAGCAGACACCTCTTCAGCTTGAGTTCTTCACCATCT
TTTGCAACTGAAATATGATGGATATGCTTAAGTACAACTGATGGCATGAAAAAAATCAAATTTTTGATTTATTAT
AAATGAATGTTGTCCCTGAACTTAGCTAAATGGTGCAACTTAGTTTCTCCTTGCTTTCATATTATCGAATTTCCT
GGCTTATAAACTTTTTAAATTACATTTGAAATATAAACCAAATGAAATATTTTAACTGATAAAAAAAAAAAAAAA
AAATAAAAAA

FIGURE 2203

MQAQAPVVVVTQPGVGPGPAPQNSNWQTGMCDCFSDCGVCLCGTFCFPCLGCQVAADMNECCLCGTSVAMRTLYR
TRYGIPGSICDDYMATLCCPHCTLCQIKRDINRRRAMRTF

FIGURE 2204

GTGACCGGAGGCGAGAAACCCCGCCTCGGCACCCTGACGCAGCGCAGGACCCGCCCCGCGCGTGACGCCAGCGTC
AGGCCAGCCCCGGC**ATG**CTCTGCGGCCGCCCGCGGTCCAGCTCCGACAACAGGAATTTTCTCCGAGAGCGGGCCG
GGCTCAGTTCAGCTGCTGTCCAGACCCGGATCGGCAACAGTGCCGCCTCCAGACGTTCTCCTGCCGCTCGCCCGC
CCGTCCCAGCGCCCCCAGCCCTCCCGCGAGGGCGCCCCGGGACGGAAGGATCCACCAGTCTGTCGGCGCCCGCCG
TTCTCGTGGTCGCCGTCGCCGTCGTCGTGGTGGTAGTCTCCGCCGTCGCCTGGGCCATGGCCAATTACATCCACG
TCCCTCCCGGCTCCCCGGAGGTGCCCAAGCTGAACGTCACCGTTCAGGATCAGGAGGAGCATCGCTGCCGGGAGG
GGGCCCTGAGCCTCCTGCAACACCTGCGGCCTCACTGGGACCCCCAGGAGGTGACCCTGCAGCTCTTCACAGATG
GAATCACAAATAAACTTATTGGCTGTTACGTGGGAAACACCATGGAGGATGTAGTCCTGGTGAGAATTTATGGCA
ATAAGACTGAGTTATTAGTCGATCGAGATGAGGAAGTAAAGAGTTTTCGAGTGTTGCAGGCTCATGGGTGTGCAC
CACAACTCTACTGTACCTTCAATAATGGACTATGCTATGAATTTATACAAGGAGAAGCACTGGATCCAAAGCATG
TCTGCAACCCAGCCATTTTCAGGCTAATAGCTCGTCAGCTTGCTAAAATCCATGCTATTCATGCACACAATGGCT
GGATCCCCAAATCTAATCTTTGGCTAAAGATGGGAAAGTATTTCTCTCTCATTCCCACAGGATTTGCAGATGAAG
ACATTAATAAAAGGTTCCTAAGTGATATCCCAAGCTCTCAGATTCTCCAGGAAGAGATGACTTGGATGAAGGAGA
TTCTTTCCAACCTGGGCTCACCTGTTGTGCTTTGCCATAATGACCTATTGTGTAAGAATATAATCTACAATGAGA
AACAAGGTGATGTACAGTTCATTGATTATGAATATTCTGGATACAACTACCTGGCATATGATATTGGAAATCATT
TCAATGAATTTGCAGGTGTGAGTGATGTAGACTATAGTCTGTATCCAGATAGAGAACTACAGAGTCAGTGGCTGC
GTGCTTACCTTGAAGCCTACAAAGAATTTAAGGGCTTTGGGACTGAAGTTACTGAAAAGGAGGTAGAAATACTCT
TCATTCAAGTCAATCAGTTTGCATTGGCTTCTCATTTCTTTTGGGGATTGTGGGCTTTGATTCAAGCCAAATACT
CCACTATTGAGTTTGATTTCCTTGGGTATGCAATTGTTCGTTTTAACCAGTACTTTAAAATGAAGCCTGAGGTTA
CTGCATTAAAAGTGCCTGAG**TAA**AGAAGAGATTTAATTATTCTCCAGTAGCTGAGCAATGCTTGTGAATCTTTTC
TTAAGAAATCCCAAAAAGCCAATATTAGTTAAAATTCTGTTGTTTAATTTGGTTATCTTGCTTTATAAATTATGC
CTCTAAACAATCAAATCTATTTTTGAAATAGACTGAATGATGTCAAGAAATATACCTACTGCTATCCGTATGTGG
TGGATTAGAAATGTGTTAAATCTGCAAAAGGTATAAAGATGTCAGTTTAATTTCTTTGATAATTTAACCTATGTT
GTATGTGAATTATTTATTATAAACTTAGCACGATTCTGTGACTGTTTTTCTCTGTTTCACGTTCGTTGAGTGTAA
GCAATGAAAATGTCCCAAATAAGTTTTTTAAGTTTTACTTTAATAAGATTAATTTCAGTAAACATTCTAGTTGTT
CAGTGTAACCTTTTTATCTTGATGCATTGTAAGTAAAATGAATCATTTACTCTTGAAATGCCAGTCATTGACTGA
TGTAGATAATTTAGGATTTTCATATAAAAATAGCTGTTTAGGAAGGTGAAATACATTCACTGTCTCTGTTGGTGG
TACATCTTGTTGAATTCAATATTAGAAAGTATTTCTTTTTGGGGTAATATAACTTAGAATTAAATCCCTGTTTCT
CTATGTAGTCTGGCAGTATAAATATAAATATTTACCATATAATCTTGGAATAAGTATTAGTTAATGTTACCAAAA
TCTGTATTAAATAATGTTTTCAAATGCTAAAAAAAAAAAAAAAAAA

FIGURE 2205

MLCGRPRSSSDNRNFLRERAGLSSAAVQTRIGNSAASRRSPAARPPVPAPPALPRGRPGTEGSTSLSAPAVLVVA
VAVVVVVVSAVAWAMANYIHVPPGSPEVPKLNVTVQDQEEHRCREGALSLLQHLRPHWDPQEVTLQLFTDGITNK
LIGCYVGNTMEDVVLVRIYGNKTELLVDRDEEVKSFRVLQAHGCAPQLYCTFNNGLCYEFIQGEALDPKHVCNPA
IFRLIARQLAKIHAIHAHNGWIPKSNLWLKMGKYFSLIPTGFADEDINKRFLSDIPSSQILQEEMTWMKEILSNL
GSPVVLCHNDLLCKNIIYNEKQGDVQFIDYEYSGYNYLAYDIGNHFNEFAGVSDVDYSLYPDRELQSQWLRAYLE
AYKEFKGFGTEVTEKEVEILFIQVNQFALASHFFWGLWALIQAKYSTIEFDFLGYAIVRFNQYFKMKPEVTALKV
PE

FIGURE 2206A

CGAAATGAGAGCAAAAAGGGAGAGAGCAGGAAAGCGAGCACAGGCGAGTACAGTATACAAAGTGTTTTGAGTTTC
TGACTGGCGTGCCGGAAAGATCATGTTAGCACACCCAGAAACTCCACACG**ATG**CAGACCCCAGAGGTACCAGCAG
AAAGGTCCCCTCGTAGACGGAGTATCTCAGGGACCAGTACATCAGAGAAACCCAACTCCATGGACACTGCAAATA
CCTCACCCTTCAAAGTACCAGGATTCTTCAGCAAGCGCCTGAAAGGCTCCATCAAGAGGACCAAAAGCCAGTCAA
AGCTTGACAGAAACACGAGCTTTCGGCTTCCATCCCTTCGCAGTACAGATGACAGGTCTCGTGGGCTGCCTAAAC
TAAAAGAGTCACGTTCCCATGAATCCTTGCTGAGCCCATGCAGCACAGTGGAATGTCTGGATCTTGGTAGAGGGG
AACCTGTATCAGTGAAACCACTTCATAGTAGCATCCTTGGACAAGACTTCTGCTTTGAGGTTACCTACTTAAGTG
GAAGTAAATGCTTCAGCTGTAATTCTGCTTCTGAGAGAGACAAGTGGATGGAAAACCTTCGCAGGACAGTTCAAC
CTAATAAGGACAATTGCAGGCGAGCTGAAAATGTTCTTCGTTTATGGATCATTGAAGCCAAGGACCTTGCCCCTA
AAAAGAAATATTTCTGCGAACTGTGCCTTGATGATACCCTCTTTGCTCGTACAACCAGCAAGACCAAAGCAGACA
ATATTTTCTGGGGCGAACATTTTGAATTCTTCAGCCTTCCACCTCTTCATAGTATCACAGTTCACATTTACAAGG
ATGTGGAAAAAAAGAAAAAAAAGGACAAGAATAATTATGTAGGGCTAGTCAACATCCCCACTGCCAGTGTGACTG
GTCGCCAATTTGTAGAAAAGTGGTATCCAGTGAGTACACCTACACCCAACAAAGGAAAGACAGGAGGACCTTCTA
TTCGGATTAAATCACGTTTCCAAACTATCACCATTCTGCCTATGGAGCAATACAAAGAATTTGCAGAATTTGTCA
CCAGCAACTACACCATGCTGTGTTCTGTCCTTGAGCCAGTAATTAGTGTGAGAAATAAAGAGGAGTTGGCTTGTG
CCTTAGTGCACATTCTTCAAAGTACTGGCAGAGCCAAGGATTTTCTGACTGACTTGGTGATGTCTGAGGTGGATC
GTTGTGGAGAGCATGATGTCTTGATCTTCAGAGAGAACACTATTGCCACCAAATCCATTGAGGAATACCTCAAGT
TGGTGGGACAACAGTATCTTCATGACGCACTGGGGGAGTTTATCAAAGCTTTGTATGAGTCCGATGAGAACTGTG
AAGTGGATCCCAGCAAATGTTCATCTAGTGAACTGATAGACCATCAGAGCAACCTGAAAATGTGCTGTGAGCTGG
CTTTCTGCAAGATCATCAACTCTTACTGTGTTTTCCCTCGTGAGTTGAAAGAAGTGTTTGCATCATGGAAGCAGC
AGTGCCTGAACCGTGGCAAGCAAGACATCAGCGAGAGGCTCATCAGTGCCTCATTATTTCTCCGTTTTCTGTGTC
CAGCCATTATGTCTCCCAGTCTTTTCAACCTTATGCAGGAGTATCCTGATGACCGCACATCTCGGACTCTAACTC
TTATTGCCAAGGTCATTCAGAACCTGGCCAACTTTGCCAAGTTTGGTAACAAAGAGGAATACATGGCATTCATGA
ATGATTTTTTAGAACATGAATGGGGTGGAATGAAGCGCTTTCTTTTGGAGATCTCTAATCCAGACACCATCTCAA
ACACCCCAGGCTTTGATGGTTACATTGATCTGGGCCGAGAGCTTTCAGTTTTGCATTCCTTACTGTGGGAAGTAG
TTTCCCAACTTGATAAGGGTGAAAATTCCTTCCTACAGGCGACCGTGGCAAAATTGGGGCCTCTCCCTCGTGTTC
TTGCTGATATTACCAAGTCATTGACTAATCCTACGCCAATACAACAGCAACTGAGACGCTTCACTGAACATAACT
CCAGTCCAAATGTCAGTGGAAGCCTCTCCTCTGGGCTGCAGAAAATATTTGAAGACCCCACTGACAGTGATTTGC
ATAAACTAAAATCTCCAAGCCAGGACAACACAGACAGCTACTTCAGAGGGAAAACATTATTGCTGGTTCAGCAAG
CCTCCTCTCAGAGCATGACTTATTCTGAAAAGGATGAAAGGGAAAGTAGCCTTCCTAATGGTCGGAGCGTCTCCC
TCATGGACCTCCAGGACACTCATGCTGCTCAAGTGGAGCATGCATCTGTCATGCTTGATGTGCCTATACGCTTGA
CCGGAAGCCAGCTTTCCATAACCCAGGTGGCCAGCATCAAACAGCTGCGGGAAACCCAGAGCACTCCCCAAAGTG
CACCCCAAGTGAGAAGGCCCCTGCACCCAGCCTTGAACCAGCCAGGTGGCCTTCAGCCCTTGTCGTTCCAGAACC
CTGTCTATCACCTCAATAACCCAATTCCAGCAATGCCAAAGGCCTCTATAGATTCCAGTTTGGAGAACCTAAGCA
CTGCCAGTTCCAGAAGCCAAAGTAACAGTGAAGACTTCAAGCTCAGTGGACCCAGCAATAGCAGCATGGAAGATT
TCACTAAACGTAGCACTCAGAGTGAGGACTTCTCCAGGCGGCACACGGTGCCAGATAGACACATACCTCTTGCTT
TGCCACGACAAAATAGTACTGGGCAGGCCCAGATCCGAAAAGTGGACCAGGGTGGGTTAGGTGCCCGAGCCAAAG
CCCCACCATCCCTGCCACACAGTGCTTCTTTACGTAGCACCGGGAGCATGTCAGTGGTGTCCGCAGCCCTGGTGG
CCGAACCTGTGCAGAATGGGAGCCGGTCCCGGCAGCAGTCCTCTTCCTCCAGAGAGAGCCCTGTTCCCAAAGTTA
GAGCAATCCAGAGACAACAGACACAGCAGGTTCAGTCACCTGTGGACTCTGCCACAATGTCCCCAGTAGAGAGGA
CAGCAGCCTGGGTTCTGAACAATGGGCAGTATGAAGAGGATGTGGAAGAAACTGAGCAAAATCTAGATGAAGCCA
AGCATGCTGAGAAGTATGAACAAGAAATTACTAAACTGAAGGAGCGCCTGAGAGTTTCCAGCCGGCGACTGGAGG
AATATGAACGCCGCTTGCTGGTGCAGGAGCAGCAGATGCAGAAGCTGCTGCTGGAATACAAGGCCCGACTGGAGG
ACAGCGAGGAGCGGCTCCGAAGACAGCAGGAAGAAAAAGATAGCCAGATGAAAAGCATCATCAGCAGGCTAATGG
CTGTGGAAGAGGAACTGAAGAAGGATCATGCTGAGATGCAAGCAGTTATTGATGCAAAGCAGAAAATAATTGATG
CACAGGAAAAACGGATCGTGTCCCTGGATTCAGCCAACACCAGACTGATGAGCGCGCTGACCCAAGTGAAGGAGC
GGTACAGCATGCAGGTCCGCAATGGCATCTCCCCCACCAACCCCACCAAGCTTTCCATCACGGAGAATGGTGAAT
TCAAAAACAGCAGCTGC**TGA**CGGGCTTTGTCTGTGGAAGGAGACAGAAGGAAATTGACCCACTCTCCTATCTCCA

FIGURE 2206B

GACCTTTACCTAGCCCCTCCAGGTTTACAGAATGTTGCTACTTCACAATGGCGATGTGGTGAGAAACTCCTGAAT
GAAGAAAGGAACCTTGTCTTTCAGGGCATAAGGCGGCGACTTCCAAGGTCAATGCTTTTCCCCCACATCTCTATG
TACATAGGGAACTTAGTTCTGGGCCATGTACAGAAAATATCACTGTAATATACCAAAAGGAAGTTAATAATGTAG
ATTACCTTTTTGATTATTGCTATTTTTATTATTGTTTTCCTCTTGTTGAAAGCACTGCAGTTGTTACAGGAAGTA
AAGTAGGAATGTTGTGTGAGCGAGACATGAGCCTGTAGTTCAGTAGGTAGAGACCAAGCATCTATCTGATAGAAC
ACATGGAGTGCAATAGGACATTGTGAGAAGGATTTTTCAGGGATTCATCTACTAGTTTAAAAACCCCACTCTGGC
CCTCTTGTCCTTTCAGAAAACATGCAAATACCAAGATCCATACAAAACAATAATTTATTCCACTGATCAACCAAG
ACTGGTTCTGGTTGGACAGCTAATCTGATTTGGGGATTCACTGTTTCAGAGGACACAGACAAAAGCTGTTGCATC
AAAACTGGACTTTAGGAGTAATTTCTATTGAACTCCTGTCAATATGTTTATTTCCTCTGTCTACAGCAGATGGGA
GTCTTCTCTTTTAGACAGGGGCTTTTTGTTTTTAACCCCAATTGTAATAAAGGGTGTTCTTTTTCCTCTTTAGAA
AAAAAAAAAAAAAAAAAA

FIGURE 2207

MQTPEVPAERSPRRRSISGTSTSEKPNSMDTANTSPFKVPGFFSKRLKGSIKRTKSQSKLDRNTSFRLPSLRSTD
DRSRGLPKLKESRSHESLLSPCSTVECLDLGRGEPVSVKPLHSSILGQDFCFEVTYLSGSKCFSCNSASERDKWM
ENLRRTVQPNKDNCRRAENVLRLWIIEAKDLAPKKKYFCELCLDDTLFARTTSKTKADNIFWGEHFEFFSLPPLH
SITVHIYKDVEKKKKKDKNNYVGLVNIPTASVTGRQFVEKWYPVSTPTPNKGKTGGPSIRIKSRFQTITILPMEQ
YKEFAEFVTSNYTMLCSVLEPVISVRNKEELACALVHILQSTGRAKDFLTDLVMSEVDRCGEHDVLIFRENTIAT
KSIEEYLKLVGQQYLHDALGEFIKALYESDENCEVDPSKCSSSELIDHQSNLKMCCELAFCKIINSYCVFPRELK
EVFASWKQQCLNRGKQDISERLISASLFLRFLCPAIMSPSLFNLMQEYPDDRTSRTLTLIAKVIQNLANFAKFGN
KEEYMAFMNDFLEHEWGGMKRFLLEISNPDTISNTPGFDGYIDLGRELSVLHSLLWEVVSQLDKGENSFLQATVA
KLGPLPRVLADITKSLTNPTPIQQQLRRFTEHNSSPNVSGSLSSGLQKIFEDPTDSDLHKLKSPSQDNTDSYFRG
KTLLLVQQASSQSMTYSEKDERESSLPNGRSVSLMDLQDTHAAQVEHASVMLDVPIRLTGSQLSITQVASIKQLR
ETQSTPQSAPQVRRPLHPALNQPGGLQPLSFQNPVYHLNNPIPAMPKASIDSSLENLSTASSRSQSNSEDFKLSG
PSNSSMEDFTKRSTQSEDFSRRHTVPDRHIPLALPRQNSTGQAQIRKVDQGGLGARAKAPPSLPHSASLRSTGSM
SVVSAALVAEPVQNGSRSRQQSSSSRESPVPKVRAIQRQQTQQVQSPVDSATMSPVERTAAWVLNNGQYEEDVEE
TEQNLDEAKHAEKYEQEITKLKERLRVSSRRLEEYERRLLVQEQQMQKLLLEYKARLEDSEERLRRQQEEKDSQM
KSIISRLMAVEEELKKDHAEMQAVIDAKQKIIDAQEKRIVSLDSANTRLMSALTQVKERYSMQVRNGISPTNPTK
LSITENGEFKNSSC

FIGURE 2208

AGACCCGACGCCCGGGGTCCTCGAAGACGCGTCCGCCGCCGTGCCCGTCGCC**ATG**AACCGCTTCAGGGTGTCCAA
GTTCCGGCACACCGAGGCTCGGCCGCCCCGCCGCGAGTCCTGGATCAGTGACATTCGAGCAGGAACCGCCCCTTC
ATGCAGGAACCACATCAAATCAAGCTGCAGCTTGATCGCCTTCAACTCCGACCGTCCTGGTGTACTGGGCATTGT
GCCTCTGCAAGGCCAAGGAGAGGACAAGCGACGCGTGGCCCACCTGGGCTGCCATTCAGACCTAGTCACCGACTT
GGACTTCTCGCCCTTTGATGACTTCCTCCTGGCCACAGGCTCGGCTGACAGGACGGTAAAACTCTGGCGACTGCC
AGGGCCTGGCCAGGCCCTGCCCTCAGCACCCGGGGTGGTGCTGGGCCCCGAGGACCTCCCAGTGGAGGTACTGCA
GTTCCACCCCACCTCTGACGGCATTCTGGTGAGCGCAGCAGGCACCACTGTGAAGGTCTGGGACGCAGCCAAGCA
GCAGCCCCTGACAGAGCTGGCAGCCCATGGGGACCTGGTGCAGAGCGCCGTCTGGAGCCGAGATGGAGCCCTGGT
GGGCACGGCGTGCAAGGACAAGCAGCTGCGGATCTTTGACCCCAGAACAAAGCCGCGGGCCTCTCAGAGCACGCA
GGCCCATGAGAACAGCAGGGATAGCCGGCTGGCATGGATGGGCACCTGGGAGCACCTTGTGTCTACTGGATTCAA
CCAGATGCGTGAGCGCGAAGTGAAGCTGTGGGACACGCGGTTCTTCTCCAGCGCCCTGGCCTCCCTCACCTTGGA
CACCTCGCTTGGGTGTCTCGTGCCTCTGCTGGACCCTGACTCTGGGCTCCTGGTCCTGGCAGGAAAGGGCGAGAG
GCAGCTGTACTGTTACGAGGTGGTCCCGCAGCAGCCGGCGCTGAGCCCAGTGACCCAGTGTGTCCTGGAGAGCGT
GCTGCGTGGGGCTGCCCTTGTGCCCCGGCAGGCGCTGGCCGTCATGGGCTGCGAGGTACTCCGCGTCCTACAGCT
GAGCGACACAGCCATCGTGCCCATCGGCTACCATGTGCCCCGCAAGGCTGTGGAGTTCCACGAGGACCTGTTCCC
GGACACTGCCGGCTGTGTGCCTGCCACCGACCCCCATGGCTGGTGGGCTGGGGACAACCAGCAGGTGCAGAAGGT
CAGCCTCAACCCCGCCTGCCGGCCCCACCCGAGCTTCACTTCCTGTCTGGTGCCCCCTGCGGAGCCCCTCCCTGA
CACAGCCCAGCCTGCGGTGATGGAGACACCCGTGGGTGATGCAGACGCAAGCGAGGGTTTCTCTTCCCCTCCCAG
TTCGCTGACCTCGCCCTCCACGCCCTCCAGCCTGGGGCCCTCACTCTCCAGCACCAGTGGCATCGGGACCAGCCC
CAGTTTGAGGTCGCTGCAGAGCCTGCTGGGCCCCAGTTCCAAGTTCCGCCATGCTCAGGGCACTGTCCTGCACCG
AGACAGCCACATCACCAACCTCAAGGGGCTCAACCTCACCACACCTGGTGAGAGTGACGGCTTCTGTGCCAACAA
GCTGCGTGTGGCCGTGCCGCTGCTCAGCAGCGGGGGACAGGTGGCTGTGCTTGAGCTACGGAAGCCTGGCCGCCT
GCCCGACACGGCACTGCCCACGCTGCAGAATGGGGCAGCTGTGACTGATCTGGCCTGGGACCCCTTTGACCCCCA
TCGCCTCGCTGTGGCTGGTGAGGACGCCAGGATCCGACTGTGGCGGGTACCCGCAGAGGGCCTGGAAGAGGTGCT
CACCACGCCAGAGACTGTGCTCACAGGCCACACGGAGAAGATCTGCTCCCTGCGCTTCCACCCACTGGCAGCCAA
TGTGCTGGCCTCGTCCTCCTATGACCTCACTGTTCGCATCTGGGACCTTCAGGCTGGAGCTGATCGGCTGAAGCT
GCAGGGCCACCAAGACCAGATCTTCAGCCTGGCCTGGAGTCCTGATGGGCAGCAGCTGGCCACTGTCTGCAAGGA
TGGGCGTGTGCGGGTCTACAGGCCCCGGAGTGGCCCTGAGCCCCTGCAGGAAGGCCCAGGGCCCAAGGGAGGACG
CGGAGCTCGCATTGTCTGGGTATGTGATGGTCGCTGTCTGCTGGTGTCTGGCTTTGACAGCCAAAGTGAGCGCCA
GCTGCTCCTATATGAAGCTGAGGCCCTGGCCGGCGGACCCTTGGCAGTGTTGGGCCTGGACGTGGCTCCCTCAAC
CCTGCTGCCCAGCTACGACCCAGACACTGGCCTGGTGCTCCTGACCGGCAAGGGCGACACCCGTGTATTCCTGTA
CGAGCTGCTCCCCGAGTCCCCTTTCTTCCTGGAGTGCAACAGCTTCACGTCGCCTGACCCCCACAAGGGCCTCGT
CCTCCTGCCTAAGACGGAGTGCGACGTGCGGGAAGTGGAGCTGATGCGGTGCCTGCGGCTGCGTCAGTCCTCCCT
GGAGCCTGTGGCCTTCCGGCTGCCCCGAGTCCGGAAAGAGTTCTTCCAGGATGACGTGTTCCCAGACACGGCTGT
GATCTGGGAGCCTGTGCTCAGTGCCGAGGCCTGGCTGCAAGGCACTAATGGGCAGCCCTGGCTTCTCAGCCTGCA
GCCTCCTGACATGAGCCCAGTGAGCCAAGCCCCCCGAGAGGCCCCTGCTCGTCGGGCCCCATCCTCAGCGCAGTA
CCTGGAAGAAAAGTCTGACCAGCAAAAGAAGGAGGAGCTGCTGAATGCCATGGTGGCAAAACTGGGGAACCGGGA
GGACCCACTCCCCCAGGACTCCTTTGAAGGCGTGGACGAGGACGAGTGGGAC**TAG**CCTGCGCCCCCGTCACCTCC
ACCTCACCTGTGCTGCCACTTCCTAGTGCACACCTCACGGCTCATCCTCAAGCTGGAAGATACCTCTCTGGCCCC
GGCACATGTCACCCCTGCACTCCTGCCTTCCCGTGGGCACTTCCACATCCTCTGGGCCTCTGGCAGTTCCCAGGG
ACTGTTTTCACCTCTGCTGTCTCTGGGGTCAGCTGCTGCTCATCAGCTGCCCGCTAGCATGTGGCCAGGGGTGCA
GGGTGGCGGGGGGTCAGCAGCATGTCCCTGGGCAGGCCCTGGGCACCCTGTCTCCCCTGGTCTCACTGCTGACCT
GGGCTGGTCCCAGCCTGGATTGGCCTCATCCAGGATCTTTGGTCACCCCACGCTGCCCCATCTTGCCTGCTGTTC
CAGTTCTGGTCAAGGGCCTTGGGGGCTGGCCCCCCACCAGGCCTTCTAGAGCAGCACCAGTCTCAGGGCCCTGGG
ACCAGCTGCCCTACTTCCCAGGTTTGTAGCCAGGAGAAGGGGGCATCACAGAGCTGATGGTCCAATAAGGGGGGT
GTGAGCCCCGCAGGGACTGGCCCGCACCTGCCTTGGATGTTTTCAGCAATTAAACTTTTTTAAGCTGGCAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2209

MNRFRVSKFRHTEARPPRRESWISDIRAGTAPSCRNHIKSSCSLIAFNSDRPGVLGIVPLQGQGEDKRRVAHLGC
HSDLVTDLDFSPFDDFLLATGSADRTVKLWRLPGPGQALPSAPGVVLGPEDLPVEVLQFHPTSDGILVSAAGTTV
KVWDAAKQQPLTELAAHGDLVQSAVWSRDGALVGTACKDKQLRIFDPRTKPRASQSTQAHENSRDSRLAWMGTWE
HLVSTGFNQMREREVKLWDTRFFSSALASLTLDTSLGCLVPLLDPDSGLLVLAGKGERQLYCYEVVPQQPALSPV
TQCVLESVLRGAALVPRQALAVMGCEVLRVLQLSDTAIVPIGYHVPRKAVEFHEDLFPDTAGCVPATDPHGWWAG
DNQQVQKVSLNPACRPHPSFTSCLVPPAEPLPDTAQPAVMETPVGDADASEGFSSPPSSLTSPSTPSSLGPSLSS
TSGIGTSPSLRSLQSLLGPSSKFRHAQGTVLHRDSHITNLKGLNLTTPGESDGFCANKLRVAVPLLSSGGQVAVL
ELRKPGRLPDTALPTLQNGAAVTDLAWDPFDPHRLAVAGEDARIRLWRVPAEGLEEVLTTPETVLTGHTEKICSL
RFHPLAANVLASSSYDLTVRIWDLQAGADRLKLQGHQDQIFSLAWSPDGQQLATVCKDGRVRVYRPRSGPEPLQE
GPGPKGGRGARIVWVCDGRCLLVSGFDSQSERQLLLYEAEALAGGPLAVLGLDVAPSTLLPSYDPDTGLVLLTGK
GDTRVFLYELLPESPFFLECNSFTSPDPHKGLVLLPKTECDVREVELMRCLRLRQSSLEPVAFRLPRVRKEFFQD
DVFPDTAVIWEPVLSAEAWLQGTNGQPWLLSLQPPDMSPVSQAPREAPARRAPSSAQYLEEKSDQQKKEELLNAM
VAKLGNREDPLPQDSFEGVDEDEWD

FIGURE 2210

CAGTGCTGCGGGCTCCGGGCA**ATG**GATGCCCCCGGGGCCCTGGCCCAGACCGCCGCCCCCGGTCCGGGCAGGAAG
GAGCTGAAGATCGTGATCGTGGGCGACGGCGGCTGCGGCAAGACCTCGCTGCTCATGGTGTACAGCCAGGGCTCC
TTCCCCGAGCACTACGCCCCATCGGTGTTCGAGAAGTACACGGCCAGCGTGACCGTTGGCAGCAAGGAGGTGACC
CTGAACCTCTACGACACGGCCGGGCAAGAAGACTATGACCGGCTGCGGCCCCTGTCCTACCAGAACACCCACCTC
GTGCTCATCTGCTATGACGTCATGAATCCCACCAGCTACGACAACGTCCTCATCAAGTGGTTCCCTGAGGTCACG
CATTTCTGCCGCGGGATCCCCATGGTGCTCATCGGCTGCAAGACAGACCTGAGGAAGGACAAGGAGCAGCCGCGG
AAGCTCCGGGCCGCCCAGCTGGAGCCCATCACCTACATGCAGGGCCTGAGCGCCTGCGAACAGATCCGAGCTGCT
CTCTACCTGGAATGTTCCGCCAAGTTTCGGGAGAATGTGGAGGACGTCTTCCGGGAGGCCGCCAAGGTGGCTCTC
AGCGCTCTGAAGAAGGCGCAACGGCAGAAGAAGCGCCGGCCCTGCCTGCTGCTC**TGA**CCCAGGGCAGACAGACCT
CACGACAGCACTGACAGGGCCCGGGGGCCCAGGTGCCGATTGCACCAGGGAGGCTGCCCCATCCCGACCCTCCAG
CTCATGGTGTCTGGGGCCTGCGGCTAGACTCTTGGAACATTCTGGAACTCTCTCCTTTCCTGGCTGGGGCTCTGA
CCACAAACTCCCCTCCAGGCTGCCCCTGGGACATGGTGGTGATGTGGGTGCAGGAGCCAGTGTCTGTTGTCGGGA
CTCGCAAGTGCCCTCATCACAGCCACCCCCACCACGAGTGTCTCCCCAGTGCAGACTCAAGTTATGCTTGAAATG
AAAAAGTCTATCTGGTAGTGGGTAAACGTAGACCTGGCACTGTTCCACGCGGGCGCCCCAAGCCTGCCACTCCTG
TGTCCCTGCCTCCCTGGGCTCCCGAGATAGGCACCACTGTATCCTCCAGCTCCTTCCTTCCTTCCCCCAGGAACA
CGGAGGCCACCGAGGGGGCTGGGCCTATCAGGAGGACACAGGCTGCAGCCTGGCACCCACCCCTCCCATCTCCAC
CCCACATGGAAGACTTGTCTTCAACTTGGCCACTGTCTTTGCAGAGCTGGGCACATGTGCCCAGGGGGCAGAAAA
AATGGCTTCTCAGTTGTTAAAAGTATACCCTGGACCACCCATCTGACCATCTCCTTAAGGTTTCACCCAAAGCCC
CCAGTGTCAGAGACTTGGGATGGGAAGAACAGTCGGCTCCCAGTGTGGTCATGAGCAAGTTTTCTGTGGACTGTT
CCCCCCACTGCGGCAGGACAGGACTGGCCCACTTAGTCCTCAAGCTCCCAACCTGCTGTCCCTCAAGCCCCGCTT
CTACCAGCCTGTGGAGTTCAGGAGGCGAGACATCCTGGCCTCCTTTGAGAACTGATGGGATCTACCCCCTGTCCA
CGCGGGACAGTTTCTCAGAACTGGTTCATAGACCACCTGTGTCACCAACAGCCAGATACCTAATCCCTGAGCCTC
CTTTGGGAAGGTCTGGGGCCGAGGGTCTGGGAATTTTTTTTTTTTTTTTTTTTTGGGACAGAGTCTCATTCTG
TCACTCAGGCTAGAGTGCAGTGGCATGATCTTGGCTCACTGCAAGCTCCACCTCCTGGGTTCAAGCGATTCTCTT
GCCTCAGCCTCCTGAGTAGCTGGGACTACATGCGCACACCACCACGTCCGGCTAATTTTTGTATTTTTAGTAGAG
ACAGGGTTTCACCATGTTGGCCAGGCTGGTCTTGAACTCCTGACCTCGTGATCCACCCGCCTTAGCCTCCCAAAG
TGCTGGGATTACAGGCGTGAGCCACCGTGCCCGGCCCAGGACTTTTAAAACAAGCATCCCAGGGGATTCCGGTGC
CCACCAGAAGTCGCAAGCTGCTTGGCTCTGGAGGGCGCCTAGGAGTCGGTGTCGCCTAAGATGGGATAATGGCTT
CAGGCAACTCCCAGCCTTCCCCATATCTCCTGCCTCAGCCCCCCTGGCCCAGTGCTGGGGCGTCAGCTAAACCTG
AGCTTCCAAGAAGTCAGGTTGCCAAAGGAAGAAGCCTTCTGAGACCCTCCCCAACCCACCCAGGTTCCCAAGGCC
CTGCCGTACCCTGGGGAATCAACCAAGGAGTTCTTGTTCTCGAAGAACCCCAGGCCTCATGATGGTCTACGGTAG
AGGTCCAACAACTACAGCCTGTGGGCCACATCTGGCCACAGCCTGATTTGTAAATAAAGTTTTATTGGAACACAA
AAAAAAAAAAAAAAAAAAAA

FIGURE 2211

MDAPGALAQTAAPGPGRKELKIVIVGDGGCGKTSLLMVYSQGSFPEHYAPSVFEKYTASVTVGSKEVTLNLYDTA
GQEDYDRLRPLSYQNTHLVLICYDVMNPTSYDNVLIKWFPEVTHFCRGIPMVLIGCKTDLRKDKEQPRKLRAAQL
EPITYMQGLSACEQIRAALYLECSAKFRENVEDVFREAAKVALSALKKAQRQKKRRPCLLL

FIGURE 2212

GTGAGCGCATGTGCGCATTTATGAGCATCTACTTGCGGCTGCACTCAGGGCCATTTGAACCCAGTGCAGAGTTAT
CTCTATGAGGAGGCCCCGGGTCTCCAGCCCCCTCCATCTCCCCTGGGGTTTGGCATATTTGACATGGAGCCCCAT
GCCAAGGGATGCAGCTGTTGGTGTCTGTCCAGTCCATTCAAGGCTAGCCTGCCCATGCACTGTGGCAGGGGTTGG
ATTGGAGGGAGAGAACAGAGTTGGGAAAAACAACAGGTTTGAGTCCTATAAAGCCATAATTTAACTCCAGTAGCT
GATGTCAGACAAGCTTGTCCT**ATG**TCCTATTTGAGTGGCAGCAGCGCCAGCCCAGCAAGAAGGCTGGGGGTTGTC
AAGGTTGTCCCCAGACCTTGCTTGCAGTGGTTGGAGAACCCAGGGGGCTGCCTTGGGCCCTCTGGCCAGAGGGAA
GCGGGCAGCTCTAGCCCTGGAGATTGTGGTCACATTGGGGCTTGTTTAGGATTGGAGGGCCAGGTCACCTCCCCA
GCCACCCTCCCTTCTCTCCTCTGGGGTCCCCACTTTAGGGCGACTTTGCCCGAGGCCCACGCATCCATCCACTCC
TTTAGTGCCTTGAATCTCATTCACAAGCAGCCCCCTCCCTTCCCCTTCCCTTCTCACTCTGTTGATGTAATCCTC
CCACCCCCAGTGTCCATCCTAAGACAGGCATCAAAAGAGGCCCTAACTTTACTTCCCAAATGGTGCTTTTTAAAA
AACACCATCACTACATTAGGGGCAATTTTTTCACACCTCCCTGTCTTCAGAATG**TAA**AGGGTGGGGATTATGTCT
CTGTTTAATATGCAGCCCCCTGCACTGTGGGGTTTGGGGCATGTTCAGTAATAAGAATGAATACAATAGACAAAG
GGGGTGTGATGAGTGTTAACTTGGTTGTTCCAGAGGTAAACCAGGTCTCAGGGAAGAGCCTGGAGCTGCTATTGC
TTAGGAAGTTGTACGTGCCTTGAAATGTCCACTACCTGAGGACGCAGCATCTGGTGGGCCCGGGGCTGCTGGGGC
CAAGGAGGGACCTTGACCTTCTGGTGCCTGCCCCTCCCCGGCCTACGTGCCATCCGCGTGACGCTAGGTCAGCGC
TGCCGGTTCTTTACCAAATGTGCTTGCTTCTCCTAAGTTATTTATAAAGAGAAATCACTAATGGACTCTACTGGT
TTGAGTGCTTCTGAGCTGGATGACCGACCGCCTGTATGTTTGTGTAATTAATTGCCATAATAAACTTTGATGAGT
CAAAAAAAAAAAAAAA

FIGURE 2213

MSYLSGSSASPARRLGVVKVVPRPCLQWLENPGGCLGPSGQREAGSSSPGDCGHIGACLGLEGQVTSPATLPSLL
WGPHFRATLPEAHASIHSFSALNLIHKQPPPFPFPSHSVDVILPPPVSILRQASKEALTLLPKWCFLKNTITTLG
AIFSHLPVFRM

FIGURE 2214

CGGGACGCGG**ATG**CAGACGCAGGCGGAGGCGCTGACGGCGGGGATGGCCGGGGTGGCCACAGCTGCCGCGGGGGC
GTGGACACAGCCGCAGCTCCGGCCGGTGGAGCTCCCCCAGCGCACGCGCCAGGTCCGGGCAGAGACGCCGCGTCT
GCCGCAGGGGGTCACGAATGCGGCCGCACATATTCACCCTCAGCGTGCCTTTCCCGACCCCCTTGGAGGCGGAAA
TCGCCCATGGGTCCCTGGCACCAGATGCCGAGCCCCACCAAAGGGTGGTTGGGAAGGATCTCACAGTGAGTGGCA
GGATCCTGGTCGTCCGCTGGAAAGC**TGA**AGACTGTCGCCTGCTCCGAATTTCCGTCATCAACTTTCTTGACCAGC
TTTCCCTGGTGGTGCGGACCATGCAGCGCTTTGGGCCCCCCGTTTCCCGCTAAGCCTGGCCTGGGCAAATGGAGC
GAGGTCCCACTTTGCGTCTCCTTGTAGGCAGTGCGTCCATCCTTCCCTAGGGCAGGAATTCCCACAGTTGCTACT
TTCCTGGGAGGGCCTCATGTTTTATCTGGTTCTTAAATGTTTGTTACTACAGAAAATAAAACTGAGGTATTATT

FIGURE 2215

MQTQAEALTAGMAGVATAAAGAWTQPQLRPVELPQRTRQVRAETPRLPQGVTNAAAHIHPQRAFPDPLGGGNRPW
VPGTRCRAPPKGGWEGSHSEWQDPGRPLES

FIGURE 2216

GAATGGAATGAAAAGCCTTGTACAAGAGGCTTCGTGCC**ATG**TTCAGCCTGCCCCTTAGCCTTCCACTGTGTGAGG
ACACAGCATTCCTTCCTTCCAAGTGCTGCAGCTCTCACAAGACAATCAAACAAGCCCGCACCTTGATCATGATCT
TCCTAGCCTCCGGAACGCACTTTCAGACCATGCTGAAGTCTAAATTGAATGTCTTAACACTGAAAAAGGAACCTC
TCCCAGCGGTCATCTTCCATGAGCCGGAGGCCATTGAGCTGTGCACGACCACACCGCTGATGAAGACAAGGACTC
ACAGTGGCTGCAAGCACTTTCAGACCATGCTGAAGTCTAAATTGAATGTCTTAACACTGAAAAAGGAACCTCTCC
CAGCGGTCATCTTCCATGAGCCGGAGGCCATTGAGCTGTGCACGACCACACCGCTGATGAAGACAAGGACTCACA
GTGGCTGCAAGGTTACCTACCTGGGCAAAGTCTCCACCACTGGCATGCAGTTTTTGTCAGGCTGCACAGAAAAGC
CAGTCATTGAGCTCTGGAAGAAGCACACGCTAGCCCGAGAGGATGTCTTTCCGGCCAATGCCCTCCTGGAAATCC
GGCCATTCCAAGTTTGGCTCCATCATCTCGACCACAAAGGGGAGGCCACAGTGCACATGGATACCTTCCAGGTGG
CCCGCATCGCCTACTGCACCGCCGACCACAACGTGAGCCCCAACATCTTCGCCTGGGTCTACAGGGAGATCAATG
ATGACCTGTCCTACCAGATGGACTGCCACGCCGTGGAGTGCGAGAGCAAGCTCGAGGCCAAGAAACTGGCCCACG
CCATGATGGAGGCCTTCAGGAAGACTTTCCACAGTATGAAGAGCGACGGGCGGATCCACAGCAACAGCTCCTCCG
AAGAGGTTTCCCAGGAATTGGAATCCGATGATGGC**TGA**ATGAACTTGAGACGCTTCAGCAAAGGCAGCATTGGTC
ACGGAGTTCAAGGGAATAGATGAGTAAGCAACGTTTCAAATTTGGGATGAAAAGACTGCCAAACTATTGGCTGAC
CAAGGTTTTTAAATTCAGAAGAGCAATTCTAAATCTAAAGAAATGTATCATTAAAGTAATTACGTTACATTGAAA
CCTGCTGCTGCTGTGACTGTGAGGAGGGTGGGAGTGTGGATGGGGAGGAAGGTTCTAGGCTCTCTTCTTATTTTT
CTCATTTCCCAATGCCTCTCTGTGGGAGAGCTTCATGCCAGTTTTCACCACGCTCAGGCAAATACTCTGCAGCTG
TTATTGGATGGGCCATTCCGATCTGCCTTATGAAATTCCACAAGAATGTTAGGGGCACCCTCTTTCCCCTTCTAA
CATCCTTAGAGGGATGAAATCTCAGCATATGTTGCAGGACACCAAAAGGAAGAAAACAATCAAGCAAATAAAATA
AACAGTCAAACAAACCAGGAGTTTAAAACAACAACCCCAACAACAGAAGCCTTGGCAAAGAGGAATAAGTGATCA
GCAAGTGAACACACTCTATGTCAACTCTCCTTTTATCCAGCTGAGATTTATGGTAACTTATTTAATTAATGGTCC
TGTCTGATGCATCCTTGATGGCAAGCTTCAAATCTGATTTGGTATCACCGAGGAAACCTTGCCCCCATCACTCAG
CATTGCACTTAGATACAGAATGAGTTAGATAAACTTGGCTTGTCTAGAGACCCATGTCATCTTAACCTAAAGGGA
AATCTTATTGCGTTATCATAAAATTGATGATATCTTAGGGTCAGAATTGCCCTTTTTTTTTATTTTGAATGGGAAG
CTCTCACTAAAACAATCCTGAGATTTCTTAATTTCATGGTTCTTTAAATATTATAAACACAGAGTCAACATAGAA
TGAAATTGTATTTGTTAAAATACACACATTGGAGGACAAGAGCAGATGACTACTTTTCGAAGTAATGCTGCTCCT
TCCTAAAAGTCTGTTTTCAATCCTGGTAATATTAGGGGCACTGCGGCACCTAAGAAGCCTTAAATGAGAGCTAAT
CCAATTTAGAGAGCGATGGTGTCAGCATTTCGGTCTGCATATCTGTGTGTCCGTATCTGCGTTTGTGTGCGTGTA
CGTGTGCCCCTGTGTGTGGGCCCAGTTTTCAGGCATGTAGAATAAGCATGGAGTCATATTGAGGAGGACTCACTT
CTTGAAGATATGCTTGTTGCTTTACAACATATGTAAGCTATTCTTTAGCATAAATGCATTCATTCTTTAATAAAA
ATATGTTTGCATTAAAAAAAAAAAAAAAAAAAA

FIGURE 2217

MFSLPLSLPLCEDTAFLPSKCCSSHKTIKQARTLIMIFLASGTHFQTMLKSKLNVLTLKKEPLPAVIFHEPEAIE
LCTTTPLMKTRTHSGCKHFQTMLKSKLNVLTLKKEPLPAVIFHEPEAIELCTTTPLMKTRTHSGCKVTYLGKVST
TGMQFLSGCTEKPVIELWKKHTLAREDVFPANALLEIRPFQVWLHHLDHKGEATVHMDTFQVARIAYCTADHNVS
PNIFAWVYREINDDLSYQMDCHAVECESKLEAKKLAHAMMEAFRKTFHSMKSDGRIHSNSSSEEVSQELESDDG

FIGURE 2218

GGGGAGGTAGCCCGCAGTGCAGGGGCAGCGCGGCGCGGGGCCACCGACGGGACGCGGCTCCGGGAAC**ATG**GCTCG
CTTCGCTCTGACTGTTGTCCGGCATGGAGAAACAAGATTTAACAAGGAGAAAATAATCCAAGGACAAGGAGTAGA
TGAACCTCTTTCAGAAACTGGATTTAAACAAGCAGCAGCTGCTGGTATATTTCTGAATAATGTGAAGTTTACTCA
TGCTTTCTCCAGTGATCTCATGAGGACAAAGCAGACCATGCATGGAATTTTGGAGAGAAGCAAATTTTGCAAAGA
TATGACGGTAAAGTATGACTCAAGACTTCGGGAAAGGAAATACGGGGTTGTAGAAGGCAAAGCGCTAAGTGAGCT
GAGGGCCATGGCCAAAGCAGCCAGGGAAGAGTGCCCTGTGTTTACACCGCCCGGAGGAGAGACGCTGGACCAGGT
GAAAATGCGTGGAATAGACTTTTTTGAATTTCTTTGTCAACTAATCCTGAAAGAAGCGGATCAAAAAGAACAGTT
TTCCCAAGGATCTCCAAGCAACTGTCTGGAAACTTCTTTGGCAGAGATATTTCCTTTAGGAAAAAATCACAGCTC
TAAAGTTAATTCAGACAGCGGTATTCCAGGATTAGCAGCCAGTGTCTTAGTTGTGAGTCACGGTGCTTACATGAG
AAGTCTGTTTGATTATTTTCTGACTGACCTTAAGTGTTCCTTACCAGCCACTCTGAGCAGATCTGAACTTATGTC
AGTCACTCCCAATACAGGGATGAGTCTCTTTATCATAAACTTTGAGGAAGGAAGAGAAGTTAAACCAACGGTTCA
GTGTATTTGTATGAACCTACAGGATCATCTAAATGGACTGACTGAAACTCGC**TAA**GGTTAAATCTGCATCAAAAT
CTAACCAATTTGAGCCTCTGAAGGGAGTGCCATTGGCTTTATTTACTTCTCTCCTCTGCTAGTCCTGATTTGGAA
ACAGTTAAAAGCCAATTTTTAGCTCCAGTGGAACCATAGCCACATAAAACTTTAATGGACAACCATATAGAATTA
ACTTATTTTGTCCAAGTACAGTTGGCATTTTCCAGAATAATTTTACCACCCTGCTAGATGTCATCTCTGGATTGC
ACATGGATGATGAAGGAACTCAGCATTGAAAGTTGGGGGATTAGTAACCTTGTTACAACGGTTTCTTTTTCATTT
TAGCCTATTTTAATGGCTATTGGTAAGATACTGTATGTTTTTAGTATCTCATCCAGTGCTTAGAAGAAAGAATGG
TTTATAATTCCCAGTACATGTTTATATTGACTGTGTTATATTTTTAAATCCTTTAAATAAAAAATCCTTATAAGT
TTATGTAAAGC

FIGURE 2219

MARFALTVVRHGETRFNKEKIIQGQGVDEPLSETGFKQAAAAGIFLNNVKFTHAFSSDLMRTKQTMHGILERSKF
CKDMTVKYDSRLRERKYGVVEGKALSELRAMAKAAREECPVFTPPGGETLDQVKMRGIDFFEFLCQLILKEADQK
EQFSQGSPSNCLETSLAEIFPLGKNHSSKVNSDSGIPGLAASVLVVSHGAYMRSLFDYFLTDLKCSLPATLSRSE
LMSVTPNTGMSLFIINFEEGREVKPTVQCICMNLQDHLNGLTETR

FIGURE 2220

ACGCGCCTCGGGGAACAGCCTGGCCCAAAGCCTCACTCCTCACGTCCCAGGGGTGGACGGGGGTCCGGGAGCCTC
GAGCTCCGGGCAGGCGTGGCGAGGCTGAAGTCTGGGTCTTCCGCGCCCCGCGAGGACCACGCCGCGACGTAATCG
CCCGCGGGGAGGCGCGGAGTGGAGCCGCAGCCAGCCCCTCCCGCACTCTGCTGACCGCGCACTAGCTGTCCTTGA
GGCAAGAATACTTGGGAGCGGAAAAAAGGTGGGGGTGTTCCCCGGGGCGGGGGAGGAGGGGCAAGGCCCCAGCAA
GCCTCTTGGAAATCTCTCCCTGGGAGGGGACGAGGGGCGGCCTTCAGTTGCAAATGGGAAGGGCTCGGATACCGG
ATTTGAAGCAGTGTTTGCACGGCAAGCGCAGCTTTTATTTAGACTGCCGGTTTGTGAGGGTTGGCTCTCAGAGCG
CTGATGGCGATTATAGTGGAACTTCACCTTCACCTGCTATGCGCCCCGCAGCGCGCCCGCTCCCACGCCCGCGTA
GCTGAGGACCCAGACTCGCCAGGAAAGGCTAGTGAGGCTGGGGCCCGGGCGGGCCCGGCCGGGCCGGGTCAGGGG
AGGGGCCTGGCGGCAGGGGCGGGGCCTCAGCTAAAGGCGCGGAGCACCCGGCGCCGAGAGCGCTGAGTAGAGCGG
CGCCCGCTCGAGAGAAGTGGGGCCGAGATCGCGCCGTCCCAGCCCGCCCGCCGGCGTCTGCGCTGCTCCGGCGCC
CTTACCCCTGCTGGCCCTTGCAAGGCGCGACCGGCGGCCATGCAGCCCCGGGGCTGAGGCCGCCCCATGGCAAAG
CCGGCGGTCCCGGCGACGACGGCGC**ATG**GAGAACTTCCGTAAGGTGCGCTCCGAAGAGGCGCCAGCGGGGTGCGG
GGCCGAGGGAGGCGGCCCGGGCTCCGGCCCCTTCGCAGACCTGGCGCCGGGCGCGGTGCACATGCGGGTCAAGGA
AGGCAGCAAGATCCGGAACCTGATGGCCTTCGCCACCGCCAGCATGGCGCAGCCAGCCACGCGCGCCATCGTCTT
CAGCGGCTGCGGCCGGGTCACCACCAAAACCGTCACGTGCGCCGAGATCCTCAAGCGCCGCCTGGCGGGCCTGCA
CCAGGTCACGCGGCTGCGCTACCGGAGCGTACGCGAGGTGTGGCAGAGCCTCCCGCCTGGGCCCACGCAGGGTCA
GACGCCTGGCGAGCCGGCCGCTAGTCTCAGCGTACTTAAGAACGTGCCCGGCCTCGCCATCCTACTTTCCAAGGA
CGCGCTGGATCCGCGACAGCCCGGCTACCAGCCCCCGAATCCCCATCCTGGTCCCTCGTCCCCGCCAGCCGCGCC
AGCGTCCAAGAGGAGCCTAGGGGAACCCGCAGCTGGAGAAGGCTCCGCGAAGCGATCGCAACCCGAGCCAGGGGT
TGCGGACGAGGATCAGACGGCC**TGA**AACTCCGGACTGTGGGCCACCTAGTCCGGCAGGATCTTCCGCCAGCGCCT
CCACCTTCAGATGTACCTCCAGCCTTTCACTCCTCGGTCCTCCGGAGCCCACAACCTGGACACAGCTCCTCAAGA
CAGGTAGCATGGACCTTAAGGCGACAAGAGAGGGGCCCCAGGAGTGGCAGGAGAGGATCCCCGACCACCCTAGGG
AAACTTCGTGCGATAATTGCTGCTTATGCCCGTGTTGCGTGAAGACACGGAACTTCACCTTTTCTGGGACCTTCT
TTGGGGGAGAATGGTGGACAGTGGGATTCTGGAAACTTGTTTGGGACCCCCAAGGGTTAAAGCCACCCAGCATTC
ACGAAGAGCACCTGAAGTATGGAAGCTGACTTTCTAGTTTTCTTTCCCCTGCTTCAGAGGAGCATCTCTGAGGGT
TCTAGCTCTTTTAACACCTCTTTTCCCCCTGCTGGCCCAGAGGGAGACCCAGGACTGAACTCTCCAGGCCTCCTC
CCCTGAGCCCTGCAGCTGGCTGGAGTCTTGTTTCCAATAAAACAAGCACAAAAAAAAAAAAAAAA

FIGURE 2221

MENFRKVRSEEAPAGCGAEGGGPGSGPFADLAPGAVHMRVKEGSKIRNLMAFATASMAQPATRAIVFSGCGRVTT
KTVTCAEILKRRLAGLHQVTRLRYRSVREVWQSLPPGPTQGQTPGEPAASLSVLKNVPGLAILLSKDALDPRQPG
YQPPNPHPGPSSPPAAPASKRSLGEPAAGEGSAKRSQPEPGVADEDQTA

FIGURE 2222

AATTCCCTCCGCCGCGGTCGCTGAGCGAGTGCGGCGGGAATGCGGAACCGGCGCGCGGGCTGAGGCCGCCCGGGA
TGGCGCAGGGGCGGCGGCGGCGGGCGGCCTGCGCGGGGCCCTAGCGAGCCGGGCTGACGCTCCCGGCCCCGGCCC
CGGCATCGGCATCGCGGGCGCATCGCGGCC**ATG**GCCAAGGAGCGGCGCAGGGCGGTCCTGGAGCTGCTGCAGCGG
CCGGGGAACGCGCGCTGCGCGGACTGCGGCGCCCCGGATCCCGACTGGGCCTCCTACACTCTGGGCGTCTTCATC
TGCCTGAGCTGCTCGGGAATCCACCGGAATATCCCCCAGGTCAGCAAGGTGAAGTCCGTCCGCCTGGACGCCTGG
GAGGAGGCCCAAGTGGAGTTCATGGCCTCCCACGGGAACGACGCCGCGAGAGCCAGGTTTGAGTCCAAAGTACCC
TCCTTCTACTACCGGCCCACGCCCTCCGACTGCCAGCTCCTTCGAGAGCAGTGGATCCGGGCCAAGTACGAGCGA
CAGGAGTTCATCTACCCGGAGAAGCAGGAGCCCTACTCGGCAGGGTACCGTGAGGGTTTTCTCTGGAAGCGTGGC
CGGGACAACGGGCAGTTTTTGAGCCGGAAGTTTGTGCTGACAGAACGAGAGGGTGCTCTGAAGTATTTCAACAGA
AATGATGCCAAGGAGCCCAAGGCCGTGATGAAGATCGAGCACCTGAATGCCACCTTCCAGCCGGCCAAGATCGGC
CACCCCCACGGCCTGCAGGTCACCTACCTGAAGGACAACAGCACCCGTAACATCTTCATCTACCATGAGGACGGG
AAGGAGATTGTGGACTGGTTCAATGCACTCCGAGCTGCTCGCTTCCACTACCTGCAGGTGGCATTCCCAGGGGCC
AGCGACGCAGATCTGGTGCCAAAGCTCTCCAGGAACTACCTGAAGGAAGGCTACATGGAGAAGACGGGGCCCAAG
CAAACGGAAGGCTTCCGGAAGCGCTGGTTCACCATGGATGACCGCAGGCTCATGTACTTCAAAGACCCCCTGGAC
GCCTTCGCCCGAGGGGAAGTCTTCATTGGCAGCAAGGAGAGTGGCTACACGGTGCTGCATGGGTTCCCGCCGTCC
ACCCAGGGCCACCACTGGCCACATGGCATCACCATCGTCACGCCCGACCGCAAGTTTCTGTTTGCCTGCGAGACG
GAGTCCGACCAGAGGGAGTGGGTGGCGGCCTTCCAGAAGGCGGTGGACAGGCCCATGCTGCCCCAGGAGTACGCA
GTGGAGGCGCACTTCAAGCATAAACCT**TAG**CGAGTGCGGCTGGAGGACCACGGACATTGGACTCACTGTGGCTGG
ACGGAGGGGACCCGTGGATGGGGGGGCTCTGGCGTCCTGAGGCCACCTGGCCCCACCTGCTCCTCAGGGCAGCCC
GGCGCGGCCAGGTAGGGCCCGAGCTTCAGCTTCCAGGATGCTTCTCTGGAACCTCAAGGCAGGCAGCCCAGGCCC
TGGGCCTGATCTCTAACCCCGTCATGCTGCTGCTGACCACACCCAGCCAACCTGCCCCTCCCTGACCCGGGGCCC
CCTTTCCTCCAGGGCCCAGTCTGGCTCCCGAGCTCAGACACAGCCCCCAGGAGCCGCCCACCACGGCTGTGGGAA
CTTCCAGGCCTCAGCGCAGAGCCCTGCTTGGGGCCAGCACGGTGGGCAGCTGCCGGCCGCTGGGGACTGGGCCCT
GCTCGCATGCCGCCCCGCCCTCCCCCCACCTCCACGACTATTTATTGAGCGCCTGTTGTGTGTCACGGGGCTATG
AGGGCCGTGGGGGTGTTTGGGTGGATTATCCACACAGGTCCCGGCCCCTGCCCGGGCTGGAGTTGCCACAGCCTGT
GCTCCTGGTCCTCACCTGGAGGGGCCAGCAGGCTGCCGTCCCACCACACGTGGCCTCTGCGCCCAGCACGGTGCT
CGCCGACAGTGGTGTCTGAACCCTTGGGGACGAGGGCCTGGGCCGCGGTGAGGCCACCAGAGGCAGGAGTGGCCC
TGGGGGTCCCGGGCACTGTCGCGCTTGCTGCAGGCGGCCCAGCCGTGTATTTATTTTTCACCTATCTCCTTCCTG
TCAAGGCAGGCCGGGCTCCAGGGCTCCCCTTGCGTGGGGCATGTAGGTGGGGGAGGCGTCTGCAGGTCACCTGGG
GGGCCCAGCCCTCTCCCAGCCTTGCCTGGCTGAGCTGTGTTCCAGGGGAGCCCTGGACAAGCCCTCATAGGCAGG
GAGGGGGTTTCCGAGGCCAGGCATCCGCCGCCCCGTGTCGCATCCTGGAATAAAATGTGGCTCTGGCATGGTTAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2223

MAKERRRAVLELLQRPGNARCADCGAPDPDWASYTLGVFICLSCSGIHRNIPQVSKVKSVRLDAWEEAQVEFMAS
HGNDAARARFESKVPSFYYRPTPSDCQLLREQWIRAKYERQEFIYPEKQEPYSAGYREGFLWKRGRDNGQFLSRK
FVLTEREGALKYFNRNDAKEPKAVMKIEHLNATFQPAKIGHPHGLQVTYLKDNSTRNIFIYHEDGKEIVDWFNAL
RAARFHYLQVAFPGASDADLVPKLSRNYLKEGYMEKTGPKQTEGFRKRWFTMDDRRLMYFKDPLDAFARGEVFIG
SKESGYTVLHGFPPSTQGHHWPHGITIVTPDRKFLFACETESDQREWVAAFQKAVDRPMLPQEYAVEAHFKHKP

FIGURE 2224

AGAGTCGGGTAGACGGCAGCGGGAGCGGTGGCGTCTCCCCGCCTTCCCTCCCTCCCGGGCCTGGGCGCCCAGCCG
GACAGGTGAGCGGCAGCCAGGTGAGCGCGCCCACCTGCGCCTCTCCGCGCGGCCCGCCCTCCCCGGCGCCGGGCT
CCTCTCCGCGCCCCTGTCGGCGCGGAACCCTGGCCTCGTCCGCGGCCCAGCTCCCTGGAGCCTCGCATCAGCGGG
GGCGCCCCCGCGAGCTGCGCTCTCCCCGGCCGGAGCGCTCCTCCTCCAGCCCCCAGCCCGCAGGGTACTTTGCCC
TCGGAGCGAAGGAGGCTCCAGAACTGGTAGAGCCGGGCCATCGGGCTGGGCACCTCCCCGCGGCGCCCGCAGCGC
GGAGTCCACTGACCGGCTCAAAGGT**ATG**GCGTTGACGGTGGATGTGGCCGGGCCAGCGCCCTGGGGCTTCCGTAT
CACAGGGGGCAGGGATTTCCACACGCCCATCATGGTGACTAAGGTGGCCGAGCGGGGCAAAGCCAAGGACGCTGA
CCTCCGGCCTGGAGACATAATCGTGGCCATCAACGGGGAAAGCGCGGAGGGCATGCTGCATGCCGAGGCCCAGAG
CAAGATCCGCCAGAGCCCCTCGCCCCTGCGGCTGCAGCTGGACCGGTCTCAGGCTACGTCTCCAGGGCAGACCAA
TGGGGACAGCTCCTTGGAAGTGCTGGCGACTCGCTTCCAGGGCTCCGTGAGGACATACACTGAGAGTCAGTCCTC
CTTAAGGTCCTCCTACTCCAGCCCAACCTCCCTCAGCCCGAGGGCCGGCAGCCCCTTCTCACCACCACCCTCTAG
CAGCTCCCTCACTGGAGAGGCGGCCATCAGCCGCAGCTTCCAGAGTCTGGCATGTTCCCCGGGCCTCCCCGCTGC
TGACCGCCTGTCCTACTCAGGCCGCCCTGGAAGCCGACAGGCCGGCCTCGGCCGCGCTGGCGACTCGGCGGTGCT
GGTGCTGCCGCCTTCCCCGGGCCCTCGTTCCTCCAGGCCCAGCATGGACTCGGAAGGGGGAAGCCTCCTCCTGGA
CGAGGACTCGGAAGTCTTCAAGATGCTGCAGGAAAATCGCGAGGGACGGGCGGCCCCCCGACAGTCCAGCTCCTT
TCGGCTCTTGCAGGAAGCCCTGGAGGCTGAGGAGAGAGGTGGCACGCCAGCCTTCTTGCCCAGCTCACTGAGCCC
CCAGTCCTCCCTGCCCGCCTCCAGGGCCCTGGCCACCCCTCCCAAGCTCCACACTTGTGAGAAGTGCAGTACCAG
CATCGCGAACCAGGCTGTGCGCATCCAGGAGGGCCGGTACCGCCACCCCGGCTGCTACACCTGTGCCGACTGTGG
GCTGAACCTGAAGATGCGCGGGCACTTCTGGGTGGGTGACGAGCTGTACTGTGAGAAGCATGCCCGCCAGCGCTA
CTCCGCACCTGCCACCCTCAGCTCTCGGGCC**TGA**GCCCGCCATGCCCTCAGCCTGCCTCACTGCTGGGCCAGGGT
CATGCCTATATAAGTTGGCATGGCAGGGACAATGGTGGGCAGTTGCTCTTACATGAGCTAAGTTTGGAGACCTGA
GGCCCCTTTGTCCTCGCTGGGTGGGCCAAGGTCTGGGACCTGTCTTGGACTGTGGGAGACTCACCCTCACCTTGC
CAGGCCTCTCCCCTGCAGGACTGGCATTGCACTAGTCTGAGGTGGCCACTGCCTTTGATCAACCTTTGTGTGCGA
GGGTCTAAGTAGGGTCGAACACAGAAGTGGGAAGGAGAGGGGTGGGCCAGGGGCTAATGGTGTCACTGTGTAAAG
TTTTTGACATACTAGCTCTATAAATATATGAATATGGACAAAAT

FIGURE 2225

MALTVDVAGPAPWGFRITGGRDFHTPIMVTKVAERGKAKDADLRPGDIIVAINGESAEGMLHAEAQSKIRQSPSP
LRLQLDRSQATSPGQTNGDSSLEVLATRFQGSVRTYTESQSSLRSSYSSPTSLSPRAGSPFSPPPSSSSLTGEAA
ISRSFQSLACSPGLPAADRLSYSGRPGSRQAGLGRAGDSAVLVLPPSPGPRSSRPSMDSEGGSLLLDEDSEVFKM
LQENREGRAAPRQSSSFRLLQEALEAEERGGTPAFLPSSLSPQSSLPASRALATPPKLHTCEKCSTSIANQAVRI
QEGRYRHPGCYTCADCGLNLKMRGHFWVGDELYCEKHARQRYSAPATLSSRA

FIGURE 2226A

CGCGCCCCGGGCTCGGCCGACCCGGCGGGGATCTAGGGGTGGGCGACTTCGCGGGACCGTGGCGCATGTTTCCTG
GGAGTTACTGATCATCTTCTTTGAAGAAACATGAAGTTACACTATGTTGCTGTGCTTACTCTAGCCATCCTGATG
TTCCTGACATGGCTTCCAGAATCACTGAGCTGTAACAAAGCACTCTGTGCTAGTGATGTGAGCAAATGCCTCATT
CAGGAGCTCTGCCAGTGCCGGCCGGGAGAAGGCAATTGCTCCTGCTGTAAGGAGTGCATGCTGTGTCTTGGGGCC
CTTTGGGACGAGTGCTGTGACTGTGTTGGTATGTGTAATCCTCGAAATTATAGTGACACACCTCCAACTTCAAAG
AGCACAGTGGAGGAGCTGCATGAACCGATCCCTTCTCTCTTCCGGGCACTCACAGAAGGAGATACTCAGTTGAAT
TGGAACATCGTTTCTTTCCCTGTTGCAGAAGAACTTTCACATCATGAGAATCTGGTTTCATTTTTAGAAACTGTG
AACCAGCCACACCACCAGAATGTGTCTGTCCCCAGCAATAATGTTCACGCGCCTTATTCCAGTGACAAAGAACAC
ATGTGTACTGTGGTTTATTTTGATGACTGCATGTCCATACATCAGTGTAAAATATCCTGTGAGTCCATGGGAGCA
TCCAAATATCGCTGGTTTCATAATGCCTGCTGCGAGTGCATTGGTCCAGAATGTATTGACTATGGTAGTAAAACT
GTCAAATGTATGAACTGCATGTTTTAAAGAAGACAAATGCAAACCAAAGCAACTTAGTAAAATAATAGGTATAAA
AAGTTATTCTGTAAGTCTGTTGGTTGTATCTTGTATCAGAATCCCAGTAAGTTAAGTTGTAAAGACTTTGGAATA
AGTTTCTTTTAAAAATATGACATAGCCAGTGATGTGTTTAATTATATAACTGTTCTTACTGATTTTATTGCCCCC
TAGCAATAAGCCCTTTCCTTTGAATACATGTACAACTTTGGTCATATGAGAAGCAGGTGCGCAGAGAATTCCTTG
AAAGATCTGAGGTTTTTAACATAAAGTCTGATGTGGTTTTCCTCTAGCATTCCAAAAGGTTTTTGCTTTGAAAGT
GTTAGCAGAAGCATGTTGATGTGAATTATGATTTCTTCATGTGCTACTGTTAGCACACTGAGTTTTTATAGTTGC
ACATCATTCCTCATTGTGCCTTGTTTTATCCATTTTATAAATAGAGTAGATATTTGATATACCACTCTGATAACT
CATATAAAAATATCATCATAAAAAGCTTAATTTCATCCCTTTTATGTTGGTTTTAAAAGGTAAATGCTTACCATA
TTTTATAATTGAGAACTCTTACATAGTAGAATCCATTCTATAATACATGTGTTGACAAAGCTTTAGAGAAAGTTT
CCTATTCTCTTCCATTTCCCCTGCCCAAAGTGCTGACATAGGCAGTGATGAAGAATCTTTACCAAGATTTTCAGG
GTGTACCTATGAAATTGCTTTAAATGCACTGCTGGTGTAAATAATTAGCAAGCAAAAGCGTTTCTGTGACTTCAG
GTACCAGCTTAAAGAGCACTAGGGATGGGGAACGAATGCCAAATCAGACTCCACCTAGAGCACCAGGAAACAGCT
TGTACCCTGGTAGGGAAATGGTGTCGCTGAAAGGGGAGGCTGAGCCAGTGCGAGACTGAACTTGTGCAGCCTTAG
CCAAGACAAAGCAGTGTTTTTCAGCAGACGGCTGATGGGACAGGAATTGAAGAAGAGAATTGACTCGTATGAACA
GGACAGGGTGAAAATGCTGGGAATTATAATGGGAAACAAAACTATCTATGTTCATATTTTGTAATATTTCATTTG
TTAAGTTTATATCTGGATATAATGTTCTTTTTAAACAAGTATAATCATATCGTCGGAGGTTAAGATTATGAAATT
TTAAAATCTCTATTCAAGATGATGTTCACTCCAAATACACTACAGAATTTAGTCAACATTTTATATAATGTTTCA
ATAAATGTTTCTTTCAATAAAGATACTATGTGCCCTTCATAGTAATAAAATCTCAATCTTAAAGCATGAATCTAA
AACATAAATATTTATATTACAGACTCAATTTTACAAAATTACTAATTGCTCTAGTGCATATTTGAACTACAAGCA
ACTTTTTAGGAATACCTCTTTATACGTCTACATATTTTAGTATATAAAAATAGATAATGCTCTTGGACACATTTT
GTATTATTCATGATCTGAATAGTAGTTAGTTAAAAGATCATTTGTAATATTATGATCAACTGTTATAAATTAAGG
TCTTAATACCTTTTCTGCTCTTTCAAATAACTCTAATGAATATTCAAGATATTTTAGCCTTTTAAAAAGTTGAGA
TTTAGCTCATGGATATATTTTTTGGTAGGGAAACATTAGGGTCTCCTTTTCTTCCTTTTACCTAGAATGCCTCAT
TTAAAAGTGCCTTGAAAACATTTAGCTCCCCTTCTTCATGAGCATCTGTAGAGCTGAAAGTATTCTGGAACTTTA
GACAGAAAGCTGAAAGGAATCTGCAGTCTCCTGCTGCAGTTCAACTCTGCTGTTTTTCAGTCATTTCCTACTGTG
AGTGGAGTGATGTTTGTGTGTGTGTTGGCAACATGCCTAATGTTTTCTTAATGATGACAACAAATATTTTAAAAC
TGCATTTATCATTTTTTAGGTCTTCATTAAATTTTAAAATGTAATATCTGTTTCCCACCCCCTACATTAGGAGGA
TAATTTCTTAAACCACATTGTTTTAATTGATTTTTCTTATCTTGATTTCTTTCATTAGAAACTATCCCTAAATGT
AAAGATCTTTTGCCTTCAAATTTGGCTTATTTTTTCTGATTTATGAGGGTTTGAAAGAAAGAATTCACCTAAAAG
ATTCCATTTCCAGTTTTATAATGTATTTCAGGTTCTGAATAACAATATTTTTCCAAATTGAAAGTAAATATTCAA
GAAGTTGATAGCCTGGTTAAAAGTTAGATCCTCTATTACCATTCTAAGCACATTCACTTCTATATTGAAGTTTTG
GTAAAAATTCTTTTTTCTTTTTTAATAAAAAATTAGGTTATTACTTTTTTTATAACCAGATTTTTAAAGCACTAG
GTTTTAAATCAGTGGGTATCATAAAAGCCATATATAAAAGATCCTTTCTTATAGTAAGACTTGTGCTTGTTAGCA
GGTTTTTCTGTTAGTTTTTCCCCCATAACATTTAATTATTACTAAAATTGTATTTACAATAGTGGTGCCAAATCA
AATGGTAATTTAAATAAAATCTATTCTGTGTTTATGTAGGGTGGTATAAAAAAGAGGTCTTCATTTAGACATGTG
ATTTCTAAAATTCCAGAAAGCAAAATTGATAAGATGTTAGAAATTTGGACCGTTATTTATAATCAGGGTAGCATT
AAAATGGAGAAAAGAAAGTTTTCTGAAAAAATGCAGTAAATATAAGCCACATTTCTAAAGTTTATTTTTATGAAA
GCTTCTTTTAAGATTTTGAAATCTATTCTGCATTCCCAAGAGTTTATGTTTATTGTATTTTATATGATCTACAAC

FIGURE 2226B

ATATAAAATTGTGTATTTTTCTTTGGTTGTCCCTATTAACAAAAAAGTATTTTAATAAAAAATTGAAATGAAAAA
AAAAAAAAAAAAAAAAAA

2510/2825

FIGURE 2227

MKLHYVAVLTLAILMFLTWLPESLSCNKALCASDVSKCLIQELCQCRPGEGNCSCCKECMLCLGALWDECCDCVG
MCNPRNYSDTPPTSKSTVEELHEPIPSLFRALTEGDTQLNWNIVSFPVAEELSHHENLVSFLETVNQPHHQNVSV
PSNNVHAPYSSDKEHMCTVVYFDDCMSIHQCKISCESMGASKYRWFHNACCECIGPECIDYGSKTVKCMNCMF

2511/2825

FIGURE 2228

TTTCACCTCAGCAAGGCCAGGGGATCTGCACGTTGTGTTAGAC**ATG**GCTAAAGTAGCTGATACCATCCTGTTCCT
CCTTGATCCACTAGAAGGCTGGGACAGCACCGGTGATTACTGTCTTTCCTGCCTCTTTGCTCAGGGCCTTCCGAC
CTATACACTAGCTGTCCAGGGGATTTCTGGCCTCCCACTGAAGAAACAAATAGATACCAGGAAGAAGCTAAGTAA
AGCAGTGGAGAAGCGCTTTCCGCATGACAAACTCCTCTTGTTAGACACTCAACAGGAGGCAGGGATGCTGCTTAG
GCAGTTGGCTAACCAGAAGCAACAGCATCTTGCTTTTCGAGATCGGCGGGCCTACCTATTTGCCCATGCTGTTGA
TTTTGTTCCTAGTGAAGAGAATAACTTGGTGGGCACCTTGAAAATTTCAGGCTATGTTCGAGGGCAGACTCTGAA
TGTCAATAGGTTGCTGCATATCGTTGGATATGGTGATTTCCAGATGAAACAGATAGATGCCCCCGGAGACCCTTT
CCCTTTAAATCCTAGAGGAATTAAACCCCAAAAGGACCCAGACATGGCAATGGAGATTTGTGCTACGGATGCTGT
AGATGATATGGAAGAAGGTCTTAAAGTCCTAATGAAGGCAGACCCTTGTAGACAGGAATCCTTGCAAGCAGAGGT
TATCCCAGATCCAATGGAGGGAGAGCAAACCTGGCCCACTGAGGAGGAGCTGAGCGAGGCAAAGGATTTCTTGAA
GGAAAGTTCTAAGGTGGTAAAGAAGGTCCCCAAAGGAACATCCAGTTACCAAGCTGAATGGATTTTGGATGGTGG
CAGCCAAAGTGGTGGGGAAGGAGATGAATATGAATATGATGATATGGAACATGAGGATTTTATGGAGGAGGAATC
TCAGGATGAGAGTAGTGAAGAAGAGGAAGAATATGAAACTATGACTATTGGGGAGTCTGTGCATGATGATCTGTA
TGATAAGAAAGTAGATGAAGAAGCTGAGGCAAAAATGTTGGAGAAATATAAACAAGAAAGACTGGAAGAGATGTT
TCCAGATGAAGTGGACACGCCCCGTGATGTGGCTGCTCGAATTCGATTTCAGAAATACAGAGGCCTTAAGAGCTT
CCGGACATCTCCATGGGATCCTAAGGAAAACCTTCCTCAAGATTATGCTCGAATATTTCAGTTTCAGAACTTTAC
TAACACTAGGAAAAGCATCTTTAAAGAGGTTGAAGAAAAAGAGGTTGAAGGAGCTGAGGTTGGCTGGTATGTCAC
ACTTCATGTCTCTGAAGTCCCCGTCTCAGTGGTCGAGTGCTTCAGGCAAGGAACACCCTTGATTGCATTTTCTTT
ACTACCTCATGAACAGAAGATGTCAGTATTGAATATGGTGGTGAGGCGTGACCCTGGCAACACTGAACCTGTGAA
AGCCAAGGAGGAGCTCATATTTCACTGTGGATTCAGGCGCTTCCGAGCCTCACCTTTATTCTCTCAGCACACTGC
AGCGGACAAACATAAATTGCAGAGATTCCTGACTGCTGACATGGCCCTGGTGGCGACAGTCTATGCGCCAATCAC
TTTTCCTCCTGCATCTGTGCTGCTTTTCAAGCAGAAAAGCAATGGAATGCACAGCCTCATTGCTACAGGCCATCT
TATGTCAGTAGATCCAGACAGAATGGTCATCAAGAGAGTTGTTCTGAGTGGTCATCCTTTCAAAATTTTTACTAA
GATGGCAGTAGTACGTTACATGTTCTTCAACAGAGAGGATGTGCTGTGGTTTAAACCAGTGGAACTGAGAACGAA
GTGGGGCCGGAGAGGACATATCAAGGAACCTTTAGGTACCCATGGCCACATGAAATGCAGCTTTGATGGGAAGCT
AAAATCTCAAGACACAGTACTGATGAACCTGTATAAACGAGTCTTCCCCAAATGGACTTATGATCCATATGTACC
AGAACCAGTACCCTGGCTGAAAAGTGAGATTTCTTCAACAGTGCCTCAAGGGGGCATGGAG**TAA**TGGATTCAAAG
AGATTCTGTCCTACCGGTGCCAGTCAGTACTCCAGGGATGGGAGGCACAAGTTGTGATTGGGCAAAGTTTATTTT
CTATGTCAGCCTGTCAGTCCACTGCCCCATTTTGCAAGACTTTTTTTTAGCCTTGACAAAATGTCTCAGTTAAGT
ATAAAAGTTTTTCCACTACTTAGTCCAAAAAAAACTATTAAATCTTAATGAAAT

FIGURE 2229

MAKVADTILFLLDPLEGWDSTGDYCLSCLFAQGLPTYTLAVQGISGLPLKKQIDTRKKLSKAVEKRFPHDKLLLL
DTQQEAGMLLRQLANQKQQHLAFRDRRAYLFAHAVDFVPSEENNLVGTLKISGYVRGQTLNVNRLLHIVGYGDFQ
MKQIDAPGDPFPLNPRGIKPQKDPDMAMEICATDAVDDMEEGLKVLMKADPCRQESLQAEVIPDPMEGEQTWPTE
EELSEAKDFLKESSKVVKKVPKGTSSYQAEWILDGGSQSGGEGDEYEYDDMEHEDFMEEESQDESSEEEEEYETM
TIGESVHDDLYDKKVDEEAEAKMLEKYKQERLEEMFPDEVDTPRDVAARIRFQKYRGLKSFRTSPWDPKENLPQD
YARIFQFQNFTNTRKSIFKEVEEKEVEGAEVGWYVTLHVSEVPVSVVECFRQGTPLIAFSLLPHEQKMSVLNMVV
RRDPGNTEPVKAKEELIFHCGFRRFRASPLFSQHTAADKHKLQRFLTADMALVATVYAPITFPPASVLLFKQKSN
GMHSLIATGHLMSVDPDRMVIKRVVLSGHPFKIFTKMAVVRYMFFNREDVLWFKPVELRTKWGRRGHIKEPLGTH
GHMKCSFDGKLKSQDTVLMNLYKRVFPKWTYDPYVPEPVPWLKSEISSTVPQGGME

FIGURE 2230

GGCGGCGGCGGCGGCGGCGAAGAACTGTTCCTTCCACCTCTTCAGCCCCGGCAGGACGGGGGCGGCCGCCGCGAA
CCCGGGGCGGGGACAGCACGCAGCCTCGAGGCGCGCACCCCCGCCCGGCAGCGGCCCCGACACCCGGGGCGAGCG
GGAAAACGGCAACGGCGGCGGCGGCGGCGGCGGCGGGGGAAGG**ATG**CAGGGGAAGAAGCCGGGCGGTTCGTCGGG
CGGCGGCCGGAGCGGCGAGCTGCAGGGGGACGAGGCGCAGAGGAACAAGAAAAAGAAAAAGAAGGTGTCCTGCTT
TTCCAACATCAAGATCTTCCTGGTGTCCGAGTGCGCCCTGATGCTGGCGCAGGGCACGGTGGGCGCCTACCTGGT
GAGCGTCCTGACCACCCTGGAGCGTAGGTTCAACCTGCAGAGCGCTGACGTGGGTGTGATCGCTAGCAGCTTCGA
GATCGGGAACCTGGCGCTCATCCTCTTCGTGAGCTACTTCGGGGCACGCGGGCACCGGCCGCGCCTGATCGGCTG
CGGCGGCATCGTCATGGCGCTGGGCGCGCTGCTGTCGGCGCTGCCCGAGTTCCTGACCCACCAGTACAAGTACGA
GGCGGGCGAGATCCGCTGGGGCGCCGAGGGCCGCGACGTCTGCGCAGCCAACGGCTCGGGCGGCGACGAGGGGCC
CGACCCCGACCTCATCTGCCGCAACCGGACGGCTACCAACATGATGTACTTGCTGCTCATTGGGGCCCAGGTGCT
CCTGGGCATCGGTGCTACCCCTGTGCAGCCCCTGGGCGTCTCCTACTACGACGACCACGTGCGGAGGAAGGACTC
CTCGCTCTATATAGGAATCCTGTTCACGATGCTGGTATTTGGACCAGCCTGCGGGTTTATCCTGGGCTCTTTCTG
TACCAAAATCTACGTGGATGCGGTCTTCATTGACACAAGTAACCTGGACATCACTCCGGACGACCCCCGCTGGAT
CGGAGCCTGGTGGGGTGGCTTTCTGCTCTGCGGTGCCTTACTCTTCTTCTCTTCCCTCTTGATGTTTGGGTTTCC
ACAGTCCCTGCCCCCGCACTCAGACCCCGCCATGGAAAGCGAGCAGGCCATGCTCTCCGAAAGAGAATACGAGAG
ACCCAAGCCCAGCAACGGGGTCCTGAGGCACCCCCTGGAGCCAGACAGCAGTGCCTCCTGTTTCCAGCAGCTGAG
AGTGATCCCGAAGGTCACCAAGCACCTGCTCTCAAACCCTGTGTTCACCTGCATCATCCTGGCCGCCTGCATGGA
GATTGCAGTGGTGGCTGGCTTCGCTGCCTTTTTGGGGAAGTACCTGGAGCAGCAGTTTAACCTCACCACCTCTTC
TGCCAACCAGCTGCTTGGGATGACTGCGATCCCGTGTGCTTGTCTGGGTATCTTCCTGGGAGGTCTTTTGGTGAA
GAAGCTCAGCCTGTCTGCCCTGGGGGCCATTCGGATGGCCATGCTCGTCAACCTGGTGTCCACTGCTTGCTACGT
CTCCTTCCTCTTCCTGGGCTGCGACACTGGCCCTGTGGCTGGGGTTACTGTTCCCTATGGAAACAGCACAGCACC
TGGCTCAGCCCTGGACCCCTACTCGCCCTGCAATAATAACTGTGAATGCCAAACCGATTCCTTCACTCCAGTGTG
TGGGGCAGATGGCATCACCTACCTGTCTGCCTGCTTTGCTGGCTGCAACAGCACGAATCTCACGGGCTGTGCGTG
CCTCACCACCGTCCCTGCTGAGAACGCAACCGTGGTTCCTGGAAAATGCCCCAGTCCTGGGTGCCAAGAGGCCTT
CCTCACTTTCCTCTGTGTGATGTGTATCTGCAGCCTGATCGGTGCCATGGCACAGACACCCTCAGTCATCATCCT
CATCAGGACAGTCAGCCCTGAACTCAAGTCTTACGCTTTGGGAGTTCTTTTTCTCCTCCTTCGTTTGTTGGGCTT
CATCCCTCCACCCCTCATCTTCGGGGCTGGCATCGACTCCACCTGCCTGTTCTGGAGCACGTTCTGTGGGGAGCA
AGGCGCCTGCGTCCTCTACGACAATGTGGTCTACCGATACCTGTATGTCAGCATCGCCATCGCGCTCAAATCCTT
CGCCTTCATCCTGTACACCACCACGTGGCAGTGCCTGAGGAAAAACTATAAACGCTACATCAAAAACCACGAGGG
CGGGCTGAGCACCAGTGAGTTCTTTGCCTCTACTCTGACCCTAGACAACCTGGGGAGGGACCCTGTGCCCGCAAA
CCAGACACATAGGACAAAGTTTATCTATAACCTGGAAGACCATGAGTGGTGTGAAAACATGGAGTCCGTTTTA**TA**
GTGACTAAAGGAGGGCTGAACTCTGTATTAGTAATCCAAGGGTCATTTTTTTCTTAAAAAAAGAAAAAAAGGTTC
CAAAAAAAACCAAAACTCAGTACACACACACAGGCACAGATGCACACACACGCAGACAGACACACCGACTTTGTC
CTTTTTCTCAGCATCAGAGCCAGACAGGATTCAGAATAAGGAGAGAATGACATCGTGCGGCAGGGTCCTGGAGGC
CACTCGCGCGGCTGGGCCACAGAGTCTACTTTGAAGGCACCTCATGGTTTTCAGGATGCTGACAGCTGCAAGCAA
CAGGCACTGCCAAATTCAGGGAACAGTGGTGGCCAGCTTGGAGGATGGACATTTCTGGATACACATACACATACA
AAACAGAAAACATTTTTTAAAAGAAGTTTCCTAAAATAAA

FIGURE 2231

MQGKKPGGSSGGGRSGELQGDEAQRNKKKKKKVSCFSNIKIFLVSECALMLAQGTVGAYLVSVLTTLERRFNLQS
ADVGVIASSFEIGNLALILFVSYFGARGHRPRLIGCGGIVMALGALLSALPEFLTHQYKYEAGEIRWGAEGRDVC
AANGSGGDEGPDPDLICRNRTATNMMYLLLIGAQVLLGIGATPVQPLGVSYYDDHVRRKDSSLYIGILFTMLVFG
PACGFILGSFCTKIYVDAVFIDTSNLDITPDDPRWIGAWWGGFLLCGALLFFSSLLMFGFPQSLPPHSDPAMESE
QAMLSEREYERPKPSNGVLRHPLEPDSSASCFQQLRVIPKVTKHLLSNPVFTCIILAACMEIAVVAGFAAFLGKY
LEQQFNLTTSSANQLLGMTAIPCACLGIFLGGLLVKKLSLSALGAIRMAMLVNLVSTACYVSFLFLGCDTGPVAG
VTVPYGNSTAPGSALDPYSPCNNNCECQTDSFTPVCGADGITYLSACFAGCNSTNLTGCACLTTVPAENATVVPG
KCPSPGCQEAFLTFLCVMCICSLIGAMAQTPSVIILIRTVSPELKSYALGVLFLLLRLLGFIPPPLIFGAGIDST
CLFWSTFCGEQGACVLYDNVVYRYLYVSIAIALKSFAFILYTTTWQCLRKNYKRYIKNHEGGLSTSEFFASTLTL
DNLGRDPVPANQTHRTKFIYNLEDHEWCENMESVL

FIGURE 2232

AGAGAGGGGTGCAAGATCCTGATTTTTCAGGAGTTCAAGCGACA**ATG**GCAGCCCAATACGGCAGTATGAGCTTCA
ACCCCAGCACACCAGGGGCCAGTTATGGGCCTGGAAGGCAAGAGCCCAGAAATTCCCAATTGAGAATTGTGTTAG
TGGGTAAAACCGGAGCAGGAAAAAGTGCAACAGGAAACAGCATCCTTGGCCGGAAAGTGTTTCATTCTGGCACTG
CAGCAAAATCCATTACCAAGAAGTGTGAGAAACGCAGCAGCTCATGGAAGGAAACAGAACTTGTCGTAGTTGACA
CACCAGGCATTTTCGACACAGAGGTGCCCAATGCTGAAACGTCCAAGGAGATTATTCGCTGCATTCTTCTGACCT
CCCCAGGGCCTCATGCTCTGCTTCTGGTGGTTCCACTGGGCCGTTACACTGAGGAAGAGCACAAAGCCACAGAGA
AGATCCTGAAAATGTTTGGAGAGAGGGCTAGAAGTTTCATGATTCTCATATTCACCCGGAAAGATGACTTAGGTG
ACACCAATTTGCATGACTACTTAAGGGAAGCTCCAGAAGACATTCAAGACTTGATGGACATTTTCGGTGACCGCT
ACTGTGCGTTAAACAACAAGGCAACAGGCGCTGAGCAGGAGGCCCAGAGGGCACAGTTGCTGGGCCTGATCCAGC
GCGTGGTGAGGGAGAACAAGGAAGGCTGCTACACTAATAGGATGTACCAAAGGGCGGAGGAGGAGATCCAGAAGC
AAACACAAGCAATGCAAGAACTCCACAGAGTGGAGCTGGAGAGAGAGAAAGCGCGGATAAGAGAGGAGTATGAAG
AGAAAATCAGAAAGCTGGAAGATAAAGTGGAGCAGGAAAAGAGAAAGAAGCAAATGGAGAAGAAACTAGCAGAAC
AGGAGGCTCACTATGCTGTAAGGCAGCAAAGGGCAAGAACGGAAGTGGAGAGTAAGGATGGGATACTTGAATTAA
TCATGACAGCGTTACAGATTGCTTCCTTTATTTTGTTACGTCTGTTCGCGGAAGAT**TAA**ACTTAATGAAAATCTG
TTTGTATTTTCTGCATATTCTCTGGCAACCTTGCCCCATACTTACTTATTTAGCATAGTCGAGTGCTCTAGTTTC
TGTCTCTCAGGCACTCGTAACTAAGGACCACCATTGGCCATTGGTAGATGTTTGATTGACTTAACAAGAGAGGGA
CAAATTTTCAATTTGTGAAACTCCAAAGCAGAAAGTATTGGTGCTTGCTACCTTGTGAATTCTTCCTTAGACATG
CAGAGAAAATGTATGCAAGAGACCAAAAAGATGGCTCCAAGCTATGTCATGTTACCTGTAATAAAATCTTTTCTT
CTAGATTCTCTCTATGTTGGCAGATAATCTCCCCTTGTAGCTTCCACTCACTTATTCTTGCATTCAGAGTCACAA
TGATCATCTTACCCATGTGGTTTTTGAGAAAGAAAGATCAATTCTTTGTTTGCAGTGGGTAATCTTAGAGATGGA
GATGATTGTAGAATTATTCCTAGATGAGTGTCAATTTATTTAATTCCATTGTCATATAAGGAGTCAAATTGTTTC
TTATCATTTGTTCATTGAAGAACAGAGACCTGTCTGGAAAATCGATCTCTACAAATTCAATTAAATAATGATCCC
CAAATGCTGAAAAAGTGAAATACAGCAATTCAACAGATAATAGAGCAATGTTTAGTATATTCAGCTGTATCTGTA
GAAACTCTTTGACGAACCTCAATTTAACCAATTTGATGAATACCCAGTTCTCTTCTTTTCTAGAGAAAGATAGTT
GCAACCTCACCTCCCTCACTCAACACTTTGAATACTTATTGTTTGGCAGGTCATCCACACACTTCTGCCCCCACT
GCATTGAATTTTTTGCTTATGTTGTTTATAATAAAACTTTTCAATTATCTC

FIGURE 2233

MAAQYGSMSFNPSTPGASYGPGRQEPRNSQLRIVLVGKTGAGKSATGNSILGRKVFHSGTAAKSITKKCEKRSSS
WKETELVVVDTPGIFDTEVPNAETSKEIIRCILLTSPGPHALLLVVPLGRYTEEEHKATEKILKMFGERARSFMI
LIFTRKDDLGDTNLHDYLREAPEDIQDLMDIFGDRYCALNNKATGAEQEAQRAQLLGLIQRVVRENKEGCYTNRM
YQRAEEEIQKQTQAMQELHRVELEREKARIREEYEEKIRKLEDKVEQEKRKKQMEKKLAEQEAHYAVRQQRARTE
VESKDGILELIMTALQIASFILLRLFAED

FIGURE 2234

GGCATGATGGGCACCTGGAGGGCCGCACTCCCGTTCCAGCCAGGCTGAGCCTTCTGTCCCCTGCCTCTGGGGCCT
GGGAACCCCCCTTCTTCTTTCTCCTGAATGGCACCCCCGCCCTAGAATCCAGACACCGAGTTTCCCACTGTGGCT
GGTTCAAGGGTATGTGAGAGCTCCCTGGTGACAGTCTGTGGCTGAGC**ATG**GCCCTCCCAGCCCTGGGCCTGGACC
CCTGGAGCCTCCTGGGCCTTTTCCTCTTCCAACTGCTTCAGCTGCTGCTGCCGACGACGACCGCGGGGGGAGGCG
GGCAGGGGCCCATGCCCAGGGTCAGATACTATGCAGGGGATGAACGTAGGGCACTTAGCTTCTTCCACCAGAAGG
GCCTCCAGGATTTTGACACTCTGCTCCTGAGTGGTGATGGAAATACTCTCTACGTGGGGGCTCGAGAAGCCATTC
TGGCCTTGGATATCCAGGATCCAGGGGTCCCCAGGCTAAAGAACATGATACCGTGGCCAGCCAGTGACAGAAAAA
AGAGTGAATGTGCCTTTAAGAAGAAGAGCAATGAGACACAGTGTTTCAACTTCATCCGTGTCCTGGTTTCTTACA
ATGTCACCCATCTCTACACCTGCGGCACCTTCGCCTTCAGCCCTGCTTGTACCTTCATTGAACTTCAAGATTCCT
ACCTGTTGCCCATCTCGGAGGACAAGGTCATGGAGGGAAAAGGCCAAAGCCCCTTTGACCCCGCTCACAAGCATA
CGGCTGTCTTGGTGGATGGGATGCTCTATTCTGGTACTATGAACAACTTCCTGGGCAGTGAGCCCATCCTGATGC
GCACACTGGGATCCCAGCCTGTCCTCAAGACCGACAACTTCCTCCGCTGGCTGCATCATGACGCCTCCTTTGTGG
CAGCCATCCCTTCGACCCAGGTCGTCTACTTCTTCTTCGAGGAGACAGCCAGCGAGTTTGACTTCTTTGAGAGGC
TCCACACATCGCGGGTGGCTAGAGTCTGCAAGAATGACGTGGGCGGCGAAAAGCTGCTGCAGAAGAAGTGGACCA
CCTTCCTGAAGGCCCAGCTGCTCTGCACCCAGCCGGGGCAGCTGCCCTTCAACGTCATCCGCCACGCGGTCCTGC
TCCCCGCCGATTCTCCCACAGCTCCCCACATCTACGCAGTCTTCACCTCCCAGTGGCAGGTTGGCGGGACCAGGA
GCTCTGCGGTTTGTGCCTTCTCTCTCTTGGACATTGAACGTGTCTTTAAGGGGAAATACAAAGAGTTGAACAAAG
AAACTTCACGCTGGACTACTTATAGGGGCCCTGAGACCAACCCCCGGCCAGGCAGTTGCTCAGTGGGCCCCTCCT
CTGATAAGGCCCTGACCTTCATGAAGGACCATTTCCTGATGGATGAGCAAGTGGTGGGGACGCCCCTGCTGGTGA
AATCTGGCGTGGAGTATACACGGCTTGCAGTGGAGACAGCCCAGGGCCTTGATGGGCACAGCCATCTTGTCATGT
ACCTGGGAACCACCACAGGGTCGCTCCACAAGGCTGTGGTAAGTGGGGACAGCAGTGCTCATCTGGTGGAAGAGA
TTCAGCTGTTCCCTGACCCTGAACCTGTTCGCAACCTGCAGCTGGCCCCCACCCAGGGTGCAGTGTTTGTAGGCT
TCTCAGGAGGTGTCTGGAGGGTGCCCCGAGCCAACTGTAGTGTCTATGAGAGCTGTGTGGACTGTGTCCTTGCCC
GGGACCCCCACTGTGCCTGGGACCCTGAGTCCCGAACCTGTTGCCTCCTGTCTGCCCCCAACCTGAACTCCTGGA
AGCAGGACATGGAGCGGGGGAACCCAGAGTGGGCATGTGCCAGTGGCCCCATGAGCAGGAGCCTTCGGCCTCAGA
GCCGCCCGCAAATCATTAAAGAAGTCCTGGCTGTCCCTAACTCCATCCTGGAGCTCCCCTGCCCCCACCTGTCAG
CCTTGGCCTCTTATTATTGGAGTCATGGCCCAGCAGCAGTCCCAGAAGCCTCTTCCACTGTCTACAATGGCTCCC
TCTTGCTGATAGTGCAGGATGGAGTTGGGGGTCTCTACCAGTGCTGGGCAACTGAGAATGGCTTTTCATACCCTG
TGATCTCCTACTGGGTGGACAGCCAGGACCAGACCCTGGCCCTGGATCCTGAACTGGCAGGCATCCCCCGGGAGC
ATGTGAAGGTCCCGTTGACCAGGGTCAGTGGTGGGGCCGCCCTGGCTGCCCAGCAGTCCTACTGGCCCCACTTTG
TCACTGTCACTGTCCTCTTTGCCTTAGTGCTTTCAGGAGCCCTCATCATCCTCGTGGCCTCCCCATTGAGAGCAC
TCCGGGCTCGGGGCAAGGTTCAGGGCTGTGAGACCCTGCGCCCTGGGGAGAAGGCCCCGTTAAGCAGAGAGCAAC
ACCTCCAGTCTCCCAAGGAATGCAGGACCTCTGCCAGTGATGTGGACGCTGACAACAACTGCCTAGGCACTGAGG
TAGCT**TAA**ACTCTAGGCACAGGCCGGGGCTGCGGTGCAGGCACCTGGCCATGCTGGCTGGGCGGCCCAAGCACAG
CCCTGACTAGGATGACAGCAGCACAAAAGACCACCTTTCTCCCCTGAGAGGAGCTTCTGCTACTCTGCATCACTG
ATGACACTCAGCAGGGTGATGCACAGCAGTCTGCCTCCCCTATGGGACTCCCTTCTACCAAGCACATGAGCTCTC
TAACAGGGTGGGGGCTACCCCCAGACCTGCTCCTACACTGATATTGAAGAACCTGGAGAGGATCCTTCAGTTCTG
GCCATTCCAGGGACCCTCCAGAAACACAGTGTTTCAAGAGACCCTAAAAAACCTGCCTGTCCCAGGACCCTATGG
TAATGAACACCAAACATCTAAACAATCATATGCTAACATGCCACTCCTGGAAACTCCACTCTGAAGCTGCCGCTT
TGGACACCAACACTCCCTTCTCCCAGGGTCATGCAGGGATCTGCTCCCTCCTGCTTCCCTTACCAGTCGTGCACC
GCTGACTCCCAGGAAGTCTTTCCTGAAGTCTGACCACCTTTCTTCTTGCTTCAGTTGGGGCAGACTCTGATCCCT
TCTGCCCTGGCAGAATGGCAGGGGTAATCTGAGCCTTCTTCACTCCTTTACCCTAGCTGACCCCTTCACCTCTCC
CCCTCCCTTTTCCTTTGTTTTGGGATTCAGAAAACTGCTTGTCAGAGACTGTTTATTTTTTATTAAAAATATAAG
GCTTAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2235

MALPALGLDPWSLLGLFLFQLLQLLLPTTTAGGGGQGPMPRVRYYAGDERRALSFFHQKGLQDFDTLLLSGDGNT
LYVGAREAILALDIQDPGVPRLKNMIPWPASDRKKSECAFKKKSNETQCFNFIRVLVSYNVTHLYTCGTFAFSPA
CTFIELQDSYLLPISEDKVMEGKGQSPFDPAHKHTAVLVDGMLYSGTMNNFLGSEPILMRTLGSQPVLKTDNFLR
WLHHDASFVAAIPSTQVVYFFFEETASEFDFFERLHTSRVARVCKNDVGGEKLLQKKWTTFLKAQLLCTQPGQLP
FNVIRHAVLLPADSPTAPHIYAVFTSQWQVGGTRSSAVCAFSLLDIERVFKGKYKELNKETSRWTTYRGPETNPR
PGSCSVGPSSDKALTFMKDHFLMDEQVVGTPLLVKSGVEYTRLAVETAQGLDGHSHLVMYLGTTTGSLHKAVVSG
DSSAHLVEEIQLFPDPEPVRNLQLAPTQGAVFVGFSGGVWRVPRANCSVYESCVDCVLARDPHCAWDPESRTCCL
LSAPNLNSWKQDMERGNPEWACASGPMSRSLRPQSRPQIIKEVLAVPNSILELPCPHLSALASYYWSHGPAAVPE
ASSTVYNGSLLLIVQDGVGGLYQCWATENGFSYPVISYWVDSQDQTLALDPELAGIPREHVKVPLTRVSGGAALA
AQQSYWPHFVTVTVLFALVLSGALIILVASPLRALRARGKVQGCETLRPGEKAPLSREQHLQSPKECRTSASDVD
ADNNCLGTEVA

2519/2825

FIGURE 2236

GTGCATGAGGGGGCTGCTCCGGAGCGACGGCGGCTGCAGCTGGAGCCAGGCGCTCGCCCGTCCGCCGGTTGGCTC
GCCGGGACCTCGCGCACCGGCGGCAGAGTCCCTTGCGTGGATTGGCAAGCGACGCCCCACCTGCCCCGAGCTCAC
CATTTTCTTTCGCGCTGGCTGCAGCTGACCCGGCGAAGGGAGCCGACCGGGCCCTGGGCTGGAGGTAAAACCCCA
CGGAAAGAACATGAGGTTCCCTTGGAAATCATTCAAGAGGAAGATGGAAGGGGCTGTTTAGAAGAGCTTAAAAGC
TACAGGCTGTAAGACTGGGGCCTGAGTGCTGGCAGTGGAAAACACTGTTGGGCTGTGATCTCTCCCTGAAAAGTT
CCAGGTGCCTTTTTGCTTCCTGCAAAAGAAAGGAAGCGAAAGAGAAGACC**ATG**TCCATAGCCCTGAAGCAGGTAT
TCAACAAGGACAAGACCTTCCGACCCAAGAGGAAATTTGAACCTGGCACACAGAGGTTTGAGCTGCACAAACGGG
CTCAGGCATCCCTCAACTCGGGTGTGGACCTGAAGGCGGCTGTGCAGTTGCCCAGTGGGGAGGACCAGAATGACT
GGGTGGCAGTACATGTGGTGGACTTCTTCAATCGGATCAACCTCATCTATGGCACCATCTGTGAGTTCTGCACCG
AGCGGACCTGTCCTGTGATGTCAGGGGGCCCCAAATATGAGTATCGGTGGCAGGATGATCTCAAGTATAAGAAGC
CAACAGCGCTGCCAGCTCCCCAGTACATGAACCTTCTTATGGATTGGATTGAGGTTCAGATCAACAACGAGGAAA
TATTTCCAACATGCGTGGGTGTTCCCTTCCCAAAGAACTTCCTTCAGATCTGCAAGAAGATCCTGTGCCGCCTTT
TCCGGGTCTTTGTCCACGTCTATATCCACCACTTCGACCGGGTCATTGTGATGGGTGCAGAGGCCCATGTCAACA
CCTGCTACAAACACTTCTATTACTTTGTCACAGAGATGAACCTCATAGACCGCAAGGAGCTAGAGCCTTTGAAAG
AAATGACGAGCAGGATGTGTCAC**TAA**TGCTCCACCTCACCCTTTGGAAGAAAGGAAAGCTGTTTCCTCCTGGTGC
CCTGAGCGGGCAGGAGGTGGACCACCCTGGCTGAAATGACACACCTACTCCCAGGAACAGCAGAGGTGGAGGCAA
GCAGTGACTCCTGAGAGACATTCCCCACTCACTTTGTGTGCTCTTAACCTTCTGAGTGCTGCTAGCCCAGACCTG
TGGACGAGGCAGACCACAACGTGAAAGAAGGACCAGCCCCTTGACCGTTCTGGCTGGGGAATTGTCCACGAGGAA
GCCTCTGCGCTTCCACACATGGCACAGTTCTGCCTGTGACCTGCCGCCTAAGCTTTACTGGAATTCAGGTTTTGA
GACTGAGATGCGTGTTCGTATTTTTCCACTTATCTGTCTTGTCAGCTGGCCGACTTCTCTGTGATTGGTTTTTTA
AGTGCCGGGTGAATTTTGGACCTCTGGATGTGCAGCAAGTTTTTATGCAATAAGCCTTCCTTTCAGGTCTCTAAA
AGCTCCTGCTCTGATCTGTGGTTTAACACTGTGCAGGGCTGTGGAGCTCTGAGAGACCTGAACCCCTACCCATCC
CCTGCACCTCCCTACTCTCCCTGCCGAGGCGTCCATAGCATTTCCCTAATAAATAGTTTTATCAGGGACACTCCA
TGGGGTGGCTTGTCTCTGCCCCAAACAGGGTCTTCACGTTCTAACTGCAGGGAAGAGACTGGTTACTAGCGTAAA
GCTGACAAGTTACCAGTTCACCTGATCAGAATGTATTTTTTATAACCACCATCATTCCTTGTCTCTTCAGTGGAA
GATATTCTTTCCTGTTTCCCAGAAGAGAGAAATAAAAGTCCTAAATAACTAAGAATGATCAGCGGGAGCGTTGGG
CATGATTACTGCAGTGTTTGTTCTTTATTAAAGACAGGGAGTCGTGGCTGTCTCTACATAATACTAACATTTCAG
TGAAAAAAGTACAGTTGGTTATTTGGTACGTGTAGATTTAACACCCAGACGGCTGACTTGTAACCCTCCCCACTA
GCCTTCTGAGCATTTAAACCCAGCCGTCATTCTCTCCCCACTCCACGCTCCCCACTCCTCTGCCACGTTATGTTA
CGGCACAAAATTAATTTCTGCCCCTGTGATTGGGCCACGGTTGCCAAGGTAACAGTGGAGCTGGAGCTAACTTCC
TTCTTTCATCCTTTCCAATTTTTCTATTCCAGAAGACAGTCAGAATAATGCATTCTGTACTACATCCTGCCTTTT
GAAACCTAAATGAGTTTTCGTTGATGAAATGTTGCCTTCTCTGATTCATTCACAAAACTGTGGTGGTTCTGACCA
CCTGTGACGAGGGGGGTCATAATACTTCCAGTGATCCTTTTAATTTAGCAAAATATTTGTCGGTGGAGGGAAGTA
GATAAGAATGTATTAGTGTATTTTAAAGTAATAATGATTAAAGAATAACTAAATGAC

FIGURE 2237

MSIALKQVFNKDKTFRPKRKFEPGTQRFELHKRAQASLNSGVDLKAAVQLPSGEDQNDWVAVHVVDFFNRINLIY
GTICEFCTERTCPVMSGGPKYEYRWQDDLKYKKPTALPAPQYMNLLMDWIEVQINNEEIFPTCVGVPFPKNFLQI
CKKILCRLFRVFVHVYIHHFDRVIVMGAEAHVNTCYKHFYYFVTEMNLIDRKELEPLKEMTSRMCH

FIGURE 2238

GGCACGAGGCTCTGGTGGCTAGCCTGTCCTGACAGGGGAGAGTTAAGCTCCCGTTCTCCACCGTGCCGGCTGGCC
AGGTGGGCTGAGGGTGACCGAGAGACCAGAACCTGCTTGCTGGAGCTTAGTGCTCAGAGCTGGGGAGGGAGGTTC
CGCCGCTCCTCTGCTGTCAGCGCCGGCAGCCCCTCCCGGCTTCACTTCCTCCCGCAGCCCCTGCTACTGAGAAGC
TCCGGGGATCCCAGCAGCCGCCACGCCCTGGCCTCAGCCTGCGGGGCTCCAGTCAGGCCAACACCGACGCGCAGCT
GGGAGGAAGACAGGACCCTTGACATCTCCATCTGCACAGAGGTCCTGGCTGGACCGAGCAGCCTCCTCCTCCTAG
G**ATG**ACCTCACCCTCCAGCTCTCCAGTTTTCAGGTTGGAGACATTAGATGGAGGCCAAGAAGATGGCTCTGAGGC
GGACAGAGGAAAGCTGGATTTTGGGAGCGGGCTGCCTCCCATGGAGTCACAGTTCCAGGGCGAGGACCGGAAATT
CGCCCCTCAGATAAGAGTCAACCTCAACTACCGAAAGGGAACAGGTGCCAGTCAGCCGGATCCAAACCGATTTGA
CCGAGATCGGCTCTTCAATGCGGTCTCCCGGGGTGTCCCCGAGGATCTGGCTGGACTTCCAGAGTACCTGAGCAA
GACCAGCAAGTACCTCACCGACTCGGAATACACAGAGGGCTCCACAGGTAAGACGTGCCTGATGAAGGCTGTGCT
GAACCTTAAGGACGGAGTCAATGCCTGCATTCTGCCACTGCTGCAGATCGACAGGGACTCTGGCAATCCTCAGCC
CCTGGTAAATGCCCAGTGCACAGATGACTATTACCGAGGCCACAGCGCTCTGCACATCGCCATTGAGAAGAGGAG
TCTGCAGTGTGTGAAGCTCCTGGTGGAGAATGGGGCCAATGTGCATGCCCGGGCCTGCGGCCGCTTCTTCCAGAA
GGGCCAAGGGACTTGCTTTTATTTCGGTGAGCTACCCCTCTCTTTGGCCGCTTGCACCAAGCAGTGGGATGTGGT
AAGCTACCTCCTGGAGAACCCACACCAGCCCGCCAGCCTGCAGGCCACTGACTCCCAGGGCAACACAGTCCTGCA
TGCCCTAGTGATGATCTCGGACAACTCAGCTGAGAACATTGCACTGGTGACCAGCATGTATGATGGGCTCCTCCA
AGCTGGGGCCCGCCTCTGCCCTACCGTGCAGCTTGAGGACATCCGCAACCTGCAGGATCTCACGCCTCTGAAGCT
GGCCGCCAAGGAGGGCAAGATCGAGATTTTCAGGCACATCCTGCAGCGGGAGTTTTCAGGACTGAGCCACCTTTC
CCGAAAGTTCACCGAGTGGTGCTATGGGCCTGTCCGGGTGTCGCTGTATGACCTGGCTTCTGTGGACAGCTGTGA
GGAGAACTCAGTGCTGGAGATCATTGCCTTTCATTGCAAGAGCCCGCACCGACACCGAATGGTCGTTTTGGAGCC
CCTGAACAAACTGCTGCAGGCGAAATGGGATCTGCTCATCCCCAAGTTCTTCTTAAACTTCCTGTGTAATCTGAT
CTACATGTTCATCTTCACCGCTGTTGCCTACCATCAGCCTACCCTGAAGAAGCAGGCCGCCCCTCACCTGAAAGC
GGAGGTTGGAAACTCCATGCTGCTGACGGGCCACATCCTTATCCTGCTAGGGGGGATCTACCTCCTCGTGGGCCA
GCTGTGGTACTTCTGGCGGCGCCACGTGTTCATCTGGATCTCGTTCATAGACAGCTACTTTGAAATCCTCTTCCT
GTTCCAGGCCCTGCTCACAGTGGTGTCCCAGGTGCTGTGTTTCCTGGCCATCGAGTGGTACCTGCCCCTGCTTGT
GTCTGCGCTGGTGCTGGGCTGGCTGAACCTGCTTTACTATACACGTGGCTTCCAGCACACAGGCATCTACAGTGT
CATGATCCAGAAGGTCATCCTGCGGGACCTGCTGCGCTTCCTTCTGATCTACTTAGTCTTCCTTTTCGGCTTCGC
TGTAGCCCTGGTGAGCCTGAGCCAGGAGGCTTGGCGCCCCGAAGCTCCTACAGGCCCCAATGCCACAGAGTCAGT
GCAGCCCATGGAGGGACAGGAGGACGAGGGCAACGGGGCCCAGTACAGGGGTATCCTGGAAGCCTCCTTGGAGCT
CTTCAAATTCACCATCGGCATGGGCGAGCTGGCCTTCCAGGAGCAGCTGCACTTCCGCGGCATGGTGCTGCTGCT
GCTGCTGGCCTACGTGCTGCTCACCTACATCCTGCTGCTCAACATGCTCATCGCCCTCATGAGCGAGACCGTCAA
CAGTGTCGCCACTGACAGCTGGAGCATCTGGAAGCTGCAGAAAGCCATCTCTGTCCTGGAGATGGAGAATGGCTA
TTGGTGGTGCAGGAAGAAGCAGCGGGCAGGTGTGATGCTGACCGTTGGCACTAAGCCAGATGGCAGCCCCGATGA
GCGCTGGTGCTTCAGGGTGGAGGAGGTGAACTGGGCTTCATGGGAGCAGACGCTGCCTACGCTGTGTGAGGACCC
GTCAGGGGCAGGTGTCCCTCGAACTCTCGAGAACCCTGTCCTGGCTTCCCCTCCCAAGGAGGATGAGGATGGTGC
CTCTGAGGAAAACTATGTGCCCGTCCAGCTCCTCCAGTCCAAC**TGA**TGGCCCAGATGCAGCAGGAGGCCAGAGGA
CAGAGCAGAGGATCTTTCCAACCACATCTGCTGGCTCTGGGGTCCCAGTGAATTCTGGTGGCAAATATATATTTT
CACTAACTAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2239

MTSPSSSPVFRLETLDGGQEDGSEADRGKLDFGSGLPPMESQFQGEDRKFAPQIRVNLNYRKGTGASQPDPNRFD
RDRLFNAVSRGVPEDLAGLPEYLSKTSKYLTDSEYTEGSTGKTCLMKAVLNLKDGVNACILPLLQIDRDSGNPQP
LVNAQCTDDYYRGHSALHIAIEKRSLQCVKLLVENGANVHARACGRFFQKGQGTCFYFGELPLSLAACTKQWDVV
SYLLENPHQPASLQATDSQGNTVLHALVMISDNSAENIALVTSMYDGLLQAGARLCPTVQLEDIRNLQDLTPLKL
AAKEGKIEIFRHILQREFSGLSHLSRKFTEWCYGPVRVSLYDLASVDSCEENSVLEIIAFHCKSPHRHRMVVLEP
LNKLLQAKWDLLIPKFFLNFLCNLIYMFIFTAVAYHQPTLKKQAAPHLKAEVGNSMLLTGHILILLGGIYLLVGQ
LWYFWRRHVFIWISFIDSYFEILFLFQALLTVVSQVLCFLAIEWYLPLLVSALVLGWLNLLYYTRGFQHTGIYSV
MIQKVILRDLLRFLLIYLVFLFGFAVALVSLSQEAWRPEAPTGPNATESVQPMEGQEDEGNGAQYRGILEASLEL
FKFTIGMGELAFQEQLHFRGMVLLLLLAYVLLTYILLLNMLIALMSETVNSVATDSWSIWKLQKAISVLEMENGY
WWCRKKQRAGVMLTVGTKPDGSPDERWCFRVEEVNWASWEQTLPTLCEDPSGAGVPRTLENPVLASPPKEDEDGA
SEENYVPVQLLQSN

FIGURE 2240

GCAGGCTGCTGTCTCACAGAGCGAGAAGGTGTCAGGAGCAGCCCAGTTGTGTCTCTCTCTCTACCTCTGTGAAGG
GCGCGA**ATG**GGCAGAGCAGAACTTCTAGAAGGGAAGATGAGCACCCAGGATCCCTCAGATCTGTGGAGCAGATCC
GATGGAGAGGCTGAGCTGCTCCAGGACTTGGGGTGGTATCACGGCAACCTCACACGCCATGCTGCTGAAGCTCTT
CTCCTCTCAAATGGATGTGACGGCAGCTACCTTCTGAGGGACAGCAATGAGACCACCGGGCTGTACTCTCTCTCT
GTGAGGGCCAAAGATTCTGTTAAACACTTTCATGTTGAATATACTGGATATTCATTTAAATTTGGCTTTAATGAA
TTCTCATCTTTGAAGGATTTTGTCAAGCATTTTGCAAATCAGCCTTTGATTGGAAGCGAGACAGGCACTCTGATG
GTTCTAAAACATCCCTACCCAAGAAAAGTGGAAGAACCCTCCATTTATGAATCTGTCCGGGTTCACACAGCAATG
CAGACAGGAAGAACAGAAGATGACCTTGTGCCCACAGCACCTTCTCTGGGCACCAAAGAAGGTTACCTCACCAAA
CAGGGAGGCCTGGTCAAGACCTGGAAAACAAGATGGTTTACTCTGCACAGGAATGAACTGAAATACTTCAAAGAC
CAGATGTCACCAGAACCAATTCGGATCCTAGACCTAACAGAATGTTCAGCTGTACAATTCGATTATTCACAAGAA
AGGGTAAACTGTTTTTGTTTGGTATTTCCATTCAGGACATTTTATCTCTGTGCAAAGACCGGAGTAGAAGCTGAT
GAGTGGATCAAGATATTACGCTGGAAATTGGTCAAGGACAAAAGCTGTATTTTGTCTGCTCTCTGTATATCTCCC
GAGGAGAAGACTGATCACAAA**TAA**GAAAACAGCTCAACCAAGGGGAAGGCACGATCCGATCTCGGTCGTTCATCT
TTAAATAGATCTTTCTTGCCAAGGAATGCTCTGGCCCAGGAGCAAGGTGGAATGTTTCCCTGACGCTGTGATCTG
CAGCAGGCTTCAAATGAAAACCGACTAAGGATTTTCTTTCAAAAACAAATCAGAAGCAGATGCTGATTGGGACCC
ATATACCACGTTGCTGACTCACGTTGCTGCCCTTCCATGATGTTGCCATCTCCTTGAGAACACTGAAGCAATCAC
CATTCTGATAGAAAGTGCTTAAACCACCACTCTTAGGTCTGCTCACTCTTAGAACACACAATGGAAGAGGAAGGG
TTTTTGTTTTCACTCATTGTGGTCCCCAAGCCTATTGACACTAGTTGCCTAGAGTCCCACTGTGAGTCATGGTCA
GCCTGTCTGACATCCAGGTTGTGCTATTAACCAAGAAGGAAACAGATACTTGGAGGCTTAGATGACTTCTGCAGG
ATTTATATTCAGATAGAAAACATCAAATATTTTCAGGGGAGAGGTTTTTTTTTTTAATTTTTCCCCCTTTATACA
AAAAAAAAGAACATTTCCAAAACTAAAATAGAAAATGCTTGTGGCATTTATTTTCTCTTTTTAAAAGGTTCAGAA
ATTTGGCAGGTCCTTTGCTTCTAATGACAAAACTGTGAGAGCTAGATGTCCTATGGGCAATTAGGTAGTATAATA
AAGGTAAATGAAGGTACAATTTTTAAACCATTATTTTCACCCTGTTGGGGTAAATGTTTTAAAGAGTGAGAAAAC
ATAAATTGAGAAAGGGTGATAAAGTAATAGATAACTTTTAGTTTAATAATAATTATTGTTATTATACTACTAATA
ATAGAGCACTTGTAAGCACTAAGTTATCTTTATCCAACATTTCTCCAAATGGACTGAAAGAAACTTTTCAAGGAC
AGTGTATTATAACAATCCCTTTCCCAGAATTAGTTGTATAGGGTTGGCCCAAGAGATGTAAGAAAAATCTCGCAT
TGCTCCCTAAGCACCCTGGGCCTTATTAAAGAGCAACTTCTATTTCCAGTCGGGGGAGTAACACTAAAGCTACAA
GAAATATGTAATAATGATAGGTAATAATGTGTTCCAAAGCTTTTTCAAACTAGAATAAGGAGGCAAATAGAAGAA
TGAGATACTGATGTCCACAGTTCATTGGCAGAATCTAACCCCTTCTGTTATCTTTTTTAATACTATTTTTGTTTA
GATAGAAGTTTCAAAGAAGATAAAAATGCTTGAAGAGCCTGAGAGTAAAAAGATTATGCTGCAAAGCTATGATAT
AAACTGCTCTTGCAGTCCAAAGGGATACCTGATTAAAGAAGTTTCTTATTTAAACATCTCAGACGCAAAAATTAC
ATTAAATTTTTGTATATTTCAACAACATTTTAAATGTATTTTGTTATGTTTGTATTATATAGGATAAAGCAAATG
TCAAGTTAAAATGTATTGTGTTGTTTGTAAAGTAAGAAGTTACTGGCCAGGAGCGGCGGCTCATGCCTGTAATCC
CAGGACTTTGGTAGGCCAAGACAAGCAGATCACTTGAGGTCAGGAGTTCAACATCAGCCTGGCCAACATGATGAA
ACCTTGTCTTTACTAAAAATACAAAAATTAGCTGGGCATGGTGGCAGGCGCCTGTAATCCCAGCTACTCAGGAGG
CTGAGGCAGGAGAATTGCTTGAACCCGGGAGGTGGAGGTTGCAGTGAACCAAGATCGCGGCGCTGCACTCTAGCC
TGGGTGACAGAGTCAGACTCCGTCCCAAAAAAACAAACAAACAAAACAAAACAAAAAAAACAGAAGTTACAAATG
AATACTCACGGATATGTATAGTTTTATGTTTGTTTTCTTAGAAACAAATGTGTTTCTTTGGGTGGGTAATATTGT
GTTTTACTATGTTTACCTTTTATAAAACATAACCTGTTTATTTATATTCTTTGGCTTTGTTTATTAAAAAGCATG
ATTTTGCTGTGCATGTACCATTTTG

FIGURE 2241

MGRAELLEGKMSTQDPSDLWSRSDGEAELLQDLGWYHGNLTRHAAEALLLSNGCDGSYLLRDSNETTGLYSLSVR
AKDSVKHFHVEYTGYSFKFGFNEFSSLKDFVKHFANQPLIGSETGTLMVLKHPYPRKVEEPSIYESVRVHTAMQT
GRTEDDLVPTAPSLGTKEGYLTKQGGLVKTWKTRWFTLHRNELKYFKDQMSPEPIRILDLTECSAVQFDYSQERV
NCFCLVFPFRTFYLCAKTGVEADEWIKILRWKLVKDKSCILSALCISPEEKTDHK

FIGURE 2242A

AAGGAGAGAACTTTTCCTGCACAAGGAACGCCTCGTGGGGAGACCCAAGGCAGGAGCGGTCCGGAGCCGGCTGCG
GCGTGTGCGGCCGGCCTTGGGACAGCGATCGCCGCGGGTGGCAACAGAGAGCCCCAAGCAAAAGTGGGAGCAGGA
GCTTGGAGGTGAGCACAGGAAGCCCCACTTGAGGCTTTTACGCAGCCTCTAGTCTCTGTTTCTTCTGGAATAGGC
AAGCGTCCTTTCAACTCTAAGAGACCAGCAGAGGCCACTGTCCCTTAAGACTGCCGGAGTCCTCACCACTTCTCC
AGGATTCCAGAGGAGACTGTGGCG**ATG**GTGAATGAAGGTCCCAACCAGGAAGAGAGCGATGACACCCCTGCGCCG
GAGTCCGCACTCCAAGCGGACCCCAGCGTCTCGGTCCATCCCAGCGTCTCGGTCCATCCCAGCGTCTCCATCAAC
CCCAGCGTCTCTGTCCACCCCAGCAGTTCGGCCCACCCCAGTGCCTTAGCCCAACCCAGTGGCTTGGCTCACCCC
AGTAGCTCGGGCCCTGAGGACCTCAGCGTGATCAAGGTGAGCAGGCGCCGTTGGGCCGTGGTCCTGGTGTTTAGC
TGCTACTCCATGTGCAACTCCTTTCAGTGGATCCAGTACGGCTCCATCAATAACATCTTCATGCACTTCTACGGT
GTCAGTGCCTTTGCCATTGACTGGCTGTCCATGTGCTACATGCTGACTTACATCCCTCTGCTCCTGCCAGTGGCT
TGGCTGCTGGAGAAGTTCGGCCTGCGCACCATTGCTCTCACTGGCTCGGCTCTCAACTGCCTGGGGGCCTGGGTG
AAGCTGGGCAGCCTGAAGCCGCATCTCTTTCCGGTCACCGTAGTGGGCCAGCTCATCTGCTCTGTGGCCCAGGTT
TTCATCCTGGGCATGCCCTCCCGCATCGCTTCCGTCTGGTTCGGGGCTAATGAGGTTTCAACAGCCTGCTCGGTG
GCTGTCTTTGGCAATCAGCTTGGAATTGCGATTGGGTTCTTGGTCCCTCCTGTTTTGGTACCCAACATTGAAGAC
CGGGACGAGCTTGCCTACCACATCAGCATCATGTTCTATATAATAGGAGGTGTGGCCACTCTCCTCCTCATCCTT
GTCATCATTGTGTTCAAGGAGAAACCTAAATATCCCCCCAGCAGGGCCCAATCCCTGAGCTATGCCTTGACCTCT
CCTGATGCCTCATACTTAGGTTCCATCGCCCGGCTCTTCAAAAATCTCAACTTTGTGCTGCTTGTCATCACCTAT
GGTCTGAATGCTGGTGCTTTTTATGCCTTGTCCACTCTTCTGAATCGCATGGTGATCTGGCACTACCCGGGGGAA
GAAGTGAATGCTGGAAGAATTGGCCTGACGATCGTCATTGCAGGAATGCTTGGGGCTGTGATCTCAGGAATCTGG
CTGGATAGGTCCAAAACCTACAAAGAGACAACCCTGGTAGTCTATATCATGACACTGGTGGGCATGGTGGTGTAC
ACGTTTACCTTGAACCTGGGACACCTGTGGGTAGTGTTCATCACTGCTGGCACAATGGGCTTCTTTATGACTGGC
TATCTCCCACTGGGATTTGAGTTTGCTGTGGAGCTCACGTACCCAGAATCAGAAGGCATCTCCTTCGGCCTCCTC
AACATATCTGCACAGGTATTTGGGATCATCTTTACCATCTCCCAGGGCCAGATTATTGACAACTATGGAACCAAG
CCTGGGAACATCTTCCTGTGTGTGTTCCTTACTCTTGGAGCAGCCCTCACTGCATTCATTAAGGCAGATCTCCGG
AGACAGAAAGCAAACAAAGAAACTCTTGAGAACAAACTCCAAGAGGAGGAGGAGGAGAGCAACACCAGCAAAGTG
CCCACTGCTGTGTCAGAGGATCATCTC**TGA**GAGGAAGGTGGTGACAACTCAGGGAACACGAACACCCCACCTTTT
CCTTCAGCACAGCTCTCACCGCCAGCACAAAGGGCTTCGCTAGAGATGTTTTTGGAGGGAATCAGTGGGACTATT
TGTGGCATGGATGGCCTATTCCTCCTAGAACCCACGTAAGAGCTTGGATGATTTAGTTGGAGAAAATTGCACCTA
TCACCAAATGCAAATTTGATTCCCACCTCCACCCCCTTTTAGGTTATGGGAGTTGGTGTTGGGACAGGGTGGCAG
AGAATATTGGAGTCAATCCTAGCTTGGTCTCTTGCCTTCCCTCTTTTCCTCCATCCATCGTGGACAATGCCTGCA
AAATTTTCACAGGAAGAAAGCCTATTCAGGATATTAACTTGAAATTTCCAGTGTCCTAAGAGCCTCTCATGAAGC
CCAGTTCTAATAAGTGGCAAGCTGCTCTGCCGGGGTCATCTCCTGGGTCATCGGACTGATTGCTCAAGTTCTGCA
GGAGAGGAAGCACCATTAGAACAACTCCATCAGAACAGCTCCACCGGGACTTGTGGGCCTAAATTTTCCTGGCCT
AACGGGTCTGTCTCCAAACCCTCTTTCCTAAGAGCTGAGCAAACCAACCATAATAAACTTGACAAAAGACTTTGT
TGTGGCCATGACAGAGATACCGACTCAGGAGGGCTACCTACCTAGGTGTGATCATGCTGGGGGCTACCTTCTGAG
TATATTTGTGAAAGCACATATTTGGGAACTCTGGTAGCTTGAGTTGGGAATGGGAAGGTTCTTTTTTACAGAAGT
ACTTCCCCAGGGACTTCTGTGTGTCACAGTCACCTCTGATGCCTTTATCTTGATGTTGCATTGGGAATCTCAGCC
ATCAGCCCAAGTGCTTGTTTTATTCCAAGGCAGGGTAATCCCCGTCAACTTACTCTAACCTTTGCTGAAAACTAA
TCTTGATTCATTCTACTCTGAAAATCCAAAGGTGCTTCTGAGAGATAAGAGGGAAGGGGTAGAAGGAAAGGTGCC
CCTTGAAATGGGAATTGAGCCTGTTAGAATTAAAAGCTTATCTCACCTCTGCTGGGGACAGTATTTGCACCACCA
ACCCCTCTCCTCACCTGCTTTGAGCGATAATCTTTATCAGATATTCTAAACTTAAAGGGATTCCCTTTAAACCAA
CTCAAGCTGATCTTTCCTATCTAGCCTGCTGTTTGGCTGTACTCATGGGCTTTGGTAATATCTCCTAAAAATGAG
GTTTTGGTAATTTTTCCTATGCATTGGGCAACTGTGATCGTGACCACTGTGCTGTCTTGCTCCAGCCACTGCCCT
GGCCTCAGCATATCAGGGCAGCCTGTGCTGGCTGCAATACTGTGGTGCTTGGGCCACTGCCTGAGAGGAGCCAGG
TTTGTGTGTGTCTGCATGTGTGTGTGTGTGTTTGTACAGATTCAAGCAATGGATGCAAGGAACATGCTGTATG
TAATAGAAGAAAGAAGTCCACGTTTTCGGCAGAAGTAGTGAGTCAGTGTGGAAGAGAGGTGAGGGTGTGCTTTAC
TTTTTGATAAAGAGAAAGATGTTTACTCATAAACCCTTCAAAAGGTATTAACAAATGTTTACCAAACCTATTGCT
TTATTTTAAAAACATAATTTGTGTTTTCTATTTGTAAGATCTGACATTTCGAGGCCAATAAAAACTTCTCAGAAA

FIGURE 2242B

AAAAAAAAAAAAAA

FIGURE 2243

MVNEGPNQEESDDTPAPESALQADPSVSVHPSVSVHPSVSINPSVSVHPSSSAHPSALAQPSGLAHPSSSGPEDL
SVIKVSRRRWAVVLVFSCYSMCNSFQWIQYGSINNIFMHFYGVSAFAIDWLSMCYMLTYIPLLLPVAWLLEKFGL
RTIALTGSALNCLGAWVKLGSLKPHLFPVTVVGQLICSVAQVFILGMPSRIASVWFGANEVSTACSVAVFGNQLG
IAIGFLVPPVLVPNIEDRDELAYHISIMFYIIGGVATLLLILVIIVFKEKPKYPPSRAQSLSYALTSPDASYLGS
IARLFKNLNFVLLVITYGLNAGAFYALSTLLNRMVIWHYPGEEVNAGRIGLTIVIAGMLGAVISGIWLDRSKTYK
ETTLVVYIMTLVGMVVYTFTLNLGHLWVVFITAGTMGFFMTGYLPLGFEFAVELTYPESEGISFGLLNISAQVFG
IIFTISQGQIIDNYGTKPGNIFLCVFLTLGAALTAFIKADLRRQKANKETLENKLQEEEEESNTSKVPTAVSEDH
L

FIGURE 2244

ATGAGTGTTGGACGTCGAAGAATAAAGTTGTTGTTGGGTATCCTGATGATGGCAAATGTCTTCATTTATTTTATT
ATGGAAGTCTCCAAAAGCAGTAGCCAAGAAAAAAATGGAAAAGGGGAAGTAATAATACCCAAAGAGAAGTTCTGG
AAGATATCTACCCCTCCCGAGGCATACTGGAACCGAGAGCAAGAGAAGCTGAACCGGCAGTACAACCCCATCCTG
AGCATGCTGACCAACCAGACGGGGGAGGCGGGCAGGCTCTCCAATATAAGCCATCTGAACTACTGCGAACCTGAC
CTGAGGGTCACGTCGGTGGTTACGGGTTTTAACAACTTGCCGGACAGATTTAAAGACTTTCTGCTGTATTTGAGA
TGCCGCAATTATTCACTGCTTATAGATCAGCCGGATAAGTGTGCAAAGAAACCTTTCTTGTTGCTGGCGATTAAG
TCCCTCACTCCACATTTTGCCAGAAGGCAAGCAATCCGGGAATCCTGGGGCCAAGAAAGCAACGCAGGGAACCAA
ACGGTGGTGCGAGTCTTCCTGCTGGGCCAGACACCCCCAGAGGACAACCACCCCGACCTTTCAGATATGCTGAAA
TTTGAGAGTGAGAAGCACCAAGACATTCTTATGTGGAACTACAGAGACACTTTCTTCAACTTGTCTCTGAAGGAA
GTGCTGTTTCTCAGGTGGGTAAGTACTTCCTGCCCAGACACTGAGTTTGTTTTCAAGGGCGATGACGATGTTTTT
GTGAACACCCATCACATCCTGAATTACTTGAATAGTTTATCCAAGACCAAAGCCAAAGATCTCTTCATAGGTGAT
GTGATCCACAATGCTGGACCTCATCGGGATAAGAAGCTGAAGTACTACATCCCAGAAGTTGTTTACTCTGGCCTC
TACCCACCCTATGCAGGGGGAGGGGGGTTCCTCTACTCCGGCCACCTGGCCCTGAGGCTGTACCATATCACTGAC
CAGGTCCATCTCTACCCCATTGATGACGTTTATACTGGAATGTGCCTTCAGAAACTCGGCCTCGTTCCAGAGAAA
CACAAAGGCTTCAGGACATTTGATATCGAGGAGAAAAACAAAAATAACATCTGCTCCTATGTAGATCTGATGTTA
GTACATAGTAGAAAACCTCAAGAGATGATTGATATTTGGTCTCAGTTGCAGAGTGCTCATTTAAAATGCTAA

FIGURE 2245

MSVGRRRIKLLLGILMMANVFIYFIMEVSKSSSQEKNGKGEVIIPKEKFWKISTPPEAYWNREQEKLNRQYNPIL
SMLTNQTGEAGRLSNISHLNYCEPDLRVTSVVTGFNNLPDRFKDFLLYLRCRNYSLLIDQPDKCAKKPFLLLAIK
SLTPHFARRQAIRESWGQESNAGNQTVVRVFLLGQTPPEDNHPDLSDMLKFESEKHQDILMWNYRDTFFNLSLKE
VLFLRWVSTSCPDTEFVFKGDDDVFVNTHHILNYLNSLSKTKAKDLFIGDVIHNAGPHRDKKLKYYIPEVVYSGL
YPPYAGGGGFLYSGHLALRLYHITDQVHLYPIDDVYTGMCLQKLGLVPEKHKGFRTFDIEEKNKNNICSYVDLML
VHSRKPQEMIDIWSQLQSAHLKC

FIGURE 2246A

GTTTGAGGCCGGCCAGTCGTGACTGGGCGGCAATGAGGTCAGTGACTGCCGGGAGTCCTGCAGGGGCGGGGCGGC
GCCAAGCGCAGGGAGCCCGGCTGAGTGGCAGCCYAGATTGAAGATGGATACGTGACAATCCCAGGGACCGCTGCA
CTGACTTCATTTCCTTAGACAAGACACAGTGTAGGGCCCGGCCCGYGTTGGCCCCAGGACTCCTTTGGAATATAG
CTGTGGACA**ATG**AATCCTGCGAGCGATGGGGGCACATCAGAGAGCATTTTTGACCTGGACTATGCATCCTGGGGG
ATCCGCTCCACGCTGATGGTCGCYGGCTTTGTCTTCTACTTGGGCGTCTTTGTGGTCTGCCACCAGCTGTCCTCT
TCCCTGAATGCCACTTACCGTTCTTTGGTGGCCAGAGAGAAGGTCTTCTGGGACCTGGCGGCCACGCGTGCAGTC
TTTGGTGTTCAGAGCACAGCCGCAGGCCTGTGGGCTCTGCTGGGGGACCCTGTGCTGCATGCCGACAAGGCGCGT
GGCCAGCAGAACTGGTGCTGGTTTCACATCACGACAGCAACGGGATTCTTTTGCTTTGAAAATGTTGCAGTCCAC
CTGTCCAACTTGATCTTCCGGACATTTGACTTGTTTCTGGTTATCCACCATCTCTTTGCCTTTCTTGGGTTTCTT
GGCTGCTTGGTCAATCTCCAAGTTGGCCACTATCTAGCTATGACCACGTTGCTCCTGGAGATGAGTACGCCCTTT
ACCTGCGTTTCCTGGATGCTCTTAAAGGCGGGCTGGTCCGAGTCTCTGTTTTGGAAGCTCAACCAGTGGCTGATG
ATTCACATGTTTCACTGCCGCATGGTTCTAACCTACCACATGTGGTGGGTGTGTTTCTGGCACTGGGACGGCCTG
GTCAGCAACCTGTATCTGCCTCATTTGACACTGTTCCTTGTCGGACTGGCTCTGCTTACGCTAATCATTAATCCA
TATTGGACCCATAAGAAGACTCAGCAGCTTCTCAATCCGGTGGACTGGAACTTCGCACAGCCAGAAGCCAAGAGC
AGGCCAGAAGGCAACGGGCAGCTGCTGCGGAAGAAGAGGCCA**TAG**CTGCTCCAGCCGGGGCTCCGGGGCGGCAGC
AGAGCTGGCACACCGATTCTGGGAAGCCCCGCGAATGATGGCTTTTGAATTAATGAGGCAGTGAATGTTTTGTGT
TTACTTCTAAGGGAAATACTAACTTTCTTTCGCATTAGTATTAATTTTGAAGTAGCTACAAAGTATTTTTAAGAA
ATTATAATTTTATGACTGTCTGGCAGGCTCTGTCAGTTTAGCCGCGCCGGACCGTGTCAAGCATCTAGGAGAGGA
GTCCATGGTGTCCAGGCATCGGGGCGTCACACCTGTTGAGGAGTGGGGTGGCTTTGAATGCTGGAAATGGCTTCA
TAGTGAAGTGCCTCCCACAGGGCGGGTGGGTCAGCGTTGACTCTTTCCARCTGCACACTCATATGCCGTGTGTCT
TATTCAGAAGTCACATTCTTTTCAGTTGGAGAGAATTGGGCTAAGATAGAAAATAACATGATTTGTTCCTTATTA
AAGTTTCCCAGCGTATGAAATTCTAAGCTGGGTGGGGTGGCTCACGCCCGACGTAATCCCAGCACGTTGGGAGGC
CGAGGCAGGTGGATCACTTGAGGCCAGGAGTTCGAGACCAGCCTGGTCAAGATGGTGAAACCCCATCTCTACTAA
AATTACAAAAATTAGCCGGGTGTCGTGGCACACACCTGTAATCCCAGCTATTTGGGAGGCCAAGGCAGGAGAATT
GCCTGAACCCGGGAGGCGGAGGTTGCAGTGAGCTGAGATCGCACCACTGCACTCCAGCACTCCAGCCTGGGTGAC
AGAGCAAGACTCTCTCTCATAAAAAAAAAAAAAAAAAAAATTCTAGACCGAAGTGTACGGCAGTGCCATCTGGTG
GCAAGTGGTACAAAGACAACGCTGAGGGGTAGTGACTCCTGTAGCAGCAGAGACGCCTTGGAGTTTAACCCCCAC
CAACCAGAGCGTGGGCTGGTAAAGATGAAATCTTGCAAGTTTTTTTTTTTTTTAAATCATGGTACCTGTTTTAAA
ATGAGAAGTTATTATTCATACTGTGTTGCTCATTTGACAAAATAAGGTAAGGATTTCATAATCAGGTTGTCTGGG
TTTCAGAGCTGTTTTTAATTGACTGAGTTACCTACAGGCACCCAATCTAGACCCTAATTCTGTGGTTGGTGTTCC
TCTGTAGATTTCAAGACAAGTAGTGATGTCATTTTCTCCCTGAGCTGTAGGGTGGACCTGGACCCCTCAGAGATG
CTCGACTGCAGGGTCCTGGGGTCCCTAGAGTGGTCCTGCAGCAGCCCCTGGCAATGAGCTGCCTGATGATGAGTC
CCAAGGTACATTGTTCTACTGTTTTATACCCAGGTAGAAGTTACACAGCAATTTAGCAATGTTGTTAACAGACAT
ACAGAATTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGAGTGTTTTGATATAAACGTGCAATTAAAATTCAA
AGTTTATTTTTTATCACAAGCACCTTTGAAATGTACGTGGAAAACGTCGGCTGCTCGTGAGAATCATGTGTGACT
TACGTTCCTTATGTTTTATGGAACTCTCGGAACAGTGTTTTGTTTTTGTTTAGTTTTTGTTTTCGTTTTTTTGRG
ACGGAGCCTGGCTTTGGCTCCCAGGCTGGAGTCCAGTGGTGTGATCTCGGCTCACTGCAACCTCCACCTCCCGGG
TTCCAGGGATTCTCCTGCCTCACCCTTTCAAGTAGCTGGGATTRCAGGTACCTCTACCATGCCTGGCTGATTTTT
TGTATTTTTAGTAGAGACAGGGTTTCACCATGTTGGCCAGGCTGGTCTCTGACTCCTGACTAAAAGTGATCTGCC
CACCTCGGCCTCCCAAAGTTCTGGGATTACGGGCGTGAGCCACTTCACCCGGCCCGGAGCGGTGTATTTTGATTG
CTGGTGCTTTAACTATATTGACCAAGGTGTATAGTAACCTATTTATCACATTTTACGAAGCAATTTTAATCTTAA
ACACATCCAGCAAATGGTGTCCCTGCTGAAACTTTTAACTGGAAACCTCACACCTGGCAGGCAGCACTCTCTGCA
GCCGTGCCCTTGTGGAGTCAGCAGGAGCTGGTGTTTTTCAGCCAGACAGAGGCATAATAAAGTGACTGATGTTTA
CRGAACCCAAATGATGTCTTCCTCTCTCTCAAAATAAACTAACCTATTCATATTGCTGTGAATGCTTTATCTTGG
AGATAGAAAATATAATGATAAATTCATCATGTGTTCAGAATTCGATTTGGAGTTGGAAGTGGACAGCCTAATTTT
TATCTCACCTCCACTAGGACTTTGACCTTCCCAGGGGTCCACACTTTACCTCCTGTATCTTCATACGCGTGTGTG
GATGCATAGAGATGGAGGTGCTGTAGAGAAGCACAGGCTCACCCGCTCCGTCCAGTGTCACCCACACATTGGTCC
GGGGACCCCTCAGTGCAGAGCCTGAAGTTGGGGGTTTAGGGGTGGAAAAGGCTTCGTGAAATGTTAATGATGCGT

FIGURE 2246B

ACACCTTCCAGATGGCACAGCACTTTCCCATGGTCCTCRCTGGCCTCAGTCTCCCTGACCGGCAGTGTGAGGGGA
TGTAGCTATAGTGGAGCATGGTACAAGCGACATTCATGAGCTCTGACTTCTTGGTGCCAGGTTGGTGTGAGCCTG
GGCCCGGCCCACTCAGCGGCCCACATTGGCCAGCATTCAGCTGCACGTGTGTGCTGCGTGCTTCACATCCTCTAT
TGAGAGTTACAGCAAGTGTTAAACGAGGTGAGTTYACATAACAGGAATTCTGGAACTGCTTGAAAACTAGGACGA
TTGGGCAATATCGGCCTTAACTCCACCTGATGGCAGGTGACCCGGATAGAAAATGGCCCTGCGTTTAGCCAGGAT
GTGGCTCTCCAGCTTGGCTTCAGTGTGATCACTTGTCAGTGCGCTTTCTCTTTCGATAGTGAAATCCTTCTCTAT
ACCTATGTTTTGTTTTGTTGCTCGACGTTGGGAAACAGAATGGGCCAGGGAGGTTGAGTGACTGAAGACCAAGGG
TTGGTGCAGCCTCCTCGCCGCGCTGCGGGGKCTGGGCCGCACAGGCTTCTGCCCTTCTCGGTGTCCAGGCTCCTT
GGGTGATGCTGGAGTTGTCATGGCYGCAGTTCAGTGTGAGATTTTTTACCAGGTATTGCGCTTAAGGGACATGAT
TTTCCATTTTCTTCGCCCGGACAACTTGAATGAAATGGGCACTGTTGATTCCACTTCTGTCGAGGAGCTTCGGGG
CTCAGAGAGGTGATGACGTGCCCAAGGTGACGCAACTCGTGAACAGCCGTGCCTGCCTTGGGCGCAGCTCCGGCG
CCAGAGCTGGGCTCTTCAACACGGCATTTAGCGCAGAAAGTCGTGGTTCAGGCAGTATGGGCCGCTGTGACAAAA
CACCTAAGACTGGGTAGTTTATAAAGAACAGACATTCAGGCCAGGCACGGTGACTCACGCCTGTAATCCCAGCAC
TTTGGGAGGCCGAGGCGCGTGGATCATTTGAGGTCAGGAGTTTGAAACCAGCCTGGCCAACATGGTGAAACCCCA
TCTCTACTAAAAAAACAAAACTAGCTGGGGGTGGTGGTGTATGCCTGTGGTCCCAGCTACTTGGGAGGCTAAGGT
AGAAGAATTGCTTGAACCTGGGAGGCAGAGATTGCAGTGAGCCGAGATCACGCCATTGCACTCCAGCCTGGGTGA
CACAGTGAGACTCCATCKCAAAAA

FIGURE 2247

MNPASDGGTSESIFDLDYASWGIRSTLMVAGFVFYLGVFVVCHQLSSSLNATYRSLVAREKVFWDLAATRAVFGV
QSTAAGLWALLGDPVLHADKARGQQNWCWFHITTATGFFCFENVAVHLSNLIFRTFDLFLVIHHLFAFLGFLGCL
VNLQVGHYLAMTTLLLEMSTPFTCVSWMLLKAGWSESLFWKLNQWLMIHMFHCRMVLTYHMWWVCFWHWDGLVSN
LYLPHLTLFLVGLALLTLIINPYWTHKKTQQLLNPVDWNFAQPEAKSRPEGNGQLLRKKRP

FIGURE 2248

CTACTGCCATGGAACTTCTTTATCACTGCCAAGGAGTACTGG**ATG**TTCAAACTCCGCAACTCCTCCAGCCCAGCC
ACCGGGGAGGACCCTGAGGGCTCAGACATCCTGAACTACTTTGAGAGCTACCTTGCCGTTGCCTCCGCCGTGCCC
TCCATGCTGTGCCTGGTGGCCAACTTCCTGCTTGTCAACAGGGTTGCAGTCCACATCCGTGTCCTGGCCTCACTG
ACGGTCATCCTGGCCATCTTCATGGTGATAACTGCACTGGTGAAGGTGGACACTTCCTCCTGGACCCGTGGCTTT
TTTGCGGTCACCATTGTCTGCATGGTGATCCTCAGCGGTGCCTCCACTGTCTTCAGCAGCAGCATCTACGGCATG
ACCGGCTCCTTTCCTATGAGGAACTCCCAGGCACTGATATCAGGAGGAGCCATGGGCGGGACGGTCAGCGCCGTG
GCCTCATTGGTGGACTTGGCTGCATCCAGTGATGTGAGGAACAGCGCCCTGGCCTTCTTCCTGACGGCCACCATC
TTCCTCGTGCTCTGCATGGGACTCTACCTGCTGCTGTCCAGGCTGGAGTATGCCAGGTACTACATGAGGCCTGTT
CTTGCGGCCCATGTGTTTTCTGGTGAAGAGGAGCTTCCCCAGGACTCCCTCAGTGCCCCTTCGGTGGCCTCCAGA
TTCATTGATTCCCACACACCCCCTCTCCGCCCCATCCTGAAGAAGACGGCCAGCCTGGGCTTCTGTGTCACCTAC
GTCTTCTTCATCACCAGCCTCATCTACCCCGCCGTCTGCACCAACATCGAGTCCCTCAACAAGGGCTCGGGCTCA
CTGTGGACCACCAAGTTTTTCATCCCCCTCACTACCTTCCTCCTGTACAACTTTGCTGACCTATGTGGCCGGCAG
CTCACCGCCTGGATCCGGGTGCCAGGGCCCAATAGCAAGGCGCTCCCAGGGTTCGTGCTCCTCCGGACCTGCCTC
ATCCCCCTCTTCGTGCTCTGTAACTACCAGCCCCGCGTCCACCTGAAGACTGTGGTCTTCCAGTCCGATGTGTAC
CCCGCACTCCTCAGCTCCCTGCTGGGGCTCAGCAACGGCTACCTCAGCACCCTGGCCCTCCTCTACGGGCCTAAG
ATTGTGCCCAGGGAGCTGGCTGAGGCCACGGGAGTGGTGATGTCCTTTTATGTGTGCTTGGGCTTAACACTGGGC
TCAGCCTGCTCTACCCTCCTGGTGCACCTCATC**TAG**AAGGGAGGACACAAGGACATTGGTGCTTCAGAGCCTTTG
AAGATGAGAAGAGAGTGCAGGAGGGCTGGGGGCCATGGAGGAAAGGCCTAAAGTTTCACTTGGGGACAGAGAGCA
GAGCACACTCGGGCCTCATCCCTCCCAAGATGCCAGTGAGCCACGTCCATGCCCATTCCGTGCAAGGCAGATATT
CCAGTCATATTAACAGAACACTCCTGAGACAGTTGAAGAAGAAATAGCACAAATCAGGGGTACTCCCTTCACAGC
TGATGGTTAACATTCCACCTTCTTTCTAGCCCTTCAAAGATGCTGCCAGTGTTCGCCCTAGAGTTATTACAAAGC
CAGTGCCAAAACCCAGCCATGGGCTCTTTGCAACCTCCCAGCTGCGCTCATTCCAGCTGACAGCGAGATGCAAGC
AAATGCTCAGCTCTCCTTACCCTGAAGGGGTCTCCCTGGAATGGAAGTCCCCTGGCATGGTCAGTCCTCAGGCCC
AAGGCTCAAGTGTGCACAGACCCCTGTGTTCTGTGGGTGAACAACTGCCCACTAACCAGACTGGAAAACCCAGAA
AGATGGGCCTTCCATGAATGCTTCATCCCAGAGGGACCAGAGGGCCTCCCTGTGCAAGGGATCAAGCATGTCTGG
CCTGGGTTTTCAAAAAAAGAGGGATCCTCATGACCTGGTGGTCTATGGCCTGGGTCAAGATGAGGGTCTTTCAGT
GTTCCTGTTTACAACATGTCAAAGCCATTGGTTCAAGGGCGTAATAAATACTTGCGTATTC

FIGURE 2249

MFKLRNSSSPATGEDPEGSDILNYFESYLAVASAVPSMLCLVANFLLVNRVAVHIRVLASLTVILAIFMVITALV
KVDTSSWTRGFFAVTIVCMVILSGASTVFSSSIYGMTGSFPMRNSQALISGGAMGGTVSAVASLVDLAASSDVRN
SALAFFLTATIFLVLCMGLYLLLSRLEYARYYMRPVLAAHVFSGEEELPQDSLSAPSVASRFIDSHTPPLRPILK
KTASLGFCVTYVFFITSLIYPAVCTNIESLNKGSGSLWTTKFFIPLTTFLLYNFADLCGRQLTAWIRVPGPNSKA
LPGFVLLRTCLIPLFVLCNYQPRVHLKTVVFQSDVYPALLSSLLGLSNGYLSTLALLYGPKIVPRELAEATGVVM
SFYVCLGLTLGSACSTLLVHLI

FIGURE 2250

GCCCGCCCGCGCCCCGACCAGCCCGGCCTCGGGCAGCCACTCACCGGTGTCCCCGTCCGCGTCCTTCCTCCCCGG
GTCCCGGCC**ATG**GCGCTGAGTGAACCCATCCTGCCGTCCTTCTCCACTTTCGCCAGCCCGTGCCGCGAGCGCGGC
CTGCAGGAGCGCTGGCCGCGCGCCGAACCCGAGTCCGGCGGCACCGACGACGACCTCAACAGCGTGCTGGACTTC
ATCCTGTCCATGGGGCTGGATGGCCTGGGCGCCGAGGCCGCCCCGGAGCCGCCGCCGCCGCCCCCGCCGCCTGCG
TTCTATTACCCCGAACCCGGCGCGCCCCCGCCCTACAGCGCCCCCGCGGGTGGCCTGGTGTCTGAGCTGCTGCGA
CCCGAGCTGGATGCGCCGCTGGGGCCCGCACTGCACGGCCGCTTTCTGCTGGCGCCGCCCGGCCGCCTGGTCAAG
GCCGAGCCCCCTGAAGCGGACGGCGGCGGCGGCTACGGCTGCGCCCCCGGGCTGACCCGTGGACCGCGCGGCCTC
AAGCGCGAGGGCGCCCCGGGCCCGGCGGCTTCGTGCATGCGAGGTCCCGGGGGCCGCCCCCCGCCGCCGCCCGAC
ACACCGCCGCTCAGCCCCGACGGCCCCGCGCGCCTGCCCGCGCCCGGTCCGCGCGCCTCCTTCCCGCCGCCTTTC
GGTGGCCCTGGTTTCGGCGCGCCCGGGCCCGGCCTGCATTACGCGCCGCCTGCGCCCCCAGCCTTCGGTCTCTTC
GACGACGCGGCCGCCGCCGCGGCAGCCCTGGGCCTGGCGCCCCCCGCCGCCCGCGGTCTCCTCACGCCGCCTGCG
TCCCCGCTGGAGCTGCTGGAGGCCAAGCCAAAGCGCGGCCGCCGCTCTTGGCCCCGCAAACGCACCGCCACTCAC
ACCTGCAGCTACGCGGGCTGCGGCAAGACCTACACCAAGAGTTCGCATCTGAAGGCGCATCTGCGCACGCACACA
GGTGAGAAGCCCTACCACTGCAACTGGGACGGCTGCGGCTGGAAGTTTGCGCGCTCAGACGAGCTCACGCGCCAC
TACCGAAAGCACACGGGCCACCGGCCATTCCAGTGCCATCTGTGCGATCGTGCCTTTTCGCGCTCCGATCACCTG
GCGCTGCACATGAAACGGCACATG**TAG**CCGGGACGCCCCCGCCCACCTGCGGCGGGCCGTGGCGGGTCCCACGCG
CCGGGCGCGGCCCCCTCCCAAACTGTGACTGGTATTTATTGGACCCAGAGAACCGGGCCGGGCACAGCGTGGCTA
CAGAGGGTCTCCCTCGATGACGACGACGACGACGCCACCACCCCAGCCCCCGTCTGTGACTGAAGGCCCGGTGGG
AAAAGACCACGATCCTCCTTGACGAGTTTTGTTTTTCAAAATGGTGCAATAATTTAAGTGGCATCTTCTCTCCCA
CCGGGTCTACACTAGAGGATCGAGGCTTGTGATGCCTTGTGAGAAATAAGGGCCTTAATTTGTACTGTCTGCGGC
ATTTTTTATAATATTGTATATAGTGACTGACAAATATTGTATTACTGTACATAGAGAGACAGGTGGGCATTTTTG
GGCTACCTGGTTCGTTTTTATAAGATTTTGCTGGGTTGGTTTTTTTTTTAATTAAAAAGTTTTGCATCTTTT

FIGURE 2251

MALSEPILPSFSTFASPCRERGLQERWPRAEPESGGTDDDLNSVLDFILSMGLDGLGAEAAPEPPPPPPPPAFYY
PEPGAPPPYSAPAGGLVSELLRPELDAPLGPALHGRFLLAPPGRLVKAEPPEADGGGGYGCAPGLTRGPRGLKRE
GAPGPAASCMRGPGGRPPPPPDTPPLSPDGPARLPAPGPRASFPPPFGGPGFGAPGPGLHYAPPAPPAFGLFDDA
AAAAAALGLAPPAARGLLTPPASPLELLEAKPKRGRRSWPRKRTATHTCSYAGCGKTYTKSSHLKAHLRTHTGEK
PYHCNWDGCGWKFARSDELTRHYRKHTGHRPFQCHLCDRAFSRSDHLALHMKRHM

FIGURE 2252

GGACCACAGCTCCTCCCGTGCATCCACTCGGCCTGGGAGGTTCTGGATTTTGGCTGTCGAGGGAGTTTGCCTGCC
TCTCCAGAGAAAG**ATG**GTCATGAGGCCCCTGTGGAGTCTGCTTCTCTGGGAAGCCCTACTTCCCATTACAGTTAC
TGGTGCCCAAGTGCTGAGCAAAGTCGGGGGCTCGGTGCTGCTGGTGGCAGCGCGTCCCCCTGGCTTCCAAGTCCG
TGAGGCTATCTGGCGATCTCTCTGGCCTTCAGAAGAGCTCCTGGCCACGTTTTTCCGAGGCTCCCTGGAGACTCT
GTACCATTCCCGCTTCCTGGGCCGAGCCCAGCTACACAGCAACCTCAGCCTGGAGCTCGGGCCGCTGGAGTCTGG
AGACAGCGGCAACTTCTCCGTGTTGATGGTGGACACAAGGGGCCAGCCCTGGACCCAGACCCTCCAGCTCAAGGT
GTACGATGCAGTGCCCAGGCCCGTGGTACAAGTGTTCATTGCTGTAGAAAGGGATGCTCAGCCCTCCAAGACCTG
CCAGGTTTTCTTGTCCTGTTGGGCCCCCAACATCAGCGAAATAACCTATAGCTGGCGACGGGAGACAACCATGGA
CTTTGGTATGGAACCACACAGCCTCTTCACAGACGGACAGGTGCTGAGCATTTCCCTGGGACCAGGAGACAGAGA
TGTGGCCTATTCCTGCATTGTCTCCAACCCTGTCAGCTGGGACTTGGCCACAGTCACGCCCTGGGATAGCTGTCA
TCATGAGGCAGCACCAGGGAAGGCCTCCTACAAAGATGTGCTGCTGGTGGTGGTGCCTGTCTCGCTGCTCCTGAT
GCTGGTTACTCTCTTCTCTGCCTGGCACTGGTGCCCCTGCTCAGGGAAAAAGAAAAAGGATGTCCATGCTGACAG
AGTGGGTCCAGAGACAGAGAACCCCCTTGTGCAGGATCTGCCA**TAA**AGGACAATATGAACTGATGCCTGGACTAT
CAGTAACCCCACTGCACAGGCACACGATGCTCTGGGACATAACTGGTGCCTGGAAATCACCATGGTCCTCATATC
TCCCATGGGAATCCTGTCCTGCCTCGAAGGAGCAGCCTGGGCAGCCATCACACCACGAGGACAGGAAGCACCAGC
ACGTTTCACACCTCCCCCTTCCCTCTCCCATCTTCTCATATCCTGGCTCTTCTCTGGGCAAGATGAGCCAAGCAG
AACATTCCATCCAGGACACTGGAAGTTCTCCAGGATCCAGATCCATGGGGACATTAATAGTCCAAGGCATTCCCT
CCCCCACCACTATTCATAAAGTATTAACCAACTGGCACCAAGGAATTGCCTCCAGCCTGAGTCCTAGGCTCTAAA
AGATATTACATATTTGAACTAATAGAGGAACTCTGAGTCACCCATGCCAGCATCAGCTTCAGCCCCAGACCCTGC
AGTTTGAGATCTGATGCTTCCTGAGGGCCAAGGCATTGCTGTAAGAAAAGGTCTAGAAATAGGTGAAAGTGAGAG
GTGGGGGACAGGGGTTTCTCTTTCTGGCCTAAGGACTTTCAGGTAATCAGAGTTCATGGGCCCTCAAAGGTAAAT
TGCAGTTGTAGACACCGAGGATGGTTGACAACCCATGGTTGAGATGGGCACCGTTTTGCAGGAAACACCATATTA
ATAGACATCCTCACCATCTCCATCCGCTCTCACGCCTCCTGCAGGATCTGGGAGTGAGGGTGGAGAGTCTTTCCT
CACGCTCCAGCACAGTGGCCAGGAAAAGAAATACTGAATTTGCCCCAGCCAACAGGACGTTCTTGCACAACTTCA
AGAAAAGCAGCTCAGCTCAGGATGAGTCTTCCTGCCTGAAACTGAGAGAGTGAAGAACCATAAAACGCTATGCAG
AAGGAACATTATGGAGAGAAAGGGTACTGAGGCACTCTAGAATCTGCCACATTCATTTTCAAATGCAAATGCAGA
AGACTTACCTTAGTTCAAGGGGAGGGGACAAAGACCCCACAGCCCAACAGCAGGACTGTAGAGGTCACTCTGACT
CCATCAAACTTTTTATTGTGGCCATCTTAGGAAAATACATTCTGCCCCTGAATGATTCTGTCTAGAAAAGCTCTG
GAGTATTGATCACTACTGGAAAAACACTTAAGGAGCTAAACTTACCTTCGGGGATTATTAGCTGATAAGGTTCAC
AGTTTCTCTCACCCAGGTGTAACTGGATTTTTTCTGGGGCCTCAATCCAGTCTTGATAACAGCGAGGAAAGAGGT
ATTGAAGAAACAGGGGTGGGTTTGAAGTACTATTTTCCCCAGGGTGGCTTCAATCTCCCCACCTAGGATGTCAGC
CCTGTCCAAGGACCTTCCCTCTTCTCCCCCAGTTCCCTGGGCAATCACTTCACCTTGGACAAAGGATCAGCACAG
CTGGCCTCCAGATCCACATCACCACTCTTCCACTCGATTGTTCCCAGATCCTCCCTGCCTGGCCTGCTCAGAGGT
TCCCTGTTGGTAACCTGGCTTTATCAAATTCTCATCCCTTTCCCACACCCACTTCTCTCCTATCACCTTCCCCCA
AGATTACCTGAACAGGGTCCATGGCCACTCAACCTGTCAGCTTGCACCATCCCCACCTGCCACCTACAGTCAGGC
CACATGCCTGGTCACTGAATCATGCAAAACTGGCCTCAGTCCCTAAAAATGATGTGGAAAGGAAAGCCCAGGATC
TGACAATGAGCCCTGGTGGATTTGTGGGGAAAAAATACACAGCACTCCCCACCTTTCTTTCGTTCATCTCCAGGG
CCCCACCTCAGATCAAAGCAGCTCTGGATGAGATGGGACCTGCAGCTCTCCCTCCACAAGGTGACTCTTAGCAAC
CTCATTTCGACAGTGGTTTGTAGCGTGGTGCACCAGGGCCTTGTTGAACAGATCCACACTGCTCTAATAAAGTTC
CCATCCTTAATGACTCACTTGTCAACTAGTGGACTAATTAACCCTCCACCAAAAAAACACAAAGTGCTTCTGTGA
GACCAATTTTGTGCTAATGAGCATTGAGACTGATGCTTTGTAAGTCACACCACAACAAATATTGATTGAGGGCGC
TGCATGTGCTGGGTACATTTCTTGGCACTTGGGAATCAGTAGTCAAGCGAAACCCTTGCCTTTGAGAGTTTATGG
TCTGGATAATATAAATAAACAAGTAAGCATAAAAAAAAAAAAAAAAA

FIGURE 2253

MVMRPLWSLLLWEALLPITVTGAQVLSKVGGSVLLVAARPPGFQVREAIWRSLWPSEELLATFFRGSLETLYHSR
FLGRAQLHSNLSLELGPLESGDSGNFSVLMVDTRGQPWTQTLQLKVYDAVPRPVVQVFIAVERDAQPSKTCQVFL
SCWAPNISEITYSWRRETTMDFGMEPHSLFTDGQVLSISLGPGDRDVAYSCIVSNPVSWDLATVTPWDSCHHEAA
PGKASYKDVLLVVVPVSLLLMLVTLFSAWHWCPCSGKKKKDVHADRVGPETENPLVQDLP

FIGURE 2254

GGCACGAGGCCGCCTTCTGCATCGCGGCTTCGGCGGCTTCCACCTAGACACCTAACAGTCGCGGAGCCGGCCGCG
TCGTGAGGGGGTCGGCACGGGGAGTCGGGCGGTCTTGTGCATCTTGGCTACCTGTGGGTCGAAG**ATG**TCGGACAT
CGGAGACTGGTTCAGGAGCATCCCGGCGATCACGCGCTATTGGTTCGCCGCCACCGTCGCCGTGCCCTTGGTCGG
CAAACTCGGCCTCATCAGCCCGGCCTACCTCTTCCTCTGGCCCGAAGCCTTCCTTTATCGCTTTCAGATTTGGAG
GCCAATCACTGCCACCTTTTATTTCCCTGTGGGTCCAGGAACTGGATTTCTTTATTTGGTCAATTTATATTTCTT
ATATCAGTATTCTACGCGACTTGAAACAGGAGCTTTTGATGGGAGGCCAGCAGACTATTTATTCATGCTCCTCTT
TAACTGGATTTGCATCGTGATTACTGGCTTAGCAATGGATATGCAGTTGCTGATGATTCCTCTGATCATGTCAGT
ACTTTATGTCTGGGCCCAGCTGAACAGAGACATGATTGTATCATTTTGGTTTGGAACACGATTTAAGGCCTGCTA
TTTACCCTGGGTTATCCTTGGATTCAACTATATCATCGGAGGCTCGGTAATCAATGAGCTTATTGGAAATCTGGT
TGGACATCTTTATTTTTTCCTAATGTTCAGATACCCAATGGACTTGGGAGGAAGAAATTTTCTATCCACACCTCA
GTTTTTGTACCGCTGGCTGCCCAGTAGGAGAGGAGGAGTATCAGGATTTGGTGTGCCCCCTGCTAGCATGAGGCG
AGCTGCTGATCAGAATGGCGGAGGCGGGAGACACAACTGGGGCCAGGGCTTTCGACTTGGAGACCAG**TGA**AGGGG
CGGCCTCGGGCAGCCGCTCCTCTCAAGCCACATTTCCTCCCAGTGCTGGGTGCGCTTAACAACTGCGTTCTGGCT
AACACTGTTGGACCTGACCCACACTGAATGTAGTCTTTCAGTACGAGACAAAGTTTCTTAAATCCCGAAGAAAAA
TATAAGTGTTCCACAAGTTTCACGATTCTCATTCAAGTCCTTACTGCTGTGAAGAACAAATACCAACTGTGCAAA
TTGCAAAACTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAA

FIGURE 2255

MSDIGDWFRSIPAITRYWFAATVAVPLVGKLGLISPAYLFLWPEAFLYRFQIWRPITATFYFPVGPGTGFLYLVN
LYFLYQYSTRLETGAFDGRPADYLFMLLFNWICIVITGLAMDMQLLMIPLIMSVLYVWAQLNRDMIVSFWFGTRF
KACYLPWVILGFNYIIGGSVINELIGNLVGHLYFFLMFRYPMDLGGRNFLSTPQFLYRWLPSRRGGVSGFGVPPA
SMRRAADQNGGGGRHNWGQGFRLGDQ

FIGURE 2256A

CAGCGCTGCTCCCCGGGCGCTCCTCCCCGGGCGCTCCTCCCCAGGCCTCCCGGGCGCTTGGATCCCGGCCATCTC
CGCACCCTTCAAGTGGGTGTGGGTGATTTCCTGGCGGGGGGGAGCAGCCAGGTGAGCCCAAG**ATG**CTGCTGCGCTC
GAAGCCTGCGCTGCCGCCGCCGCTGATGCTGCTGCTCCTGGGGCCGCTGGGTCCCCTCTCCCCTGGCGCCCTGCC
CCGACCTGCGCAAGCACAGGACGTCGTGGACCTGGACTTCTTCACCCAGGAGCCGCTGCACCTGGTGAGCCCCTC
GTTCCTGTCCGTCACCATTGACGCCAACCTGGCCACGGACCCGCGGTTCCTCATCCTCCTGGGTTCTCCAAAGCT
TCGTACCTTGGCCAGAGGCTTGTCTCCTGCGTACCTGAGGTTTGGTGGCACCAAGACAGACTTCCTAATTTTCGA
TCCCAAGAAGGAATCAACCTTTGAAGAGAGAAGTTACTGGCAATCTCAAGTCAACCAGGATATTTGCAAATATGG
ATCCATCCCTCCTGATGTGGAGGAGAAGTTACGGTTGGAATGGCCCTACCAGGAGCAATTGCTACTCCGAGAACA
CTACCAGAAAAAGTTCAAGAACAGCACCTACTCAAGAAGCTCTGTAGATGTGCTATACACTTTTGCAAACTGCTC
AGGACTGGACTTGATCTTTGGCCTAAATGCGTTATTAAGAACAGCAGATTTGCAGTGGAACAGTTCTAATGCTCA
GTTGCTCCTGGACTACTGCTCTTCCAAGGGGTATAACATTTCTTGGGAACTAGGCAATGAACCTAACAGTTTCCT
TAAGAAGGCTGATATTTTCATCAATGGGTCGCAGTTAGGAGAAGATTTTATTCAATTGCATAAACTTCTAAGAAA
GTCCACCTTCAAAAATGCAAAACTCTATGGTCCTGATGTTGGTCAGCCTCGAAGAAAGACGGCTAAGATGCTGAA
GAGCTTCCTGAAGGCTGGTGGAGAAGTGATTGATTCAGTTACATGGCATCACTACTATTTGAATGGACGGACTGC
TACCAGGGAAGATTTTCTAAACCCTGATGTATTGGACATTTTTATTTCATCTGTGCAAAAAGTTTTCCAGGTGGT
TGAGAGCACCAGGCCTGGCAAGAAGGTCTGGTTAGGAGAAACAAGCTCTGCATATGGAGGCGGAGCGCCCTTGCT
ATCCGACACCTTTGCAGCTGGCTTTATGTGGCTGGATAAATTGGGCCTGTCAGCCCGAATGGGAATAGAAGTGGT
GATGAGGCAAGTATTCTTTGGAGCAGGAAACTACCATTTAGTGGATGAAAACTTCGATCCTTTACCTGATTATTG
GCTATCTCTTCTGTTCAAGAAATTGGTGGGCACCAAGGTGTTAATGGCAAGCGTGCAAGGTTCAAAGAGAAGGAA
GCTTCGAGTATACCTTCATTGCACAAACACTGACAATCCAAGGTATAAAGAAGGAGATTTAACTCTGTATGCCAT
AAACCTCCATAATGTCACCAAGTACTTGCGGTTACCCTATCCTTTTTCTAACAAGCAAGTGGATAAATACCTTCT
AAGACCTTTGGGACCTCATGGATTACTTTCCAAATCTGTCCAACTCAATGGTCTAACTCTAAAGATGGTGGATGA
TCAAACCTTGCCACCTTTAATGGAAAAACCTCTCCGGCCAGGAAGTTCACTGGGCTTGCCAGCTTTCTCATATAG
TTTTTTTGTGATAAGAAATGCCAAAGTTGCTGCTTGCATC**TGA**AAATAAAATATACTAGTCCTGACACTGAATTT
TTCAAGTATACTAAGAGTAAAGCAACTCAAGTTATAGGAAAGGAAGCAGATACCTTGCAAAGCAACTAGTGGGTG
CTTGAGAGACACTGGGACACTGTCAGTGCTAGATTTAGCACAGTATTTTGATCTCGCTAGGTAGAACACTGCTAA
TAATAATAGCTAATAATACCTTGTTCCAAATACTGCTTAGCATTTTGCATGTTTTACTTTTATCTAAAGTTTTGT
TTTGTTTTATTATTTATTTATTTATTTATTTTGTGACGGAGAGAGATTCCATCTCAAAAAAACAAGTTATTAAAA
ATGTATATGAATGCTCCTAATATGGTCAGGAAGCAAGGAAGCGAAGGATATATTATGAGTTTTAAGAAGGTGCTT
AGCTGTATATTTATCTTTCAAAATGTATTAGAAGATTTTAGAATTCTTTCCTTCATGTGCCATCTCTACAGGCAC
CCATCAGAAAAAGCATACTGCCGTTACCGTGAAACTGGTTGTAAAAGAGAAACTATCTATTTGCACCTTAAAAGA
CAGCTAGATTTTGCTGATTTTCTTCTTTCGGTTTTCTTTGTCAGCAATAATATGTGAGAGGACAGATTGTTAGAT
ATGATAGTATAAAAAATGGTTAATGACAATTCAGAGGCGAGGAGATTCTGTAAACTTAAAATTACTATAAATGAA
ATTGATTTGTCAAGAGGATAAATTTTAGAAAACACCCAATACCTTATAACTGTCTGTTAATGCTTGCTTTTTCTC
TACCTTTCTTCCTTGTTTCAGTTGGGAAGCTTTTGGCTGCAAGTAACAGAAACTCCTAATTCAAATGGCTTAAGC
AATAAGGAAATGTATATTCCCACATAACTAGACGTTCAAACAGGCCAGGCTCCAGCACTTCAGTACGTCACCAGG
GGATCTGGGTTCTTCCCAGCTCTCTGCTCTGCCATCTTTAGCGCTGGCTTCATTCTCAGACTCTGGTAGCATGAT
GGCTGTAGCTGTTTCATGGGCCCCTTCAAACCTCATAGCAACCAGAGGAAGAAAATGAGCCATTTTTTGAGTCTC
CTTCATAGACTTGAATAACTCTTTTTCAGAGCTTCTCACAGCAAACCTCTCCTCATGTCTCCTCATGTCTTATTG
TTCAGAAATGGGTAATGTGGCCATTTCACCAGTCACTGCCAACAACAACGAGGTTCCTATAATTGTCTCTGAGTA
ACCCTTTGGAATGGAGAGGGTGTTGGTCAGTCTACAAACTGAACACTGCAGTTCTGCGCTTTTTACCAGTGAAAA
AATGTAATTATTTTCCCCTCTTAAGGATTAATATTCTTCAAATGTATGCCTGTTATGGATATAGTATCTTTAAAA
TTTTTTATTTTAATAGCTTTAGGGGTACACACTTTTTGCTTACAGGGGTGAATTGTGTAGTGGTGAAGACTCGGC
TTTTAATGTACTTGTCACCTGAGTGATGTACATTGTACCCAATAGGTAATTTTTCATCCATTACCCTCCTTCCGC
CCTCTTCCCTTCTGAGTCTCCAACATCCCTTATACCACTGTGTATGTTCTTGTGTACCTACAGCTAAGCTTCCAC
TTATAAGTGAGAACATGCAGTATTTGGTTTTCCATTCCTGAGTTACTTCCCTTAGGATAACAGCCCCCAGTTCCG
TCCAAGTTGCTGCAAAATACATTATTCTTCTTTATGGCTGAGTAATAGTCCATGGTACATATATACCACATTTTC
TTTATCCACTTATCAGTTGATGGACACTTAGGTTAATTCCATTCAATTTCATTCAATTTAAGTATATTTGTAAGG

FIGURE 2256B

AGCTAAAGCTGAAAATTAAATTTTAGATCTTTCAATACTCTTAAATTTTATATGTAAGTGGTTTTTATATTTTCA
CATTTGAAATAAAGTAATTTTTATAACCTTGAAAAAAAAAAAAAAAAAAAA

FIGURE 2257

MLLRSKPALPPPLMLLLLGPLGPLSPGALPRPAQAQDVVDLDFFTQEPLHLVSPSFLSVTIDANLATDPRFLILL
GSPKLRTLARGLSPAYLRFGGTKTDFLIFDPKKESTFEERSYWQSQVNQDICKYGSIPPDVEEKLRLEWPYQEQL
LLREHYQKKFKNSTYSRSSVDVLYTFANCSGLDLIFGLNALLRTADLQWNSSNAQLLLDYCSSKGYNISWELGNE
PNSFLKKADIFINGSQLGEDFIQLHKLLRKSTFKNAKLYGPDVGQPRRKTAKMLKSFLKAGGEVIDSVTWHHYYL
NGRTATREDFLNPDVLDIFISSVQKVFQVVESTRPGKKVWLGETSSAYGGGAPLLSDTFAAGFMWLDKLGLSARM
GIEVVMRQVFFGAGNYHLVDENFDPLPDYWLSLLFKKLVGTKVLMASVQGSKRRKLRVYLHCTNTDNPRYKEGDL
TLYAINLHNVTKYLRLPYPFSNKQVDKYLLRPLGPHGLLSKSVQLNGLTLKMVDDQTLPPLMEKPLRPGSSLGLP
AFSYSFFVIRNAKVAACI

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FIGURE 2258

GGCTGCGCTTCCCTGGTCAGGCACGGCACGTCTGGCCGGCCGCCAGG**ATG**CAGGCCCCGCACAAGGAGCACCTGT
ACAAGTTGCTGGTGATTGGCGACCTGGGCGTGGGGAAGACCAGTATCATCAAGCGCTACGTGCACCAGAACTTCT
CCTCGCACTACCGGGCCACAATCGGCGTGGACTTCGCGCTCAAGGTGCTCCACTGGGACCCGGAGACTGTGGTGC
GCCTGCAGCTCTGGGATATCGCAGGTCAAGAAAGATTTGGAAACATGACGAGGGTCTATTACCGAGAAGCTATGG
GTGCATTTATTGTCTTCGATGTCACCAGGCCAGCCACATTTGAAGCAGTGGCAAAGTGGAAAAATGATTTGGACT
CCAAGTTAAGTCTCCCTAATGGCAAACCGGTTTCAGTGGTTTTGTTGGCCAACAAATGTGACCAGGGGAAGGATG
TGCTCATGAACAATGGCCTCAAGATGGACCAGTTCTGCAAGGAGCACGGTTTCGTAGGATGGTTTGAAACATCAG
CAAAGGAAAATATAAACATTGATGAAGCCTCCAGATGCCTGGTGAAACACATACTTGCAAATGAGTGTGACCTAA
TGGAGTCTATTGAGCCGGACGTCGTGAAGCCCCATCTCACATCAACCAAGGTTGCCAGCTGCTCTGGCTGTGCCA
AATCC**TAG**TAGGCACCTTTGCTGGTGTCTGGTAGGAATGACCTCATTGTTCCACAAATTGTGCCTCTATTTTTAC
CATTTTGGGTAAACGTCAGGATAGATATACCACATGTGGCAAGCCAAAGATCTATGCCTCTGTTTTTTCAATGAG
AGAGAAATAGCAAATGTTCTTTCTATGCTTTCCTCACCATCATCACAGTGTTTACAAACTTTTGAAAATATTTAG
TCTGTTACAAACTTCTGTCATGTAGCTGACCAAAATCCTGCAGGGCCACAGTCGGCACTGTTATTTGCTTCTTTT
AATCAGCAAAGGCCTCAAGTCTTAAAATAAAAGGGGAGAAGAACAAACTAGCTGTCAAGTCAAGGACTGGCTTTC
ACCTTGCCCTGGTGTCTTTTTCCAGATTTCAATATATTCTCTGATGGCCTGACAGGCCTATTAAGTAGATGTGAT
ATTTTCTTCCAAGATGACCTCCATTCTCGGCAGACCTAAGAGTTGCCTCTGAGTTAGCTCTTTGGAATCGTGAAC
ACAGGTGTGCTATATTGTCCTTGTCCTAACTGTCACTTGCCATGGCCTGAATGTTGGCTTAACTGAATATTGTAT
GAAAAGACATGCCTCCATATGTGCCTTTCTGTTAGCTCTCTTTGACTCAAGCTGTGGGGCTCCTCTATACATGCT
ATACATGTAATATATATTATATATATTTTTGCAAGTGAACAATAAAACATTAAAAGATAAAA

FIGURE 2259

MQAPHKEHLYKLLVIGDLGVGKTSIIKRYVHQNFSSHYRATIGVDFALKVLHWDPETVVRLQLWDIAGQERFGNM
TRVYYREAMGAFIVFDVTRPATFEAVAKWKNDLDSKLSLPNGKPVSVVLLANKCDQGKDVLMNNGLKMDQFCKEH
GFVGWFETSAKENINIDEASRCLVKHILANECDLMESIEPDVVKPHLTSTKVASCSGCAKS

2546/2825

FIGURE 2260

GGCACGAGGGCGGGTGGGAAGCCGTGTCTCGCAGTCGTGGACTCGTGCAGCTGGGGCGTCCGCAGCCGCTCGTCA
CCCGCGTGATGCTGTTTCTGGCGTTGGGCAGCCCGTGGGCGGTCGAACTGCCTCTCTGCGGAAGGAGGACTGCAT
TGTGTGCGGCCGCCGCGCTCCGAGGTCCCCGGGCCTCTGTCTCCCGGGCGTCCTCCAGCAGCGGGCCTTCGGGGC
CGGTAGCCGGCTGGAGTACGGGGCCTTCGGGAGCCGCGCGCCTTCTCCGGCGTCCGGGTCGAGCGCAGATCCCTG
TTTATTGGGAAGGATATGTTCGATTCTTAAATACGCCATCTGACAAATCAGAAGATGGAAGGCTAATTTATACTG
GCAAT**ATG**GCCCGAGCAGTGTTTGGTGTGAAATGTTTCTCTTATTCTACGAGTCTGATTGGCCTTACATTTCTGC
CATACATTTTTACACAAAATAATGCTATTTCTGAAAGTGTGCCTCTGCCTATTCAAATCATATTCTATGGCATCA
TGGGAAGCTTTACGGTGATCACCCCAGTGCTGCTTCACTTTATTACAAAAGGCTATGTCATTCGATTGTACCATG
AGGCCACAACAGACACTTATAAAGCCATTACCTACAATGCTATGCTTGCAGAAACGAGTACAGTGTTTCACCAGA
ATGATGTGAAGATTCCAGATGCTAAACATGTATTTACCACATTTTATGCTAAAACAAAATCACTGTTAGTTAATC
CAGTGCTCTTTCCAAACCGTGAAGACTATATCCATCTAATGGGTTATGACAAAGAAGAATTTATTTTGTATATGG
AAGAAACCAGTGAAGAGAAACGGCATAAAGATGACAAA**TGA**GCCTATTTGTTAGTGTTCGTGCTCAAATGTGATT
TACGTTTTAATGTATAATAATAAAATTGCCTTTTGCATTCCGTTAGTGACTGATTGTTAAAAATAATTTGAAATT
ATCAAAGCTTTTAATTTCCAGAGAATGATGTTTGTTTATAATAAAACAAGCTATGTTTGAAAACCAAAATGTAGT
ATCTACCATTCGTGTTTTAGAAAGGTATGTGAATAAATATGTTCATGCTAGTATAAGAGTTCTGTGTTACTGTGG
TTGACTCTAAACTGGGGATCTGATGTCAGTAGCAAATGGGAGAGTTGCTTTATTCTTTGTGTATGGATTTTTCTA
AGTGTATAAATATTTTCCGACATTAAAAGACATTTTCTCTTTGAGGAAGACACAGTCATAGGTGGTGCGGAGCTG
TGGTCCACCTGCTCCTGCTCCTGACTCACTGCTCTTTGCTGTTGCCTGAGGACCAAGTCTGTCAGGAAGCTGGCT
AGGAAGCCTTGCAGCAGCCATGGCTTTTAAACATACCAGAAAAACACCCGTGGAGTCAGAGGTGGCAATTCACCG
AATTCATATCACTCTAACGAGTTGCAACGTAAAATCCCTGGATAAGGTGTGTGCTGACTTGATCTGAGGAGCAAA
GGAAAAGAATCAGTGAAAGGACCAGTTTGAATGCCTACCAAGACTTTGAGAATCACTACAAGAAAAACTTACGGT
GAAGGTTCTAAGGCATGGGATCGTTTCCAGATGAGAATCCACAAGCGACTCATTGACTTGCGCAGTCCTCAGATA
GTTAAGCAGATTACTTCCATCAGTATTGAGCCAGGAGTTGAGATGGAAGTCACCATTGCAAATGCTTAAGTCAAC
TGTTTTCATAAATTGATTACCAGTTGTTAAAAAATTTTCAAAAAACCGCAAAATTTCAAGAAATTCACAAATTAT
GGGAGCAGTTTTAAGTCTTCTTTGGTTCAGAACACAGGTTTTTGCCTAACCCCTGGCATGATTGCCCATAAGAAC
ATACATGTACAGTTGAACTGGTGGTTAGCTATACGGGAAATGGTAAGTAGTGTTGTCTTCAGTATCTTAATTTGT
TTCTGCAACTGTGCACTCCTCCCTTGGTGGCACCCTATGGGTGTAGGAAAACCACTGTTATTAAACAGGTGAAAA
ATAAAAAATTTTTCAAAAAAAAAAAAAAAAAAA

FIGURE 2261

MARAVFGVKCFSYSTSLIGLTFLPYIFTQNNAISESVPLPIQIIFYGIMGSFTVITPVLLHFITKGYVIRLYHEA
TTDTYKAITYNAMLAETSTVFHQNDVKIPDAKHVFTTFYAKTKSLLVNPVLFPNREDYIHLMGYDKEEFILYMEE
TSEEKRHKDDK

FIGURE 2262

CGGAATTGGTGGGTTCTTGGTCTCACTGAGTTCTAGAATGAAGCTGCAGACCCTCGCAGTGAGTGTTACAGCTCT
TAAGGCTCTCTGACTGCCACCCCTGCCTGCCTGCCCGGCCCTGCACAAC**ATG**CAGCCCTCCGGCCTCGAGGGTCC
CGGCACGTTTGGTCGGTGGCCTCTGCTGAGTCTGCTGCTCCTGCTGCTGCTGCTCCAGCCTGTAACCTGTGCCTA
CACCACGCCAGGCCCCCCCAGAGCCCTCACCACGCTGGGCGCCCCCAGAGCCCACACCATGCCGGGCACCTACGC
TCCCTCGACCACACTCAGTAGTCCCAGCACCCAGGGCCTGCAAGAGCAGGCACGGGCCCTGATGCGGGACTTCCC
GCTCGTGGACGGCCACAACGACCTGCCCCTGGTCCTAAGGCAGGTTTACCAGAAAGGGCTACAGGATGTTAACCT
GCGCAATTTCAGCTACGGCCAGACCAGCCTGGACAGGCTTAGAGATGGCCTCGTGGGCGCCCAGTTCTGGTCAGC
CTATGTGCCATGCCAGACCCAGGACCGGGATGCCCTGCGCCTCACCCTGGAGCAGATTGACCTCATACGCCGCAT
GTGTGCCTCCTATTCTGAGCTGGAGCTTGTGACCTCGGCTAAAGCTCTGAACGACACTCAGAAATTGGCCTGCCT
CATCGGTGTAGAGGGTGGCCACTCGCTGGACAATAGCCTCTCCATCTTACGTACCTTCTACATGCTGGGAGTGCG
CTACCTGACGCTCACCCACACCTGCAACACACCCTGGGCAGAGAGCTCCGCTAAGGGCGTCCACTCCTTCTACAA
CAACATCAGCGGGCTGACTGACTTTGGTGAGAAGGTGGTGGCAGAAATGAACCGCCTGGGCATGATGGTAGACTT
ATCCCATGTCTCAGATGCTGTGGCACGGCGGGCCCTGGAAGTGTCACAGGCACCTGTGATCTTCTCCCACTCGGC
TGCCCGGGGTGTGTGCAACAGTGCTCGGAATGTTCCTGATGACATCCTGCAGCTTCTGAAGAAGAACGGTGGCGT
CGTGATGGTGTCTTTGTCCATGGGAGTAATACAGTGCAACCCATCAGCCAATGTGTCCACTGTGGCAGATCACTT
CGACCACATCAAGGCTGTCATTGGATCCAAGTTCATCGGGATTGGTGGAGATTATGATGGGGCCGGCAAATTCCC
TCAGGGGCTGGAAGACGTGTCCACATACCCGGTCCTGATAGAGGAGTTGCTGAGTCGTGGCTGGAGTGAGGAAGA
GCTTCAGGGTGTCCTTCGTGGAAACCTGCTGCGGGTCTTCAGACAAGTGGAAAAGGTACAGGAAGAAAACAAATG
GCAAAGCCCCTTGGAGGACAAGTTCCCGGATGAGCAGCTGAGCAGTTCCTGCCACTCCGACCTCTCACGTCTGCG
TCAGAGACAGAGTCTGACTTCAGGCCAGGAACTCACTGAGATTCCCATACACTGGACAGCCAAGTTACCAGCCAA
GTGGTCAGTCTCAGAGTCCTCCCCCCACATGGCCCCAGTCCTTGCAGTTGTGGCCACCTTCCCAGTCCTTATTCT
GTGGCTC**TGA**TGACCCAGTTAGTCCTGCCAGATGTCACTGTAGCAAGCCACAGACACCCCACAAAGTTCCCCTGT
TGTGCAGGCACAAATATTTCTTGAAATAAATGTTTTGGACATAGAAAAAA

FIGURE 2263

MQPSGLEGPGTFGRWPLLSLLLLLLLLQPVTCAYTTPGPPRALTTLGAPRAHTMPGTYAPSTTLSSPSTQGLQEQ
ARALMRDFPLVDGHNDLPLVLRQVYQKGLQDVNLRNFSYGQTSLDRLRDGLVGAQFWSAYVPCQTQDRDALRLTL
EQIDLIRRMCASYSELELVTSAKALNDTQKLACLIGVEGGHSLDNSLSILRTFYMLGVRYLTLTHTCNTPWAESS
AKGVHSFYNNISGLTDFGEKVVAEMNRLGMMVDLSHVSDAVARRALEVSQAPVIFSHSAARGVCNSARNVPDDIL
QLLKKNGGVVMVSLSMGVIQCNPSANVSTVADHFDHIKAVIGSKFIGIGGDYDGAGKFPQGLEDVSTYPVLIEEL
LSRGWSEEELQGVLRGNLLRVFRQVEKVQEENKWQSPLEDKFPDEQLSSSCHSDLSRLRQRQSLTSGQELTEIPI
HWTAKLPAKWSVSESSPHMAPVLAVVATFPVLILWL

FIGURE 2264

ATTGGTGAAGCTCTAACGGCTGTTTTGACTGGCGTAGCCGGAGCCGGCGACGTGAGGCGGGCGTTGCTCGCGCGA
CAAGTAGTTGCTGGGACAGCGAA**ATG**GAGGGGTGTGTGTCTAACCTAATGGTCTGCAACCTGGCCTACAGCGGGA
AGCTGGAAGAGTTGAAGGAGAGTATTCTGGCCGATAAATCCCTGGCTACTAGAACTGACCAGGACAGCAGAACTG
CATTGCACTGGGCATGCTCAGCTGGACATACAGAAATTGTTGAATTTTTGTTGCAACTTGGAGTGCCAGTGAATG
ATAAAGACGATGCAGGTTGGTCTCCTCTTCATATTGCGGCTTCTGCTGGCCGGGATGAGATTGTAAAAGCCCTTC
TGGGAAAAGGTGCTCAAGTGAATGCTGTCAATCAAAATGGCTGTACTCCCTTACATTATGCAGCTTCGAAAAACA
GGCATGAGATCGCTGTCATGTTACTGGAAGGCGGGGCTAATCCAGATGCTAAGGACCATTATGAGGCTACAGCAA
TGCACCGGGCAGCAGCCAAGGGTAACTTGAAGATGATTCATATCCTTCTGTACTACAAAGCATCCACAAACATCC
AAGACACTGAGGGTAACACTCCTCTACACTTAGCCTGTGATGAGGAGAGAGTGGAAGAAGCAAAACTGCTGGTGT
CCCAAGGAGCAAGTATTTACATTGAGAATAAAGAAGAAAAGACACCCCTGCAAGTGGCCAAAGGTGGCCTGGGTT
TAATACTCAAGAGAATGGTGGAAGGT**TAA**ACAGCTTGGATTTATTCTTACTTTGTATGTTGTGTTGTTGTCCCCA
GTGTCCTACAAACTAATGTATTTGTGCACAAGACATCATCTATGAATGATGAAGTTTTCTCACCTTCAAAGTCTT
ATAAACATGTTGACTCTTGTTCCTGCTGAGTTACTTGTTCGAAGCTTACAGCTTGTTTTCCAGGCATCGAATAAC
TGTTGAGATTGTTCTACTGTTGTCGTATATTCTTCTATATTGAATTCTGGTTAATTTGGAGTAACTAATTCTGTG
GCTGTTGTGAGTCTTCAGCACCCTCCCATGTACCTTATATCCCTCTCTGAAACAGAACAGCTCCAATAGCAACAA
GCTAGTTGTTCTGCCAGATGTTTCTATGTGGATTCTGTAATGTTCCTCCATACAGTTAAAACATCCTAACTTGTT
TTTCAAGCTCACTCAGGCCTACGCCAAACGTTTCTGTTTTTTTTAACCATGAGGTTTAATTTATTTTTGTGATAG
GAGGGATATTTACATATTTTAGTGGACCACATTTTAAGTTGGATGGTGTGCTCTAAAATACTGAAAAACAATAGC
CCATATACCTATGTATTTGTTTTTGATGGGTTGTTTACTCTGAAATAAAATGTATGGTTTTCTTAAAAGGAAGTT
TTAAAGTACCTATTTTGTGTCATCCTGTATTGAAAAGAATGTCAAGCTTGTTAAAATGACATGTAACAAAAATGT
ATTTTGATTTGTATTTCAGAAACTAAAAAATAAAATGTTGAAAG

FIGURE 2265

MEGCVSNLMVCNLAYSGKLEELKESILADKSLATRTDQDSRTALHWACSAGHTEIVEFLLQLGVPVNDKDDAGWS
PLHIAASAGRDEIVKALLGKGAQVNAVNQNGCTPLHYAASKNRHEIAVMLLEGGANPDAKDHYEATAMHRAAAKG
NLKMIHILLYYKASTNIQDTEGNTPLHLACDEERVEEAKLLVSQGASIYIENKEEKTPLQVAKGGLGLILKRMVE
G

FIGURE 2266

GGCACGAGGCTTGTCCCCAGCGCCTGGACTCCCCCTTAACTGCTTGGGAAATGTGACCTTTGCTCTGGGGGGCCT
GGCCCTGCAGGCCCCAACCTTCCCTCATCTCTGGCGGCCCTCTTGGGCCTCTGACCCAGCCCCTCCCCGGGCCAG
GCTCACAGAAGCTGGCTTCTGGGACTGTCCTGGGCCCAAGTGGGCACCTGCGCCAGCCCCACCTGTGCCTGGGCT
GTGGCCCCTTCCTACAGGGCGCTCACCATGGCCCCGCCGCTCCTGCTGCTGCTGCTGGCCAGTGGAGCGGCCGCC
TGCCCGCTGCCCTGCGTCTGCCAGAACCTGTCCGAGTCGCTCAGCACCCTCTGTGCCCACCGAGGCCTGCTGTTT
GTGCCGCCCAACGTGGACCGGCGCACAGTGGAGCTGCGGCTGGCTGACAACTTCATCCAGGCCCTGGGGCCCCCT
GACTTCCGCAACATGACGGGACTGGTGGACCTGACACTGTCTCGCAATGCCATCACCCGCATTGGGGCCCGCGCC
TTTGGGGACCTCGAGAGCCTGCGTTCCCTCCACCTTGACGGCAACAGGCTGGTGGAGCTGGGCACCGGGAGCCTC
CGGGGCCCCGTCAATCTGCAGCACCTCATCCTCAGCGGCAACCAGCTGGGCCGCATCGCGCCGGGAGCCTTCGAC
GACTTCCTAGAGAGCCTGGAGGACCTGGACCTGTCCTACAACAACCTCCGGCAGGTGCCCTGGGCCGGCATCGGC
GCCATGCCTGCCCTGCACACCCTCAACCTGGACCATAACCTTATTGACGCACTGCCCCCAGGCGCCTTCGCCCAG
CTCGGTCAGCTCTCCCGCCTGGACCTCACCTCCAACCGCCTGGCCACGCTGGCTCCGGACCCGCTTTTCTCTCGT
GGGCGTGATGCAGAGGCCTCTCCCGCCCCCCTGGTGCTGAGCTTTAGCGGGAACCCCCTGCACTGCAACTGTGAG
CTGCTGTGGCTGCGGCGGCTGGCGCGGCCGGACGACCTGGAAACGTGCGCCTCCCCGCCCGGCCTGGCCGGCCGC
TACTTCTGGGCAGTGCCCGAGGGCGAGTTCTCCTGTGAGCCGCCCCTCATTGCCCGCCACACGCAGCGCCTCTGG
GTGCTGGAAGGCCAGCGGGCCACGCTGCGGTGCCGGGCCCTGGGTGACCCCGCGCCTACC**ATG**CACTGGGTCGGT
CCTGACGACCGGTTGGTTGGCAACTCCTCCCGAGCCCGGGCTTTCCCCAACGGGACCTTAGAGATTGGGGTGACC
GGCGCTGGGGACGCTGGGGGCTACACCTGCATCGCCACCAACCCTGCTGGTGAGGCCACAGCCCGAGTAGAACTG
CGGGTGCTGGCCTTGCCCCATGGTGGGAACAGCAGTGCCGAGGGGGGCCGCCCCGGGCCCTCGGACATCGCCGCC
TCCGCTCGCACTGCTGCCGAGGGTGAGGGGACGCTGGAGTCTGAGCCAGCCGTGCAGGTGACGGAGGTGACCGCC
ACCTCAGGGCTGGTGAGCTGGGGTCCCGGGCGGCCAGCCGACCCAGTGTGGATGTTCCAAATCCAGTACAACAGC
AGCGAAGATGAGACCCTCATCTACCGGATTGTCCCAGCCTCCAGCCACCACTTCCTGCTGAAGCACCTCGTCCCC
GGCGCTGACTATGACCTCTGCCTGCTGGCCTTGTCACCGGCCGCTGGGCCCTCTGACCTCACGGCCACCAGGCTG
CTGGGCTGTGCCCATTTCTCCACGCTGCCGGCCTCGCCCCTGTGCCACGCCCTGCAGGCCCACGTGCTGGGCGGG
ACCCTGACCGTGGCCGTGGGGGGTGTGCTGGTGGCTGCCTTACTGGTCTTCACTGTGGCCTTGCTGGTTCGGGGC
CGGGGGGCCGGAAATGGCCGCCTCCCCCTCAAGCTCAGCCACGTCCAGTCCCAGACCAATGGAGGCCCCAGCCCC
ACACCCAAGGCCCACCCGCCGCGGAGCCCCCCGCCCCGGCCGCAGCGCAGCTGCTCTCTGGACCTGGGAGATGCC
GGGTGCTACGGTTATGCCAGGCGCCTGGGAGGAGCTTGGGCCCGACGGAGCCACTCTGTGCATGGGGGGCTGCTC
GGGGCAGGGTGCCGGGGGGGTAGGAGGCAGCGCCGAGCGGCTGGAAGAGAGTGTGGTG**TGA**TGGACGGGCAGCTTC
CTGTGTGCTCCAAGGGATGAGCCTCGTGGGGCAGAGGGCCCGGGGCCGCCGCCTGGCCTGGGAGTCCCTCCCTGG
TTTTTATTCTCAGTACCTCAGGCTCCCCTGTGTACTTGGAGGGGCAGGGAGCCCTTTCCTCGGTTCTGGCCTCCA
GACCAGGGTAAGGGCAGGCCCCTCCAACAGGTGCTCACAGCCACCGAGGCAGGGGCTGCAGCCACCCACTGGGAG
TCTTGTTTTTATTTATAATAAAATTGTTGGGGACACCTCAAAAAAAAAAAAAAAAAAA

FIGURE 2267

MHWVGPDDRLVGNSSRARAFPNGTLEIGVTGAGDAGGYTCIATNPAGEATARVELRVLALPHGGNSSAEGGRPGP
SDIAASARTAAEGEGTLESEPAVQVTEVTATSGLVSWGPGRPADPVWMFQIQYNSSEDETLIYRIVPASSHHFLL
KHLVPGADYDLCLLALSPAAGPSDLTATRLLGCAHFSTLPASPLCHALQAHVLGGTLTVAVGGVLVAALLVFTVA
LLVRGRGAGNGRLPLKLSHVQSQTNGGPSPTPKAHPPRSPPPRPQRSCSLDLGDAGCYGYARRLGGAWARRSHSV
HGGLLGAGCRGVGGSAERLEESVV

FIGURE 2268A

AGACGCGTAGGCTGGCAGCCCGCTGAGCCCGCCAGACTCCGCCGCCGTCGGGAGCCGGCCGCTGGGAGCCCGTCG
CTATGGGACCGCGCTGAGCCGCCCGCTGGCGGGGGAGCAGCGCGGTCGAGGATGGAGGGGCCGGCAGAGTGGGGC
CCCGAGGCGGCGCTGGGCCCCGAGGCGGTGCTGCGCTTCCTGGCGGAGCGCGGGGGCCGGGCCCTGCACGCCGAG
CTGGTGCAGCACTTCAGGGGCGCCCTGGGCGGCGAACCGGAGCAGCGCGCCCGCGCCCGCGCGCACTTCAAGGAG
CTGGTGAACGCCGTGGCCACTGTGCGCGTCGATCCCGCCGACGGCGCCAAGTACGTGCACCTCAAGAAGAGGTTC
TGTGAAGGGCCGTCCGAGCCCTCCGGGGACCCGCCGCGAATCCAGGTGACCGCCGAGCCCGAGGCCCCCGACGGC
CCTGCCGGGCCCGAGGCGCGCGATCGGCTCCCCGACGCGGCGGCCCCGGAGTCGCTCCCTGGACAGGGCCGCGAG
CTGGGCGAGGGAGAGCCCCCCGCCCCCGCGCACTGGCCGCCCCTGAGCGCCGGGGCTCGCAGGAAGAACTCGCGG
CGCGACGTGCAGCCCCTACCGCGGACTCCAGCCCCGGGGCCCAGCGAGGACCTGGAGCTCCCGCCACATGGCTGC
GAGGAGGCGGACAGGGGCAGCTCCCTTGTGGGGGCTACCGCACAGAGGCCGGCCCGCCAGAACCTCCGTGACCTG
GTGATGGGCAGCTCCCCGCAGCTGAAGAGGAGCGTGTGTCCCGGGGGCAGCAGCCCGGGCAGCTCCTCCGGGGGA
GGACGCGGCAGAGGCGGGGGCGACTCAGACAGCGCATCGGTGGCCTCGTCGTCCGCGGAGGAGGAGAGCAGCGGC
GGAGGCTCCGTGACGCTGGACCCCCTGGAGCACGCGTGGATGCTCTCTGCCTCCGATGGCAAGTGGGACAGCCTG
GAGGGCTTGCTCACCTGCGAGCCCGGCCTGCTGGTCAAGCGGGACTTCATTACCGGCTTCACTTGCCTGCGCTGG
GCCGCAAGCACGGCAGGCAGGAGCTTGTGGCCATGCTAGTCAACTTCGCCAACAAACACCAGCTGCCGGTGAACA
TGGACGCCAGGACGAGCGGGGGTTACACCGCCCTGCACTTGGCAGCCATGCACGGCCACGTGGAGGTGGTGAAGC
TGCTGGTGGGGGCCTACGACGCCGATGTGGACATCAGGGACTACAGTGGGAAAAAGGCCTCCCAGTACCTGAGTC
GGAGCATCGCCGAGGAGATCAAGAACCTGGTGGGAGCCCTGGACGAGGGTGACGGGGAAAGCGCCGCGGGTAGCG
GCGGCGGGCGCTGGAGGCTTTCAAAGGTGCTTCCCTCGCATCTCATCACCTACAAACTCTCACACGCCCTAGAAG
ATGGAGGGGACCATCACCACCATCACCACTCGGCTGAGGGGTGGGTCGGAGGCAAAGCCAAGGATCCAGGGCGCA
AAGCCTCGGGCAGCTCTAGTGGACGTATAAAACCCAGACTCAACAAAATCCGATTCAGAACCCAGATCGTCCACA
CCACACCCTCTTTCAGGGACCCAGAGCAGCCGCTGGAGGGCAGGGGGGAGGAGGGAGTGGGGGAGGAACGACCTG
TTAAAGGCCACTCGCCCTTCACATTGAGACCAAAGTCCAATGTATTTGGGTAAAAATTGCTTCTTTTAGAAAATG
CAAAGGTTTATTTGTCTTAATAAATTGAATACTAGGTGTTGTAAGGAAGTGAGACCAGAAGGACAAGCTAAATTA
TGCATTCTTACTTGAGGGATCGGAATGGATGGGGCGGAGTTCTCTTCGGGCTAGCCTTCTGGGAAAAGTGGATGT
CTTTTTCAGAGATTCATCATACCTTGACCTGTACCTCTTCTCTGCCCTCCACTTCCCTGCCCTGGAGTCCGTTTC
TGGAGGCTAGAAATGTATCTAAATTGGGGGAACAGAATGAATGAATTAATGAATGAGAGTTCCTTTGCTTTAACC
ATTCCTGGATGCCTGCAAAGTAAGGAATAATGCAGTTTTTATGTATCTGATTTTATAAGGGGTTACTCTTTCAAG
AGTAACAAAAAAATGCAAACTGTAATGAAACTACATTGTATTTCTAAGTGTGAAAACGACAGGCTGCCCCGTTTT
TACTAATTGCATTTGCATTTTAAGGTACTACTGAAGGTCAGATCAAAGTTGAAATGCAAAAATACTAATTAGAGA
ATAATGTGAATAAAATGGGAATCTTCTTGGTATTTTATGTGTATTGTAAGTAGCAGTTAAATTATTTTTTTAAAA
GCAATTTCAGTTTTAATCACTGAACAAAAGAAACAGGCAACATTCACTTCTGTAGTATGGTTTCCACCTATCTCT
AACACCACTATTAAGGTACACCAGTGTTAAGGTACATTAATAACTACACAAAATTTTATTTAAAGAGAACACTTA
GCAGCCTATGATAGTTTTCAATAAAATGTTGCCTCTCTTTCGGATTCTCACTAACTTTTGTTACTATTCTAAAAG
TTTGAATTTGCTGGGGTGTTTATTCTGAGGATTATTTAACCATTGTTCTATTTGGCATAACCCTATTTAATGGTG
CTTAGAGCTGAATTACCTACAGAAACTGTTTCTGGTTTAAATAATTAGCACAAATTGGCCTAAGTATTCATGAGC
CCATGTTTCTGTGAAGTAATTATTAAACCAACTTAATGATTCTTATGTAAGGTACACTTTTTATTTTAATACATT
GGTAGTCTCTATGACTTGTAGCAATGTTTTACAAATGTTTAAAATGCTAAACTTAATTTTCCAAGCTTTTCTTGA
CAATTAGATACCTATCCTGTAGTTACTGAAAATCTGGGTAGTAAATCTACCCAATTAAAATGGCACTTTATAAAA
GGGAATAGAGAAGAGATGGGACTATTTCTATATTTAAATGCTGCTGGCTATTCCTTTGTATATAAATGAAAAATA
CCATTCATTAAAATTAAGTACTCGTTTAAGTATGGTTCTTAATTACATTTCATTCATTTATATTAGAGTAAATGG
CTTCATAACTACTTTAAAATTTAACCCACAAGCATATTAAATCTGTTTGTTATAAGGTTGGAAACAATTTTTGAG
AGGGACTAATTTAAACAAGTCCTCCTTTAGTCTTTTGGGTCGCGTAGTTGCTGAAACCTAAGTACCTGCAGCCTA
CAGGATAAGGAAGTTCACAGCCTGCGGGGTGAATGAACCCATGTGTGAACTGCACAGAGCAATTCATAGAAAATG
CATAGAAATTTGTAACACTTTGGTCACATCTGTCTCTAGATGGTCATTGAATTTGTTTAAAGATGGATGAAAGGC
CAGGCATGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCAGGTGGATCACTTGAGGCCAGGAGT
TTGAAACCAGCCTGGCCAACATGGTGAAAACCTGTCTCTACTAAAAATACAAAAATTAGCCGAGCGTGGTGGTGC
GTGCCTGTAGTCCCAGCTACTTAGGAGGCTGAGGCATGAGAATCACTTAAACCTGAGAGGTGGAGGTTGCAGTTG

FIGURE 2268B

AGCCAAGATCACGACACTGCACTCCAGCCTGGGCAACGGAGACTCTGTCTCAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2269

MEGPAEWGPEAALGPEAVLRFLAERGGRALHAELVQHFRGALGGEPEQRARARAHFKELVNAVATVRVDPADGAK
YVHLKKRFCEGPSEPSGDPPRIQVTAEPEAPDGPAGPEARDRLPDAAAPESLPGQGRELGEGEPPAPAHWPPLSA
GARRKNSRRDVQPLPRTPAPGPSEDLELPPHGCEEADRGSSLVGATAQRPARQNLRDLVMGSSPQLKRSVCPGGS
SPGSSSGGGRGRGGGDSDSASVASSSAEEESSGGGSVTLDPLEHAWMLSASDGKWDSLEGLLTCEPGLLVKRDFI
TGFTCLRWAASTAGRSLWPC

FIGURE 2270

ACAGCAATAGTGCAGAATCCAGA**ATG**GATGTCCTCTTTGTAGCCATCTTTGCTGTGCCACTTATCCTGGGACAAG
AATATGAGGATGAAGAAAGACTGGGAGAGGATGAATATTATCAGGTGGTCTATTATTATACAGTCACCCCCAGTT
ATGATGACTTTAGTGCAGATTTCACCATTGATTACTCCATATTTGAGTCAGAGGACAGGCTGAACAGGTTGGATA
AGGACATAACAGAAGCAATAGAGACTACCATTAGTCTTGAAACAGCACGTGCAGACCATCCGAAGCCTGTAACTG
TGAAACCAGTAACAACGGAACCTAGTCCAGATCTGAACGATGCCGTGTCCAGTTTGCGAAGTCCTATTCCCCTCC
TCCTGTCGCGTGCCTTTGTTCAGGTGGGGATGTATTTCATG**TAG**AAGGTGGAAGAAGGCTGCTATGACTCTTTGG
ATGGGAGTCTGGCAAGAGGAAATTGGAAGATAAAATAAATAATAAGTGAAATAAAGAAAAAAAAAAAAA

FIGURE 2271

MDVLFVAIFAVPLILGQEYEDEERLGEDEYYQVVYYYTVTPSYDDFSADFTIDYSIFESEDRLNRLDKDITEAIE
TTISLETARADHPKPVTVKPVTTEPSPDLNDAVSSLRSPIPLLLSRAFVQVGMYFM

FIGURE 2272

GAATTCCGGGCACCCCTCGAGCGAGCGAGCTAGCCAGCAGGCATCGAGGGGGCGCGGCTGCCGTCCGGACGAGAC
AGGCGAACCCGACGCAGAAGAGTCCACCACCGGACAGTCAGGTAGCCGCCGCGTCCCTCGCACACGCAGAGTCGG
GCGGCGCGGGGTCTCCCTTGCGCCCGGCCTCCGCCCTCTCCTCCTCTCCTTTCCCCTTCTTCTCGCTGTCCTCTC
CTCTCTCGCTGCCCGCGTTTGCGCAGCCCCGGGCC**ATG**TCCGACGCGTCCCTCCGCAGCACATCCACGATGGAGC
GTCTTGTCGCCCGTGGGACCTTCCCAGTACTAGTGCGCACCAGCGCCTGCCGCAGCCTCTTCGGGCCGGTGGACC
ACGAGGAGCTGAGCCGCGAGCTGCAGGCCCGCCTGGCCGAGCTGAACGCCGAGGACCAGAACCGCTGGGATTACG
ACTTCCAGCAGGACATGCCGCTGCGGGGCCCTGGACGCCTGCAGTGGACCGAAGTGGACAGCGACTCGGTGCCCG
CGTTCTACCGCGAGACGGTGCAGGTGGGGCGCTGCCGCCTGCTGCTGGCGCCGCGGCCCGTCGCGGTCGCGGTGG
CTGTCAGCCCGCCCCTCGAGCCGGCCGCTGAGTCCCTCGACGGCCTCGAGGAGGCGCCGGAGCAGCTGCCTAGTG
TCCCGGTCCCGGCCCCGGCGTCCACCCCGCCCCCAGTCCCGGTCCTGGCTCCAGCCCCGGCCCCGGCTCCGGCTC
CGGTCGCGGCTCCGGTCGCGGCTCCGGTCGCGGTCGCGGTCCTGGCCCCGGCCCCGGCCCCGGCCCCGGCTCCGG
CTCCGGCCCCGGCTCCAGTCGCGGCCCCGGCCCCAGCCCCGGCCCCGGCCCCGGCCCCGGCCCCCGCCCCGGCCC
CGGCCCCGGACGCGGCGCCTCAAGAGAGCGCCGAGCAGGGCGCGAACCAGGGGCAGCGCGGCCAGGAGCCTCTCG
CTGACCAGCTGCACTCGGGGATTTCGGGACGTCCCGCGGCCGGCACCGCGGCCGCCAGCGCCAACGGCGCGGCGA
TCAAGAAGCTGTCCGGGCCTCTGATCTCCGATTTCTTCGCCAAGCGCAAGAGATCAGCGCCTGAGAAGTCGTCGG
GCGATGTCCCCGCGCCGTGTCCCTCTCCAAGCGCCGCCCCTGGCGTGGGCTCGGTGGAGCAGACCCCGCGCAAGA
GGCTGCGG**TGA**GCCAATTTAGAGCCCAAAGAGCCCCGAGGGAACCTGCCGGGGCAGCGGACGTTGGAAGGGCGCT
GGGCCTCGGCTGGGACCGTTCATGTAGCAGCAACCGGCGGCGGCTGCCGCAGAGCAGCGTTCGGTTTTGTTTTTA
AATTTTGAAAACTGTGCAATGTATTAATAACGTCTTTTTATATCTAAATGTATTCTGCACGAGAAGGTACACTGG
TCCCAAAGTGTAAAGCTTTAAGAGTCATTTATATAAAATGTTTAATCTCTGCTGAAACTCAGTACAAAAAAACCG
GGATTCCGGCC

FIGURE 2273

MSDASLRSTSTMERLVARGTFPVLVRTSACRSLFGPVDHEELSRELQARLAELNAEDQNRWDYDFQQDMPLRGPG
RLQWTEVDSDSVPAFYRETVQVGRCRLLLAPRPVAVAVAVSPPLEPAAESLDGLEEAPEQLPSVPVPAPASTPPP
VPVLAPAPAPAPAPVAAPVAAPVAVAVLAPAPAPAPAPAPAPVAAPAPAPAPAPAPAPAPAPAPDAAPQESAE
QGANQGQRGQEPLADQLHSGISGRPAAGTAAASANGAAIKKLSGPLISDFFAKRKRSAPEKSSGDVPAPCPSPSA
APGVGSVEQTPRKRLR

FIGURE 2274

GCCGGCTCCAGTTAGAGCTCGGGTCTCCTCGCCACAGCTCCGAGTCTTTCGTTCTGGGAGGCCCAGGCGGCTTCG
CGTTCTGAGAATAAACAGAACCTCTGTTGCTCTGCGACTTGCAGGCACTGGGAGATTCGTAGCTAAGACGCCAGG
GCATCCCGGAAGCTGGGAAATGGGACTGTTGACATTCAGGGATGTGGCCGTAGAATTCTCTTTGGAGGAGTGGGA
ACACCTGGAACCAGCTCAGAAGAATTTGTATCAGGATGTGATGTTAGAAAACTACAGAAACCTGGTCTCTCTGGG
TCTTGTTGTCTCTAAGCCGGACCTGATCACCTTTTTGGAACAAAGGAAAGAGCCTTGGAATGTGAAGAGTGAGGA
GACAGTAGCCATCCAGCCAGATGTGTTTTCGCATTATAACAAGGACCTGTTGACAGAGCACTGCACAGAAGCTTC
ATTCCAAAAAGTGATATCGAGGAGACATGGGAGCTGTGATCTTGAGAATTTACATTTAAGAAAAAGGTGGAAAAG
GGAGGAGTGTGAAGGGCACAATGGATGTTATGATGAAAAGACTTTTAAATATGATCAATTTGATGAATCCTCTGT
TGAAAGTTTGTTTCACCAGCAAATACTTTCTTCTTGTGCCAAAAGCTATAACTTTGATCAATATAGGAAGGTCTT
TACTCATTCATCATTGCTTAATCAACAAGAGGAAATAGATATTTGGGGAAAACATCACATATATGATAAAACTTC
AGTGTTATTTAGGCAGGTCTCTACTCTAAATAGTTACCGAAATGTTTTTATTGGAGAGAAAAATTATCATTGCAA
TAATTCTGAAAAAACCTTGAACCAAAGCTCAAGCCCTAAAAATCATCAGGAAAATTATTTTCTAGAAAAACAATA
CAAATGTAAAGAATTTGAGGAAGTCTTTCTTCAGAGTATGCATGGGCAAGAGAAACAAGAACAGTCTTACAAATG
TAATAAATGTGTAGAAGTTTGTACCCAGTCATTAAAACATATTCAACATCAGACCATCCATATCAGAGAAAACTC
ATATAGCTATAACAAATATGATAAAGATCTTAGTCAGTCATCAAATCTTAGAAAGCAGATAATCCATAATGAAGA
GAAACCATACAAATGTGAAAAATGTGGGGATAGCTTAAACCATAGTTTGCACCTTACTCAACATCAGATCATTCC
TACCGAAGAGAAACCCTATAAATGGAAAGAATGTGGCAAGGTCTTTAACCTTAACTGTAGTTTATACCTTACTAA
ACAGCAGCAAATTGATACTGGAGAAAACCTTTACAAATGTAAAGCATGTAGCAAATCTTTTACTCGTTCCTCCAA
TCTTATTGTGCATCAGAGAATTCACACTGGAGAGAAACCATACAAATGTAAAGAATGTGGCAAAGCCTTTCGCTG
TAGTTCATACCTTACTAAACATAAGCGAATTCATACTGGAGAGAAACCTTATAAATGTAAAGAATGTGGAAAAGC
TTTTAACCGTAGTTCATGCCTTACTCAACATCAGACAACTCATACAGGAGAAAAACTTTACAAATGTAAAGTATG
TAGCAAATCTTATGCTCGTTCTTCAAATCTTATTATGCATCAGAGAGTTCATACTGGAGAGAAGCCTTATAAATG
TAAAGAATGTGGCAAAGTCTTTAGCCGTAGTTCTTGCCTTACTCAACATCGGAAAATTCATACTGGAGAAAATCT
TTACAAATGCAAAGTATGTGCTAAACCTTTTACTTGTTTCTCAAATCTTATTGTGCATGAGAGAATTCATACTGG
AGAGAAACCCTATAAATGTAAAGAATGTGGCAAAGCCTTTCCTTATAGTTCACACCTTATTCGACATCATCGAAT
TCATACTGGAGAAAAACCATACAAATGTAAAGCATGTAGCAAATCTTTTAGTGACTCCTCAGGTCTTACTGTGCA
TCGGCGAACTCATACTGGAGAGAAACCCTATACATGTAAAGAATGTGGCAAAGCCTTTAGTTATAGTTCAGATGT
TATTCAGCATCGGAGAATTCATACTGGCCAGAGACCCTACAAATGTGAAGAATGTGGCAAAGCCTTCAACTATAG
GTCATACCTCACTACACATCAGAGAAGTCATACTGGAGAGAGACCCTACAAATGTGAAGAATGTGGCAAAGCCTT
CAACTATAGGTCATACCTCACTACACATCGGAGAAGACATACTGGAGAGAGACCCTACAAATGTGATGAATGTGG
TAAAGCCTTCAGCTATAGGTCATACCTCACTACACATCGGAGAAGTCATAGTGGAGAGAGACCCTACAAATGTGA
AGAATGTGGCAAAGCCTTTAACTCTAGGTCATACCTCATTGCACATCAGAGAAGTCATACTAGAGAAAAACTT**TA**
AAAATGTAAAACATGGAGCAGATTTTTTACTTGTTACCCATGTCTTATTGTGCATCAGATAATTTATATGGGAGT
GAAACCCTACAAATGTTAAGAATGTGGCATAACCTTTAACTATTTTCAAGCCTTACACAATAGCAGAGAATATAA
ACTGAAAAAATCCATACAAATATTAAAAATGTGGCAAATTATTTTAAACTGTGCTCAACCCTTACTCAAGATAAT
CCATACTAGAGAAACACTATAGATGTAAAAATGTGAAAAGTTTTATTCAAAATATCAAACTTATGAGTCACCTAG
GGGTTCATAGAAAAAGGAAGTTTGCAGATGCAATAAATGTGAGGAAGTATTTAATAAAAAATGAAGTCTAAATGT
GTCAGAGAATTTATGTGAGAAAGGACTAAAGCACAGACACTTTCAGCCTTTATACTAAATAAGAGTATTTTTTGT
ACAGAATAATCTAAAGGCAAAATAATTAGATAATTTATTTGCTTATATGTTTTAAAGTAGCAAGAACATTGATGT
TTTGACAGGTATATTTCATAGATACTTCATTTGTATTTACAGTATTTGAGGTTTTTGGAAAGCAAATATTATTTA
TATAATTCAGCTTTCAAATCTGTTGCTGCTTTTCCTTAATCCGTGGTGTTCATGTGAAAATATGTGTTCTGTTTT
TTTTTCTGCATCAGAACAATGTGAGGTCATTCTACGTTAATATCATTAATATCAGCATTTTTCATGGAAGTTTAA
TGCCAAATGTAAAACACATGAAAATTTTTAAAAATATGCTCTTTGTGTTTGANTCATTAAACAGTAATATGTGTA
AACATATAGTACATATTTAGGGCATTAGTATTCTATACTAAAGTAAAAGAGGAATATTCTGAATTTATTTATTAC
ATCAATTGCTCCTTAAGTAGAAAAACACTGGTCAGTTATTTAAAATACTGGCATACCTTTATAGTACAATGAAGT
AGTAATCTTGGAATATTATTTG

FIGURE 2275

PAPVRARVSSPQLRVFRSGRPRRLRVLRINRTSVALRLAGTGRFVAKTPGHPGSWEMGLLTFRDVAVEFSLEEWE
HLEPAQKNLYQDVMLENYRNLVSLGLVVSKPDLITFLEQRKEPWNVKSEETVAIQPDVFSHYNKDLLTEHCTEAS
FQKVISRRHGSCDLENLHLRKRWKREECEGHNGCYDEKTFKYDQFDESSVESLFHQQILSSCAKSYNFDQYRKVF
THSSLLNQQEEIDIWGKHHIYDKTSVLFRQVSTLNSYRNVFIGEKNYHCNNSEKTLNQSSSPKNHQENYFLEKQY
KCKEFEEVFLQSMHGQEKQEQSYKCNKCVEVCTQSLKHIQHQTIHIRENSYSYNKYDKDLSQSSNLRKQIIHNEE
KPYKCEKCGDSLNHSLHLTQHQIIPTEEKPYKWKECGKVFNLNCSLYLTKQQQIDTGENLYKCKACSKSFTRSSN
LIVHQRIHTGEKPYKCKECGKAFRCSSYLTKHKRIHTGEKPYKCKECGKAFNRSSCLTQHQTTHTGEKLYKCKVC
SKSYARSSNLIMHQRVHTGEKPYKCKECGKVFSRSSCLTQHRKIHTGENLYKCKVCAKPFTCFSNLIVHERIHTG
EKPYKCKECGKAFPYSSHLIRHHRIHTGEKPYKCKACSKSFSDSSGLTVHRRTHTGEKPYTCKECGKAFSYSSDV
IQHRRIHTGQRPYKCEECGKAFNYRSYLTTHQRSHTGERPYKCEECGKAFNYRSYLTTHRRRHTGERPYKCDECG
KAFSYRSYLTTHRRSHSGERPYKCEECGKAFNSRSYLIAHQRSHTREKL

FIGURE 2276

GCTGGAGGAGCCTCGAGGCTGAGGCTGCCGGGGGGGCTGTGGGCTACCGGGCCGCCGGCGCCTCAGCG**ATG**TTTTA
CTCAGGGCTCCTCACTGAGGGCGGCCGCAAGGAGACCGACATGCGGGAGGCGGCGTCACTGCGACAGCAGCGCCG
GATGAAGCAGGCGGTGCAGTTCATCCACAAGGACTCCGCCGACCTGCTGCCCCTGGACGGCCTCAAGAAGCTGGG
CTCGTCCAAGGACATGCAACCTCATAATATTCTGCAGAGGCGCCTCATGGAAACCAACCTGTCTAAGCTCCGAAG
CGGTCCCCGTGTCCCTTGGGCCTCTAAGACGAACAAACTCAATCAGGCTAAGTCTGAGGGGCTAAAGAAGTCTGA
GGAGGATGACATGATTTTGGTTTCTTGCCAGTGTGCTGGAAAGGATGTGAAAGCCTTGGTTGACACAGGCTGCCT
ATATAATCTCATCTCTTTGGCCTGTGTGGACAGATTGGGACTCAAGGAGCATGTCAAATCCCACAAGCATGAAGG
AGAAAAGCTTTCTCTACCCCGGCATCTCAAAGTAGTGGGCCAGATTGAGCACCTAGTGATCACACTGGGCTCCCT
CCGCCTGGACTGCCCAGCAGCTGTGGTTGATGACAATGAGAAAAACTTGTCCCTTGGTCTACAGACTCTCCGATC
TCTGAAGTGCATCATAAACTTGGATAAGCACCGGCTGATCATGGGGAAGACAGACAAGGAAGAAATCCCTTTTGT
GGAGACAGTCTCTTTGAATGAAGACAACACTTCAGAAGCA**TAA**CTACAGCCTGCAGCATGTCTGCACGTGTGCAT
GCATACACACCGGGTTGACAGATTGAGAAAACTGGGTTTGAACCAAATGCCGTAGTGACTTGCTGTGGACCAAGT
CCTTCCATCTAATAGAAGCTCCAGGGGCTCCTTCCCATTCAGACCTCTCTAGACTATAGTCTATGCTTAGAGATC
TTGTCTGGTTATGGCCATTGTTTTTTACTACTTTGATCACTTAACTTATAGACCTTTTTTGACACTGCCAGTCTC
ACTTGTGGCCTATTTCTCTGCTTCTTCCAGGAATTTGCTTTTATTAGTCAAGTATAGGGGCTGCCAGGTTCTGTG
TCTCCATAGATATATGTGCTTCTTTTCCTATAGCTAAATGTATAATAAACAGGAACCTGACCTTTACCTCCTTTC
AGCTGTTTCAAACAGGTGCCAGGATACCTATGTCTTAGAATTAGAGTTTCTTCAAATTGATTCATTGATTTCTCA
AGTATGGATTATGTGAAAGAGCCCAGGGACATTATCCATTACAGTCTAACTCTTTCATTTAAAGGTCCAGAGAGG
CAAGTGAATTGTCTAAGTTCATATATTAGGTCAGTGACTGAAGGGACCAAGAACGCAGACCTGATTTCCAAGCCA
AGACTCCCATGCTGCCTCATTTGTATTCAAGCCTTTAACAGGAGGGCAAAGAGGTGAGAATGTGTTAAAAAAAAA
AAAAAAAA

FIGURE 2277

MFYSGLLTEGGRKETDMREAASLRQQRRMKQAVQFIHKDSADLLPLDGLKKLGSSKDMQPHNILQRRLMETNLSK
LRSGPRVPWASKTNKLNQAKSEGLKKSEEDDMILVSCQCAGKDVKALVDTGCLYNLISLACVDRLGLKEHVKSHK
HEGEKLSLPRHLKVVGQIEHLVITLGSLRLDCPAAVVDDNEKNLSLGLQTLRSLKCIINLDKHRLIMGKTDKEEI
PFVETVSLNEDNTSEA

FIGURE 2278A

AAAATACTTGCCCTTTGGAAAAAAATCATTCTGGCGTCCACATTCAGACTGGTTTAGAGGAGAGTAATACTGAAG
ACATGCCCCCCCCGAATCAAGGTAGCAATTGCGGAGATGAAAAGAAATGAGTCCAAAAGATGCTTAAATGTGACCA
TTGAACAGGATTTGACTCATTGGATATGAGGCCATGGAGCAGTGTCTGGCTAGGTGGATGGATGTTGGTGCTGTT
TAGTTAAATAGGAAACTGGAAGAGAAGCAGGCTTGCAAGAATGGTAATATTTTGGACGTGTAACTTGTCTGGCAA
GATGTTGAAGAGGTAAAGGAGGCAGCACAGCATCATGGGCCTTGGAGGCAGAAGCCGCTTTGATTTACTCAGAAC
ACCAAATCAGTCTCCATTTTCTTGACTCAGACTACACCCAAGAGATTGCTTCCTTCCCTGTGCTTCCTGGCCACT
TGCTACTCTAGCTAGGAAGATCTGCCTCCCTTAGCTGAAGTCTAAGATGTGTAGCTTATTGATGCCTCTCCTCTT
CTTGTTCTGCTGTTGCTGAATATAATGGGGATGCCAGGGCAGACATACCATTCAACTTGAATCTTCCTTACCCAC
TTTGTATAGTCTTACATGTCATTGATACCTTGTTTTCTGGTACGCCTAAAAGGAGTAGAACTTCAAGTGGTATTT
AAAAGCTTTAAGAAAAGTCAAATTTTTACTTTTTTCTTCCCATCTGAGGCATGGATTTATTTTCTTTTTAAAGAA
ATCCAAATTTTTAAAAGAAGGGATCTTATTTTTAAAACGAAGATCGATAATATCTACTATGTACTAAATGTCATT
CTTTAAAAGTTGTTCCCTCATAATTTAGTAAATTACTTCCTTTTTTAAAAAAAGGAAAGAAAGAGTGTTTGTCTT
ACAGGCTAACATCACAAACAATAAGTTTCTTCTCATCCATCTCCATTTATAAACTAGTGTGACTGTCTTCTGAGC
ACAGTATTAAACCTGGACAGGGAGAGGGAGGGTGTTAGAGAATGAGAGGGAAAGAGAGAGAATACCTACATATAA
GGTGACCCTAAAGAAAAGCCTTTCACCCTTCGGAAGATCTTTTCATTTTCATTTTTCTTTTTTCAAACACCAACT
TGTACCAGAGGGAAGATCTTTTTTTAAAAGCGTTTCACTAAAATTTGTAAGGAAATAATGAGCTAGATAAAATAT
TACAGTGTTTATTTAATGAATTTACTCATATTTAAAATAATATCTAAAAAGAGTAATTTAGGAATATTGAGGCAA
TGAGACTTGAAGGTTATAAATAGTGGCAGTGAGAAAAGGAATATTATAGATAAGCTGTTGAAAAGAAAAGATGCT
AAGTTTTCTAGTGCTTCCTTCTGTTTCCAAGGGATTATAGAAATCGGAGTTTGTTTGACCTGTTTCACAGGCATC
TCCTTTGTGGACTCATTGTGTCTCTTCCTTAGGCTAATAGTCACCATTTATCATGGACGGTTGTCATGAGTGTTG
AAGCACACTTAACCTGCTTCGTCAGAGGGTACTTGGCATCACCGGTGCACAGCTGGTGTCCTAGCAGGAGACTAA
CTAGCTGACACACCGTGCTTTGTTAGCCTAATAATCTTATTTGTTAAAACTTGCCATTTGTTGGATTTTTCTATT
TTACCCCATTATAAACTTCTTATTGAGATCAGATGACTTCTGAATAGCATTTGCTGTATTTTTCCAAGGTAAAGA
ATATCTTTTTCAGATTTTTCTTTCTTTCTTTA**ATG**TCAGAAATAGAAGAAATCTTTTCTACCGACCTTGTGCCAG
GAGATGTCATGGTCATTCCATTAAATGGGACAATAATGCCTTGTGATGCTGTGCTTATTAATGGTACCTGCATTG
TAAACGAAAGCATGTTAACAGGAGAAAGTGTTCCAGTGACAAAGACTAATTTGCCAAATCCTTCAGTGGATGTGA
AAGGAATAGGAGATCAATTATATAATCCGGAAACACATAAACGACATACTTTGTTTTGTGGGACAACTGTTATTC
AGACTCGTTTCTACACTGGAGAACTCGTCAAAGCCATAGTTGTTAGAACAGGATTTAGTACTTCCAAAGGACAGC
TTGTTCGTTCCATATTGTATCCCAAACCAACTGATTTTAAACTCTACAGAGATGCCTACTTGTTTCTACTATGTC
TTGTGGCAGTTGCTGGCATTGGGTTTATCTACACTATTATTAATAGCATTTTAAATGAGGTACAAGTTGGGGTCA
TAATTATCGAGTCTCTTGATATTATCACAATTACTGTGCCCCCTGCACTTCCTGCTGCAATGACTGCTGGTATTG
TGTATGCTCAGAGAAGACTGAAAAAAATCGGTATTTTCTGTATCAGTCCTCAAAGAATAAATATTTGTGGACAGC
TCAATCTTGTTTGCTTTGACAAGACTGGAACTCTAACTGAAGATGGTTTAGATCTTTGGGGGATTCAACGAGTGG
AAAATGCACGATTTCTTTCACCAGAAGAAAATGTGTGCAATGAGATGTTGGTAAAATCCCAGTTTGTTGCTTGTA
TGGCTACTTGTCATTCACTTACAAAAATTGAAGGAGTGCTCTCTGGTGATCCACTTGATCTGAAAATGTTTGAGG
CTATTGGATGGATTCTGGAAGAAGCAACTGAAGAAGAAACAGCACTTCATAATCGAATTATGCCCACAGTGGTTC
GTCCTCCCAAACAACTGCTTCCTGAATCTACCCCTGCAGGAAACCAAGAAATGGAGCTGTTTGAACTTCCAGCTA
CTTATGAGATAGGAATTGTTCGCCAGTTCCCATTTTCTTCTGCTTTGCAACGTATGAGTGTGGTTGCCAGGGTGC
TGGGGGATAGGAAAATGGACGCCTACATGAAAGGAGCGCCCGAGGCCATTGCCGGTCTCTGTAAACCTGAAACAG
TTCCTGTCGATTTTCAAAACGTTTTGGAAGACTTCACTAAACAGGGCTTCCGTGTGATTGCTCTTGCACACAGAA
AATTGGAGTCAAAACTGACATGGCATAAAGTACAGAATATTAGCAGAGATGCAATTGAGAACAACATGGATTTTA
TGGGATTAATTATAATGCAGAACAAATTAAAGCAAGAACCCCCTGCAGTACTTGAAGATTTGCATAAAGCCAACA
TTCGCACCGTCATGGTCACAGGTGACAGTATGTTGACTGCTGTCTCTGTGGCCAGAGATTGTGGAATGATTCTAC
CTCAGGATAAAGTGATTATTGCTGAAGCATTACCTCCAAAGGATGGGAAAGTTGCCAAAATAAATTGGCATTATG
CAGACTCCCTCACGCAGTGCAGTCATCCATCAGCAATTGACCCAGAGGCTATTCCGGTTAAATTGGTCCATGATA
GCTTAGAGGATCTTCAAATGACTCGTTATCATTTTGCAATGAATGGAAAATCATTCTCAGTGATACTGGAGCATT
TTCAAGACCTTGTTCCTAAGTTGATGTTGCATGGCACCGTGTTTGCCCGTATGGCACCTGATCAGAAGACACAGT
TGATAGAAGCATTGCAAAATGTTGATTATTTTGTTGGGATGTGTGGTGATGGCGCAAATGATTGTGGTGCTTTGA

FIGURE 2278B

AGAGGGCACACGGAGGCATTTCCTTATCGGAGCTCGAAGCTTCAGTGGCATCTCCCTTTACCTCTAAGACTCCTA
GTATTTCCTGTGTGCCAAACCTTATCAGGGAAGGCCGTGCTGCTTTAATAACTTCCTCCTGTGAATTAGCACTAT
TTTCTATAGTTACTTATTCTCTGGATCATTTTATAATTTCCATATTAATTTCAAGTATGCTCGTGTTATTCTTCA
GTGATTTCCACAATTGTGCATTTTATTCTTTGGTT**TAA**GTACTGAAGCATATAATGAAAGTAATTGCTAAGTAGC
AGCTTAAAAATTCAATTATCCGATTGTATTTAACATCTTTAAGAGCATGATCATAAAGAGCTATTTTTGACACCC
CCCCCCCACTTTTTTAACATTTAGAGTTAGTAAGGGTTTTATATCTCTTCTGTCCATATTGTTTTCAAAGGAATG
AGGTGTTTAGGTGGCTGGAAAAGCATTTGTAGGAAGTTAGATTTGAATATAGACAAGGTGGGTTATTCACGTTGA
GAATGTTATTTGAAGAATGCCTGTGAAGCCAGGTGTGGGTTCTACTCAGTGCCATAGATAGACTGAGTCTTCTCT
CGTAGGTTACCATTACATAGTAATTTTGATTCTGAATTTCACATTAAATTATTTGAGTTTATACAGACCTAAATT
TTAAAATCTGTACATATATTATTTTGATGTATTAAGATGAATATTGCTGATTTAAATTTTATTTATGCACATACT
TAAAGGACAGAAATGTCTGGGAAAGTAATTGTTAAATAATGATATGTAACTTTTTAACTTTTTAAATAAATAACA
AGATTTTTAATGTGTGTCTCCCTCAGGGTTGTTTAAAGTTTTTTTTCTCCCTCAAGTATAAATAGTGGTAACTAT
ATGTTTTGTATCTTCTAGCACCAACTGCTGTAAAGCAATGCTGCAAATAATGCTTGAATACAAGTGGCTAAGCCA
ACAACAGAATAAATACTTTTATAGTAGTTTTATAATCCTGAAATTCGAAAGCTTTCCCAATTGCACTTGCATCTA
AACAAAACTGTTGCAGTTTTTACTCTATTTATTTTGTTCCCCATGTTTATGAAAGTCCTGCACAGTTTCAAAGGC
ATGGTAAATAATATATCAATGTTTATGTAGTCTGTTACAGAAACAGCTATAGATAACATTATCCAGTGAAGAGCA
AAATTCAAGCTTTAGAAAATATTCATGCATGCAATTTTGACATATCTAAAAATAGGTTTTTGTATATTTATGGTG
GGAGGTGGTTGGGAACTTTTAACAAAATGGGGTGTTAATTTTTGTACAGTCTGTGGGCATTTACACATTTTTAAT
GTATTAAAATTTGGTAATTATGTGTACATTAAATTAATAAAAGTTACTTCTAGTTATGATTTGTGAATTCCCTAA
GACCTTGGATTTTTTTAAGTAACTTTATATCAGAAATGATACTGCATCTTTATATTTTTAAAATTGTATTGCTGC
TCAAGAATGGTACCCTCTTGTCAAAAAGGCATACATTCATAATTGTACATTCAGCATTGTAAATAATCTTATGAA
ACCTTTTTTGATTGAAGCTATTCAAAATAAAAATTTTAATGAATGAAATAA

FIGURE 2279

MSEIEEIFSTDLVPGDVMVIPLNGTIMPCDAVLINGTCIVNESMLTGESVPVTKTNLPNPSVDVKGIGDQLYNPE
THKRHTLFCGTTVIQTRFYTGELVKAIVVRTGFSTSKGQLVRSILYPKPTDFKLYRDAYLFLLCLVAVAGIGFIY
TIINSILNEVQVGVIIIESLDIITITVPPALPAAMTAGIVYAQRRLKKIGIFCISPQRINICGQLNLVCFDKTGT
LTEDGLDLWGIQRVENARFLSPEENVCNEMLVKSQFVACMATCHSLTKIEGVLSGDPLDLKMFEAIGWILEEATE
EETALHNRIMPTVVRPPKQLLPESTPAGNQEMELFELPATYEIGIVRQFPFSSALQRMSVVARVLGDRKMDAYMK
GAPEAIAGLCKPETVPVDFQNVLEDFTKQGFRVIALAHRKLESKLTWHKVQNISRDAIENNMDFMGLIIMQNKLK
QEPPAVLEDLHKANIRTVMVTGDSMLTAVSVARDCGMILPQDKVIIAEALPPKDGKVAKINWHYADSLTQCSHPS
AIDPEAIPVKLVHDSLEDLQMTRYHFAMNGKSFSVILEHFQDLVPKLMLHGTVFARMAPDQKTQLIEALQNVDYF
VGMCGDGANDCGALKRAHGGISLSELEASVASPFTSKTPSISCVPNLIREGRAALITSSCELALFSIVTYSLDHF
IISILISSMLVLFFSDFHNCAFYSLV

FIGURE 2280

GGAGTTGAGAATTAGGGAGGAGGTGGTAGAGTCCGGGTAGTGAGCGGAGGGACAGGAAGGGTAGGGCAAGAAAGG
GAGAGGGGACAGGAGGGAAGGGTGGGCCAAAGCGGTGAGAAAGGAGGGCCAGCCAGTTGGGTGGGGGAGAGGGCC
GAGGCCCGGGGGCAGGAGTGCAGGGCTCTGAGGCGGGGAGAGGAGAGGAGAGAAGAGCCGCGGGGGGCCCAGCCC
GGAGCCAGG**ATG**CCCGCGCCGCGCGCCCGGGAGCAGCCCCGCGTGCCCGGGGAGCGCCAGCCGCTGCTGCCTCGC
GGTGCGCGGGGCCCTCGACGGTGGCGGCGGGCGGCGGGCGCGGCCGTGCTGCTGGTGGAGATGCTGGAGCGCGCC
GCCTTCTTCGGCGTCACCGCCAACCTCGTGCTGTACCTCAACAGCACCAACTTCAACTGGACCGGCGAGCAGGCG
ACGCGCGCCGCGCTGGTATTCCTGGGCGCCTCCTACCTGCTGGCGCCCGTGGGCGGCTGGCTGGCCGACGTGTAC
CTGGGCCGCTACCGCGCGGTCGCGCTCAGCCTGCTGCTCTACCTGGCCGCCTCGGGCCTGCTGCCCGCCACCGCC
TTCCCCGACGGCCGCAGCTCCTTCTGCGGAGAGATGCCCGCGTCGCCGCTGGGACCTGCCTGCCCCTCGGCCGGC
TGCCCGCGCTCCTCGCCCAGCCCCTACTGCGCGCCCGTCCTCTACGCGGGCCTGCTGCTACTCGGCCTGGCCGCC
AGCTCCGTCCGGAGCAACCTCACCTCCTTCGGTGCCGACCAGGTGATGGATCTCGGCCGCGACGCCACCCGCCGC
TTCTTCAACTGGTTTTACTGGAGCATCAACCTGGGTGCTGTGCTGTCGCTGCTGGTGGTGGCGTTTATTCAGCAG
AACATCAGCTTCCTGCTGGGCTACAGCATCCCTGTGGGCTGTGTGGGCCTGGCATTTTTCATCTTCCTCTTTGCC
ACCCCCGTCTTCATCACCAAGCCCCCGATGGGCAGCCAAGTGTCCTCTATGCTTAAGCTCGCTCTCCAAAACTGC
TGCCCCCAGCTGTGGCAACGACACTCGGCCAGAGACCGTCAATGTGCCCGCGTGCTGGCCGACGAGAGGTCTCCC
CAGCCAGGGGCTTCCCCGCAAGAGGACATCGCCAACTTCCAGGTGCTGGTGAAGATCTTGCCCGTCATGGTGACC
CTGGTGCCCTACTGGATGGTCTACTTCCAGATGCAGTCCACCTATGTCCTGCAGGGTCTTCACCTCCACATCCCA
AACATTTTCCCAGCCAACCCGGCCAACATCTCTGTGGCCCTGAGAGCCCAGGGCAGCAGCTACACGATCCCGGAA
GCCTGGCTCCTCCTGGCCAATGTTGTGGTGGTGCTGATTCTGGTCCCTCTGAAGGACCGCTTGATCGACCCTTTA
CTGCTGCGGTGCAAGCTGCTTCCCTCTGCTCTGCAGAAGATGGCGCTGGGGATGTTCTTTGGTTTTACCTCCGTC
ATTGTGGCAGGAGTCCTGGAGATGGAGCGCTTACACTACATCCACCACAACGAGACCGTGTCCCAGCAGATTGGG
GAGGTCCTGTACAACGCGGCACCACTGTCCATCTGGTGGCAGATCCCTCAGTACCTGCTCATTGGGATCAGTGAG
ATCTTTGCCAGCATCCCAGGCCTGGAGTTTGCCTACTCAGAGGCCCCGCGCTCCATGCAGGGCGCCATCATGGGC
ATCTTCTTCTGCCTGTCGGGGGTGGGCTCACTGTTGGGCTCCAGCCTAGTGGCACTGCTGTCCTTGCCCGGGGGC
TGGCTGCACTGCCCCAAGGACTTTGGGAACATCAACAATTGCCGGATGGACCTCTACTTCTTCCTGCTGGCTGGC
ATTCAGGCCGTCACGGCTCTCCTATTTGTCTGGATCGCTGGACGCTATGAGAGGGCGTCCCAGGGCCCAGCCTCC
CACAGCCGTTTCAGCAGGGACAGGGGC**TGA**ACAGGCCCTATTCCAGCCCCCTTGCTTCACTCTACCGGACAGACG
GCAGCAGTCCCAGCTCTGGTTTCCTTCTCGGTTTATTCTGTTAGAATGAAATGGTTCCCATAAATAAGGGGCATG
AGCCCTTCCTCCC

FIGURE 2281

MPAPRAREQPRVPGERQPLLPRGARGPRRWRRAAGAAVLLVEMLERAAFFGVTANLVLYLNSTNFNWTGEQATRA
ALVFLGASYLLAPVGGWLADVYLGRYRAVALSLLLYLAASGLLPATAFPDGRSSFCGEMPASPLGPACPSAGCPR
SSPSPYCAPVLYAGLLLLGLAASSVRSNLTSFGADQVMDLGRDATRRFFNWFYWSINLGAVLSLLVVAFIQQNIS
FLLGYSIPVGCVGLAFFIFLFATPVFITKPPMGSQVSSMLKLALQNCCPQLWQRHSARDRQCARVLADERSPQPG
ASPQEDIANFQVLVKILPVMVTLVPYWMVYFQMQSTYVLQGLHLHIPNIFPANPANISVALRAQGSSYTIPEAWL
LLANVVVVLILVPLKDRLIDPLLLRCKLLPSALQKMALGMFFGFTSVIVAGVLEMERLHYIHHNETVSQQIGEVL
YNAAPLSIWWQIPQYLLIGISEIFASIPGLEFAYSEAPRSMQGAIMGIFFCLSGVGSLLGSSLVALLSLPGGWLH
CPKDFGNINNCRMDLYFFLLAGIQAVTALLFVWIAGRYERASQGPASHSRFSRDRG

FIGURE 2282

AACATTCCTGCAAATGGTTTCAATATATGCAGATGTCTCGATATAGGAATGAAATTACGTCTTTGGAACAACTTA
AATAAGTCAAATATACTTGGAGCTTTAAAAATTAAAAGGAGAGAGATTCGAGCACCTTTTCTGCTGCC**ATG**ACAA
CCATGCAAGGAATGGAACAGGCCATGCCAGGGGCTGGCCCTGGTGTGCCCCAGCTGGGAAACATGGCTGTCATAC
ATTCACATCTGTGGAAAGGATTGCAAGAGAAGTTCTTGAAGGGAGAACCCAAAGTCCTTGGGGTTGTGCAGATTC
TGACTGCCCTGATGAGCCTTAGCATGGGAATAACAATGATGTGTATGGCATCTAATACTTATGGAAGTAACCCTA
TTTCCGTGTATATCGGGTACACAATTTGGGGGTCAGTAATGTTTATTATTTCAGGATCCTTGTCAATTGCAGCAG
GAATTAGAACTACAAAAGGCCTGGTCCGAGGTAGTCTAGGAATGAATATCACCAGCTCTGTACTGGCTGCATCAG
GGATCTTAATCAACACATTTAGCTTGGCGTTTTATTCATTCCATCACCCTTACTGTAACTACTATGGCAACTCAA
ATAATTGTCATGGGACTATGTCCATCTTAATGGGTCTGGATGGCATGGTGCTCCTCTTAAGTGTGCTGGAATTCT
GCATTGCTGTGTCCCTCTCTGCCTTTGGATGTAAAGTGCTCTGTTGTACCCCTGGTGGGGTTGTGTTAATTCTGC
CATCACATTCTCACATGGCAGAAACAGCATCTCCCACACCACTTAATGAGGTT**TGA**GGCCACCAAAAGATCAACA
GACAAATGCTCCAGAAATCTATGCTGACTGTGACACAAGAGCCTCACATGAGAAATTACCAGTATCCAACTTCGA
TACTGATAGACTTGTTGATATTATTATTATATGTAATCCAATTATGAACTGTGTGTGTATAGAGAGATAATAAAT
TCAAAATTATGTTCTCATTTTTTTCCCTGGAACTCAATAACTCATTTCACTGGCTCTTTATCGAGAGTACTAGAA
GTTAAATTAATAAATAATGCATTTAATGAGGCAACAGCACTTGAAAGTTTTTCATTCATCATAAGAACTTTATAT
AAAGGCATTACATTGGCAAATAAGGTTTGGAAGCAGAAGAGCAAAAAAAAAGATATTGTTAAAATGAGGCCTCCAT
GCAAAACACATACTTCCCTCCCATTTATTTAACTTTTTTTTTCTCCTACCTATGGGGACCAAAGTGCTTTTTCCT
TCAGGAAGTGGAGATGCATGGCCATCTCCCCCTCCCTTTTTCCTTCTCCTGCTTTTCTTTCCCCATAGAAAGTAC
CTTGAAGTAGCACAGTCCGTCCTTGCATGTGCACGAGCTATCATTTGAGTAAAAGTATACATGGAGTAAAAATCA
TATTAAGCATCAGATTCAACTTATATTTTCTATTTCATCTTCTTCCTTTCCCTTCTCCCACCTTCTACTGGGCAT
AATTATATCTTAATCATATATGGAAATGTGCAACATATGGTATTTGTTAAATACGTTTGTTTTTATTGCAGAGCA
AAAATAAATCAAATTAGAAGCAATAAAAAAAAAAAAAAAAAAA

FIGURE 2283

MTTMQGMEQAMPGAGPGVPQLGNMAVIHSHLWKGLQEKFLKGEPKVLGVVQILTALMSLSMGITMMCMASNTYGS
NPISVYIGYTIWGSVMFIISGSLSIAAGIRTTKGLVRGSLGMNITSSVLAASGILINTFSLAFYSFHHPYCNYYG
NSNNCHGTMSILMGLDGMVLLLSVLEFCIAVSLSAFGCKVLCCTPGGVVLILPSHSHMAETASPTPLNEV

FIGURE 2284

GTGCTCTGCACCCAGCTCCTTCCCGGGCGCGCACACGCGCTTCCTCTCTTGAGCTCCCGGGCGTCCGGAGGCGAA
GGTCCCGGAGCGTTCACGAGAATCCGGGTCCCGGCGAGTCCGGGGTCCGCTCCTCCAGCTGCGCCCAGGGCGCAC
GAGCCGGCCAGCCTCGGGGAGAGGGCGCGGGGGCGCTGGGGGTTCTTACGGGAAG**ATG**AGGAAGCCCGACAGCAA
GATCGTGCTCCTGGGGGACATGAACGTGGGGAAGACGTCGCTGCTGCAGCGGTATATGGAGCGGCGCTTCCCGGA
CACGGTCAGCACGGTGGGCGGCGCCTTCTACCTGAAGCAGTGGCGCTCCTACAACATCTCCATCTGGGACACCGC
AGGGCGGGAGCAGTTCCACGGCCTGGGATCCATGTACTGCCGGGGGGCGGCCGCCATCATCCTCACCTATGATGT
GAATCACCGGCAGAGCCTGGTGGAGCTGGAGGACCGGTTCCTGGGCCTGACAGACACAGCCAGCAAAGACTGCCT
CTTCGCCATCGTGGGGAACAAAGTGGACCTCACTGAGGAGGGGGCCTTGGCGGGCCAGGAGAAGGAAGAGTGCAG
TCCCAATATGGACGCTGGGGACCGTGTCTCCCCAAGGGCACCTAAGCAGGTGCAGCTGGAGGATGCGGTGGCCCT
TTATAAAAAGATCCTCAAGTACAAGATGCTGGATGAGCAGGATGTGCCGGCCGCTGAGCAAATGTGCTTTGAGAC
CAGCGCCAAGACCGGCTACAATGTGGACCTCCTGTTTGAGACCCTCTTTGACCTGGTGGTGCCAATGATCTTACA
GCAGAGAGCTGAGAGGCCGTCACACACAGTGGATATATCCAGTCATAAGCCACCCAAGAGGACCAGATCTGGGTG
TTGTGCC**TGA**CTTTCGAGGGCCTCCTGGACTCAGACTGTGCATGTTGGGAAGGGGTCTGACCAGGCAAGCTGTGA
TCTGAAAGGAGCAAGGAACAGCAAGGAATTATTTTCCAGAATGACACCCGCAGCAGAATGTTGGAGTGGAAATGA
TGGCTGGCTATGAAGAGGAGGTCAACGTGTGTGGTCTCCTCAGTCTCTGTCAGAGGGGTGGGGAGGTGGGAAACA
GGAATCCTCTGCAAAGCCCAATCTGCAGAGTCGAGACCCCTGGTGCTCTCTGCCCCGCTGCCTGGCACTGGTCCT
TTGCAGCCAGCCACCAACGGCCCCCTTGCCCTTGCAGAGGCAGAAGCCTGCGTCTGCACCTGCACCTCTGACCGT
TTCAGCACCCTGGGTTGTTACCACGTCCTACAACTCTGACATTTCTTGTTCTCAAGCGTTTCTCTTCACTGTGAG
TTGTCTTTGGTCCTCCCACTTGGTACTTGTATCTTGATGCTTTATAATCCTGACTCTCGACGTGTTCATTTATAC
AAAATCAGGAATAACTTTGTTTTTATACTGATTGCAGCAATGTTGGCTACATGTATTATTAAAGAGGATTTTTGG
AACAACTTAAAAAAAAAAAAAAAAAAAAA

FIGURE 2285

MRKPDSKIVLLGDMNVGKTSLLQRYMERRFPDTVSTVGGAFYLKQWRSYNISIWDTAGREQFHGLGSMYCRGAAA
IILTYDVNHRQSLVELEDRFLGLTDTASKDCLFAIVGNKVDLTEEGALAGQEKEECSPNMDAGDRVSPRAPKQVQ
LEDAVALYKKILKYKMLDEQDVPAAEQMCFETSAKTGYNVDLLFETLFDLVVPMILQQRAERPSHTVDISSHKPP
KRTRSGCCA

FIGURE 2286

TTTAGTTTAAAAAGAAAAAATGCAGGGTGATTTCTTATTATTATATGTTAGCCTGCATGGTTAAATTCGACAACT
TGTAACTCTATGAACTTAGAGTTTACTATTTTAGCAGCTAAAAATGCATCACATATTCATATTGTTCAATAATGT
CCTTTCATTTGTTTCTGATTGTTTTCATCCTGATACTGTAGTTCACTGTAGAAATGTGGCTGCTGAAACTCATTT
GATTGTCATTTTTATCTATCCTATGTTAAATGGTTTGTTTTTACAAAATAATACCTTATTTTAATTGAAACGTTT
ATGCTTTTGCCAACACATCTTGTAACTTAATATACTAGATGTTAAGGTTGTTAATGTACAAAAAAAAAACCCTTA
TACTCACCTGCGTTTTCATTTGTTTGACATTTGTCTATTATTGGATTTCATTATCATATGAACTTGTCAGTGGGA
AACAAACTGTCTAAAAATTTTTCTCTTACGTTTAACATACAATCATGTGAAATTTAGGCAGAGTTCGATAAATTA
CTGGCAAAAACAAAACTCTTTTATAAAGATTTTCTAATGTTGACTTTAATACTCTAACATGGTACAAACCAAATG
GTAAAATCCCAAGTCATTTCTTTTTTCATCTCTATTCAGCAACAGAATTAAGTGG**ATG**AAGATATTCTACTGTGC
ATTAAATCTTGAACTTTATAAAACATGTACAAAAATTGTACAAGATAAGTTCCACCTGGTAATGTCTTTCCCTAA
TACAGGGTTGCGCTTGCATTGGACCCTAGGGATTTGCACTAAAATTATATCAAGGTCTCAGATGAGCTTAGTGCA
CAAGCACTATCACTTTAAATACTATTATTTGCTACCACAGCAACTATATATTTCCATAGCTTTTGGCTGGGGGCG
GGGGACATTTTTATTACAACTTGAAATTGCTTTGCTGGTTTCATATTTATTTGTTGTATTTAAAAAATACATTGT
TGTAAGAGTGATTTTTTCAATATATTTTATTCCTGGGGGGGGATCATGCTACACTCTCAAAAGAAAAT**TAA**GAAAT
CATTCAGATCATCCCCCCTTTTTAAGTAGTGTGAATTGCAAAACCCAACATATTTTTTTTTACTGTCAGTTGCGG
TTTATTTATTCTTTAACTGTCTGTTTTAGTAGTTTAATGATTATGAAAAATGTATCTGTGTGTGATTTGCTATTT
ATTAAATTTTAAGTACTTTGCTGAATGTCATTTTAAAGCATGTTTGAAGTCTTGTGTATTTGTCTGTGTTAATGC
TGTCAGGAGGAACTGACTAAGATGTTTTAATATGTATCAAAAATTAAAATGATTTTTTTT

FIGURE 2287

MKIFYCALNLELYKTCTKIVQDKFHLVMSFPNTGLRLHWTLGICTKIISRSQMSLVHKHYHFKYYYLLPQQLYIS
IAFGWGRGTFLLQLEIALLVSYLFVVFKKYIVVRVIFSIYFIPGGDHATLSKEN

FIGURE 2288

GGGGAGCCTTTGGAGAGAAGGGAGAGGGCCCGTCGGACAGCCACAGCGGCCAGCGCAGCGGCAGCGGCGGCGGCA
CCACCATCACCGCTCGCACCCCAGCCGCCCGGCCCGCGACCAGGCAGCGGCGGCCGCCGGCGGGATCGGAGGAGG
CGGCGAAGCGACTCCGATCCTCCCTCTGAGCCTTGCTCAGCTCTGCCCCGCGCCTCCCGGGCTCCGGTCCGCGCG
GCGGGGTCCCTGCTCCTGCGCCCCGGGCGCGCTTCCCGGACACCCCGGTCCCCGCAGCCAGGACAAAGCC**ATG**AA
GCCAGCGCTGCTGGAAGTGATGAGGATGAACAGAATCTGCCGGATGGTGCTGGCCACTTGCTTGGGATCCTTTAT
CCTGGTCATCTTCTATTTCCAAAGTATGTTGCACCCAGTCATGCGGAGGAATCCCTTTGGTGTGGACATCTGCTG
CCGGAAGGGGTCCCGAAGCCCCCTGCAGGAACTCTACAACCCAATCCAGCTGGAGCTCTCAAACACTGCTGTCCT
GCACCAGATGCGGCGGGACCAGGTGACAGACACGTGCCGAGCCAACAGCGCCACAAGCCGTAAGCGGAGGGTGCT
GACCCCCAACGACCTGAAGCACTTGGTGGTGGATGAGGACCACGAGCTCATCTACTGCTACGTGCCCAAGGTGGC
CTGCACCAACTGGAAGCGGCTCATGATGGTCCTGACCGGGCGGGGGAAGTACAGCGACCCCATGGAGATCCCGGC
CAACGAGGCACACGTCTCCGCCAACCTGAAGACCCTGAACCAGTACAGCATCCCAGAAATCAACCACCGCTTGAA
AAGCTACATGAAGTTCCTGTTTGTCCGGGAGCCCTTCGAGAGGCTAGTGTCCGCCTACCGCAACAAGTTCACCCA
GAAGTACAACATCTCCTTCCACAAGCGGTACGGCACCAAGATCATCAAACGCCAGCGGAAGAACGCCACCCAGGA
GGCCCTGCGCAAAGGGGACGATGTCAAATTCGAGGAGTTTGTGGCCTATCTCATCGACCCACACACCCAGCGGGA
GGAGCCTTTCAACGAACACTGGCAAACCGTCTACTCACTCTGCCATCCCTGCCACATCCACTATGACCTCGTGGG
CAAGTACGAGACACTGGAAGAGGATTCTAATTACGTCCTGCAGCTGGCAGGAGTGGGCAGCTACCTGAAGTTCCC
CACCTATGCAAAGTCTACGAGAACTACTGATGAAATGACCACAGAATTCTTCCAGAACATCAGCTCAGAGCACCA
AACGCAGCTGTACGAAGTCTACAAACTCGATTTTTTAATGTTCAATTACTCAGTGCCAAGCTACCTGAAATTGGA
A**TAA**AGGGGGTGGGGAGAGGGAGAGAATCATGCTTTTTAATTTAAGATTTTTATTTGTCAAAAGAATTATATGGA
TATTGGGTTATTTTGTAAATTAATATTTCTTTGGGGATGATGCTGCGAGCAGCATAGTGAGAATTATTTAAAATC
CTTCGTAGGGAAGGACAGCTGTCTTTGCAGGGGAAATAGGATGGGTCGTTCTTGTCTGTAGAAGTGAATACTGCA
ACACTGTCTCAAAGGTTTCTTGTGTTCTGGTGAATTCCATGAATTGTGCATTCCATAAATTCTAATTAATATTAT
TTATAGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2289

MKPALLEVMRMNRICRMVLATCLGSFILVIFYFQSMLHPVMRRNPFGVDICCRKGSRSPLQELYNPIQLELSNTA
VLHQMRRDQVTDTCRANSATSRKRRVLTPNDLKHLVVDEDHELIYCYVPKVACTNWKRLMMVLTGRGKYSDPMEI
PANEAHVSANLKTLNQYSIPEINHRLKSYMKFLFVREPFERLVSAYRNKFTQKYNISFHKRYGTKIIKRQRKNAT
QEALRKGDDVKFEEFVAYLIDPHTQREEPFNEHWQTVYSLCHPCHIHYDLVGKYETLEEDSNYVLQLAGVGSYLK
FPTYAKSTRTTDEMTTEFFQNISSEHQTQLYEVYKLDFLMFNYSVPSYLKLE

FIGURE 2290

TTTGCGCTCGGGGAATTAAAAGAGGGGAAAAAAAGCCCGAAGAAAACTCACGCCCCAAACAAAACGCAAGGAGAG
GAGGGCGCGCGGCCTGCAGCCCTCGCCCGCGTCCCCGGCCGCGGCGTGATGCGCGCGGACCAGCCCGCGACGCCC
GGGCTGCCGCTGTCCCCGCACCTGGACGCTGGCGCGGTGGCCGCGCCCCAGCCTCGATCGCTCGCCGCGGCGACT
CGGCCCCAGGCTTCCGGCGCCGGTGGGGGCCCTCGCTCTCC**ATG**GGGCTGAGGGACTGGCTGAGAACCGTGTGCT
GCTGCTGCCGGTGCGAGTGCTTGGAGGAGCGCGCCCTGCCTGAGAAGGAGCCCCTCGTCAGTGATAACAATCCAT
ATTCCTCATTTGGAGCAACTCTGGTGAGGGATGATGAGAAGAATTTATGGAGTATGCCCCATGATGTGTCCCACA
CAGAGGCAGACGACGACAGAACCCTGTACAATTTGATAGTCATTCGTAATCAGCAGGCCAAAGACTCAGAGGAGT
GGCAGAAGCTCAACTATGATATCCATACCCTGCGGCAGGTTCGAAGGGAAGTAAGAAACAGATGGAAGTGCATCT
TAGAAGATTTAGGTTTTCAAAAGGAAGCTGACTCTTTGTTGTCAGTGACTAAACTCAGCACCATCAGTGATTCTA
AAAACACAAGGAAAGCTCGAGAGATGTTGTTAAAACTGGCTGAAGAAACCAGTATTTTCCCAACAAGTTGGGAGC
TCTCAGAGAGATATCTCTTTGTTGTGGACCGTCTCATTGCACTTGATGCTGCAGAAGAGTTCTTTAAGCTTGCTC
GTCGAACTTACCCCAAGAAGCCTGGGGTTCCATGCCTGGCAGATGGCCAGAAAGAACTGCACCTGTGGGGGGACC
TCTCATGCAGACTTGCACATATGCAGGGAGTATTGCAC**TGA**AGATCTTTGCTGGACCTTCTTCTCTTCAGAAGAT
AATTTTCAAAAGGGAGCAATGCTGTGAATGCAGCTTGCTTCTCTCTACAGATTGAGAAGTCCAGCTTCAAAAGTT
ACTTGCCACTTAAGCAAGGAACTTGTCAAGAGATCATGGTTCATGTTACTGAAAAGACTTTAAGGATTTGTAAGG
TTAATCCATAGATTGCTGAGAACAATGGAAATATTTTTATTTTTACAGATTTTGCACTTCTGAATTCAGGTTAAA
AACTAACTTGTATTTAGTCTGCTTAGAGGACTGTGACTTGAAAATTTTTATATACCAATGAGCTTTTTGGTAGCG
TCCACAATGTTTAAAATATTTCATAGGCGAGATCCGTGTTCTCCATTTATTAATGCATTGTAGACCAATTTAACT
GCTGTGTTTCAGGAAAATTCTTCCTAGTTTAATAAGCAAGCTAAAAGTTTTATTTTTTATATTTAGTGCTTAATC
TTTGCCTCATGTTATGTAAAATTAGCCTGCAGATATTTTCTCTCAATTCTGTAGACTCTCGCAAGATAAACATTC
AAACAGTGAAACAAACAATAAAATAAATAAACCT

FIGURE 2291

MGLRDWLRTVCCCCRCECLEERALPEKEPLVSDNNPYSSFGATLVRDDEKNLWSMPHDVSHTEADDDRTLYNLIV
IRNQQAKDSEEWQKLNYDIHTLRQVRREVRNRWKCILEDLGFQKEADSLLSVTKLSTISDSKNTRKAREMLLKLA
EETSIFPTSWELSERYLFVVDRLIALDAAEEFFKLARRTYPKKPGVPCLADGQKELHLWGDLSCRLAHMQGVLH

FIGURE 2292

GAGAGCTGGCTGCGCCGAGCCCCCTGCGCGCTGCAC**ATG**GGGCGCCTGACGGAAGCGGCGGCAGCGGGCAGCGGC
TCTCGGGCTGCAGGCTGGGCAGGGTCCCCTCCCACGCTCCTGCCGCTGTCTCCCACGTCCCCCAGGTGCGCGGCC
ACCATGGCGTCCAGCGACGAGGACGGCACCAACGGCGGCGCCTCGGAGGCCGGCGAGGACCGGGAGGCTCCCGGC
AAGCGGAGGCGCCTGGGGTTCTTGGCCACCGCCTGGCTCACCTTCTACGACATCGCCATGACCGCGGGGTGGTTG
GTTCTAGCTATTGCCATGGTACGTTTTTATATGGAAAAAGGAACACACAGAGGTTTATATAAAAGTATTCAGAAG
ACACTTAAATTTTTCCAGACATTTGCCTTGCTTGAGATAGTTCACTGTTTAATTGGAATTGTACCTACTTCTGTG
ATTGTGACTGGGGTCCAAGTGAGTTCAAGAATCTTTATGGTGTGGCTCATTACTCACAGTATAAAACCAATCCAG
AATGAAGAGAGTGTGGTGCTTTTTCTGGTCGCGTGGACTGTGACAGAGATCACTCGCTATTCCTTCTACACATTC
AGCCTTCTTGACCACTTGCCATACTTCATTAAATGGGCCAGATATAATTTTTTTATCATCTTATATCCTGTTGGA
GTTGCTGGTGAACTTCTTACAATATACGCTGCCTTGCCGCATGTGAAGAAAACAGGAATGTTTTCAATAAGACTT
CCTAACAAATACAATGTCTCTTTTGACTACTATTATTTTCTTCTTATAACCATGGCATCATATATACCTTTGTTT
CCACAACTCTATTTTCATATGTTACGTCAAAGAAGAAAGGTGCTTCATGGAGAGGTGATTGTAGAAAAGGATGAT
TAAATGATCTCTGCAAACAAGGTGCTTTTTCCAGAATAACCAAGATTACCTGAGTCCAAGTTTTAATAACAAGAA
TAAACAACTTTGTGAAATATCAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2293

MGRLTEAAAAGSGSRAAGWAGSPPTLLPLSPTSPRCAATMASSDEDGTNGGASEAGEDREAPGKRRRLGFLATAW
LTFYDIAMTAGWLVLAIAMVRFYMEKGTHRGLYKSIQKTLKFFQTFALLEIVHCLIGIVPTSVIVTGVQVSSRIF
MVWLITHSIKPIQNEESVVLFLVAWTVTEITRYSFYTFSLLDHLPYFIKWARYNFFIILYPVGVAGELLTIYAAL
PHVKKTGMFSIRLPNKYNVSFDYYYFLLITMASYIPLFPQLYFHMLRQRRKVLHGEVIVEKDD

FIGURE 2294

AGAAACCGTTGATGGGACTGAGAAACCAGAGTTAAAACCTCTTTGGAGCTTCTGAGGACTCAGCTGGAACCAACG
GGCACAGTTGGCAACACCATC**ATG**ACATCACAACCTGTTCCCAATGAGACCATCATAGTGCTCCCATCAAATGTC
ATCAACTTCTCCCAAGCAGAGAAACCCGAACCCACCAACCAGGGGCAGGATAGCCTGAAGAAACATCTACACGCA
GAAATCAAAGTTATTGGGACTATCCAGATCTTGTGTGGCATGATGGTATTGAGCTTGGGGATCATTTTGGCATCT
GCTTCCTTCTCTCCAAATTTTACCCAAGTGACTTCTACACTGTTGAACTCTGCTTACCCATTCATAGGACCCTTT
TTTTTTATCATCTCTGGCTCTCTATCAATCGCCACAGAGAAAAGGTTGACCAAGCTTTTGGTGCATAGCAGCCTG
GTTGGAAGCATTCTGAGTGCTCTGTCTGCCCTGGTGGGTTTCATTATCCTGTCTGTCAAACAGGCCACCTTAAAT
CCTGCCTCACTGCAGTGTGAGTTGGACAAAAATAATATACCAACAAGAAGTTATGTTTCTTACTTTTATCATGAT
TCACTTTATACCACGGACTGCTATACAGCCAAAGCCAGTCTGGCTGGATCTCTCTCTCTGATGCTGATTTGCACT
CTGCTGGAATTCTGCCTAGCTGTGCTCACTGCTGTGCTGCGGTGGAAACAGGCTTACTCTGACTTCCCTGGGGTG
AGTGTGCTGGCCGGCTTCACT**TAA**CCTTGCCTAGTGTATCTTATCCCTGCACTGTGTTGAGTATGTCACCAAGAG
TGGTAGAAGGAACAACCAGCCAATCACGAGATCACATGGGAGGGCATTTGCATTGTGATGGAAGACAGAGAAGAA
AAGCAGATGGCAATTGAGTAGCTGATAAGCTGAAAATTCACTGGATATGAAAATAGTTAATCATGAGAAATCAAC
TGATTCAATCTTCCTATTTTGTCAGCGAAGGGAATGAGACTCTGGGAAGTTAAATGACTGGCCTGGCATTATGCT
ATGAGTTTGTGCCTTTGCTGAGGACACTAGAACCTGGCTTGCCTCCCTTATAAGCAGAAACAATTTCTGCCACAA
CCACTAGTCTCTTTAATAGTATTGACTTGGTAAAGGGCATTTACACACGTAACTGGATCCAGTGAATGTCTTATG
CTCTGCATTTGCCCCTGGTGATCTTAAAATTCGTTTGCCTTTTTAAAGCTATATTAAAAATGTATTGTTGAATCA
AAAAAAAAAAAAAA

FIGURE 2295

MTSQPVPNETIIVLPSNVINFSQAEKPEPTNQGQDSLKKHLHAEIKVIGTIQILCGMMVLSLGIILASASFSPNF
TQVTSTLLNSAYPFIGPFFFIISGSLSIATEKRLTKLLVHSSLVGSILSALSALVGFIILSVKQATLNPASLQCE
LDKNNIPTRSYVSYFYHDSLYTTDCYTAKASLAGSLSLMLICTLLEFCLAVLTAVLRWKQAYSDFPGVSVLAGFT

FIGURE 2296

GCTTCCCGGAAGTGGCGGCGCGGTCAGGGCTGGCCTTGGCTTCAGCTGCGGTTTTGGGGTCCCGGACTCTGGGAT
CGGCGGCGCTATGAGTTCTTTCGAGGGGCAGATGGCCGAGTATCCAACTATCTCCATAGACCGCTTCGATAGGGA
GAACCTGAGGGCCCGCGCCTACTTCCTGTCCCACTGCCACAAAGATCACATGAAAGGATTAAGAGCCCCTACCTT
GAAAAGAAGGTTGGAGTGCAGCTTGAAGGTTTATCTATACTGTTCACCTGTGACTAAGGAGTTGTTGTTAACGAG
CCCGAAATACAGATTTTGGAAGAAACGAATTATATCTATTGAAATCGAGACTCCTACCCAGATATCTTTAGTGG**A**
TGAAGCATCAGGAGAGGTTTTTATTTCAGGGCAATAATGGAACTGTCCTGTACACAGGAGACTTCAGATTGGCGC
AAGGAGAAGCTGCTAGAATGGAGCTTCTGCACTCCGGGGGCAGAGTCAAAGACATCCAAAGTGTATATTTGGATA
CTACGTTCTGTGATCGAAGATTTTACCAAATTCCAAGTCGGGAGGAGTGTTTAAGTGGAGTCTTAGAGCTGGTCC
GAAGCTGGATCACTCGGAGCCCGTACCATGTTGTGTGGCTGAACTGCAAAGCGGCTTATGGCTATGAATATCTGT
TCACCAACCTTAGTGAAGAATTAGGGGTCCAGGTTCATGTGAATAAGCTAGACATGTTTAGGAACATGCCTGAGA
TCCTTCATCATCTCACAACAGACCGCAACACTCAGATCCATGCATGCCGGCATCCCAAGGCAGAGGAATATTTTC
AGTGGAGCAAATTACCCTGTGGAATTACTTCCAGAAATAGAATTCCACTCCACATAATCAGCATTAAGCCATCCA
CCATGTGGTTTGGAGAAAGGAGCAGAAAAACAAATGTAATTGTGAGGACTGGAGAGAGTTCATACAGAGCTTGTT
TTTCTTTTCACTCCTCCTACAGTGAGATTAAAGATTTCTTGAGCTACCTCTGTCCTGTGAACGCATATCCAAATG
TCATTCCAGTTGGCACAACTATGGATAAAGTTGTCGAAATCTTAAAGCCTTTATGCCGGTCTTCCCAAAGTACGG
AGCCAAAGTATAAACCACTGGGAAAACTGAAGAGAGCTAGAACAGTTCACCGAGACTCAGAGGAGGAAGATGACT
ATCTCTTTGATGATCCTCTGCCAATACCTTTAAGGCACAAAGTTCCATACCCGGAAACTTTTCACCCTGAGGTAT
TTTCAATGACTGCAGTATCAGAAAAGCAGCCTGAAAAACTGAGACAAACCCCAGGATGCTGCAGAGCAGAGTGTA
TGCAGAGCTCTCGTTTCACAAACTTTGTAGATTGTGAAGAATCCAACAGTGAAAGTGAAGAAGAAGTAGGAATCC
CAGCTTCACTGCAAGGAGATCTGGGCTCTGTACTTCACCTGCAAAAGGCTGATGGGGATGTACCCCAGTGGGAAG
TATTCTTTAAAAGAAATGATGAAATCACAGATGAGAGTTTGGAAAACTTCCCTTCCTCCACAGTGGCAGGGGGAT
CTCAGTCACCAAAGCTTTTCAGTGACTCTGATGGAGAATCAACTCACATCTCCTCCCAGAATTCTTCCCAGTCAA
CACACATAACAGAACAAGGAAGTCAAGGCTGGGACAGCCAATCTGATACTGTTTTGTTATCTTCCCAAGAGAGAA
ACAGTGGGGATATTACTTCCTTGGACAAAGCTGACTACAGACCAACAATCAAAGAGAATATTCCTGCCTCTCTCA
TGGAACAAAATGTAATTTGCCCAAAGGATACTTACTCTGATTTGAAAAGCAGAGATAAAGATGTGACAATAGTTC
CTAGTACTGGAGAACCAACTACTCTAAGCAGTGAGACACATATACCCGAGGAAAAAAGTTTGCTAAATCTTAGCA
CAAATGCAGATTCCCAGAGCTCTTCTGATTTTGAAGTTCCCTCAACTCCAGAAGCTGAGTTACCTAAACGAGAGC
ATTTACAATATTTATATGAGAAGCTGGCAACTGGTGAGAGTATAGCAGTCAAAAAAAGAAAATGCTCACTCTTAG
ATACC**TAA**GAATTCAAAGCGTTTCAACCTAGAGCAACCACTAAAAAACCTGCACAGAGATGACAGTCAATATTAC
AATAGAGAAAATACAGTACTTAAAAATGTTCAAATAACCTGGTTGGGTGTGGTGGCTCACACTTGTAATCCCAGC
ACTTTGAGGTGGGCAATGGCTTGAGCCCAGGAGTTCGACACCAGCCTGGCCAACACAGTGAAATGTGTCTCTACT
TACAAAAAAAAAAAAAAAAAAAAAAGCCAGGCATGGTGGTGGGCTACTCTGGAGGCCCTTGAGGACCACTTGAGCC
CAGGAGATTGAGGCTGCAGTGAGCCATGACTGTGCCACTGCACCTCTAGTCTGGGTGACAGAGCAAGACCCTGTT
TAAAAAAGAAAAAGGCCAGGCACGGTGGCTCATGCCTGTAATCCCAGCTACGCAGGAGGCCAAGGCAGGAGAATC
ACTTGAACCTGGGAGGTGGTGGTTGCAGTGAGCTGAGATTGTGTCATTGCACTCCAGCCTGGGCAACAAGAGCAA
AACTCTGTCTC

FIGURE 2297

MKHQERFLFQGNNGTVLYTGDFRLAQGEAARMELLHSGGRVKDIQSVYLDTTFCDRRFYQIPSREECLSGVLELV
RSWITRSPYHVVWLNCKAAYGYEYLFTNLSEELGVQVHVNKLDMFRNMPEILHHLTTDRNTQIHACRHPKAEEYF
QWSKLPCGITSRNRIPLHIISIKPSTMWFGERSRKTNVIVRTGESSYRACFSFHSSYSEIKDFLSYLCPVNAYPN
VIPVGTTMDKVVEILKPLCRSSQSTEPKYKPLGKLKRARTVHRDSEEEDDYLFDDPLPIPLRHKVPYPETFHPEV
FSMTAVSEKQPEKLRQTPGCCRAECMQSSRFTNFVDCEESNSESEEEVGIPASLQGDLGSVLHLQKADGDVPQWE
VFFKRNDEITDESLENFPSSTVAGGSQSPKLFSDSDGESTHISSQNSSQSTHITEQGSQGWDSQSDTVLLSSQER
NSGDITSLDKADYRPTIKENIPASLMEQNVICPKDTYSDLKSRDKDVTIVPSTGEPTTLSSETHIPEEKSLLNLS
TNADSQSSSDFEVPSTPEAELPKREHLQYLYEKLATGESIAVKKRKCSLLDT

FIGURE 2298

AAAATTTGAAGACAAG**ATG**GGCACCTACTCTACAATTCTGATAAAAACAGAGGTCATCGAATGTGGGAACTACTG
TGGAGTACGCATCATTCACTCTTTGATTGCAGAGTTCTCACTGGAAGAATTGAAGAAAAGCTATCACCTGAATAA
AAGTCAAATTATGTTGGATATGCTAACTGAGAATTTGTTCTTCGATACTGGTATGGGAAAAAGTAAATTTTTGCA
AGATATGCACACACTCCTACTCACAAGACACCGCGATGAACATGAAGGTGAAACAGGAAATTGGTTTTCCCCATT
TATTGAAGCATTACATAAAGATGAAGGAAATGAAGCAGTTGAAGCTGTATTGCTTGAAAGTATCCATCGGTTCAA
CCCAAATGCATTCATTTGCCAAGCGTTGGCAAGACATTTCTACATTAAAAAGAAGGACTTTGGCAATGCTCTAAA
CTGGGCAAAACAAGCAAAAATCATAGAACCTGACAATTCTTATATCTCAGATACACTGGGTCAAGTCTACAAAAG
TAAAATAAGATGGTGGATAGAGGAAAACGGAGGAAACGGGAACATTTCAGTTGATGATCTAATTGCTCTTTTGGA
TTTAGCAGAACATGCCTCAAGTGCATTCAAAGAATCTCAACAGCAAAGTGAAGATAGAGAGTATGAAGTGAAGGA
AAGATTGTATCCGAAGTCAAAAAGGCGGTATGATACTTACAATATAGCTGGTTATCAAGGAGAGATAGAAGTTGG
GCTTTACACAATCCAAATTCTCCAGCTCATTCCTTTTTTTGATAATAAAAATGAGCTATCTAAAAGATATATGGT
CAATTTTGTATCAGGAAGTAGTGATATTCCAGGGGATCCAAACAATGAATATAAATTAGCCCTCAAAAACTATAT
TCCTTATTTAACTAAATTGAAATTTTCTTTGAAAAAGTCCTTTGATTTTTTTGATGAATACTTTGTCCTGCTAAA
ACCCAGGAACAATATTAAGCAAAATGAAGAGGCCAAAACTCGGAGAAAGGTGGCTGGATATTTTAAGAAATATGT
AGATATATTTTGTCTCTTAGAAGAATCACAAAACAACACAGGTCTTGGATCAAAGTTCAGTGAGCCACTTCAAGT
AGAGAGATGCAGGAGAAACCTAGTAGCTTTAAAAGCAGACAAGTTTTCTGGGCTCTTGGAATATCTTATCAAAAG
TCAAGAGGATGCTATAAGCACTATGAAATGTATAGTGAACGAATATACTTTTCTCTTAGAACAATGCACTGTCAA
AATCCAGTCAAAAGAAAAGCTAAATTTCATCTTGGCCAACATTATTCTCTCCTGTATCCAACCTACCTCCAGATT
AGTAAAGCCAGTTGAAAAACTAAAAGATCAGCTTCGAGAAGTCTTGCAACCAATAGGACTGACTTATCAGTTTTC
AGAACCGTATTTTCTAGCTTCCCTCTTATTCTGGCCAGAAAATCAACAACTAGATCAACATTCTGAACAAATGAA
AGAGTATGCTCAAGCACTAAAAAATTCTTTCAAGGGGCAATATAAACATATGCATCGTACAAAGCAACCAATTGC
ATATTTCTTTCTTGGAAAAGGTAAAAGACTGGAAAGACTTGTTCACAAAGGAAAAATTGACCAGTGCTTTAAGAA
GACACCAGATATTAATTCCTTGTGGCAGAGTGGAGATGTGTGGAAGGAGGAAAAAGTCCAAGAACTTTTGCTTCG
TTTACAAGGTCGAGCTGAAAACAATTGTTTATATATAGAATATGGAATCAATGAAAAAATCACAATACCCATCAC
TCCCGCTTTTTTAGGTCAACTTAGAAGTGGCAGAAGCATAGAGAAGGTGTCTTTTTACCTGGGATTTCCCATTGG
AGGCCCACTTGCTTATGACATTGAAATTGTT**TAA**GAGCCTGATATTCTTCCTCCAAGAATTTGATCTCAGTACCC
ATTTAATTTTTTTGGACTCAAGATCTATGCTTTAAACCGGCAAGGTTATAGATACAGCCTCTAGCTCTTCAGATC
TGTACATGCAGTATTTAATTTCCTCTTAAACATGTTATGAGTTCTACAAGGACAATAGTGAAAAAGGAAGGAGTG
AGATATATGAAAAGTAGCAAATATGTTCCTTGGTTTGGTTAACATCATTGATGACAAAATAATAAGGAGCTATGA
CTGGAGTCAGGAGAAGTTAGTGTAATAAGCTGGCTACACAGAACCCCACTACTTACCAGGCATGGATTGAAGAAG
ATTGTCTACTCAAATGGCATTTAGACATTAGAATGTCTGGGAAAATATTTCTCAAAGACAGCAAAAACCTCTCAA
ACTGAGGAGCAACATTTATTCTTACTAAGCAGATCATCAATGTATCATGTGCTTGGCACTCAAGGATCTTCCAAA
ACAGAGGACCAACCAGTCTTCTGAAGGTCATGCCCACAGAAGTCATCGGACCTTACCAAAGTAGGTTGGAGAATT
AGATTGCCTTTTCATGCAGTGAGATTCAGTTAAGCAAAAATGAAATTTGTCTCTATAGCTAATTAGCTTATCAAC
TCCCCTCCAAACAAACAATTAAAAAAAAAACATACAGACACTCAAATTCCACAAGCTAATGAACAAAAGGGACTC
TTGTGAGAAGACTAATGAGTCCCTCATCCAGAAGATGCCAATGTACTGGCAGATTAACATACAACCTATGTTTTG
AACAAAAACAACCAGCGATACGTAATCAAAATGTAATTTTCCCCTAATAAAATTATGGATATGGGCAGTCATCAA
TGGCTGCCAAAACCATTAAGTGGAAAGCTGATTAAAAAACAAAAATTTCTAATGGATTTATCAAACTGTCCCAAA
TCCTGATAAATATTAACATCACAGAGGAAGACCAGACATTATGGGCCTGGAAGTACTATAGGAGTGCACACATCA
CCCGTGACATGGTCTTGCCAAATAATTAAACCTGAATTTGATCAGGTCTCTGGATCTTATTTGCAATTCAAAAGA
AATTTTAAAAAAATCCTACTAACACCACCACAAATATGCAATCAGCAATATCCAGAAAGGGGAAATTCACAGGAC
AAAAACCTGGTTTTCTTTTTTGGTTTCTTCAACCAAAAAAGAAAGAAATTGCAAAGGACCAAAAAAATGTTGGGG
AATCTATACATTATAAGGGACTTAACAACTAAAGGGCAACATATAGACTTTAGATCCTAATTTGAGCAAAATCTA
AAATCAATTATTAGGCAATCAGAAAAATTTGAACACAGACTAGATATTTGAGGATATTAAGGTACTATATTATTG
AAGATTCCATGGTTATGTTTTTTAAAGAGTTCATGCCTTTTAGAGATACATACTAAAGTATTTGTAAATAAATGA
CATGATCTAGAAAAAAAAAAAAAAAA

FIGURE 2299

MGTYSTILIKTEVIECGNYCGVRIIHSLIAEFSLEELKKSYHLNKSQIMLDMLTENLFFDTGMGKSKFLQDMHTL
LLTRHRDEHEGETGNWFSPFIEALHKDEGNEAVEAVLLESIHRFNPNAFICQALARHFYIKKKDFGNALNWAKQA
KIIEPDNSYISDTLGQVYKSKIRWWIEENGGNGNISVDDLIALLDLAEHASSAFKESQQQSEDREYEVKERLYPK
SKRRYDTYNIAGYQGEIEVGLYTIQILQLIPFFDNKNELSKRYMVNFVSGSSDIPGDPNNEYKLALKNYIPYLTK
LKFSLKKSFDFFDEYFVLLKPRNNIKQNEEAKTRRKVAGYFKKYVDIFCLLEESQNNTGLGSKFSEPLQVERCRR
NLVALKADKFSGLLEYLIKSQEDAISTMKCIVNEYTFLLEQCTVKIQSKEKLNFILANIILSCIQPTSRLVKPVE
KLKDQLREVLQPIGLTYQFSEPYFLASLLFWPENQQLDQHSEQMKEYAQALKNSFKGQYKHMHRTKQPIAYFFLG
KGKRLERLVHKGKIDQCFKKTPDINSLWQSGDVWKEEKVQELLLRLQGRAENNCLYIEYGINEKITIPITPAFLG
QLRSGRSIEKVSFYLGFPIGGPLAYDIEIV

2588/2825

FIGURE 2300

TGACATGCCTGATCCTCTCTTTTCTGCAGTTCAAGGGAAAGACGAGATCTTGCACAAGGCACTCTGCTTCTGCCC
TTGGCTGGGGAAGGGTGGC**ATG**GAGCCTCTCCGGCTGCTCATCTTACTCTTTGTCACAGAGCTGTCCGGAGCCCA
CAACACCACAGTGTTCCAGGGCGTGGCGGGCCAGTCCCTGCAGGTGTCTTGCCCCTATGACTCCATGAAGCACTG
GGGGAGGCGCAAGGCCTGGTGCCGCCAGCTGGGAGAGAAGGGCCCATGCCAGCGTGTGGTCAGCACGCACAACTT
GTGGCTGCTGTCCTTCCTGAGGAGGTGGAATGGGAGCACAGCCATCACAGACGATACCCTGGGTGGCACTCTCAC
CATTACGCTGCGGAATCTACAACCCCATGATGCGGGTCTCTACCAGTGCCAGAGCCTCCATGGCAGTGAGGCTGA
CACCCTCAGGAAGGTCCTGGTGGAGGTGCTGGCAGACCCCCTGGATCACCGGGATGCTGGAGATCTCTGGTTCCC
CGGGGAGTCTGAGAGCTTCGAGGATGCCCATGTGGAGCACAGCATCTCCAGGAGCCTCTTGGAAGGAGAAATCCC
CTTCCCACCCACTTCCATCCTTCTCCTCCTGGCCTGCATCTTTCTCATCAAGATTCTAGCAGCCAGCGCCCTCTG
GGCTGCAGCCTGGCATGGACAGAAGCCAGGGACACATCCACCCAGTGAACTGGACTGTGGCCATGACCCAGGGTA
TCAGCTCCAAACTCTGCCAGGGCTGAGAGACACG**TGA**AGGAAGATGATGGGAGGAAAAGCCCAGGAGAAGTCCCA
CCAGGGACCAGCCCAGCCTGCATACTTGCCACTTGGCCACCAGGACTCCTTGTTCTGCTCTGGCAAGAGACTACT
CTGCCTGAACACTGCTTCTCCTGGACCCTGGAAGCAGGGACTGGTTGAGGGAGTGGGGAGGTGGTAAGAACACCT
GACAACTTCTGAATATTGGACATTTTAAACACTTACAAATAAATCCAAGACTGTCATATTTAAAAA

FIGURE 2301

MEPLRLLILLFVTELSGAHNTTVFQGVAGQSLQVSCPYDSMKHWGRRKAWCRQLGEKGPCQRVVSTHNLWLLSFL
RRWNGSTAITDDTLGGTLTITLRNLQPHDAGLYQCQSLHGSEADTLRKVLVEVLADPLDHRDAGDLWFPGESESF
EDAHVEHSISRSLLEGEIPFPPTSILLLLACIFLIKILAASALWAAAWHGQKPGTHPPSELDCGHDPGYQLQTLP
GLRDT

FIGURE 2302

CCATTTAAAGAAG**ATG**CTCGGCCTTAAAGGAAATGGCGGTGCGGTTCTGTCCATGGCCCTTCCTTTTCAGCCAGA
GCAGAGAGATTCAGAGGATTTATTGAAGAATTTTAATTCAGAGTGTGATACACACTGTGGCCTTGATACTGCACG
ACAAGAATATTTGGGTAACTCATTAAGACAGGAATCAGACTTGAAAAAATCCACCTCGTCAGATAATTCAAGCTC
TCATCATGGTGAAAATAAACAAAATCTGACTGTTGATCCCTGTGACATTTTGGGTGGAGTTGATAATCAGCAAAG
ACTGCTACACATTGTCTGGCCTCACAGGTGGGAGCATGATAAAGATCCAGAAAGCTTTTTTAAGGTATTAATGCA
TCTTAAAGACTTAGGACTCAATTTCCACGTGTCTGTACTTGGAGAAACCTTCACAGATGTCCCAGATATTTTTTC
AGAGGCCAAAAAGGCATTGGGATCTTCTGTCTTACACTGGGGCTACTTACCCAGCAAAGATGACTACTTCCAAGT
ACTGTGCATGGCTGATGTTGTCATCTCAACAGCTAAGCATGAATTCTTTGGAGTGGCAATGTTGGAAGCTGTGTA
CTGTGGGTGTTACCCACTTTGTCCTAAAGATTTGGTTTATCCCGAAATATTTCCAGCTGAATATCTGTATTCTAC
ACCTGAACAGCTTTCAAAAAGGCTCCAGAATTTCTGCAAGAGACCAGATATTATAAGAAAACATCTCTATAAGGG
TGAAATCGCTCCGTTTTCTTGGGCAGCCCTACATGGTAAATTCAGGTCTCTGCTTACAACAGAGCCTAGGGAAGA
TTTG**TGA**CAGATGGGGCTAAGTCACAAACTTGCAGCCTAAGGCAGAATCTGAAGAACTTTCCAGAGTGTGCCCAT
ATTTACCTGATCAGAGAGAAAAGAAAATCTGCAGAGGAAGCTGAGCCTGGCTGCTTGTCATAGCTGACACAGAGC
CATCTGCCACAAACCTGTGGCGGCTTCAGATCTCCAATCCCTGCCACCACCCCAACTCAAATTAAATACAGATTC
CTAGAGACGTTATGATGGTTACACATGTCCTCGGCATCACATGTAGGAGACTGTTCAAAAAAAATATGTGGCCTG
TTGTATAACCGCACTCATGTATCCCATATGTGGTGCCACATTGAATTTCCGGTTGAATCCGTTTTTATCCTTTGT
ACTGGATGACATGGTGCCTGAATTCTTTCTTTTCGCCGACACGATGGCAGCCAAACTGCAGCTTCAAACGCTCAC
ACTTGGCTGGGTTTCTACCTAGGTTGCCAGGTTATCATCGGAGCCTTCTTGTGTCCTCAAAGGGCCACGAGGCCT
GAAAGGAGGATCAGAATGCTTTGGGATTAATTGGGCAGCCATCGCAGAATTGTTTGTGGGCAAAGGGCTGCTTTA
GCACTTTTCTTTTAGCAAATTAATGACTCTCAGGCACAGGGGGTTTTAAGTGAAGGTATTAATAAGAGGTCTGGC
AGGTATTCCCATGATTCACAGAGTTACATTTGCATTTAATTAATCTTAAAGTTGCAAGATAAACAGCTGTAATTC
GGACAAACATGACAAACACAGTGAAGCCAACTATCCCATAAAATGAACACTGACATACTTGTTTTAATTTTTTTC
CCAGCGTAAAAATAGAAAAATCAAAATACTCCTAACAAAACCAGTGATTTTGATAGAAATATTTCTCCAATATAC
TTGCATCCACCTACAAATATAACCTTTTCAAGATAAATCGCTTATGATTTCAATAGTCAAACTGCTGTGTTTGTT
GATGTAAAGATGTTTTGAATGGCTAGATGGTAAAATAAATTCTTAATAAAGTACCCACTGCAATTTTT

FIGURE 2303

MLGLKGNGGAVLSMALPFQPEQRDSEDLLKNFNSECDTHCGLDTARQEYLGNSLRQESDLKKSTSSDNSSSHHGE
NKQNLTVDPCDILGGVDNQQRLLHIVWPHRWEHDKDPESFFKVLMHLKDLGLNFHVSVLGETFTDVPDIFSEAKK
ALGSSVLHWGYLPSKDDYFQVLCMADVVISTAKHEFFGVAMLEAVYCGCYPLCPKDLVYPEIFPAEYLYSTPEQL
SKRLQNFCKRPDIIRKHLYKGEIAPFSWAALHGKFRSLLTTEPREDL

FIGURE 2304

GAAAACATTTTGCTGAAAATATAAGCAAACATCGGCCTTGTCCTCCTTGTGTTCATACACTGTGGAAGCTTTTCT
CTGCCTCCTCCGTGAGAGTGCGTGGCCGGGAGACCAGAAACGTGGTCCTTTCTCTTGCCTGTGAGCTGGTGCAGA
GATGGAGGAAGAAGAAT**ATG**AACAAATTCCCCAGGAGAATCCCCCAGAAGAGCTGTCCCAGGATCCTGTGCTGGA
GCTGTCAGGAGGTCTCGCCAGAGGTGGCAGACGCTATCTGCCAAGCCATCGTCTTATCCGCCCCAGGGCCCCACG
CCGTGCTCCTGGTGACACAACTGGGCCGGTTCACGGATGAGGATCAGCAGGTGGTCAGGCGCCTGCAGGAGGTCT
TTGGAGTGGGGGTTCTGGGTCACACCATCCTGGTGTTCACCCGGAAGGAAGACCTGGCTGGCAGCTCCCTGGAAG
ACTATGTGCGAGAGACCAACAACCAGGCCCTTGCCTGGCTGGATGTGACCCTTGCACGGCGCCATTGCGGCTTCA
ACAACAGGGCACAGGGGGAGGAGCAGGAGGCCCAACTGCGAGAGCTCATGGAGAAAGTTGAAGCCATTATGTGGG
AAAACGAAGGAGATTATTACAGCAACAAGGCTTACCAATATACCCAGCAAAACTTTCGGCTGAAAGAACTACAGG
AAAGGCAAGTAAGCCAGGGCCAAGGCTCTGAGGACGTGCCTGGTGAGGAGTCTTGGCTGGAAGGACTGTCCCAGA
TCCAGAAGGAATCTGAGGAAGCCCACAGATGCCTGCTGGGGAAGGCTGACCTT**TGA**GCCTGTGCTGGACTTGAGC
CAAGGACACCATCAGCCTTTGCACCCCCCTGTGTCCAGCCCTCTGTTTCTCTTTCCATCCCATGGAGTGCTTCCC
AGTCTCCAGGTCATGACGTCTGGTGTAGGAAGAGGGGCATGGGGCTTGAGGACAGGGTCCAGCATGCCCAGATCA
CATTCCAGTTCCTTCATTCCTTCTTCCAGAACATCTGGGTCCTCCCTCCTCTGTGCCCCAACAGCACGCTGTCTT
CCTATTGGACCTTCTATCTCATTGGCATTGCCTTTCATGAGTTACTTGTCTATACTCTGATAGAACCAAAGTTTC
TTGAGGGCAGGCCTGTATCTTTTACTTCTGTGTAACTTCCACAGCTTTTGACTGCATTGGAGTCATGCAGTCACG
TTTGGTGCGGCAACTCCATGCAAGCTGTTGACCAGATGACTTCTCATCTCTCCCCACACCATGATGGTTTAAGGT
GCCTGTTGTGTCTGGTGGAGACAGTGCTGGGAGATGATCAGAAATCTCAGGGCACAGCCTCAGGTCTACCTGGAC
ACTCATCCACTGTTGGAGATGCTCAACAGCTAGACACAGATGCTCACAGCCGACCTGTGGCCTCTTGCTCTGAAG
CCATCCCCCATCTTCCCTAGACACAGCAGACATCTGAGAAAGCTTCAGCATTTCTCTTGCTAACAGATTCAGAAA
AGTGTCTCAAAGCAGAGCACAGAGTTATTTGGTGTTTGCTGAAGACAGCCTTTGTGCCACAATCACTTATTAAAT
AAGCGATCAATTTCCCATTGAACTGAACATGCAACATTTATCATACATTCAGCTCTCATTCACACTCCTTAAGAT
TTGGTCAGAATTTTTATTTCTGTTCATGTCTTCTACTTTTCTACTCCTGTATGAATAAAATATTGATTTGATTAC
AGTGGCTTTGACTATAATGTGGGAGCCAATTTTTGCCTCAGTCTTCATTTTTATATTTACCTTGTTATTCTCAGG
CATTTTTTTCTTCTATGTGAGAGTTAAAATCATTCTGTAATTTCCCCCCAAAATCATATTGGTATTCTAGTTGGC
AATGTCTTACATTTATGTTAAGTTTGAGGGAATTGGTAGTTCAAGTATAAGTTAATTAAGGCCATTTTATTTCTA
AGTGAACAGACTTGAAACTCCAGAGCTACTGAAGTAAAAGTTAGAATCATTTGCATTTTCATTCAGATAGGAGAT
AATTTTGTAAATTTTGATGCTATTATTTTAACTCTATTAGCTTAAGTAATGTCATAATAGAAAACACAAGCATTT
GACCAAATGAGATCCATTCAGCGACTAACTGGCAAGGCACTCAAAACATGTCATTCATTAAATGTTGTTTTTATT
TACCTCAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2305

MNKFPRRIPQKSCPRILCWSCQEVSPEVADAICQAIVLSAPGPHAVLLVTQLGRFTDEDQQVVRRLQEVFGVGVL
GHTILVFTRKEDLAGSSLEDYVRETNNQALAWLDVTLARRHCGFNNRAQGEEQEAQLRELMEKVEAIMWENEGDY
YSNKAYQYTQQNFRLKELQERQVSQGQGSEDVPGEESWLEGLSQIQKESEEAHRCLLGKADL

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FIGURE 2306

AATAGGGGAAAATAAGCCAGATGGATAAAGGAAGTGCTGGTCACCCTGGAGGTGCACTGGTTTGGGGAAGGCTCC
TGGCCCCCACAGCCCTCTTCGGAGCCTGAGCCCGGCTCTCCTCACTCACCTCAACCCCCAGGCGGCCCCTCCACA
GGGCCCCTCTCCTGCCTGGACGGCTCTGCTGGTCTCCCCGTCCCCTGGAGAAGAACAAGGCC**ATG**GGTCGGCCCC
TGCTGCTGCCCCTACTGCCCCTGCTGCTGCCGCCAGCATTTCTGCAGCCTAGTGGCTCCACAGGATCTGGTCCAA
GCTACCTTTATGGGGTCACTCAACCAAAACACCTCTCAGCCTCCATGGGTGGCTCTGTGGAAATCCCCTTCTCCT
TCTATTACCCCTGGGAGTTAGCCACAGCTCCCGACGTGAGAATATCCTGGAGACGGGGCCACTTCCACGGGCAGT
CCTTCTACAGCACAAGGCCGCCTTCCATTCACAAGGATTATGTGAACCGGCTCTTTCTGAACTGGACAGAGGGTC
AGAAGAGCGGCTTCCTCAGGATCTCCAACCTGCAGAAGCAGGACCAGTCTGTGTATTTCTGCCGAGTTGAGCTGG
ACACACGGAGCTCAGGGAGGCAGCAGTGGCAGTCCATCGAGGGGACCAAACTCTCCATCACCCAGGCTGTCACGA
CCACCACCCAGAGGCCCAGCAGCATGACTACCACCTGGAGGCTCAGTAGCACAACCACCACAACCGGCCTCAGGG
TCACACAGGGCAAACGACGCTCAGACTCTTGGCACATAAGTCTGGAGACTGCTGTGGGGGTGGCAGTGGCTGTCA
CTGTGCTCGGAATCATGATTTTGGGACTGATCTGCCTCCTCAGGTGGAGGAGAAGGAAAGGTCAGCAGCGGACTA
AAGCCACAACCCCAGCCAGGGAACCCTTCCAAAACACAGAGGAGCCATATGAGAATATCAGGAATGAAGGACAAA
ATACAGATCCCAAGCTAAATCCCAAGGATGACGGCATCGTCTATGCTTCCCTTGCCCTCTCCAGCTCCACCTCAC
CCAAAGCACCTCCCAGCCACCGTCCCCTCAAGAGCCCCCAGAACGAGACCCTGTACTCTGTCTTAAAGGCC**TAA**C
CAATGGACAGCCCTCTCAAAACTGAATGGTGAGGCCAGGTACAGTGGCGCACACCTGTAATCCCAGCTACTCTGA
AGCCTGAGGCAAAATCAAGTGAGCCCAGGAGTTCAGGGCCAGCTTTGGATAATGGGAGCGAGGATGCCATCTCTA
GTTAAAAATATATATTAACAATAAAGTAACAAATTTAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2307

MGRPLLLPLLPLLLPPAFLQPSGSTGSGPSYLYGVTQPKHLSASMGGSVEIPFSFYYPWELATAPDVRISWRRGH
FHGQSFYSTRPPSIHKDYVNRLFLNWTEGQKSGFLRISNLQKQDQSVYFCRVELDTRSSGRQQWQSIEGTKLSIT
QAVTTTTQRPSSMTTTWRLSSTTTTTGLRVTQGKRRSDSWHISLETAVGVAVAVTVLGIMILGLICLLRWRRRKG
QQRTKATTPAREPFQNTEEPYENIRNEGQNTDPKLNPKDDGIVYASLALSSSTSPKAPPSHRPLKSPQNETLYSV
LKA

FIGURE 2308

GGGCGAGGCTGCACCAGCGCCTGGCACC**ATG**AGGACGCCTGGGCCTCTGCCCGTGCTGCTGCTGCTCCTGGCGGG
AGCCCCCGCCGCGCGGCCCACTCCCCCGACCTGCTACTCCCGCATGCGGGCCCTGAGCCAGGAGATCACCCGCGA
CTTCAACCTCCTGCAGGTCTCGGAGCCCTCGGAGCCATGTGTGAGATACCTGCCCAGGCTGTACCTGGACATACA
CAATTACTGTGTGCTGGACAAGCTGCGGGACTTTGTGGCCTCGCCCCCGTGTTGGAAAGTGGCCCAGGTAGATTC
CTTGAAGGACAAAGCACGGAAGCTGTACACCATCATGAACTCGTTCTGCAGGAGAGATTTGGTATTCCTGTTGGA
TGACTGCAATGCCTTGGAATACCCAATCCCAGTGACTACGGTCCTGCCAGATCGTCAGCGC**TAA**GGGAACTGAGA
CCAGAGAAAGAACCCAAGAGAACTAAAGTTATGTCAGCTACCCAGACTTAATGGGCCAGAGCCATGACCCTCACA
GGTCTTGTGTTAGTTGTATCTGAAACTGTTATGTATCTCTCTACCTTCTGGAAAACAGGGCTGGTATTCCTACCC
AGGAACCTCCTTTGAGCATAGAGTTAGCAACCATGCTTCTCATTCCCTTGACTCATGTCTTGCCAGGATGGTTAG
ATACACAGCATGTTGATTTGGTCACTAAAAAGAAGAAAAGGACTAACAAGCTTCACTTTTATGAACAACTATTTT
GAGAACATGCACAATAGTATGTTTTTATTACTGGTTTAATGGAGTAATGGTACTTTTATTCTTTCTTGATAGAAA
CCTGCTTACATTTAACCAAGCTTCTATTATGCCTTTTTCTAACACAGACTTTCTTCACTGTCTTTCATTTAAAAA
GAAATTAATGCTCTTAAGATATATATTTTACGTAGTGCTGACAGGACCCACTCTTTCATTGAAAGGTGATGAAAA
TCAAATAAAGAATCTCTTCACATG

FIGURE 2309

MRTPGPLPVLLLLLAGAPAARPTPPTCYSRMRALSQEITRDFNLLQVSEPSEPCVRYLPRLYLDIHNYCVLDKLR
DFVASPPCWKVAQVDSLKDKARKLYTIMNSFCRRDLVFLLDDCNALEYPIPVTTVLPDRQR

FIGURE 2310

TTTTCAGTGCCTCTTCTGTCACAATCGTAGACACGGTCACACTCCAGTATCTGGGAAAACACAGAGATCGCTATG
GGTTGCAGCGC**ATG**TGGGGCTCCCTGGGCTGGGGCCTGGCGATGCTGTCTGTGGGCATCGGGATCGACTACACCC
ACATCGAAGTGCTCATCGATGGAAAGGGGTGTAAGCCCCCCGAGTACAGGAATTACCAGATCGTCTTCATCGTCT
TCGGCGTTCTCATGACCATGGCCTTGATCGTTGCCACTCAGTTCCGGTTCCGCTACAACCATTTCAAAAACGATG
ATTCTAAAGGGAAAGAGGTGGAGATCCCGCAGGTGGAAAGGAACAACTCTACAGAGTCCTCTGAGGAGACACCAA
CCACCACAAGCCACTCGCAGGCCTTCAACTTTTGGGACTTAATCAAGCTGCTCTGCAGCGTGCAGTATGGCTCAG
TGCTGTTTGTGGCTTGGTTCATGGGTTTTGGATATGGCTTCGTGTTCACCTTTCTCTACTGGCATTTGGAAGACC
TCAATGGAACTACAACCCTCTTTGGGGTCTGTTCAGTCCTGAGTCATGTGTCTGAGCTGACAGCATATTTTTTTA
GTCACAAGCTTATTGAATTGATCGGCCACATCAGGGTTCTGTACATTGGCCTGGCCTGCAATACGGCTCGCTATA
TTTATATTTCCTACCTGGAGAATGCCTGGACTGTTCTCCCCATGGAAGTTCTTCAAGGAGTGACACACGCGGCCA
TCTGGGCAGCATGCATTTCTTACCTCAGTGCAGCCGTTCCCCCTGAGCTGAGGACATCTGCTCAGGGCATCCTGC
AGGGCCTTCACCTGGGTTTGGGAAGAGGATGTGGTGCCATGATCGGAGGCGTGTTAGTCAATTATTTTGGGGCTG
CTGCAACCTTCCGAGGAATTGGCATGGCCTGCTTGGTGATCCTACTGCTCTTTGCCCTGATCCAGTGGCTGGCAG
TGCCAGATGAGGAAGAAGACAAGACAATGTTGGCAGAAAGAATTCCTGTTCCCTCCAGTCCCGTTCCTATAGCAA
CCATCGACTTGGTACAGCAACAGACAGAAGATGTCATGCCACGCATTGAGCCCAGACTTCCACCCAAGAAAACTA
AGCACCAGGAAGAACAGGAAGATGTGAACAAACCAGCCTGGGGAGTCAGCTCTTCTCCCTGGGTGACCTTTGTCT
ATGCACTCTACCAAATTAAAGAGATGATGCAACTCACAAGAGACAACCGTGCTTCTGAGATACAGCCTTTACAGG
GGACCAATGGGAATAGGGAAAATTCTCCTGCTGGTAGAGCCCAGCCTGTCCCATGTGAGACTCACTCTGACCCAT
CTAGAAACCAGCCATCCCCTGACGCAGCAGCATCTCAGACGCAGACCAGCCCCGCTCACCCCAGTGTGGACCCGT
GCACAGAGGAGAGTGAAGAGCAGCAGGCTCAGCTGGCCGCGGGAGGACAC**TGA**GGGCATCCTGCTCATCTCACAC
CCTGCATGGAATCAGGCTCCTCAGCCAGGACACAGGGTGAGGCCCCCCAGCCAGGATATGCCTCCCCTGGAGGAG
CACAGCACTGCATATGCTTCTAAATATCTAAACTCATTAACATGGAAACACACACACAGGAGCTACAGTACATAT
TGGCAGAAAAAGGTAAACTTTCGTAATCTCATTGGAATTACAACAGGGAAATGGAGTTCAATGAGGACTTTCAGT
TCTTTGCTTGGTTAGGTTAAGGATGATAGAATTTCTCTGCCAGTGCAGTAAGAGTTGAAACCGGCAGTTACACTA
AGTAAGTGGAGGGAATGAAAGTGTTTCGAGGTGAATGTGGATATAATTTCCCTCTTCTGATTATTTATTCTTATT
TGGTTCCTAACACAAACTGGGAAGAGATAGAATTCATCTATACTTTCTTTTTTCTTGGAGAGAACCGTTTAAAAA
ATTACAAGATATATTTAAAAAGTAACCAGATAAAAGTAGCACATGTGCTTTTGTTAAAAATAAAGTTAAAAGTTA
AAGTTAAAAAATGAAGTTAAAAGTTTCATCAGAAACTTTACATATCTTTAGCAAATATATTTTTATATGTGTATG
GCATATAATGGAAATAATTCTTTGAGCAACAGAAGCTATTATTAACTACTGCAAGCTAAGCCGAGCTTAAAAATG
CCTTTTGTTTTAAATGGGCTTTGAGAAAAAAAAAAAAAAAAA

FIGURE 2311

MWGSLGWGLAMLSVGIGIDYTHIEVLIDGKGCKPPEYRNYQIVFIVFGVLMTMALIVATQFRFRYNHFKNDDSKG
KEVEIPQVERNNSTESSEETPTTTSHSQAFNFWDLIKLLCSVQYGSVLFVAWFMGFGYGFVFTFLYWHLEDLNGT
TTLFGVCSVLSHVSELTAYFFSHKLIELIGHIRVLYIGLACNTARYIYISYLENAWTVLPMEVLQGVTHAAIWAA
CISYLSAAVPPELRTSAQGILQGLHLGLGRGCGAMIGGVLVNYFGAAATFRGIGMACLVILLLFALIQWLAVPDE
EEDKTMLAERIPVPSSPVPIATIDLVQQQTEDVMPRIEPRLPPKKTKHQEEQEDVNKPAWGVSSSPWVTFVYALY
QIKEMMQLTRDNRASEIQPLQGTNGNRENSPAGRAQPVPCETHSDPSRNQPSPDAAASQTQTSPAHPSVDPCTEE
SEEQQAQLAAGGH

FIGURE 2312

GGAATTAGCCTCCTCAATGAAAAAGAAAGAGGGGGAGGAAGAGGAAGAGAAAAGAAGAAGAAAACCCTGAACATG
GTTTCATTGGATATTCACCCGAACTGCTACAGAACAACACGCTGCCCGATTACAGCCCGGGGGAATCTTTTTTCA
CTGTCTTTGGGGTTTTCTTCCCAGCGGCTACAGGAGTCATGGCCGGTTCAACATGGGGGGCGACCTCAGGGAGCC
TGCCGCCAGCATTCCCCTGGGCTCCCTGGCAGCTGTTGGCATCTCGTGGTTTCTGTACATCGTCTTCGTCTTCCT
CCTGGGCGCCATCTGCACTCGAGAGGCCCTTCGCTATGACTTCCTGATAGCGGAAAAGGTATCCCTCATGGGCTT
CCTGTTCCTTTTGGGCTTATACATCTCGTCCCTGGCTTCCTGCATGGGAGGACTTTATGGAGCTCCCCGCATCCT
GCAGTGCATTGCCCAGGAGAAAGTGATCCCTGCACTTGCCTGTCTGGGACAAGGGAAGGGGCCAAACAAAACACC
CGTGGCTGCCATCTGCCTGACCAGCTTGGTGACCATGGCCTTTGTTTTTGTGGGTCAAGTGAACGTTCTGGCCCC
CATCGTCACCATCAACTTCATGCTTGACATACGTTGCAGTGGACTACTCTTACTTCTCCCTGTCC**ATG**TGTTCCT
GCAGCCTGACCCCGGTGCCTGAGCCGGTGCTCAGGGAGGGCGCAGAAGGCCTCCACTGCTCTGAGCACCTGCTCT
TAGAGAAAGCTCCCAGTTACGGCTCTGAGGGACCTGCCCAAAGAGTCTTGGAGGGCACGCTACTGGAATTCACCA
AGGACATGGATCAGCTCCTCCAGCTAACCAGGAAGCTTGAGAGTAGCCAGCCCAGGCAAGGAGATGGTAACAGGA
CCCCAGAAAGTCAGAAGAGGAAAAGCAAGAAGGCCACCAAGCAGACCCTACAAGATAGCTTCCTCTTGGACCTCA
AATCCCCTCCTTCTTTCCCTGTCGAGATCTCTGACAGGTTGCCCGCTGCCTCCTGGGAGGGGCAGGAGTCCTGCT
GGAACAAGCAGACTTCCAAGAGCGAAGGGACTCAGCCTGAGGGAACATATGGAGAGCAACTTGTTCCTGAGCTGT
GCAACCAATCAGAGTCCAGTGGAGAAGATTTCTTCCTGAAGTCCAGGCTCCAAGAACAAGATGTCTGGAGAAGAT
CCACTTCTTTCTATACCCACATGTGCAACCCCTGGGTCTCCCTGTTGGGGGCTGTTGGGTCCCTTCTCATCATGT
TTGTGATACAGTGGGTGTATACCCTGGTTAACATGGGTGTTGCTGCCATCGTGTATTTCTACATTGGCCGGGCCA
GTCCAGGGCTTCACCTTGGATCAGCCTCCAACTTCAGCTTTTTCCGGTGGATGAGGTCTCTCTTGCTCCCCTCCT
GCAGGAGCTTGCAGTCCCCCCAGGAGCAGATCATCTTGGCGCCGTCCCTGGCTAAGGTTGACATGGAGATGACTC
AGCTCACCCAGGAGAATGCAGACTTCGCCACTCGGGATCGCTACCACCACTCCTCCCTCGTGAACCGGGAGCAGC
TGATGCCTCACTAC**TAG**ATGCAGTGCTGGGACCTTCCTCTTTTGGAGCTGTCCCATGTACAGTGGACCCAAGCCC
AGGACCTTCGTGGAGCTGCTTCTCCAACCTGAGAAACTCAAGACCCATCCTCCCGCTGTCACTTTGGACAATGGA
AATCTACATTTTCTTTTCCCTTTTTTTTTTTTTGAGACAGAGTCTCGCCTTGTCACCCAGGCTGGAGTCCAGTGG
CACAATCTTGGCTCACTGCAACCTCTGCTTCCCGAGTTCAAGCAATTCTCCTGCCTCAGCTCTGAGTAGCTGGGA
TTATAGGCATGCACCACCACCACCCAGCTATTTTTTGTATTTTTACTGGAGACAGGGTTTCACCATGTTGGCCAG
GCTGGTCTCGAACTCCTGACCTCGTGATCCACCCGTCTCAGCCTCCCAAAGTACTGGGATTACAGGCGTGAGCCA
CCATGCCTGGCCAGAAATCTATGTTTTCTTAGAACATGTGGAAGAAGGAAAAAGACAAAAAGGAAGTCTGGATTC
TGAGGACCACGTCTCACCCAGGGTGACATCAGGAATGGTGCTAGCCTCTGCAACACGACACCCAGTTTGAAGAGC
TCTATACAGGTACTAAGACTAGCAGGGGACACCAAGACTCTGCACAACCAGATTGCTTGTGCAGAGGGCCACAAT
AAGTGTATGTTTTATATTTTATTGTATTATTTATTCAAAAATAAATAATACACTCACATGTTTCCACACCCAAAA
AAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2313

MCSCSLTPVPEPVLREGAEGLHCSEHLLLEKAPSYGSEGPAQRVLEGTLLEFTKDMDQLLQLTRKLESSQPRQGD
GNRTPESQKRKSKKATKQTLQDSFLLDLKSPPSFPVEISDRLPAASWEGQESCWNKQTSKSEGTQPEGTYGEQLV
PELCNQSESSGEDFFLKSRLQEQDVWRRSTSFYTHMCNPWVSLLGAVGSLLIMFVIQWVYTLVNMGVAAIVYFYI
GRASPGLHLGSASNFSFFRWMRSLLLPSCRSLQSPQEQIILAPSLAKVDMEMTQLTQENADFATRDRYHHSSLVN
REQLMPHY

FIGURE 2314

CTGACGACTTGAAGCCAGAGGCACCGCCAGTTGGCCCCAGCCCGCAGC**ATG**GCAGCCGCCGCCTATGTGGACCAC
TTCGCCGCCGAGTGCCTCGTGTCCATGTCGAGCCGCGCGGTCGTGCACGGGCCGCGGGAGGGGCCGGAGTCCCGG
CCCGAGGGCGCGTCCGTGGCCGCCACCCCCACGCTGCCCCGCGTCGAGGAGCGCCGCGACGGTAAGGACAGCGCC
TCGCTCTTCGTGGTAGCGCGGATCCTAGCGGACCTCAACCAGCAAGCGCCGGCGCCCGCCCCGGCGGAGCGCAGG
GAGGGCGCCGCGGCCCGGAAGGCGAGGACCCCCTGCCGCCTGCCGCCGCCCGCCCCCATGAGCCCACCTCCCCCG
GCGCTGAAGGCGCGGCGAGCCGCGCCCCCCAGCCCGGCGTGGAGCGAGCCGGAGCCCGAGGCGGGGCTGGAGCCC
GAGCGGGAGCCGGGGCCCGCGGGGAGCGGCGAGCCCGGCCTCAGACAAAGGGTCCGGCGGGGCCGAAGTCGCGCC
GACCTCGAGTCCCCGCAGAGGAAGCACAAGTGCCACTACGCGGGCTGCGAGAAAGTTTACGGGAAATCTTCGCAC
CTCAAGGCGCACCTGAGAACTCACACAGGTGAGAGGCCCTTCGCCTGCAGCTGGCAGGACTGCAACAAGAAGTTC
GCGCGCTCCGACGAGCTGGCGCGGCACTACCGCACACACACGGGCGAGAAGAAGTTCAGCTGCCCCATCTGCGAG
AAGCGCTTCATGCGCAGCGACCACCTGACCAAGCACGCGCGCCGCCACGCCAACTTCCACCCGGGAATGCTGCAG
CGGCGCGGCGGGGGCTCGCGGACCGGCTCCCTCAGCGACTACAGCCGCTCCGACGCCAGCAGCCCCACCATCAGC
CCGGCCAGCTCGCCC**TGA**GCCCGCACAGCCATGAGCAGCCGCTCCCACCCCCTCGTGAGTCCCTGGCCTTTCCTT
TTGTTATAAGAAAGAAGAGAGAGAACTTGATGCCAAGTCCACGAAAAAACAATTTTTTTCACCTCAGGTGTCAAA
GTAAATTTGTTAAAAAAAAAAAAAAAAA

FIGURE 2315

MAAAAYVDHFAAECLVSMSSRAVVHGPREGPESRPEGASVAATPTLPRVEERRDGKDSASLFVVARILADLNQQA
PAPAPAERREGAAARKARTPCRLPPPAPMSPPPPALKARRAAPPSPAWSEPEPEAGLEPEREPGPAGSGEPGLRQ
RVRRGRSRADLESPQRKHKCHYAGCEKVYGKSSHLKAHLRTHTGERPFACSWQDCNKKFARSDELARHYRTHTGE
KKFSCPICEKRFMRSDHLTKHARRHANFHPGMLQRRGGGSRTGSLSDYSRSDASSPTISPASSP

FIGURE 2316

GAATTCCGGCTCCCGCGGCTGCAGGCGCGCGCCTAGAGTGCCTGGCGGGCTCCGGCTTCCGCGTCCGCCCCGGCC
CCGGTCCAGACTTAGTCTTCAGCTCCGCGCCCGCTCCGCCGCGGCCCACCGCGCCCGCCGGCAGCCGAGCCCCCA
GCGACGCCCGCACAGCTCCGGGTGCCCAGACAGGGGGCC**ATG**CCGTGCCGGAGGGAGGAGGAAGAGGAAGCCGGC
GAGGAGGCGGAGGGGGAGGAAGAGGAGGAGGACAGCTTCCTCCTACTGCAGCAGTCAGTGGCGCTGGGCAGCTCG
GGCGAGGTGGACCGGCTGGTGGCCCAGATCGGCGAGACGCTGCAGCTGGACGCGGCGCAXGACAGCCCGGCCTCG
CCGTGCGGGCCCCCGGGGGCGCCGCTGCGGGCCCCGGGGCCCCTGGCTGCGGCGGTGCCGGCGGACAAGGCCAGG
TCCCCGGCGGTGCCGCTGCTGCTGCCGCCCGCGTTGGCGGAGACTGTGGGCCCGGCGCCCCCTGGGGTCCTGCGC
TGCGCCCTGGGGGACCGCGGCCGCGTGCGGGGCCGCGCTGCGCCCTACTGCGTGGCCGAGCTCGCCACAGGCCCC
AGCGCGCTGTCCCCACTGCCCCCTCAGGCCGACCTTGATGGGCCTCCGGGAGCTGGCAAGCAGGGCATCCCGCAG
CCGCTGTCGGGTCCGTGCCGGCGAGGATGGCTCCGGGGCGCCGCCGCCTCCCGCCGCCTGCAGCAGCGACGCGGG
TCCCAACCAGAAACCCGCACAGGCGACGACGACCCGCACCGGCTTCTGCAGCAGCTAGTGCTCTCTGGAAACCTC
ATCAAGGAGGCCGTGCGAAGGCTTCATTCGCGACGGCTGCAGTTACGTGCAAAGCTTCCCCAACGCCCGCTCCTG
GGACCTCTGTCGGCCCCGGTGCATGAACCCCCTTCGCCTCGCAGCCCTCGCGCGGCCTGCAGTGACCCTGGCGCC
TCCGGGAGGGCGCAGCTCAGAACTGGCGACGGCGTTCTTGTGCCTGGCAGC**TAA**CACGCCCGGGGTGGCCACAGC
GCCAGCCTCAGACTGGAGGGCAAGGGGTTCCCTTGAGGGCTGCAGTTCTACTCAGGCTGGTGGAGAACTCTGGCT
TTTGGAAGCGAGAGTAAAAAGCTAATGACGAGGAACCGAAAAATCGCGAGTGTTTCGCGGGTAACTGGGGTTGAG
GGCCAAAATATTTGGAATGAAGGACTTGGCCCTATTTAAGGCAGATTTTACAGAGCGCACCTCAAACGTACAAGT
CAGTAGGACTCCTTATTTGGCGTGACCCGACCTGGCCGCGGAGCCTGCATTTCCTCGCAGCCTCTCAGTGCCCTC
CAGCCCCGCGACCATGTGGCCACAATCCACGCTTCTCCGGATCGCGGTGCGCCGGAACCACGGAGGATGATGCCA
GTTACTTGCTTTACCTTTTCAGGGCTGGCTCCTGATCCACTTTGGGGGAGGAGAACATGAGTAGATAATTTCAGG
GTGCAGCCCAATCTGCCAGACTTAAAAAAACCATCTTGTGTCTTTGGAGGTGCTGCTTAATATCAAACATGCGGT
GCCATGAAGGGACCCTTTGGGGGTTGAATAGGAGTTAACCCCTGCGCTCTCTTTGCAACTGTCTCTCTTCTCAGA
GTGGTGGGGGAAGGCTGTACGACACGGGTGGGGAAAGGAGGTGGGGGCGGGGAGTATTGAATGGTGGTGGAAGGG
TAGAGAGGCGCGGAGTGAACCCCACGCCCTGTCTAAAGTGTATTTTCAGAGCCGGCCCGCCTCTCCTCGGTTCAA
GGTCACTGTTTCCTGGGCACGCACTGGGTTGCGGGACAGAGTAGCCAGTTTCTGCCGGTGCTCGGAGAAGAGCGC
AGTGTTTTGCAAGTGCTGGAGTCTCCTGAGGACACGCGCGTCGCCGCCACCGCGGGTGTGGGAAAGCGCGGACGT
GCTGGGCGTCTGTGCTTCGGTAGGCGACCACCGCCCCTGGCCGCGCTCCGGGCTTTCACGGAAACTCCCGAGACC
GGGCCCTGGGTTCCTCCTCTCCTACTCGGCTCTGCAGTCCTACTCAAGCGGGTGGCTCTGGGATCCTGGGGGCCT
GGGTTGGGGGCTAGGGAGACGCCATGTGATGGACACTCCAGGGACACACAGCCTAGCACAGCAGCTTATAATGGG
CTCTCCGGGGCCATTTGCAATAACAGCTGCAATTCCCTGGATAGACGAGTTGATTTCCTCCCTCTGCCCCTCCCC
CAGCCATGCCAGCTGGCCTTTGTAAGTGCAGGAAACCGAGTAGAAAATGTGACCCTCCAAATGGAGAAGCTGCCA
GCTTTGCCATTGTGAACCATGGTGAAGTGCTTGGAACATACTGTTCACTCACTCTAAAGGCGCTGAGACTGTGCT
GTTGTTCTCGTTTTTATAGTCAATGGCTTGTTCATCATCCAGATGTGGCTACTGACATATCTACACTTCGCACCG
GAGTGTCTGGAATTGTGGCTATCCTGATTATAGGATTTTAACTTAACTGAAATGCCTGCTTTGAATAAATGTGTT
GGGTTTTT

FIGURE 2317

MPCRREEEEEAGEEAEGEEEEEDSFLLLQQSVALGSSGEVDRLVAQIGETLQLDAAXDSPASPCGPPGAPLRAPG
PLAAAVPADKARSPAVPLLLPPALAETVGPAPPGVLRCALGDRGRVRGRAAPYCVAELATGPSALSPLPPQADLD
GPPGAGKQGIPQPLSGPCRRGWLRGAAASRRLQQRRGSQPETRTGDDDPHRLLQQLVLSGNLIKEAVRRLHSRRL
QLRAKLPQRPLLGPLSAPVHEPPSPRSPRAACSDPGASGRAQLRTGDGVLVPGS

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FIGURE 2318

CAGGAAGAGGTATTTCTTGGGGATGCTACCAAGGCAGAGACTGTGAAGAAGGAAGAACGTTGCTTGGGCAAAAGG
AGCATATTCTCAGGAGACGGGGCCCCTGCCTGCCACACCAAGCATTAGGCCACCAGGAAGACCCCCATCTGCAAG
CAAGCCTAGCCTTCCAGGGAGAAAGAGGCCCCTGCAGCTCCTTCATC**ATG**AACTGGCACATGATCATCTCTGGGC
TTATTGTGGTAGTGCTTAAAGTTGTTGGAATGACCTTATTTCTACTTTATTTCCCACAGATTTTTAACAAAAGTA
ACGATGGTTTCACCACCACCAGGAGCTATGGAACAGTCTCACAGATTTTTGGGAGCAGTTCCCCAAGTCCCAACG
GCTTCATTACCACAAGGAGCTATGGAACAGTCTGCCCCAAAGACTGGGAATTTTATCAAGCAAGATGTTTTTTCT
TATCCACTTCTGAATCATCTTGGAATGAAAGCAGGGACTTTTGCAAAGGAAAAGGATCCACATTGGCAATTGTCA
ACACGCCAGAGAAACTGAAGTTTCTTCAGGACATAACTGATGCTGAGAAGTATTTTATTGGCTTAATTTACCATC
GTGAAGAGAAAAGGTGGCGTTGGATCAACAACTCTGTGTTCAATGGCAATGTTACCAATCAGAATCAGAATTTCA
ACTGTGCGACCATTGGCCTAACAAAGACATTTGATGCTGCATCATGTGACATCAGCTACCGCAGGATCTGTGAGA
AGAATGCCAAA**TGA**TCACAGTTCCCTGTGACAAGAACTATACTTGCAACTCTTTTTGAATCCATACAGGTCGTCT
GGCCAATGATTCTTTTACTTACCTATCTGTCTACCAGTAGCGGTCCTTGCCCATTTGGGAAACTGAGCTTCTTTC
TTCTGCACTGGGGGACTGGATGCTAGCCATCTCCAGGAGACAGGATCAGTTTTACGGAAACAACTCAGTTAGTAT
AGAGATGAGGTCCGCTTCTGTAGTACTGAGCATTTCTGACTGATCAAAAAGGCCTAGTCTGTTGACAGGGTTTGT
TTTATTTTAGCCTCAGAGTATACCATACTACTAGGGAGTAACTGTAGAGTGAGAAATTATAAACATTATTTAGGG
ATTACCATGGTGGAAGAGGGATAAACATAGGTCCTGTGACTTCGTCTCTGTTCTCAAGGGAACCCCATTCACATG
CCCCTCCTAACTCCACAAGCGAGGGTAGCAGAGGCTCTCCTCAGTCTGAACTAAGGCTTGGCCTTGGGGAGGGCT
CCTAGTGCTGAGCTTGGAGCAGCACGGACAGCAGCATTGTTTATGGGAATGGAGAGAGGTCTGGGCAGGATAGGA
ACCTTCTTGGAGACCCCTTTGAAGAAAACCAGGCAGCCAAGGGAGCCAAACACACTAGATTTCTGTTCTTCAGCA
AAGCCCTGAAGAGACACTTAAGCTAAAAATTCCCTTGTCATATTTCTGAAACTCCATTATAACATATGTAACTCC
TTTGTAACCAAAATTTAGGTAAGCAGGCTTCCTTTGCTCTGAAGGTTTTGAGTACCTGGCTGTATTTGTTGAGTA
TTTTTAAAATTTTGGATAGTCTCTTAGGCAACAATAATCACAATATATTCATCCCTTCAGTTCTGGAGAAAGCCT
GATACCAGCACAGCCTACTGACCCCAAGGAGCCTGGCACTGATTGGCATCACATTGATCTAAGAACTGGTCCAGC
CGACGAAGAGTAGGAAAAGAGAAGGGCTGCTCAGGGAAACATTGGCTGGGGGCACGGAATAAGCACATAGTAAAA
AGGGAACATCAGGGTCAAATGGAAATCACCTGAGACAGGAAACAGGGAGTTCATTTGGCCACACTGGAAGAAAGG
CAAGAAAGAGGAAGACAAGTCTTGGGGTACCCTGGCTGTTCTCCACACTCACAAGACATCAGCTATATACTCTGC
TTGGTGCATAAGAGAGAGAAAAGAGATGCCTTTTGTGTTTTGAGTAAGAATAATTAAACCATAAGGAAGACCATG
TATAAAACTGATGGAAATAATAGTCACCAAAGTACAGCACATACCATTTTGTGTCTAATAACAATGTAGCACAGT
AATGACTGTACATGTCATTGTATGTATACCAAACAAGATTGTTGTAAATCATATTTTTTATTACAACACTAAGTT
CTGCTTCTGCATTCCTAGGTTTCATCATTTTTGGCTCCTTAGCATGGCCACTTACAATTTTTTAACATGAGATAA
CACATCAGGTGTCAGAACTTGCTTGAAGGGAATTACCAGAAGTAATTTGTGTTTGAGATGGGGTGGAAATTGGAA
TTATATTAGTAGCCGGTGGAGATACAAGTTCTCTGACTGTGTTGGGAAAGGATAAGTGCTACCGTTGAGAAGGGA
AGAAAGGCTGAGTCTAGGTGGAGAAAAATATCAACAGAACTCTAGCCAAAGGCAAGCCCCAGAACTCAGACAACA
GAAAGGAAATCCTAATCCTTCTGTTTTGAGAAGAGAGAACTGTAGTTGCTTCACTTCCTATTTCATGACAGAATA
ACTGCAAACTTTTAAGATCAGGAAATGTAGACATCTAGTGATTTCTTTAGTAGACAGTTTAATTTCCCCCAAGAT
TAGGAGACACTTCTGTGCAGGTTCTAAAAGGAGCCCAATGGCCTGGGGTGGGAGTGGGGAGTAGATAGGGAATAT
GTGGGATTTGGTTTAAGTTCATCATTGGGAGAGTTCCTGGATCCTTGCAAGCTTAGATAAATGTGATCTTTATTA
GATAGCAGTGGCATGCTTTTAAAAAAAAAAAAGGCAATGAAAATTTAGCAAGCCACTGAATTTGAGTTTTCACTTT
GTTTCTAATATGCTGTGTGAATCAGTACAGTTTTCTTACCCTTTCTTGGTCTTAATTTCCTTACTGATAAAATGG
GGTAGTAATACCTATCTCAAAAAATATTGCACATATTAAATAACATTCCTCTATGTATCTCAATGGCATTAGACA
TTAGGAGAAGCATTTTGTGGAGGATTTGAAGTTGAGATCTTCATCCAAGAAGTAGCTTTTCAATTTGCTAGAAGC
TTAATGTAGGCAAGCCACTTCATTTTTCAGAACTTGTTTACTCATTTATAATATGGGAATAAAAATTTGTGCAAG
TCAGAGAAGGGTGCCTTAAAAATGTTGTGGCCAAGCCACATGAGATCAAAGACACACTTTTCATGACCTCAAATG
TGGGCCCAGCCTAGGTCAGCCAACCCCCATCCAACCCTTAGACTCACGAACAAATCCACCTGAGATCAGCAGAGC
CACCCTAGATCAGCTGAAACTCTAAGCACAAAAATAAAAACTTATCACTGTATACCACTGGAGTTTTCTGGTTAT
CTCTCGTATAGCAAAATCTAACTGATGCAATCTCCATCTGGCCTTCATCCTTCTCCCTTTATTGTCCTTTCGTGT
ATTGTTCATCCAGCAACCAGGATGATCTTGTTAAAACATTAAACAGATTCTGTCACTCTT

FIGURE 2319

MNWHMIISGLIVVVLKVVGMTLFLLYFPQIFNKSNDGFTTTRSYGTVSQIFGSSSPSPNGFITTRSYGTVCPKDW
EFYQARCFFLSTSESSWNESRDFCKGKGSTLAIVNTPEKLKFLQDITDAEKYFIGLIYHREEKRWRWINNSVFNG
NVTNQNQNFNCATIGLTKTFDAASCDISYRRICEKNAK

FIGURE 2320

GGGGGGGGCGGGGCGCCCAGCGGGATGCGGTGAAGGGCGAGCGGCGCGGCGGCTGCG**ATG**AGTGCCTCTGCGGCC
ACCGGGGTCTTCGTGCTGTCCCTCTCGGCCATCCCGGTCACCTATGTCTTCAACCACCTGGCGGCCCAGCATGAT
TCCTGGACTATTGTAGGGGTTGCTGCCCTCATCCTGTTCCTGGTAGCACTGCTGGCTCGTGTCCTCGTCAAAAGA
AAACCACCCCGGGACCCACTGTTCTATGTGTATGCAGTTTTTGGATTTACCAGCGTGGTGAACCTCATCATAGGA
CTGGAGCAAGATGGAATCATTGACGGGTTCATGACACACTACTTGAGAGAGGGTGAACCGTATCTGAACACCGCA
TATGGGCACATGATCTGCTACTGGGATGGCTCTGCTCATTATCTGATGTACCTGGTGATGGTGGCAGCCATAGCA
TGGGAGGAAACTTATAGAACCATTGGCCTATATTGGGTTGGATCTATTATTATGAGTGTTGTTGTTTTTGTGCCA
GGAAACATTGTAGGGAAGTATGGAACACGAATTTGCCCTGCTTTTTTCTTAAGCATACCATATACTTGTCTTCCT
GTCTGGGCTGGTTTCAGAATCTATAATCAGCCATCAGAAAATTATAATTACCCCTCAAAGGTTATTCAAGAAGCC
CAAGCGAAAGACCTGCTGAGAAGACCATTTGATTTAATGTTGGTTGTGTGTCTCCTCCTGGCAACTGGATTTTGC
CTGTTCAGAGGTTTGATTGCTTTGGATTGCCCATCTGAGCTCTGCCGATTATATACGCAATTTCAAGAGCCCTAT
CTAAAGGATCCTGCTGCTTATCCTAAAATTCAGATGCTGGCATATATGTTCTATTCTGTTCCTTACTTTGTGACT
GCACTGTATGGCTTAGTGGTTCCTGGATGTTCCTGGATGCCTGACATCACATTGATACATGCTGGAGGTCTGGCT
CAGGCTCAGTTTTCTCACATTGGTGCATCTCTTCATGCTAGAACTGCTTATGTCTACAGAGTCCCTGAAGAAGCA
AAAATCCTTTTTTTAGCATTAAACATAGTATATGGAGTTCTTCCTCAGCTCTTGGCCTATCGTTGTATCTACAAA
CCAGAGTTCTTCATAAAAACAAAGGCAGAAGAAAAAGTGGAA**TAA**AAATATTACTTCATGTTCCTCCTTTCTAAA
TTACTAACTTTTGTTATACTGGTACTGATATTTTGTCCCATTTCACTCTCTTCTCATACGTGAGTACTTAAGAAT
ATGTACATTCTTGCTCTGCACTGTATGTGTGAGCTATATGGTATTGTGTAAATTTTTTTTGAAGGAAAATGGAAA
TTCTTGAGAAACAGTTTGTTTAAAGAAATATATTCAAAATCATTTGTGAATAAACTTGATCATCCATCTCAAAAA
AAAAAAAAAAAAAAAAAAA

FIGURE 2321

MSASAATGVFVLSLSAIPVTYVFNHLAAQHDSWTIVGVAALILFLVALLARVLVKRKPPRDPLFYVYAVFGFTSV
VNLIIGLEQDGIIDGFMTHYLREGEPYLNTAYGHMICYWDGSAHYLMYLVMVAAIAWEETYRTIGLYWVGSIIMS
VVVFVPGNIVGKYGTRICPAFFLSIPYTCLPVWAGFRIYNQPSENYNYPSKVIQEAQAKDLLRRPFDLMLVVCLL
LATGFCLFRGLIALDCPSELCRLYTQFQEPYLKDPAAYPKIQMLAYMFYSVPYFVTALYGLVVPGCSWMPDITLI
HAGGLAQAQFSHIGASLHARTAYVYRVPEEAKILFLALNIVYGVLPQLLAYRCIYKPEFFIKTKAEEKVE

FIGURE 2322

CATTTGCTATGAATATTCTCTATAACAAAGCAAGACAAATTTAGCAGCACTTCATTGCATCTGGATGGGGGAGAG
AGCTGGACAATTTCTTGCTAACAAGAG**ATG**GTTAACTGCCCTCACCTCAGCCGTGAATTCTGCACACCTCGCATC
CGGGGCAACACCTGCTTCTGCTGTGACCTCTACAACTGTGGCAACCGGGTGGAGATCACTGGTGGGTACTACGAA
TACATCGATGTCAGCAGTTGCCAAGATATCATCCACCTCTACCACCTGCTCTGGTCTGCCACCATCCTCAACATT
GTTGGCCTGTTCCTGGGCATCATCACTGCCGCTGTCCTTGGAGGCTTTAAGGACATGAACCCAACTCTCCCAGCA
CTGAACTGTTCTGTTGAAAATACCCATCCAACAGTTTCTTACTATGCTCATCCCCAAGTGGCATCCTACAATACC
TACTACCATAGCCCTCCTCACCTGCCACCATATTCTGCTTATGACTTTCAGCATTCCGGTGTCTTTCCATCCTCC
CCTCCCTCTGGACTTTCTGATGAGCCCCAGTCTGCCTCTCCCTCACCCAGCTACATGTGGTCCTCAAGTGCACCG
CCCCGTTACTCTCCACCCTACTATCCACCTTTTGAAAAGCCACCACCTTACAGTCCC**TAA**AGAGGAATGCCTGCT
GGCTATTGAGATTATTGTGGCTTTTGTATTTCTGCTTCAGTGGAAGTGTGTAGGGTACAAAATTTAAAGTGTGAC
TCTTATGCATAAAGTTTTACAATGGCCTGCCAGGCTAGGGAAAGATAGGGACGAAGCTTATTCATTATTAGTGCA
GAGCAGGGGTGGTCAGGCTGAACGCAGCACAGAAGGGCAGCTCACATTCTCTAAGCAAGACTGGGGAGCCAGCCC
AGCAAGAAGCTTGTTTGGACTTGCATTACCCTATGCTCCACCTCTGTATTCAGCAGAAGTGTGGTTGCCATCTTT
TTCACTTTATGTAAAGGAGTGTTGCCCTCGGGCCCTTGGCAGATTGCCACCCCAGCACCTAGGTTGAAGCACCTG
GTTTATAGGCCCTATCTTTCCCTACCCCTAAAGTCAGTCCCTAAGGACAATTTCCCAGCTGATGGGGCTACACAG
TAGTTCCAATACAGAGAGTTCTGGCTAAGATTTTGTTTGCTTGTGTCTGGATGTTGAAAAAGACTGCCCGTATCT
CTTACTCCTTCCTTCTCTGTGAGTATTGTAAAAATGGCTGTTGTGATCACTCAGCTCAGCTTTTGTTATTGGTAC
CTCCTAAAGGGAAAAGTGCAATATTCTTGCATCTTCAGTAGTGGGGAACAGGATGTATTGTTCCGGAAACACTGA
AATACACAGCAACATGTGAGATGTTTTAAGTAGATCACTTAGGAGACAGTGGTTCTACTACATGTTGCATTATTA
CAAAATACATTTGCTACAGGAGATATAAATCTTATGGTTGTAATTCAGAGTTTAAAAATGTTATAAATTAGGTTC
TTGGGTCGTGATATGAATTGTTACTAATCTTTGTGACTATTTAATCTTCAAATATTGTGCTTAACCCCAGCAATC
CGCACGTATCCTGCACCCCACCCCAAAAGAGTCATCTGTATTTTAATGCCACTGGTCTTATCGGTCCTTTTGTCT
GTTGAGACCAGTCATGACAGCATTCAAGATTATGAAAGTGTTACAATGCCGCTTCAAGTCTGCAAAACCTCAAAC
GTAGCCAACTTGACAAATATTTAAGTGTTACGGCAGATTTAAAATCCATCTGGCACACCGTGGTAGGTATTTGTA
CAGTTCTTTTAATTACACATAGCTTTAAACCATCAACCTGATGAGTTTAAAGCTTTTGCACCCATGCCTTCACTT
CAGAATGAACACCTTCATTGTGATCTTATGTTAACCTGAGAATTGATTTAAAGGAAGATTGATAATCCTATACTT
TATAACGTAAAAATACAGGGGCTACAGGAGGGTACCTAATTAGACAGTTCTCCAAACACAGAACACACACTGGAA
AATTTTCCGGCCAATTTTGCTACCTCCCAACTTGATGGATTAGAGGTAGCGCATATGCTGGTGCTCCCATCTACC
TTGTAGACACTTAGCCATCAAGAATCAAGGCACAAGAAGTGCACTCTCTCATTAACAGTAAATGTTTGCAAGATA
TTCAGTTTAACTTTCAGCATCATGAATGTTCTTATCCAGATTTTGAATCCGAAAAACTATAATCCTTTTATGTTA
TACAAAATTACTATGATTTTTTACAGTTCTGAGCATATTAAAATTCTACTGGATTTCAAAAAGAGACTAATACCC
AACTGACTAACTAAACAAATATCAACTTGTAATACTCAATGAATTTTTTTGCCATTTACATTTGACCGTTGGCTT
TAGTGAATGTCCATATTTAATTTTTTAAGGCACCATTACACAGTTTATCCTACATTTATCACATTTCTTAAAGTG
TTAAGATTCTATGGCTCATTTCTATGTATTTTTCTTACTTTACAAAATAACCTGAAACAGTATAGATTTTGTAAC
ACTTAATTTGAGCAGCTTTTTTATTACATTGAATTATATAAAGTGCATGTTACCTTAGAAAAATTAGTATTTGCT
GCTTTACTCTTTTGCAAAACATTTGCTGTAATGAATGGATTTGTATTTCCAATATGTATCTTGACTGCATTTTGT
AATATTTACTGCTTTATTCCTAATTCTGCTTTAAAGTACTGAACTGGGCATGAAACATTAAAATATTAATCCAGA
AACTGTATAAACTGGATGTTGCTTAAAATCTGTATCACTGCCATGTTGAAAATTCAGACTGCTTTTGTGATGTTT
CAAATGAATAAAACTATCCTCCCCTCGTT

FIGURE 2323

MVNCPHLSREFCTPRIRGNTCFCCDLYNCGNRVEITGGYYEYIDVSSCQDIIHLYHLLWSATILNIVGLFLGIIT
AAVLGGFKDMNPTLPALNCSVENTHPTVSYYAHPQVASYNTYYHSPPHLPPYSAYDFQHSGVFPSSPPSGLSDEP
QSASPSPSYMWSSSAPPRYSPPYYPPFEKPPPYSP

FIGURE 2324

AAGGCTATTATTACCACCACTGAGTGGCTTAAATAATCCTGTCAACAGCAATCGCCCATTTCCAAAGCCATGGTG
AAACATCTCTGTGCTAATTTCTTTTGTTTTGTTTCCTAATTTTTTTTTTTTGGCAGGTGGTGGGAAATAATCTTT
GTCTTCTTTGGAGTAAACCTTCAACACCGGATTTTTTCTTTTAATTATGGATGTAAACCCCAATATCCCCATAAT
TTACATTGGGTCTCGACCAATTGCCTAATTATAAGAGGATATATTTAGGCTCTTATTTCATCCACACAAAAACTT
GTGTAACAGGTAGTTGGAAACATCTGAGGCACCACTTTGATTCTGTTTTGGATGGTCATGTTTTTTCTCCTCCGT
TTCCCCAGCATGTCTGCCACCATCCTCATGCACTGCTTCCAAGTGCCTGGGAGCCTTTATGAGCGTCCCTAAACC
TAAAAGAATCCAGAGGCGGGGCTCGG**ATG**AACCCTCGAGATAAGCAAGTGAGCCGCTTCTCCCCTCTAAAGGATG
TTTACACGTGGGTGGCACTCGCTGGAATCCAGCGCTCGGGCAGCCCTGGGAGGACGCGCTCAGCTGCGAGGAGGA
TGGAGAGCAATACATCATCATCTTTGGAGAATTTAGCGACGGCGCCTGTGAACCAGATCCAAGAAACAATTTCTG
ATAATTGTGTGGTGATTTTCTCAAAAACATCCTGTTCTTACTGTACAATGGCAAAAAAGCTTTTCCATGACATGA
ATGTTAACTATAAAGTGGTGGAACTGGACCTGCTTGAATATGGAAACCAGTTCCAAGATGCTCTTTACAAAATGA
CTGGTGAAAGAACTGTTCCAAGAATATTTGTCAATGGTACTTTTATTGGAGGTGCAACTGACACTCATAGGCTTC
ACAAAGAAGGAAAATTGCTCCCACTAGTTCATCAGTGTTATTTAAAAAAAAGTAAGAGGAAAGAATTTCAG**TGA**T
GTTTATACTAATAAGTTTGCTAGTACAGTGTCAGTTATTTAAAGTGGTAATGCCCGATAATGTCTTTTAAATGTT
TGAGGATGTTTTAAATACATGCATTGTCTTCACGAAGAAGATGTAAAAATAATGAACAATAAATTGCGGTGGAAA
CCTAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2325

MNPRDKQVSRFSPLKDVYTWVALAGIQRSGSPGRTRSAARRMESNTSSSLENLATAPVNQIQETISDNCVVIFSK
TSCSYCTMAKKLFHDMNVNYKVVELDLLEYGNQFQDALYKMTGERTVPRIFVNGTFIGGATDTHRLHKEGKLLPL
VHQCYLKKSKRKEFQ

FIGURE 2326

TTCTCACTATACTGGTCCTGAGGAAAGGGCTTCTGTGAACTGCGGTTTTTAGTTTTTATTGTGGTTCTTAGTTCT
CATGAGACCCCTCTTGAGGATATGTGCCTATCTGGTGCCTCTGCTCTCCACTAGTTGAGTGAAAGGAAGGAGGTA
ATTTACCACCATGTTTGGTTCCTGTTTATAAGATGTTTTAAGAAAGATTTGAAACAGATTTTCTGAAGAAAGCAG
AAGCTCTCTTCCCATT**ATG**ACTTCGGAAATCACTTATGCTGAAGTGAGGTTCAAAAATGAATTCAAGTCCTCAGG
CATCAACACAGCCTCTTCTGCAGCTTCCAAGGAGAGGACTGCCCCTCACAAAAGTAATACCGGATTCCCCAAGCT
GCTTTGTGCCTCACTGTTGATATTTTTCCTGCTATTGGCAATCTCATTCTTTATTGCTTTTGTCATTTTCTTTCA
AAAATATTCTCAGCTTCTTGAAAAAAAGACTACAAAAGAGCTGGTTCATACAACATTGGAGTGTGTGAAAAAAAA
TATGCCCGTGGAAGAGACAGCCTGGAGCTGTTGCCCAAAGAATTGGAAGTCATTTAGTTCCAACTGCTACTTTAT
TTCTACTGAATCAGCATCTTGGCAAGACAGTGAGAAGGACTGTGCTAGAATGGAGGCTCACCTGCTGGTGATAAA
CACTCAAGAAGAGCAGGATTTCATCTTCCAGAATCTGCAAGAAGAATCTGCTTATTTTGTGGGGCTCTCAGATCC
AGAAGGTCAGCGACATTGGCAATGGGTTGATCAGACACCATACAATGAAAGTTCCACATTCTGGCATCCACGTGA
GCCCAGTGATCCCAATGAGCGCTGCGTTGTGCTAAATTTTCGTAAATCACCCAAAAGATGGGGCTGGAATGATGT
TAATTGTCTTGGTCCTCAAAGGTCAGTTTGTGAGATGATGAAGATCCACTTA**TGA**ACTGAACATTCTCCATGAAC
AGGTGGTTGGATTGGTATCTGTCATTGTAGGGATAGATAATAAGCTCTTCTTATTCATGTGTAAGGGAGGTCCAT
AGAATTTAGGTGGTCTGTCAACTATTCTACTTATGAGAGAATTGGTCTATACATTGACTGATTCACTTTTTCATA
AAGTGAGCATTTATTGAGCATTTTTTCATGTGCCAGAGCCTGTACTGGAGGCCCCCATTGTGCACACAGGGAGAG
AACATGAGTCTCTCTTAATTTTTATCTGGTTGCTAAAGAATTATTTACCATTAAATTATATGGTGTGGTGT

FIGURE 2327

MTSEITYAEVRFKNEFKSSGINTASSAASKERTAPHKSNTGFPKLLCASLLIFFLLLAISFFIAFVIFFQKYSQL
LEKKTTKELVHTTLECVKKNMPVEETAWSCCPKNWKSFSSNCYFISTESASWQDSEKDCARMEAHLLVINTQEEQ
DFIFQNLQEESAYFVGLSDPEGQRHWQWVDQTPYNESSTFWHPREPSDPNERCVVLNFRKSPKRWGWNDVNCLGP
QRSVCEMMKIHL

FIGURE 2328

AGATCAGCTGATGCCGGAGGGTTTGAAGCCGCGCCGCGAGGGAGCGAGGTCGCAGTGACAGCGGCGGGCGATCGG
ACCCAGGCTGCCCCGCCGTACCCGCCTGCGTCCCGCGCTCCCGCCCCAGC**ATG**ACAGCCCCGGCGGGTCCGCGCG
GCTCAGAGACCGAGCGGCTTCTGACCCCCAACCCCGGGTATGGGACCCAGGCGGGGCCTTCACCGGCCCCTCCGA
CACCCCCAGAAGAGGAAGACCTTCGCCGTCGTCTCAAATACTTTTTCATGAGTCCCTGCGACAAGTTTCGAGCCA
AGGGCCGCAAGCCCTGCAAGCTGATGCTGCAAGTGGTCAAGATCCTGGTGGTCACGGTGCAGCTCATCCTGTTTG
GGCTCAGTAATCAGCTGGCTGTGACATTCCGGGAAGAGAACACCATCGCCTTCCGACACCTCTTCCTGCTGGGCT
ACTCGGACGGAGCGGATGACACCTTCGCAGCCTACACGCGGGAGCAGCTGTACCAGGCCATCTTCCATGCTGTGG
ACCAGTACCTGGCGTTGCCTGACGTGTCACTGGGCCGGTATGCGTATGTCCGTGGTGGGGGTGACCCTTGGACCA
ATGGCTCAGGGCTTGCTCTCTGCCAGCGGTACTACCACCGAGGCCACGTGGACCCGGCCAACGACACATTTGACA
TTGATCCGATGGTGGTTACTGACTGCATCCAGGTGGATCCCCCCGAGCGGCCCCCTCCGCCCCCCAGCGACGATC
TCACCCTCTTGGAAAGCAGCTCCAGTTACAAGAACCTCACGCTCAAATTCCACAAGCTGGTCAATGTCACCATCC
ACTTCCGGCTGAAGACCATTAACCTCCAGAGCCTCATCAATAATGAGATCCCGGACTGCTATACCTTCAGCGTCC
TGATCACGTTTGACAACAAAGCACACAGTGGGCGGATCCCCATCAGCCTGGAGACCCAGGCCCACATCCAGGAGT
GTAAGCACCCCAGTGTCTTCCAGCACGGAGACAACAGCTTCCGGCTCCTGTTTGACGTGGTGGTCATCCTCACCT
GCTCCCTGTCCTTCCTCCTCTGCGCCCGCTCACTCCTTCGAGGCTTCCTGCTGCAGAACGAGTTTGTGGGGTTCA
TGTGGCGGCAGCGGGGACGGGTCATCAGCCTGTGGGAGCGGCTGGAATTTGTCAATGGCTGGTACATCCTGCTCG
TCACCAGCGATGTGCTCACCATCTCGGGCACCATCATGAAGATCGGCATCGAGGCCAAGAACTTGGCGAGCTACG
ACGTCTGCAGCATCCTCCTGGGCACCTCGACGCTGCTGGTGTGGGTGGGCGTGATCCGCTACCTGACCTTCTTCC
ACAACTACAATATCCTCATCGCCACACTGCGGGTGGCCCTGCCCAGCGTCATGCGCTTCTGCTGCTGCGTGGCTG
TCATCTACCTGGGCTACTGCTTCTGTGGCTGGATCGTGCTGGGGCCCTATCATGTGAAGTTCCGCTCACTCTCCA
TGGTGTCTGAGTGCCTGTTCTCGCTCATCAATGGGGACGACATGTTTGTGACGTTCGCCGCCATGCAGGCGCAGC
AGGGCCGCAGCAGCCTGGTGTGGCTCTTCTCCCAGCTCTACCTTTACTCCTTCATCAGCCTCTTCATCTACATGG
TGCTCAGCCTCTTCATCGCGCTCATCACCGGCGCCTACGACACCATCAAGCATCCCGGCGGCGCAGGCGCAGAGG
AGAGCGAGCTGCAGGCCTACATCGCACAGTGCCAGGACAGCCCCACCTCCGGCAAGTTCCGCCGCGGGAGCGGCT
CGGCCTGCAGCCTTCTCTGCTGCTGCGGAAGGGACCCCTCGGAGGAGCATTCGCTGCTGGTGAAT**TGA**TTCGACC
TGACTGCCGTTGGACCGTAGGCCCTGGACTGCAGAGACCCCCGCCCCCGACCCCGCTTATTTATTTGTAGGGTTT
GCTTTTAAGGATCGGCTCCCTGTCGCGCCCGAGGAGGGCCTGGACCTTTCGTGTCGGACCCTTGGGGGCGGGGAG
ACTGGGTGGGGAGGGTGTTGAATAAA

FIGURE 2329

MTAPAGPRGSETERLLTPNPGYGTQAGPSPAPPTPPEEEDLRRRLKYFFMSPCDKFRAKGRKPCKLMLQVVKILV
VTVQLILFGLSNQLAVTFREENTIAFRHLFLLGYSDGADDTFAAYTREQLYQAIFHAVDQYLALPDVSLGRYAYV
RGGGDPWTNGSGLALCQRYYHRGHVDPANDTFDIDPMVVTDCIQVDPPERPPPPPSDDLTLLESSSSYKNLTLKF
HKLVNVTIHFRLKTINLQSLINNEIPDCYTFSVLITFDNKAHSGRIPISLETQAHIQECKHPSVFQHGDNSFRLL
FDVVVILTCSLSFLLCARSLLRGFLLQNEFVGFMWRQRGRVISLWERLEFVNGWYILLVTSDVLTISGTIMKIGI
EAKNLASYDVCSILLGTSTLLVWVGVIRYLTFFHNYNILIATLRVALPSVMRFCCCVAVIYLGYCFCGWIVLGPY
HVKFRSLSMVSECLFSLINGDDMFVTFAAMQAQQGRSSLVWLFSQLYLYSFISLFIYMVLSLFIALITGAYDTIK
HPGGAGAEESELQAYIAQCQDSPTSGKFRRGSGSACSLLCCCGRDPSEEHSLLVN

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FIGURE 2330

AACAGTATTTTCCTTTTCAACACATCTATTGAAAGTGTTGGATAAATGCAGGATGTTAATATGCTATAAACATAA
AGTCTGTTTTTAAAAAATAGCATTTGAAAATCATGAAGGGCTTTTTGTTTTCTTTTGTTTGTATATATGTTTATT
GGTAACAGGTGACACTGGAAGCA**ATG**AACACCACAGTGATGCAAGGCTTCAACAGATCTGAGCGGTGCCCCAGAG
ACACTCGGATAGTACAGCTGGTATTCCCAGCCCTCTACACAGTGGTTTTCTTGACCGGCATCCTGCTGAATACTT
TGGCTCTGTGGGTGTTTGTTCACATCCCCAGCTCCTCCACCTTCATCATCTACCTCAAAAACACTTTGGTGGCCG
ACTTGATAATGACACTCATGCTTCCTTTCAAAATCCTCTCTGACTCACACCTGGCACCCTGGCAGCTCAGAGCTT
TTGTGTGTCGTTTTTCTTCGGTGATATTTTATGAGACCATGTATGTGGGCATCGTGCTGTTAGGGCTCATAGCCT
TTGACAGATTCCTCAAGATCATCAGACCTTTGAGAAATATTTTTCTAAAAAAACCTGTTTTTGCAAAAACGGTCT
CAATCTTCATCTGGTTCTTTTTGTTCTTCATCTCCCTGCCAAATATGATCTTGAGCAACAAGGAAGCAACACCAT
CGTCTGTGAAAAAGTGTGCTTCCTTAAAGGGGCCTCTGGGGCTGAAATGGCATCAAATGGTAAATAACATATGCC
AGTTTATTTTCTGGACTGTTTTTATCCTAATGCTTGTGTTTTATGTGGTTATTGCAAAAAAAGTATATGATTCTT
ATAGAAAGTCCAAAAGTAAGGACAGAAAAAACAACAAAAAGCTGGAAGGCAAAGTATTTGTTGTCGTGGCTGTCT
TCTTTGTGTGTTTTGCTCCATTTCATTTTGCCAGAGTTCCATATACTCACAGTCAAACCAACAATAAGACTGACT
GTAGACTGCAAAATCAACTGTTTATTGCTAAAGAAACAACTCTCTTTTTGGCAGCAACTAACATTTGTATGGATC
CCTTAATATACATATTCTTATGTAAAAAATTCACAGAAAAGCTACCATGTATGCAAGGGAGAAAGACCACAGCAT
CAAGCCAAGAAAATCATAGCAGTCAGACAGACAACATAACCTTAGGC**TGA**CAACTGTACATAGGGTTAACTTCTA
TTTATTGATGAGACTTCCGTAGATAATGTGGAAATCAAATTTAACCAAGAAAAAAAGATTGGAACAAATGCTCTC
TTACATTTTATTATCCTGGTGTACAGAAAAGATTATATAAAATTTAAATCCACATAGATCTATTCATAAGCTGAA
TGAACCATTACTAAGAGAATGCAACAGGATACAAATGGCCACTAGAGGTCATTATTTCTTTCTTTCTTTTTTTTT
TTTTTAATTTCAAGAGCATTTCACTTTAACATTTTGGAAAAGACTAAGGAGAAACGTATATCCCTACAAACCTCC
CCTCCAAACACCTTCTCACATTCTTTTCCACAATTCACATAACACTACTGCTTTTGTGCCCCTTAAATGTAGATA
TGTGCTGAAAGAAAAAAAAAAACGCCCAACTCTTGAAGTCCATTGCTGAAAACTGCAGCCAGGGGTTGAAAGGGAT
GCAGACTTGAAGAGTCTGAGGAACTGAAGTGGGTCAGCAAGACCTCTGAAATCCTGGGTAAAGGATTTTCTCCTT
ACAATTACAAACAGCCTCTTTCACATTACAATAATATACCATAGGAGGCACAAGCACCATTATTAAGCCACTTTG
CTTACACCTTAAGTGTGTACAATTCAAGTGTGAGAATGCTGTGTTAACTATTCTTTGGAATTCTCCTTCTGTCCA
GCAAATACTCTAATGATGGTTAAACATGGCACCTACTCAGCAATGCCTTCCTGGACCACAACCCCTATCCCCCTG
CCCCACCCTCCTCATTAAAAACAAATACTTCTACTGTTTGGGTGTGTGATAGGGTTCTCAATGCAGATCTCCCTT
TTCTAGTTAGCTATATTCTTGACTGCATCCGCTAAAAATGTTAAAGCTTCTTGAGAGACAGACATGCCAGATTTT
CTTGGTATCTCCCATAATACGACCTACAGTCCATGGTCTACAGATGTTTTAAATAGAATTGCTATTCTCGATACA
TACAAAGACGTAATTGCTGACCCACAATCAGTAACATCCATATTGGGAGATTTTTCAAAGGATGGTGACCCTGCT
TGTATTTATTTACCTTGGTATTTTTTCTTGCATCCTTCTGTGATTCAAAAAAGTAAAATGTGGCTTTCTGAAATG
ATGGATAAGAGTCTACATCTTCTAGAAAAAATACATAAAGGAGTAGTTAAGCTCTGTAAATGTGCCACGAGCTCC
AACACGACCATCGTAGGGTGAAGCCCACGTTTTCTTCCATGGCCTCAAAGGCCCTAGAACTTGCCTACCTTTCTG
GCCTTACCTCCTAGCTACTTATCCATCTCTTGAACTTTATACTCTTGTATAAATTTCTAACTTTCAGAAAATGCC
ATACTCTGTTTTGGCACCACACATGTATATTTCCCCCTGGTACACTTGGAAGACTCTTATCCATCTGTGAAACCC
TATGTTGTCATCACTTGGTCCATGAAATATTACCTGGCCAATATCCCACCATCACCTCAAACCCAATCACCCCCT
CCTCTGTATGCTGTCACACCTATATTATTAAACTTATCACATTGCATTGTAATTACTTCCTGACCTTTGTATCTA
CTCTTTTAGTAACTGATGTATATATCTGAAAGGAGAGATTGTTTCATTGTGCAATCAATAAATGTTTGATAAAAT
AAAGCCC

FIGURE 2331

MNTTVMQGFNRSERCPRDTRIVQLVFPALYTVVFLTGILLNTLALWVFVHIPSSSTFIIYLKNTLVADLIMTLML
PFKILSDSHLAPWQLRAFVCRFSSVIFYETMYVGIVLLGLIAFDRFLKIIRPLRNIFLKKPVFAKTVSIFIWFFL
FFISLPNMILSNKEATPSSVKKCASLKGPLGLKWHQMVNNICQFIFWTVFILMLVFYVVIAKKVYDSYRKSKSKD
RKNNKKLEGKVFVVVAVFFVCFAPFHFARVPYTHSQTNNKTDCRLQNQLFIAKETTLFLAATNICMDPLIYIFLC
KKFTEKLPCMQGRKTTASSQENHSSQTDNITLG

FIGURE 2332

GTGCGGGGTCAAGCTCTCCGCCTTG**ATG**GTGGCCACTGGGCGGGCGCGTGGAGCCCGGCGGGCTGGGCAGCAGCC
GCCGCCGCCGCTGCGAGTCAACGTGGTGCTCAGCGGCCTCCTCGGCAAGTTGTTTCCAGGCCCAGCGCGAGCGTC
GCAACTCCGGCACGAGGGCAACCGACTGTACCGCGAGCGCCAGGTGGAGGCGGCACTGCTCAAGTACAACGAGGC
AGTTAAGTTGGCTCCAAATGACCACTTGCTTTATAGCAATCGGTCTCAGATTTATTTCACCTTGGAGTCTCATGA
GAATGCACTGCATGATGCAGAAATAGCATGTAAGCTCCGCCCGATGGGTTTTAAGGACAATCTGGAGCTCCCACA
TTGTTCTAGTCAGGAGGAAGCAGCAGCCAGGGGAGATGGCAGCAGTCTGATGGACCCAGCTAAAGTGAAGGGGGA
TGGTCAGCAGCACCACATGAAAGACCAGGAAGAAGAGGAGGAGAAGTGGGATGCTACCTCTCCAAAAGCTGCTTC
CAGCAAGACTGGAAAATGCCAGGAAAAGAAAAGGAAACATTGCCAGATTGAATCCCAAGAAGAAACGGGGATGCC
TAATAAAGCCTCCAAGCAAGATCCTCCCACTGATCAGGGGGACAAACCTGCTCTCAGTTTACCACTTGCATCTTT
CGACGCATCTGACCTTGAATGCGCTCTATGTATGAGATTATTCTATGAGCCAGTCACAACACCTTGCGGGCATAC
TTTTTGCTTAAAATGCCTAGAAAGATGCCTAGATCACAACGCAAAGTGTCCATTGTGCAAAGACGGTCTTTCACA
GTGCTTGGCATCAAGAAAATACAGCAAAAATGTAATAATGGAGGAGCTCATAGCTAAATTCCTTCCAGAAGAACT
GAAGGAACGAAGGAAGCTTTATGAAGAGGAAATGGAAGAACTTTCTAACCTTAATAAGAATGTGCCTATTTTCGT
GTGTACTATGGCCTATCCCACCGTTCCTTGTCCCCTGCACATCTTTGAGCCTTGTTACCGCCTGATGATTCGTAG
ATGCATTGAGACAGGCACGAGACAGTTTGGCATGTGCCTTGGAGATCCTGTCAAAGGGTTTGCAGAATATGGCTG
CATCCTAGAGATCAGAAATGTTCAATTCTTTGCTGATGGCCGCTCAGTGGTTGACAGCATAGGCAAGAGGCGCTT
CAGGGTGCTCCATCAGAGCCAGCGGGATGGCTACAACACAGCCGACATTGAATACATTGAAGACCAAAAGGTTCA
GGGAGAGGATTGTGCTGAGCTCATGGGATTACATAACTGTGTCTATCAGCAAGCGTCATTGTGGTTTCATTCGCT
CAAATTATCCCTAAAGAATCGGATACTCAATCACTTTGGTCCCATGCCGGAGAAAGACGCCGATCCTCAGATGAA
CCCGAATGGCCCAGCCTGGTGCTGGTGGATGTTAGCAGTTCTTCCCTTGGAAAGCCGAGCTCAGCTCCCCTTCCT
AGCAATGAGGTCCTTAAAGGACAGACTGAATGGTATTCGACGAGTCCTGGCCTTCATATCCCGAAACCAAAAC**TA**
GTGAGTGGATTGCCGAAGAGGAGCTCCCACCTTCCCCACTGCCGTCGGGGGGAGTCTTCTTGTAAATATATCTAA
TTGCAATAACATCTTAACAGAAGGGGGTGTCAAACAGAGGCATCAGCCTGCTGTTGATCACAGAGAGAAATTGAG
TAGAAAGACCAAAAGAATGTGACCTATTTGAAACTTTCTGTCTTAAGATGCTTCTTGACATGCTGCATAACTACA
TAAACAGCAGAGGTGTTTAAGAGCCCAGAAAAACATAATTTGATTTTAACATTAAAATTTCCAAAAGTTTAAAAA
AAAAAAAAAAAAAA

FIGURE 2333

MVATGRARGARRAGQQPPPPLRVNVVLSGLLGKLFPGPARASQLRHEGNRLYRERQVEAALLKYNEAVKLAPNDH
LLYSNRSQIYFTLESHENALHDAEIACKLRPMGFKDNLELPHCSSQEEAAARGDGSSLMDPAKVKGDGQQHHMKD
QEEEEEKWDATSPKAASSKTGKCQEKKRKHCQIESQEETGMPNKASKQDPPTDQGDKPALSLPLASFDASDLECA
LCMRLFYEPVTTPCGHTFCLKCLERCLDHNAKCPLCKDGLSQCLASRKYSKNVIMEELIAKFLPEELKERRKLYE
EEMEELSNLNKNVPIFVCTMAYPTVPCPLHIFEPCYRLMIRRCIETGTRQFGMCLGDPVKGFAEYGCILEIRNVQ
FFADGRSVVDSIGKRRFRVLHQSQRDGYNTADIEYIEDQKVQGEDCAELMGLHNCVYQQASLWFHSLKLSLKNRI
LNHFGPMPEKDADPQMNPNGPAWCWWMLAVLPLESRAQLPFLAMRSLKDRLNGIRRVLAFISRNQN

FIGURE 2334A

GACAGACAGG**ATG**GACTTCCTCCGGCTATACCTCCCTGGGCTGCACCAGGCCTTGAGGGGGGCACTGGATTCCCT
CGGCACCTTTGTCTCCTACCTCCTGGGAGATGCAGTCCCCACTGTAGAGCGGGAGGCGCAGGCGGCTGAGGAACT
GGGGGTGGTGGCGGTGGGAAAGACAGGGAAGATTGTAGAGGAGGAAGCCCAGGAGGACCTGGAGGGCCTTAGAGG
CAGCCAAAACGAGGGGGCTGGAAGGCTGAGAGGGCCTGGAGATGACAGAAGACATGAAGTGGGGAGCTCAGCTGT
AGAACAGACCTGGGGCTGGGGAGATGGCAGCTCCCATGGGTCCCAAGCAGAGAGGCAGGACAGTGGGGCTGGGGA
GACAGCCAAGGCTGCCAGGTGCCAGGAGCCAAGCGCCCACTTGGAGGCCAGAAAGAAATCCAAGGCAGGGTCTGG
GGCTTGCCAAGACAGGAGCGGCCAAGCCCAGGAGAGGCAGGAGTCCCATGAGCAGGAAGTGAACAGAGAAGAGAG
GCTGAGAAGCTGGGAACAGGAGGAGGAGGAGGAAGAGGTCAGGGCAAGAGAGCCAGGGATGGCCAGAGGGGCGGA
GTCAGAGTGGACCTGGCATGGGGAGACGGAGGGGAAGGCTGGTGCTGTTGGGCCAAAGGCGGCAGGGGACAACCG
GGAGATGGAGCAGGGGGTCAGGGAGGCAGATGCAGGGGAAACTGAGGAGCCTGGGGCCGAAGGGGCTGGGAAAGG
AGAAGAGGTGGTAGTGGTGGAGAAGGCCTGTGAAAGCACTAGGGCATGGGGGACGTGGGGCCCAGGGGCAGAGCC
TGAGGACTGGGGAATCTTAGGCAGAGAGGAGGCCAGGACAACCCCAGGTAGGGAAGAGGCCAGGGCAATTTTAGA
TGGGGAGGAAGCCAGGACAATCTCAGGCGGGGAGGAGGCTGAGACAGCCTCAGGCGGGGAGGAGGCTGAAACAGC
CTCAGGCGGGGAGGAGGCCGGGACAGCCTCGGGAGGGGAGGAGGCCGGGATATCCTCAGGCGGGGAGGCTGGGAC
AGCCTCAGGAGGGGAGGAGGCCGGGACAGCCTCAGGAGGGGACGAGGCCTGGACAACCTCAGGCAAAGAGGAGGC
TGACCTGCTGGGAGTCAGACAGACTCAATATGGAGCAGTTCCAGGAGAAAGGCTCCTAGAGGCTACTGGAAAAGT
CTGGGTCCTAGAGGAGGAGGGGGATGAGGAGAGAGAGGCTGAGGTGAGCCCTTTCCCCAAACAGGCCCAGGTCCT
GGGCACTGAAAGAACAGAAGAGGCTGCTGAGAGCCAGACCGCAGGGAGGGAAGCTGTGGGAGGCCAGGAGGCAGG
GGAGAGCTTTGAGGGCCAGGTAGACCTGCGTGGTAAGGAGGCTGAGATGAGGCAGGACTTGGGGATCAGGGCCGA
CCGGGCCAGGATGGAAGAGCTGGTACAGGCAGAGGAGGCCCAGGAGGAGAGAGGGAGCAGCAGGGATCCAGTGGC
TGAGCTGCCCTCAGATGGAGAGGCTGAAGGCACTGCCGACTTGGAGGCAACTCCAGAGGCCAGGCCTGAGGAGGA
GCTCACAGGGGAGGAGAGTGAGGCGGCCCAGACTAGCTGTGGCCTACTGGGCGTGGAATGGGGTGGCCTCACACA
CAGCGTCACCAAAGGCCAGGGACCTGAGCTGATGGGGGGTGCCCAGACCCCAACTAAGCAACCCGAGGAAAGGGA
GGCAGGGGAGGTGGAGCTCATGGGAGTTCTGGCCCTGAGCAAAGAGGAGCAGGAGAGGAGCCTGGAGGCAGGTCC
CAGGCACGCGGGGTCTGTAAAGCCTGAGGCCTCCGAGGCCTTCCCAGGAGCCTGGGAAAACCGCACGAGAAAGGA
CATGGAGAGAGGAAATACTCAGGAGGATGCGGCCGATGGCGAGCAGCGGGAGGAGGAGGAGACTGCGGGAGGCCA
GACCCTGGCGGCTGAGGCTGAAGGAGACCGAGAGTCTGAACTATCAGAAGTCCCAGAGGCAGGCGGGGAGGGGCT
GACAACCCAGGACGCGGGATGTGGAACTGAGGAGGGAGAGGCATCTGTCTCAGAGAACCAGGAGCTGGACGGAAG
CACAGGGGCAGACGCAGGGCCTTGCCCGTCACTGGGAGAGGCCTATGCCAGAGAAACTGAGGATGAGGAGGCGGA
GGCTGACAGAACATCCAGAAGAGGCTGGAGGCTGCAAGCGGTGGCTGTGGGCCTCCCGGACCGTGAGGATGCACA
GACTGGCTCTGTGGCTGCTGGGATTATGGGGGGTGATGTGGTCCCACACATCAGCGCTGCTGGCGCTGGTGAAGC
TTTGGAAGGGGCGCTTGGGCAAGGCTGGGACTCGAAAGAAAAGGAAGAGGCAGCAGCAGGAGAGCATGCAGGTGG
GCAAGAATTTGGTCTGGAGGGCTCAGCAGAGGAAGAGGTGACTGGCAGAGGCAGCCAAGTAGAGGCTTTTGAGTC
CAGGGAGGGAGGACCTTGGGGAGGGCGGGTAGAGGCCGAGGAATCTGCAGGCGCAGAGGACAGCTGTGGGCTGGA
TCCCGCGGGCTCCCAGACAGCGAGGGCAGAGGGGATGGGAGCCATGGTGGAGGCTGGGGGGCTTCTAGAAAAGTG
GACGCTGTTGGAAGAAGAGGCTGTTGGATGGCAGGAGAGAGAACAGAGGGAAGACAGTGAGGGGCGGTGTGGGGA
CTACCACCCTGAGGGAGAGGCACCAAGGCTCCTTGATGCAGAGGGTCTCATGGTGACCGGGGGCCGGAGGGCAGA
GGCCAAGGAGACTGAGCCAGAAAGCCTGGAACATGTCAGGGGCCAGGAGGAGCAGCCAACACACCAGGCCCCTGC
AGAAGCTGCGCCGGAGTCAGTCGGGGAAGCCGAGACGGCTGAGGCCATGGGCAGTGCCAGAGGAGGTGCTGCCAA
CAGCTGGAGCGAGGCCCCGCTCCCCGGGTCCCTCCTAGACGTCTCTGTCCCAAGGAGTCGCGTGCACCTCTCGAG
AAGCTCCTCACAGCGTCGCTCCCGGCCCTCTTTTCGTCGGACTCCGGCCTGGGAGCAGCAGGAGGAGCCCCCAGC
CCCCAACCCTCCTGAGGAGGAGCTGTCAGCTCCTGAGCAGAGACCCCTCCAGCTGGAGGAACCCCTGGAGCCAAG
CCCTCTGAGGCATGATGGGACCCCGGTGCCAGCCAGGAGAAGGCCCCTGGGACACGGGTTTGGCCTCGCGCACCC
TGGCATGATGCAGGAGCTGCAAGCCCGTCTGGGCCGGCCTAAGCCCCAG**TGA**CTGAGACCCGGTGCTCTGGGAGC
CAGGCCCTGAGTGGGTGCCAGAAGGCTTGCTCCAATGCCACTGAGCCCTGCTCCCTCTGCCACTGTGGACACATC
CTCTCCACCCTCTGGGCCTCAGTGTCTTGATGTATCATTCATGGAGCAGGCAAAACCAGACGTCTGGGAATACCG
TGAACTTAAGGAGTCTGATTCTCCGACACAGGCTGGTGGACCACCTACCCCACTGAGACCACCTCTCAGGGTGCC
TGCCCTGGTTCCTCCCCAGCCTGAGTCAGCTGTCTGGACTGCAAGGAGGCTGGGCACGGGGGCTCACGCCTGTCA

FIGURE 2334B

CCCCAGAGCTTTGGGAGGCCAAGGTGGGAGGATCGCTTGAGACCAGGAGTTCGAGACCAGCCTGGGCAGCATAGC
AAGATCCCCATCTTTTAAAAACAAAATAAAACAATAAAGACTGCAAGGAAAAAAAAAAAAAAAAAAAA

FIGURE 2335

MDFLRLYLPGLHQALRGALDSLGTFVSYLLGDAVPTVEREAQAAEELGVVAVGKTGKIVEEEAQEDLEGLRGSQN
EGAGRLRGPGDDRRHEVGSSAVEQTWGWGDGSSHGSQAERQDSGAGETAKAARCQEPSAHLEARKKSKAGSGACQ
DRSGQAQERQESHEQEVNREERLRSWEQEEEEEEVRAREPGMARGAESEWTWHGETEGKAGAVGPKAAGDNREME
QGVREADAGETEEPGAEGAGKGEEVVVVEKACESTRAWGTWGPGAEPEDWGILGREEARTTPGREEARAILDGEE
ARTISGGEEAETASGGEEAETASGGEEAGTASGGEEAGISSGGEAGTASGGEEAGTASGGDEAWTTSGKEEADLL
GVRQTQYGAVPGERLLEATGKVWVLEEEGDEEREAEVSPFPKQAQVLGTERTEEAAESQTAGREAVGGQEAGESF
EGQVDLRGKEAEMRQDLGIRADRARMEELVQAEEAQEERGSSRDPVAELPSDGEAEGTADLEATPEARPEEELTG
EESEAAQTSCGLLGVEWGGLTHSVTKGQGPELMGGAQTPTKQPEEREAGEVELMGVLALSKEEQERSLEAGPRHA
GSVKPEASEAFPGAWENRTRKDMERGNTQEDAADGEQREEEETAGGQTLAAEAEGDRESELSEVPEAGGEGLTTQ
DAGCGTEEGEASVSENQELDGSTGADAGPCPSLGEAYARETEDEEAEADRTSRRGWRLQAVAVGLPDREDAQTGS
VAAGIMGGDVVPHISAAGAGEALEGALGQGWDSKEKEEAAAGEHAGGQEFGLEGSAEEEVTGRGSQVEAFESREG
GPWGGRVEAEESAGAEDSCGLDPAGSQTARAEGMGAMVEAGGLLEKWTLLEEEAVGWQEREQREDSEGRCGDYHP
EGEAPRLLDAEGLMVTGGRRAEAKETEPESLEHVRGQEEQPTHQAPAEAAPESVGEAETAEAMGSARGGAANSWS
EAPLPGSLLDVSVPRSRVHLSRSSSQRRSRPSFRRTPAWEQQEEPPAPNPPEEELSAPEQRPLQLEEPLEPSPLR
HDGTPVPARRRPLGHGFGLAHPGMMQELQARLGRPKPQ

FIGURE 2336

GCCTGTCGCAGGCGTGCAGGGACCTGGACTCCGCCTCGTCCCCGGGGCTCGGGCAGCCGAGCC**ATG**GCGGGGAAC
TGTGGGGCCCGCGGCGCGCTGTCGGCGCACACGCTGCTGTTCGACCTGCCGCCCGCGCTGCTCGGAGAGCTCTGC
GCTGTTCTGGACAGCTGCGACGGCGCGCTGGGCTGGCGCGGCCTGGCAGAGAGACTTTCAAGCAGCTGGCTGGAT
GTTCGTCATATTGAAAAGTATGTAGACCAAGGTAAAAGTGGAACAAGAGAATTACTTTGGTCCTGGGCACAGAAA
AACAAGACCATCGGTGACCTTTTACAGGTCCTCCAGGAGATGGGACATCGTCGAGCTATTCATTTAATTACAAAC
TATGGAGCAGTGTTGAGTCCTTCAGAGAAGAGTTATCAGGAAGGTGGATTTCCAAATATATTATTCAAGGAAACA
GCCAATGTCACCGTGGATAATGTTCTTATTCCTGAACATAATGAAAAAGGAGTACTGCTTAAATCTTCCATCAGC
TTTCAAAATATCATAGAAGGAACTAGAAATTTCCACAAAGACTTCCTAATTGGAGAAGGAGAGATTTTTGAGGTA
TACAGAGTGGAGATTCAAAACCTAACATATGCTGTCAAATTATTTAAACAGGAGAAAAAAATGCAGTGTAAGAAG
CATTGGAAGAGGTTTTTATCTGAGCTTGAAGTTTTACTACTGTTTCATCACCCAAACATACTAGAGTTGGCTGCA
TATTTTACAGAGACTGAGAAGTTCTGTCTGATTTATCCATACATGAGAAATGGAACACTTTTTGACAGATTGCAG
TGTGTAGGTGACACGGCCCCACTCCCTTGGCACATTCGAATCGGTATATTAATAGGAATATCCAAAGCCATTCAC
TACCTGCACAACGTTCAACCATGCTCGGTCATCTGTGGCAGTATATCAAGTGCAAACATCCTTTTGGATGATCAG
TTTCAACCCAAACTAACTGATTTTGCCATGGCACACTTCCGGTCCCACCTAGAACATCAGAGTTGTACCATAAAT
ATGACCAGCAGCAGCAGTAAACATCTGTGGTACATGCCAGAAGAGTACATCAGACAGGGGAAACTTTCCATTAAA
ACAGATGTCTACAGCTTTGGAATTGTAATAATGGAAGTTCTAACAGGATGTAGAGTAGTGTTAGATGATCCAAAA
CATATCCAGCTGCGGGATCTCCTTAGAGAATTGATGGAGAAGAGAGGCCTGGATTCATGTCTCTCATTTCTAGAT
AAGAAAGTGCCTCCCTGCCCTCGGAATTTCTCTGCCAAGCTCTTCTGTTTGGCAGGCCGGTGTGCTGCAACGCGG
GCAAAGTTAAGACCATCAATGGATGAAGTTTTAAATACTCTTGAAAGTACTCAAGCCAGCTTGTATTTTGCTGAA
GATCCTCCCACATCACTAAAGTCCTTCAGGTGTCCTTCTCCTCTATTCCTGGAGAATGTACCAAGTATTCCAGTG
GAAGATGATGAAAGCCAGAATAACAATTTACTACCTTCTGATGAAGGCCTGAGGATAGACAGAATGACTCAGAAA
ACTCCTTTTGAATGCAGCCAGTCTGAGGTTATGTTTCTGAGCTTGGACAAAAAGCCAGAGAGCAAGAGAAATGAG
GAAGCTTGCAACATGCCCAGTTCTTCTTGTGAAGAAAGTTGGTTCCCAAAGTATATAGTTCCATCCCAGGACTTA
AGGCCCTATAAGGTAAATATAGATCCTTCTTCAGAAGCTCCAGGGCATTCTTGCAGGAGCAGGCCAGTGGAGAGC
AGCTGTTCCTCCAAATTTTCCTGGGATGAATATGAACAGTACAAAAAAGAA**TAA**ATTCTACCAGAAGATAAAGAA
AAAAGCAAGTATTGCATAGGCACCTGAGCATAGGTATGACCTTGGGAAGACATTGGCTCCATAAGCAATGCCAAG
AGAATGATCAATAGTGAGTTTGGGTGATGCAGATAAACAATCTGGATAATTCCATTTCTTTTTTCCCAAACCCTC
AAACAGAGTGCCTTAAAAAATTGTTTTATCAGGATAATTGTCTCATGACCAAATCCACGCTCAATTAGAGCCATT
CAAAATTCCTTAAGATCATGGGTTCTGACTTCAGCCAAACAAAACAATCAAAACCTACCAAAAAGGGACTGGATT
GTAATGTCCTCTCCATCATCCTCAGTGTGAGTCCTCAGAGCCTCCATCTGCCAAGAACATTCAGTTGGATTCCAT
CGTTTGGTTTAGCTTGCTTGCACGGGTTGTAGGAAATG

FIGURE 2337

MAGNCGARGALSAHTLLFDLPPALLGELCAVLDSCDGALGWRGLAERLSSSWLDVRHIEKYVDQGKSGTRELLWS
WAQKNKTIGDLLQVLQEMGHRRAIHLITNYGAVLSPSEKSYQEGGFPNILFKETANVTVDNVLIPEHNEKGVLLK
SSISFQNIIEGTRNFHKDFLIGEGEIFEVYRVEIQNLTYAVKLFKQEKKMQCKKHWKRFLSELEVLLLFHHPNIL
ELAAYFTETEKFCLIYPYMRNGTLFDRLQCVGDTAPLPWHIRIGILIGISKAIHYLHNVQPCSVICGSISSANIL
LDDQFQPKLTDFAMAHFRSHLEHQSCTINMTSSSSKHLWYMPEEYIRQGKLSIKTDVYSFGIVIMEVLTGCRVVL
DDPKHIQLRDLLRELMEKRGLDSCLSFLDKKVPPCPRNFSAKLFCLAGRCAATRAKLRPSMDEVLNTLESTQASL
YFAEDPPTSLKSFRCPSPLFLENVPSIPVEDDESQNNNLLPSDEGLRIDRMTQKTPFECSQSEVMFLSLDKKPES
KRNEEACNMPSSSCEESWFPKYIVPSQDLRPYKVNIDPSSEAPGHSCRSRPVESSCSSKFSWDEYEQYKKE

FIGURE 2338

CAGTCTTGTTTCGGGTTCCGGCTGCGTTGGGCTTGCGTGCGGCTCGCTAAGACT**ATG**GCGTCCGGGCCTCATTCG
ACAGCTACTGCTGCCGCAGCCGCCTCATCGGCCGCCCCAAGCGCGGGCGGCTCCAGCTCCGGGACGACGACCACG
ACGACGACCACGACGGGAGGGATCCTGATCGGCGATCGCCTGTACTCGGAAGTTTCACTTACCATCGACCACTCT
CTGATTCCGGAGGAGAGGCTCTCGCCCACCCCATCCATGCAGGATGGGCTCGACCTGCCCAGTGAGACGGACTTA
CGCATCCTGGGCTGCGAGCTCATCCAGGCCGCCGGCATTCTCCTCCGGCTGCCGCAGGTGGCGATGGCAACGGGG
CAGGTGTTGTTTCATCGTTTTTTCTACTCCAAATCTTTCGTCAAACACAGTTTCGAGATTGTTGCTATGGCTTGT
ATTAATCTTGCATCAAAAATCGAAGAAGCACCTAGAAGAATAAGAGATGTGATTAATGTATTCCACCACCTCCGC
CAGTTAAGAGGAAAAAGGACTCCAAGCCCCCTGATCCTTGATCAGAACTACATTAACACCAAAAATCAAGTTATC
AAAGCAGAGAGGAGGGTGCTAAAGGAGTTGGGATTTTGTGTTCATGTCAAGCATCCTCATAAGATCATTGTTATG
TATTTACAAGTCTTAGAATGTGAACGTAATCAAACCCTGGTTCAAACTGCCTGGAATTACATGAATGACAGTCTT
CGAACCAATGTGTTTGTTCGATTTCAACCAGAGACTATAGCATGTGCTTGCATCTACCTTGCAGCTAGAGCACTT
CAGATTCCGTTGCCAACTCGTCCCCATTGGTTTCTTCTTTTTGGTACTACAGAAGAGGAAATCCAGGAAATCTGC
ATAGAAACACTTAGGCTTTATACCAGAAAAAAGCCAAACTATGAATTACTGGAAAAAGAAGTAGAAAAAAGAAAA
GTAGCCTTACAAGAAGCCAAATTAAAAGCAAAGGGATTGAATCCGGATGGAACTCCAGCCCTTTCAACCCTGGGT
GGATTTTCTCCAGCCTCCAAGCCATCATCACCAAGAGAAGTAAAAGCTGAAGAGAAATCACCAATCTCCATTAAT
GTGAAGACAGTCAAAAAAGAACCTGAGGATAGACAACAGGCTTCCAAAAGCCCTTACAATGGTGTAAGAAAAGAC
AGCAAGAGAAGTAGAAATAGCAGAAGTGCAAGTCGATCGAGGTCAAGAACACGATCACGTTCTAGATCACATACT
CCAAGAAGACACTATAATAATAGGCGGAGTCGATCTGGAACATACAGCTCGAGATCAAGAAGCAGGTCCCGCAGT
CACAGTGAAAGCCCTCGAAGACATCATAATCATGGTTCTCCTCACCTTAAGGCCAAGCATACCAGAGATGATTTA
AAAAGTTCAAACAGACATGGTCATAAAAGGAAAAAATCTCGTTCTCGATCTCAGAGCAAGTCTCGGGATCACTCA
GATGCAGCCAAGAAACACAGGCATGAAAGGGGACATCATAGGGACAGGCGTGAACGATCTCGCTCCTTTGAGAGG
TCCCATAAAAGCAAGCACCATGGTGGCAGTCGCTCAGGACATGGCAGGCACAGGCGC**TGA**CTTTGTCTTCCTTTG
AGCCTGCATCAGTTCTTGGTTTTGCCTATCTACCAGTGTGATGTATGGACTCAATCAAAAACATTAAACGCAAAA
CTGATTAGGATTTGATTTCTTGAAACCCTCTAGGTCTCTAGAACACTGAGGACAGTTTCTTTTGAAAAGAACTAT
GTTAATTTTTTTGCACATTAAAATGCCCTAGCAGTATCTAATTAAAAACCATGGTCAGGTTCAATTGTACTTTAT
TATAGTTGTGTATTGTTTATTGCTATAAGAACTGGAGCGTGAATTCTGTAAAAATGTATCTTATTTTTATACAGA
TAAAATTGCAGACACTGTTCTATTTAAGTGGTTATTTGTTTAAATGATGGTGAATACTTTCTTAACACTGGTTTG
TCTGCATGTGTAAAGATTTTTACAAGGAAATAAAATACAAATCTTGTTTTT

FIGURE 2339

MASGPHSTATAAAAASSAAPSAGGSSSGTTTTTTTTTGGILIGDRLYSEVSLTIDHSLIPEERLSPTPSMQDGLD
LPSETDLRILGCELIQAAGILLRLPQVAMATGQVLFHRFFYSKSFVKHSFEIVAMACINLASKIEEAPRRIRDVI
NVFHHLRQLRGKRTPSPLILDQNYINTKNQVIKAERRVLKELGFCVHVKHPHKIIVMYLQVLECERNQTLVQTAW
NYMNDSLRTNVFVRFQPETIACACIYLAARALQIPLPTRPHWFLLFGTTEEEIQEICIETLRLYTRKKPNYELLE
KEVEKRKVALQEAKLKAKGLNPDGTPALSTLGGFSPASKPSSPREVKAEEKSPISINVKTVKKEPEDRQQASKSP
YNGVRKDSKRSRNSRSASRSRSRTRSRSRSHTPRRHYNNRRSRSGTYSSRSRSRSRSHSESPRRHHNHGSPHLKA
KHTRDDLKSSNRHGHKRKKSRSRSQSKSRDHSDAAKKHRHERGHHRDRRERSRSFERSHKSKHHGGSRSGHGRHR
R

FIGURE 2340A

GTAGACAGATCCAGGCTCACCAGTCCTGTGCCACTGGGCTTTTGGCGTTCTGCACAAGGCCTACCCGCAGATGCC
ATGCCTGCTCCCCCAGCCTAATGGGCTTTG**ATG**GGGGAAGAGGGTGGTTCAGCCTCTCACGATGAGGAGGAAAGA
GCAAGTGTCCTCCTCGGACATTCTCCGGGTTGTGAAATGTGCTCGCAGGAGGCTTTTCAGGCACAGAGGAGCCAG
CTGGTCGAGCTGCTGGTCTCAGGGTCCCTGGAAGGCTTCGAGAGTGTCCTGGACTGGCTGCTGTCCTGGGAGGTC
CTCTCCTGGGAGGACTACGAGGGCTTCCACCTCCTGGGCCAGCCTCTCTCCCACTTGGCCAGGCGCCTTCTGGAC
ACCGTCTGGAATAAGGGTACTTGGGCCTGTCAGAAGCTCATCGCGGCTGCCCAAGAAGCCCAGGCCGACAGCCAG
TCCCCCAAGCTGCATGGCTGCTGGGACCCCCACTCGCTCCACCCAGCCCGAGACCTGCAGAGTCACCGGCCAGCC
ATTGTCAGGAGGCTCCACAGCCATGTGGAGAACATGCTGGACCTGGCATGGGAGCGGGGTTTCGTCAGCCAGTAT
GAATGTGATGAAATCAGGTTGCCGATCTTCACACCGTCCCAGAGGGCAAGAAGGCTGCTTGATCTTGCCACGGTG
AAAGCGAATGGATTGGCTGCCTTCCTTCTACAACATGTTCAGGAATTACCAGTCCCATTGGCCCTGCCTTTGGAA
GCTGCCACATGCAAGAAGTATATGGCCAAGCTGAGGACCACGGTGTCTGCTCAGTCTCGCTTCCTCAGTACCTAT
GATGGAGCAGAGACGCTCTGCCTGGAGGACATATACACAGAGAATGTCCTGGAGGTCTGGGCAGATGTGGGCATG
GCTGGACCCCCGCAGAAGAGCCCAGCCACCCTGGGCCTGGAGGAGCTCTTCAGCACCCCTGGCCACCTCAATGAC
GATGCGGACACTGTGCTGGTGGTGGGTGAGGCGGGCAGTGGCAAGAGCACGCTCCTGCAGCGGCTGCACTTGCTG
TGGGCTGCAGGGCAAGACTTCCAGGAATTTCTCTTTGTCTTCCCATTCAGCTGCCGGCAGCTGCAGTGCATGGCC
AAACCACTCTCTGTGCGGACTCTACTCTTTGAGCACTGCTGTTGGCCTGATGTTGGTCAAGAAGACATCTTCCAG
TTACTCCTTGACCACCCTGACCGTGTCCTGTTAACCTTTGATGGCTTTGACGAGTTCAAGTTCAGGTTCACGGAT
CGTGAACGCCACTGCTCCCCGACCGACCCCACCTCTGTCCAGACCCTGCTCTTCAACCTTCTGCAGGGCAACCTG
CTGAAGAATGCCCGCAAGGTGGTGACCAGCCGTCCGGCCGCTGTGTCGGCGTTCCTCAGGAAGTACATCCGCACC
GAGTTCAACCTCAAGGGCTTCTCTGAACAGGGCATCGAGCTGTACCTGAGGAAGCGCCATCATGAGCCCGGGGGTG
GCGGACCGCCTCATCCGCCTGCTCCAAGAGACCTCAGCCCTGCACGGTTTGTGCCACCTGCCTGTCTTCTCATGG
ATGGTGTCCAAATGCCACCAGGAACTGTTGCTGCAGGAGGGGGGGTCCCCAAAGACCACTACAGATATGTACCTG
CTGATTCTGCAGCATTTTCTGCTGCATGCCACCCCCCCAGACTCAGCTTCCCAAGGTCTGGGACCCAGTCTTCTT
CGGGGCCGCCTCCCCACCCTCCTGCACCTGGGCAGACTGGCTCTGTGGGGCCTGGGCATGTGCTGCTACGTGTTC
TCAGCCCAGCAGCTCCAGGCAGCACAGGTCAGCCCTGATGACATTTCTCTTGGCTTCCTGGTGCGTGCCAAAGGT
GTCGTGCCAGGGAGTACGGCGCCCCTGGAATTCCTTCACATCACTTTCCAGTGCTTCTTTGCCGCGTTCTACCTG
GCACTCAGTGCTGATGTGCCACCAGCTTTGCTCAGACACCTCTTCAATTGTGGCAGGCCAGGCAACTCACCAATG
GCCAGGCTCCTGCCCACGATGTGCATCCAGGCCTCGGAGGGAAAGGACAGCAGCGTGGCAGCTTTGCTGCAGAAG
GCCGAGCCGCACAACCTTCAGATCACAGCAGCCTTCCTGGCAGGGCTGTTGTCCCGGGAGCACTGGGGCCTGCTG
GCTGAGTGCCAGACATCTGAGAAGGCCCTGCTCCGGCGCCAGGCCTGTGCCCGCTGGTGTCTGGCCCGCAGCCTC
CGCAAGCACTTCCACTCCATCCCGCCAGCTGCACCGGGTGAGGCCAAGAGCGTGCATGCCATGCCCGGGTTCATC
TGGCTCATCCGGAGCCTGTACGAGATGCAGGAGGAGCGGCTGGCTCGGAAGGCTGCACGTGGCCTGAATGTTGGG
CACCTCAAGTTGACATTTTGCAGTGTGGGCCCCACTGAGTGTGCTGCCCTGGCCTTTGTGCTGCAGCACCTCCGG
CGGCCCGTGGCCCTGCAGCTGGACTACAACTCTGTGGGTGACATTGGCGTGGAGCAGCTGCTGCCTTGCCTTGGT
GTCTGCAAGGCTCTGTATTTGCGCGATAACAATATCTCAGACCGAGGCATCTGCAAGCTCATTGAATGTGCTCTT
CACTGCGAGCAATTGCAGAAGTTAGCTCTATTCAACAACAAATTGACTGACGGCTGTGCACACTCCATGGCTAAG
CTCCTTGCATGCAGGCAGAACTTCTTGGCATTGAGGCTGGGGAATAACTACATCACTGCCGCGGGAGCCCAAGTG
CTGGCCGAGGGGCTCCGAGGCAACACCTCCTTGCAGTTCCTGGGATTCTGGGGCAACAGAGTGGGTGACGAGGGG
GCCCAGGCCCTGGCTGAAGCCTTGGGTGATCACCAGAGCTTGAGGTGGCTCAGCCTGGTGGGGAACAACATTGGC
AGTGTGGGTGCCCAAGCCTTGGCACTGATGCTGGCAAAGAACGTCATGCTAGAAGAACTCTGCCTGGAGGAGAAC
CATCTCCAGGATGAAGGTGTATGTTCTCTCGCAGAAGGACTGAAGAAAAATTCAAGTTTGAAAATCCTGAAGTTG
TCCAATAACTGCATCACCTACCTAGGGGCAGAAGCCCTCCTGCAGGCCCTTGAAAGGAATGACACCATCCTGGAA
GTCTGGCTCCGAGGGAACACTTTCTCTCTAGAGGAGGTTGACAAGCTCGGCTGCAGGGACACCAGACTCTTGCTT
TGAAGTCTCCGGGAGGATGTTCGTCTCAGTTTGTTTGTGAGCAGGCTGTGAGTTTGGGCCCCAGAGGCTGGGTGA
CATGTGTTGGCAGCCTCTTCAAAATGAGCCCTGTCCTGCCTAAGGCTGAACTTGTTTTCTGGGAACACCATAGGT
CACCTTTATTCTGGCAGAGGAGGGAGCATCAGTGCCCTCCAGGATAGACTTTTCCCAAGCCTACTTTTGCCATTG
ACTTCTTCCCAAGATTCAATCCCAGGATGTACAAGGACAGCCCCTCCTCCATAGTATGGGACTGGCCTCTGCTGA
TCCTCCCAGGCTTCCGTGTGGGTCAGTGGGGCCCATGGATGTGCTTGTTAACTGAGTGCCTTTTGGTGGAGAGGC

FIGURE 2340B

CCGGCCTCTCACAAAAGACCCCTTACCACTGCTCTGATGAAGAGGAGTACACAGAACACATAATTCAGGAAGCAG
CTTTCCCCATGTCTCGACTCATCCATCCAGGCCATTCCCCGTCTCTGGTTCCTCCCCTCCTCCTGGACTCCTGCA
CACGCTCCTTCCTCTGAGGCTGAAATTCAGAATATTAGTGACCTCAGCTTTGATATTTCACTTACAGCACCCCCA
ACCCTGGCACCCAGGGTGGGAAGGGCTACACCTTAGCCTGCCCTCCTTTCCGGTGTTTAAGACATTTTTGGAAGG
GGACACGTGACAGCCGTTTGTTCCCCAAGACATTCTAGGTTTGCAAGAAAAATATGACCACACTCCAGCTGGGAT
CACATGTGGACTTTTATTTCCAGTGAAATCAGTTACTCTTCAGTTAAGCCTTTGGAAACAGCTCGACTTTAAAAA
GCTCCAAATGCAGCTTTAAAAAATTAATCTGGGCCAGAATTTCAAACGGCCTCACTAGGCTTCTGGTTGATGCCT
GTGAACTGAACTCTGACAACAGACTTCTGAAATAGACCCACAAGAGGCAGTTCCATTTCATTTGTGCCAGAATGC
TTTAGGATGTACAGTTATGGATTGAAAGTTTACAGGAAAAAAAATTAGGCCGTTCCTTCAAAGCAAATGTCTTCC
TGGATTATTCAAAATGATGTATGTTGAAGCCTTTGTAAATTGTCAGATGCTGTGCAAATGTTATTATTTTAAACA
TTATGATGTGTGAAAACTGGTTAATATTTATAGGTCACTTTGTTTTACTGTCTTAAGTTTATACTCTTATAGACA
ACATGGCCGTGAACTTTATGCTGTAAATAATCAGAGGGGAATAAACTGTTGAGTCAAAAC

FIGURE 2341

MGEEGGSASHDEEERASVLLGHSPGCEMCSQEAFQAQRSQLVELLVSGSLEGFESVLDWLLSWEVLSWEDYEGFH
LLGQPLSHLARRLLDTVWNKGTWACQKLIAAAQEAQADSQSPKLHGCWDPHSLHPARDLQSHRPAIVRRLHSHVE
NMLDLAWERGFVSQYECDEIRLPIFTPSQRARRLLDLATVKANGLAAFLLQHVQELPVPLALPLEAATCKKYMAK
LRTTVSAQSRFLSTYDGAETLCLEDIYTENVLEVWADVGMAGPPQKSPATLGLEELFSTPGHLNDDADTVLVVGE
AGSGKSTLLQRLHLLWAAGQDFQEFLFVFPFSCRQLQCMAKPLSVRTLLFEHCCWPDVGQEDIFQLLLDHPDRVL
LTFDGFDEFKFRFTDRERHCSPTDPTSVQTLLFNLLQGNLLKNARKVVTSRPAAVSAFLRKYIRTEFNLKGFSEQ
GIELYLRKRHHEPGVADRLIRLLQETSALHGLCHLPVFSWMVSKCHQELLLQEGGSPKTTTDMYLLILQHFLLHA
TPPDSASQGLGPSLLRGRLPTLLHLGRLALWGLGMCCYVFSAQQLQAAQVSPDDISLGFLVRAKGVVPGSTAPLE
FLHITFQCFFAAFYLALSADVPPALLRHLFNCGRPGNSPMARLLPTMCIQASEGKDSSVAALLQKAEPHNLQITA
AFLAGLLSREHWGLLAECQTSEKALLRRQACARWCLARSLRKHFHSIPPAAPGEAKSVHAMPGFIWLIRSLYEMQ
EERLARKAARGLNVGHLKLTFCSVGPTECAALAFVLQHLRRPVALQLDYNSVGDIGVEQLLPCLGVCKALYLRDN
NISDRGICKLIECALHCEQLQKLALFNNKLTDGCAHSMAKLLACRQNFLALRLGNNYITAAGAQVLAEGLRGNTS
LQFLGFWGNRVGDEGAQALAEALGDHQSLRWLSLVGNNIGSVGAQALALMLAKNVMLEELCLEENHLQDEGVCSL
AEGLKKNSSLKILKLSNNCITYLGAEALLQALERNDTILEVWLRGNTFSLEEVDKLGCRDTRLLL

FIGURE 2342

GCGCGCCACGGCAGGAAAGGGCGGTCCTGCGCTGTGGCCCACGCTCGCTCCCGCTGTCGGACTCTGGGCCTGGAC
CGCGCGTGGCCGGCGCCAAAAGCGAGAGGCATGAGCGCGCGCCCGGGCCAGTGAACTGCTCGGGG**ATG**GACTGCG
GCTCGGTCGGCGGCCAGAGGACCCAGCGCCTGCCCGGCCGCCAGCGGCTTCTCTTCTTGCCCGTGGGCCTCAGCG
GAAGACCGGGCGGCAGCGAAACCTCAGCACGCCGCTGCCCCTCTGCGCTCTCCGACGGTCTGGGGGCGCTGCGCC
CTCGCGCCCCGGCGGCCCGCGGCGGCGTGTCACGTGCCTCACCGCTGCTCCTCCTCCTGCTAGTGCCCTCCCCGC
GCTTGGCCGCCGCAGCCCCGCGCCGGCAGCTCGGGGACTGGGAGCGCTCGCGCCTCGGGTATGCCGCACCCCCGG
CCGGGCGCAGCGGCGCGTGGAGGTGCTCACCGGGCGTCGCCGCTGCCGCCGGCGCCCTTCCCCAGTACCACGGCC
CGGCGCCTGCACTCGTTTCCTGCAGGAGAGAGCTAAGCTTGTCTGCTGGATCCCTGCAGCTGGAGCGCAAAAGGA
GAGATTTCACCTCTTCTGGGAGCAGGAAACTCTACTTCGACACTCATGCCTTAGTGTGCTTACTGGAAGACAATG
AATCTCACTCTTTCATCCAGGCTGGAGTGCAGTGGCACAGTCTTGGCCTACTGCAACCCCCACCTCCCGGTTTCA
AGCGATCCTCCCACCTCATCCTCCTGAGTAGCTGGGATTACAGGCATGCACCACCACACCTGGATAATTTTTCTG
TATTTTTACTAGAGACGGGGTTTCACCATGTTGGCCAGGCTGGTCTCAAACTGCTGACCTCAAGTGATCCACCCA
CCTTGGCCTCC**TAA**AGTGCTGGGATTACAGGCGTGAACCACTGTGTCCAGTTGCCAAACCTAATTATGTTTAAAC
ATGAACTCTTTTTTTAATTAAAATTTTTTAAAATTTTATTTACATTAAAATGGAGATGGGATCACTATGTTGCCC
ATGCTGGTTCTGAACTCCTGGGCTCAAAGATCCTCCCGCCTTGGTCTCCCAGAGTGTTAGGATTACAGGCGTGAG
CCACCACACCCAGCCAGTGAACTCTTCTTAATAAAACTTTAAAATTTGGCAAAAGTTTAGTTTGAGTTTTTAAAA
ACTAGGAAGACAGACGAGAAAAAAGAAAACAGAGTCAGAGCTAAACAATGTTAACATTTTGGGTTTGCTACTCAA
CAAGCAGAAATCATTGTGTCTGCATTGGTCAAGATCCTGGAGGCCAACATGGACATCGTCTACAAAGATATGGTC
ACCAAGATGCAGCAGGAAATCACTTTTCAGCAAGTAATGTCTCAGATTGCGAATGTGAAAAAGGATATGATTATT
TTGGAGAAGAGTGAATTTTCAGCCCTCAGAGCAGAAAATGAGAAAATAAAACTCGAACTACATCAGTTAAAACAA
CAAGTAATGGATGAAGTGATCAAAGTCCGAACAGATACCAAATTAGACTTCAACCTAGAAAAGAGCAGAGTAAAA
GAATTGTATTCATTGAACGAAAAGAAGCTGCTGGAATTGAGAACAGAAATAGTGGCATTGCATGCCCAGCAAGAT
CGGGCCCTTACCCAGACAGACAGGAAGATCGAAACTGAGGTTGCTGGCCTCAAAACCATGCTTGAGTCACACAAG
CTTGATAATATTAAATATTTAGCAGGGTCTATATTTACGTGCCTAACAGTAGCTCTGGGATTTTATCGCCTGTGG
ATCTAATAAAGTGTCTATTTAAAGTGAAAAAAAAAAAAAAAA

FIGURE 2343

MDCGSVGGQRTQRLPGRQRLLFLPVGLSGRPGGSETSARRCPSALSDGLGALRPRAPAARGGVSRASPLLLLLLV
PSPRLAAAAPRRQLGDWERSRLGYAAPPAGRSGAWRCSPGVAAAAGALPQYHGPAPALVSCRRELSLSAGSLQLE
RKRRDFTSSGSRKLYFDTHALVCLLEDNESHSFIQAGVQWHSLGLLQPPPPGFKRSSHLILLSSWDYRHAPPHLD
NFSVFLLETGFHHVGQAGLKLLTSSDPPTLAS

FIGURE 2344

ATTCCAAGTCGCTGCTGTGCAGAGCAGCAAGTGCTCCGTGCAGGGCTGTTGCTATCACTTGGAGGTGAACAGCCT
CTTTTGCCGGTATTCAGTGAAGAAAGCAAGTCTAAATATGCAGTTCTCTCACTGGAGTGAAAGATGTTTTGTTCA
TTTCTAATCAACT**ATG**CTAGACAGCTGCAAGCTGAAAAGTGCCTGCAATTTGCCATTTATTTGTAATAAGAAAAT
AATAAACACTGCTGGAACCAGTAATGCAGAAGTCCCCTTGGCTGATCCCGGAATGTACCAGCTGGACATTACATT
AAGAAGGGGTCAAAGTTTAGCTGCTCGAGATCGAGGAGGGACGAGTGATCCATATGTGAAGTTTAAAATCGGAGG
AAAAGAAGTTTTTAGAAGTAAGATAATACACAAGAACCTCAACCCTGTGTGGGAAGAAAAAGCTTGTATTCTGGT
TGATCATCTTAGGGAGCCATTGTATATAAAGGTATTTGACTATGATTTTGGACTACAGGATGACTTTATGGGCTC
AGCCTTTCTGGATCTGACACAATTGGAGTTAAACAGGCCCACAGATGTGACCCTTACTCTGAAAGATCCTCATTA
TCCTGACCATGATCTTGGAATCATTTTGCTCTCAGTCATCCTTACCCCTAAAGAAGGAGAGTCCAGGGATGTGAC
AATGCTAATGAGGAAGAGTTGGAAAAGATCAAGTAAGTTTCAGACCCAAAGTTTACGCCTATCAGACCTACACAG
AAAATCGCATCTTTGGAGAGGAATAGTCAGCATCACCTTGATTGAAGGGAGAGACCTCAAGGCCATGGATTCCAA
CGGGTTGAGCGATCCCTACGTGAAGTTCCGGCTTGGGCATCAGAAGTACAAGAGCAAGATTATGCCAAAAACGTT
GAATCCTCAGTGGAGGGAACAATTTGATTTTCACCTTTATGAAGAAAGAGGAGGAGTCATTGATATCACTGCATG
GGACAAAGATGCTGGGAAAAGGGATGATTTCATTGGCAGGTGCCAGGTCGACCTGTCAGCCCTCAGTAGGGAACA
GACGCACAAGCTGGAGTTGCAGCTGGAAGAGGGTGAGGGACACCTGGTGCTGCTGGTCACTCTGACAGCATCAGC
CACAGTCAGCATCTCTGACCTGTCTGTCAACTCCCTGGAGGACCAGAAGGAACGAGAGGAGATATTAAAGAAATA
TAGCCCATTGAGGATATTTCACAACCTGAAAGATGTGGGATTTCTCCAGGTGAAAGTCATCAGAGCGGAAGGGTT
AATGGCTGCCGACGTCACTGGAAAAAGTGACCCATTTTGTGTGGTAGAACTGAACAACGATAGACTGCTAACACA
TACTGTCTACAAAAATCTCAATCCTGAGTGGAATAAAGTCTTCACGTTCAACATTAAAGATATCCATTCAGTTCT
TGAAGTGACAGTTTATGATGAAGATCGGGATCGAAGTGCTGACTTTCTGGGCAAAGTTGCTATACCATTGCTGTC
TATTCAAAATGGTGAACAGAAAGCCTACGTCTTGAAAAACAAGCAGCTGACAGGGCCAACAAAGGGGGTCATCTA
TCTTGAAATAGATGTGATTTTTAATGCTGTGAAAGCCAGCTTACGAACATTAATACCCAAAGAACAGAAGTACAT
TGAAGAGGAAAACAGACTCTCTAAACAGCTGCTACTAAGAAACTTTATCAGAATGAAACGTTGTGTCATGGTGCT
GGTAAATGCTGCATACTACGTTAATAGTTGCTTTGATTGGGATTCACCCCCAAGGAGTCTCGCTGCTTTTGTGGT
AGTGGAGGACATGCTAGAGGACGAGGAAGAAGAAGATGACAAAGATGACAAGGACAGTGAAAAAAAGGGATTTAT
AAATAAAATCTATGCCATCCAGGAGGTATGTGTCAGTGTCCAGAACATCCTAGATGAAGTGGCTTCCTTTGGCGA
AAGGATAAAGAATACTTTCAACTGGACTGTCCCATTCTTAAGCTGGCTGGCCATTGTAGCCCTCTGTGTGTTCAC
AGCCATCCTGTACTGCATTCCGCTGAGATACATTGTCCTTGTCTGGGGCATCAATAAATTTACAAAAAAGCTTCG
GAGTCCATATGCAATTGATAACAATGAACTACTTGACTTCCTTTCCAGAGTCCCTTCAGATGTACAAGTGGTGCA
ATACCAAGAACTGAAACCAGATCCTTCTCATAGCCCATATAAAAGAAAGAAAAACAATCTTGGC**TAG**CCAGCTCC
CAGCAATGAGGAGACCAGCATCTGTTTGGGAAGATAAAAGAAAAAGCCCTCAGCCTCAGCAGCATTTCCTTTCTT
TCTGCTTTTTATTTATTTTGCCTTTTTATCATGATCGAGAGAATCTGTAAATAGTGTACAAAGGCATATGTCTTT
GAATATATACTTCTATTGTACAGACTCAACTTGATAAAGGTTTTGCTACTGCTGTGTCAAAACCTTGTTAGCTGT
GGATAATAATATAACACACTGAAAGAACAAATATAAGAATGATAACACTGGAAGATATATTCTTATCTAATTACT
AGTGGATTAAATACTCACCTGTGCTCTGATTAAATCTACATCAATTGT

FIGURE 2345

MLDSCKLKSACNLPFICNKKIINTAGTSNAEVPLADPGMYQLDITLRRGQSLAARDRGGTSDPYVKFKIGGKEVF
RSKIIHKNLNPVWEEKACILVDHLREPLYIKVFDYDFGLQDDFMGSAFLDLTQLELNRPTDVTLTLKDPHYPDHD
LGIILLSVILTPKEGESRDVTMLMRKSWKRSSKFQTQSLRLSDLHRKSHLWRGIVSITLIEGRDLKAMDSNGLSD
PYVKFRLGHQKYKSKIMPKTLNPQWREQFDFHLYEERGGVIDITAWDKDAGKRDDFIGRCQVDLSALSREQTHKL
ELQLEEGEGHLVLLVTLTASATVSISDLSVNSLEDQKEREEILKKYSPLRIFHNLKDVGFLQVKVIRAEGLMAAD
VTGKSDPFCVVELNNDRLLTHTVYKNLNPEWNKVFTFNIKDIHSVLEVTVYDEDRDRSADFLGKVAIPLLSIQNG
EQKAYVLKNKQLTGPTKGVIYLEIDVIFNAVKASLRTLIPKEQKYIEEENRLSKQLLLRNFIRMKRCVMVLVNAA
YYVNSCFDWDSPPRSLAAFVVVEDMLEDEEEEDDKDDKDSEKKGFINKIYAIQEVCVSVQNILDEVASFGERIKN
TFNWTVPFLSWLAIVALCVFTAILYCIPLRYIVLVWGINKFTKKLRSPYAIDNNELLDFLSRVPSDVQVVQYQEL
KPDPSHSPYKRKKNNLG

FIGURE 2346

CTGGGCTCGGGTGATCCTCCTGTCTTAGCCTTCCAAGGTGCTGGGATTACAGGTGTGGGCCACCATGCCCAGCCA
CCATCTTGGTTTAATTTCTTTCCTTGGAAATGGAGCAAAGGGCTTTCACTCTTCTTTTTCATGGCTGCATAGTAT
TCCATAATTGTTTAAACAATTGATAATAGACACTGTATCGGGGTGACTGGTATACCCCCAAAATCACATCTGCCC
AGAGCCTCAGGACATGGCCTTGTTTGGAA**ATG**GTTTTAGCAGATGCAGCTAAGATGAGGTCACCCCGTGTTAGGA
TGGCCCCGAATCCAGTGCCTGGCACCCTTATAAGGAGAGGGAAACTTGGACGCAGACAGGAAGGCCGGGTGAAGA
CAGAAGCAGAGACCGGGGGCCAAGGAGTGCCTGGGGTTGCCCAGAGCCACCACGGGCTGCAAGAGGTGTGGGACA
GACTCTCTCAGCCACAGAAGGGCCCAGCCCCGCACAGGCCTGGATTTCAGAGGGCGAACATTTCTGTGGCCGAAG
CTCCCAGTGCGTTTGCAGTCCTTGGAGACGGCCGCAGACACATTTGTTCTTGGCCTGTCTCCAGGTCTGTAGCCC
CCACAGTGAGCGGCCACTGGCCGGAGGGGAACAGGAAGAGCTGGAGGGGACGTCACACACATGAGCCTTTTAGGA
ATAACGAG**TGA**CACGTGCAAGACCCCAAACCAAACACCATGTAACCTGACACCCAGGGAGGGAGGGAGGGAGGGG
CTGGGAGGGGCTCACCTGTAGGGAGGGGCTCACCTGTACAGCGGTGCTGGGAAGCTGGCCTCGAGGGTCCCCGAG
GGGATACAGGGCCGTGCAGCCTCTTGCCTGAGGGTTTGCATGTCTGCCTGGATCCCCCGGGCTCCTGCCAGAAGG
CCTCTGAGGCCACCGTTGACAGCATAAAGGCCACCCAGTGTCTCGGCAACCACGCTGACCACTCCCTCCTCCCAG
CTGCGGGGTGAGGTGGCCTCGAGGGAAGGGCTGGAGAGTCGTTCTGAGTATTTAACAACTGGGGGTGACACAGTG
TGGGTGGGCAAGGCCAGGGCCACTGCCAGGTGGGGTCCGTGGCCCTGAGCCCCCAGCTCTATGCACCCCCCACCT
GGGGTCTGGCTTCTCCATCTCCACACCCCCTTGAGGGGCTTCTGTCTCCCCCTGCCCCTTCGATCGCAGGAGGCA
GTGCCTGGCCGGGGTCGCAGGCACCTGTCACCCCAGCTCCTCACTCCTCACCCACTCACATCCAGTCCGTTTGTA
AAATACACCCAGGATGAGACCTGCACGCAAGTGGCTCACAGCAGCACGATTTGTGACAGCCCGAGGCGGAGAACA
CCGAACACCCAGTGAAGGTGAGGGGATCAGCACGGCGCGGCCACCCACGCACCCACGCGCTGGAATGAGACTCAG
CCACAAGGAGGTGCGAAGCTCTGACCCAGGCCACAGTGCGGATGCACCTTGAGGATGTCACGCTCAGTGAGAGAC
ACCAGACACAGAAGGGTACGCTGTGATCCCACTTCTATGAAATGTCCAGGACAGACCAATCCACAGAATCAGGGA
GAGGATTCGTGGGTGCCGGGACTGGGGAGGGGGACCTGGGGGTGACTAGGTGACATAATGGGGACAGGGCTGCCT
TCTGGGTGATGAGAATGTTCTGGAATCAGATGGGATGGCTGCACGGCGTGGTGAAGGTACTGAACGCCACCTCAC
TGTAAGACGGTAGATTTTGTATTTTACCACAATAAACAAAACAAAACAAAACCAAAAAAAAAAAAAAAAAA

FIGURE 2347

MVLADAAKMRSPRVRMAPNPVPGTLIRRGKLGRRQEGRVKTEAETGGQGVPGVAQSHHGLQEVWDRLSQPQKGPA
PHRPGFQRANISVAEAPSAFAVLGDGRRHICSWPVSRSVAPTVSGHWPEGNRKSWRGRHTHEPFRNNE

FIGURE 2348

TTTTCAGAGACTCGCCTGGCAGAGGCCTGGAGCGTCCTGCTGCGTGGACTGTGGGCACCGAGCCACCAGGAGGTT
GTTGATCTCATTCTTGCTCACTGGTCCCTGCCAGACTGGTGGTGCCTCTCTACTGTCGGGCAGCCCCACCTCTGT
GCTGCCCCATCCACCTACAGCCCTCATGCCTGGGCCCAGCTGGAGGTTCTGACAGGGGCCCCCTGGGGTGGCATG
CGGACCCTTCAGGGTGCCCCAGGCGCAGCACAGGTCTCCAGAGACACAGGCACCAGGGCGTTCAGAGCTAGTCCC
CTCGCTGCTGTTGACTGTCCTTGAGCAGCCCCAGGGCCGGTTTCTCAACCTCATTTGCTCACCTGAGCAATGAAG
TGAGGTGGGCTCCTGGAACTGCAGCAGCCACCCCCCGGGGCCATCGTGAGGCTAAGAATCCAGTGCAGGGTGAGC
AACCAGCGACCGCTACAAGGACAGTGAAGAGCTAGCACCAGGACCTTGGGTAGCCCACCCGCTGGAGGGAGCGTG
TGCTGCAAAAAGCAAGAGTGGGCTTTGGAGGCCAACGGATGGAGCGGATTCAGTCTGAGGCTGTTCCAGCCCTTG
CTTAGGATCCACCTACCTAGGTCTGGAAATCGTATTTCCACTTCAGATGCCTTCTCAGAGGATAAAATAACCCCC
GGTGGGGGAGAGTACTGGAAGAGGGCTAATTCCCCTGGTTTTCTCCCCATGAGCATTAGTGTCAGTGTAATTTTA
GAGTGACCCCAGCT**ATG**TCACGTGTGGCAGGCACAAGAACAGATGTCAATGAGCTATTGCAGAGGTGGACACCCA
GATGTGTGCGCTGGCACACTGGAGGGGCCCGTAGGGTGGCTCTAGACCGCCCCCTCGTGACGGCTTGCCTACCAC
CTGCAGGCGACGTTGTGGACGTTTACCAGCGGGAGTTCCTGGCGCTGCGCGATCGGTTGCACGCAGCTGAGCAGG
AGAGCCTCAAGCGCTCCAAGGAGCTCAACCTGGTGCTGGACGAGATCAAGAGGGCCGTGTCAGAAAGGCAGGCGC
TGCGAGACGGAGACGGCAATCGCACCTGGGGCCGCCTAACAGAGGACCCCCGATTGAAGCCGTGGAACGGCTCAC
ACCGGCACGTGCTGCACCTGCCCACCGTCTTCCATCACCTGCCACACCTGCTGGCCAAGGAGAGCAGTCTGCAGC
CCGCGGTGCGCGTGGGCCAGGGCCGCACCGGAGTGTCGGTGGTGATGGGCATCCCGAGCGTGCGGCGCGAGGTGC
ACTCGTACCTGACTGACACTCTGCACTCGCTCATCTCCGAGCTGAGCCCGCAGGAGAAGGAGGACTCGGTCATCG
TGGTGCTGATCGCCGAGACTGACTCACAGTACACTTCGGCAGTGACAGAGAACATCAAGGCCTTGTTCCCCACGG
AGATCCATTCTGGGCTCCTGGAGGTCATCTCACCCTCCCCCCACTTCTACCCTGACTTCTCCCGCCTCCGAGAGT
CCTTTGGGGACCCCAAGGAGAGAGTCAGGTGGAGGACCAAACAGAACCTCGATTACTGCTTCCTCATGATGTACG
CGCAGTCCAAAGGCATCTACTACGTGCAGCTGGAGGATGACATCGTGGCCAAGCCCAACTACCTGAGCACCATGA
AGAACTTTGCACTGCAGCAGCCTTCAGAGGACTGGATGATCCTGGAGTTCTCCCAGCTGGGCTTCATTGGTAAGA
TGTTCAAGTCGCTGGACCTGAGCCTGATTGTAGAGTTCATTCTCATGTTCTACCGGGACAAGCCCATCGACTGGC
TCCTGGACCATATTCTGTGGGTGAAAGTCTGCAACCCCGAGAAGGATGCGAAGCACTGTGACCGGCAGAAAGCCA
ACCTGCGGATCCGCTTCAAACCGTCCCTCTTCCAGCACGTGGGCACTCACTCCTCGCTGGCTGGCAAGATCCAGA
AACTGAAGGACAAAGACTTTGGAAAGCAGGCGCTGCGGAAGGAGCATGTGAACCCGCCAGCAGAGGTGAGCACGA
GCCTGAAGACATACCAGCACTTCACCCTGGAGAAAGCCTACCTGCGCGAGGACTTCTTCTGGGCCTTCACCCCTG
CCGCGGGGGACTTCATCCGCTTCCGCTTCTTCCAACCTCTAAGACTGGAGCGGTTCTTCTTCCGCAGTGGGAACA
TCGAGCACCCGGAGGACAAGCTCTTCAACACGTCTGTGGAGGTGCTGCCCTTCGACAACCCTCAGTCAGACAAGG
AGGCCCTGCAGGAGGGCCGCACCGCCACCCTCCGGTACCCTCGGAGCCCCGACGGCTACCTCCAGATCGGCTCCT
TCTACAAGGGAGTGGCAGAGGGAGAGGTGGACCCAGCCTTCGGCCCTCTGGAAGCACTGCGCCTCTCGATCCAGA
CGGACTCCCCTGTGTGGGTGATTCTGAGCGAGATCTTCCTGAAAAAGGCCGAC**TAA**GCTGCGGGCTTCTGAGGGT
ACCCTGTGGCCAGCCCTGAAGCCCACATTTCTGGGGGTGTCGTCACTGCCGTCCCCGGAGGGCCAGATACGGCCC
CGCCCAAAGGGTTCTGCCTGGCGTCGGGCTTGGGCCGGCCTGGGGTCCGCCGCTGGCCCGGAGGCCCTAGGAGCT
GGTGCTGCCCCCGCCCGCCGGGCCGCGGAGGAGGCAGGCGGCCCCCACACTGTGCCTGAGGCCCGGAACCGTTCG
CACCCGGCCTGCCCCAGTCAGGCCGTTTTAGAAGAGCTTTTACTTGGGCGCCCGCCGTCTCTGGCGCGAACACTG
GAATGCATATACTACTTTATGTGCTGTGTTTTTTATTCTTGGATACATTTGATTTTTTCACGTAAGTCCACATAT
ACTTCTATAAGAGCGTGACTTGTAATAAAGGGTTAATGAAG

FIGURE 2349

MSRVAGTRTDVNELLQRWTPRCVRWHTGGARRVALDRPLVTACLPPAGDVVDVYQREFLALRDRLHAAEQESLKR
SKELNLVLDEIKRAVSERQALRDGDGNRTWGRLTEDPRLKPWNGSHRHVLHLPTVFHHLPHLLAKESSLQPAVRV
GQGRTGVSVVMGIPSVRREVHSYLTDTLHSLISELSPQEKEDSVIVVLIAETDSQYTSAVTENIKALFPTEIHSG
LLEVISPSPHFYPDFSRLRESFGDPKERVRWRTKQNLDYCFLMMYAQSKGIYYVQLEDDIVAKPNYLSTMKNFAL
QQPSEDWMILEFSQLGFIGKMFKSLDLSLIVEFILMFYRDKPIDWLLDHILWVKVCNPEKDAKHCDRQKANLRIR
FKPSLFQHVGTHSSLAGKIQKLKDKDFGKQALRKEHVNPPAEVSTSLKTYQHFTLEKAYLREDFFWAFTPAAGDF
IRFRFFQPLRLERFFFRSGNIEHPEDKLFNTSVEVLPFDNPQSDKEALQEGRTATLRYPRSPDGYLQIGSFYKGV
AEGEVDPAFGPLEALRLSIQTDSPVWVILSEIFLKKAD

FIGURE 2350

GGCAAATGGGCTTGGGCGGCTCCTCGGCGGGTGGCGGTGGTGGCCGTAGCGGTTCCTCCTGGCCCTGTTAATGTC
GGGGCCAGGCCGGGGGAGGATGGCGCCCTAGAACCCGGCCTTGCTGGGGTAGGGGCGGGAGGGGACGGGGTGGGG
ACCGGCC**ATG**TCGGAGGTGACCCGGAGTCTGCTGCAGCGCTGGGGCGCCAGTTTTAGGAGAGGCGCCGACTTCGA
CTCTTGGGGCCAGCTGGTGGAGGCGATAGACGAGTATCAGATATTAGCAAGACATCTACAAAAGGAGGCCCAAGC
TCAACACAATAATTCTGAATTCACAGAAGAACAAAAGAAAACCATAGGCAAAATTGCAACATGCTTGGAATTGCG
AAGTGCAGCTTTACAGTCCACACAGTCTCAAGAAGAATTTAAACTGGAGGACCTGAAGAAGCTAGAACCAATCCT
AAAGAATATTCTTACATATAATAAAGAATTCCCATTTGATGTTCAGCCTGTCCCATTAAGAAGAATTTTGGCACC
TGGTGAAGAAGAGAATTTGGGATTTGAAGAAGATGAAGAAGAGGGTGGTGCTGGAGCAGGGTCTCCTGATTCTTT
TCCTGCTAGAGTTCCCGGTACTTTATTACCAAGGTTGCCATCGGAACCAGGAATGACATTACTCACTATCAGAAT
TGAGAAAATTGGTTTGAAAGATGCTGGGCAGTGCATCGATCCCTATATTACAGTTAGTGTAAAGGATCTGAATGG
CATAGACTTAACTCCTGTGCAAGATACTCCTGTGGCTTCAAGAAAAGAAGATACATATGTTCATTTTAATGTGGA
CATTGAGCTCCAGAAGCATGTTGAAAAATTAACCAAAGGTGCAGCTATCTTCTTTGAATTCAAACACTACAAGCC
TAAAAAAAGGTTTACCAGCACCAAGTGTTTTGCTTTCATGGAGATGGATGAAATTAAACCTGGGCCAATTGTAAT
AGAACTATACAAGAAACCCACTGACTTTAAAAGAAAGAAATTGCAATTATTGACCAAGAAACCACTTTATCTTCA
TCTACATCAAACTTTGCACAAGGAA**TGA**TCCTGACATGATGAACCTGGAACTTCTGTGAATTTTACCACTCAGTA
GAAACCATCATAGCTCTGTGTAGCATATTCACCCTTCAACAGGCAGGAAGCAAGCCGTACCCAGACCAGTAGGCC
GGACGGAGTCCAATGCAAAGCTGTACCACAGAATTCAGAGTCCAGCACATCACACTGACGTATAGGACTCCTTGG
GATACAGGTTTATTGTAGATTTTGAAACATGTTTTTACTTTTCTATTAATTGTGCAATTAATAGTCTATTTTCTA
ATTTACCACTACTCCTACCCTGCTTCCTGGAACAATACTGTTGTGGGTAGGATGTGCTCATCTTCAGACTTAATA
CAGCAATAAGAATGTGCTAGAGTTTACACATCTGTTCACTTTTGCTCCAATATGCTCTTTTGACTTAACGTCAAG
CTTTGGGTTGATGTGGGTAGGGTAGTGTCAAACTGCTTTGAGAGGAATGGGACCAGTTCTGCTGCCTAAGAAGGT
CTGTCTGGATGTTTATAGGCAGCACCTCTGAAGTGGCCTAAATTCACCCTGATCTGATAGTTTTCCTGCTTAGAA
AGTGTGCCTTGGCCAGATCAGTATCCCACATGGGAGTGTTCCCTAGGTTGTAGCTGTGATTGTTTCCAGATGACC
AGATTGTTTTTCTGAAAATGAGCATATTTTTAGTCATGTCGATTAGCTGTTCTTCTACATCACATTGTTACTCTT
TCTGATGATGATTCTAGGGTTAACATTGGAACCATCTCAAAATAATTACAAAGTTTTAGATGGGTTTACAATGTC
TTCTAAACAATGTAATCTAAAAATAATTGAGTCAGATGCTAACGAGATACTGCAGGCATAACTGCTGTTTTTCTG
ACAACTGATTGTGAAACCTTAAAACCTGCATACCTCTTCTTACAGTGAGGAGTATGCAAAATCTGGAAAGATATT
CTATTTTTTTTATATAGGTAGATAGGATCGCCATTTATTTCCTATTTAGATATACTGACATTCATCCATATGAAA
ATATGCAGGTCATTAGCTTACTATAATTTACTTTTGACTTAATGGGGCATAAATAAAACTTTCATAGTACACATG
AGGTGGATATTTGATACACAGAACATTTGCGGTGGGCTTTCTGTGGGTTAGATGTAAAGCCCACATATTTTAATA
TTCACTATTTTAAATGAGCAATGCATGAGGGGAATGCAGTGTCAGTACCTGGCCTATTTTTAAACTAGTGTAATC
ACCCTAGTCATACCATTCAGTATGTTTGCTTTTTAAAATAAGTAACCACAATTAAGTTGTTGTAGCCCTTGCACT
TCAAGAGATCTAGTCTTTACTTTCAGTTGTCTGTTAGGTCCATTCTGTTTACTAGACGGATGTTAATAAAAACTA
TGCGAGCCTG

FIGURE 2351

MSEVTRSLLQRWGASFRRGADFDSWGQLVEAIDEYQILARHLQKEAQAQHNNSEFTEEQKKTIGKIATCLELRSA
ALQSTQSQEEFKLEDLKKLEPILKNILTYNKEFPFDVQPVPLRRILAPGEEENLGFEEDEEEGGAGAGSPDSFPA
RVPGTLLPRLPSEPGMTLLTIRIEKIGLKDAGQCIDPYITVSVKDLNGIDLTPVQDTPVASRKEDTYVHFNVDIE
LQKHVEKLTKGAAIFFEFKHYKPKKRFTSTKCFAFMEMDEIKPGPIVIELYKKPIDFKRKKLQLLTKKPLYLHLH
QTLHKE

FIGURE 2352

CTCCCGGCCTCCCTGGTCCCGCCTGGGAAGGGATGCAAGGAAGCCCTCCGGCGCTGCGCTCCGAGGCGGGAGACA
GCGTCCCCCTCCGCCCCTCGGGTCCTGGCGCCTCAGAGCCCGGCCCAGGCCGCGGAACGGTGATGCTCGGGCCGG
ACGGGCGGGCGCGGATCCCTGCGTCCCGCTGAAAATGTGTGTCTGACATGCAAGCTCAGTGGGGCAGAGACCCGT
GGATTGCTGTGCCCTGCCCTCCGGACCTGGATC**ATG**AAGGTGTTGGGAAGAAGCTTCTTCTGGGTGCTGTTTCCC
GTCCTTCCCTGGGCGGTGCAGGCTGTGGAGCACGAGGAGGTGGCGCAGCGTGTGATCAAACTGCACCGCGGGCGA
GGGGTGGCTGCCATGCAGAGCCGGCAGTGGGTCCGGGACAGCTGCAGGAAGCTCTCAGGGCTTCTCCGCCAGAAG
AATGCAGTTCTGAACAAATTGAAAACTGCAATTGGAGCAGTGGAGAAAGACGTGGGCCTGTCGGATGAAGAGAAA
CTGTTTCAGGTGCACACGTTTGAAATTTTCCAGAAAGAGCTGAATGAAAGTGAAAATTCCGTTTTCCAAGCTGTC
TACGGACTGCAGAGAGCCCTGCAGGGGGATTACAAAGATGTCGTGAACATGAAGGAGAGCAGCCGGCAGCGCCTG
GAGGCCCTGAGAGAGGCTGCAATAAAGGAAGAAACAGAATATATGGAACTTCTGGCAGCAGAAAAACATCAAGTT
GAAGCCCTTAAAAATATGCAACATCAAAACCAAAGTTTATCCATGCTTGACGAGATTCTTGAAGATGTAAGAAAG
GCAGCGGATCGTCTGGAGGAAGAGATAGAGGAACATGCTTTTGACGACAATAAATCAGTCAAGGGGGTCAATTTT
GAGGCAGTTCTGAGGGTGGAGGAAGGAGAGGCCAATTCTAAGCAAAATATAACAAAACGAGAAGTGGAGGATGAC
TTGGGTCTTAGCATGCTGATTGACTCCCAGAACAACCAGTATATTTTGACCAAGCCCAGAGATTCAACCATCCCA
CGTGCAGATCACCACTTTATAAAGGACATTGTTACCATAGGAATGCTGTCCTTGCCTTGTGGCTGGCTATGTACA
GCCATAGGATTGCCTACAATGTTTGGTTATATTATTTGTGGTGTACTTCTGGGACCTTCAGGACTAAATAGTATT
AAGTCTATTGTGCAAGTGGAGACATTAGGAGAATTTGGGGTGTTTTTTACTCTTTTTCTTGTTGGTTTAGAATTT
TCTCCAGAAAAGCTAAGAAAGGTGTGGAAGATTTCCTTACAAGGGCCGTGTTACATGACACTGTTAATGATTGCA
TTTGGCTTGCTGTGGGGGCATCTCTTGCGGATCAAACCCACGCAGAGCGTCTTCATTTCCACGTGTCTGTCCTTG
TCAAGCACACCCCTCGTGTCCAGGTTCCTCATGGGCAGTGCTCGGGGTGACAAAGAAGGCGACATTGACTACAGC
ACCGTGCTCCTCGGCATGCTGGTGACGCAGGACGTGCAGCTCGGGCTCTTCATGGCCGTCATGCCGACTCTCATA
CAGGCGGGCGCCAGTACATCTTCTAGCATTGTCGTGGAAGTTCTCCGAATCCTGGTTTTGATTGGTCAGATTCTT
TTTTCACTAGCGGCGGTTTTTCTTTTATGTCTTGTTATAAAGAAGTATCTCATTGGACCCTATTATCGGAAGCTG
CACATGGAAAGCAAGGGGAACAAAGAAATCCTGATCTTGGGAATATCTGCCTTTATCTTCTTAATGTTAACGGTA
ATTCTCAAACTATGTGTTATTTATGTAATC**TGA**TACATAATCTCTTTCACTGAAATCTTGTGATCCATTCTTTAC
CTTTCCATTTTAATAATGGTTAAAATATTTGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAA

FIGURE 2353

MKVLGRSFFWVLFPVLPWAVQAVEHEEVAQRVIKLHRGRGVAAMQSRQWVRDSCRKLSGLLRQKNAVLNKLKTAI
GAVEKDVGLSDEEKLFQVHTFEIFQKELNESENSVFQAVYGLQRALQGDYKDVVNMKESSRQRLEALREAAIKEE
TEYMELLAAEKHQVEALKNMQHQNQSLSMLDEILEDVRKAADRLEEEIEEHAFDDNKSVKGVNFEAVLRVEEGEA
NSKQNITKREVEDDLGLSMLIDSQNNQYILTKPRDSTIPRADHHFIKDIVTIGMLSLPCGWLCTAIGLPTMFGYI
ICGVLLGPSGLNSIKSIVQVETLGEFGVFFTLFLVGLEFSPEKLRKVWKISLQGPCYMTLLMIAFGLLWGHLLRI
KPTQSVFISTCLSLSSTPLVSRFLMGSARGDKEGDIDYSTVLLGMLVTQDVQLGLFMAVMPTLIQAGASTSSSIV
VEVLRILVLIGQILFSLAAVFLLCLVIKKYLIGPYYRKLHMESKGNKEILILGISAFIFLMLTVILKLCVIYVI

FIGURE 2354A

CTCCTCCTCCGTCTCCTCCTCTCTCTCTCATCTGCTGTGGTT**ATG**GCCTGTCGCTGGAGCACAAAAGAGTCTCCG
CGGTGGAGGTCTGCGTTGCTCTTGCTTTTCCTCGCTGGGGTGTACGGAAATGGTGCTCTTGCAGAACATTCTGAA
AATGTGCATATTTCAGGAGTGTCAACTGCTTGTGGAGAGACTCCAGAGCAAATACGAGCACCAAGTGGCATAATC
ACAAGCCCAGGCTGGCCTTCTGAATATCCTGCAAAAATCAACTGTAGCTGGTTCATAAGGGCAAACCCAGGCGAA
ATCATTACTATAAGTTTTCAGGATTTTGATATTCAAGGATCCAGAAGGTGCAATTTGGACTGGTTGACAATAGAA
ACATACAAGAATATTGAAAGTTACAGAGCTTGTGGTTCCACAATTCCACCTCCGTATATCTCTTCACAAGACCAC
ATCTGGATTAGGTTTCATTCGGATGACAACATCTCTAGAAAGGGTTTCAGACTGGCATATTTTTCAGGGAAATCT
GAGGAACCAAATTGTGCTTGTGATCAGTTTCGTTGTGGTAATGGAAAGTGTATACCAGAAGCCTGGAAATGTAAT
AACATGGATGAATGTGGAGATAGTTCCGATGAAGAGATCTGTGCCAAAGAAGCAAATCCTCCAACTGCTGCTGCT
TTTCAACCCTGTGCTTACAACCAGTTCCAGTGTTTATCCCGTTTTACCAAAGTTTACACTTGCCTCCCCGAATCT
TTAAAATGTGATGGGAACATTGACTGCCTTGACCTAGGAGATGAGATAGACTGTGATGTGCCAACATGTGGGCAA
TGGCTAAAATATTTTTATGGTACTTTTAATTCTCCCAATTATCCAGACTTTTATCCTCCTGGAAGCAATTGCACC
TGGTTAATAGACACTGGTGATCACCGTAAAGTCATTTTACGCTTCACTGACTTTAAACTTGATGGTACTGGTTAT
GGTGATTATGTCAAAATATATGATGGATTAGAGGAGAATCCACACAAGCTTTTGCGTGTGTTGACAGCTTTTGAT
TCTCATGCACCTCTTACAGTTGTTTCTTCTTCTGGACAGATAAGGGTACATTTTTGTGCTGATAAAGTGAATGCT
GCAAGGGGATTTAATGCTACTTACCAAGTAGATGGGTTCTGTTTGCCATGGGAAATACCCTGTGGAGGTAACTGG
GGGTGTTATACTGAGCAGCAGCGTTGTGATGGGTATTGGCATTGCCCAAATGGAAGGGATGAAACCAATTGTACC
ATGTGCCAGAAGGAAGAATTTCCATGTTCCCGAAATGGTGTCTGTTATCCTCGTTCTGATCGCTGCAACTACCAG
AATCATTGCCCAAATGGCTCAGATGAAAAAAACTGCTTTTTTTGCCAACCAGGAAATTTCCATTGTAAAAACAAT
CGTTGTGTGTTTGAAAGTTGGGTGTGTGATTCTCAAGATGACTGTGGTGATGGCAGCGATGAAGAAAATTGCCCA
GTAATCGTGCCTACAAGAGTCATCACTGCTGCCGTCATAGGGAGCCTCATCTGTGGCCTGTTACTCGTCATAGCA
TTGGGATGTACTTGTAAGCTTTATTCTCTGAGAATGTTTGAAAGAAGATCATTTGAAACACAGTTGTCAAGAGTG
GAAGCAGAATTGTTAAGAAGAGAAGCTCCTCCCTCGTATGGACAATTGATTGCTCAGGGTTTAATTCCACCAGTT
GAAGATTTTCCTGTTTGTTCACCTAATCAGGCTTCTGTTTTGGAAAATCTGAGGCTAGCGGTACGATCTCAGCTT
GGATTTACTTCAGTCAGGCTTCCTATGGCAGGCAGATCAAGCAACATTTGGAACCGTATTTTTAATTTTGCAAGA
TCACGTCATTCTGGGTCATTGGCTTTGGTCTCAGCAGATGGAGATGAGGTTGTCCCTAGTCAGAGTACCAGTAGA
GAACCTGAGAGAAATCATACTCACAGAAGTTTGTTTTCCGTGGAGTCTGATGATACAGACACAGAAAATGAGAGA
AGAGATATGGCAGGAGCATCTGGTGGGGTTGCAGCTCCTTTGCCTCAAAAAGTCCCTCCCACAACGGCAGTAGAA
GCGACAGTAGGAGCATGTGCAAGTTCCTCAACTCAGAGTACCCGAGGTGGTCATGCAGATAATGGAAGGGATGTG
ACAAGTGTGGAACCCCCAAGTGTGAGTCCAGCACGTCACCAGCTTACAAGTGCACTCAGTCGTATGACTCAGGGG
CTACGCTGGGTACGTTTTACATTAGGACGATCAAGTTCCCTAAGTCAGAACCAGAGTCCTTTGAGACAACTTGAT
AATGGGGTAAGTGGAAGAGAAGATGATGATGATGTTGAAATGCTAATTCCAATTTCTGATGGATCTTCAGACTTT
GATGTGAATGACTGCTCCAGACCTCTTCTTGATCTTGCCTCAGATCAAGGACAAGGGCTTAGACAACCATATAAT
GCAACAAATCCTGGAGTAAGGCCAAGTAATCGAGATGGCCCCTGTGAGCGCTGTGGTATTGTCCACACTGCCCAG
ATACCAGACACTTGCTTAGAAGTAACACTGAAAAACGAAACGAGTGATGATGAGGCTTTGTTACTTTGT**TAG**GTA
CGAATCACATAAGGGAGATTGTATACAAGTTGGAGCAATATCCATTTATTATTTTGTAACTTTACAGTTAAACTA
GTTTTAGTTTAAAAAGAAAAAATGCAGGGTGATTTCTTATTATTATATGTTAGCCTGCATGGTTAAATTCGACAA
CTTGTAACTCTATGAACTTAGAGTTTACTATTTTAGCAGCTAAAAATGCATCACATATTCATATTGTTCAATAAT
GTCCTTTCATTTGTTTCTGATTGTTTTCATCCTGATACTGTAGTTCACTGTAGAAATGTGGCTGCTGAAACTCAT
TTGATTGTCATTTTTATCTATCCTATGTTAAATGGTTTGTTTTTACAAAATAATACCTTATTTTAATTGAAACGT
TTATGCTTTTGCCAACACATCTTGTAACTTAATATACTAGATGTTAAGGTTGTTAATGTACAAAAAAAAAACCCT
TATACTCACCTGCGTTTTCATTTGTTTGACATTTGTCTATTATTGGATTTCATTATCATATGAACTTGTCAGTGG
GAAACAAACTGTCTAAAAATTTTTCTCTTACGTTTAACATACAATCATGTGAAATTTAGGCAGAGTTCGATAAAT
TACTGGCAAAAACAAAACTCTTTTATAAAGATTTTCTAATGTTGACTTTAATACTCTAACATGGTACAAACCAAA
TGGTAAAATCCCAAGTCATTTCTTTTTTCATCTCTATTTAGCAACAGAATTAAGTGGATGAAGATATTCTACTAT
GCATTAAATCTTGAACTTTATAAAACATGTACAAAAATTGTACAAGATAAGTTCCACCTGGTAATGTCTTTCCCT
AATACAGGGTTGCGCTTGCATTGGACCCTAGGGATTTGCACTAAAATTATATCAAGGTCTCAGATGAGCTTAGTG
CACAAGCACTATCACTTTAAATACTATTATTTGCTACCACAGCAACTATATATTTCCATAGCTTTTGGCTGGGGG

FIGURE 2354B

CGGGGGACATTTTTATTACAACTTGAAATTGCTTTGCTGGTTTCATATTTATTTGTTGTATTTAAAAAATACATT
GTTGTAAGAGTGATTTTTTCAATATATTTTATTCCTGGGGGGGGATCATGCTACACTCTCAAAAGAAAATTAAGAA
ATCATTCAGATCATCCCCCCTTTTTAAGTAGTGTGAATTGCAAAACCCAACATATTTTTTTTACTGTCAGTTGCG
GTTTATTTATTCTTTAACTGTCTGTTTTAGTAGTTTAATGATTATGAAAAATGTATCTGTGTGTGATTTGCTATT
TATTAAATTTTAAGTACTTTGCTGAATGTCATTTTAAAGCATGTTTGAAGTCTTGTGTATTTGTCTGTGTTAATG
CTGTCAGGAGGAACTGACTAAGATGTTTTAATATGTATCAAAAATTAAAATGATTTTTTTTATTGCCTTGAGGTA
CTTTTTAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2355

MACRWSTKESPRWRSALLLLFLAGVYGNGALAEHSENVHISGVSTACGETPEQIRAPSGIITSPGWPSEYPAKIN
CSWFIRANPGEIITISFQDFDIQGSRRCNLDWLTIETYKNIESYRACGSTIPPPYISSQDHIWIRFHSDDNISRK
GFRLAYFSGKSEEPNCACDQFRCGNGKCIPEAWKCNNMDECGDSSDEEICAKEANPPTAAAFQPCAYNQFQCLSR
FTKVYTCLPESLKCDGNIDCLDLGDEIDCDVPTCGQWLKYFYGTFNSPNYPDFYPPGSNCTWLIDTGDHRKVILR
FTDFKLDGTGYGDYVKIYDGLEENPHKLLRVLTAFDSHAPLTVVSSSGQIRVHFCADKVNAARGFNATYQVDGFC
LPWEIPCGGNWGCYTEQQRCDGYWHCPNGRDETNCTMCQKEEFPCSRNGVCYPRSDRCNYQNHCPNGSDEKNCFF
CQPGNFHCKNNRCVFESWVCDSQDDCGDGSDEENCPVIVPTRVITAAVIGSLICGLLLVIALGCTCKLYSLRMFE
RRSFETQLSRVEAELLRREAPPSYGQLIAQGLIPPVEDFPVCSPNQASVLENLRLAVRSQLGFTSVRLPMAGRSS
NIWNRIFNFARSRHSGSLALVSADGDEVVPSQSTSREPERNHTHRSLFSVESDDTDTENERRDMAGASGGVAAPL
PQKVPPTTAVEATVGACASSSTQSTRGGHADNGRDVTSVEPPSVSPARHQLTSALSRMTQGLRWVRFTLGRSSSL
SQNQSPLRQLDNGVSGREDDDDVEMLIPISDGSSDFDVNDCSRPLLDLASDQGQGLRQPYNATNPGVRPSNRDGP
CERCGIVHTAQIPDTCLEVTLKNETSDDEALLLC

FIGURE 2356

CGCTCCCACCCGCCCGTGGCCCGCGCCCATGGCCGCGCGCGCTCCACACAACTCACCGGAGTCCGCGCCCTGCGC
CGCCGACCAGTTCGCAGCTCCGCGCCACGGCAGCCAGTCTCACCTGGCGGCACCGCCCGCCCACCGCCCCGGCCA
CAGCCCCTGCGCCCACGGCAGCAATCGAGGCGACCGCGACAGTGGTGGGGGACGCTGCTGAGTGGAAGAGAGCGC
AGCCCGGCCACCGGACCTACTTACTCGCCTTGCTGATTGTCTATTTTTGCGTTTACAACTTTTCTAAGAACTTTT
GTATACAAAGGAACTTTTTAAAAAAGACGCTTCCAAGTTATATTTAATCCAAAGAAGAAGGATCTCGGCCAATTT
GGGGTTTTGGGTTTTGGCTTCGTTTTTTCTCTTCGTTGACTTTGGGGTTCAGGTGCCCCAGCTGCTTCGGGCTGC
CGAGGACCTTCTGGGCCCCCACATTAATGAGGCAGCCACCTGGCGAGTCTGAC**ATG**GCTGTCAGCGACGCGCTGC
TCCCATCTTTCTCCACGTTCGCGTCTGGCCCGGCGGGAAGGGAGAAGACACTGCGTCAAGCAGGTGCCCCGAATA
ACCGCTGGCGGGAGGAGCTCTCCCACATGAAGCGACTTCCCCCAGTGCTTCCCGGCCGCCCCTATGACCTGGCGG
CGGCGACCGTGGCCACAGACCTGGAGAGCGGCGGAGCCGGTGCGGCTTGCGGCGGTAGCAACCTGGCGCCCCTAC
CTCGGAGAGAGACCGAGGAGTTCAACGATCTCCTGGACCTGGACTTTATTCTCTCCAATTCGCTGACCCATCCTC
CGGAGTCAGTGGCCGCCACCGTGTCCTCGTCAGCGTCAGCCTCCTCTTCGTCGTCGCCGTCGAGCAGCGGCCCTG
CCAGCGCGCCCTCCACCTGCAGCTTCACCTATCCGATCCGGGCCGGGAACGACCCGGGCGTGGCGCCGGGCGGCA
CGGGCGGAGGCCTCCTCTATGGCAGGGAGTCCGCTCCCCCTCCGACGGCTCCCTTCAACCTGGCGGACATCAACG
ACGTGAGCCCCTCGGGCGGCTTCGTGGCCGAGCTCCTGCGGCCAGAATTGGACCCGGTGTACATTCCGCCGCAGC
AGCCGCAGCCGCCAGGTGGCGGGCTGATGGGCAAGTTCGTGCTGAAGGCGTCGCTGAGCGCCCCTGGCAGCGAGT
ACGGCAGCCCGTCGGTCATCAGCGTCAGCAAAGGCAGCCCTGACGGCAGCCACCCGGTGGTGGTGGCGCCCTACA
ACGGCGGGCCGCCGCGCACGTGCCCCAAGATCAAGCAGGAGGCGGTCTCTTCGTGCACCCACTTGGGCGCTGGAC
CCCCTCTCAGCAATGGCCACCGGCCGGCTGCACACAACTTCCCCCTGGGGCGGCAGCTCCCCAGCAGGAGTACCC
CGACCCTGGGTTTTGAGGAAGTGCTGAGCAGCAGGGAATGTCACCCTGCCCTGCCGCTTCCTCCCGGCTTCCATC
CCCACCCGGGGCCCAATTACCCATCCTTCCTGCCCGATCAGATGCAGCCGCAAGTCCCGCCGCTCCATTACCAAG
AGCTCATGCCACCCGGTTCCTGCATGCCAGAGGAGCCCAAGCCAAAGAGGGGAAGACGATCGTGGCCCCGGAAAA
GGACCGCCACCCACACTTGTGATTACGCGGGCTGCGGCAAAACCTACACAAAGAGTTCCCATCTCAAGGCACACC
TGCGAACCCACACAGGTGAGAAACCTTACCACTGTGACTGGGACGGCTGTGGATGGAAATTCGCCCGCTCAGATG
AACTGACCAGGCACTACCGTAAACACACGGGGCACCGCCCGTTCCAGTGCCAAAAATGCGACCGAGCATTTTCCA
GGTCGGACCACCTCGCCTTACACATGAAGAGGCATTTT**TAA**ATCCCAGACAGTGGATATGACCCACACTGCCAGA
AGA

FIGURE 2357

MAVSDALLPSFSTFASGPAGREKTLRQAGAPNNRWREELSHMKRLPPVLPGRPYDLAAATVATDLESGGAGAACG
GSNLAPLPRRETEEFNDLLDLDFILSNSLTHPPESVAATVSSSASASSSSSPSSSGPASAPSTCSFTYPIRAGND
PGVAPGGTGGGLLYGRESAPPPTAPFNLADINDVSPSGGFVAELLRPELDPVYIPPQQPQPPGGGLMGKFVLKAS
LSAPGSEYGSPSVISVSKGSPDGSHPVVVAPYNGGPPRTCPKIKQEAVSSCTHLGAGPPLSNGHRPAAHNFPLGR
QLPSRSTPTLGFEEVLSSRECHPALPLPPGFHPHPGPNYPSFLPDQMQPQVPPLHYQELMPPGSCMPEEPKPKRG
RRSWPRKRTATHTCDYAGCGKTYTKSSHLKAHLRTHTGEKPYHCDWDGCGWKFARSDELTRHYRKHTGHRPFQCQ
KCDRAFSRSDHLALHMKRHF

2649/2825

FIGURE 2358

ACAAATAATAAGGAACAAGGTGTGGTTATTGATTCTCTAAAATTAAGTGAGGAG**ATG**AAGCCCAATCTAGATGGT
GTTGATTTATTCAACAATGGTGGTTCTGGAAACGGTGAAACGAAAACTGGGCTGAGACTGAAAGCAATAAATCTG
CCTTTGGAAAATGAAGTAACTGAAATTTCAGCTTTGCAGGTGCATTTGGATGAATTCCAAAAAATCTTATGGAAG
GAAAGAGAAATGCGCACAGCTTTGGAAAAAGAAATAGAGAGACTGGAGTCGGCTTTGTCTCTGTGGAAGTGGAAG
TATGAAGAACTGAAAGAATCAAAGCCAAAAAATGTGAAAGAGTTTGACATTCTTCTTGGTCAACATAATGATGAA
ATGCAAGAACTGTCAGGCAATATAAAGGAAGAATCCAAATCTCAAAACAGCAAAGACAGAGTGATTTGTGAGTTA
AGAGCAGAGCTAGAGAGATTGCAAGCTGAAAATACCTCGGAGTGGGACAAGAGGGAAATACTTGAAAGAGAAAAG
CAGGGACTGGAGAGAGAAAATAGAAGGCTGAAGATCCAGGTGAAAGAAATGGAAGAGCTTTTGGATAAGAAAAAT
AGATTAAGTGCAAACTCTCAAAGTCCTGATTTCAAGATGTCACAAATTGATCTGCAAGAAAAAAACCAGGAATTA
CTGAACCTTCAACATGCCTACTATAAACTAAACAGACAATACCAGGCAAATATTGCAGAACTGACTCATGCAAAC
AACCGAGTGGATCAAAATGAAGCAGAAGTAAAGAAACTAAGATTACGAGTGGAAGAACTAAAGCAGGGACTCAAC
CAAAAAGAAGATGAGCTTGATGATTCCCTGAATCAGATCCGTAAGCTCCAGAGGTCTCTGGATGAAGAGAAAGAA
AGAAATGAAAACTTAGAGACTGAACTCAGGCACTTGCAAAACTGG**TAA**TTTTTTCACAAAATATGCTGAATTAAA
GATTAGGGCCTTAAAGACATTTCCATATCCTTTTCTTAAATATCAGTAAAATTGTTTTTATTAACTAGAAATATT
AATGAAAAAAACGTAGACAATACACAAATTAATGGGCTTCTTCACTTCTTCTAATTTTTGCCTAACAGATACTGC
ATATTCTCAAAAAGACAATTTAAATGTCATTTAAAAACAACTTTAATTCTAAGATGTGTAAATATTTTGAAAGTC
AAAAAGGGCTTTCAGAATACTTTTTACATAAAATCTGAAAGAGTTATAATATCGGTAAGAAAAAGTAAGTTGAAA
ACCATACAAGACGCTGGGTCATTAATAAGAAAACCATTGACTTTAAGTATAAAGTACTGGTTTGTTTAAATAATT
GGTAAACTTTTATGTACGTGTTGTCTATGTGGTGGGGATGGCAGGTTGTATTAACAAAAATGAATCATTCTAGAG
GTGTAACAATACATTTCTTATATAATTTTATAAGTCATTTCTAATCTTTGTATAAAACAGAAGTGAGCAAGATGA
ATCAGAAAAAAGGTGTTTTGTATTTTAAAGGTAACAGATAACCAGGTGATTGAATCTAAGACAGGCTGTAAGCAT
CGCTGAGAAACTAAAAGGACTTTTGACTTTTATCTGGATAGACATTTCTACAGTAAAATCATGGAAAGGCATCAG
CATTGCAAAGTAGCATCTAGGTAGAAATCAGGCCAAAATTAAGCTGTGGTTTCCCTCTGAGTAGTGGGAATAGAG
AAAATTAGGAAATTGTGGTTATGTGAATATTTCTTTAAAACTTTTATGTACATTATAGTTTATTGCTTCATATTT
AAGTTTAGTTTTTAAGGTAAAATGTTATTTTGAACAAAAAGACACTTATAATTTTCCATACCTATTTTCAACTGA
AGGCAACTTGTAAGATTTAACTCAGTCAATAACATACTGGTTTTACTCATCTCCCCCTCCATTGATTAGCCAAAA
AAAAATGAAATCTTACTAATTCATTATTGAATAAAGACCACTTTTATCAGAGTCAAAAAAAAAAA

FIGURE 2359

MKPNLDGVDLFNNGGSGNGETKTGLRLKAINLPLENEVTEISALQVHLDEFQKILWKEREMRTALEKEIERLESA
LSLWKWKYEELKESKPKNVKEFDILLGQHNDEMQELSGNIKEESKSQNSKDRVICELRAELERLQAENTSEWDKR
EILEREKQGLERENRRLKIQVKEMEELLDKKNRLSANSQSPDFKMSQIDLQEKNQELLNLQHAYYKLNRQYQANI
AELTHANNRVDQNEAEVKKLRLRVEELKQGLNQKEDELDDSLNQIRKLQRSLDEEKERNENLETELRHLQNW

FIGURE 2360

CGGCCTTGTCAGCTCACAGCAGGCGTTAACAGCCTCTAATTGAGGAAACTGTGGCTGGACAGGTTGCAAGGCAGT
TCTGCTCCCCATCGTCCTCTTGCTGACTGGGGACTGCTGAGCCCGTGCACGGCAGAGAGTCTGGTGGGGTGGAGG
GGCTGGCCTGGCCCCTCTGTCCTGTGGAA**ATG**CTGGGGCAAGTGGTCACCCTCATACTCCTCCTGCTCCTCAAGG
TGTATCAGGGCAAAGGATGCCAGGGATCAGCTGACCATGTGGTTAGCATCTCGGGAGTGCCTCTTCAGTTACAAC
CAAACAGCATACAGACGAAGGTTGACAGCATTGCATGGAAGAAGTTGCTGCCCTCACAAAATGGATTTCATCACA
TATTGAAGTGGGAGAATGGCTCTTTGCCTTCCAATACTTCCAATGATAGATTCAGTTTTATAGTCAAGAACTTGA
GTCTTCTCATCAAGGCAGCTCAGCAGCAGGACAGTGGCCTCTACTGCCTGGAGGTCACCAGTATATCTGGAAAAG
TTCAGACAGCCACGTTCCAGGTTTTTGTATTTGATAAAGTTGAGAAACCCCGCCTACAGGGGCAGGGGAAGATCC
TGGACAGAGGGAGATGCCAAGTGGCTCTGTCTTGCTTGGTCTCCAGGGATGGCAATGTGTCCTATGCTTGGTACA
GAGGGAGCAAGCTGATCCAGACAGCAGGGAACCTCACCTACCTGGACGAGGAGGTTGACATTAATGGCACTCACA
CATATACCTGCAATGTCAGCAATCCTGTTAGCTGGGAAAGCCACACCCTGAATCTCACTCAGGACTGTCAGAATG
CCCATCAGGAATTCAGATTTTGGCCGTTTTTGGTGATCATCGTGATTCTAAGCGCACTGTTCCTTGGCACCCTTG
CCTGCTTCTGTGTGTGGAGGAGAAAGAGGAAGGAGAAGCAGTCAGAGACCAGTCCCAAGGAATTTTTGACAATTT
ACGAAGATGTCAAGGATCTGAAAACCAGGAGAAATCACGAGCAGGAGCAGACTTTTCCTGGAGGGGGGAGCACCA
TCTACTCTATGATCCAGTCCCAGTCTTCTGCTCCCACGTCACAAGAACCTGCATATACATTATATTCATTAATTC
AGCCTTCCAGGAAGTCTGGATCCAGGAAGAGGAACCACAGCCCTTCCTTCAATAGCACTATCTATGAAGTGATTG
GAAAGAGTCAACCTAAAGCCCAGAACCCTGCTCGATTGAGCCGCAAAGAGCTGGAGAACTTTGATGTTTATTCC**T**
AGTTGCTGCAGCAATTCTCACCTTTCTTGCACATCAGCATCTGCTTTGGGAATTGGCACAGTGGATGACGGCACA
GGAGTCTCTATAGAACACTTCCTAGTCTGGAGAGGATATGGAAATTTGTTCTTGTTCTATATTTTGTTTTGAAAA
TGATGTCTAACAACCATGATAAGAGCAAGGCTGTTAAATAATATCTTCCAATTTACAGATCAGACATGAATGGGT
GGAGGGGTTAGGTTGTTCACAAAAGGCCACATTCCAAGTATTTGTAATCTAGAAAGTGTTATGTAAGTGATGTTA
TTAGCATCGAGATTCCCTCCACCTGATTTTCAAGCTGTCACTTGTTTCCTTTTCTCCCCTCTCTGGGTTGACTGC
ATTTCTAGACTCTCGCCGGCCCAGGCCCATCTTCCAAAGCAAGAGGAAGGAATGATAATGGTGACTCAGGGGAAG
AAGAAACAGCCCTCCTCTGAAAGCCTGGACTGTCCGGCTGTGAACTGGCTGGCAGGTTCTGCACGTGGGTGGGGG
CCAGGGCCTGGGCTTTACTCAATTGCAGAGAAAAAACTTTCTCCCTGCATCTCATACCTTTACCTCTGGCCAGTT
GGCCACCAGGGGGAGTGGGCTGAAGGGAGAGTAGATGGTGCAAAGCAAGCCCATCTCTGAGTAGAAAAATCACCC
AGAGCACATGCTGACCTGATAACTGGGGTGTTGAGACCAGCTTTGTCCATGGTATGATGTTTGATTTATGAAGAC
GCATTGTTAGAAATCCATTTGGCTTCTTCATAGAAGTGGCTTCCCAGAGGAAGAGGCCTCTCAGAAACCATGTTC
TATTTAAGTTCTGAGTCCTGATGAGTGTTCCCCAGGATGCACATTGAAGGGAGGGCTCAGGCAGCTGAGGGCTGA
GAATGAGGCAGTTGGAATCTAGACACTATGCTGGGTTCCCTGAGTCGTCAGGCCAGACATTTCAACAAGGCTGTG
GGGAGCAGGGCTGTGACTCTGGCTGAGCCCAGGAAAGCGACAAGGGTGAACTGGGAGAGGACTTACTCAGAGACC
CCAACAGGTGATACTGCACAAAGCCTGGTTCTTCAATTTTCCTACCCTGTATCTAACATAGGAGTTTCATATAAA
ACGGTGATATCATGCAGATGCAGTCTGAATTCCTTGCCTG

FIGURE 2361

MLGQVVTLILLLLLKVYQGKGCQGSADHVVSISGVPLQLQPNSIQTKVDSIAWKKLLPSQNGFHHILKWENGSLP
SNTSNDRFSFIVKNLSLLIKAAQQQDSGLYCLEVTSISGKVQTATFQVFVFDKVEKPRLQGQGKILDRGRCQVAL
SCLVSRDGNVSYAWYRGSKLIQTAGNLTYLDEEVDINGTHTYTCNVSNPVSWESHTLNLTQDCQNAHQEFRFWPF
LVIIVILSALFLGTLACFCVWRRKRKEKQSETSPKEFLTIYEDVKDLKTRRNHEQEQTFPGGGSTIYSMIQSQSS
APTSQEPAYTLYSLIQPSRKSGSRKRNHSPSFNSTIYEVIGKSQPKAQNPARLSRKELENFDVYS

FIGURE 2362

AGCTTAACAAGACCATGGCCTCTGGACCCGCGATCAGCTCGCTGTGTGGTCCTGAGCAGCCACCCAACATCTCTG
GGCCTTGGATTCCTACCTGGCCTTTCTTCTGGATGCATCATTTTTGCCTTTAGGTATCTGGACCATTCCCCCCCA
TGGATGATAAAGTCTTTGCTTCACACCCTCAGGATTACCTTAAAGGCCTGAAAAGAACAGAGGAGGAGTCTGAGG
AGGTGAATTCCAGCCGTGCTCTTGCAGGCTGGCTGGGCAGTGTGCTGGGGAGGAGAGGGAGCCTCTGGCTGGGCC
TCCTCCACCGGGCCTGGTGTGCTGGGAACACCCCGCATTGTCCCAAGGCCTCAGATTTGACTTTCAAAGGGAAAA
CAGCTCTCCTGATAAAGGACACCATTGGAGAAACTGGGCATTTCACCAAGGATTTGACTGGAATGGCATGCTTCC
TTTAAAGATGAAAGTTGACTTTTAGAGCCAATTAAAGCCCTTTGGGGAATCTGGCCTCATACCTTGTCCACACAG
AGTTCCTGTACAAGGTTCCTGACCTGTGGGAAGCGGCACAGCACCAGCTAGGCAGAGACGCCCCAGGCCATGTTA
GAGCTTTGAGTGAGGCCTGGTAACAGGGAGGCGCTGTCACCTACTGGCCTTGCCAATCCAGCTCCAAG**ATG**CTGA
GCCTGAAGCTCCCCAGGCTGTTTAGCATAGACCAGATACCCCAGGTGTTCCATGAGCAAGGCATCCTGTTCGGCT
ACCGCCATCCACAGAGTTCTGCCACTGCCTGCATCCTCAGCCTTTTCCAAATGACCAATGAGACTCTCAACATTT
GGACTCACTTGCTGCCCTTCTGGTTCTTTGCATGGAGGTTTGTGACTGCACTGTATATGACAGACATCAAGAATG
ACAGCTACTCCTGGCCCATGCTTGTGTACATGTGCACCAGCTGCGTGTACCCACTTGTGTCCAGCTGTGCGCACA
CCTTCAGCTCTATGTCCAAGAATGCCCGGCACATTTGCTACTTCCTGGACTATGGTGCCGTCAACCTCTTCAGCC
TGGGCTCAGCCATTGCCTACTCTGCATACACGTTCCCGGATGCGCTCATGTGCACCACTTTCCATGACTACTACG
TGGCCCTGGCTGTACTGAACACCATCCTCAGCACAGGCCTCTCCTGCTACTCCAGGTTTCTTGAAGTCCAGAAGC
CCAGACTCTGTAAGGTGATTCGTGTCCTCGCCTTTGCTTATCCGTACACCTGGGACTCCCTCCCCATCTTCTACA
GGCTATTCCTGTTCCCAGGGGAGAGTGCACAAAATGAAGCCACCTCGTACCACCAGAAGCACATGATCATGACCC
TCCTGGCCTCTTTCTTGTACTCTGCACATCTGCCAGAACGCCTAGCCCCTGGACGCTTTGACTACATCGGTCACA
GTCACCAGCTGTTTCACGTGTGTGTGATCCTGGCCACGCACATGCAGATGGAAGCCATACTTCTGGACAAGACTC
TGAGGAAGGAATGGCTCCTGGCCACCTCCAAGCCCTTCTCTTTCTCTCAGATAGCTGGAGCCATACTTCTGTGCA
TCATCTTCAGCCTCAGCAACATAATTTATTTCTCAGCTGCTCTGTATCGGATTCCCAAGCCAGAATTACATAAAA
AAGAAACA**TGA**CTCAGACCATAAGCTTTTCATGCCAGATGTCAACATTAAGCTGCAACATCCTAACCACCATAAG
CCGGAGGTGGTTACAGCTTATCACGGCCTAAAATATTCATAATGGTTGGTGTCTTTTGAATGAATTCATGTCAAA
AATGTTATTCAGCTGGGGAAATTTCTCTAAATGTACACTGATTCTGTGTGTGTGATTTTAAAAGGAGAACATGGT
TCAAGCAAGTCCTTGTTAAGGCAAACTATTGATATTTCATTAATTTTAAATTTACTTAAAATGTGGTTTTAAATT
CTATTTAAACATTTGGATTAAGCATATTACTCTGGAGCTTTGTATTATTCTTTAAAAATGAATCTTGCTTCATTT
GATGAATTTCATGTCACAAAGCTTCTCTCAAGAGCTCTCGTAGTGGCCTGTCAACCACTTTCGGAGAATGAGCCA
GGTCAGTCACTGGGAGGACCTGTGAAAGAAAGTTGGTCACTGAGTGCCTTGGGGACTGGCAAAACATTCCAGAAT
GAAGAGAGCTGTCTGGGGAGAGCCCTTCTTCCCTTCTCCACCTAGTGAAGGGAGAACAGAAGGGGAGTCCTCTCT
TCCCACAAGTCCATTCTGCCTTCAAAGTGTAAGTTCTCATGTCATTATGGATTTGGAGTTTGTCAGTTTTTTTCT
TAAAAGTCCACAGCGGGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2363

MLSLKLPRLFSIDQIPQVFHEQGILFGYRHPQSSATACILSLFQMTNETLNIWTHLLPFWFFAWRFVTALYMTDI
KNDSYSWPMLVYMCTSCVYPLVSSCAHTFSSMSKNARHICYFLDYGAVNLFSLGSAIAYSAYTFPDALMCTTFHD
YYVALAVLNTILSTGLSCYSRFLEVQKPRLCKVIRVLAFAYPYTWDSLPIFYRLFLFPGESAQNEATSYHQKHMI
MTLLASFLYSAHLPERLAPGRFDYIGHSHQLFHVCVILATHMQMEAILLDKTLRKEWLLATSKPFSFSQIAGAIL
LCIIFSLSNIIYFSAALYRIPKPELHKKET

FIGURE 2364A

GGAGGGAGGCCGGGCAGGCGGCTGAGCGGCGCGGCTCTCAACGTGACGGGGAAGTGGTTCGGGCGGCCGCGGCTT
ACTACCCCAGGGCGAACGGACGGACGACGGAGGCGGGAGCCGGTAGCCGAGCCGGGCGACCTAGAGAACGAGCGG
GTCAGGCTCAGCGTCGGCCACTCTGTCGGTCCGCTGAATGAAGTGCCCGCCCCTCTAAGCCCGGAGCCCGGCGCT
TTCCCCGCAAG**ATG**GACGGTTTCGCCGGCAGTCTCGATGATAGTATTTCTGCTGCAAGTACTTCTGATGTTCAAG
ATCGCCTGTCAGCTCTTGAGTCACGAGTTCAGCAACAAGAAGATGAAATCACTGTGCTAAAGGCGGCTTTGGCTG
ATGTTTTGAGGCGTCTTGCAATCTCTGAAGATCATGTGGCCTCAGTGAAAAAATCAGTCTCAAGTAAAGGCCAAC
CAAGCCCTCGAGCAGTTATTCCCATGTCCTGTATAACCAATGGAAGTGGTGCAAACAGAAAACCAAGTCATACCA
GTGCTGTCTCAATTGCAGGAAAAGAAACTCTTTCATCTGCTGCTAAAAGTGGTACAGAAAAAAAGAAAGAAAAAC
CACAAGGACAGAGAGAAAAAAAAAGAGGAATCTCATTCTAATGATCAAAGTCCACAAATTCGAGCATCACCTTCTC
CCCAGCCCTCTTCACAACCTCTCCAAATACACAGACAAACTCCAGAAAGCAAGAATGCTACTCCCACCAAAAGCA
TAAAACGACCATCACCAGCTGAAAAGTCACATAATTCTTGGGAAAATTCAGATGATAGCCGTAATAAATTGTCGA
AAATACCTTCAACACCCAAATTAATACCAAAAGTTACCAAAACTGCAGACAAGCATAAAGATGTCATCATCAACC
AAGAAGGAGAATATATTAAAATGTTTATGCGCGGTCGGCCAATTACCATGTTCATTCCTTCCGATGTTGACAACT
ATGATGACATCAGAACGGAACTGCCTCCTGAGAAGCTCAAACTGGAGTGGGCATATGGTTATCGAGGAAAGGACT
GTAGAGCTAATGTTTACCTTCTTCCGACCGGGGAAATAGTTTATTTCATTGCATCAGTAGTAGTACTATTTAATT
ATGAGGAGAGAACTCAGCGACACTACCTGGGCCATACAGACTGTGTGAAATGCCTTGCTATACATCCTGACAAAA
TTAGGATTGCAACTGGACAGATAGCTGGCGTGGATAAAGATGGAAGGCCTCTACAACCCCACGTCAGAGTGTGGG
ATTCTGTTACTCTATCCACACTGCAGATTATTGGACTTGGCACTTTTGAGCGTGGAGTAGGATGCCTGGATTTTT
CAAAAGCAGATTCAGGTGTTCATTTATGTGTTATTGATGACTCCAATGAGCATATGCTTACTGTATGGGACTGGC
AGAAGAAAGCAAAAGGAGCAGAAATAAAGACAACAAATGAAGTTGTTTTGGCTGTGGAGTTTCACCCAACAGATG
CAAATACCATAATTACATGCGGTAAATCTCATATTTTCTTCTGGACCTGGAGCGGCAATTCACTAACAAGAAAAC
AGGGAATTTTTGGGAAATATGAAAAGCCAAAATTTGTGCAGTGTTTAGCATTCTTGGGGAATGGAGATGTTCTTA
CTGGAGACTCAGGTGGAGTCATGCTTATATGGAGCAAAACTACTGTAGAGCCCACACCTGGGAAAGGACCTAAAG
GTGTATATCAAATCAGCAAACAAATCAAAGCTCATGATGGCAGTGTGTTCACACTTTGTCAGATGAGAAATGGGA
TGTTATTAACTGGAGGAGGGAAAGACAGAAAAATAATTCTGTGGGATCATGATCTGAATCCTGAAAGAGAAATAG
AGGTTCCTGATCAGTATGGCACAATCAGAGCTGTAGCAGAAGGAAAGGCAGATCAATTTTTAGTAGGCACATCAC
GAAACTTTATTTTACGAGGAACATTTAATGATGGCTTCCAAATAGAAGTACAGGGTCATACAGATGAGCTTTGGG
GTCTTGCCACACATCCCTTCAAAGATTTGCTCTTGACATGTGCTCAGGACAGGCAGGTGTGCCTGTGGAACTCAA
TGGAACACAGGCTGGAATGGACCAGGCTGGTAGATGAACCAGGACACTGTGCAGATTTTCATCCAAGTGGCACAG
TGGTGGCCATAGGAACGCACTCAGGCAGGTGGTTTGTTCTGGATGCAGAAACCAGAGATCTAGTTTCTATCCACA
CAGACGGGAATGAACAGCTCTCTGTGATGCGCTACTCAATAGATGGTACCTTCCTGGCTGTAGGATCTCATGACA
ACTTTATTTACCTCTATGTAGTCTCTGAAAATGGAAGAAAATATAGCAGATATGGAAGGTGCACTGGACATTCCA
GCTACATCACACACCTTGACTGGTCCCCAGACAACAAGTATATAATGTCTAACTCGGGAGACTATGAAATATTGT
ACTGGGACATTCCAAATGGCTGCAAACTAATCAGGAATCGATCGGATTGTAAGGACATTGATTGGACGACATATA
CCTGTGTGCTAGGATTTCAAGTATTTGGTGTCTGGCCAGAAGGATCTGATGGGACAGATATCAATGCACTGGTGC
GATCCCACAATAGAAAGGTGATAGCTGTTGCCGATGACTTTTGTAAAGTCCATCTGTTTCAGTATCCCTGCTCCA
AAGCAAAGGCTCCCAGTCACAAGTACAGTGCCCACAGCAGCCATGTCACCAATGTCAGTTTTACTCACAATGACA
GTCACCTGATATCAACTGGTGGAAAAGACATGAGCATCATTCAGTGGAAACTTGTGGAAAAGTTATCTTTGCCTC
AGAATGAGACTGTAGCGGATACTACTCTAACCAAAGCCCCCGTCTCTTCCACTGAAAGTGTCATCCAATCTAATA
CTCCCACACCGCCTCCTTCTCAGCCCTTAAATGAGACAGCTGAAGAGGAAAGTAGAATAAGCAGTTCTCCCACAC
TTCTGGAGAACAGCCTGGAACAAACTGTGGAGCCAAGTGAAGACCACAGCGAGGAGGAGAGTGAAGAGGGCAGCG
GAGACCTTGGTGAGCCTCTTTATGAAGAGCCATGCAACGAGATAAGCAAGGAGCAGGCCAAAGCCACCCTTCTGG
AGGACCAGCAAGACCCTTCGCCCTCGTCC**TAA**CACCCTGGCTTCAGTGCAACTCTTTTCCTTCAGCTGCATGTGA
TTTTGTGATAAAGTTCAGGTAACAGGATGGGCAGTGATGGAGAATCACTGTTGATTGAGATTTTGGTTTCCATGT
GATTTGTTTTCTTCAATAGTCTTATTTTCAGTCTCTCAAATACAGCCAACTTAAAGTTTTAGTTTGGTGTTTATT
GAAAATTAACCAAACTTAATACTAGGAGAAGACTGAATCATTAATGATGTCTCACAAATTACTGTGTACCTAAGT
GGTGTGATGTAAATACTGGAAACAAAAACAGCAGTTGCATTGATTTTGAAAACAAACCCCCTTGTTATCTGAACA
TGTTTTCTTCAGGAACAACCAGAGGTATCACAAACACTGTTACTCATCTACTGGCTCAGACTGTACTACTTTTTT

FIGURE 2364B

TTTTTTTTTTCCTGAAAAAGAAACCAGAAAAAAATGTACTCTTACTGAGATACCCTCTCACCCCAAATGTGTAAT
GGAAAATTTTTAATTAAGAAAAACTTCAGTTTTGCCAAGTGCAATGGTGTTGCCTTCTTTAAAAAATGCCGTTTT
CTTACACTACCAGTGGATGTCCAGACATGCTCTTAGTCTACTAGAGAGGTGCTGCCTTTTCTAAGTCATAATGAG
GAACAGTCCCTTAATTTCTTGTGTGCAACTCTGTTTTATCCTAGAACTAAGAGAGCATTGGTTTGTTAAAGAGCT
TTCAATGTATATTAAAACCTTCAATACTCAGAAATGATGGATTCCTCCAAGGAGTCCTTTACTAGCCTAAACATT
CTCAAATGTTTGAGATTCAAGTGAATGGAAGGAAAACCACATGCCTTTAAAACTAAACTGTAATAATTACCTGGC
TAATTTCAGCTAAGCCTTCATCATAATTTGTTCCCTCAGTAATAGGAGAAATATAAATACAGTAAGTTTAGATTA
TTGAATTGGTGCTTGAAATTTATTGGTTTTGTTGTAATTTTATACAGATTATATGAGGGATAAGATACTCATCAA
ATTGCAAATTCTTTTTTTTACAGAAGTGTGGGTAACAGTCACAGCAGTTTTTTTTACCAACAGCATACTTAACAG
ACTTGCTGTGTAGCAGTTTTTTTCTGGTGGAGTTGCTGTAAGTCTTGTAAGTCTAATGTGGCTATCCTACTCTTT
TGGGCAATGCATGTATTATGCATTGGAAAGGTATTTTTTTTAAGTTCTGTTGGCTAGCTATGGTTTTCAGTACAT
TTCCTACTTTAAGAGTAATTACTGACAAATATGTATTTCCTATATGTTTATACTTTGATTATAAAAAAGTATTTT
GTTTTGATTTTTTAACTTGCTGCATTGTTTTGATACTTTCTATTTTTTTGGTCAAATCATGTTTAGAAACTTTGG
ATGAGTTAAGAAGTCTTAAGTATGCAGGCGTTTACGTGATTGTGCCATTCCAAAGTGCATCAGAACTGTCATTCC
CTTCTAATATCTTCTCAGGAGTAATACAAATCAGGTATTTCATCATCATTTGGTAATATGAAAACTCCAGTGAAC
TCCCAAGGACATTTACAACATTTATATTCACACGCTGTATGGAAGGGTGTGGGTGTGTGTGAAGGGGCGAGTGGA
GACACTGTGTGTATCTCTAGATAAGAAGATATGCACCACGTTGAAAATACTCAGTGTAGATCTCTATGTGTATAG
GTATCTGTATATCTTTCCTTTTGTTTACAACTGTTAAAAAACCTCAAAATAGTTCTCTTCAAAAGAAGAGAGATT
CCAAGCAACCCATCTTTCTTCAGTATGTATGTTCTGTACATACTTATCGGAGCGCGCCAGTAAGTATCAGGCATA
TATATCTGTCTGTTAGCAATGATTATTACATCATCAGATCAGCATGTGCTATACTCCCTGCAAGAAATATACTGA
CATGAACAGGCAGTTCTTGGAGAAGAAAGAGCATTTCTTTAAGTACCTGGGGAATACAGCTCTCAGTGATCAGCA
GGGAGTTTATTTGAGGACATCAGTCACCTTTGGGGTTGCCATGTACAATGAGATTTATAATCATGATACTCTTCG
GTGGTAGTTTCAAAAGACACTACTAATACGCAGGAAGCGTTCCAGCTATTTAATGCTGGCAACTACTGTTTAATG
GTCAGTTAAATCTGTGATAATGGTTGGAAGTGGGTGGGGTTATGAAATTGTAGATGTTTTTAGAAAAACTTGTGA
ATGAAAATGAATCCAAGTGTTTCATGTGAAGATGTTGAGCCATTGCTATCATGCATTCCTGTCTCATGGCAGAAA
ATTTTGAAGATTAAAAAATAAAATAATCAAAATGTTTCCTCTTTCTAAAAAAAAAAAAAAAAAA

FIGURE 2365

MDGFAGSLDDSISAASTSDVQDRLSALESRVQQQEDEITVLKAALADVLRRLAISEDHVASVKKSVSSKGQPSPR
AVIPMSCITNGSGANRKPSHTSAVSIAGKETLSSAAKSGTEKKKEKPQGQREKKEESHSNDQSPQIRASPSPQPS
SQPLQIHRQTPESKNATPTKSIKRPSPAEKSHNSWENSDDSRNKLSKIPSTPKLIPKVTKTADKHKDVIINQEGE
YIKMFMRGRPITMFIPSDVDNYDDIRTELPPEKLKLEWAYGYRGKDCRANVYLLPTGEIVYFIASVVVLFNYEER
TQRHYLGHTDCVKCLAIHPDKIRIATGQIAGVDKDGRPLQPHVRVWDSVTLSTLQIIGLGTFERGVGCLDFSKAD
SGVHLCVIDDSNEHMLTVWDWQKKAKGAEIKTTNEVVLAVEFHPTDANTIITCGKSHIFFWTWSGNSLTRKQGIF
GKYEKPKFVQCLAFLGNGDVLTGDSGGVMLIWSKTTVEPTPGKGPKGVYQISKQIKAHDGSVFTLCQMRNGMLLT
GGGKDRKIILWDHDLNPEREIEVPDQYGTIRAVAEGKADQFLVGTSRNFILRGTFNDGFQIEVQGHTDELWGLAT
HPFKDLLLTCAQDRQVCLWNSMEHRLEWTRLVDEPGHCADFHPSGTVVAIGTHSGRWFVLDAETRDLVSIHTDGN
EQLSVMRYSIDGTFLAVGSHDNFIYLYVVSENGRKYSRYGRCTGHSSYITHLDWSPDNKYIMSNSGDYEILYWDI
PNGCKLIRNRSDCKDIDWTTYTCVLGFQVFGVWPEGSDGTDINALVRSHNRKVIAVADDFCKVHLFQYPCSKAKA
PSHKYSAHSSHVTNVSFTHNDSHLISTGGKDMSIIQWKLVEKLSLPQNETVADTTLTKAPVSSTESVIQSNTPTP
PPSQPLNETAEEESRISSSPTLLENSLEQTVEPSEDHSEEESEEGSGDLGEPLYEEPCNEISKEQAKATLLEDQQ
DPSPSS

FIGURE 2366

CGCCTCCGAGGCAGTGTGTTTCCGCCCAGAGCTGGAGTCTCCCAGCTGCCAGCCGACCCCGAACCCGCACTCCCG
CCAACCGCGCTTTTTGTGGGCGGTCGGAAACCACAGCCTCCGTTGGAT**ATG**TTCGGTGCATGTTATAAACAACCA
CTTAAACCCTCCGGATCTGAGCCTCCCGCAGAGGAATGCAGAATGACGCCACGGCACGCAGGATGTGATGTCACC
GAGATGCAGAGGATACTCAGTCAACCAACATTTACTGAGCATCTACTTCGTGCCGTCTTGTCAACGGAAAGGGGT
CCCTATCCAGACCCCAAGAGAGCATTCTTGGATCTCTTGCAAGAAAGAATT**TGA**GGCGAATCCATAGAGTAAGCA
AGGCAAGTTACTTCTATATAGAAGGGTGCACCCTTACAGATCAAACAATGCTTAGTGATGTGTGTCAGACCTCTG
AGCCCAAGCAAAGCCATCATATCCCCTGTGACCTGCATGTATACATCCAGATGGCCTGAAGCAAGTGAAGAATCA
CAAAAGAAGTGAAAAGGGCCGGTTCCTGCCTTAACTGATGACATTCCACCATTGTGATTTGTTCCTGCCCCACCT
TAACTGAGCGATTAACCTGTGAACTTCCTTCTCCTGGCTCAGAAGCTTCCCCACTGAGCACCTTGTGACCCCCGC
CCCTGCCTGCCATAGAACAACCCCCTTTGATTGTAATTTTCCTTTACCTACCCAAATCCTATAAAACGGCCCCAC
CCCTATCTCCCTTCGCTGACACTCTCTTTGGACTCAGCCTGCCTGCACCTAGGTGATTAAAAAGCTTTATTGTCA
CGCAAAAAA

FIGURE 2367

MFGACYKQPLKPSGSEPPAEECRMTPRHAGCDVTEMQRILSQPTFTEHLLRAVLSTERGPYPDPKRAFLDLLQER
I

FIGURE 2368

GCGCCCTCGCCGCGGACACCGGAGCTGCGGCCGCTCCCCGCTGTCCCCCAGAG**ATG**GCAGATCCTGAGGTAGTTG
TGTGTAGCTGCAGCTCTCATGAAGAGGAAAATCGCTGCAATTTTAACCAGCAAACATCTCCATCTGAGGAGCTTC
TATTAGAAGACCAGATGAGGCGAAAACTCAAATTTTTTTTCATGAATCCCTGTGAGAAGTTCTGGGCTCGAGGTA
GAAAACCATGGAAACTTGCCATACAAATTCTAAAAATTGCAATGGTGACTATCCAGTACTTGCAGCTATACAATG
TCTCCGTTGGGAATCATGCTTATGAGAACAAAGGTACCAAGCAATCTGCTATGGCAATCTGTCAGCACTTCTACA
AGCGAGGAAACATCTACCCTGGAAATGATACCTTTGACATCGATCCAGAAATTGAAACTGAGTGTTTCTTTGTGG
AGCCAGATGAACCTTTTCACATTGGGACACCAGCAGAAAATAAACTGAACTTAACACTGGACTTCCACAGACTCC
TAACAGTGGAGCTTCAGTTTAAACTGAAAGCCATTAATCTGCAGACAGTTCGTCATCAAGAACTCCCTGACTGTT
ATGACTTTACTCTGACTATAACATTTGACAACAAGGCCCATAGTGGAAGAATTAAAATAAGTTTAGATAATGACA
TTTCCATCAGAGAATGTAAAGACTGGCATGTATCTGGATCAATTCAGAAGAACACTCATTACATGATGATCTTTG
ATGCCTTTGTCATTCTGACTTGCTTGGTTTCATTAATCCTCTGCATTAGATCTGTGATTAGAGGACTTCAGCTTC
AGCAGGAGTTTGTCAATTTTTTCCTCCTCCATTATAAGAAGGAAGTTTCTGTTTCTGATCAAATGGAATTTGTCA
ATGGATGGTACATTATGATTATTATTAGTGACATATTGACAATCATTGGATCAATTCTAAAAATGGAAATCCAAG
CTAAGAGTCTAACTAGTTATGATGTCTGTAGCATACTTCTTGGGACTTCTACCATGCTCGTGTGGCTTGGAGTCA
TCCGATACCTCGGTTTCTTTGCAAAGTACAACCTCCTCATTTTGACCCTTCAGGCAGCGCTGCCCAATGTCATCA
GGTTCTGCTGCTGTGCAGCTATGATTTACTTAGGTTACTGCTTCTGTGGATGGATCGTGCTGGGGCCTTACCATG
ACAAGTTTCGTTCTCTGAACATGGTCTCTGAGTGCCTTTTCTCTCTGATAAATGGAGATGATATGTTTGCCACGT
TTGCAAAAATGCAGCAAAAAAGTTACTTAGTCTGGCTGTTTAGTAGAATTTACCTCTACTCATTCATCAGCCTCT
TTATATATATGATTTTAAGTCTTTTCATTGCACTGATCACTGATACATACGAAACAATTAAGCAATACCAACAAG
ATGGCTTCCCAGAGACTGAACTTCGTACATTTATATCAGAATGCAAAGATCTACCCAACTCTGGAAAATACAGAT
TAGAAGATGACCCTCCAGTATCTTTATTCTGCTGTTGTAAAAAG**TAG**CTATCAGGTTTATCTGTACTTTAGAGGA
AAATATAATGTGTAGCTGAGTTGGAACACTGTGGATATTCTGAGATCAGATGTAGTATGTTTGGAGACTGTTATT
TTGAGCTAATTGAGACCTATAATTCACCAATAACTGTTTATATTTTTAAAAGCAATATTTAATGTCTTTGCAACT
TTATGCTGGGATTGTTTTTAAAAAAACTTTAATGAGG

FIGURE 2369

MADPEVVVCSCSSHEEENRCNFNQQTSPSEELLLEDQMRRKLKFFFMNPCEKFWARGRKPWKLAIQILKIAMVTI
QYLQLYNVSVGNHAYENKGTKQSAMAICQHFYKRGNIYPGNDTFDIDPEIETECFFVEPDEPFHIGTPAENKLNL
TLDFHRLLTVELQFKLKAINLQTVRHQELPDCYDFTLTITFDNKAHSGRIKISLDNDISIRECKDWHVSGSIQKN
THYMMIFDAFVILTCLVSLILCIRSVIRGLQLQQEFVNFFLLHYKKEVSVSDQMEFVNGWYIMIIISDILTIIGS
ILKMEIQAKSLTSYDVCSILLGTSTMLVWLGVIRYLGFFAKYNLLILTLQAALPNVIRFCCCAAMIYLGYCFCGW
IVLGPYHDKFRSLNMVSECLFSLINGDDMFATFAKMQQKSYLVWLFSRIYLYSFISLFIYMILSLFIALITDTYE
TIKQYQQDGFPETELRTFISECKDLPNSGKYRLEDDPPVSLFCCCKK

FIGURE 2370

TCAAGACCCAGCAGTGGGACAGCCAGACAGACGGCACG**ATG**GCACTGAGCTCCCAGATCTGGGCCGCTTGCCTCC
TGCTCCTCCTCCTCCTCGCCAGCCTGACCAGTGGCTCTGTTTTCCCACAACAGACGGGACAACTTGCAGAGCTGC
AACCCCAGGACAGAGCTGGAGCCAGGGCCAGCTGGATGCCCATGTTCCAGAGGCGAAGGAGGCGAGACACCCACT
TCCCCATCTGCATTTTCTGCTGCGGCTGCTGTCATCGATCAAAGTGTGGGATGTGCTGCAAGACG**TAG**AACCTAC
CTGCCCTGCCCCCGTCCCCTCCCTTCCTTATTTATTCCTGCTGCCCCAGAACATAGGTCTTGGAATAAAATGGCT
GGTTCTTTTGTTTTCC

FIGURE 2371

MALSSQIWAACLLLLLLLASLTSGSVFPQQTGQLAELQPQDRAGARASWMPMFQRRRRRDTHFPICIFCCGCCHR
SKCGMCCKT

FIGURE 2372

CGGGAATCCCTGCAGCTGAGCCTGTCTCTCACGGGACCGGGAAGCTGGAGAGAGCCCCAACCCTGCCCGCTGGGG
CCGAGCTCCCTGCTCCTGCAGCAGTCCCATGCCCCACACTCTGAGTCTGCCCTATCCACAGCTGCTGGGCCTCTC
TGTGGCCACC**ATG**GTGACTCTTACCTACTTCGGGGCCCACTTTGCTGTCATCCGCCGAGCGTCCCTGGAGAAGAA
CCCGTACCAGGCTGTGCACCAATGGGCCTTCTCTGCGGGGTTGAGCCTGGTGGGCCTCCTGACTCTGGGAGCCGT
GCTGAGCGCTGCAGCCACCGTGAGGGAGGCCCAGGGCCTCATGGCAGGGGGCTTCCTGTGCTTCTCCCTGGCGTT
CTGCGCACAGGTGCAGGTGGTGTTCTGGAGACTCCACAGCCCCACCCAGGTGGAGGACGCCATGCTGGACACCTA
CGACCTGGTATATGAGCAGGCGATGAAAGGTACGTCCCACGTCCGGCGGCAGGAGCTGGCGGCCATCCAGGACGT
GTTTCTGTGCTGTGGGAAGAAGTCTCCTTTCAGCCGTCTGGGGAGCACAGAGGCTGACCTGTGTCAGGGAGAGGA
GGCGGCGAGAGAGGACTGCCTTCAGGGCATCCGGAGCTTCCTGAGGACACACCAGCAGGTCGCCTCCAGCCTGAC
CAGCATCGGCCTGGCCCTCACGGTGTCCGCCTTGCTCTTCAGCTCCTTCCTGTGGTTTGCCATCCGCTGTGGCTG
CAGCTTGGACCGCAAGGGCAAATACACCCTGACCCCACGAGCATGTGGCCGCCAGCCCCAGGAGCCCAGCCTCTT
GAGATGCTCCCAGGGTGGACCCACACATTGTCTCCACTCCGAAGCAGTTGCTATTGGTCCAAGAGGATGCTCGGG
TAGTCTTCGGTGGCTGCAGGAGAGCGATGCTGCGCCTCTGCCCCTCTCCTGCCACCTGGCTGCCCACAGAGCTCT
CCAGGGCAGAAGTCGCGGTGGGCTCAGTGGGTGCCCTGAGCGGGGTCTCTCAGAC**TGA**CGTCAGGCCTTGGTGGG
CTGCACTCTCACCTGGAGGCTCCGGGGAAGCATCTGCCTCCAGGACCATTCAGGCTGTTGACAAGTCAACTCCTC
ATGGCTGTAGGACTGAGGTTCCCAAGTCCTTGTCCCTGGTCCTGTGGTCCCTCCACCTTCAAACCAGCAATGGTG
CATTGAGCAAATTGTGGTCAAATATACATCACATCAAATTTACCATCTTAAAAAAA

FIGURE 2373

MVTLTYFGAHFAVIRRASLEKNPYQAVHQWAFSAGLSLVGLLTLGAVLSAAATVREAQGLMAGGFLCFSLAFCAQ
VQVVFWRLHSPTQVEDAMLDTYDLVYEQAMKGTSHVRRQELAAIQDVFLCCGKKSPFSRLGSTEADLCQGEEAAR
EDCLQGIRSFLRTHQQVASSLTSIGLALTVSALLFSSFLWFAIRCGCSLDRKGKYTLTPRACGRQPQEPSLLRCS
QGGPTHCLHSEAVAIGPRGCSGSLRWLQESDAAPLPLSCHLAAHRALQGRSRGGLSGCPERGLSD

FIGURE 2374

GGCCATCTCTGGGCGGCGGCGGCGGGCGGTGTCTGCGCGGTCGGTGAGACCCGCGCGGGTGAGACGCTGGCCCTC
CTTACAGCCTAGAAAAA**ATG**ACAGATCTCGTAGCTGTTTGGGATGTTGCTTTAAGTGACGGAGTCCACAAGATCG
AATTTGAACATGGGACTACATCAGGCAAACGAGTAGTATATGTAGATGGAAAGGAAGAGATAAGAAAAGAGTGGA
TGTTCAAATTAGTGGGCAAAGAAACATTCTATGTTGGAGCTGCAAAGACAAAAGCGACCATAAATATAGACGCTA
TCAGTGGTTTTGCTTATGAATATACTCTGGAAATTAATGGGAAAAGTCTCAAGAAGTATATGGAGGACAGATCAA
AAACCACCAATACTTGGGTATTACACATGGATGGTGAGAACTTTAGAATTGTTTTGGAAAAAGATGCTATGGACG
TATGGTGCAATGGTAAAAAATTGGAGACAGCGGGTGAGTTTGTAGATGATGGGACTGAAACTCACTTCAGTATCG
GGAACCATGACTGTTACATAAAGGCTGTCAGTAGTGGGAAGCGGAAAGAAGGGATTATTCATACTCTCATTGTGG
ATAATAGAGAAATCCCAGAGATTGCAAGT**TAA**TGAATTTTCATCTTAAGAAGTAAAGATCAGGACTTTTTAATTA
CTGTGGTAATTAAATGTGTTCAGTATGTACTTATCAGTACATTTAGTCTGCAATGTTTTAATTTTTTAAAAAGTT
ACATGAAACTAACATTCCAAGGGTCAGGAAAAAAACCAATTATGTATAGTCATAAAAATTACAATTTATGATGCA
AATAATGTAAAATGTTTTAAAGACAAATGGCAAATAAGATATGGACCAAAGTCACTAATGTTTTACAACAGTAAC
CTTTACTATAATAAATACTTTT

FIGURE 2375

MTDLVAVWDVALSDGVHKIEFEHGTTSGKRVVYVDGKEEIRKEWMFKLVGKETFYVGAAKTKATINIDAISGFAY
EYTLEINGKSLKKYMEDRSKTTNTWVLHMDGENFRIVLEKDAMDVWCNGKKLETAGEFVDDGTETHFSIGNHDCY
IKAVSSGKRKEGIIHTLIVDNREIPEIAS

FIGURE 2376

ACCGTCTTCCGCCGCACGTGGATTCAGCGCG**ATG**CCCAAATCCAAGCGCGACAAGAAAGTCTCCTTAACCAAAAC
TGCCAAGAAAGGCTTGGAATTGAAACAAAACCTGATAGAAGAGCTTCGGAAATGTGTGGACACCTACAAGTACCT
TTTCATCTTCTCTGTGGCCAACATGAGGAACAGCAAGCTGAAGGACATCCGGAACGCCTGGAAGCACAGCCGGAT
GTTCTTTGGCAAAAACAAGGTGATGATGGTGGCCTTGGGTCGGAGCCCATCTGATGAATACAAAGACAACCTGCA
CCAGGTCAGCAAAAGGTTGAGGGGTGAGGTGGGTCTCCTGTTCACCAACCGCACAAAGGAAGAGGTGAATGAGTG
GTTCACGAAATACACAGAAATGGACTACGCCCGAGCTGGTAACAAAGCAGCTTTCACTGTGAGCCTGGATCCAGG
GCCCCTGGAGCAGTTCCCCCACTCCATGGAGCCACAGCTCAGGCAGCTGGGCCTGCCCACCGCCCTCAAGAGAGG
TGTGGTGACTCTGCTGTCTGACTACGAGGTGTGCAAGGAGGGCGATGTGCTGACCCCAGAGCAGGCTCGCGTCCT
GAAGCTTTTTGGGTATGAGATGGCTGAATTCAAGGTGACCATCAAATACATGTGGGATTCACAGTCGGGAAGGTT
CCAGCAGATGGGAGACGACTTGCCAGAGAGCGCATCTGAGTCCACAGAAGAGTCAGACTCAGAAGATGATGAC**TG**
AAAGGGACTCGGGACTGAAGGTCTCCTGGAAGCTTCTGGGTCTCACTGGACCATCAGGACTGCTGCCGCCCCTCT
GGAGAGAGCAGCTTTTTATTTGTCTGTAGACAGGGAACATGATGGGCACTGACCTCCTGTAAAGAATAAAACTGT
GGGCCGGGCGCGGTGGCTCACGCCTGGAATCCCAGCACTTTGGGAAGCCGAGGTGGGCAGATCATAAGGTCAGGA
GATTAAGACCATCCTGGCTAACACGGTGAAACCCCGTCTCTACTAAAAATAGAAAAAAAAACTAGTTGGGCATAG
TGGCATGTGCCTGTAGTCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATCACTTGAACCCGGGAGGTGGAGGTTG
CCGTGAGTTGAGATTGGACCACTGCTCTCCAGCCTGGGCAACAGAGTAAAACTCTGTCCC

FIGURE 2377

MPKSKRDKKVSLTKTAKKGLELKQNLIEELRKCVDTYKYLFIFSVANMRNSKLKDIRNAWKHSRMFFGKNKVMMV
ALGRSPSDEYKDNLHQVSKRLRGEVGLLFTNRTKEEVNEWFTKYTEMDYARAGNKAAFTVSLDPGPLEQFPHSME
PQLRQLGLPTALKRGVVTLLSDYEVCKEGDVLTPEQARVLKLFGYEMAEFKVTIKYMWDSQSGRFQQMGDDLPES
ASESTEESDSEDDD

FIGURE 2378

CCGTCATTGACGCCATGAGCGCGCTGCTGCGGCTGCTGCGCACGGTTGCCCCAGCCGCTGCGTGCCTGCGGTTGG
GGACCAGTGCAGGGACCGGGTCGCGCCGTGCT**ATG**GCCCTGTACCACACTGAGGAGCGCGGCCAGCCCTGCTCGC
AGAATTACCGCCTCTTCTTTAAGAATGTAACTGGTCACTACATTTCCCCCTTTCATGATATTCCTCTGAAGGTGA
ACTCTAAAGAGGAAAATGGCATTCCTATGAAGAAAGCACGAAATGATGAATATGAGAATCTGTTTAATATGATTG
TAGAAATACCTCGGTGGACAAATGCTAAAATGGAGATTGCCACCAAGGAGCCAATGAATCCCATTAAACAATATG
TAAAGGATGGAAAGCTACGCTATGTGGCGAATATCTTCCCTTACAAGGGTTATATATGGAATTATGGTACCCTCC
CTCAGATTCTTTCTTGTGGAGAAGTTATTCATGTGAAGATCCTTGGAATTTTGGCTCTTATTGATGAAGGTGAAA
CAGATTGGAAATTAATTGCTATCAATGCGAATGATCCTGAAGCCTCAAAGTTTCATGATATTGATGATGTTAAGA
AGTTCAAACCGGGTTACCTGGAAGCTACTCTTAATTGGTTTAGATTATATAAGGTACCAGATGGAAAACCAGAAA
ACCAGTTTGCTTTTAATGGAGAATTCAAAAACAAGGCTTTTGCTCTTGAAGTTATTAAATCCACTCATCAATGTT
GGAAAGCATTGCTTATGAAGAACTGTAATGGAGGAGCTATAAATTGCACAAACGTGCAGATATCTGATAGCCCTT
TCCGTTGCACTCAAGAGGAAGCAAGATCATTAGTTGAATCGGTATCATCTTCACCAAATAAAGAAAGTAATGAAG
AAGAGCAAGTGTGGCACTTCCTTGGCAAG**TGA**TTGAAACATCTGAAATTCTGCTGTCAAGATTCCCATCTCTAAG
GACTCCAAGACTCTTTTTCCCCAAGTGCTAGAGACAAGGGGGTCTATGAGCATTTACTGACTTCCTGTTAAAACT
TCATTTTTTCAAACTTTTTGAGCTATGCAATATATAAATAAACAGTAAGAATTTTAAATTAAAAA

FIGURE 2379

MALYHTEERGQPCSQNYRLFFKNVTGHYISPFHDIPLKVNSKEENGIPMKKARNDEYENLFNMIVEIPRWTNAKM
EIATKEPMNPIKQYVKDGKLRYVANIFPYKGYIWNYGTLPQILSCGEVIHVKILGILALIDEGETDWKLIAINAN
DPEASKFHDIDDVKKFKPGYLEATLNWFRLYKVPDGKPENQFAFNGEFKNKAFALEVIKSTHQCWKALLMKNCNG
GAINCTNVQISDSPFRCTQEEARSLVESVSSSPNKESNEEEQVWHFLGK

FIGURE 2380

GGCACGAGGGCCAGGAACGCCAGCCGTTCACGCGTTCGGTCCTCCTTGGCTGACTCACCGCCCTCGCCGCCGCAC
C**ATG**GACGCCCCCAGGCAGGTGGTCAACTTTGGGCCTGGTCCCGCCAAGCTGCCGCACTCAGTGTTGTTAGAGAT
ACAAAAGGAATTATTAGACTACAAAGGAGTTGGCATTAGTGTTCTTGAAATGAGTCACAGGTCATCAGATTTTGC
CAAGATTATTAACAATACAGAGAATCTTGTGCGGGAATTGCTAGCTGTTCCAGACAACTATAAGGTGATTTTTCT
GCAAGGAGGTGGGTGCGGCCAGTTCAGTGCTGTCCCCTTAAACCTCATTGGCTTGAAAGCAGGAAGGTGTGCGGA
CTATGTGGTGACAGGAGCTTGGTCAGCTAAGGCCGCAGAAGAAGCCAAGAAGTTTGGGACTATAAATATCGTTCA
CCCTAAACTTGGGAGTTATACAAAAATTCCAGATCCAAGCACCTGGAACCTCAACCCAGATGCCTCCTACGTGTA
TTATTGCGCAAATGAGACGGTGCATGGTGTGGAGTTTGACTTTATACCCGATGTCAAGGGAGCAGTACTGGTTTG
TGACATGTCCTCAAACTTCCTGTCCAAGCCAGTGGATGTTTCCAAGTTTGGTGTGATTTTTGCTGGTGCCCAGAA
GAATGTTGGCTCTGCTGGGGTCACCGTGGTGATTGTCCGTGATGACCTGCTGGGGTTTGCCCTCCGAGAGTGCCC
CTCGGTCCTGGAATACAAGGTGCAGGCTGGAAACAGCTCCTTGTACAACACGCCTCCATGTTTCAGCATCTACGT
CATGGGCTTGGTTCTGGAGTGGATTAAAAACAATGGAGGTGCCGCGGCCATGGAGAAGCTTAGCTCCATCAAATC
TCAAACAATTTATGAGATTATTGATAATTCTCAAGGATTCTACGTTTGTCCAGTGGAGCCCCAAAATAGAAGCAA
GATGAATATTCCATTCCGCATTGGCAATGCCAAAGGAGATGATGCTTTAGAAAAAAGATTTCTTGATAAAGCTCT
TGAACTCAATATGTTGTCCTTGAAAGGGCATAGGTCTGTGGGAGGCATCCGGGCCTCTCTGTATAATGCTGTCAC
AATTGAAGACGTTCAGAAGCTGGCCGCCTTCATGAAAAAATTTTTGGAGATGCATCAGCTA**TGA**ACACATCCTAA
CCAGGATATACTCTGTTCTTGAACAACATACAAAGTTTAAAGTAACTTGGGGATGGCTACAAAAAGTTAACACAG
TATTTTTCTCAAATGAACATGTTTATTGCAGATTCTTCTTTTTTGAAAGAACAACAGCAAAACATCCACAACTCT
GTAAAGCTGGTGGGACCTAATGTCACCTTAATTCTGACTTGAACTGGAAGCATTTTAAGAAATCTTGTTGCTTTT
CTAACAAATTCCCGCGTATTTTGCCTTTGCTGCTACTTTTTCTAGTTAGATTTCAAACTTGCCTGTGGACTTAAT
AATGCAAGTTGCGATTAATTATTTCTGGAGTCATGGGAACACACAGCACAGAGGGTAGGGGGGCCCTCTAGGTGC
TGAATCTACACATCTGTGGGGTCTCCTGGGTTCAGCGGCTGTTGATTCAAGGTCAACATTGACCATTGGAGGAGT
GGTTTAAGAGTGCCAGGCGAAGGGCAAACTGTAGATCGATCTTTATGCTGTTATTACAGGAGAAGTGACATACTT
TATATATGTTTATATTAGCAAGGTCTGTTTTTAATACCATATACTTTATATTTCTATACATTTATATTTCTAATA
ATACAGTTATCACTGATATATGTAGACACTTTTAGAATTTATTAAATCCTTGACCTTGTGCATTATAGCATTCCA
TTAGCAAGAGTTGTACCCCCTCCCCAGTCTTCGCCTTCCTCTTTTTAAGCTGTTTTATGAAAAAGACCTAGAAGT
TCTTGATTCATTTTTACCATTCTTTCCATAGGTAGAAGAGAAAGTTGATTGGTTGGTTGTTTTTCAATTATGCCA
TTAAACTAAACATTTCTGTTAAATTACCCTATCCTTTGTTCTCTACTGTTTTCTTTGTAATGTATGACTACGAGA
GTGATACTTTGCTGAAAAGTCTTTCCCCTATTGTTTATCTATTGTCAGTATTTTATGTTGAATATGTAAAGAACA
TTAAAGTCCTAAAACATCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2381

MDAPRQVVNFGPGPAKLPHSVLLEIQKELLDYKGVGISVLEMSHRSSDFAKIINNTENLVRELLAVPDNYKVIFL
QGGGCGQFSAVPLNLIGLKAGRCADYVVTGAWSAKAAEEAKKFGTINIVHPKLGSYTKIPDPSTWNLNPDASYVY
YCANETVHGVEFDFIPDVKGAVLVCDMSSNFLSKPVDVSKFGVIFAGAQKNVGSAGVTVVIVRDDLLGFALRECP
SVLEYKVQAGNSSLYNTPPCFSIYVMGLVLEWIKNNGGAAAMEKLSSIKSQTIYEIIDNSQGFYVCPVEPQNRSK
MNIPFRIGNAKGDDALEKRFLDKALELNMLSLKGHRSVGGIRASLYNAVTIEDVQKLAAFMKKFLEMHQL

FIGURE 2382

GGGATCAGGCTCGTGAACATATTCGGCAAAACCTAGAAAGTTTCATAAGACAGGACTTTCCAGGAACTAAATTGA
GCCTGTTTGGCTCCTCCAAAAATGGATTTGGGTTCAAACAGAGTGACCTTGACGTCTGT**ATG**ACAATTAATGGGC
TTGAAACTGCTGAGGGATTGGACTGTGTCAGAACTATTGAAGAATTAGCAAGAGTCCTCAGAAAACATTCAGGCC
TGAGAAACATCTTACCTATTACAACAGCAAAGGTGCCAATTGTGAAGTTCTTCCATTTGAGAAGTGGTCTGGAAG
TAGATATCAGTTTGTATAACACATTGGCCCTTCATAACACAAGGCTTTTATCTGCTTATTCCGCCATTGATCCCA
GAGTGAAGTATTTGTGCTATACCATGAAAGTATTTACAAAGATATACAAAGGTGAAAAGAAACCTGAAATATTTG
TTGATGGCTGGAATATTTATTTTTTTGATCAAATAGATGAACTGCCTACCTATTGGTCAGAATGTGGAAAAAATA
CAGAATCTGTTGGGCAGTTATGGTTGGGCCTTCTTCGTTTCTACACAGAGGAATTTGATTTTAAAGAACATGTTA
TTAGCATCAGGAGAAAAAGTCTGCTTACAACTTTTAAGAAACAGTGGACCTCAAAATACATTGTTATTGAAGATC
CCTTTGATTTGAATCATAATCTTGGAGCTGGATTATCAAGGAAAATGACAAATTTTATAATGAAGGCTTTTATCA
ATGGTAGAAGAGTATTTGGTATTCCTGTCAAGGGATTTCCAAAGGACTACCCCTCAAAAATGGAATACTTTTTTG
ATCCAGATGTGTTAACTGAAGGAGAGCTGGCCCCAAATGATAGATGTTGTCGAATTTGTGGAAAAATCGGACACT
TCATGAAGGACTGTCCTATGAGGAGAAAAGTAAGACGGCGGCGAGATCAGGAAGATGCCCTGAACCAAAGATACC
CTGAGAACAAGGAAAAAAGAAGCAAAGAGGACAAAGAAATTCACAACAAGTACACAGAAAGGGAGGTGTCAACAA
AAGAAGATAAGCCCATACAGTGCACACCTCAGAAAGCCAAGCCAATGCGGGCAGCTGCTGACCTGGGGAGGGAGA
AGATCCTCAGGCCACCAGTAGAAAAATGGAAGAGACAGGATGACAAAGACTTAAGAGAAAAACGTTGTTTTATTT
GTGGAAGAGAAGGGCACATTAAAAAGGAATGCCCACAGTTTAAAGGCTCTTCAGGTAGCCTTTCCAGTAAATATA
TGACTCAGGGAAAAGCCTCAGCGAAGAGGACCCAGCAGGAATCA**TGA**GGGAAGGAAAATGCAGCACTCTAAATGG
CCACTCAGGCGTTCCTATTCACTCGGAAAATTAGGTTCATTTCACAGGACACAGCAGTGTAGATCAGGCTTCAAC
TTAACATTTAAGGGAAATGTCAGATTTTTTTTTAATTTAATGAAATTGTTAATGAGGAAAAATTTTTAATATAGT
CTTATCTACCACACATCCCCATAGATTTAAGGATTTTAATAGAAAGTCATGATGTATGTATTTAAGCCACGTTAA
AAGAAAAAATATAACTATGGACCGGTATTCAGTGAATACAGTTTCATGGTTTTTAATTCTTTCAAAGCACATTAA
AAATGGTGTGCTGATAAACCCCAAGTAAATTAACCCTTTTTCCGTATAAATCCATTTTTTGTTTTGAAGAGGGGA
AATTATACTTATTGTTGTTTACTGAATCCTGGTGTGAAAGCATATCAGATATGTATGAACTGCTACTGCTGTACT
TCCGATTTACGGACATCATTTTATTGCTATTTGTAGACGTGATAACATGAACATGAGTACCTATTTATGTGGGCC
TTCAGTGGATGGGCAGTGCCACTCAGGTCTCTGGGGTTTCCCTCTCTAATTTTAAGTAAATTGACATATAACTAC
TATGCTTATAAAAATGAAGTAAGGAAAACAAGTAGTCCTGTTTGCCACTAAAAACATTTTCAAAGGAAAAATAAA
ATGAAAGTACTTTTTACTTTTTATGATACTCAGAAATTAGGATGAAGAACTTTTAAAATTGCTGAAGGTCAAAGA
GGTTATCTCTGCCAGTCACAAGTGTGGCTGGTGTCATTCTGGGTCTGACTGGAGCCCTCCTGGACTGTTTCTTTA
ATTTCAAAAGCCCTGCAGACATAGTACCTGGTCAGAACTATGCCTCGGTTTATTTATCATTTTGAAATAAAATCA
AAATTTCAACCTGT

FIGURE 2383

MTINGLETAEGLDCVRTIEELARVLRKHSGLRNILPITTAKVPIVKFFHLRSGLEVDISLYNTLALHNTRLLSAY
SAIDPRVKYLCYTMKVFTKIYKGEKKPEIFVDGWNIYFFDQIDELPTYWSECGKNTESVGQLWLGLLRFYTEEFD
FKEHVISIRRKSLLTTFKKQWTSKYIVIEDPFDLNHNLGAGLSRKMTNFIMKAFINGRRVFGIPVKGFPKDYPSK
MEYFFDPDVLTEGELAPNDRCCRICGKIGHFMKDCPMRRKVRRRRDQEDALNQRYPENKEKRSKEDKEIHNKYTE
REVSTKEDKPIQCTPQKAKPMRAAADLGREKILRPPVEKWKRQDDKDLREKRCFICGREGHIKKECPQFKGSSGS
LSSKYMTQGKASAKRTQQES

FIGURE 2384

GGATCAGCTTCCAGCCCAGTCGGCCCGGCCCGGGGGCCATGGAGCTCCGAGCGGCGGATCGCGAGCCTCCTGCGA
ACCCCAGCCTGCACGCCCGGTTAGCATTCGGCCGGGAGATGCGGCAGTGGAATCTGGAAGGGCGGTGAAAAACCT
ACGTCCTGCCCTCGCCCGGCCTCTCCATTCGTCCCCCGGGTAGAGAGGTGCCCGGCTCCCACCCCTTCCCAGCCC
CAGCCCTGGAGACAGCAGCCCCTAGACTACTGAGGGACAGCGACAGT**ATG**AAGGCTCCGGGTCGGCTCGTGCTCA
TCATCCTGTGCTCCGTGGTCTTCTCTGCCGTCTACATCCTCCTGTGCTGCTGGGCCGGCCTGCCCCTCTGCCTGG
CCACCTGCCTGGACCACCACTTCCCCACAGGCTCCAGGCCCACTGTGCCGGGACCCCTGCACTTCAGTGGATATA
GCAGTGTGCCAGATGGGAAGCCGCTGGTCCGCGAGCCCTGCCGCAGCTGTGCCGTGGTGTCCAGCTCCGGCCAAA
TGCTGGGCTCAGGCCTGGGTGCTGAGATCGACAGTGCCGAGTGCGTGTTCCGCATGAACCAGGCGCCCACCGTGG
GCTTTGAGGCGGATGTGGGCCAGCGCAGCACCCTGCGTGTCGTCTCACACACAAGCGTGCCGCTGCTGCTGCGCA
ACTATTCACACTACCTCCAGAAGGCCCGAGACACGCTCTACATGGTGTGGGGCCAGGGCAGGCACATGGACCGGG
TGCTCGGCGGCCGCACCTACCGCACGCTGCTGCAGCTCACCAGGATGTACCCCGGCCTGCAGGTGTACACCTTCA
CGGAGCGCATGATGGCCTACTGCGACCAGATCTTCCAGGACGAGACGGGCAAGAACCGGAGGCAGTCGGGCTCCT
TCCTCAGCACCGGCTGGTTCACCATGATCCTCGCGCTGGAGCTGTGTGAGGAGATCGTGGTCTATGGGATGGTCA
GCGACAGCTACTGCAGGGAGAAGAGCCACCCCTCAGTGCCTTACCACTACTTTGAGAAGGGCCGGCTAGATGAGT
GTCAGATGTACCTGGCACACGAGCAGGCGCCCCGAAGCGCCCACCGCTTCATCACTGAGAAGGCGGTCTTCTCCC
GCTGGGCCAAGAAGAGGCCCATCGTGTTCGCCCATCCGTCCTGGAGGACTGAG**TAG**CTTCCGTCGTCCTGCCAGC
CGCCATGCCGTTGCGAGGCCTCCGGGATGTCCCATCCCAAGCCATCACACTCCACAAAAACATTTAATTTATGGA
TCCTGCCTCCTGCCACGTGCTGGGTGGACCTAAGGTTCCTTCCCACCCCATTCTGGCGACACTTGGAGCCATCTC
AGGCTCCACTCCCTGAGTAATTCATGGCATTTGGGGGCTCACCCCACCTCCAGGTCTGTCAAGTGGCCTTTGTCC
CTGGGGCTGATGGCCCCCAACTCACCAGCATCATGACCTTGTGCCAGTCCTGGTCCTCCCTCCCCAGCCGCCCCT
ACCACCTTTTGGTGCCACACTTCTCAGGCTGGCCGCCCTGGTTGGGGCAGCCGAGAGCCTGGGGTTCATTGGTGA
AGGGGCCTTGGAGTTGTGACTGCCGGGGCCGTATCAGGAACGTACGGGTAAATGTGTGTTTTCTGGAAAAAAAAA
AAAAAAAAAAA

FIGURE 2385

MKAPGRLVLIILCSVVFSAVYILLCCWAGLPLCLATCLDHHFPTGSRPTVPGPLHFSGYSSVPDGKPLVREPCRS
CAVVSSSGQMLGSGLGAEIDSAECVFRMNQAPTVGFEADVGQRSTLRVVSHTSVPLLLRNYSHYLQKARDTLYMV
WGQGRHMDRVLGGRTYRTLLQLTRMYPGLQVYTFTERMMAYCDQIFQDETGKNRRQSGSFLSTGWFTMILALELC
EEIVVYGMVSDSYCREKSHPSVPYHYFEKGRLDECQMYLAHEQAPRSAHRFITEKAVFSRWAKKRPIVFAHPSWR
TE

FIGURE 2386

GTGACATTGAGCTCACCAGCGCCACCGTCCCCGGCGAAGTTCTGCGCTGGTCGGCGGAGAGCAAGTGGCC**ATG**GG
GAGCCTCAGCGGTCTGCGCCTGGCAGCAGGAAGCTGTTTTAGGTTATGTGAAAGAGATGTTTCCTCATCTCTAAG
GCTTACCAGAAGCTCTGATTTGAAGAGAATAAATGGATTTTGCACAAAACCACAGGAAAGTCCCGGAGCTCCATT
CCCGCACTTACAACAGAGTGCCTTTACACAAACCTACGGATTGGCAGAAAAAGATCCTCATATGGTCAGGTCGCT
TCAAAAGGAAGATGAAATCCCAGAGACTGTCTCGTTGGAGATGCTTGATGCTGCAAAGAACAAGATGCGAGTGAA
GATCAGCTATCTAATGATTGCCCTGACGGTGGTAGGATGCATCTTTCATTGGTTATTGAGGGCAAGAAGCTTGCC
CAAAGACCGAGACTTTAACCAGCTTGGACCTTTAGAAAAGAAAGCTCGTCTGAAAGAAGGAAGCAGCTATGAAGG
CCAAAACAGATTACCAAAGGTATCCGTGTTGGTTGGGATTTTGAAAATCCAGGAATTATGTTTTAACGTGCCTGT
ATTAAAAAGGATGTGGTATGAGGATCCATTTCATAAAGTA**TGA**TTTGCCCAAACCTGTACCATTTCCGTATTTCT
GCTGTAGAAGTAGAAATAAATTTTCTTAAATAATGACTGTGTTTTATTGTTTTGATCCAAGTCAAGTGTAGCCTC
TCAGCCTTTTGGAGAAAAATGAAACAATTTATTTCAACTTGAATACCAACTCTTCAGAGAAGCAGGTACCATATC
TTACTTCTCTTCCCATTATCAAAGTAACCTCTCCACAGGCGAACTCATTTTGAGGAGATAAGGAAGGCCAGTTGA
GTATATGGCCCAGGTGCAGCTTGGAGGGCCAGCCTTCTCAAATGTCCTGGTGTACTGGTGGGGAGGCTGCCCCCT
AATAGAGCGAGCGCTGAGAAGCAGCCAGACCACATTCTATAATCTTTGAACATGCTGGCAGATGGAGGCTTTTAG
GAGAATAGTTTTTTAAACATTCTGACAAGGTCCAGCCAGGAATTTCTAAGGACTTAGAAATCCCAGTGTCATGGA
GTTGCTTGGGGGTCAACACAAGTCACCTCTTAGCTTCATGCCTTAGAATTCTCAACTGGGCTGTTTTTCTTACCA
CCTGAGAAACTAAAT

FIGURE 2387

MGSLSGLRLAAGSCFRLCERDVSSSLRLTRSSDLKRINGFCTKPQESPGAPFPHLQQSAFTQTYGLAEKDPHMVR
SLQKEDEIPETVSLEMLDAAKNKMRVKISYLMIALTVVGCIFHWLLRARSLPKDRDFNQLGPLEKKARLKEGSSY
EGQNRLPKVSVLVGILKIQELCFNVPVLKRMWYEDPFHKV

FIGURE 2388A

GGCACGAGGCTGGGGCGCAGAGCAGCGGCGGGAGGAGGCGGACACGTGGCAACAGCGGTAGCAGCCCGGGCGGCG
GCAGCAACAGCGGCGGCGGCATCGGCCCGAGCCGCCGGCCGCCCTCCCACCCTCCCGCCCCGCGGCAGCCCTAGC
TCCCTCCACTTGGCTCCCCTGGTCCCGCTCGCTCGGCCGGGAGCTGCTCTGTGCTTTTCTCTCTGATTCTCCAGC
GACAGGACCCGGCGCCGGGCACTGAGCACCGCCACC**ATG**GGGAAGGGGGTTGGACGTGATAAGTATGAGCCTGCA
GCTGTTTCAGAACAAGGTGATAAAAAGGGCAAAAAGGGCAAAAAAGACAGGGACATGGATGAACTGAAGAAAGAA
GTTTCTATGGATGATCATAAACTTAGCCTTGATGAACTTCATCGTAAATATGGAACAGACTTGAGCCGGGGATTA
ACATCTGCTCGTGCAGCTGAGATCCTGGCGCGAGATGGTCCCAACGCCCTCACTCCCCCTCCCACTACTCCTGAA
TGGATCAAGTTTTGTCGGCAGCTCTTTGGGGGGTTCTCAATGTTACTGTGGATTGGAGCGATTCTTTGTTTCTTG
GCTTATAGCATCCAAGCTGCTACAGAAGAGGAACCTCAAAACGATAATCTGTACCTGGGTGTGGTGCTATCAGCC
GTTGTAATCATAACTGGTTGCTTCTCCTACTATCAAGAAGCTAAAAGTTCAAAGATCATGGAATCCTTCAAAAAC
ATGGTCCCTCAGCAAGCCCTTGTGATTCGAAATGGTGAGAAAATGAGCATAAATGCGGAGGAAGTTGTGGTTGGG
GATCTGGTGGAAGTAAAAGGAGGAGACCGAATTCCTGCTGACCTCAGAATCATATCTGCAAATGGCTGCAAGGTG
GATAACTCCTCGCTCACTGGTGAATCAGAACCCCAGACTAGGTCTCCAGATTTCACAAATGAAAACCCCCTGGAG
ACGAGGAACATTGCCTTCTTTTCAACCAATTGTGTTGAAGGCACCGCACGTGGTATTGTTGTCTACACTGGGGAT
CGCACTGTGATGGGAAGAATTGCCACACTTGCTTCTGGGCTGGAAGGAGGCCAGACCCCCATTGCTGCAGAAATT
GAACATTTTATCCACATCATCACGGGTGTGGCTGTGTTCCTGGGTGTGTCTTTCTTCATCCTTTCTCTCATCCTT
GAGTACACCTGGCTTGAGGCTGTCATCTTCCTCATCGGTATCATCGTAGCCAATGTGCCGGAAGGTTTGCTGGCC
ACTGTCACGGTCTGTCTGACACTTACTGCCAAACGCATGGCAAGGAAAAACTGCTTAGTGAAGAACTTAGAAGCT
GTGGAGACCTTGGGGTCCACATCCACCATCTGCTCTGATAAAACTGGAACTCTGACTCAGAACCGGATGACAGTG
GCCCACATGTGGTTTGACAATCAAATCCATGAAGCTGATACGACAGAGAATCAGAGTGGTGTCTCTTTTGACAAG
ACTTCAGCTACCTGGCTTGCTCTGTCCAGAATTGCAGGTCTTTGTAACAGGGCAGTGTTTCAGGCTAACCAGGAA
AACCTACCTATTCTTAAGCGGGCAGTTGCAGGAGATGCCTCTGAGTCAGCACTCTTAAAGTGCATAGAGCTGTGC
TGTGGTTCCGTGAAGGAGATGAGAGAAAGATACGCCAAAATCGTCGAGATACCCTTCAACTCCACCAACAAGTAC
CAGTTGTCTATTCATAAGAACCCCAACACATCAGAGCCCCAACACCTGTTGGTGATGAAGGGCGCCCCAGAAAGG
ATCCTAGACCGTTGCAGCTCTATCCTCCTCCACGGCAAGGAGCAGCCCCTGGATGAGGAGCTGAAAGACGCCTTT
CAGAACGCCTATTTGGAGCTGGGGGGCCTCGGAGAACGAGTCCTAGGTTTCTGCCACCTCTTTCTGCCAGATGAA
CAGTTTCCTGAAGGGTTCCAGTTTGACACTGACGATGTGAATTTCCCTATCGATAATCTGTGCTTTGTTGGGCTC
ATCTCCATGATTGACCCTCCACGGGCGGCCGTTCCTGATGCCGTGGGCAAATGTCGAAGTGCTGGAATTAAGGTC
ATCATGGTCACAGGAGACCATCCAATCACAGCTAAAGCTATTGCCAAAGGTGTGGGCATCATCTCAGAAGGCAAT
GAGACCGTGGAAGACATTGCTGCCCGCCTCAACATCCCAGTCAGCCAGGTGAACCCCAGGGATGCCAAGGCCTGC
GTAGTACACGGCAGTGATCTAAAGGACATGACCTCCGAGCAGCTGGATGACATTTTGAAGTACCACACTGAGATA
GTGTTTGCCAGGACCTCCCCTCAGCAGAAGCTCATCATTGTGGAAGGCTGCCAAAGACAGGGTGCTATCGTGGCT
GTGACTGGTGACGGTGTGAATGACTCTCCAGCTTTGAAGAAAGCAGACATTGGGGTTGCTATGGGGATTGCTGGC
TCAGATGTGTCCAAGCAAGCTGCTGACATGATTCTTCTGGATGACAACTTTGCCTCAATTGTGACTGGAGTAGAG
GAAGGTCGTCTGATCTTTGATAACTTGAAGAAATCCATTGCTTATACCTTAACCAGTAACATTCCCGAGATCACC
CCGTTCCTGATATTTATTATTGCAAACATTCCACTACCACTGGGGACTGTCACCATCCTCTGCATTGACTTGGGC
ACTGACATGGTTCCTGCCATCTCCCTGGCTTATGAGCAGGCTGAGAGTGACATCATGAAGAGACAGCCCAGAAAT
CCCAAAACAGACAAACTTGTGAATGAGCGGCTGATCAGCATGGCCTATGGGCAGATTGGAATGATCCAGGCCCTG
GGAGGCTTCTTTACTTACTTTGTGATTCTGGCTGAGAACGGCTTCCTCCCAATTCACCTGTTGGGCCTCCGAGTG
GACTGGGATGACCGCTGGATCAACGATGTGGAAGACAGCTACGGGCAGCAGTGGACCTATGAGCAGAGGAAAATC
GTGGAGTTCACCTGCCACACAGCCTTCTTCGTCAGTATCGTGGTGGTGCAGTGGGCCGACTTGGTCATCTGTAAG
ACCAGGAGGAATTCGGTCTTCCAGCAGGGGATGAAGAACAAGATCTTGATATTTGGCCTCTTTGAAGAGACAGCC
CTGGCTGCTTTCCTTTCCTACTGCCCTGGAATGGGTGTTGCTCTTAGGATGTATCCCCTCAAACCTACCTGGTGG
TTCTGTGCCTTCCCCTACTCTCTTCTCATCTTCGTATATGACGAAGTCAGAAAACTCATCATCAGGCGACGCCCT
GGCGGCTGGGTGGAGAAGGAAACCTACTAT**TAG**CCCCCCGTCCTGCACGCCGTGGAGCATCAGGCCACACACTCT
GCATCCGACACCCACCCCCTCTTTGTGTACTTCAGTCTTGGAGTTTGGAACTCTACCCTGGTAGGAAAGCACCGC
AGCATGTGGGGAAGCAAGACGTCCTGGAATGAAGCATGTAGCTCTATGGGGGGAGGGGGGAGGGCTGCCTGAAAA
CCATCCATCTGTGGAAATGACAGCGGGGAAGGTTTTTATGTGCCTTTTTGTTTTTGTAAAAAAGGAACACCCGGA

FIGURE 2388B

AAGACTGAAAGAATACATTTTATATCTGGATTTTTACAAATAAAGATGGCTATTATAATGGAAAAAAAAAAAAAA
AAAAA

FIGURE 2389

MGKGVGRDKYEPAAVSEQGDKKGKKGKKDRDMDELKKEVSMDDHKLSLDELHRKYGTDLSRGLTSARAAEILARD
GPNALTPPPTTPEWIKFCRQLFGGFSMLLWIGAILCFLAYSIQAATEEEPQNDNLYLGVVLSAVVIITGCFSYYQ
EAKSSKIMESFKNMVPQQALVIRNGEKMSINAEEVVVGDLVEVKGGDRIPADLRIISANGCKVDNSSLTGESEPQ
TRSPDFTNENPLETRNIAFFSTNCVEGTARGIVVYTGDRTVMGRIATLASGLEGGQTPIAAEIEHFIHIITGVAV
FLGVSFFILSLILEYTWLEAVIFLIGIIVANVPEGLLATVTVCLTLTAKRMARKNCLVKNLEAVETLGSTSTICS
DKTGTLTQNRMTVAHMWFDNQIHEADTTENQSGVSFDKTSATWLALSRIAGLCNRAVFQANQENLPILKRAVAGD
ASESALLKCIELCCGSVKEMRERYAKIVEIPFNSTNKYQLSIHKNPNTSEPQHLLVMKGAPERILDRCSSILLHG
KEQPLDEELKDAFQNAYLELGGLGERVLGFCHLFLPDEQFPEGFQFDTDDVNFPIDNLCFVGLISMIDPPRAAVP
DAVGKCRSAGIKVIMVTGDHPITAKAIAKGVGIISEGNETVEDIAARLNIPVSQVNPRDAKACVVHGSDLKDMTS
EQLDDILKYHTEIVFARTSPQQKLIIVEGCQRQGAIVAVTGDGVNDSPALKKADIGVAMGIAGSDVSKQAADMIL
LDDNFASIVTGVEEGRLIFDNLKKSIAYTLTSNIPEITPFLIFIIANIPLPLGTVTILCIDLGTDMVPAISLAYE
QAESDIMKRQPRNPKTDKLVNERLISMAYGQIGMIQALGGFFTYFVILAENGFLPIHLLGLRVDWDDRWINDVED
SYGQQWTYEQRKIVEFTCHTAFFVSIVVVQWADLVICKTRRNSVFQQGMKNKILIFGLFEETALAAFLSYCPGMG
VALRMYPLKPTWWFCAFPYSLLIFVYDEVRKLIIRRRPGGWVEKETYY

FIGURE 2390

GCCCCCGAGCAGGAGCCGGTGCGAGCGGAGCAGAGCCGAGGTCGGGCCGCGAGCGGAGCCGGCTGAGCGGGCGCC
GAGCTCCCGCC**ATG**GCCCGGAACACGCTGTCCTCGCGCTTCCGCCGGGTGGACATCGACGAATTTGACGAGAACA
AATTTGTGGACGAGCAGGAGGAGGCGGCGGCGGCGGCGGAGCCAGGCCCGGACCCGAGCGAGGTGGACGGGC
TCCTGCGGCAAGGGGACATGCTTCGGGCATTCCATGCAGCCTTGCGGAACTCTCCCGTCAACACCAAGAATCAAG
CTGTGAAGGAGCGAGCCCAGGGCGTGGTGCTGAAAGTGCTCACAAACTTCAAGAGCAGTGAGATTGAGCAGGCTG
TGCAGTCACTGGACAGAAACGGCGTTGACTTGTTAATGAAGTACATTTATAAAGGCTTTGAGAAGCCCACAGAAA
ATAGCAGCGCAGTGTTACTCCAGTGGCACGAAAAGGCCTTAGCAGTAGGAGGACTAGGCTCCATTATAAGAGTTC
TTACAGCAAGAAAGACTGTT**TAA**AAAAAATAAAAAGACTCATGTTACCTTGAGAAGAATTCTGGATGCCCAGGCT
GGTGAAGAAGGGATTGACAATGGACCATCTTCCTAGGAACTCCCAAGTAAACTATTTCAGGACATGTATCTGCTG
AAATGTATTTTATTTTCAAGGTGGAGGGGAAAATCGTCTGTTTCCTAAATCCTGTTTAGGATCTGATAGTCTATG
CCTTTGTCTCCGAGTACTGCAGAACTGACATTTTGACGGTCTACCAGCGTGGCGGCTGGTGTTGGTCAGATGCAC
CTGTGTGCACTGGGGGAGGGATGGTTTGGGCAGGTGCAGATCCAAGGGCTGTGGTAAACGGGAGAGCTTGTGTTT
TTGAAGTGGAAAAAAACCCAAGAGTTTGTACAGACATCCTGTCTTCCCAGAGAAGGTGGACACTCTTGGGCTCAT
TGTAAAGTGCCTGCTGCATCAATAAAGCTCTTGGCTTATTAGTCTATACAAAAAAAAAAAAAAAAA

FIGURE 2391

MARNTLSSRFRRVDIDEFDENKFVDEQEEAAAAAAEPGPDPSEVDGLLRQGDMLRAFHAALRNSPVNTKNQAVKE
RAQGVVLKVLTNFKSSEIEQAVQSLDRNGVDLLMKYIYKGFEKPTENSSAVLLQWHEKALAVGGLGSIIRVLTAR
KTV

FIGURE 2392

GCGGAAGCTCGGCAGTGCGCGTGCGCCCGCACCCGCACTCCAAATTAGAAAGGGGACGTCTAGTGGGTTGCCCGG
GAGGGGTGGCGGGAGCGGTCCTGGAAATAATCTGTCCTCTGTCGCCGGGAACTGGCGAGGTAGTTCCTTCGCGGT
GGAGAGACCTGGA**ATG**GCCAAATATCAAGGTGAAGTTCATAGTTTGAAACTGGATGATGATTCAGTTATAGAAGG
AGTAAGCGACCAAGTACTTGTGGCAGTTGTGGTCAGTTTCGCTTTGATTGCTACCCTGGTATATGCACTTTTCAG
AAATGTACATCAAAACATTCACCCAGAAAACCAGGAGCTAGTAAGGGTACTTCGAGAACAGCTTCAAACAGAACA
GGATGCACCTGCTGCCACTCGACAGCAGTTCTACACTGACATGTACTGTCCCATCTGCCTGCACCAAGCCTCCTT
CCCGGTGGAGACCAACTGTGGACATCTTTTTTGTGGTGCCTGCATTATTGCTTACTGGCGATATGGTTCATGGCT
TGGGGCAATCAGTTGTCCAATCTGTAGACAAACGGTAACCTTACTCCTAACAGTATTTGGTGAAGATGATCAGTC
TCAGGATGTTCTGAGATTGCATCAGGATATTAATGATTATAACCGGAGATTCTCAGGGCAACCCAGATCTATTAT
GGAGAGAATTATGGATCTACCCACTTTACTGAGGCATGCATTCAGGGAAATGTTTTCAGTCGGGGGCCTTTTCTG
GATGTTTCGCATCAGGATAATACTTTGTTTAATGGGAGCTTTTTTCTATCTTATATCACCTCTAGATTTTGTACC
TGAAGCCTTGTTTGGAATTCTAGGCTTTCTAGATGATTTCTTTGTCATCTTTTTATTGCTTATCTACATCTCTAT
TATGTATCGAGAAGTGATAACCCAAAGGCTAACTAGA**TGA**AAAAGAAAACAAAACTGAGTTTACTAGGATATCTG
AGCTAATGTAGAACATCAAACAGAAGGACCCATGGCAGTATAAAGCAATGAAGCAATGGAGTATTATCTCACAAA
TATAAAACCACTATAAGACAAACATTTGATTATCATTTGACAAATACCTAGGTATAACTGGAATTTTCATGTTTG
AAGTTCTAATATTAAGTTTAGAATTATAATGATCTACAGTTGTATCTTGATTCTATGTTGTCTGGAAAAAATATG
GAATTATATAAAAAGGGATGCTTTTATATATTTTTCTTTTCCCCAGAATTACTTAGATTAATTAGATGTATAGTA
AAATATTGTTAAATGTCAGTTTATCCATCTTATCCTTCTCAGCAGGTACCTATATGATAATATATAGCTGTGAAA
CTCATCTAAATATTTTTGTTCCAATAAAATATTATATACTATTGGGGAAAATTCAGTATTTCTTTTAGTGCTAGC
TAAGTTTTGTGCATTTGGAGCAGTTCTGCCTTTTCATTCTGGTATAATTAATTATTTGCTATCAGCTGAAACTGA
AAGAAGAAACTTGAACTTCATACTTCGATATCATATTCTAGTTTACAGAACACATTTTAATCAATAGAAGAATTA
AGATGAAAAACATGGCCGGGCGGGGTGGCTCACGCCTGTAATCCTAGCACTTTGGGAGGCTGAGGCGGGTAGATC
ACAAGGTCAGGAGATCAGGACCATCCTGGCTAACATGGTGAAACCCCGTCTCTACTAAAAATACAAAAAATTAGC
CAGGCGTGGTGGCAGGCGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAGAAGAATGGCGTAAACCCAGGAGG
TGGATTGCGCCACTGCACTCCAGCCTGGGCAACAGAGTGAGACTCCCTCTC

FIGURE 2393

MAKYQGEVHSLKLDDDSVIEGVSDQVLVAVVVSFALIATLVYALFRNVHQNIHPENQELVRVLREQLQTEQDAPA
ATRQQFYTDMYCPICLHQASFPVETNCGHLFCGACIIAYWRYGSWLGAISCPICRQTVTLLLTVFGEDDQSQDVL
RLHQDINDYNRRFSGQPRSIMERIMDLPTLLRHAFREMFSVGGLFWMFRIRIILCLMGAFFYLISPLDFVPEALF
GILGFLDDFFVIFLLLIYISIMYREVITQRLTR

FIGURE 2394

CCCACGCGTCCGCGGACGCGTGGGTCGACCCACGCGTCCGGCCGCTCGGCCCGGGGGGCTTCGGGCTGTCGGGCCG
GCGCTCCCTTCTCTGCCAGGTGGCGAGTACACCTGCTCACGTAGGCGTC**ATG**AGGTCTCCGGTTCGAGACCTGGC
CCGGAACGATGGCGAGGAGAGCACGGACCGCACGCCTCTTCTACCGGGCGCCCCACGGGCCGAAGCCGCTCCAGT
GTGCTGCTCTGCTCGTTACAACTTAGCAATTTTGGCCTTTTTTGGTTTCTTCATTGTGTATGCATTACGTGTGAA
TCTGAGTGTTGCGTTAGTGGATATGGTAGATTCAAATACAACTTTAGAAGATAATAGAACTTCCAAGGCATGTCC
AGAGCATTCTGCTCCCATAAAAGTTCATCATAATCAAACGGGTAAGAAGTACCAATGGGATGCAGAAACTCAAGG
ATGGATTCTCGGTTCCTTTTTTTATGGCTACATCATCACACAGATTCCTGGAGGATATGTTGCCAGCAAAATAGG
GGGGAAAATGCTGCTAGGATTTGGGATCCTTGGCACTGCTGTCCTCACCCTGTTCACTCCCATTGCTGCAGATTT
AGGAGTTGGACCACTCATTGTACTCAGAGCACTAGAAGGACTAGGAGAGGGTGTTACATTTCCAGCCATGCATGC
CATGTGGTCTTCTTGGGCTCCCCCTCTTGAAAGAAGCAAACTTCTTAGCATTTCATATGCAGGAGCACAGCTTGG
GACAGTAATTTCTCTTCCTCTTTCTGGAATAATTTGCTACTATATGAATTGGACTTATGTCTTCTACTTTTTTGG
TACTATTGGAATATTTTGGTTTCTTTTGTGGATCTGGTTAGTTAGTGACACACCACAAAAACACAAGAGAATTTC
CCATTATGAAAAGGAATACATTCTTTCATCATTAAGAAATCAGCTTTCTTCACAGAAGTCAGTGCCGTGGGTACC
CATTTTAAAATCCCTGCCACTTTGGGCTATCGTAGTTGCACACTTTTCTTACAACTGGACTTTTTATACTTTATT
GACATTATTGCCTACTTATATGAAGGAGATCCTAAGGTTCAATGTTCAAGAGAATGGGTTTTTATCTTCATTGCC
TTATTTAGGCTCTTGGTTATGTATGATCCTGTCTGGTCAAGCTGCTGACAATTTAAGGGCAAAATGGAATTTTTC
AACTTTATGTGTTCGCAGAATTTTTAGCCTTATAGGAATGATTGGACCTGCAGTATTCCTGGTAGCTGCTGGCTT
CATTGGCTGTGATTATTCTTTGGCCGTTGCTTTCCTAACTATATCAACAACACTGGGAGGCTTTTGCTCTTCTGG
ATTTAGCATCAACCATCTGGATATTGCTCCTTCGTATGCTGGTATCCTCCTGGGCATCACAAATACATTTGCCAC
TATTCCAGGAATGGTTGGGCCCGTCATTGCTAAAAGTCTGACCCCTGATAACACTGTTGGAGAATGGCAAACCGT
GTTCTATATTGCTGCTGCTATTAATGTTTTTGGTGCCATTTTCTTTACACTATTCGCCAAAGGTGAAGTACAAAA
CTGGGCTCTCAATGATCACCATGGACACAGACAC**TGA**AGGAACCAATAAATAATCCTGCCTCTATTAATGTATTT
TTATTTATCATGTAACCTCAAAGTGCCTTCTGTATTGTGTAAGCATTCTATGTCTTTTTTTAATTGTACTTGTAT
TAGATTTTTAAGGCCTATAATCATGAAATATCACTAGTTGCCAGAATAATAAAATGAACTGTGTTTAATTATGAA
TAATATGTAAGCTAGGACTTCTACTTTAGGTTCACATACCTGCCTGCTAGTCGGGCAACATGAAGTAGGACAGTT
CTGTTGATTTTTTAGGGCCATACTAAAGGGAATGAGCTGAAACAGACCTCCTGATACCTTTGCTTAATTAAACTA
GATGATAATTCTCAGGTACTGATAAACACCTGTTGTTGTTCACTTTCCTCATAAAAATTGTCAGCTCTCTCTGAC
ACTTAGACCTCAAACTTTAGCATCTCTGTGGAGCTGCCATCCACTGTATAATTTCGCCTGGCAACTGGACTGAGG
GGAGTGTGCCCAGGCAGCTGCCAAGCACTCCCTCCCTGGCTTCAGGGTCAGAGTGCCCAGCGTTTATCAGAGGCA
GCATCCAAGCCCAGAGCCAGTGTCGACTCTTCGGCTGGTGCCTTTCCTCTGAGGGGCTATCAATGTGTAGATAAA
GCCCTGAGTAGGCAAGAGCAGTGAGATCCACTGCTATGGTCTTGATACATCCTCAAACTTTCCCTTCCCAGCACA
GAGGAATATTGGCTGGCATGCAACCTGCAAAAGAAAAATGCGAAGCGGCCGGGCACGGTGGCTCATGCCTGTAGT
CCCAGCACTTTGGGGGGCTGAGGTGGGCGAATCATGAGATCAGGAGTTCGAGACCAGCCTGGCCAGCATGGTGAA
ACCCCATCTCTACTAAAAATACAAAAAATTAGCTGGGCGTGGTGACGGGCGCCTGTAATCCCAGATACTCAGGAG
GCTGAGGTAGGAGAATCACTTGAACCTGGGAGATGGAAGTTGCAGTGAACCAAGATCACGCCACTGCACTCCAGC
CTGGGCGATGGAGCGAGACTCCAACTCAAAAAAAAAAAAAGAATAAAGAAAGAAAAGTGCGATGCCCAGTCAATC
ACAAATAAGATCATCCTGGTTTAAATCTACTCTCACATGGATCACAGTATAAATTTCTATGTGCTGTGTTTTGTT
CGTTTGTATTTTGTAGAGATGGGGTCTCGTTTTGTCGCCCAGGCTGGTTTTGAACTCCTGGCTTCAAGCGATCCT
CCTGTCTCGGCCTCACAAAGTGTTGAGACTACAGGCATGAGCCACTGTGCCCAGCCTGTTCTATGTTTTTAAGCT
ACACGAGAATTTTTTTTTTAATTAATTCTCACTGTTTGTTCAGTCTGTCTTCATCTAAGTTTGTGTTGCAGTTTA
AAGTTAAAGTGACTTTTAAAGGCCACATCACCTGAGACTAGGGTAATCATCTTTACTTCTGGTTCCTGAAATCAT
ATTTTTCCAGTGGACCATCCTCCAGTGGCTGTGGTTGTTGAGCATGCTTTCAGAACACCTATGTGGCTTAAAACT
TAGTTTATGTTTTGTGTTCAACACTACGTGTAATATTTTAAAACTGTTTAATGTGATGTGAATACATTTATGTAC
ATTTATTTTTAAATTTGTAAATAGCTTTAAATTGCTATGGCAATGTTTCTTTTATAAATCATCAAAATAAACCTT
TGTGAATTGAAAAAAAAAAAAAAAAAAA

FIGURE 2395

MRSPVRDLARNDGEESTDRTPLLPGAPRAEAAPVCCSARYNLAILAFFGFFIVYALRVNLSVALVDMVDSNTTLE
DNRTSKACPEHSAPIKVHHNQTGKKYQWDAETQGWILGSFFYGYIITQIPGGYVASKIGGKMLLGFGILGTAVLT
LFTPIAADLGVGPLIVLRALEGLGEGVTFPAMHAMWSSWAPPLERSKLLSISYAGAQLGTVISLPLSGIICYYMN
WTYVFYFFGTIGIFWFLLWIWLVSDTPQKHKRISHYEKEYILSSLRNQLSSQKSVPWVPILKSLPLWAIVVAHFS
YNWTFYTLLTLLPTYMKEILRFNVQENGFLSSLPYLGSWLCMILSGQAADNLRAKWNFSTLCVRRIFSLIGMIGP
AVFLVAAGFIGCDYSLAVAFLTISTTLGGFCSSGFSINHLDIAPSYAGILLGITNTFATIPGMVGPVIAKSLTPD
NTVGEWQTVFYIAAAINVFGAIFFTLFAKGEVQNWALNDHHGHRH

FIGURE 2396

TAAGAAGTCTCTTGAAATAAAAGAAGAAAAAATTGCTGCTTTAGAAGCTCGATTAGAAGAATCCACGAATTATAA
CCAGCAATTGCGCCAAGAACTTAAAACAAATGCTACACTGCAAGCAGAGAAGCAAGCGTTGAAAACTCAACTGAA
GCAACTTGAGACACAGAACAATAATTTGCAGGCTCAGATTCTTGCACTTCAGAGGCAGACAGTGTCATTACAAGA
ACAGAATACCACTCTTCAAACACAGAATGCCAAGCTTCAGGTTGAAAATTCCACCCTTAATTCCCAAAGTACCTC
ACTC**ATG**AACCAGAATGCCCAACTCCTAATCCAGCAGTCTTCCTTAGAAAATGAAAATGAATCTGTAATCAAAGA
GCGAGAAGACCTAAAATCTCTCTATGATTCTCTGATCAAAGATCATGAAAAGCTGGAACTTCTTCATGAACGTCA
GGCTTCAGAGTATGAATCTCTTATCTCTAAACATGGAACTCTGAAGTCTGCCCACAAAAATCTTGAGGTGGAACA
TAGAGACCTTGAAGACCGTTACAATCAGTTATTAAAACAGAAAGGACAGTTGGAAGATTTGGAAAAAATGCTCAA
AGTAGAACAGGAAAAAATGCTGCTTGAAAATAAAAATCATGAAACAGTAGCTGCAGAATACAAGAAACTTTGTGG
TGAAAATGATAGGCTGAATCATACCTATAGTCAACTTTTAAAAGAGACTGAAGTTTTACAAACTGACCATAAAAA
TTTGAAAAGTCTTCTGAATAATTCCAAACTGGAACAAACAAGATTAGAAGCTGAATTTTCAAAACTAAAGGAACA
ATACCAACAATTGGATATTACATCAACCAAGCTGAATAACCAGTGTGAGTTGCTAAGCCAACTTAAAGGAAATTT
AGAAGAAGAAAATCGGCATCTACTAGATCAAATTCAGACATTAATGCTACAGAACAGAACACTTTTGGAGCAGAA
TATGGAAAGCAAGGATCTTTTTCATGTTGAACAAAGACAGTACATTGATAAGTTAAATGAATTAAGACGTCAGAA
GGAGAAACTAGAAGAGAAAATTATGGATCAATACAAATTTTATGACCCATCTCCTCCTAGAAGGAGAGGCAACTG
GATTACTCTAAAAATGAGAAAATTGATAAAGTCTAAGAAAGATATTAATCGGGAACGCCAGAAATCTCTAACATT
AACACCCACCCGCTCAGACTCCAGTGAAGGATTTCTTCAGCTCCCTCATCAAGACAGTCAAGATAGTTCTTCAGT
AGGTTCAAACTCTTTAGAAGATGGCCAGACCTTGGGGACCAAGAAAAGCAGCACCATGAATGACCTGGTGCAGTC
CATGGTCCTAGCAGGACAGTGGACAGGTAGTACTGAGAATTTGGAGGTTCCTGATGTTATTTCAACGGGTAAAAG
GAGAAAAGAATTGGGAGCTATGGCCTTCTCTACTACAGCCATCAACTTTTCAACTGTCAACTCTTCTGCAGGCTT
CAGATCCAAGCAGTTGGTTAATAATAAAGATACTACATCCTTTGAAGACATAAGTCCACAAGGTGTTAGTGATGA
TTCTAGTACGGGATCAAGAGTTCATGCTTCAAGACCAGCCAGCCTTGATAGTGGCAGAACATCCACTAGCAATAG
CAATAATAATGCTTCACTACATGAAGTCAAAGCAGGTGCAGTTAATAACCAAAGCAGGCCACAAAGCCACAGCAG
TGGAGAATTTAGCCTGCTTCATGACCATGAGGCTTGGTCCAGCAGTGGTAGCAGTCCAATCCAGTACTTGAAAAG
ACAGACCAGATCAAGCCCAGTGCTCCAGCACAAAATATCTGAAACACTGGAGAGTCGACATCACAAGATCAAAAC
TGGTTCCCCTGGAAGTGAAGTTGTTACTCTACAACAGTTTTTGGAAGAAAGCAATAAGCTTACCTCAGTACAGAT
AAAGTCCTCAAGTCAAGAGAATCTTTTAGATGAAGTAATGAAAAGTTTGTCTGTCTCTTCTGACTTTTTGGGAAA
AGACAAACCAGTTAGCTGTGGTCTGGCCAGGTCAGTAAGTGGAAAAACCCCAGGGGACTTCTATGATAGACGGAC
AACTAAGCCTGAGTTTTTGAGACCTGGTCCTCGAAAAACTGAAGATACCTACTTCATTAGTTCTGCGGGAAAACC
TACACCAGGCACTCAAGGAAAAATAAAATCAGAAGAC**TGA**AGGAGTTGAAAGACCAGTAGACGCTCCTCTACTCT
TTGAGACATCACTGGCCTATAATAAATGGGTTAATTTATGT

FIGURE 2397

MNQNAQLLIQQSSLENENESVIKEREDLKSLYDSLIKDHEKLELLHERQASEYESLISKHGTLKSAHKNLEVEHR
DLEDRYNQLLKQKGQLEDLEKMLKVEQEKMLLENKNHETVAAEYKKLCGENDRLNHTYSQLLKETEVLQTDHKNL
KSLLNNSKLEQTRLEAEFSKLKEQYQQLDITSTKLNNQCELLSQLKGNLEEENRHLLDQIQTLMLQNRTLLEQNM
ESKDLFHVEQRQYIDKLNELRRQKEKLEEKIMDQYKFYDPSPPRRRGNWITLKMRKLIKSKKDINRERQKSLTLT
PTRSDSSEGFLQLPHQDSQDSSSVGSNSLEDGQTLGTKKSSTMNDLVQSMVLAGQWTGSTENLEVPDVISTGKRR
KELGAMAFSTTAINFSTVNSSAGFRSKQLVNNKDTTSFEDISPQGVSDDSSTGSRVHASRPASLDSGRTSTSNSN
NNASLHEVKAGAVNNQSRPQSHSSGEFSLLHDHEAWSSSGSSPIQYLKRQTRSSPVLQHKISETLESRHHKIKTG
SPGSEVVTLQQFLEESNKLTSVQIKSSSQENLLDEVMKSLSVSSDFLGKDKPVSCGLARSVSGKTPGDFYDRRTT
KPEFLRPGPRKTEDTYFISSAGKPTPGTQGKIKSED

FIGURE 2398

GGCACGAGGCCTGGGTCCCGTCACATCCTTCTTGCTCAACCACTGGGTGCACAGGATGGAAACTTCTATTCCCTC
TCTGGAAGACAGCGCGTGGCTTGGCTTCACAGAGTTGTGGCTGGAGACCGAAGCAGCCCCTTTCTCAGGCTTACT
GTCACCAGTCTGTCTGTGTTAGGGGAGAGGGGAGTCCGCTCTGTCCTGAAGGCCCAGAG**ATG**GAAGGACAAGTGG
TAGGCCGGGTGTTCAGGCTCTTCCAACGCCGACTGCTTCAACTCCGAGCAGGACCACCCCAGGACAATTCAGGGG
AAGCTTTAAAGGAACCAGAAAGGGCCCAGGAGCACTCTTTGCCCAACTTTGCTGGGGGGCAGCACTTCTTTGAAT
ACCTTCTTGTGGTTTCTCTCAAAAAGAAGCGTTCAGAGGATGATTACGAGCCTATAATCACCTACCAATTTCCCA
AGCGGGAGAACCTGCTTCGGGGTCAGCAGGAGGAGGAGGAGCGGCTGCTCAAAGCTATCCCCTTGTTCTGCTTCC
CAGATGGGAATGAGTGGGCATCACTCACCGAGTATCCCAGGGAGACCTTCTCCTTCGTTCTGACCAATGTGGATG
GGAGCAGAAAGATTGGATACTGCAGGCGCCTCTTGCCTGCCGGCCCTGGCCCTCGCCTTCCCAAAGTGTACTGCA
TCATCAGCTGCATCGGCTGCTTCGGCTTGTTCTCCAAGATCCTGGATGAAGTGGAGAAGAGACATCAGATCTCCA
TGGCTGTCATCTACCCGTTCATGCAGGGCCTCCGAGAGGCAGCCTTCCCTGCTCCTGGGAAGACTGTCACTCTCA
AGAGCTTCATCCCCGACTCAGGCACTGAGTTCATTTCACTGACACGGCCCCTGGACTCCCACCTAGAACATGTGG
ATTTTAGTTCTCTATTGCACTGTCTCAGTTTTGAACAGATACTTCAGATCTTTGCCTCTGCCGTGCTGGAGAGAA
AAATCATCTTCCTGGCGGAAGGTCTCAGCACCTTGTCTCAGTGCATCCATGCTGCTGCCGCACTGCTCTACCCCT
TCAGCTGGGCGCACACCTACATCCCTGTTGTCCCTGAGAGCCTTCTGGCCACCGTCTGCTGCCCCACCCCCTTCA
TGGTTGGAGTACAAATGCGCTTCCAGCAGGAGGTCATGGACAGCCCTATGGAAGAGGTCCTGCTGGTCAATCTTT
GTGAAGGAACCTTCTTAATGTCGGTTGGTGATGAAAAAGACATCCTGCCACCGAAGCTTCAGGATGACATCTTAG
ACTCTCTTGGTCAGGGGATCAATGAGTTAAAGACTGCAGAACAAATCAACGAGCATGTTTCAGGCCCCTTTGTGC
AGTTCTTTGTCAAGATTGTGGGCCATTATGCTTCCTATATCAAGCGGGAGGCAAATGGGCAAGGCCACTTCCAAG
AAAGATCCTTCTGTAAGGCTCTGACCTCCAAGACCAACCGCCGATTTGTGAAGAAGTTTGTGAAGACACAGCTCT
TCTCACTTTTCATCCAGGAAGCCGAGAAGAGCAAGAATCCTCCTGCAGGCTATTTCCAACAGAAAATACTTGAAT
ATGAGGAACAGAAGAAACAGAAGAAACCAAGGGAAAAAACTGTGAAA**TAA**GAGCTGTGGTGAATAAGAATGACTA
GAGCTACACACCATTTCTGGACTTCAGCCCCTGCCAGTGTGGCAGGATCAGCAAAACTGTCAGCTCCCAAAATCC
ATATCCTCACTCTGAGTCTTGGTATCCAGGTATTGCTTCAAACTGGTGTCTGAGATTTGGATCCCTGGTATTGAT
TTCTCAGGACTTTGGAGGGCTCTGACACCATGCTCACAGAACTGGGCTCAGAGCTCCATTTTTTGCAGAGGTGAC
ACAGGTAGGAAACAGTAGTACATGTGTTGTAGACACTTGGTTAGAAGCTGCTGCAACTGCCCTCTCCCATCATTA
TAACATCTTCAACACAGAACACACTTTGTGGTCGAAAGGCTCAGCCTCTCTACATGAAGTCTGTGGACATGTAAG
GACGAGAGTAAAGAGGAAAATCTTATAAAAAAAAAAAAAAAAAAAA

FIGURE 2399

MEGQVVGRVFRLFQRRLLQLRAGPPQDNSGEALKEPERAQEHSLPNFAGGQHFFEYLLVVSLKKKRSEDDYEPII
TYQFPKRENLLRGQQEEEERLLKAIPLFCFPDGNEWASLTEYPRETFSFVLTNVDGSRKIGYCRRLLPAGPGPRL
PKVYCIISCIGCFGLFSKILDEVEKRHQISMAVIYPFMQGLREAAFPAPGKTVTLKSFIPDSGTEFISLTRPLDS
HLEHVDFSSLLHCLSFEQILQIFASAVLERKIIFLAEGLSTLSQCIHAAAALLYPFSWAHTYIPVVPESLLATVC
CPTPFMVGVQMRFQQEVMDSPMEEVLLVNLCEGTFLMSVGDEKDILPPKLQDDILDSLGQGINELKTAEQINEHV
SGPFVQFFVKIVGHYASYIKREANGQGHFQERSFCKALTSKTNRRFVKKFVKTQLFSLFIQEAEKSKNPPAGYFQ
QKILEYEEQKKQKKPREKTVK

FIGURE 2400

AGCAGGAGGGTGGGACCAAGGGTGCTGCTGGACCAAGGATGGGACTGGGCCAAGGGTGGGGCTGGGAAGCATCCT
GTTTTGCATGTTTGATCAGGAGCTGCTGCCAAGTTGTGACTTTCACTTTCCCTTTTGGGTTCCAGGGTATATCTC
AGAGCCTGGAGAACGTGTCTGGTTATTATGCAGATGCACGGCTGGAGGTGGGATCCACACAGCTCAGAACAGCTG
GATCTTGCTCACACTCTTTCAAGAGAAGCTTCCTTGGACAAAAGGACCCTGCCTTGGTGTGAGAGTGAGGGCAGA
GGGAGCTGGAGCAAGTAGAATTTCTCTAAATACCAGCTGGCTGGGGCCCAGGAGATTAAAAAACACCGGGCTAGG
TTGGTCTTGGCATTTGCTGACACGCAAAGGGATTGCAGAGATCCAGCCCCTCCAACCTCCCTCTGTCCACAGGTG
GCTCACATTCAGTCCCACAATTTGCTTTCTCCTCCTCAAGGGTTAAGAAAAAAAACGAACCCTTCCAGTCAGGTC
AGTGACTGGAGAGCTCCATGGAAAGTCTCTCAGTGACCTGGCTGCTGGCACC**ATG**GACTCAGAAAAGAAACGCTT
TACTGAAGAGGCCACCAAATACTTCCGGGAGAGAGTCAGCCCAGTGCATCTGCAAATCCTGCTGACTAACAATGA
AGCCTGGAAGAGATTCGTGACTGCGGCTGAATTGCCCAGGGATGAGGCAGATGCTCTCTACGAAGCTCTGAAGAA
GCTTAGAACATATGCAGCTATTGAGGACGAATATGTGCAGCAGAAAGATGAGCAGTTTAGGGAATGGTTTTTGAA
AGAGTTTCCCCAAGTCAAGAGGAAGATCCAGGAGTCCATAGAAAAGCTTCGTGCCCTTGCAAATGGTATTGAAGA
GGTCCACAGAGGCTGCACCATCTCCAATGTGGTGTCCAGCTCCACTGGCGCTGCCTCTGGCATCATGTCCCTTGC
TGGTCTTGTTTTGGCACCATTTACAGCAGGGACGAGTCTGGCCCTTACTGCAGCTGGGGTAGGGCTGGGAGCAGC
GTCTGCTGTGACTGGGATCACCACCAGCATCGTGGAGCACTCATACACATCATCAGCAGAAGCTGAAGCCAGCAG
GCTGACTGCAACCAGCATTGACCGATTGAAGGTATTTAAGGAAGTTATGCGTGACATCACACCCAACTTACTTTC
CCTTCTTAATAATTATTACGAAGCCACACAAACCATTGGGAGTGAAATCCGTGCCATCAGGCAAGCCAGAGCCAG
GGCCCGACTCCCTGTGACCACCTGGCGAATCTCAGCTGGAAGTGGTGGTCAAGCAGAGAGAACGATTGCAGGCAC
CACCCGGGCAGTGAGCAGAGGAGCCCGGATCCTGAGTGCGACCACTTCAGGCATCTTCCTTGCACTGGATGTGGT
CAACCTTGTATACGAGTCAAAGCACTTGCATGAGGGGGCAAAGTCTGCATCTGCTGAGGAGCTGAGGCGGCAGGC
TCAGGAGCTGGAGGAGAATCTAATGGAGCTCACTCAGATCTATCAGCGTCTGAATCCATGCCATACCCAC**TGA**CC
CCAGACCAGTGCAGCCAGCAGGGGAGGTGAGCCATACACAGGCCACGACAAAATGCAGGCATTTTATTAGGGGGA
TAAAGAGGGCAAGGTAAAGTTTATGGAGCTGAGTGTTAGTGACTTTGGCATTTCTGTAGCTGAGCACAGCAGGGG
AGGGGTTAATGCAGATGGCAAGTGCACCAAGGAGAAGGCAGGAATGCTGGAGCCTGGAATAAGGGAGGAGAGGGG
ACTGGAGAGTGTGGGGAATAGGAAGAAGAAATTTCCTTTAGACTAACGAATATATTGGGGGGAGGAATAGAGGGG
AGGTGTGCAGGAACCAGCAATGAGAAGGCCAGGAAAAGAAAGAGCTGAAAATGCAGAAAGCCGAAGAGTTAGAAC
TTTTGGATACAGCAGAAGAAACAGCGGCTCCACTACCGACCTGCCCCCGGTTCGATGTCCTTCCAAGAATGAAGT
CTTTCCCTGGTGATGGTCCCCTGCCCTGTCTTTCCAGCATCCACTCTGTCTTGTCCTCCTGGAAGTGTATCTCAG
TCAGCCAGTGGCTTCTTGATGATGGCGGTGGAGGTGGTGGTTGTAGTGTGATGGATCCCCTTTAGGTTATTTAGG
GGTATATGTCCCCTGCTTGAACCCTGAAGGCCAGGTAATGAGCCATGGCCATTGTCCCCAGCTGAGGACCAGGTG
TCTCTAAAAACCCAAACATCCTGGAGAGTATGCGAGAACCTACCAAGAAAAACAGTCTCATTACTCATATACAGC
AGGCAAAGAGACAGAAAATTAACTGAAAAGCAGTTTAGAGACTGGGGGAGGCCGGATCTCTAGAGCCATCCTGCT
GAGTGCCCTGTGTGTAAGTCCTAATAAACTCACCTACTCACCAA

FIGURE 2401

MDSEKKRFTEEATKYFRERVSPVHLQILLTNNEAWKRFVTAAELPRDEADALYEALKKLRTYAAIEDEYVQQKDE
QFREWFLKEFPQVKRKIQESIEKLRALANGIEEVHRGCTISNVVSSSTGAASGIMSLAGLVLAPFTAGTSLALTA
AGVGLGAASAVTGITTSIVEHSYTSSAEAEASRLTATSIDRLKVFKEVMRDITPNLLSLLNNYYEATQTIGSEIR
AIRQARARARLPVTTWRISAGSGGQAERTIAGTTRAVSRGARILSATTSGIFLALDVVNLVYESKHLHEGAKSAS
AEELRRQAQELEENLMELTQIYQRLNPCHTH

FIGURE 2402

TCGCGGCCGCGTCRACGCGTGGTAGGGGGCCCAGAGCAAGCCGAAGGCAAGCACGATGGCGCTCACCAGCCGGCC
CACCCGCGCCCCGTGCCGCCCGGAGCCCCAGCGGGCGCCCCGCAGCCGTGCCAGCGTCACGCTGTAGCAGCCGAG
CATCAGCCGAAAGGAAGCACGAAAGCGGTCAGAGTCTCCAGGCTCAGGTGGGCGGCGGCGTGGACCGGCGACGGG
TGGCACAGCTGGCATACGCGGTCCCTCCACAGGTGGCGGTAGACGGCGGCCGGGACGGCGAGCAACAGGGCGGCC
AGCCAGACCGCCAGCAGCAGGCGGCGGGCCAGGGCCGGGCTGCGCAGCCGAGGCGCCAGGAAGGGGCGGGTGACT
GCGAGGCAGCGCTGCAGGCTGAGCAGGCCGGTGAGCAGCACGCTTGGCGTACATGCTGAGCGCGCACACGTAGTA
CACCGCCTTGCAGCCCGCCTGGCCCAGCGGCCAGGCCTGCCGGTCAGGAAGGCCACAAAGAGCGGCGTGAGCAGC
AGCACCGCGCCGTCGGCCAGCGCCAGGTGCAGCACAAGCGTGGCCGCCAGCGGTCGCCCCCGTGCAGGCTGCCAG
CCCGCCAAGCTCCACACCACGAAGCCGTTGCCAGGCAGCCCCAGCAGCGCCGCCAGCAGCAGGAAGGCTGTGCCT
GTGGCCCGCGAAGTCTTCCAGCTCAGCAGTGTCTCGTTCCCTGGGGGACGGTAGCAGACCGACATCCTTCTGGGC
CTACAGGACACAGAAAAAAAGTGGGGAAGCTGGGGGACCCTACAAGGATCCTTGGCAGGAAAGCAGGGATTGTGT
TCATTTTGAGGGTTTCACTGTCAGTGAGAGTCTCAGCTTCCATGCAACTGTCCATCACGGCTGCAACTGAAATCA
GAGCTGGGACACAGCGCACCAGAAGCTAAAGTCTTGATGCCATCAAAGGACATCCCCTGCCCCATTCACAYATTC
ACATCTCTGTCACGTCCACTAATCGGCAAAAGGAGAAAAGTGAGAGAAGATGACCTAAGTGTGACTGCAGCAGGC
AGCTCTGGAAAATGAAGCCAGAGCAGTGAGCCAGCCCCTCCTCCGACCAAGGAGGAAGGAAAGAGCAGCCCCAGC
ACAGGAGAGAACCACCCAGCCCAGAAGTTCCAGGGAAGGAACTCTCCGGTCCACC**ATG**GAGTACCTCTCAGCTCT
GAACCCCAGTGACTTACTCAGGTCAGTATCTAATATAAGCTCGGAGTTTGGACGGAGGGTCTGGACCTCAGCTCC
ACCACCCCAGCGACCTTTCCGTGTCTGTGATCACAAGCGGACCATCCGGAAAGGCCTGACAGCTGCCACCCGCCA
GGAGCTGCTAGCCAAAGCATTGGAGACCCTACTGCTGAATGGAGTGCTAACCCTGGTGCTAGAGGAGGATGGAAC
TGCAGTGGACAGTGAGGACTTCTTCCAGCTGCTGGAGGATGACACGTGCCTGATGGTGTTGCAGTCTGGTCAGAG
CTGGAGCCCTACAAGGAGTGGAGTGCTGTCATATGGGCCTGGACGGGAGAGCCCCAAGCACAGCAAGGACATCGG
CCGATTCACCTTTGACGTGTACAAGCAAAACCCTCGAGACCTCTTTGGCAGCCTGAATGTCAAAGCCACATTCTA
CGGGCTCTACTCTATGAGTTGTGACTTTCAAGGACTTGGCCCAAAGAAAGTACTCAGGGAGCTCCTTCGTTGGAC
CTCCACACTGCTGCAAGGCCTGGGCCATATGTTGCTGGGAATTTCCTCCACCCTTCGTCATGCAGTGGAGGGGGC
TGAGCAGTGGCAGCAGAAGGGCCGCCTCCATTCCTAC**TAA**GGGGCTCTGAGCTTCTGCCCCCAGAATCATTCCAA
CCGACCCACTGCAAAGACTATGACAGCATCAAATTTCAGGACCTGCAGACAGTACAGGCTAGATAACCCACCCAA
TTTCCCCACTGTCCTCTGATCCCCTCGTGACAGAACCTTTCAGCATAACGCCTCACATCCCAAGTCTATACCCTT
ACCTGAAGAATGCTGTTCTTTCCTAGCCACCTTTCTAGCCTCCCACTTGCCCTGAAAGGCCAAGATCAAGATGTC
CCCCAGGCATCTTGATCCCAGCCTGACTGCTGCTACATCTAATCCCCTACCAATGCCTCCTGTCCCTAAACTCCC
CAGCATACTGATGACAGCCCTCTCTGACTTTACCTTGAGATCTGTCTTCATACCCTTCCCCTCAAACTAACAAAA
ACATTTCCAATAAAAATATCAAATATTTACCGTCAACCC

FIGURE 2403

MEYLSALNPSDLLRSVSNISSEFGRRVWTSAPPPQRPFRVCDHKRTIRKGLTAATRQELLAKALETLLLNGVLTL
VLEEDGTAVDSEDFFQLLEDDTCLMVLQSGQSWSPTRSGVLSYGPGRESPKHSKDIGRFTFDVYKQNPRDLFGSL
NVKATFYGLYSMSCDFQGLGPKKVLRELLRWTSTLLQGLGHMLLGISSTLRHAVEGAEQWQQKGRLHSY

FIGURE 2404

ACTTAATGGGCTCAAGGTCACCTACCTGACCTACCAGCAGCTCA**ATG**GCCTTCCCAAAGAAGAAACTTCAGGGTC
TTGTGGCTGCAACCATCACGCCAATGACTGAGAATGGAGAAATCAACTTTTCAGTAATTGGTCAGTATGTGGATT
ATCTTGTGAAAGAACAGGGAGTGAAGAACATTTTTGTGAATGGCACAACAGGAGAAGGCCTGTCCCTGAGCGTCT
CAGAGCGTCGCCAGGTTGCAGAGGAGTGGGTGACAAAAGGGAAGGACAAGCTGGATCAGGTGATAATTCACGTAG
GAGCACTGAGCTTGAAGGAGTCACAGGAACTGGCCCAACATGCAGCAGAAATAGGAGCTGATGGCATCGCTGTCA
TTGCACCGTTCTTCCTCAAGCCATGGACCAAAGATATCCTGATTAATTTCCTAAAGGAAGTGGCTGCTGCCGCCC
CTGCCCTGCCATTTTATTACTATCACATTCCTGCCTTGACAGGGGTAAAGATTCGTGCTGAGGAGTTGTTGGATG
GGATTCTGGATAAGATCCCCACCTTCCAAGGGCTGAAATTCAGTGATACAGATCTCTTAGACTTCGGGCAATGTG
TTGATCAGAATCGCCAGCAACAGTTTGCTTTCCTTTTTGGGGTGGATGAGCAACTGTTGAGTGCTCTGGTGATGG
GAGCAACTGGAGCAGTGGGCAGTACCTATAACTACCTGGGAAAAAAGACAAACCAGATGTTGGAGGCTTTTGAAC
AAAAGGACTTCTCTTTAGCCCTGAACTATCAGTTTTGTATCCAGAGATTTATCAACTTTGTTGTCAAACTAGGTT
TTGGAGTGTCACAGACCAAAGCCATCATGACTCTGGTCTCTGGGATTCCAATGGGCCCACCCCGGCTTCCACTGC
AGAAAGCCTCCAGGGAGTTTACTGATAGTGCTGAAGCTAAACTGAAGAGCCTGGATTTCCTTTCTTTCACTGATT
TAAAGGATGGAAACTTGGAAGCTGGTAGC**TAG**TGCCTCTCTATCAAATCAGGGTTTGCACCTTGAGACATAATCT
ACCTTAAATAGTGCATTTTTTTCTCAGGGAATTTTAGATGAACTTGAATAAACTCTCCTAGCAAATGAAATCTCA
CAATAAGCATTGAGGTACCTTTTGTGAGCCTTAAAAAGTCTTATTTTGTGAAGGGGCAAAAACTCTAGGAGTCAC
AACTCTCAGTCATTCATTTCACAGATTTTTTTGTGGAGAAATTTCTGTTTATATGGATGAAATGGAATCAAGAGG
AAAATTGTAATTGATTAATTCCATCTGTCTTTAGGAGCTCTCATTATCTCGGTCTCTGGTTCCTAATCCTATTTT
AAAGTTGTCTAATTTTAAACCACTATAATATGTCTTCATTTTAATAAATATTCATTTGGAATCTAGGAAAACTCT
GAGCTACTGCATTTAGGCAGGCACTTTAATACCAAACTGTAACATGTCTCAACTGTATACAACTCAAAATACACC
AGCTCATTTGGCTGCTCAGTCTAACTCTAGAATGGATGCTTTTGAATTCATT

FIGURE 2405

MAFPKKKLQGLVAATITPMTENGEINFSVIGQYVDYLVKEQGVKNIFVNGTTGEGLSLSVSERRQVAEEWVTKGK
DKLDQVIIHVGALSLKESQELAQHAAEIGADGIAVIAPFFLKPWTKDILINFLKEVAAAAPALPFYYYHIPALTG
VKIRAEELLDGILDKIPTFQGLKFSDTDLLDFGQCVDQNRQQQFAFLFGVDEQLLSALVMGATGAVGSTYNYLGK
KTNQMLEAFEQKDFSLALNYQFCIQRFINFVVKLGFGVSQTKAIMTLVSGIPMGPPRLPLQKASREFTDSAEAKL
KSLDFLSFTDLKDGNLEAGS

FIGURE 2406

GGATGAAAGTGATTTAATTCATTTTTAGAATTTTTTTTTTGTTTTGTTTTAGCAACATGCTGAACAACTAATTTA
CTTTAAAAATAAGCCAGTTAAAACAAAGGACGCTAAGCCCAAGTGGGGGGCAATATTAGTCAGGATCTTTGGGGT
CTAATTCCAGACCAACTTTCAGAAGCACTTCTTTGTCTCTGTTCTCACCTCTGCTGTCCCTCTCTTCCCTCATCC
CCTAAGAGAGACAAAGATAAAAGCCCACCTGCATCCCTAAGTCTTACTGAGATCAGCCACCCCAGGGGAGAGAAA
CTGGATCTACTTACAGCCACCCCCTGTTTCCATCCATATACTTACTTCCCCCAATTTGCATGTGATT**ATG**GAAAC
AAGTCATGCTCATGAAAGCAACTGTAAAATAAAAGGTTATGGAGTAGTTCAGCAACTTCTTCACAGCCAGCTTTG
TGGAGCTGGGGAGGACTTAGGGCCCATTGGAGTCTCTTATGTGTACAGCTTCAGGGCTGTCCCTTTCAGTTTGAT
TTTAAGCAATGCCTCACTTCATAGCTTAGGGGGTAAGGATTCCATTCAGGTAGGTTGTCTAAAGGAACTAATGGG
ACCTCTCAGTGAATTAGCTGACCAGATTTTAGGAAATCTTTTTAATTTCTATGATTTTCCTTCTCACATTTTGAA
ATGG**TAA**AATTGACTGGAAATAATTTTTCTTGGTGCCTTATTGGTTTTCCTTGCAAACCTTTCTCATATTTTCTC
ATGACCATTGCCAGTGACCAAGGCCCATGTGTGTGTTGTGTGTAATTGTGGGCATGTACAAGCTTAAATAACGTG
CCGACAGCACTGTTTCAAAGTTGGTATTCATTAGGCTGTTGCCTCCTGGGCTGGAGCTGCGCTAATCCTGACACC
GGCTGCCAGGAGAAAACCTCATGGATCACACACCAAACCTTAATAACAGCATCCGTGACCTGCACTCTCCAGTAC
AGAATGGGAACCCCAGAGCTAGGAAATGTAGTTGTATATTTTAATGAACTGCTACCCCAGCCAAAGAAGCTTCTT
TCACTTTTGTGCTCTACAGAAAGCCCAAGGGGGGTAGGAGGGACAGAGCTTTGAATAACTGCTTTCTAACACTAA
ATGTGGCCAACAGGACAGAGCACATCACACGTATAGGCAGGTGTGAGGGACAGTGGCTAAGAATTGCCTGCTCCC
TCTGCATGCTCTTTCTTGTTTCCAAAGTCCAATCAAGTGATCCTGGGAAACAAATCTGTCTGGATTGCGGAGGGT
GGTTCTGAAAGAACTGCCAAGACGTTAAAGAAGGGTGAAGAGTAGGCAGAATATAAGTAGCTAACCTGAGTCAAG
ACTCTCAAAAGCTAGCAGCCTGATGACAATAGGATTTATTTCAGCCAGGATAGTGTCTGTCTGTGAGTGCATCAT
TTTAAGACAGTATGACTTCATGTTGTTACAAACTATGTATAGTATGTATGTTTTGTGGGTTGTATATATACATAA
TATATATTATATATATATATGAGAGATTTGGTGACTTTTGATACGGGTTTGGTGCAGGTGAATTTATTACTGAGC
CAAATGAGGCACATACCGAGTCAGTAGTTGAAGTCCAGGGCATTCGATACTGTTTATGATTTCCATATATGTATA
GTGCCTATCCCATGCTGTAGTCACTGTTATGTTAAATCCAGAAGTTACACTAGAGCCAGCGATACTTTATTTGTA
GACAATCAATTTGAATCCATATGTTATTACTGGCAGATGATACATGATTACAGTTCTGAATCTGTAACACTTACA
AAAGGAAACCCAGAGCAGCTTGATGAGTTTTTGTTTCTGCTTCGTTCCTGGGAGTCAGTAGAAACAGCAGTTGTA
TGTGGTTATGTTAGTCTCAAGATACTTAATTTGTTGACCTTACTTCAGAAAAATTTTGTATGTATTATATTTGTG
GGAAGGTAAAATAATCATTTGAGATTTTTATCAAATATGAAGATTAGTTATTTATGAAAAACAAAGAAATGTCTA
TTTTTCTTTGTTCCCAATTAATGTAGATAAATTTTAAAATGCATTAAAGTAATGGTCCGGAAAAAAAAAA

FIGURE 2407

METSHAHESNCKIKGYGVVQQLLHSQLCGAGEDLGPIGVSYVYSFRAVPFSLILSNASLHSLGGKDSIQVGCLKE
LMGPLSELADQILGNLFNFYDFPSHILKW

FIGURE 2408A

CTGCTCCTTGCACCCCGCTCCCTGCCTGGACACAGGCTCACTCGCTGCCTTCTTCTGGGGGAAACCAGCTTCTTG
CCAGCCACAGCTGCTGCCTCCGCCACTGGCCACCGCCCCTGTCCTGGGAGTCCCTTGGCCCAGACACCCACCTGA
CTTAGTGGCTCCTCTGCAGGAAAGGTGGCTGCCCCCTGCGTTCCTCCATCCAACCATGAGCTGGTGCCCATCACC
ACTGAGAATGCACCAAAGAATGTAGTGGACAAGGGAGAAGGAGCCTCCCGGGGGTGGAAACACACGGAAAAGCCTC
GAGGACAACGGCTCCACCAGGGTCACCCCGAGTGTCCAGCCCCACCTCCAGCCCATCAGAAAC**ATG**AGTGTGAGC
CGGACCATGGAGGACAGCTGTGAGCTGGACCTGGTGTACGTCACAGAGAGGATCATCGCTGTCTCCTTCCCCAGC
ACAGCCAATGAGGAGAACTTCCGGAGCAACCTCCGTGAGGTGGCGCAGATGCTCAAGTCCAAACATGGAGGCAAC
TACCTGCTGTTCAACCTCTCTGAGCGGAGACCTGACATCACGAAGCTCCATGCCAAGGTACTGGAATTTGGCTGG
CCCGACCTCCACACCCCAGCCCTGGAGAAGATCTGCAGCATCTGTAAGGCCATGGACACATGGCTCAATGCAGAC
CCTCACAATGTCGTTGTTCTACACAACAAGGGAAACCGAGGCAGGATAGGAGTTGTCATCGCGGCTTACATGCAC
TACAGCAACATTTCTGCCAGTGCGGACCAGGCTCTGGACCGGTTTGCAATGAAGCGGTTCTATGAGGATAAGATT
GTGCCCATTGGCCAGCCATCCCAAAGAAGGTACGTGCATTACTTCAGTGGCCTGCTCTCCGGCTCCATCAAAATG
AACAACAAGCCCTTGTTTCTGCACCACGTGATCATGCACGGCATCCCCAACTTTGAGTCTAAAGGAGGATGTCGG
CCATTTCTCCGCATCTACCAGGCCATGCAACCTGTGTACACATCTGGCATCTACAACATCCCAGGAGACAGCCAG
ACTAGCGTCTGCATCACCATCGAGCCAGGACTGCTCTTGAAGGGAGACATCTTGCTGAAGTGCTACCACAAGAAG
TTCCGAAGCCCAGCCCGAGACGTCATCTTCCGTGTGCAGTTCCACACCTGTGCCATCCATGACCTGGGGGTTGTC
TTTGGGAAGGAGGACCTTGATGATGCTTTCAAAGATGATCGATTTCCAGAGTATGGCAAAGTGGAGTTTGTATTT
TCTTATGGGCCAGAGAAAATTCAAGGCATGGAGCACCTGGAGAACGGGCCGAGCGTGTCTGTGGACTATAACACC
TCTGACCCCCTCATCCGCTGGGACTCCTACGACAACTTCAGTGGGCATCGAGATGACGGCATGGAGGAGGTGGTG
GGACACACGCAGGGGCCACTAGATGGGAGCCTGTATGCTAAGGTGAAGAAGAAAGACTCCCTGCACGGCAGCACC
GGGGCTGTTAATGCCACACGTCCTACACTGTCGGCCACCCCCAACCACGTGGAACACACGCTTTCTGTGAGCAGC
GACTCGGGCAACTCCACAGCCTCCACCAAGACCGACAAGACCGACGAGCCTGTCCCCGGGGCCTCCAGTGCCACT
GCTGCCTTGAGTCCCCAGGAGAAGCGGGAGCTGGACCGCCTGCTGAGTGGCTTTGGCTTAGAGCGAGAGAAGCAA
GGCGCCATGTACCACACCCAGCACCTCAGGTCCCGCCCAGCAGGGGGCTCGGCTGTGCCCTCCTCTGGACGCCAC
GTTGTCCCAGCCCAGGTTCATGTCAATGGTGGGGCGTTAGCATCTGAGCGGGAGACAGACATCCTGGACGATGAA
TTGCCAAACCAGGATGGTCACAGTGCGGGCAGCATGGGCACACTCTCTTCTCTGGACGGGGTCACCAACACCAGT
GAGGGGGGCTACCCAGAGGCCCTGTCCCCACTGACCAACGGTCTGGACAAGTCCTACCCCATGGAGCCTATGGTC
AATGGAGGAGGCTACCCCTACGAGTCTGCCAGCCGGGCGGGGCCTGCCCATGCTGGCCACACGGCCCCCATGCGG
CCCTCCTACTCTGCACAGGAGGGTTTAGCTGGCTACCAGAGGGAGGGGCCCCACCCAGCCTGGCCACAGCCAGTG
ACCACCTCCCACTATGCCCATGACCCCAGCGGTATGTTCCGCTCTCAATCCTTTTCGGAAGCTGAACCCCAGCTG
CCCCCAGCTCCGGTCCGAGGGGGAAGCAGCCGGGAGGCTGTGCAAAGGGGACTGAATTCATGGCAGCAGCAGCAG
CAGCAGCAGCAGCAGCCTCGCCCACCTCCACGCCAGCAGGAAAGAGCCCACTTGGAGAGTCTTGTAGCCAGCAGG
CCCAGCCCTCAGCCATTGGCAGAGACCCCCATCCCCAGTCTCCCTGAGTTCCCGCGAGCAGCCTCCCAGCAGGAG
ATTGAACAGTCCATCGAAACACTCAATATGCTGATGCTGGACCTGGAGCCAGCCTCCGCTGCTGCCCCACTACAC
AAGTCCCAGAGTGTCCCCGGGGCCTGGCCAGGGGCTTCTCCACTCTCCTCCCAGCCCCTCTCTGGATCCTCCCGT
CAGTCCCATCCACTGACCCAGTCCAGATCTGGCTATATCCCCAGTGGGCATTCGTTGGGAACCCCTGAGCCAGCC
CCACGGGCCTCTCTGGAGTCTGTCCCTCCTGGCAGGTCTTACTCACCTTATGACTATCAGCCATGTTTGGCTGGG
CCTAACCAGGATTTCCATTCAAAGAGCCCAGCCTCTTCCTCCTTGCCTGCCTTCCTTCCGACCACCCACAGCCCT
CCAGGGCCTCAGCAACCCCCAGCCTCTCTCCCTGGCCTCACTGCTCAGCCTCTGCTCTCACCAAAGGAAGCGACT
TCAGACCCCTCCCGGACTCCAGAGGAGGAGCCATTGAATTTAGAAGGGCTGGTGGCCCACAGGGTAGCAGGGGTA
CAGGCTCGGGAGAAGCAGCCTGCAGAGCCCCCAGCCCCTCTGCGGAGGCGGGCGGCCAGTGATGGACAGTATGAG
AACCAGTCTCCAGAAGCCACATCCCCTCGTAGCCCTGGGGTTCGCTCCCCTGTCCAGTGTGTCTCCCCGGAGCTG
GCTCTTACCATCGCTCTCAATCCTGGAGGGCGGCCCAAAGAGCCCCATTTGCACAGCTACAAGGAGGCCTTCGAG
GAGATGGAGGGAACCTCCCCGAGCAGCCCACCACCCAGTGGGGTGCGGTCCCCCCCGGGTCTGGCCAAGACACCC
CTGTCTGCTCTGGGCCTGAAACCTCACAACCCAGCGGACATCCTGTTGCACCCCACAGGAGTTACCAGAAGACGG
ATCCAGCCAGAGGAAGATGAGGGGAAGGTGGTGGTCAGGCTGTCAGAAGAGCCCCGGAGCTATGTGGAGTCTGTG
GCACGGACAGCGGTGGCTGGACCCCGAGCTCAGGACTCTGAGCCCAAGAGCTTTAGTGCTCCAGCCACCCAGGCC
TATGGCCATGAGATACCCCTGAGGAACGGGACCCTGGGTGGCTCCTTTGTCTCCCCCAGCCCCCTCTCCACCAGC

FIGURE 2408B

AGCCCCATCCTCAGTGCTGACAGCACTTCAGTGGGGAGTTTCCCGTCGGGAGAGAGCAGTGACCAGGGTCCCCGG
ACGCCCACCCAGCCTCTGTTGGAGTCTGGCTTCCGCTCAGGCAGCCTGGGACAGCCCAGCCCGTCTGCCCAGAGA
AACTACCAGAGCTCTTCTCCTCTCCCGACTGTGGGCAGTAGCTACAGCAGCCCCGACTACTCACTTCAGCATTTC
AGCTCCTCTCCGGAAAGCCAGGCTCGAGCTCAGTTCAGTGTGGCTGGCGTCCACACGGTGCCTGGGAGCCCTCAG
GCGCGCCACAGAACAGTGGGCACCAACACTCCCCCTAGTCCTGGCTTCGGCTGGCGGGCCATCAATCCCAGCATG
GCTGCCCCCAGCAGTCCCAGTTTGAGCCATCACCAGATGATGGGTCCACCAGGCACTGGCTTCCATGGTAGCACT
GTCTCCAGCCCCCAGAGCAGTGCAGCGACCACCCCGGGGAGCCCCAGCCTGTGTCGGCACCCAGCAGGGGTCTAC
CAGGTTTCTGGCCTCCACAACAAAGTGGCCACCACCCCGGGGAGTCCCAGCCTGGGCCGGCACCCTGGGGCTCAC
CAAGGCAACCTGGCCTCCGGTCTTCATAGCAATGCAATAGCCAGCCCTGGAAGCCCCAGCCTGGGCCGTCACCTC
GGAGGGTCTGGATCTGTGGTTCCCGGCAGCCCCTGCTTGGACCGGCATGTGGCCTATGGCGGCTATTCTACCCCG
GAGGATCGGAGACCCACACTGTCCCGGCAGAGCAGTGCCTCTGGCTACCAGGCTCCTTCCACGCCCTCCTTCCCT
GTCTCCCCTGCCTACTACCCTGGCCTGAGCAGCCCTGCCACCTCCCCGTCACCAGACTCCGCAGCCTTCCGGCAA
GGGAGCCCAACACCAGCCTTGCCAGAGAAGCGAAGGATGTCAGTGGGAGACCGGGCAGGCAGCCTCCCCAACTAT
GCCACCATCAATGGGAAGGTGTCTTCGCCTGTCGCCAGCGGCATGTCCAGTCCCAGCGGGGGCAGCACCGTCTCC
TTCTCCCACACTCTGCCCGACTTCTCCAAGTACTCCATGCCAGACAACAGCCCGGAGACGCGGGCTAAAGTGAAG
TTTGTCCAGGACACTTCTAAGTATTGGTACAAGCCTGAGATCTCCAGGGAGCAGGCCATCGCGCTCCTCAAGGAC
CAGGAGCCGGGGGCCTTCATCATCCGCGACAGTCACTCCTTCCGAGGCGCGTACGGGCTGGCCATGAAGGTGTCT
TCGCCACCTCCAACCATCATGCAGCAGAATAAAAAAGGAGACATGACCCATGAGCTGGTCAGGCATTTTCTGATA
GAGACTGGCCCCAGAGGAGTCAAGCTCAAGGGCTGCCCCAATGAGCCAAACTTCGGATCGCTGTCTGCCCTGGTC
TACCAGCACTCCATCATCCCATTGGCCCTGCCTTGCAAGCTGGTCATTCCAAACCGAGACCCCACAGATGAATCG
AAAGATAGCTCCGGCCCTGCCAACTCAACTGCAGACCTGCTGAAACAAGGGGCAGCCTGCAATGTGCTCTTCATC
AACTCTGTGGACATGGAGTCACTCACTGGGCCACAGGCCATCTCTAAAGCCACATCTGAGACGTTGGCTGCAGAC
CCCACGCCAGCTGCCACCATCGTTCACTTCAAAGTCTCTGCCCAGGGAATCACTCTGACTGACAACCAGAGAAAG
CTCTTTTTCAGACGCCACTACCCTCTCAACACTGTCACCTTCTGTGACCTGGATCCACAGGAAAGAAAGTGGATG
AAAACAGAGGGTGGTGCCCCTGCTAAGCTCTTCGGCTTCGTGGCCCGGAAGCAGGGCAGCACCACGGACAACGCC
TGCCACCTCTTTGCTGAGCTTGACCCCAACCAGCCGGCCTCTGCCATCGTCAACTTCGTCTCCAAGGTCATGCTG
AATGCCGGCCAAAAGAGA**TGA**ACCCTGCCCCTTGCCCAGGGCCAGTGCCATGGGGAAGGGGCTTGTGGGGAGGGG
ACCCATGAATCCTGACCACTCTTGAACCCAGAAGGAGGACTTTGGGCCAATTTCGGAGGAGAGAAGAAAGTGCAA
CGTGGGGAGAGGGAAGTGAATTGCAGAGGGGAGGGGGAAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGA
GAGAAAGATGGAGGAGAAGAACTTGGATTCCCCTGGGTAGATGGAAACTGCAAAAACCCAAAGCCTCCAAAACTA
ACCAGGTCCACCTAACACCCCCTCCCTCCCCTAAGAAGATGGATGTCCTCAAAAGAGAAGGAACAAACCTCCTTG
GGAATCCACATTTTTTGGGGGAATGGAAAAGCTCTGTCTCCCTAACTCAACTGCTTTGCAAGGGGAAATCAAGCT
GGGAGAATCTTTTTCTGGCCACCTGTAGGGTAGGTTGTCAAACCAAACAGAGCCACCGTGGGACATCAAGTGGAA
GAACTTGTTTGCTTGAAAGTATCTCAGACCCAAGGCACCTCAGGTCTCTTTGCTGTGCCTCCACTATATTGTCGT
GTGGGTGTGTGTCTGCACCCACATCCTCACACATTGATCTAGATCTGCCTTTATCCACTCGAATTATAAACAGCT
CGGCTTGTCCTTGTCCCATGTGTTTGTAGACACACATGCATACTGTCCAAAGATTAGGGTTGGTGGTGGCAGTGC
AGCAGGGGAGGGACAAACAACCAAGCTATGGGTGACAGAGGCTCTCTCCTGGTGCCTGCACCTGCACTCTAGTGA
CCCTGGGTGCCGCCAGACCCTTCTCTTCTACAAAGACCCCAGCAGGAGTGGGAGGGTCTGCAATGGCATCGCCCT
GTCCTGCCTTGGCCAGAAGCCTGGAGCTTTGGTTTGAGGAGGTAGAGATATGTGTATCCATAGGAAGAGATCTGT
CAGAACAGGCAGCTGTTGAGCTCGGGGTGTCTTCCCCAAGGCATGTGGCTCAGCAGCAAGAAAGGCAAGTTGCTC
CTGCTGGGGCCCTGGACTCTGCCTTAGCTCCCACCTCTCAGCCTTGTTATTGGGTTTCATGCCCCTGGACCAGCC
TTATCTCAGACCTGCTTACCTGCATGATGCCTTTTTGGGGGCTGGGGATTGAGTCTTGCTGCTCTGCCCAGCCCT
GTTCTATTCTGCAGGGTCCCTGTGTTGGAATTCTCCCTGGGGAACCTACTTTCTGCTCAGTGAGGCTCCGGCCAG
AAACCTGGAGTCCTTATCCTCCCCTCTGTAAGTGTTTTAGGGTCTGGCTTTTGCAGGCACCCTCTGACCTCAGCA
GAGCTCCTGGGCCTGCTGCCTGCACACCACATCGCCTACCTACAATGCCAAAGCCTCACTGTCACCCTTTCTGCC
TTGGTTTCCCTAGCTGAGCCACGCTGCCCATGCAGCAGAGGGCAGAAGGCTTGCACTTGGGCCAAAGGGCCTAAG
GTCCACTGGACAGTTGGGAAAACACCTGACCACCATTTAAGGACTCTAAGCCAGAATGGAAAATTCACCAGGACT
CCATTCTTAAGCCTATGCGAGTCCCCTAGAGAGAGGCATTGTACTGATATATAAATATTATATAATATATACATG

FIGURE 2408C

AGACATACTGACAGAATCTGTAAGCTAATAAAATGTAAGAAAAGGTTAAAAAAAGAAAAAAAAAAAA

FIGURE 2409

MSVSRTMEDSCELDLVYVTERIIAVSFPSTANEENFRSNLREVAQMLKSKHGGNYLLFNLSERRPDITKLHAKVL
EFGWPDLHTPALEKICSICKAMDTWLNADPHNVVVLHNKGNRGRIGVVIAAYMHYSNISASADQALDRFAMKRFY
EDKIVPIGQPSQRRYVHYFSGLLSGSIKMNNKPLFLHHVIMHGIPNFESKGGCRPFLRIYQAMQPVYTSGIYNIP
GDSQTSVCITIEPGLLLKGDILLKCYHKKFRSPARDVIFRVQFHTCAIHDLGVVFGKEDLDDAFKDDRFPEYGKV
EFVFSYGPEKIQGMEHLENGPSVSVDYNTSDPLIRWDSYDNFSGHRDDGMEEVVGHTQGPLDGSLYAKVKKKDSL
HGSTGAVNATRPTLSATPNHVEHTLSVSSDSGNSTASTKTDKTDEPVPGASSATAALSPQEKRELDRLLSGFGLE
REKQGAMYHTQHLRSRPAGGSAVPSSGRHVVPAQVHVNGGALASERETDILDDELPNQDGHSAGSMGTLSSLDGV
TNTSEGGYPEALSPLTNGLDKSYPMEPMVNGGGYPYESASRAGPAHAGHTAPMRPSYSAQEGLAGYQREGPHPAW
PQPVTTSHYAHDPSGMFRSQSFSEAEPQLPPAPVRGGSSREAVQRGLNSWQQQQQQQQQPRPPPRQQERAHLESL
VASRPSPQPLAETPIPSLPEFPRAASQQEIEQSIETLNMLMLDLEPASAAAPLHKSQSVPGAWPGASPLSSQPLS
GSSRQSHPLTQSRSGYIPSGHSLGTPEPAPRASLESVPPGRSYSPYDYQPCLAGPNQDFHSKSPASSSLPAFLPT
THSPPGPQQPPASLPGLTAQPLLSPKEATSDPSRTPEEEPLNLEGLVAHRVAGVQAREKQPAEPPAPLRRRAASD
GQYENQSPEATSPRSPGVRSPVQCVSPELALTIALNPGGRPKEPHLHSYKEAFEEMEGTSPSSPPPSGVRSPPGL
AKTPLSALGLKPHNPADILLHPTGVTRRRIQPEEDEGKVVVRLSEEPRSYVESVARTAVAGPRAQDSEPKSFSAP
ATQAYGHEIPLRNGTLGGSFVSPSPLSTSSPILSADSTSVGSFPSGESSDQGPRTPTQPLLESGFRSGSLGQPSP
SAQRNYQSSSPLPTVGSSYSSPDYSLQHFSSSPESQARAQFSVAGVHTVPGSPQARHRTVGTNTPPSPGFGWRAI
NPSMAAPSSPSLSHHQMMGPPGTGFHGSTVSSPQSSAATTPGSPSLCRHPAGVYQVSGLHNKVATTPGSPSLGRH
PGAHQGNLASGLHSNAIASPGSPSLGRHLGGSGSVVPGSPCLDRHVAYGGYSTPEDRRPTLSRQSSASGYQAPST
PSFPVSPAYYPGLSSPATSPSPDSAAFRQGSPTPALPEKRRMSVGDRAGSLPNYATINGKVSSPVASGMSSPSGG
STVSFSHTLPDFSKYSMPDNSPETRAKVKFVQDTSKYWYKPEISREQAIALLKDQEPGAFIIRDSHSFRGAYGLA
MKVSSPPPTIMQQNKKGDMTHELVRHFLIETGPRGVKLKGCPNEPNFGSLSALVYQHSIIPLALPCKLVIPNRDP
TDESKDSSGPANSTADLLKQGAACNVLFINSVDMESLTGPQAISKATSETLAADPTPAATIVHFKVSAQGITLTD
NQRKLFFRRHYPLNTVTFCDLDPQERKWMKTEGGAPAKLFGFVARKQGSTTDNACHLFAELDPNQPASAIVNFVS
KVMLNAGQKR

FIGURE 2410

GTCATGTTCTTCGCGCCCTGGTGTGGACACTGCCAGCGGCTGCAGCCGACTTGGAATGACCTGGGAGACAAATAC
AACAGC**ATG**GAAGATGCCAAAGTCTATGTGGCTAAAGTGGACTGCACGGCCCACTCCGACGTGTGCTCCGCCCAG
GGGGTGCGAGGATACCCCACCTTAAAGCTTTTCAAGCCAGGCCAAGAAGCTGTGAAGTACCAGGGTCCTCGGGAC
TTCCAGACACTGGAAAACTGGATGCTGCAGACACTGAACGAGGAGCCAGTGACACCAGAGCCGGAAGTGGAACCG
CCCAGTGCCCCCGAGCTCAAGCAAGGGCTGTATGAGCTCTCAGCAAGCAACTTTGAGCTGCACGTTGCACAAGGC
GACCACTTTATCAAGTTCTTCGCTCCGTGGTGTGGTCACTGCAAAGCCCTGGCTCCAACCTGGGAGCAGCTGGCT
CTGGGCCTTGAACATTCCGAAACTGTCAAGATTGGCAAGGTTGATTGTACACAGCACTATGAACTCTGCTCCGGA
AACCAGGTTCGTGGCTATCCCACTCTTCTCTGGTTCCGAGATGGGAAAAAGGTGGATCAGTACAAGGGAAAGCGG
GATTTGGAGTCACTGAGGGAGTACGTGGAGTCGCAGCTGCAGCGCACAGAGACTGGAGCGACGGAGACCGTCACG
CCCTCAGAGGCCCCGGTGCTGGCAGCTGAGCCCGAGGCTGACAAGGGCACTGTGTTGGCACTCACTGAAAATAAC
TTCGATGACACCATTGCAGAAGGAATAACCTTCATCAAGTTTTATGCTCCATGGTGTGGTCATTGTAAGACTCTG
GCTCCTACTTGGGAGGAACTCTCTAAAAAGGAATTCCCTGGTCTGGCGGGGGTCAAGATCGCCGAAGTAGACTGC
ACTGCTGAACGGAATATCTGCAGCAAGTATTCGGTACGAGGCTACCCCACGTTATTGCTTTTCCGAGGAGGGAAG
AAAGTCAGTGAGCACAGTGGAGGCAGAGACCTTGACTCGTTACACCGCTTTGTCCTGAGCCAAGCGAAAGACGAA
CTT**TAG**GAACACAGTTGGAGGTCACCTCTCCTGCCCAGCTCCCGCACCCTGCGTTTAGGAGTTCAGTCCCACAGA
GGCCACTGGGTTCCCAGTGGTGGCTGTTCAGAAAGCAGAACATACTAAGCGTGAGGTATCTTCTTTGTGTGTGTG
TTTTCCAAGCCAACACACTCTACAGATTCTTTATTAAATGTGTAACTCATGGTCACTGTGTAAACATTTTCAGTG
GCGATATATCCCCTTTGACCTTCTCTTGATGAAATTTACATGGTTTCCTTTGAGACTAAAATAGCGTTGAGGGAA
ATGAAATTGCTGGACTATTTGTGGCTCCTGAGTTGAGTGATTTTGGTGAAAGAAAGCACATCCAAAGCATAGTTT
ACCTGCCCACGAGTTCTGGAAAGGTGGCCTTGTGGCAGTATTGACGTTCCTCTGATCTTAAGGTCACAGTTGACT
CAATACTGTGTTGGTCCGTAGCATGGAGCAGATTGAAATGCAAAAACCCACACCTCTGGAAGATACCTTCACGGC
CGCTGCTGGAGCTTCTGTTGCTGTGAATACTTCTCTCAGTGTGAGAGGTTAGCCGTGATGAAAGCAGCGTTACTT
CTGACCGTGCCTGAGTAAGAGAATGCTGATGCCATAACTTTATGTGTCGATACTTGTCAAATCAGTTACTGTTCA
GGGGATCCTTCTGTTTCTCACGGGGTGAAACATGTCTTTAGTTCCTCATGTTAACACGAAGCCAGAGCCCACATG
AACTGTTGGATGTCTTCCTTAGAAAGGGTAGGCATGGAAAATTCCACGAGGCTCATTCTCAGTATCTCATTAACT
CATTGAAAGATTCCAGTTGTATTTGTCACCTGGGGTGACAAGACCAGACAGGCTTTCCCAGGCCTGGGTATCCAG
GGAGGCTCTGCAGCCCTGCTGAAGGGCCCTAACTAGAGTTCTAGAGTTTCTGATTCTGTTTCTCAGTAGTCCTTT
TAGAGGCTTGCTATACTTGGTCTGCTTCAAGGAGGTCGACCTTCTAATGTATGAAGAATGGGATGCATTTGATCT
CAAGACCAAAGACAGATGTCAGTGGGCTGCTCTGGCCCTGGTGTGCACGGCTGTGGCAGCTGTTGATGCCAGTGT
CCTCTAACTCATGCTGTCCTTGTGATTAAACACCTCTATCTCCCTTGGGAATAAGCACATACAGGCTTAAGCTCT
AAGATAGATAGGTGTTTGTCCTTTTACCATCGAGCTACTTCCCATAATAACCACTTTGCATCCAACACTCTTCAC
CCACCTCCCATACGCAAGGGGATGTGGATACTTGGCCCAAAGTAACTGGTGGTAGGAATCTTAGAAACAAGACCA
CTTATACTGTCTGTCTGAGGCAGAAGATAACAGCAGCATCTCGACCAGCCTCTGCCTTAAAGGAAATCTTTATTA
ATCACGTATGGTTCACAGATAATTCTTTTTTTAAAAAAACCCAACCTCCTAGAGAAGCACAACTGTCAAGAGTCT
TGTACACACAACTTCAGCTTTGCATCACGAGTCTTGTATTCCAAGAAAATCAAAGTGGTACAATTTGTTTGTTTA
CACTATGATACTTTCTAAATAAACTCTTTTTTTTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAC

FIGURE 2411

MEDAKVYVAKVDCTAHSDVCSAQGVRGYPTLKLFKPGQEAVKYQGPRDFQTLENWMLQTLNEEPVTPEPEVEPPS
APELKQGLYELSASNFELHVAQGDHFIKFFAPWCGHCKALAPTWEQLALGLEHSETVKIGKVDCTQHYELCSGNQ
VRGYPTLLWFRDGKKVDQYKGKRDLESLREYVESQLQRTETGATETVTPSEAPVLAAEPEADKGTVLALTENNFD
DTIAEGITFIKFYAPWCGHCKTLAPTWEELSKKEFPGLAGVKIAEVDCTAERNICSKYSVRGYPTLLLFRGGKKV
SEHSGGRDLDSLHRFVLSQAKDEL

FIGURE 2412

TGGCATTTCTGCATTCGAAGAAGAATCTGAGAGAAACCTGACGCAGGGAGC**ATG**GGTATCTGGACCTCAGGCACT
GATATCTTCCTAAGTCTTTGGGAGATTTACGTGTCTCCAAGAAGCCCCGGATGGATGGACTTTATCCAGCATTTG
GGAGTTTGCTGTTTGGTTGCTCTTATTTCAGTGGGCCTCCTGTCTGTGGCCGCCTGCTGGTTTCTGCCATCAATC
ATAGCGGCCGCTGCCTCCTGGATTATCACGTGTGTTCTGCTGTGTTGCTCCAAGCATGCACGATGTTTTATTCTT
CTTGTCTTTCTCTCTTGTGGCCTGCGTGAAGGCAGGAATGCTTTGATTGCAGCTGGCACAGGGATCGTCATCTTG
GGACACGTAGAAAATATTTTTCACAACTTTAAAGGTCTCCTAGATGGTATGACTTGCAACCTAAGGGCAAAGAGC
TTTTCCATACATTTTCCACTTTTGAAAAAATATATTGAGGCAATTCAGTGGATTTATGGCCTTGCCACTCCACTA
AGTGTATTTGATGACCTTGTTTCTTGGAACCAGACCCTGGCAGTCTCTCTTTTCAGTCCCAGCCATGTCCTGGAG
GCACAGCTAAATGACAGCAAAGGGGAAGTCCTGAGCGTCTTGTACCAGATGGCAACAACCACAGAGGTGTTGTCC
TCCCTGGGTCAGAAGCTACTTGCCTTTGCAGGGCTTTCGCTCGTCCTGCTTGGCACTGGCCTCTTCATGAAGCGA
TTTTTGGGCCCTTGTGGTTGGAAGTATGAAAACATCTACATCACCAGACAATTTGTTCAGTTTGATGAAAGGGAG
AGACATCAACAGAGGCCCTGTGTGCTCCCGCTGAATAAGGAGGAAAGGAGGAAGTATGTCATCATCCCGACTTTC
TGGCCGACTCCTAAAGAAAGGAAAAACCTGGGGCTGTTTTTCCTCCCCATACTTATCCATCTCTGCATCTGGGTG
CTGTTTGCAGCTGTAGATTATCTGCTGTATCGGCTCATTTTCTCAGTGAGCAAGCAGTTTCAAAGCTTGCCAGGG
TTTGAGGTTCACTTGAAACTGCACGGAGAGAAACAAGGAACTCAAGATATTATCCATGATTCTTCCTTTAATATA
TCTGTGTTTGAACCCAACTGTATCCCAAAACCAAAATTCCTTCTATCTGAGACCTGGGTTCCTCTCAGTGTTATT
CTTTTGATATTAGTGATGCTGGGACTGTTGTCCTCTATCCTTATGCAACTTAAAATCCTGGTGTCAGCATCTTTC
TACCCCAGCGTGGAGAGGAAGCGCATCCAATATCTGCATGCAAAGCTGCTTAAAAAAAGATCAAAGCAGCCGCTG
GGAGAAGTCAAAAGACGGCTGAGTCTCTATCTTACAAAGATTCATTTCTGGCTTCCAGTCCTGAAAATGATTAGG
AAGAAGCAAATGGACATGGCAAGTGCAGACAAGTCA**TGA**GAGACCCCGACTACTCCTCAGCCACATCGCACCAAC
AATTCTCTTCAGGTCTAGGATGGCAGTCACTATTCATGCCGGATAATAGAGAACTATGTGACGCAGTCCTCTCAG
GAGTCTGAGTTTACAGAGCCAACTTGCAGCACCTGGTTATGCCTCCTTTCATCTCAAAGCCAAAGAGCTGCCAGG
TAAATGGTTATGTGGTCTATGTTCCAAACAAACCACATGATCTTGCCTGTGTCACAATGTAACAAGACTCTAGCT
GGGTCCCCTGGTGATGAGTTTCAGCATAGAATAATGTTCAAGGAAAAGAAAACGAAAACAGTTTAAATCTCTACC
ACAGCCTCACAAGCAAATGCTAAGGGGAACATACATGTAAAAAGCCAGCAAACTATCTTCAAACTCTTCCGTCCT
TAATGTCTTCCATGGCTATTGCCCCCACAATGGTCTCTTTTCTCCCTGCTCCCTTATTAAAGAACTCTTTCTGAA
ACCCTTTTTTTTTTTTTTTTTTT

FIGURE 2413

MGIWTSGTDIFLSLWEIYVSPRSPGWMDFIQHLGVCCLVALISVGLLSVAACWFLPSIIAAAASWIITCVLLCCS
KHARCFILLVFLSCGLREGRNALIAAGTGIVILGHVENIFHNFKGLLDGMTCNLRAKSFSIHFPLLKKYIEAIQW
IYGLATPLSVFDDLVSWNQTLAVSLFSPSHVLEAQLNDSKGEVLSVLYQMATTTEVLSSLGQKLLAFAGLSLVLL
GTGLFMKRFLGPCGWKYENIYITRQFVQFDERERHQQRPCVLPLNKEERRKYVIIPTFWPTPKERKNLGLFFLPI
LIHLCIWVLFAAVDYLLYRLIFSVSKQFQSLPGFEVHLKLHGEKQGTQDIIHDSSFNISVFEPNCIPKPKFLLSE
TWVPLSVILLILVMLGLLSSILMQLKILVSASFYPSVERKRIQYLHAKLLKKRSKQPLGEVKRRLSLYLTKIHFW
LPVLKMIRKKQMDMASADKS

FIGURE 2414

CCTGGGCCAGCATGGCGGCGCCCATGTAACCCGGTCCGTGCCGCAAAGCGAACGGCGGCCGCGGCGCGGGCCCCG
CGGGGGTTAGAGGTCACC**ATG**CTGAGGGTCGCGTGGAGGACGCTGAGTTTGATTCGGACCCGGGCAGTTACCCAG
GTCCTAGTACCCGGGCTGCCGGGCGGTGGGAGCGCCAAGTTTCCTTTCAACCAGTGGGGCCTGCAGCCTCGAAGT
CTCCTCCTCCAGGCCGCGCGCGGATATGTCGTCCGGAAACCAGCCCAGTCTAGGCTGGATGATGACCCACCTCCT
TCTACGCTGCTCAAAGACTACCAGAATGTCCCTGGAATTGAGAAGGTTGATGATGTCGTGAAAAGACTCTTGTCT
TTGGAAATGGCCAACAAGAAGGAGATGCTAAAAATCAAGCAAGAACAGTTTATGAAGAAGATTGTTGCAAACCCA
GAGGACACCAGATCCCTGGAGGCTCGAATTATTGCCTTGTCTGTCAAGATCCGCAGTTATGAAGAACACTTGGAG
AAACATCGAAAGGACAAAGCCCACAAACGCTATCTGCTAATGAGCATTGACCAGAGGAAAAAGATGCTCAAAAAC
CTCCGTAACACCAACTATGATGTCTTTGAGAAGATATGCTGGGGGCTGGGAATTGAGTACACCTTCCCCCCTCTG
TATTACCGAAGAGCCCACCGCCGATTCGTGACCAAGAAGGCTCTGTGCATTCGGGTTTTCCAGGAGACTCAAAAG
CTGAAGAAGCGAAGAAGAGCCTTAAAGGCTGCAGCAGCAGCCCAAAAACAAGCAAAGCGGAGGAACCCAGACAGC
CCTGCCAAAGCCATACCAAAGACACTCAAAGACAGCCAA**TAA**ATTCTGTTCAATCATTAAAAAAAA

FIGURE 2415

MLRVAWRTLSLIRTRAVTQVLVPGLPGGGSAKFPFNQWGLQPRSLLLQAARGYVVRKPAQSRLDDDPPPSTLLKD
YQNVPGIEKVDDVVKRLLSLEMANKKEMLKIKQEQFMKKIVANPEDTRSLEARIIALSVKIRSYEEHLEKHRKDK
AHKRYLLMSIDQRKKMLKNLRNTNYDVFEKICWGLGIEYTFPPLYYRRAHRRFVTKKALCIRVFQETQKLKKRRR
ALKAAAAAQKQAKRRNPDSPAKAIPKTLKDSQ

FIGURE 2416A

GGCACGAGCGCGGGCGGAGGCGGCCCGGCGGGCCCTGGGAGAGCTGGGACGGGCGGCGGCCGGGTGGCCTCGGCC
ACCCGCTAATTGCATCTTTTCCCGGCGTCTCGTCTGCAGAGGGAGCACT**ATG**TCTGCGGAAGTCCCCGAGGCAGC
CTCCGCGGAGGAGCAGAAGGAAATGGAAGATAAAGTGACTAGTCCAGAGAAAGCAGAAGAAGCAAAATTAAAAGC
AAGATATCCTCATCTGGGACAAAAGCCTGGAGGTTCAGATTTCTTAAGGAAACGGTTGCAGAAAGGGCAAAAATA
TTTTGATTCTGGGGATTACAACATGGCTAAAGCAAAAATGAAGAACAAGCAACTTCCTACTGCAGCTCCGGATAA
GACGGAGGTCACTGGTGACCACATTCCCACTCCGCAAGACCTTCCTCAACGGAAGCCGTCCCTTGTTGCTAGCAA
GCTGGCTGGC**TGA**TTAAGAAGCTGAACTGCATGAATCTGCTAAATCTCATTATTTCTCCTTAATATGTTACTTAT
CTACTTTTTATTTCCTTTCATTCACTAGTCATTTGAGACTGACAGCTTTGCAGGTAGCAGTAGTGTGTGCTGCTA
TTGTGGAATATACGTGTGTAGAGTTTTTGATTAGTTTAACAGTGCACTGGTGAAGAGGACATGTTAGAGCAACAT
AAGTAAACTACTTGAAAATAGTTGTATATATTACCTAACTTCTAGTGTAGTACTGGTTCTAACAAGTAACAAGCA
AGTTTTAAAATTTTAATGTTTTGGCTTTCATTACTTCATCTTAATTATAGCTTTGTATGTTACTCTTATTTAATA
TAATCTCTATTGTATTGATTTCTTCTGTATTTACCTTTTGGATTTTGTAAAACAGAAGTTTAAGACCACAAGTTA
GAAGAAAGGTCACATATTTCAAACACAACTAGATGGGGCTCTGAAAGATTTGTATCTCTGTGCTTGAACTTGAAT
GGCCTTAAACCTGTTTCAGCTTTAACAGTAGAATTTTACTTGGGCAATATTTGCCCATTCTGGTGTAACTTATGT
GACTCTAGTGCTTAACAGCTGCCGTTGAAGCTAATATTCAGTTCTGTAXAGTTAGAATACCTTTTGTTGTTGAAG
ATGTGAATGAAGTATGCCATGTGCATTAACTGTTTGAATTCACTTTTGTGCCATTTTTGTAAATACAGTAGTTTT
GCACAACCTCTCACAAATGTCTGTATTAATTTCACATACTTAAAAAGTAGATAATGTGCCAACCAGAAGCACAAG
AGTTCCTACACAAAACTCTGTAAATCATTATAGCTTTTGTATAATAAGAGTAGTTTACAATCTCGGGCTTATAGA
ATACCAAACTGAAATCTTAGTTCAATCTGCCATAGACTTAAGCTTTTCATTTGTTACTAATATCCATGACATTCA
GTGGCCTTGTGCAAATACGATATGTTGCTTAGGCATATCTTTTGTCCTATGCAGAACCTTTCATTTTGATTTTTA
TGAAAGTTGCAATTCATGTAATTTATATAAACTTTTTAAATGTAGAAACTTTTTACTTCCACACTCAGTTTTGGA
GACCCTAGAATAAAAGGCTTCAATACTCTGCATTCCATGCCCTCTGCCACCTGCTTTTTTTTCCCCTTTGTTCTT
TGACTCAAATGGTATTGAGCTGTTTGTTGTATATGGAAGCATAGGTGTCTATATCCTTACTCTTTTATATAACAC
AATAATGGCGTTTTCCTTCTAATTTCTCAGTTGTTAACTTCTTTCTCTTTTTTTTTTTAGGATAGGGCCTTGCTCT
GTCACCTGAGCTCTAGTGCAGTAGTGCAATCACAGCTCACTGCAACCTTACTCCTAGGCTCAAGTTAACTATTCT
TGATCCTTTATTATTACTAATATTCTACAATTGTTTAAATAAAAGGAACTTTATAATGAAACGGTTCGGAATACT
GGCTCAAGAACCTATGTCAAGATGAGCTGAATTTTGGTAAATTATTTTAGGAATTATGACAAGCTAATTGAATTA
GGCTTGTGACAATTAGAGTAATTTACATGACAGGTAAAACTCCTATTAAAAATGTTTAGATGTTTGCTTCTGTAG
ATGTCACTTTAGTAAAATACCAATTTAGTTTTACTTGTGGCTTATCTAGTTAGAACTTAGCAGACTTTACTGGGA
CAAGTTTACTGCTCTTGTAGGAGCTCCTCTCACAAGTAGTTGTAATGCTGTAGCATGATACTCAGGATCAGTAGC
TTGAGATGTTACTATTTTTCTCTTCATCTTTGACTTGCAGAGAGCCTCCCGTTTTTGGATCCAGGCATCTTTTCT
GAATCCTGGTTCCATCAGTATACCTGCTCTCCTATGACCCCAAATCATAGTCAATGGTGCCTCAAACATAGCACC
TTAAGTTAAAGGCTGCCTAGTGCTCTGAGGAAAGCTTGCTGATTATCTTCCTGATCTACTCACCCCAAAAGGCAG
AAAAGCAACACAGTCACTGCTGTGGTCATTTGTAATGTAAAGATCAGTTATATATATATATTTGTAATGAGAGCA
AGTATATACTCATTATAGAATCAATTTAAGAAGTTTAAAATAACCCAGAGTAGAATTTCTATATCTAGTCTTGGT
TTTTTTCATGAATATTTGCAAGTAATTACCATTAAATTCACACATGAAAGATTAATCTGAAAGATCAGAGACCAT
GTTATTCCTGACCACGATAGAACTGCTCCTGTGGTTTGGGACAAGTAATAAAACAACTGCTTGAGTTTTGTTTGT
AAAATACATAATTAATATTTGACCTACCTCAAAATGTATTGAGGATCTGTGAAATGCTAAGTGCCCAAAATAAAA
TATTGCTGATTGTCTTTTTATTAAAAGTAAATTTCCTCATTAAGCCAACCTGCCTTCTGTAAGTCACAGTGCTTA
AATCTCAGGATTTTTCATTAGGAGAGACCTGTCGTTAAGGATTTGTAGGTATAATTGCTTAGCCTCCATTATTGG
TGCTTGGGATAGAGAGGTTTTAGATTTTTGTTTTTTTTTTGTTCTGCCTCAAAGCTCAGTTTATTGAAGACATTT
GTAAGCTATTGGATCATCACTTGAATCAAGATTTTGACTAGTGAGCTTAATTGTCCATTTCTTACAATTTCAAAG
TTACAGTCTCAGAAATGGTTAATTTTAATAACTGTCCTATCATAAATTAATGTTGGAATAAATTGAAGTTGTTGA
TAAATACTTCATGAAAACTAAAGTCTGAAATAAATTACTTGTTTTATGTCCAATAGCTACTACATTTGATAGAAC
AGTTTTGAGGAACATTTCATTCTTGAACGCAGCATCTGACATGGTTCTCAGCAAGTTGGAATAGTAAGGATTATT
GGCTTGTTTCGATGAGTGGAAGCGGCATGTTTGTAGCATACAAGTTATTCAATAATCTTGTGCTGATGACCTAAA
AATATGTCTTAACTATTCATCAAGGAAAGCCTGGTGAAGCCTTTACTTGTTACTACTTCAACAGTTGGAATTAGT
TGTCTTTTTACTTGATGAAACAAAACTATACCTCTGAATATTTATGGATACTTTTTACTAAATCAGGCTTGTGTT

FIGURE 2416B

CTTAATCCAAATTAGTAAAGTTTTATGGAAGCTGAAATGTAATACAGTAGTCTCCCCTTATCTGTAAGAGATACA
TTCCAAGACCCCTAGTGGATGCCTGAAACCTCAGATAGTACTGAACCCTTTATCAACTATGTTTTTTCAGTCTGA
CAACCAAGGCGGCTACTAAGTGACTAAGGGGCAGGTAGTATACAGTGTGGATAAGCAGGACAAAGGGGTGATTCA
CATCCCAGGCAGGACAGAGCAGGAGATCATGAGATTTCATCACTCAGGATGGCTTGTGATTTATTTTATTTTATT
CTTTTTTTTTTTTGAGATGGAGTCTCACTCTTGCCCAGGCTGGAGTGCAGTGGTGCGATCTTGGCTCACTGCAAC
CTCTGCCTCCTGGGTTCAAGCAGTTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGGCGTCCGCCACCAT
GCCCAGCCAATTTTTGTACTTTTAGTAGAGATGGGGTTTCACCATGTTGGCCAGGCTGGTCTTGAACTCCTGACC
TCAGGTGATCCACTCGCCTCGGCCTCCCAAAGTGCTGGGATTATAGGCATGCGCCACCATGCCCGGCCGGCTTAT
GATTTAAAACATGAATTGTTTATTTCTGGAATTTTCCACATAATATTTTTGGACCAAGGTTGCCTCAGGTAACAA
ACTACAGAAAGTGAAATTGCAGATAAAGGGGATTACTGCTCCTCTGCTCTAAAATTGGTGTTTGGGTGATCAGAA
GCAGGTAGCCAATGGGAAGAGCACTTCTGAGTGATAACTAAAGCAGTTTGGTGGCCTTTTCACATTCTCCAATGT
TCAAACATATTTTCCACTTTCCATTTTCTCTTTCACCTCATTTTGCCTCTCTATCCCCCATCCCTGCTTATTTCT
TAAGCCCATTGATGGCACTCATTAAATTGTATTTAGGGCTAATGAGTCATTGTTCCTTAATATCGTTTTCAATAT
GCCACAATTTAGGACACATTTAAAATTTTTTAAAACAATATCCTAATCAATATTGACTAATTTGAGCCACATTCC
CAACTCTAACTCAGCACACACTGCCAGTCTTCCCCAATATCTGTCTCCTCTCAATTCCCCACCACACCTTATAAA
ATTGTAATCAAAGATATCTCACTCTGTCATTGTTAATCTAAGAATAAAAACACTGACTTTAATACGGTTTTACTA
AGTTTCAACCTTCTAATTAGGTAGGCCTCTAGGTATTCTGCAGATCACTGCTGGTCTTGATAGCCATTAATATAT
GTTTGTATTATGTTATTTTTCAACTAAATCGCAGTTGGAAAAAAAACATATTTAATATTATGCCCTTGGATCTGT
TACTGCATCACTAGCACTTGTGATGCAATAGAACACTTCGCCTGTACTGAAAGGGCCAAGAGTAAATGCCTTGTT
TTGTTTTTTTGTTTTGTTTTGTTTTGCTTTTTGTTAAAACATGTCTATAGAGTTGGCAGTTAATGCTGAATTTGT
CAAATACCCCTTCCAAAATTATACTTGTATTTAAAAAATAAATGGATCTACCTAAAAAAAAAAAAAAAAAA

FIGURE 2417

MSAEVPEAASAEEQKEMEDKVTSPEKAEEAKLKARYPHLGQKPGGSDFLRKRLQKGQKYFDSGDYNMAKAKMKNK
QLPTAAPDKTEVTGDHIPTPQDLPQRKPSLVASKLAG

FIGURE 2418

GTGACAGGAGCCGAAGCAGCAGCGCAGGTTGTCCCCGTTTCCCCTCCCCCTTCCCTTCTCCGGTTGCCTTCCCGG
GCCCCTTACACTCCACAGTCCCGGTCCCGCC**ATG**TCCCAGAAACAAGAAGAAGAGAACCCTGCGGAGGAGACCGG
CGAGGAGAAGCAGGACACGCAGGAGAAAGAAGGTATTCTGCCTGAGAGAGCTGAAGAGGCAAAGCTAAAGGCCAA
ATACCCAAGCCTAGGACAAAAGCCTGGAGGCTCCGACTTCCTCATGAAGAGACTCCAGAAAGGGCAAAAGTACTT
TGACTCAGGAGACTACAACATGGCCAAAGCCAAGATGAAGAATAAGCAGCTGCCAAGTGCAGGACCAGACAAGAA
CCTGGTGACTGGTGATCACATCCCCACCCCACAGGATCTGCCCCAGAGAAAGTCCTCGCTCGTCACCAGCAAGCT
TGCGGGG**TAA**CCTGAGCCCCCCTCTCCTCCCCTTCCTCAACCACTGGACGTTTATATATTATAGGCAGGGATGAA
ATGGGCACCTAGTCAGATCTTCTCAGCTTGCTAGCCAGAAATGACTGTGATTCTGCTGGGGGCTGCTGAGAAGGT
AATGTAGGTTGAAAAGGGGCTCTAAGTTTATTTATTTCGTTAGATTGACACTTCCACACACTCCCTGTAGTCCAG
GTAGGGCCTAGAAATAGGAAAGGCTAGGATTGGATAATGCTGCAAATGCTTTTTTTGTGTGAGAAACTGGAGAGA
TGTGATTTCTCCTTTTGGGAGAGAATGTCCCAAAATTGATTAGGCTGAGCCTTGGGAATAGTTTGGCAGGTTTAA
CATCCCAAGGCTAACCTAACGTAGTTGGGAAAGGTAGATTGAATGAGACATGTTTTCTGTGCTTCTAAGTGTTCT
GTCCCTTAGGCTGCTATTGCTTCATGTTTCCATTATGGCAGGTTTAGAGAATCCTTAAAAAGAAAAATTGACTTG
CTTGCCTAAAACTACAGTGCCCCCTTAGCCTCCATTACTTAGTATCTCTTACAGTTTGCTCTGGCTCTCAAATAA
TATAAAGATTGATGAACATTATTCACAAAAAAAAAAAAAAAAA

FIGURE 2419

MSQKQEEENPAEETGEEKQDTQEKEGILPERAEEAKLKAKYPSLGQKPGGSDFLMKRLQKGQKYFDSGDYNMAKA
KMKNKQLPSAGPDKNLVTGDHIPTPQDLPQRKSSLVTSKLAG

FIGURE 2420

TACCTGTGCGGCCCTCAACGTCTCCTTGGTGCGGGACCCGTTCACTTTCGGCTCCCGGAGTCTCCCTCCACTGCT
CAGACCTCTGGACCTGACAGGAGACGCCTACTTGGCTCTGACGCGGCGCCCCAGCCCGGCTGTGTCCCCGGCGCC
CCGGACCACCCTCCCTGCCGGCTTTGGGTGCGTTGTGGGGTCCCGAGGATTTGTTGAAAGACATTCAAGATTACG
AAGTTTAG**ATG**ACCAAAATGGATATCCGAGGTGCTGTGGATGCTGCTGTCCCCACCAATATTATTGCTGCCAAGG
CTGCAGAAGTTCGTGCAAACAAAGTCAACTGGCAATCCTATCTTCAGGGACAGATGATTTCTGCTGAAGATTGTG
AGTTTATTCAGAGGTTTGAAATGAAACGAAGCCCTGAAGAGAAGCAAGAGATGCTTCAAACTGAAGGCAGCCAGT
GTGCTAAAACATTTATAAATCTGATGACTCATATCTGCAAAGAACAGACCGTTCAGTATATACTAACTATGGTGG
ATGATATGCTGCAGGAAAATCATCAGCGTGTTAGCATTTTCTTTGACTATGCAAGATGTAGCAAGAACACTGCGT
GGCCCTACTTTCTGCCAATATTGAATCGCCAGGATCCCTTCACTGTTCATATGGCAGCAAGAATTATTGCCAAGT
TAGCAGCTTGGGGAAAAGAACTGATGGAAGGCAGTGACTTAAATTACTATTTCAATTGGATAAAAACTCAGCTGA
GTTCACAGAAACTGCGTGGTAGCGGTGTTGCTGTTGAAACAGGAACAGTCTCTTCAAGTGATAGTTCGCAGTATG
TGCAGTGCGTGGCCGGGTGTTTGCAGCTGATGCTCCGGGTCAATGAGTACCGCTTTGCTTGGGTGGAAGCAGATG
GGGTAAATTGCATAATGGGAGTATTGAGTAACAAGTGTGGCTTTCAGCTCCAGTATCAAATGATTTTTTCAATAT
GGCTCCTGGCATTCAGTCCTCAAATGTGTGAACACCTGCGGCGCTATAATATCATTCCAGTTCTGTCTGATATCC
TTCAGGAGTCTGTCAAAGAGAAAGTAACAAGAATCATTCTTGCAGCATTTCGTAACTTTTTAGAAAAATCAACTG
AAAGAGAAACTCGCCAAGAATATGCCCTGGCTATGATTCAGTGCAAAGTTCTGAAACAGTTGGAGAACTTGGAAC
AGCAGAAGTACGATGATGAAGATATCAGCGAAGATATCAAATTTCTTTTGGAAAAACTTGGAGAGAGTGTCCAGG
ACCTTAGTTCATTTGATGAATACAGTTCAGAACTTAAATCTGGAAGGTTGGAATGGAGTCCTGTGCACAAATCTG
AGAAATTTTGGAGAGAGAATGCTGTGAGGTTAAATGAGAAGAATTATGAACTCTTGAAAATCTTGACAAAACTTT
TGGAAGTGTCAGATGATCCCCAAGTCTTAGCTGTTGCTGCTCACGATGTTGGAGAATATGTGCGGCATTATCCAC
GAGGCAAACGGGTCATCGAGCAGCTCGGTGGGAAGCAGCTGGTCATGAACCACATGCATCATGAAGACCAGCAGG
TCCGCTATAATGCTCTGCTGGCCGTGCAGAAGCTCATGGTGCACAACTGGGAATACCTTGGCAAGCAGCTCCAGT
CCGAGCAGCCCCAGACCGCTGCCGCCCGAAGC**TAA**GCCTGCCTCTGGCCTTCCCCTCCGCCTCAATGCAGAACCA
GTAGTGGGAGCACTGTGTTTAGAGTTAAGAGTGAACACTGTTTGATTTTACTTGGAATTTCCTCTGTTATATAGC
TTTTCCCAATGCTAATTTCCAAACAACAACAACAAAATAACATGTTTGCCTGTTAAGTTGTATAAAAGTAGGTGA
TTCTGTATTTAAAGAAAATATTACTGTTACATATACTGCTTGCAATTTCTGTATTTATTGTTCTCTGGAAATAAA
TATAGTTATTAAAGGATTCTCACTCCAAACATGGCCTCTCTCTTTACTTGGACTTTGAACAAAAGTCAACTGTTG
TCTCTTTTCAAACCAAATTGGGAGAATTGTTGCAAAGTAGTGAATGGCAAATAAATGTTTTAAAATCT

FIGURE 2421

MTKMDIRGAVDAAVPTNIIAAKAAEVRANKVNWQSYLQGQMISAEDCEFIQRFEMKRSPEEKQEMLQTEGSQCAK
TFINLMTHICKEQTVQYILTMVDDMLQENHQRVSIFFDYARCSKNTAWPYFLPILNRQDPFTVHMAARIIAKLAA
WGKELMEGSDLNYYFNWIKTQLSSQKLRGSGVAVETGTVSSSDSSQYVQCVAGCLQLMLRVNEYRFAWVEADGVN
CIMGVLSNKCGFQLQYQMIFSIWLLAFSPQMCEHLRRYNIIPVLSDILQESVKEKVTRIILAAFRNFLEKSTERE
TRQEYALAMIQCKVLKQLENLEQQKYDDEDISEDIKFLLEKLGESVQDLSSFDEYSSELKSGRLEWSPVHKSEKF
WRENAVRLNEKNYELLKILTKLLEVSDDPQVLAVAAHDVGEYVRHYPRGKRVIEQLGGKQLVMNHMHHEDQQVRY
NALLAVQKLMVHNWEYLGKQLQSEQPQTAAARS

FIGURE 2422A

TGCGGGCGGCCGGCTAGGAGGCTTGGCCCCCACCCCGGGACCCCCGCCGTCCCCGGGCCGGCCGGCCGGTGGGCA
CGATGAGCCAGGTGCTGGGGAAGCCGCAGCCGCAGGACGAGGACGACGCGGAGGAGGAGGAGGAGGAGGATGAGC
TGGTGGGGCTAGCGGACTACGGAGACGGGCCCGACTCCTCCGACGCCGATCCGGACAGCGGCACAGAGGAGGGAG
GATGATTAC**ATG**GAAGCCCTGGCCAGGCTCCACCTCACGGTGACCAGGGCCTACAAAGTGAATACTGACATCAAC
TTCGAGGTGTTTATTCATAAAGTGGATGGTCTGTCAGATGACCACAAAATTGAAACCCAAAGAGATATTCACCAG
AGGGCAAACGATGACCTTGCAGATGCTGGATTAGAAAAAATTCACCTCAGCTTTTATCTGACAAGCATATATGAT
CATTCAATATTTGAAGCTTTTAGCAAAGTTGTTCAGAAACTGATTCCACAACTCCCAACTCTGGAGAATTTGCTG
AACATCTTTATCTCAAATTCTGGAATTGAAAAGGCATTTCTATTTGATGTGGTCAGTAAAATTTATATTGCAACT
GATAGTACTCCGGTGGATATGCAAACCTATGAGCTCTGCTGTGATATGATAGATGTGGTTATTGACATCTCTTGT
ATTTATGGTCTCAAAGAAGATGGAGCAGGAACCCCCTATGACAAGGAATCCACAGCCATCATAAAGCTTAATAAT
ACAACCGTGCTTTATTTAAAAGAGGTGACAAAGTTCCTGGCTCTCGTTTGCTTTGTCAGAGAGGAAAGCTTTGAA
AGAAAAGGGCTAATTGACTATAATTTTCATTGCTTCCGGAAGGCCATTCATGAAGTTTTTGAGGTGAGAATGAAA
GTAGTAAAATCTCGAAAGGTTCAGAATCGGCTGCAGAAGAAAAAGAGAGCCACCCCTAATGGGACCCCTAGAGTG
CTGCTG**TAG**GTGAGGTTTCAGGAATGTCTTTTGAAATCAGACCTTATCCATGAGGCTGCTGCGCCATGTTGCACT
AAAGGAAGAGGAAGAAGGAGATTGGGACACATACCATTGATTTGTTGTTAAAAAAAAAAAAAAATTCCTGCAACCC
TCTTGATCTTCTCTTTTATAAATAAAGTAAGCACTTTGAAGCAAAAACTTGTATATTAACAGTGATGTGAAATCC
ATTGTCATTTCATTACACAAATGTAAACTTTTATGGTCTGTAGTCAAAAAAATCCCGTGTGAGAACTGCCAGGAA
TTGTACATATTTTGCACTTTTTCATGTTTCTCATTGAACTGAACTTTGATAAAACGACTTTTCTAAGCTTTTTTT
CTGTACTTGGTGTCAAGGACATGCATACTGTAGTCCATATCTATATGGCAATCAGAAATTAATCAAAAAGTGATG
CATTGGTAATGACTTTTTGTAAATTTGGAAATCTTTGCTACCAATTGTTGAGAAAAATCATTTTTCAGTGGAGCT
GGAACAGATTGGAGCTACAAGCTCCAGGAGCAATAAGAACTGTCCCCTATTTATAATGGGTGTAAACAGTTTTGT
AGAATAATGCTAGCACCAGACTTACCTAAAAATTTCTATAGCAGTGGCTGTGCTTCCCTGCTCAACGGTTTTTAT
GAAGCTGTTTACCTCAACACACATCTCTATAATCACTTTATACAGAGAGGTTATTTCTTTTTGTTGCATTAGTAT
TCTTTTGAAACTTTGGGACCAGATTTCCAAAATGGTGCCGAACACTGGAAAAAAGTAAGAATGTCACTGAATTGT
AGGGTTTCTGGAGGCTTTTCTGTACCTACCACCCAGGGCTAAAGTAACATCAGAGGCCTAAAGTTGTTCCAAAAG
TATGTGATTGGCAACTGCAGACTAAAAAACATAGATACAATTCTGGACTTTTGGCCCTGTGCGATGGTCTGGTGT
GCTGCATTTAAAATGCTTATTCAGGACCAGTTCTTTATTGCTCCATGACCATAGTGAATAGAACAAATCGCAGAA
CCCCACCATGGAGCTCAATCCTGTTAGTCACTTTTGTCACCTCCACATCTTCTTCTCACTGGTGAAAACATGCCT
CATGTACTCCACTTGTTCCCACCTTATGATTAAGCCAAGCTCAGCCTGCCACCAGCATGCTCTGCAAGGCTGAAG
AGTCATCCTGAAGACCCCTAAAGGTCAGTGGGAAAAGGATGGCTGGAGAGACATTACAATTAGCTGTGTAATTGT
TTCTGTGAAATTATTTCACTTATGTTTACTTTAGACTAACAGGAAATTAAGAGTCCTAAATCTACCCCTATGCCA
AATCATTCCAAGTAGATAATTTTACGTGCATCTCAAGGGTTAGCACCCTAAAGCATGCTTGTGGGGCATTAGAAA
ATGAGATTTTTTTTTTTTTAAAGCAGAGCCTCCTAAGAACATCAAAGTTGGTCCTAGCAAAATATATAAAGTCCC
TAAAGCAACTTATACTTGAAACTTTTTTTTTTTTTTTTAGAGGGGGGCCTCATTCTGTTGCTTGTGCTGGAATA
CATTGGTACAATCATAGCTCACTGTTACCTCTTGGGCTCAAGGGATCCTTCCACCTCAGCCTCCCTAGTAGCTAG
AACTACAGGTGTGCACAACCACGCCCGGCTAATTCTTAAATTTTGTTTTTGTAGAGACAGGATCTCACTGTGTTG
CCCAAGATGGTCTCAAACTCCTGGCCCCAAGCAATCCTCCTGCCTTGGCCTCCTCAAATGCTGAGATTACAGGCC
TGAGCTACTGTGCCCAGCCTAAACTTTCCCACTTCTCTCTGTGGCTTCTTTCCAACCTCTCTCCTTCCTCTCCCC
AAGTCCTGTTTCTTTGAAGCTGGTAACTGAATTTAAGATGATATCTGGTTGGTGTTTAAGGTTTGAGCCTCCCAA
GGGTCTGTGCATTTTGAAAGGAGATTTCTAAAAATAATTAAGGTGCCCTAACTCCTTTCCTCATGATTCCTACTC
CGAAACCTGGATGGTTAGGAGCCCAGGGCTCCCTGATTTCCAGAGCTATATCCTGTTGGACCTTTGCCAACAGAC
CTGACACTTAGGGGTTATTGTTATAAATCTAATTCTCTAATATTTTTTACATGTTGTTTCACTTTGAATAAGCAA
ATGAAGAATCAGTTTTCTAATATGACTTTATCCTCAAGCTAGAGACACTAGCCTATTTGGTAAATCACACATTAC
TTAGGTATATTTATTACTATAACCAGGTTGGAGCTTCCATGTTTAAGCTGGGTATATGATGGGTTTTTGTTAAAA
TGTGCCTTAAAAAGCCTATTACTTCAAGAGCAAATGATTCTTTGGGGGAAAGGCAAAAATAATTCTATGACATAG
GGCCCAAGTTCATGGTAGTAAGTGCACTCTTTGATTAATCACACGCTAATATAGATTACTGCCTCTAACTTTGTA
AGTGTGGCAATGACTTCTTAATTAAAGAAAGATGCAGGAGTTATGTCTAAGCGTTCAGTTTTTCAAATCTGTGTT
ATTGGAAATGTCTTCAAGTCATTTTGCATTGTATTTTTGATATGAGAGGCAGCTTATTGCGATGTGTATGGCCAT

FIGURE 2422B

GTTTCATTCTCAAATTTAATTCTATAAATACAAATCCTAAATACATGGCTACAGCAACTGCACTGGAACATTTTT
GCTTGGTTTTAGGGATTGAGAACTTGCCTTGCAGGTTTCCTTCCTCAAAAGGAGCAGGGCAGTCCTTTCCCTGTT
GAGTCAATTAGAATTTTTACATAGAGGTGAGACTGTGAATTATTTTGGTTATTTTCAGTGATGTAGATTAGTGTG
AATGACCAGGGTGGAATGTTTTTGAAGGAATATAAAGCAAAAACTGGTTGACATTCACAAACTGTTCTTTTGTGA
ACATATTTTGGACCCTTAAATATGACTAAAATCACAGCAATATTGTTACATACGGGTTATATGCCAACTCTGTTT
GAAATATACTCTGGAAAAACAGCTGAATTGTCTTGGTTATTAAAGTATGGTATGTATTCAACTTGTAAAAAAAAA
AAAAAAAAAA

FIGURE 2423

MEALARLHLTVTRAYKVNTDINFEVFIHKVDGLSDDHKIETQRDIHQRANDDLADAGLEKIHLSFYLTSIYDHSI
FEAFSKVVQKLIPQLPTLENLLNIFISNSGIEKAFLFDVVSKIYIATDSTPVDMQTYELCCDMIDVVIDISCIYG
LKEDGAGTPYDKESTAIIKLNNTTVLYLKEVTKFLALVCFVREESFERKGLIDYNFHCFRKAIHEVFEVRMKVVK
SRKVQNRLQKKKRATPNGTPRVLL

FIGURE 2424

GGCCACGAAGGCCGGCCCCCACCCCGGGACCCCCGCCGTCCCCGGGCCGGCCGGCCGGTGGGCACG**ATG**AGCCAG
GTGCTGGGGAAGCCGCAGCCGCAGGACGAGGACGACGCGGAGGAGGAGGAGGAGGAGGATGAGCTGGTGGGGCTA
GCGGACTACGGAGACGGGCCCGACTCCTCCGACGCCGATCCGGACAGCGGCACAGAGGAGGGAGTTCTGGACTTC
AGTGACCCCTTCAGCACTGAAGTGAAGCCGAGAATCCTGCTCATGGGCCTGAGGAGAAGCGGCAAGTCGTCTATT
CAGAAAGTTGTCTTTCACAAAATGTCTCCCAACGAAACTCTGTTCTTGGAGAGCACTAATAAGATATGCCGGGAA
GATGTTTCCAACAGCTCCTTTGTCAATTTTCAGATTTGGGACTTCCCAGGACAGATTGACTTTTTTGACCCTACA
TTTGACTATGAGATGATCTTCCGGGGAACAGGAGCACTGATATTTGTCATTGACTCACAGGATGATTACATGGAA
GCCCTGGCCAGGCTCCACCTCACGGTGACCAGGGCCTACAAAGTGAATACTGACATCAACTTCGAGGTGTTTATT
CATAAAGTGGATGGTCTGTCAGATGACCACAAAATTGAAACCCAAAGAGATATTCACCAGAGGGCAAACGATGAC
CTTGCAGATGCTGGATTAGAAAAAATTCACCTCAGCTTTTATCTGACAAGCATATATGATCATTCAATATTTGAA
GCTTTTAGCAAAGTTGTTCAGAAACTGATTCCACAACTCCCAACTCTGGAGAATTTGCTGAACATCTTTATCTCA
AATTCTGGAATTGAAAAGGCATTTCTATTTGATGTGGTCAGTAAAATTTATATTGCAACTGATAGTACTCCGGTG
GATATGCAAACCTATGAGCTCTGCTGTGATATGATAGATGTGGTTATTGACATCTCTTGTATTTATGGTCTCAAA
GAAGATGGAGCAGGAACCCCCTATGACAAGGAATCCACAGCCATCATAAAGCTTAATAATACAACCGTGCTTTAT
TTAAAAGAGGTGACAAAGTTCCTGGCTCTCGTTTGCTTTGTCAGAGAGGAAAGCTTTGAAAGAAAAGGGCTAATT
GACTATAATTTTCATTGCTTCCGGAAGGCCATTCATGAAGTTTTTGAGGTGAGAATGAAAGTAGTAAAATCTCGA
AAGGTTCAGAATCGGCTGCAGAAGAAAAAGAGAGCCACCCCTAATGGGACCCCTAGAGTGCTGCTG**TAG**GTGAGG
TTTCAGGAATGTCTTTTGAAATCAGACCTTATCCATGAGGCTGCTGCGCCATGTTGCACTAAAGGAAGAGGAAGA
AGGAGATTGGGACACATACCATTGATTTGTTGTTAAAAAAAAAAAAAATTCCTGCAACCCTCTTGATCTTCTCTTT
TATAATTAAAGTCAGCACTTGAAGCGGG

FIGURE 2425

MSQVLGKPQPQDEDDAEEEEEEDELVGLADYGDGPDSSDADPDSGTEEGVLDFSDPFSTEVKPRILLMGLRRSGK
SSIQKVVFHKMSPNETLFLESTNKICREDVSNSSFVNFQIWDFPGQIDFFDPTFDYEMIFRGTGALIFVIDSQDD
YMEALARLHLTVTRAYKVNTDINFEVFIHKVDGLSDDHKIETQRDIHQRANDDLADAGLEKIHLSFYLTSIYDHS
IFEAFSKVVQKLIPQLPTLENLLNIFISNSGIEKAFLFDVVSKIYIATDSTPVDMQTYELCCDMIDVVIDISCIY
GLKEDGAGTPYDKESTAIIKLNNTTVLYLKEVTKFLALVCFVREESFERKGLIDYNFHCFRKAIHEVFEVRMKVV
KSRKVQNRLQKKKRATPNGTPRVLL

FIGURE 2426A

CTGCACTGAAGAGGGAGAGCGAGAGAGAGACTGGAGACGCACAGATCCCCCCAAGGTCTCCCAAGCCTACCGTCC
CACAGATTATTGTACAGAGCCCCAAAAATCGAAACAGAGGAAACGAACAGCAGTTGAAC**ATG**GACGAAGGAATTC
CTCATTTGCAAGAGAGACAGTTACTGGAACATAGAGATTTTATAGGACTGGACTATTCCTCTTTGTATATGTGTA
AACCCAAAAGGAGCATGAAACGAGACGACACCAAGGATACCTACAAATTACCGCACAGATTAATAGAAAAGAAAA
GAAGAGACCGAATTAATGAATGCATTGCTCAGCTGAAAGATTTACTGCCTGAACATCTGAAATTGACAACTCTGG
GACATCTGGAGAAAGCTGTAGTCTTGGAATTAACTTTGAAACACTTAAAAGCTTTAACCGCCTTAACCGAGCAAC
AGCATCAGAAGATAATTGCTTTACAGAATGGGGAGCGATCTCTGAAATCGCCCATTCAGTCCGACTTGGATGCGT
TCCACTCGGGATTTCAAACATGCGCCAAAGAAGTCTTGCAATACCTCTCCCGGTTTGAGAGCTGGACACCCAGGG
AGCCGCGGTGTGTCCAGCTGATCAACCACTTGCACGCCGTGGCCACCCAGTTCTTGCCCACCCCGCAGCTGTTGA
CTCAACAGGTCCCTCTGAGCAAAGGCACCGGCGCTCCCTCGGCCGCCGGGTCCGCGGCCGCCCCCTGCCTGGAGC
GCGCGGGGCAGAAGCTGGAGCCCCTCGCCTACTGCGTGCCCGTCATCCAGCGGACTCAGCCCAGCGCCGAGCTCG
CCGCCGAGAACGACACGGACACCGACAGCGGCTACGGCGGCGAAGCCGAGGCCCGGCCGGACCGCGAGAAAGGCA
AAGGCGCGGGGGCGAGCCGCGTCACCATCAAGCAGGAGCCTCCCGGGGAGGACTCGCCGGCGCCCAAGAGGATGA
AGCTGGATTCCCGCGGCGGCGGCAGCGGCGGCGGCCCGGGGGGCGGCGCGGCGGCGGCGGCAGCCGCGCTTCTGG
GGCCCGACCCTGCCGCCGCGGCCGCGCTGCTGAGACCCGACGCCGCCCTGCTCAGCTCGCTGGTGGCGTTCGGCG
GAGGCGGAGGCGCGCCCTTCCCGCAGCCCGCGGCCGCCGCGGCCCCCTTCTGCCTGCCCTTCTGCTTCCTCTCGC
CTTCTGCAGCTGCCGCCTACGTGCAGCCCTTCCTGGACAAGAGCGGCCTGGAGAAGTATCTGTACCCGGCGGCGG
CTGCCGCCCCGTTCCCGCTGCTATACCCCGGCATCCCCGCCCCGGCGGCAGCCGCGGCAGCCGCCGCCGCCGCTG
CCGCCGCCGCCGCCGCGTTCCCCTGCCTGTCCTCGGTGTTGTCGCCCCCTCCCGAGAAGGCGGGCGCCGCCGCCG
CGACCCTCCTGCCGCACGAGGTGGCGCCCCTTGGGGCGCCGCACCCCCAGCACCCGCACGGCCGCACCCACCTGC
CCTTCGCCGGGCCCCGCGAGCCGGGGAACCCGGAGAGCTCTGCTCAGGAAGATCCCTCGCAGCCAGGAAAGGAAG
CTCCC**TGA**ATCCTTGCGTCCCGAAGGACGGAGGTTCAAGCAGAGTGAGAAGTTAAAATACCCTTAAGGAGGTTCA
AGCAGAGTGAGAAGTTAAAATACCCTTAAGGTCTTTAAGGGAGGAAGTGTAATAGATGCACGACAGGCATAAACA
AGAACAACAAAACAGGTGTTATGTGTACATTCGGAGTTCCTGTTTTGCTCATCCCGCACCACCCCACCCTCCACA
CACTAACATCCCTTTCTTCCCCCCACCAGCTGTAAAAGATCCTATGCGAAAGACACTGGCTCTTTTTTTTAATCC
CCCAAATAAATTTTGCCCCCTTTTAGGCCATGTTCCATTATCTCTTAAAATTGGAACCTAATTCGAGAGGAAGTA
AGAAGGGTCTGTTCTGTGGCTGAGCTAGGTGAACCCCGGGGTAGGGGAAAGATGTTAACACCTTTGACGTCTTTG
GAGTTGACATGGAACAGCAGGTAGTTGTTATGTAGAGCTAGTTCTCAAAGCTGCCCTGCCTGTTTTAGGAGGCGT
TCCACAAACAGATTGAGGCTCTTTTTAGAATTGAATTTACTCTTCAGTATTTTCTAATGTTCAGCTTTCTAAAAG
GCATATATTTTTCAAAGAAGTGAGGATGCAGTTTCTCACGTTGCAACCTATTCTGAAGTGGTTTAAATGGTATCT
CTTAGTAACTTGCACTCGTTAAAGAAACACGGAGCTGGGCCATCGTCAGAACTAAGTCAGGGAAGGAGATGGATG
AGAAGGCCAGAATCATTCCTAGTACATTTGCTAACACTTTATTGAGAAATTGACCATGAATTAATGGACTCATCT
TAATTTCTTCTAAGTCCATATATAGATAGATATCTATCTGTACAGATTTCTATTTATCCATAGATAGGTATCTAT
ACATACACATCTCAAGTGCATCTATTCCCACTCTCATTAATCCATCATGTTCCTAAATTTTTGTAATCTTACTGT
AAAAAAAAGTGCACTGAACTTCAAAACAAAACAAAAAACAACAACAACAAAAAACAAGTCCAAACTGATATATCC
TATATTCTGTTAAAATTCAAAAGTGAACGAAAGCATTTAACTGGCCAGTTTTGATTGCAAATGCTGTAAAGATAT
AGAATGAAGTCCTGTGAGGCCTTCCTATCTCCAAGTCTATGTATTTTCTGGAGACCAAACCAGATACCAGATAAT
CACAAAGAAAGCTTTTTTAATAAGGCTTAAACCAAGACCTTGTCTAGATATTTTTAGTTTGTTGCCAAGGTAGCA
CTGTGAGAAATCTCACTTGGATGTTATGTAAGGGGTGAGACACAACAGTCTGACTATGAGTGAGGAAAATATCTG
GGTCTTTTCGTCAGTTTGGTGCATTTGCTGCTGCTGTTGCTACTGTTTGCCTCAAACGCTGTGTTTAAACAACGT
TAAACTCTTAGCCTACAAGGTGGCTCTTATGTACATAGTTGTTAATACATCCAATTAATGATGTCTGACATGCTA
TTTTTGTAGGGAGAAAATATGTGCTAATGATATTTTGAGTTAAAATATCTTTTGGGGAGGATTTGCTGAAAAGTT
GCACTTTTGTTACAATGCTTATGCTTGGTACAAGCTTATGCTGTCTTAAATTATTTTAAAAAAATTAAATACTGT
CTGTGAGAAACCAGCTGGTTTAGAAAAGTTTAGTATGTGACGATAAACTAGAAATTACCTTTATATTCTAGTATT
TTCAGCACTCCATAAATTCTATTACCTAAATATTGCCACACTATTTTGTGATTTAAAAATTCTTACTAAGGAATA
AAAACTTTAATATACGATATGATATTGTCTAATAATTAAAAAAGACATAATGGATGCTCAATTAGTTTTAAGATA
TCTATAACTATAGGGATACAAATCACTACAGTTCTCAGATTTACACCTTTTTTTTGTCATTGGCTTGATGTCACA
CATTTCCAATCTCTTGCAAGCCTCCAGGCTCTGGCTTTGTCTACCTGCTCGTTCCCAATGTATCTTAATGAAAAG

FIGURE 2426B

TGCAAAAGAAAAACCTACCAATTAAAAAAAAAAAAAAAAAA

FIGURE 2427

MDEGIPHLQERQLLEHRDFIGLDYSSLYMCKPKRSMKRDDTKDTYKLPHRLIEKKRRDRINECIAQLKDLLPEHL
KLTTLGHLEKAVVLELTLKHLKALTALTEQQHQKIIALQNGERSLKSPIQSDLDAFHSGFQTCAKEVLQYLSRFE
SWTPREPRCVQLINHLHAVATQFLPTPQLLTQQVPLSKGTGAPSAAGSAAAPCLERAGQKLEPLAYCVPVIQRTQ
PSAELAAENDTDTDSGYGGEAEARPDREKGKGAGASRVTIKQEPPGEDSPAPKRMKLDSRGGGSGGGPGGGAAAA
AAALLGPDPAAAAALLRPDAALLSSLVAFGGGGGAPFPQPAAAAAPFCLPFCFLSPSAAAAYVQPFLDKSGLEKY
LYPAAAAAPFPLLYPGIPAPAAAAAAAAAAAAAAAAFPCLSSVLSPPPEKAGAAAATLLPHEVAPLGAPHPQHPH
GRTHLPFAGPREPGNPESSAQEDPSQPGKEAP

FIGURE 2428

GGGACTGAGGGGGTGGGCTTACTCCCTGGGCAGTCTTGGGGGCCAGAGCTGAGGCCAGTCCATATTACAGTGGCT
GGGCTGTTTTTTTCAGTAGCCCCTAGCATTGGCTGGGATTCCTGTTCCTGGGTGCGCCTCCACCTCCCTTCTGAT
GCTTCCTGGCTATGGTGGGGTGGGAACCTCAGTTTCCCCCAAAGTCTTCCCTGGATGCTGGCTTCAGGTTGAAGA
CCCTGGTTCTTCCAGTTCCTCACGGGTTAGGTAGGGGCTCCTGCATCACCTTCAGAATCAGTTCCAACCCCCACT
CTCCTTAGGCTTTGTGCTCTGCTCTGCCCTGCCAGGCTGCCCTTGTCCATGTGAGTAGCATGGGCGGGTGGTGGG
GACGGCAGTGGTGATGAAGGGGGTGCACCACAGGCCTCATGAAGCAGTTCCCACATGGGCGTGTGGCTGGGGCGT
GGCCACCACAGAGCACATGGCTGTGTCTAGGCGCAAGCACTTTAGCAGTATCTGTTTACATGCGCAAGGATCAAG
CCGACTACCTGTGCTGTCTACTGGGACAGCAGTCTCCGAGCTACTCCGTACCTCCCTCTGCCAGGTCGTGGAGTT
AGGCCCCAGTCCCTACTTGTCACTGGTTCCCACTGTGCTCCTAACTGTGCAGCACCTGGGAGCTCTGGCCTGGGG
CTGGAGGCCCTGGTAGGAGCTGCAGTTGGAGGCCGTTCTGTGCCCAGCAGCGGTGAGCGGCTCCCATGGGCCCTG
TGTCTGCAGGGAGCCAGGGCTGCGGCACATGTGCTGTGAAACTGGCACCCACCTGGCGTGCTGCTGCCGCCACTT
GCTTCCTGCAGCACCTCCTACCCTGCTCCGTGTCCTCCCTCTCCCCGCGCCTGGCTCAGGAGTGCTGGAAAAGCT
CACGCCTCGGCCTGGGAGCCTGGCCTCTTGATATACCTCGAGCTTCCCCTGTGCTCCCCAGCCCCAGGACCACTG
GCCCCTTGGCCTGAGGGGCTGGGGGCCCCACGACCTGCAGCGTCGAGTCCGGGAGAGAGCCCGGAGCGGCGTGCC
ATCTCGGCTCGGCCTTGCTGAGAGCCTCCGCCCTGGCTTTCTCCCTGTCTGGTTTCAGTGGCTCACGTTGGTGCT
ACACAGCTAGAATAGATATATTTAGAGAGAGAGATATTTTTAAGACAAAGCCCACAATTAGCTGTCCTTTAACAC
CGCAGAACCCCCTCCCAGAAGAAGAGCGATCCCTCGGACGGTCCGGGCGGGCACCCTCAGCCGGGCTCTTTGCAG
AAGCAGCACCGCTGACTGTGGGCCCGGCCCTCAGATGTGTACATATACGGCTATTTCCTATTTTACTGTTCTTCA
GATTTAGTACTTGTAAATAAACACACACATTAAGGAGAGATTAAACATTTTTGCCAAAAAAAAAAAAAAAAAAA

FIGURE 2429

GCGGAGCGAGGCTGGAGGCGCGGGAGGGCAGCGAGAGGTTCGCGGGTGCAGCGCACAGGAGACC**ATG**TCCGGGGG
CAGCAGCTGCAGCCAGACCCCAAGCCGGGCCATCCCCGCCACTCGCCGGGTGGTGCTCGGCGACGGCGTGCAGCT
CCCGCCCGGGGACTACAGCACGACCCCCGGCGGCACGCTCTTCAGCACCACCCCGGGAGGTACCAGGATCATCTA
TGACCGGAAATTCCTGATGGAGTGTCGGAACTCACCTGTGACCAAAACACCCCCAAGGGATCTGCCCACCATTCC
GGGGGTCACCAGCCCTTCCAGTGATGAGCCCCCCATGGAAGCCAGCCAGAGCCACCTGCGCAATAGCCCAGAAGA
TAAGCGGGCGGGCGGTGAAGAGTCACAGTTTGAGATGGACATT**TAA**AGCACCAGCCATCGTGTGGAGCACTACCA
AGGGGCCCCTCAGGGCCTTCCTGGGAGGAGTCCCACCAGCCAGGCCTTATGAAAGTGATCATACTGGGCAGGCGT
TGGCGTGGGGTCGGACACCCCAGCCCTTTCTCCCTCACTCAGGGCACCTGCCCCCTCCTCTTCGTGAACACCAGC
AGATACCTCCTTGTGCCTCCACTGATGCAGGAGCTGCCACCCCAAGGGGAGTGACCCCTGCCAGCACACCCTGCA
GCCAAGGGCCAGGAAGTGGACAAGAACGAACCCTTCCTTCCGAATGATCAGCAGTTCCAGCCCCTCGCTGCTGGG
GGCGCAACCACCCCTTCCTTAGGTTGATGTGCTTGGGAAAGCTCCCTCCCCCTCCTTCCCCAAGAGAGGAAATAA
AAGCCACCTTCGCCCTAGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2430

MSGGSSCSQTPSRAIPATRRVVLGDGVQLPPGDYSTTPGGTLFSTTPGGTRIIYDRKFLMECRNSPVTKTPPRDL
PTIPGVTSPSSDEPPMEASQSHLRNSPEDKRAGGEESQFEMDI

FIGURE 2431A

GGCGGCTGCTCCCATTGAGCTGTCTGCTCGCTGTGCCCGCTGTGCCTGCTGTGCCCGCGCTGTCGCCGCTGCTAC
CGCGTCTGCTGGACGCGGGAGACGCCAGCGAGCTGGTGATTGGAGCCCTGCGGAGAGCTCAAGCGCCCAGCTCTG
CCCGAGGAGCCCAGGCTGCCCCGTGAGTCCCATAGTTGCTGCAGGAGTGGAGCC**ATG**AGCTGCGTCCTGGGTGGT
GTCATCCCCTTGGGGCTGCTGTTCCTGGTCTGCGGATCCCAAGGCTACCTCCTGCCCAACGTCACTCTCTTAGAG
GAGCTGCTCAGCAAATACCAGCACAACGAGTCTCACTCCCGGGTCCGCAGAGCCATCCCCAGGGAGGACAAGGAG
GAGATCCTCATGCTGCACAACAAGCTTCGGGGCCAGGTGCAGCCTCAGGCCTCCAACATGGAGTACATGACCTGG
GATGACGAACTGGAGAAGTCTGCTGCAGCGTGGGCCAGTCAGTGCATCTGGGAGCACGGGCCCACCAGTCTGCTG
GTGTCCATCGGGCAGAACCTGGGCGCTCACTGGGGCAGGTATCGCTCTCCGGGGTTCCATGTGCAGTCCTGGTAT
GACGAGGTGAAGGACTACACCTACCCCTACCCGAGCGAGTGCAACCCCTGGTGTCCAGAGAGGTGCTCGGGGCCT
ATGTGCACGCACTACACACAGATAGTTTGGGCCACCACCAACAAGATCGGTTGTGCTGTGAACACCTGCCGGAAG
ATGACTGTCTGGGGAGAAGTTTGGGAGAACGCGGTCTACTTTGTCTGCAATTATTCTCCAAAGGGGAACTGGATT
GGAGAAGCCCCCTACAAGAATGGCCGGCCCTGCTCTGAGTGCCCACCCAGCTATGGAGGCAGCTGCAGGAACAAC
TTGTGTTACCGAGAAGAAACCTACACTCCAAAACCTGAAACGGACGAGATGAATGAGGTGGAAACGGCTCCCATT
CCTGAAGAAAACCATGTTTGGCTCCAACCGAGGGTGATGAGACCCACCAAGCCCAAGAAAACCTCTGCGGTCAAC
TACATGACCCAAGTCGTCAGATGTGACACCAAGATGAAGGACAGGTGCAAAGGGTCCACGTGTAACAGGTACCAG
TGCCCAGCAGGCTGCCTGAACCACAAGGCGAAGATCTTTGGAACTCTGTTCTATGAAAGCTCGTCTAGCATATGC
CGCGCCGCCATCCACTACGGGATCCTGGATGACAAGGGAGGCCTGGTGGATATCACCAGGAACGGGAAGGTCCCC
TTCTTCGTGAAGTCTGAGAGACACGGCGTGCAGTCCCTCAGCAAATACAAACCTTCCAGCTCATTCATGGTGTCA
AAAGTGAAAGTGCAGGATTTGGACTGCTACACGACCGTTGCTCAGCTGTGCCCGTTTGAAAAGCCAGCAACTCAC
TGCCCAAGAATCCATTGTCCGGCACACTGCAAAGACGAACCTTCCTACTGGGCTCCGGTGTTTGGAACCAACATC
TATGCAGATACCTCAAGCATCTGCAAGACAGCCGTGCACGCGGGAGTCATCAGCAACGAGAGTGGGGGTGACGTG
GACGTGATGCCCGTGGATAAAAAGAAGACCTACGTGGGCTCGCTCAGGAATGGAGTTCAGTCTGAAAGCCTGGGG
ACTCCTCGGGATGGAAAGGCCTTCCGGATCTTTGCTGTCAGGCAG**TGA**ATTTCCAGCACCAGGGGAGAAGGGGCG
TCTTCAGGAGGGCTTCGGGGTTTTGCTTTTATTTTTATTTTGTCATTGCGGGGTATATGGAGAGTCAGGAAACTT
CCTTTGACTGATGTTCAGTGTCCATCACTTTGTGGCCTGTGGGTGAGGTGACATCTCATCCCCTCACTGAAGCAA
CAGCATCCCAAGGTGCTCAGCCGGACTCCCTGGTGCCTGATCCTGCTGGGGCCCGGGGGTCTCCATCTGGACGTC
CTCTCTCCTTTAGAGATCTGAGCTGTCTCTTAAAGGGGACAGTTGCCCAAAATGTTCCTTGCTATGTGTTCTTCT
GTTGGTGGAGGAAGTTGATTTCAACCTCCCTGCCAAAAGAACAAACCATTTGAAGCTCACAATTGTGAAGCATTC
ACGGCGTCGGAAGAGGCCTTTTGAGCAAGCGCCAATGAGTTTCAGGAATGAAGTAGAAGGTAGTTATTTAAAAAT
AAAAAACACAGTCCGTCCCTACCAATAGAGGAAAATGGTTTTAATGTTTGCTGGTCAGACAGACAAATGGGCTAG
AGTAAGAGGGCTGCGGGTATGAGAGACCCCGGCTCCGCCCTGGCACGTGTCCTTGCTGGCGGCCCGCCACAGGCC
CCCTTCAATGGCCGCATTCAGGATGGCTCTATACACAGCAGTGCTGGTTTATGTAGAGTTCAGCAGTCACTTCAG
AGATGTATCTTGTCTTTGTCAGGCCCTTCATCTTCATGGCCCACCTGTTTTCTGCCGTGACCTTTGGTCCCATTG
AGGACTAAGGATCGGGACCCTTTCTTTACCCCCTACCCATTGTGGCTCCCACCCTGCCTCGGACTGGTTTACGTG
TCCTGGTTCACACCCAGGACTTTTCTTTGCAAGCGAACCTGTTTGAAGCCCAAGTCTTAACTCCTGGTCTCGTAA
GGTTCCACTGAGACGAGATGTCTGAGAACAACCAAAGAAGGCCTGCTCTTTGCTGCTTTTAAAAAATGACAATTA
AATGTGCAGATTCCCCACGCACCCGATGACCTATTTTTTCAGCCGTGGGAGGAATGGAGTCTTTGGTACATTCCT
CACCGAGGTTAGCAGCTCAGTTTGTGGTTATGAAACCGTCTGTGGCCTCATGACAGCGAGAGATGGGAATACACT
AGAAGGATCTCTTTTCCTGTTTTCGTGAAACGACTCTTGCCAAACGTTCCCGAGGCGCCAAGGAGTGTAGTACAC
CCTGGCTGCCATCACTCTATAAAAGTGCTTCATGAGCCCAGACCAAAAGCCCACAGTGAAATGAAGTACCCTTTT
GTAAATAGCATTTTTTTGCAGAAGGTGAAAATTCCACTCTCTACCACCGGGCCAGCCAATAGATCACTTTGGTGA
ATGCTAGTTTCAAATTTGATTCAAAATATTTCTTAGGTGAAAGAACTAGCAGAAAGTCAAAAACTAAGATACTGT
AGACTGGACAAGAAATTCTACCTGGGCACCTAGGTGATGCCTTCTTTCTTTGATTGCCTTTCTAATAAATGCAGA
ATCTGAAGGTAAATAGGTTTAAAACAAAACAAAAACCCACCCCTTTAAGGAGTTGGTAAAAAGCAGTTCAACTCT
TAGCTTGACTGAGCTAAAATTCACAGGACTACGTGCTTTGTGCATTGTAGTCTAGTCGTAATTCATAGGTACTGA
CTCCTCAGCCCCAAATGTCGGAGAGGAAGAATTCGGTCAGCCTGTCAGGTCGTGAGTCCAGTTACCACCAAACAT
CTGGGAAACTTCTGGGTGCTGGGTGCTCTGCTGCTGGACTTTTGTGGCTGTGTCTGTGTCTGCAAGATAAATTAG
ATCGCCCTGTGGGGTTTGCAGAATTAGTGAAGGGTCCAGGACGATCCCAGTGGGCTCGCTTCCAAAGCATCCCAC

FIGURE 2431B

TCAAGGGAGACTTGAAACTTCCAGTGTGAGTTGACCCCATCATTTAAAAATAAAGTCCCCGGGTTCCTTAATGCC
TCCTTCACTGGGCCTTCCTAGCAGGATAGAAAGTCCTTGCCCAGAGCAGGACCTGGCTGTCTTTTTTTTTTTTT
TTTCCCGAGACCAAGTTTCACTCTGTTGCCCAAGGTAGAGTGCAGTGGCGTGATCTCTGCTCATTGCAACTGCCG
CCTCCCGGGTTCAAGCAATTCTCATGCATCAGCCTCCCAAGTACCTGGGACTACAGGCGTGAGCTACCATGCCCG
GCTAATTTTTGTATTTTTAGTAGAGATGGGGTTTCATTATGTTGGCCAGGCTGGTCTCGAACTCCTTACCTCAGG
TGATCCACCCACCTTGGCCTCCCGAAGTGCTGGGATTACAGGCATGAGCCACTGCGCCCGGCCATGGACCTGGCT
GTCTTTATCATCCCCACAAACATTTTGAAACTGGAATATTTGTCTTCAGAAAATGGAAACAAGACTATAAATGAT
AAGCCCTGTCCCTAGCACCACCTCTCCTGTGTGTGGAATAGAGGCCCCTCGTGCTACCAACACTTACCCTGTGTT
TAAAAAGATCTTGTACCAAGCCAACGGCGTTCCTGGCTCTCCTGCCCACAGGATGAACATTTTCGGCTTCCTTAG
GAGTTTTGCCCTACCGTATTCCAAAGCGTGTGCTGGTTTCTCATATTGTCTGTAGGCTCACTCAGCCCGCAGTTT
ATGTGTGTGCTTTTTTCTATGAAAAATGATGTATTTTGCTACTTCCTGTGTACAAAGTTTTATTGTAAATGTTTT
TTGTGCTTTGCATGAACAGGGGCCACGTTGTTGCAATTGTTTCAGTAGAACTGGTTTGATTTCTAAAATGTTCCT
GTAACATATCTTTTATGAACAAATCTGAACAATTTGTGAAATAAAACATTGAAAACCAAAAAAAAAAAAAAAAA

FIGURE 2432

MSCVLGGVIPLGLLFLVCGSQGYLLPNVTLLEELLSKYQHNESHSRVRRAIPREDKEEILMLHNKLRGQVQPQAS
NMEYMTWDDELEKSAAAWASQCIWEHGPTSLLVSIGQNLGAHWGRYRSPGFHVQSWYDEVKDYTYPYPSECNPWC
PERCSGPMCTHYTQIVWATTNKIGCAVNTCRKMTVWGEVWENAVYFVCNYSPKGNWIGEAPYKNGRPCSECPPSY
GGSCRNNLCYREETYTPKPETDEMNEVETAPIPEENHVWLQPRVMRPTKPKKTSAVNYMTQVVRCDTKMKDRCKG
STCNRYQCPAGCLNHKAKIFGTLFYESSSSICRAAIHYGILDDKGGLVDITRNGKVPFFVKSERHGVQSLSKYKP
SSSFMVSKVKVQDLDCYTTVAQLCPFEKPATHCPRIHCPAHCKDEPSYWAPVFGTNIYADTSSICKTAVHAGVIS
NESGGDVDVMPVDKKKTYVGSLRNGVQSESLGTPRDGKAFRIFAVRQ

FIGURE 2433A

GGGTAGAGACGGGGTTTCACCGTGTTAGCCAGGATGGTCTGGATCTCCTGACCTCGTGATCCACCCACCTCGGCC
TCCTAAAGTGCTGGGATTACAGACATGAGCCACCGCGCCCAGCCCTATTCATCCCTTTTCAAAAGTCAGACCCTA
GGAAGCTGGAGGGAGGTGGGGCATGGTTTTACAGTGAATTTCTGATTTCACTCAGGGTGATAAATCAGACTCTTG
GGGAAGCGGGTGGTGGCTCTGGACAGCAGCAGGAATGGGGATCCAGTTAGCAACAAATCCATGGACCTATGACAG
GCTGAAAGCCACCCCTTCTCCATCTTTGGGAGGTTGCCAATGTCTGATTTAACACTATCCAATGAATGATCATTG
AAAGTAAAAAATAACTATCAACTAGCAGAAAATATAAATGGTAAGCATTAGCACATATTTCACATGTTTATATTT
GGCTCTCAGATTGACCTATAAAACAAAGTCTGGGAAATTCTATATGATCCTGAAAAAATGATACGCTGGTCTGGA
TGGTAGAATAAGTTGGAGAAATGTTTAAGCCAAAATGCAGTCTTACCAATGACTTTTTATTTTATTTTATTAATT
TTCAGGATTTTTGGTATACAGGTGGTTTTTGGTTACATGGAAAAGTTCTTTACTGGTGATTTCTGAGATTTTAGT
TCACCCCTTATCCTGAGCAGTGTACACTGTTCCCAATATGTAGCCTTTTATCCCTCACCCCCTCTAAGTTCAAGA
AGACTATGGTCCTGCAGAAAGCTTTATATGTAATTAACATATCTTTATCTTTATCTTTATAGGCAGTAGACTCAT
CTTTTGAAACAGATTCCATTAAGAGTGAATGTGTACCCTCCCTCTAGCCTTTATTATTACTGTTTTTGCTATTAC
ATGTGTTAGTGTATGTGAATTTAATGCTTAAAAATGTATCCCATTGGCTACTATGGCAAAAGGTTGACTCATAAG
AGTTTAGCACGGGTTAAGATCTGAAAGTTTTCTCCCAGCCTCTTATCACTGGCGCAGACTTCACAATTCATGGAA
GCCACCAGTGAGATGACATTGCCTCAGGCAGTTACTATTTTTATATTCTATAACTCGAGGAGCTCAGGGTTTCGG
AAATCATTAAACTTTTTTTGTCCTTTTAAAGTTGGAGACAGCAATTGTAGACAGCCTTCCAGTGGGTTATCTTTT
TGTGTCTCCTTACCTGTGGAGAAGCCTATTAGCTGGGATATGTAGTTAAATAGCTATATTTATATATATCCAGGG
CACCCCGAATTCGGGAGAGCTTCCCGGAGTCGACCTTCCTGCTGGCTGCTCTGTGACCGCTTCCCGGCTCTGCCC
TCTTGGCCGAAGTGCCCGCTGCCGGGCGCGGGCCTCAGACAATACA**ATG**GTGGGTGAAGAGAAGATGTCTCTAAG
AAACCGGCTGTCAAAGTCCAGGGAAAATCCTGAGGAAGATGAAGACCAGAGAAACCCTGCAAAGGAGTCCCTAGA
GACACCTAGTAATGGTCGAATTGACATAAAACAGTTGATAGCAAAGAAGATAAAGTTGACAGCAGAGGCAGAGGA
ATTGAAGCCATTTTTTATGAAGGAAGTTGGCAGTCACTTTGATGATTTTGTGACCAATCTCATTGAAAAGTCAGC
ATCATTAGATAATGGTGGGTGCGCTCTCACAACCTTTTCTGTTCTTGAAGGAGAGAAAAACAACCATAGAGCGAA
GGATTTGAGAGCACCTCCAGAACAAGGAAAGATTTTTATTGCAAGGCGCTCTCTCTTAGATGAACTGCTTGAAGT
GGACCACATCAGAACAATATATCACATGTTTATTGCCCTCCTCATTCTCTTTATCCTCAGCACACTTGTAGTAGA
TTACATTGATGAAGGAAGGCTGGTGCTTGAGTTCAGCCTCCTGTCTTATGCTTTTGGCAAATTTCCTACCGTTGT
TTGGACCTGGTGGATCATGTTCCTGTCTACATTTTCAGTTCCCTATTTTCTGTTTCAACATTGGGCCACTGGCTA
TAGCAAGAGTTCTCATCCGCTGATCCGTTCTCTCTTCCATGGCTTTCTTTTCATGATCTTCCAGATTGGAGTTCT
AGGTTTTGGACCAACATATGTTGTGTTAGCATATACACTGCCACCAGCTTCCCGGTTCATCATTATATTCGAGCA
GATTCGTTTTGTAATGAAGGCCCACTCATTTGTCAGAGAGAACGTGCCTCGGGTACTAAATTCAGCTAAGGAGAA
ATCAAGCACTGTTCCAATACCTACAGTCAACCAGTATTTGTACTTCTTATTTGCTCCTACCCTTATCTACCGTGA
CAGCTATCCCAGGAATCCCACTGTAAGATGGGGTTATGTCGCTATGAAGTTTGCACAGGTCTTTGGTTGCTTTTT
CTATGTGTACTACATCTTTGAAAGGCTTTGTGCCCCCTTGTTTCGGAATATCAAACAGGAGCCCTTCAGCGCTCG
TGTTCTGGTCCTATGTGTATTTAACTCCATCTTGCCAGGTGTGCTGATTCTCTTCCTTACTTTTTTTGCCTTTTT
GCACTGCTGGCTCAATGCCTTTGCTGAGATGTTACGCTTTGGTGACAGGATGTTCTATAAGGATTGGTGGAACTC
CACGTCATACTCCAACTATTATAGAACCTGGAATGTGGTGGTCCATGACTGGCTATATTACTATGCTTACAAGGA
CTTTCTCTGGTTTTTCTCCAAGAGATTCAAATCTGCTGCCATGTTAGCTGTCTTTGCTGTATCTGCTGTAGTACA
CGAATATGCCTTGGCTGTTTGCTTGAGCTTTTTCTATCCCGTGCTCTTCGTGCTCTTCATGTTCTTTGGAATGGC
TTTCAACTTCATTGTCAATGATAGTCGGAAAAAGCCGATTTGGAATGTTCTGATGTGGACTTCTCTTTTCTTGGG
CAATGGAGTCTTACTCTGCTTTTATTCTCAAGAATGGTATGCACGTCGGCACTGTCCTCTGAAAAATCCCACATT
TTTGGATTATGTCCGGCCACGTTCCTGGACTTGTCGTTACGTGTTT**TAG**AAGCTTGGACTTTGTTTCCTCCTTGT
CACTGAAGATTGGGTAGCTCCCTGATTTGGAGCCAGCTGTTTCCAGTTGTTACTGAAGTTATCTGTGTTATTTGG
ACCACTCCAGGCTTTACAGATGACTCACTCCATTCCTAGGTCACTTGAAGCCAAACTGTTGGAAGTTCACTGGAG
TCTTGTACACTTAAGCAGAGCAGAACTTTTTTTGTGGGGCTGGGTGGGGGGGAGAAGACCGACTAACAGCTGAAGT
AATGACAGATTGTTGCTGGGTCATATCAGCTTTATCCCTTGGTAATTATATCTGTTTTGTTTCTTGACTCTGTCC
AATCAGAGAATAAACATCATAGTTTCTTGGCCACTGAATTAGCCAAAACACTTAGGAAGAAATCACTTAAATACC
TCTGGCTTAGAAATTTTTTCATGCACACTGTTGGAATGTATGCTAATTGAACATGCAATTGGGGAAGAAAAAATG
TAGAATGATTTTTGCTATTTCTAGTAGAAAGAAAATGTCTGTTTTCCAAAGATAATGTTATACATCCTATTTTGT

FIGURE 2433B

AATTTTTTTGAAAAAAGTTCAATGTTCAGTTTTCCTTAGTTTTTACCTTGTTTTCTCTATAGGTCATGATTTCTG
TGAAGCAAAAAGATGCCTTTTACCATGAATTCTTGAGTTTACATCAATAATATTGTATATTAAGGGGATCAGAAG
TAGGAAGGAAAAAATAAGAGATAGCAGAGGAAAAAGAAAAACATTTCCTCTTATAACTTCTGAAGTAATTTGTAA
AAAAGATTTGTAGAGTCAATCATGTGTTTAAATTATTTTATCACAAACTTAACATGGAAGATATTCCTTTTTAAC
TTTGTGGTAACTTCTTTGAAGTTATTTAGAAATATCCTTTGGAACAATTATTTTATTGTCTAATAAATATTGACT
TCTCTTGAATTATTTTGCAGACTAGTGAGTCTGTAC

FIGURE 2434

MVGEEKMSLRNRLSKSRENPEEDEDQRNPAKESLETPSNGRIDIKQLIAKKIKLTAEAEELKPFFMKEVGSHFDD
FVTNLIEKSASLDNGGCALTTFSVLEGEKNNHRAKDLRAPPEQGKIFIARRSLLDELLEVDHIRTIYHMFIALLI
LFILSTLVVDYIDEGRLVLEFSLLSYAFGKFPTVVWTWWIMFLSTFSVPYFLFQHWATGYSKSSHPLIRSLFHGF
LFMIFQIGVLGFGPTYVVLAYTLPPASRFIIIFEQIRFVMKAHSFVRENVPRVLNSAKEKSSTVPIPTVNQYLYF
LFAPTLIYRDSYPRNPTVRWGYVAMKFAQVFGCFFYVYYIFERLCAPLFRNIKQEPFSARVLVLCVFNSILPGVL
ILFLTFFAFLHCWLNAFAEMLRFGDRMFYKDWWNSTSYSNYYRTWNVVVHDWLYYYAYKDFLWFFSKRFKSAAML
AVFAVSAVVHEYALAVCLSFFYPVLFVLFMFFGMAFNFIVNDSRKKPIWNVLMWTSLFLGNGVLLCFYSQEWYAR
RHCPLKNPTFLDYVRPRSWTCRYVF

FIGURE 2435

GGCTTCCGGCACCGGCCGAGGTGCGGGTCGCCTCCAGAGATCCTGTGCCTTCAAACCCTACGAGTCCATACTTTA
AAACAAA**ATG**AAGAAAGTAAGGCTTAAGGAACTAGAGAGTCGCCTGCAACAAGTGGATGGATTTGAAAAGCCCAA
GCTACTTCTGGAACAGTATCCTACCAGGCCGCACATTGCAGCATGTATGCTCTATACAATCCATAACACTTATGA
TGACATTGAAAATAAAGTCGTTGCAGATCTAGGATGTGGTTGTGGAGTACTTAGCATCGGAACTGCAATGTTAGG
AGCAGAGTTGTGTGTTGGATTTGACATAGATGAAGACGCATTGGAAATATTTAATAGGAATGCAGAAGAGTTTGA
GTTACAAATATTGACATGGTTCAATGTGCTGTGTGCTTATTATCTAACAGAATGTCCAAGTCATTCGATACAGTA
TTATGAATCCTCCCTTTGGGACCAAAAA**TAA**TAAAGGGACAGATATGGCTTTCTAAAGACTGCTTTGGAAATGGC
AAGAACAGCAGTATATTCCTTACACAAATCCTCAACTAGAGAACATGTTCAAAGAAAGCTGCAGAATGGAAAATC
AAGATAGATATTATAGCAGAACTTCGATATGACCTGCCAGCATCATACAAGTTTCACAAAAAGAAATCAGTCTGA
TCATCTAAATCACCCGAAAATTTCAGCAAGCATCCAATCTTTTCTTCTAGAGATTTCTATAAAAATATACAAAGT
GATCAAAAAGTTTCTTAAAAGCAACAACAGACCAGAAATGACTCACACCACCTTATAGCTATACAAGAAAAAGAC
TAGAAACCAAAATGCTATTTTAAAGTAGTTTCTTCCGCCGGGGCAGCAAGAGCGAAACTCCATCTCAAAAAATAA
TAATAATAATAAATAAATAAAGTAGTTTCATAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2436

MKKVRLKELESRLQQVDGFEKPKLLLEQYPTRPHIAACMLYTIHNTYDDIENKVVADLGCGCGVLSIGTAMLGAE
LCVGFDIDEDALEIFNRNAEEFELQILTWFNVLCAYYLTECPSHSIQYYESSLWDQK

FIGURE 2437A

GTCTTTGTGGCCCAAACTGTTCTAGAAAATGGGACATATATTAAAGATGATACAATTTTTATTAAAGTCATAGTG
GATACTTCGGATCTGCCCGATCCCTGATAAGTAGCTGGGGAGGTGGATTTAGCAGAAGGCAACTCCTCTGGGGGA
TTTGAACCGGTCTGTCTTCACTGAGGTCCTCGCGCTCAGAAAAGGACCTTGTGAGACGGAGGAAGCGGCAGAAGG
CGGACGCGTGCCGGCGGGAGGAGCCACGCGTGAGCACACCTGACACGTTTTATAATAGACTAGCCACACTTCACT
CTGAAGAATTATTTATCCTTCAACAAGATAAATATTGCTGTCAGAGAAGGTTTTCATTTTCATTTTTAAAGATCT
AGTTAATTAAGGTGGAAAACATATATGCTAAACAAAAGAAACATGATTTTTCTTCCTTAAACTTGAACACCAAAA
AAACACACACACACACACACGTGGGGATAGCTGGACATGTCAGCATGTTAAGTAAAAGGAGAATTTATGAAATAG
TAATGCAATTCTGATATCTTCTTTCTAAAATTCAAGAGTGCAATTTTGTTTCAAATACAGTATATTGTCTATTTT
TAAGGCCTCATCTGGTCTCTGTTTTAATAATTTGTTTGTCAGAAGACCCTGAAGTATATACCTAGGTCTTTTTTT
TGAAAGTCTCTAAATTCAGAATCATTTTTTAATTTAAAGTTCTACAAATAATTGTTACTGCAAACATTTTATTTT
AAAACGTTGATAGACTGATATTTCTTGGAAGAAAATATAAAATATCAAACACTGGTTATCACTTGTGATAGGAAA
GAGAATATTCAACCTGTTGTTATTTCTCGTTAGAAATGTAAACCTTCAAATATCTGTCGTAGTTAATGACACGAC
TTCACAATTCTGAACGGAGCCTCGCTCATGGATGCTGTGCATCATTTTCAGATTTATAATTGTTTTCACCCTAAA
ATAGGGCATCCGTTGAACTTTGGAGTTCTAAACAAAATCCTGTAGGTGTTTGGATTCTGCCCCATGTGTTCGGAC
GAGCTCTCTGTTGCTGACAGCACCGGCCTTCGGTCTCCATGTCAGGGGTGGGCGGGTGACTGCTGAGGGAGGCCC
GCAGGTGTGTTTCTCCATCCCGTCATCTTGCTGCATGCCGTCAACGGTCTCCGAAAGCAACGTTGTGCGTAGAGC
TGGTGGCATACGGCCCACGTGCCTTAGATGGGACATGCTGCTTCTCCACCCTGGGTTTGCATTGAGCATCATTCT
AGAAAGTGCTAGTTTAACCAGACTTTTCTCTCCACCACTAGATCTTTGTCTCTACAAGGGCCCTCAGACACCTCT
GCACCTGCTGAGGGGAAGCCAGGCTCCACCGTCGGCTTCTGGAGCCTCCGCTGCTTAATTACCACAGATTCCAAA
TCTCTAGGCCCCACGAGTGAGCCGCCTGGTCCAAGTACGGCCTGGTCCCACCCTGAGGGAGGCAGGTGTGGAACA
GAAGCCGAGCCTCTCCGTGTCCCCACCGGGGCCGTGGGCACCCCCACAGCCCGAAGCAGAACCCTCTGAGCATTC
CAGAGACCGCTGCTCGGGGGCCTGCCCAGGCTGACCAACGGGCGCTCCTGACCACCACCCTGGCGGGAAGGGTGG
CCACGGGGCCCGTCGTCCCAGCCTGTGCCTGCCCAGATGGCATTTTCTCAACTCACTGTTTACTGTCTCTCAGTG
TCCAACTGTGATTAGAAGCCTGGAGCCTGCCCCCTGCACCCCTTTTGCTATGCACCACGCTTCATGGTGCTCTTA
CCACTGATGGGTGCTACACGCGACGGGTGCTTCTTAGGCAAAACCAATGTATGCGAACTGTCACACCTGTGCCAC
TCGCCCACAAGCCGCGCCCACAATTGGCCAGCTGGGCCGTGCACGTCAGACTGCCTGCCTCGGCTCTCCCCGTGG
CCGCGCGGGGACAGCTTGGTGGGTGCCCGGTGGCCCACCTGTCTCTGGTGCTGCCATCTGTCCTGGGTGTGCCTT
CGCCCCAGTGCCTGCTGGAAGTGCCCTCCGTCGCACCCCTGTGCCCTGAGCTCCCGTGAGGGGCCCGCCGCGCCC
TTTCGCGGTCGAAGCGTTCCGTTGTTCTTATCTGCCTTTCCTTTCCCCGCTCTCCTGGGATTACTTTGGGGGAAT
GAGTATCCTTGGTTCTGCCCTGTGAGGGAGTCGTGTGTCCCTGCTCATAAAGGAAGGACTTCCTGCAGAAGCTGC
GGAAAACTACTGTTCCCTCGAAGGTGTCCCCCACCTGAGGCCTGTCCCCTACCTGCCCTCAGGTAGTTTTCCTGA
GGCCAGGGGTTAACAACAGGGACATCCCTGCAACTTCCCCTTCACAAAATGTATAATATTAGATGAAGGATATGC
AACATCTTGGTCTAGTAAGAACCGTTTCCTCCCCTCTGGGTTGAAGTCCTGGTGTGGCCCCCAGAAGCAGCAGTG
CGTGTCACTGGGACGTCTCCAGTAGCCCTTCCCAGGCAGACGCTCCTGGCGGGACGCCATGGGGCCCACCTGAGG
GTCCCACAGACGTAACCTGAGTGACAGGAGTCCTTGAGGATGGGATGGCCTATGTCACACACTTTGTCCTTGAAC
CTGAGTGATGGGGGTCATTGAGGATGGGATGGCCTGTGTCACGCGCTTTGTCTTTGTGTTTGGTTGTATCGGGGT
CTCTGTTCTGAGTGTGTCTTCCTCTCATGTACTCAACACAGTGGGCAGCAGCCTGGGACGGCGTCCCCTCTCCCG
GCGGCGGGCAAGCCTTGCGCTGCTCCACCCTCGGCCTGGGCACCCTCACTTGGCGCTGGCCACCTGGGCCAGCCT
GGGGCCATGGTCTCTCTGCAGCTGAGGCCCAGTGGCCCCTTGGGCAGTGATCGGCCCTCCCCGCATCACAGGGCC
CTGGCAGCAAGCGGGAAATGGGGGCGCACACTGTGTGCTTGGGGGTGCTGCTTGTTTACCACACATGACCAGACT
CCCAGCAGGACAGAGCTGCTCAGTACTTTACAGAAACCAACTGAGTCGTTTGTGCATGAATTAAGCCGGTCTGCT
TCCCCGTCACCTTCGTAACAAAACAACGTCCCCTCTCCCCTCGCCTCGAGCAGTTTCTTCAGGACACCGTGGCTC
GGGCTGCTCCCTGCTGCCAGGCACGCTGGTTGGCTGGCCTGGGCCCGGCTCACGTGAAGGGCACTGGCTCTTGTG
ACCACACTGAGCCACGTGCAAGCCGCAGCCGGGCCTGGAAGCCTGACCCTCTGGTTCTAGGGCTTGTCCCGCGGA
GCCTGCAGAGCTAGACGTTGGGGTGTGTCCGTGATGATATGGGGGCCAGGCTGGGAGTAGGGCCTTTCTAGCAGG
GTTGGGTGGCTCAGTGAGGGTGTGGAAGTGGGGGACCCACGGGGCCTGGCTTTGGGACTAGACATGCCAGCCCCA
GCTGGGCTGGAGGGAGCCTGAGTGAGCCCCGACATACGCTGGGCCTTTCAGCTCGCCGTGCTCTGGTGACACACA
GGCGGCCAGGTTGGGATTTGTGTCAATTCTAGGAGCCATCAAGCATGAAAGTGGTTCTGTCTCCTGAGCGCAAGC

FIGURE 2437B

CTCGCCGGACCCCTGGGCGAAGGCCTGGACTTGCAGATGTGTGTTCCCTGTGCGGGTGGACAGAGGGGGCCCTTA
TGACCCACATTGCAGCCCCATTCCACCACCCCTTCCTCCCCAGAGCAGTCTCTGCCGAGGGACAGCACCTGTGTC
CCTTCGATGCCACAACAGCCAGTTGAACAGGGGAGCCCTTTGCTCAGGCAGCTTCTCCTGCCTCTCCCTCCTTTC
TCCTTCCCTGCCCCATCCCCGTGCCCTTCTTGGCCTGTGGCGCTGGGGAGCCATGGTGTGGCATACTGGGGCTCC
TGCTCCTTGGGCCACTTCCTCAGCCCGGGCCCCACAGGCCCACCACCTGCCAGGGCTCCCACTGCACTGGCTGTG
GCAGGAGGCTTCCCCATGACCCCGTGTGGCCCAGCTCGGTGAGGATGCAGTTCTAGGCACAGCCCCTGGGACAGC
CAGCTGCCTCCCAGACCACGTCAGCCTGCTCCAGGGTCCTCAGTCACCCTGGGCCAGGGGCCACGTGTCCCATGG
ATGTCGACCATGCCAACGTCACATTCCAGCACCCCTTTTGCTTGATGGCGTCTGGTGGTAGTCAGCATGGTGGAC
CCACATCCTACAGCCAGAGGTGATGTTGGACAAAGGAAGGGGAGTCTGGATGGGTCCTTAAACGACCATTCTGTC
CGCAGCGGGGTCATTCCTTGTCAGCCCAAGGGAGGGCCGGGGAGTACACTGATCCCAACAGCTGGGCTGACACCT
CCTTTCTCCCCTGCACGGGGAGGATTGGCCTGAGGACCGTCACCCTGTGCACAGCCCCAGTAGGGTGGCAGTGCC
ACTGTCTCCTTGGGCCGTTGCAGGATTGGGCGGGTGCAGACTCCCCTTGCGGGCCCCTTGCTCAATCCCCGGCCC
TCCCAGACTCCTCCCTCTACTGGGGGTAATTTGTGTGTCAGAAGGGCTCTGGCAGAGCTGTAAAATACTGTTTTT
TAAAAATTTTAGTCCAGATCTTTACTTATTAGACTGCAGAAGGAGAGCTAGGGAGAGTGGGGGAAGCCCCCTTGC
TTTTGTATCTGTGAGGTGAATGAGGGTCTGTCACCCAAATCTACTTCTCAGCCCATGACCATAGTTCTGTTTTCC
GTTTGCAAATCTCAGTAGCTCTGTTTTCTCCAAAGTAGAATGTGCGCACCGGGGTCCTAGCCAGGCGAGGTCAGT
GTCGGCAGGCTACCTGGTCATTATTGCTGCCTCGTCCAGGCTGATGCTGATGGTCACAGGCACGGTGGCATCAGG
GAGCCGGGCCAGCAGGCGGCGTGAGGCGGGGCCAGCAGCTCACTGCAAGGGCATTTTCCACCTGATCCTGGTGTG
CCCCACATGCGGTGGCAGGGCAGACGTGTGAAGCCTCGGCCGTCTCGGGGCTGGCAGGTGTGCGGGTGAGGAGGC
CCCGGTGGCCAAGCAGAGCCTGCGTTTCATTTCTCCTGCTGCACTGTGTCTAGTCTGTCTTGTGAACTCTCACCG
TGAAAAGAGGCTAGAAGTCCAGGATCGCTGTACCGCTCCTGTAATTAGGTGATGACTGGATTTGACAACTTAGTC
CCCTCAGACAAGTAAGATACCCTCCAACAGCAAATTCAATGACTTAATTGGAAAACACACAAGCTGGCATGATGT
CCGGTGATTTCTGTAAGAAATGCCTGTAGGAGAAGGTCTGTGAAGTGTGGAGGGCAGTGTCGACGCTGCACAGCA
TCTGCAGATTCGCAGCCTCTTCTCTGCCGGTGCCTCTGTTCGGTTCTGTTACCCAAAAACAAAGACCAAAGAAGG
CCAATCTCTCATTTGACCCTGTCTTTTTAATCTGCCTGTTTTAAAAGTTGCGTCTGTAGTAGCCGCTTGCTGTGA
AGACACATCTTGACAGTCCAAGTGATTTTGTGACCAGTGATTTGGGTCCTGTTTTCCGCTCTTCTAAGAAAAAAC
AAAAAGACCGTGAGTTATTGCCCAGCAATAATCATGTTGTTACTGTGAGTTAGCAACATGCCTGACTTCCTGATA
GCATTACTGTTTTCTAGTTTTGTTTATTGTATATTATGTGTGGTTTTATTTGGTATTTATTTGTGTTTTGAGGTC
TTGCAATGTTTTTGTGTTTCTGATGCTAATAACTAAAGTTTGTAAGACTGTAGAATGCAAAACTCGGAGATGCTA
AACTGTCTTATTAGAGGAAAATAAATCTGATTATGGAGTCTCAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2438

CGGAACGAGGGCAACCTGCACAGCC**ATG**CCCGGGCAAGAACTCAGGACGGTGAATGGCTCTCAGATGCTCCTGGT
GTTGCTGGTGCTCTCGTGGCTGCCGCATGGGGGCGCCCTGTCTCTGGCCGAGGCGAGCCGCGCAAGTTTCCCGGG
ACCCTCAGAGTTGCACTCCGAAGACTCCAGATTCCGAGAGTTGCGGAAACGCTACGAGGACCTGCTAACCAGGCT
GCGGGCCAACCAGAGCTGGGAAGATTCGAACACCGACCTCGTCCCGGCCCCTGCAGTCCGGATACTCACGCCAGA
AGTGCGGCTGGGATCCGGCGGCCACCTGCACCTGCGTATCTCTCGGGCCGCCCTTCCCGAGGGGCTCCCCGAGGC
CTCCCGCCTTCACCGGGCTCTGTTCCGGCTGTCCCCGACGGCGTCAAGGTCGTGGGACGTGACACGACCGCTGCG
GCGTCAGCTCAGCCTTGCAAGACCCCAAGCGCCCGCGCTGCACCTGCGACTGTCGCCGCCGCCGTCGCAGTCGGA
CCAACTGCTGGCAGAATCTTCGTCCGCACGGCCCCAGCTGGAGTTGCACTTGCGGCCGCAAGCCGCCAGGGGGCG
CCGCAGAGCGCGTGCGCGCAACGGGGACGACTGTCCGCTCGGGCCCGGGCGTTGCTGCCGTCTGCACACGGTCCG
CGCGTCGCTGGAAGACCTGGGCTGGGCCGATTGGGTGCTGTCGCCACGGGAGGTGCAAGTGACCATGTGCATCGG
CGCGTGCCCGAGCCAGTTCCGGGCGGCAAACATGCACGCGCAGATCAAGACGAGCCTGCACCGCCTGAAGCCCGA
CACGGAGCCAGCGCCCTGCTGCGTGCCCGCCAGCTACAATCCCATGGTGCTCATTCAAAAGACCGACACCGGGGT
GTCGCTCCAGACCTATGATGACTTGTTAGCCAAAGACTGCCACTGCATA**TGA**GCAGTCCTGGTCCTTCCACTGTG
CACCTGCGCGGGGGAGGCGACCTCAGTTGTCCTGCCCTGTGGAATGGGCTCAAGGTTCCTGAGACACCCGATTCC
TGCCCAAACAGCTGTATTTATATAAGTCTGTTATTTATTATTAATTTATTGGGGTGACCTTCTTGGGGACTCGGG
GGCTGGTCTGATGGAACTGTGTATTTATTTAAAACTCTGGTGATAAAAATAAAGCTGTCTGAACTGTTAAAAAAA
AAAA

FIGURE 2439

MPGQELRTVNGSQMLLVLLVLSWLPHGGALSLAEASRASFPGPSELHSEDSRFRELRKRYEDLLTRLRANQSWED
SNTDLVPAPAVRILTPEVRLGSGGHLHLRISRAALPEGLPEASRLHRALFRLSPTASRSWDVTRPLRRQLSLARP
QAPALHLRLSPPPSQSDQLLAESSSARPQLELHLRPQAARGRRRARARNGDDCPLGPGRCCRLHTVRASLEDLGW
ADWVLSPREVQVTMCIGACPSQFRAANMHAQIKTSLHRLKPDTEPAPCCVPASYNPMVLIQKTDTGVSLQTYDDL
LAKDCHCI

FIGURE 2440

CAGTGCGGCGGATGTACGGATGATTCAGTGGCTGGCAGGAAGCCCGCCCTGCCCGCCCGCCAGTGTCAGTGGTGT
TGGCATCAGCTTGGGCAGGTGTGCGGGCTCAGGATGGGGCGGCCGTGTTGAGGAACCCTGGACTCTCAGAGATGG
AATTTCACCGTGTTGCCTAGGCTGGTCTGGAGCTCTTGATCTCAAGCGATCCTCCCTGCCTCGGCCTCCCAACGT
GCTGGGATTATAGGCGTGAGCCACCGCTCCTGGCCAGGGTCTGTTCCTAGTTGCAACAGTTCTTGGAAACCCACT
CGAGAGGGCCACGCCTCCATTCACCAGGCCACGCATCACAAGAGGCAACACCAGGAGCCAAC**ATG**AGCTCGGGGA
CTGAACTGCTGTGGCCCGGAGCAGCGCTGCTGGTGCTGTTGGGGGTGGCAGCCAGTCTGTGTGTGCGCTGCTCAC
GCCCAGGTGCAAAGAGGTCAGAGAAAATCTACCAGCAGAGAAGTCTGCGTGAGGACCAACAGAGCTTTACGGGGT
CCCGGACCTACTCCTTGGTCGGGCAGGCATGGCCAGGACCCCTGGCGGACATGGCACCCACAAGGAAGGACAAGC
TGTTGCAATTCTACCCCAGCCTGGAGGATCCAGCATCTTCCAGGTACCAGAACTTCAGCAAAGGAAGCAGACACG
GGTCGGAGGAAGCCTACATAGACCCCATTGCCATGGAGTATTACAACTGGGGGCGGTTCTCGAAGCCCCCAGAAG
ATGATGATGCCAATTCCTACGAGAATGTGCTCATTTGCAAGCAGAAAACCACAGAGACAGGTGCCCAGCAGGAGG
GCATAGGTGGCCTCTGCAGAGGGGACCTCAGCCTGTCACTGGCCCTGAAGACTGGCCCCACTTCTGGTCTCTGTC
CCTCTGCCTCCCCGGAAGAAGATGAGGAATCTGAGGATTATCAGAACTCAGCATCCATCCATCAGTGGCGCGAGT
CCAGGAAGGTCATGGGGCAACTCCAGAGAGAAGCATCCCCTGGCCCGGTGGGAAGCCCAGACGAGGAGGACGGGG
AACCGGATTACGTGAATGGGGAGGTGGCAGCCACAGAAGCC**TAG**GGCAGACCAAGAAGAAAGGAGCCAAGGCAAA
GAGGGACCACTGTGCTCATGGACCCATCGCTGCCTTCCAAGGACCATTTCCCAGAGCTACTCAACTTTTAAGCCC
CTGCCATGGTTGCTCCTGGAAGGAGAACCAGCCACCCTGAGGACCACCTGGCCATGCGTGCACAGCCTGGGAAAA
GACAGTTACTCACGGGAGCTGCAGGCCCGTCACCAAGCCCTCTCCCGACCCAGGCTTTGTGGGGCAGGCACCTGG
TACCAAGGGTAACCCGGCTCCTGGTATGGACGGATGCGCAGGATTTAGGATAAGCTGTCACCCAGTCCCCATAAC
AAAACCACTGTCCAACACTGGTATCTGTGTTCTTTTGTGCTATGAATTTGGATTCCTAATTGCTATTGTTGGTTG
CTGGGGTTTTAAATGATTGATAAGCTTGTACAGTTAACTTATAGAGGGGGAGCCATATTTAACATTCTGGATTTC
AGAGTAGAGATTTCTGTGTTGTCTCCTAGAAAGCATTACATGTAGTTTATTTCAGCATCCTTGTTGGGTGGGGCC
CTGGCTCTCTTCCCCTTTGGTGGGACCTCCCCTTTCTTTGGGCTTCAGTTCACTCAGGAAGAAATGAGGCTGTCG
CCATCTTTATGTGCTTCCAGTGGAAATGTCACTTGCTACAGACAATAGTGCATGAGAGTCTAGAGAAGTAGTGAC
CAGAACAGGGCAGAGTAGGTCCCCTCCATGGCCCTGAATCCTCCTCTGCTCCAGGGCTGGCCTCTGCAGAGCTGA
TTAAACAGTGTTGTGACTGTCTCATGGGAAGAGCTGGGGCCCAGAGGGACCTTGAGTCAGAAATGTTGCCAGAAA
AAGTATCTCCTCCAACCAAAACATCTCAATAAAACCATTTTAGTTGAAAAAAAAAAAAAAAAAA

FIGURE 2441

MSSGTELLWPGAALLVLLGVAASLCVRCSRPGAKRSEKIYQQRSLREDQQSFTGSRTYSLVGQAWPGPLADMAPT
RKDKLLQFYPSLEDPASSRYQNFSKGSRHGSEEAYIDPIAMEYYNWGRFSKPPEDDDANSYENVLICKQKTTETG
AQQEGIGGLCRGDLSLSLALKTGPTSGLCPSASPEEDEESEDYQNSASIHQWRESRKVMGQLQREASPGPVGSPD
EEDGEPDYVNGEVAATEA

FIGURE 2442

GGCACGAGGGCAGA**ATG**GCTCCCGCAAAGAAGGGTGGCGAGAAGAAAAAGGGCCGTTCTGCCATCAACGAAGTGG
TAACCCGAGAATACACCATCAACATTCACAAGCGCATCCATGGAGTGGGCTTCAAGAAGCGTGCACCTCGGGCAC
TCAAAGAGATTCGGAAATTTGCCATGAAGGAGATGGGAACTCCAGATGTGCGCATTGACACCAGGCTCAACAAAG
CTGTCTGGGCCAAAGGAATAAGGTGC**TAA**AGTTATCTGTATTCGAAGGTGAACTTTTGCAATGACACCAGCTTCA
CTTAACCCTGCAAGAGCCCATATCAGAATGTGCCATACCGAATCCGTGTGCGGCTGTCCAGAAAACGTAATGAGG
ATGAAGATTCACCAAATAAGCTATATACTTTGGTTACCTATGTACCTGTTACCACTTTCAAAAGTAAGTTCTCCA
TCCCATAAAGCCATTTAAATTCATTAGAAAAATGTCCTTACCTCTTAAAATGTGAATTCATCTGTTAAGCTAGGG
GTGACACACGTCATTGTACCCTTTTTAAATTGTTGGTGTGGGAAGATGCTAAAGAATGCAAAACTGATCCATATC
TGGGATGTAAAAAGGTTGTGGAAAATAGAATGTCCAGACCCGTCTACAAAAGGTTTTTAGAGTTGAAATATGAAA
TGTGATGTGGGTATGGAAATTGACTGTTACTTCCTTTACAGATCTACAGACAGTCAATGTGGATGAGAACTAATC
GCTGATCGTCAGATCAAATAAAGTTATAAAATTGCCTTCAAAAAAAAAAAAAAAAA

FIGURE 2443

MAPAKKGGEKKKGRSAINEVVTREYTINIHKRIHGVGFKKRAPRALKEIRKFAMKEMGTPDVRIDTRLNKAVWAK
GIRC

FIGURE 2444

GGCACGAGGCCAGGGCGCGACGCGCTGCGGCTCAGCGACGCGGCTTCTAGAACCGGGTGATTGAACTAAACCTTC
GCCGCACCGAGTTTGCAGTACGGCCGTCACCCGCACCGCTGCCTGCTTGCGGTTGGAGAAATCAAGGCCCTACCG
GGCCTCCGTAGTCACCTCTCTATAGTGGGCGTGGCCGAGGCCGGGGTGACCCTGCCGGAGCCTCCGCTGCCAGCG
AC**ATG**TTCAAGGTAATTCAGAGGTCCGTGGGGCCAGCCAGCCTGAGCTTGCTCACCTTCAAAGTCTATGCAGCAC
CAAAAAAGGACTCACCTCCCAAAAATTCCGTGAAGGTTGATGAGCTTTCACTCTACTCAGTTCCTGAGGGTCAAT
CGAAGTATGTGGAGGAGGCAAGGAGCCAGCTTGAAGAAAGCATCTCACAGCTCCGACACTATTGCGAGCCATACA
CAACCTGGTGTCAGGAAACGTACTCCCAAACTAAGCCCAAGATGCAAAGTTTGGTTCAATGGGGGTTAGACAGCT
ATGACTATCTCCAAAATGCACCTCCTGGATTTTTTCCGAGACTTGGTGTTATTGGTTTTGCTGGCCTTATTGGAC
TCCTTTTGGCTAGAGGTTCAAAAATAAAGAAGCTAGTGTATCCGCCTGGTTTCATGGGATTAGCTGCCTCCCTCT
ATTATCCACAACAAGCCATCGTGTTTGCCCAGGTCAGTGGGGAGAGATTATATGACTGGGGTTTACGAGGATATA
TAGTCATAGAAGATTTGTGGAAGGAGAACTTTCAAAAGCCAGGAAATGTGAAGAATTCACCTGGAACTAAG**TAG**A
AAACTCCATGCTCTGCCATCTTAATCAGTTATAGGTAAACATTGGAAACTCCATAGAATAAATCAGTATTTCTAC
AGAAAAATGGCATAGAAGTCAGTATTGAATGTATTAAATTGGCTTTCTTCTTCAGGAAAAACTAGACCAGACCTC
TGTTATCTTCTGTGAAATCATCCTACAAGCAAACTAACCTGGAATCCCTTCACCTAGAGATAATGTACAAGCCTT
AGAACTCCTCATTCTCATGTTGCTATTTATGTACCTAATTAAAACCCAAGTTAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAA

FIGURE 2445

MFKVIQRSVGPASLSLLTFKVYAAPKKDSPPKNSVKVDELSLYSVPEGQSKYVEEARSQLEESISQLRHYCEPYT
TWCQETYSQTKPKMQSLVQWGLDSYDYLQNAPPGFFPRLGVIGFAGLIGLLLARGSKIKKLVYPPGFMGLAASLY
YPQQAIVFAQVSGERLYDWGLRGYIVIEDLWKENFQKPGNVKNSPGTK

FIGURE 2446

CAGTGCCAGGCTGGAGGCGGCAGCGGTTGGAGGCTTCGCCCGGCTTTGCAGCGGGGACTTCGGCGGCGGCGCCTC
AGGCACCTCGGCCCGGACACG**ATG**AGGCGAGTGGTACGACAGAGCAAGTTTCGGCATGTATTTGGGCAAGCGGTG
AAAAATGACCAGTGCTATGATGACATCCGGGTTTCTCGTGTGACCTGGGATAGTTCCTTTTGTGCTGTCAATCCC
AGATTTGTTGCCATAATCATAGAGGCAAGTGGGGGAGGAGCGTTCCTTGTCCTCCCTCTGCACAAGACTGGTCGA
ATTGACAAATCTTACCCTACAGTATGTGGCCACACAGGACCAGTGCTGGACATAGACTGGTGCCCACATAACGAT
CAGGTCATTGCCAGCGGTTCAGAGGACTGCACGGTCATGGTATGGCAGATCCCAGAAAATGGACTCACCCTTTCC
CTGACTGAACCTGTGGTGATTTTGGAAGGCCACTCAAAGAGAGTCGGCATCGTGGCTTGGCATCCAACGGCCCGC
AATGTGCTTCTTAGTGCAGGCTGTGATAATGCCATTATCATCTGGAATGTGGGAACAGGGGAAGCCCTTATAAAC
TTGGACGATATGCATTCAGACATGATTTACAATGTGAGCTGGAACCGGAATGGCAGTCTGATCTGCACAGCTTCC
AAAGACAAGAAAGTGAGAGTCATTGATCCCAGGAAACAAGAGATTGTTGCTGAGAAGGAGAAAGCACATGAAGGA
GCAAGACCCATGAGAGCCATCTTCCTGGCCGATGGCAATGTCTTCACCACTGGGTTCAGCCGCATGAGCGAGCGG
CAGCTGGCTCTCTGGAATCCGAAAAATATGCAGGAACCAATTGCTCTTCATGAGATGGACACTAGCAATGGGGTG
TTGCTGCCTTTCTATGACCCTGACACCAGCATCATTTACTTATGTGGAAAGGGTGACAGCAGTATTCGCTATTTT
GAGATCACGGATGAATCCCCGTACGTCCACTACCTCAACACATTCAGCAGCAAGGAGCCTCAGAGAGGGATGGGT
TACATGCCCAAGAGGGGACTTGATGTTAACAAATGTGAGATTGCCAGATTCTTCAAACTTCATGAGAGAAAGTGT
GAACCTATTATTATGACTGTTCCCAGGAAGTCTGACCTTTTCCAAGATGACCTGTATCCTGACACAGCGGGGCCA
GAGGCCGCGCTGGAGGCAGAAGAGTGGTTCGAAGGCAAGAATGCAGACCCAATCCTCATCTCCTTGAAGCACGGG
TACATTCCAGGCAAAAACAGGGATCTCAAGGTGGTCAAGAAGAACATTCTGGATAGCAAGCCCACTGCAAACAAG
AAGTGCGACCTGATCAGCATCCCCAAGAAAACCACAGACACGGCCAGTGTGCAAAATGAAGCCAAGTTGGATGAG
ATTTTAAAAGAGATCAAATCTATAAAAGACACAATCTGCAATCAAGATGAGCGTATTTCCAAGTTAGAACAGCAG
ATGGCAAAGATAGCAGCC**TGA**AGGTCCCACCCCCACCCCTACAGAAAAAATGGGAGCAAGAACTTGTGCTTGGGA
GCTGGTTATTGGTGTGGTCCTAGGGAGGGCGGAAAGGGAGGCACTGCCATTTGGAGACATTCCATTTCAGATTTG
TCAACCAGCGATAGGCCACATTCCAGTAAGAACTCAATTTGTCTCCCAAATTTGCAGAAACAAAACGTGATTTAA
AAGCTGAGCTTTTTATCAGAAAGCTTTTTTGATGTTTTAAGTGTTATGTGACTTGTTGAACTTTTTAAAAAGTGC
TACTTTTAAAATCCCAGATACTCTGAATTTTAGAAAACAAACTAATTCTGATTGTGTCGTGCCCAAGTACCCTTT
TTTTTTTAATGAATAGGGACCAATGCCACATTGCTTTTTATATTTCTTTCTTTTTTAATGTTGCCAAAACCAAAA
GTAGCTTTGTTTTCCTTTGTATTTTGCTACTTTGCAGTATTTGTGTGTGTGGTTTTTTTTCCTTAATTTGAAAGG
GACAGCACTGTGTATGTTTATAAACTAAATGAAGATAAGATATTATTTTGTATAAACATTCATCTGAGAACAATC
AAAGCAGTAGCCACATGGTGCTGGCTCCTTTGCAGCACAAACCTGGTCATTTTGATGACTGTACAACAGGAAGAC
TTGAAAAATCACGTGGATTCATATTACCACCGCTCTCATTTCATGGAGTCTTCTGATCAAAAAAGCTCACGTCGT
ATTTCTTCTTTTCCTTTCTCTTTTCTAGAAATTGGGTGTTTGTACCAGAATGGAATTTTGCTTCTCGGTTATCCT
GTGCTTCAGATGATTATAATCTAACCC

FIGURE 2447

MRRVVRQSKFRHVFGQAVKNDQCYDDIRVSRVTWDSSFCAVNPRFVAIIIEASGGGAFLVLPLHKTGRIDKSYPT
VCGHTGPVLDIDWCPHNDQVIASGSEDCTVMVWQIPENGLTLSLTEPVVILEGHSKRVGIVAWHPTARNVLLSAG
CDNAIIIWNVGTGEALINLDDMHSDMIYNVSWNRNGSLICTASKDKKVRVIDPRKQEIVAEKEKAHEGARPMRAI
FLADGNVFTTGFSRMSERQLALWNPKNMQEPIALHEMDTSNGVLLPFYDPDTSIIYLCGKGDSSIRYFEITDESP
YVHYLNTFSSKEPQRGMGYMPKRGLDVNKCEIARFFKLHERKCEPIIMTVPRKSDLFQDDLYPDTAGPEAALEAE
EWFEGKNADPILISLKHGYIPGKNRDLKVVKKNILDSKPTANKKCDLISIPKKTTDTASVQNEAKLDEILKEIKS
IKDTICNQDERISKLEQQMAKIAA

FIGURE 2448

GGCACGAGGGCCCGGCGGCAGGTCCCAGCCCGGGGCTAGAGACCGAGGGCCGGGGTCCGGGCCCGGCGGCGGGAC
CCAGGCGGTTGAGGCTGGTCAGGAGTCAGCCAGCCTGAAAGAGCAGG**ATG**GATCTTGATGTGGTTAACATGTTTG
TGATTGCGGGCGGCACGCTGGCCATCCCAATCCTGGCATTTGTGGCTTCATTTCTTCTGTGGCCTTCAGCACTGA
TAAGAATCTATTATTGGTACTGGCGGAGGACATTGGGCATGCAAGTCCGCTATGTTCACCATGAAGACTATCAGT
TCTGTTATTCCTTCCGGGGCAGGCCTGGGCACAAACCCTCCATCCTCATGCTCCACGGATTCTCTGCCCACAAGG
ATATGTGGCTCAGTGTGGTCAAGTTCCTTCCAAAGAACCTGCACTTGGTCTGCGTGGACATGCCAGGACATGAGG
GCACCACCCGCTCCTCCCTGGATGACCTGTCCATAGATGGGCAAGTTAAGAGGATACACCAGTTTGTAGAATGCC
TGAAGCTGAACAAAAAACCTTTCCACCTGGTAGGCACCTCCATGGGTGGCCAGGTGGCTGGGGTGTATGCTGCTT
ACTACCCATCGGATGTCTCCAGCCTGTGTCTCGTGTGTCCTGCTGGCCTGCAGTACTCAACTGACAATCAATTTG
TACAACGGCTCAAAGAACTGCAGGGCTCTGCCGCCGTGGAGAAGATTCCCTTGATCCCGTCTACCCCAGAAGAGA
TGAGTGAAATGCTTCAGCTCTGCTCCTATGTCCGCTTCAAGGTGCCCCAGCAGATCCTGCAAGGCCTTGTCGATG
TCCGCATCCCTCATAACAACTTCTACCGAAAGTTGTTTTTGGAAATCGTCAGTGAGAAGTCCAGATACTCTCTCC
ATCAGAACATGGACAAGATCAAGGTTCCGACGCAGATCATCTGGGGGAAACAAGACCAGGTGCTGGATGTGTCTG
GGGCAGACATGTTGGCCAAGTCAATTGCCAACTGCCAGGTGGAGCTTCTGGAAAACTGTGGGCACTCAGTAGTGA
TGGAAAGACCCAGGAAGACAGCCAAGCTCATAATCGACTTTTTAGCTTCTGTGCACAACACAGACAACAACAAGA
AGCTGGAC**TGA**GGCCCCGACTGCAGCCTGCATTCTGCACACAGCATCTGCTCCCATCCCCCAAGTCTGACGCAGC
CACCACTCTCAGGGATCCTGCCCCAAATGCGGTCGGAGCGCCAGTGACCCTGAGGAAGCCCGTCCCTTATCCCTG
GTATCCACGGTTCCCCAGAGCTTTGGGGACCACGCGAAAACCTCCAAGATATTTTTCACAAAATAGAAACTCATA
TGGAACAAAATAAGAAACCCCAGCCATGAAATCTACCATGAAGTCTTCAAGTTCATGTCACTGAGAAGCTTGTGC
AAAGCAGCCACCTTGGACCATAATTAAATCAAGGACATTTTCTTTGAGACATTCCTTATAGTTGGAGACTCAAGA
TATTTTTGTTGCATCAGGTGTATTCCCTTGCATGGGCAGTGGCTTTTATAGGAGCATTAGTCCTCATTCGCTGAA
CCCTGTTGTTTAGGTCTAATTTAAGTTTTACATAGAGACCCATGTATGACTGCAGCCCATTGGCTGCAAGACCAG
GGAGGAAAGTGGCAAGCTGTAGAAAATGTTTACACGCATGGAGGGGCATTGCTCTAGCCCTCAGAGCGTCCGGAG
CAGCAGGGTACATGGGTGGGAGGTTCATTCAGCACCCACCAGTCAGGTATGTTCTGAGTGAACCCACAGCAGTCG
CAGAATGAGCACCTGGCAGGGTGGGTTTCCTAGGAATAATTTATTATTTTTAAAAATAGGCCTAATAAAGCAATA
ATGTTCTAGACATCTGTCTAAGTAATCAGACTCAGGTTCCACACACAAGCAACAACTCGTGGGCCTCTTTTCTAT
TTCAATGTGCTACTAAGAACCCTTGGATGTAACATACTAGTTAGTTAATGAATTCTGTGAATTCTGTGAAGAGTA
ATGTGATTGAAAATAAGTCTAAACAGCTGTAAAAGTGACCACAATGACATGAAATAAATTTAATAAGTCTAGATC
AGCAAAAAAAAAAAAAAAAAA

FIGURE 2449

MDLDVVNMFVIAGGTLAIPILAFVASFLLWPSALIRIYYWYWRRTLGMQVRYVHHEDYQFCYSFRGRPGHKPSIL
MLHGFSAHKDMWLSVVKFLPKNLHLVCVDMPGHEGTTRSSLDDLSIDGQVKRIHQFVECLKLNKKPFHLVGTSMG
GQVAGVYAAYYPSDVSSLCLVCPAGLQYSTDNQFVQRLKELQGSAAVEKIPLIPSTPEEMSEMLQLCSYVRFKVP
QQILQGLVDVRIPHNNFYRKLFLEIVSEKSRYSLHQNMDKIKVPTQIIWGKQDQVLDVSGADMLAKSIANCQVEL
LENCGHSVVMERPRKTAKLIIDFLASVHNTDNNKKLD

FIGURE 2450

GGCACGAGGGCGGCTCTGGGCTCCGGAATCGCCCGCAGCCGGTACTGCGGGACCCACTGCGGATATGGCTGTCTT
GGCTGGATCCCTGTTGGGCCCCACGAGTAGGTCGGCAGCGTTGCTGGGTGGCAGGTGGCTCCAGCCCCGGGCCTG
GCTGGGGTTCCCAGACGCCTGGGGCCTCCCCACCCCGCAGCAGGCCCGGGGCAAGGCTCGCGGGAATGAGTATCA
GCCGAGCAACATCAAACGCAAGAACAAGCACGGCTGGGTCCGGCGCCTGAGCACGCCGGCCGGCGTGCAGGTCAT
CCTTCGCCGAATGCTCAAGGGCCGCAAGTCGCTGAGCCATTGAGGATCGCGACGCAGTCGGCGGGACCCTCATGG
AAGCATCGCCCTCGCCTCGGACCTTGCCTGGCGCTATTTTTGCAGGGAGCTGGGGAGCAGGAACGCCTCGGACCT
GAGTGCTCTCCATATTGTGGGGTTGAAGTCTGGATGGGAGCTTGCCAAGTCCCTTTTTAGGCTTTTTAATTAGGA
AGCATTTCGAACCTGCGCAACAGACCAAAGAACAGTACAAAGAACATCCGTGTACCCAGTACCCTGACTACCGAC
TACCTACAACCCGTCCCTGCCCCATCCTGAGTTCTTTTGAAGCTGATCTCAGGCATCGGATTATTTCTTCTGTAA
ATATTTCAGAATGTATCTCTCCAAGATGAGAGCTCATTAAAAGACAATTACAAAGCTTATCACATCCAAAAGAAT
TATCAATAATTTTGAAATATTATTAAACGTGTAATAAATGTTCAAAGTTCCACTTGCAAAAAAAAAAAAAAAAAA

FIGURE 2451

MAVLAGSLLGPTSRSAALLGGRWLQPRAWLGFPDAWGLPTPQQARGKARGNEYQPSNIKRKNKHGWVRRLSTPAG
VQVILRRMLKGRKSLSH

FIGURE 2452

GTCTCGCCCTCTTGCAGTCTGCAGCTTCTCCTGTCATCGGAAATGCCAGGCCAAGGTGGCTGCCCCCTGCGTTCC
TCCATCCAACCATGAGCTGGTGCCCATCACCACTGAGAATGCACCAAAGAATGTAGTGGACAAGGGAGAAGGAGG
CTCCCGGGGTGGAAACACACGGAAAAGCCTCGAGGACAACGGCTCCACCAGGGTCACCCCGAGTGTCCAGCCCCA
CCTCCAGCCCATCAGAAAC**ATG**AGTGTGAGCCGGACCATGGAGGACAGCTGTGAGCTGGACCTGGTGTACGTCAC
AGAGAGGATCATCGCTGTCTCCTTCCCCAGCACAGCCAATGAGGAGAACTTCCGGAGCAACCTCTCTGAGCGGAG
ACCTGACATCACGAAGCTCCATGCCAAGGTACAGGAATTTGGCTGGCCCGACCTCCACACCCCAGCCCTGGAGAA
GATCTGCAGCATCTGTAAGGCCATGGACACATGGCTCAATGCAGACCCTCACAATGTCGTTGTTCTACACAACAA
GGGAAACCGAGGCAGGATAGGAGTTGTCATCGCGGCTTACATGCACTACAGCAACATTTCTGCCAGTGCGGACCA
GGCTCTGGACCGGTTTGCAATGAAGCGGTTCTATGAGGATAAGATTGTGCCCATTGGCCAGCCATCCCAAAGAAG
GTACGTGCATTACTTCAGTGGCCTGCTCTCCGGCTCCATCAAAATGAACAACAAGCCCTTGTTTCTGCACCACGT
GATCATGCACGGCATCCCCAACTTTGAGTCTAAAGGAGGATGTCGGCCGTTTCTCCGCATCTACCAGGCCATGCA
ACCTGTGTACACATCTGGCATCTACAACATCCCAGGAGACAGCCAGACTAGCGTCTGCATCACCATCGAGCCAGG
ACTGCTCTTGAAGGGAGACATCTTGCTGAAGTGCTACCACAAGAAGTTCCGAAGCCCAGCCCGAGACGTCATCTT
CCGTGTGCAGTTCCACACCTGTGCCATCCATGACCTGGGGGTTGTCTTTGGGAAGGAGGACCTTGATGATGCTTT
CAAAGATGATCGATTTCCAGAGTATGGCAAAGTGGAGTTTGTATTTTCTTATGGGCCAGAGAAAATTCAAGGCAT
GGAGCACCTGGAGAACGGGCCGAGCGTGTCTGTGGACTATAACACCTCTGACCCCCTCATCCGCTGGGACTCCTA
CGACAACTTCAGTGGGCATCGAGATGACGGCATGGAGGAGGTGGTGGGACACACGCAGGGGCCACTAGATGGGAG
CCTGTATGCTAAGGTGAAGAAGAAAGACTCCCTGCACGGCAGCACCGGGGCTGTTAATGCCACACGTCCTACACT
GTCGGCCACCCCCAACCACGTGGAACACACGCTTTCTGTGTATTTATATAGATGGAAATATACTTTATATTTTGT
ATCATCGTGCCTA**TAG**CCGCTGCCACCGTGTATAAATCCTGGTGTATGCTCCTTATCCTGGACATGAATGTATTG
TACACTGACGCGTCCCCACTCCTGTACAGCTGCTTTGTTTCTTTGCAATGCATTGTATGGCTTTATAAATGATAA
AGTT

FIGURE 2453

MSVSRTMEDSCELDLVYVTERIIAVSFPSTANEENFRSNLSERRPDITKLHAKVQEFGWPDLHTPALEKICSICK
AMDTWLNADPHNVVVLHNKGNRGRIGVVIAAYMHYSNISASADQALDRFAMKRFYEDKIVPIGQPSQRRYVHYFS
GLLSGSIKMNNKPLFLHHVIMHGIPNFESKGGCRPFLRIYQAMQPVYTSGIYNIPGDSQTSVCITIEPGLLLKGD
ILLKCYHKKFRSPARDVIFRVQFHTCAIHDLGVVFGKEDLDDAFKDDRFPEYGKVEFVFSYGPEKIQGMEHLENG
PSVSVDYNTSDPLIRWDSYDNFSGHRDDGMEEVVGHTQGPLDGSLYAKVKKKDSLHGSTGAVNATRPTLSATPNH
VEHTLSVYLYRWKYTLYFVSSCL

FIGURE 2454

CGGACGCGTGGGGAGAGGCTGTTTACCAGAACAGCATAACAAGGGCAGGTCTGACTGCAAGGCTGGGACTGGGAG
GCAGAGCCGCCGCCAAGGGGGCCTCGGTTAAACACTGGTCGTTCAATCACCTGCAAGACGAAGGAGGCAAGG**ATG**

CTGTTGGCCTGGGTACAAGCATTCCTCGTCAGCAACATGCTCCTAGCAGAAGCCTATGGATCTGGAGGCTGTTTC
TGGGACAACGGCCACCTGTACCGGGAGGACCAGACCTCCCCCGCGCCGGGCCTCCGCTGCCTCAACTGGCTGGAC
GCGCAGAGCGGGCTGGCCTCGGCCCCCGTGTCGGGGGCCGGCAATCACAGTTACTGCCGAAACCCGGACGAGGAC
CCGCGCGGGCCCTGGTGCTACGTCAGTGGCGAGGCCGGCGTCCCTGAGAAACGGCCTTGCGAGGACCTGCGCTGT
CCAGAGACCACCTCCCAGGCCCTGCCAGCCTTCACGACAGAAATCCAGGAAGCGTCTGAAGGGCCAGGTGCAGAT
GAGGTGCAGGTGTTCGCTCCTGCCAACGCCCTGCCCGCTCGGAGTGAGGCGGCAGCTGTGCAGCCAGTGATTGGG
ATCAGCCAGCGGGTGCGGATGAACTCCAAGGAGAAAAAGGACCTGGGAACTCTGGGCTACGTGCTGGGCATTACC
ATGATGGTGATCATCATTGCCATCGGAGCTGGCATCATCTTGGGCTACTCCTACAAGAGGGGGAAGGATTTGAAA
GAACAGCATGATCAGAAAGTATGTGAGAGGGAGATGCAGCGAATCACTCTGCCCTTGTCTGCCTTCACCAACCCC
ACCTGTGAGATTGTGGATGAGAAGACTGTCGTGGTCCACACCAGCCAGACTCCAGTTGACCCTCAGGAGGGCAGC
ACCCCCCTTATGGGCCAGGCCGGGACTCCTGGGGCC**TGA**GCCCCCCCAGTGGGCAGGAGCCCATGCAGACACTGG
TGCAGGACAGCCCACCCTCCTACAGCTAGGAGGAACTACCACTTTGTGTTCTGGTTAAAACCCTACCACTCCCCC
GCTTTTTTGGCGAATCCTAGTAAGAGTGACAGAAGCAGGTGGCCCTGTGGGCTGAGGGTAAGGCTGGGTAGGGTC
CTAACAGTGCTCCTTGTCCATCCCTTGGAGCAGATTTTGTCTGTGGATGGAGACAGTGGCAGCTCCCACAGTGAT
GCTGCTGCTAAGGGCTTCCAAACATTGCCTGCACCCCTGGAACTGAACCAGGGATAGACGGGGAGCTCCCCCAGG
CTCCTCTGTGCTTTACTAAGATGGCCTCAGTCTCCACTGTGGGCTTGAGTGGCATACACTGTTATTCATGGTTAA
GGTAAAGCAGGTCAAGGGATGGCATTGAAAAAATATATTTAGTTTTTAAAATATTTGGGATGGAACTCCCTACTG
ACCTCTGAGAACTGGAAACGAGTTTGTACAGAAGTCAGAACTTTGGGTTGGGAATGAGATCTAGGTTGTGGCTGC
TGGTATGCTTCAGCTTGCTGGCAATGATGTGCCTTGACAACCGTGGGCCAGGCCTGGGCCCAGGGACTCTTCCTG
TTTCATAAGGAAAGGAAGAATTGCACTGAGCATTCCACTTAGGAAGAGGATAGAGAAGGATCTGCTCCGCCTTTG
GCCACAGGAGCAGAGGCAGACCTGGGATGCCCCAGTTTCTCTTCAGGGATGGATAGTGACCTGTCTTCATTTTGC
ACAGGTAAGAGAGTAGTTAGCTAACCTATGGGAATTATACTGTGGGGCCTTGTGAGCTGCTTCTAAGAGGCTAAC
CTGGAAACTAAGCTCAGAGGCAAGGTAATAAAGCACTTCAGGGCTTGCTCCCCAAGTGGGCCTGATTTAGCAGGT
GGTCCTGCGGGCGTCCAGGTCAGCACCTTCCTGTAGGGCACTGGGGCTAGGGTCACAGCCCCTAACTCATAAAGC
AATCAAAGAACCATTAGAAAGGGCTCATTAAGCCTTTTGGACACAGGACCCCAGAGAGGAAAAAGTGACTTGCCC
AAGGTCGTAAGCAAGCTACTGGCATGGCAAGAGCCCAGCTTCCTGACGGAGCGCAACATTTCTCCACTGCACTGT
GCTAGCAGCTCAGCAGGGCCTCTAACCTGTGATGTCACACTCAAGAGGCCTTGGCAGCTCCTAGCCATAGAGCTT
CCTTTCCAGAACCCTTCCACTGCCCAATGTGGAGACAGGGGTTAGTGGGGCTTTCTATGGAGCCATCTGCTTTGG
GGACCTAGACCTCAGGTGGTCTCTTGGTGTTAGTGATGCTGGAGAAGAGAATATTACTGGTTTCTACTTTTCTAT
AAAGGCATTTCTCTATATACATGTTTTATATACCTCATTCTGACACCTGCATATAGTGTGGGAAATTGCTCTGCA
TTTGACTTAATTAAAAAAAAAAAAAAA

FIGURE 2455

MLLAWVQAFLVSNMLLAEAYGSGGCFWDNGHLYREDQTSPAPGLRCLNWLDAQSGLASAPVSGAGNHSYCRNPDE
DPRGPWCYVSGEAGVPEKRPCEDLRCPETTSQALPAFTTEIQEASEGPGADEVQVFAPANALPARSEAAAVQPVI
GISQRVRMNSKEKKDLGTLGYVLGITMMVIIIAIGAGIILGYSYKRGKDLKEQHDQKVCEREMQRITLPLSAFTN
PTCEIVDEKTVVVHTSQTPVDPQEGSTPLMGQAGTPGA

FIGURE 2456

CGGAGGAGAGCGCAGGAGGAAACAGTACCGGCTGGAGGCCGGTCTTGCAGGAGCGGGGGACTGCTGGGGGCGGGG
CTTGGTGGTGACTGCTGGCGGGGCGGGGCCTGGGGCTCAGAGGGGTGGGCTTTGGAGATCAGAGGGTCGACGCTG
CTTCGTTGCCTGGACTCTGGTTTCCGCCCTGGAGCAAGCCGGGGCCTGGTCGGCAGCTGGGCCGCC**ATG**GAGTCC
ACGCTGGGCGCGGGCATCGTGATAGCCGAGGCGCTACAGAACCAGCTAGCCTGGCTGGAGAACGTGTGGCTCTGG
ATCACCTTTCTGGGCGATCCCAAGATCCTCTTTCTGTTCTACTTCCCCGCGGCCTACTACGCCTCCCGCCGTGTG
GGCATCGCGGTGCTCTGGATCAGCCTCATCACCGAGTGGCTCAACCTCATCTTCAAGTGGTTTCTTTTTGGAGAC
AGGCCCTTTTGGTGGGTCCATGAGTCTGGTTACTACAGCCAGGCTCCAGCCCAGGTTCACCAGTTCCCCTCTTCT
TGTGAGACTGGTCCAGGCAGCCCTTCTGGACACTGCATGATCACAGGAGCAGCCCTCTGGCCCATAATGACGGCC
CTGTCTTCGCAGGTGGCCACTCGGGCCCGCAGCCGCTGGGTAAGGGTGATGCCTAGCCTGGCTTATTGCACCTTC
CTTTTGGCGGTTGGCTTGTCGCGAATCTTCATCTTAGCACATTTCCCTCACCAGGTGCTGGCTGGCCTAATAACT
GGCGCTGTCCTGGGCTGGCTGATGACTCCCCGAGTGCCTATGGAGCGGGAGCTAAGCTTCTATGGGTTGACTGCA
CTGGCCCTCATGCTAGGCACCAGCCTCATCTATTGGACCCTCTTTACACTGGGCCTGGATCTTTCTTGGTCCATC
AGCCTAGCCTTCAAGTGGTGTGAGCGGCCTGAGTGGATACACGTGGATAGCCGGCCCTTTGCCTCCCTGAGCCGT
GACTCAGGGGCTGCCCTGGGCCTGGGCATTGCCTTGCACTCTCCCTGCTATGCCCAGGTGCGTCGGGCACAGCTG
GGAAATGGCCAGAAGATAGCCTGCCTTGTGCTGGCCATGGGGCTGCTGGGCCCCCTGGACTGGCTGGGCCACCCC
CCTCAGATCAGCCTCTTCTACATTTTCAATTTCCTCAAGTACACCCTCTGGCCATGCCTAGTCCTGGCCCTCGTG
CCCTGGGCAGTGCACATGTTCAGTGCCCAGGAAGCACCGCCCATCCACTCTTCC**TGA**CTTCTTGTGTGCCTCCCT
TTCCTTTCCCTCCCACAAAGCCAACACTCTGTGACCACCACACTCCAGGAGGCAGCCCCATCCCCTTCCAGCCCC
TAAGTAGGCCCTCCCCTCCCTAAATCTGCTTCCGCACCACCTGGTCTTAGCCCCAAAGATGGGCCTTCTCTCTCC
CAGATAAGTTGGTCCTCCCTCTGCCTTTCCTCTCAAGCCCCCAAAGAGCAAAGGCAACAGCAAGACCAGCGGGTT
CTTGCAACACTGTGAGGGGCAGCCAGGGCGGCCCCAATAAAGCCCTTGAATACTTTGAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2457

MESTLGAGIVIAEALQNQLAWLENVWLWITFLGDPKILFLFYFPAAYYASRRVGIAVLWISLITEWLNLIFKWFL
FGDRPFWWVHESGYYSQAPAQVHQFPSSCETGPGSPSGHCMITGAALWPIMTALSSQVATRARSRWVRVMPSLAY
CTFLLAVGLSRIFILAHFPHQVLAGLITGAVLGWLMTPRVPMERELSFYGLTALALMLGTSLIYWTLFTLGLDLS
WSISLAFKWCERPEWIHVDSRPFASLSRDSGAALGLGIALHSPCYAQVRRAQLGNGQKIACLVLAMGLLGPLDWL
GHPPQISLFYIFNFLKYTLWPCLVLALVPWAVHMFSAQEAPPIHSS

FIGURE 2458A

AGTGCTCGCGGGGCCGCGGCGGAGTGTACCGTGCTGCTCTACTCGCTGCCATTCGCCCGCAGGTCGGCGCGCTCG
CCCACCTGAGCCGCGCCGGGGCTGCGGGACCGTGGGACAGCGCGCTCAGCCCAGCCTAGGAAAGAGGCAGCAGTC
TCAGCGCGGAGATGGGGAGCGGGCGAAGTTGACGAGTCTCCCGCCCACGCTGCGCCCCTCCTGCCCAGAGGGGCT
GCAGCCAGCGGTCTGTCGCGCGTGCCTGTGTGCCCGAGGAGCCGCCCCGGGGAGAAGACCCGGCGCGGAGTTGTT
CCCCCAGGGAGGATCCGCAGCCCAGCCGAGGGGGTCGGGCGGCCTGGCTACGCAGGACCCAGCCCCGCAGCCGCG
GACTCCCAGCGGCGGCGAAGTTTGGCTGCTGAGCGGCGCGGCGCCGGACCACTGGACAGCGGGAGCGATGCCCGT
GGGGGGCCTGTTGCCGCTCTTCAGCAGCCCCGCGGGCGGCGTCCTGGGCGGGGGGCTCGGCGGCGGCGGTGGCAG
GAAGGGGTCGGGCCCCGCCGCCCTCCGCCTGACGGAGAAGTTCGTGCTGCTGCTGGTATTCAGCGCCTTCATCAC
GCTCTGCTTCGGGGCGATCTTCTTCCTGCCAGACTCCTCCAAGCTGCTCAGCGGGGTCCTGTTCCACTCCAGCCC
CGCCTTGCAGCCGGCCGCCGACCACAAGCCCGGGCCCGGGGCGCGCGCCGAGGACGCGGCCGAGGGGCGAGCCCG
GCGCCGCGAGGAGGGGGCACCCGGGGACCCGGAGGCCGCCCTGGAGGACAACTTGGCCAGGATCCGCGAAAACCA
CGAGCGGGCTCTCAGGGAAGCCAAGGAGACCCTGCAGAAGCTGCCCGAGGAGATCCAAAGAGACATCCTACTGGA
GAAGAAGAAGGTGGCCCAGGACCAGCTGCGTGACAAGGCGCCGTTCAGAGGCCTGCCCCCGGTGGACTTCGTGCC
CCCAATCGGGGTGGAGAGCCGGGAGCCCGCCGACGCCGCCATCCGCGAGAAAAGGGCAAAGATCAAAGAGATGAT
GAAACATGCTTGGAATAATTATAAAGGTTATGCCTGGGGATTAAATGAACTCAAACCTATATCAAAAGGAGGCCA
TTCAAGCAGTTTGTTTGGTAACATCAAAGGAGCAACTATAGTAGATGCCCTGGATACACTTTTTATTATGGAAAT
GAAACATGAATTTGAAGAAGCAAAATCATGGGTTGAAGAAAATTTAGATTTTAATGTGAATGCTGAAATTTCTGT
CTTTGAAGTAAATATACGCTTTGTTGGTGGACTACTCTCAGCCTACTATCTGTCTGGAGAAGAGATTTTTCGAAA
GAAAGCAGTGGAACTTGGGGTAAAATTGCTACCTGCATTTCATACTCCCTCTGGAATACCTTGGGCATTGCTGAA
TATGAAAAGTGGTATTGGAAGGAACTGGCCCTGGGCCTCTGGAGGCAGCAGTATTCTGGCAGAATTTGGAACCCT
GCATTTGGAGTTTATGCACTTGAGCCACTTATCAGGAAACCCCATCTTTGCTGAAAAGGTAATGAATATTCGAAC
AGTACTGAACAAACTGGAAAAACCACAAGGCCTTTATCCTAACTATCTGAATCCCAGTAGTGGACAGTGGGGTCA
ACATCATGTATCAGTTGGAGGACTTGGAGACAGCTTCTATGAGTATTTGCTGAAGGCCTGGTTAATGTCTGACAA
GACAGATCTGGAAGCTAAGAAGATGTATTTTGATGCTGTTCAGGCTATCGAGACTCATTTGATCCGCAAGTCTAG
CAGCGGACTAACTTATATCGCAGAGTGGAAAGGGGGCCTCCTGGAGCACAAGATGGGCCACCTGACCTGCTTCGC
TGGGGGCATGTTCGCACTCGGGGCTGATGCAGCTCCCGAAGGCATGGCCCAACACTACCTTGAACTCGGGGCTGA
AATTGCCCGTACTTGTCATGAATCATATAATCGAACATTTATGAAACTGGGACCAGAAGCTTTCAGATTTGATGG
TGGTGTTGAAGCCATCGCTACAAGACAAAATGAAAAATACTACATCTTACGGCCAGAAGTTATGGAGACTTACAT
GTATATGTGGAGACTGACTCATGATCCAAAGTACAGGAAATGGGCCTGGGAAGCCGTAGAGGCCTTGGAAAACCA
TTGCAGAGTGAATGGAGGCTATTCAGGCCTAAGGGATGTTTACCTTCTTCATGAGAGTTATGATGATGTGCAGCA
GAGTTTCTTCCTGGGCAGAGACATTGAAATATTTGTACCTAATATTTTC**TGA**CGACGATCTTCTTCCACTGGAGC
ATTGGATCTTCAATAGCGAGGCACATCTTCTCCCTATCCTCCCTAAAGATAAAAAGGAAGTTGAAATCAGAGAGG
AATAAAAAGACATTTTATATTTTATTCTGCTCCATTCCCTTCACTGTATACCTTAATAATTCCTTTTCTGGTAAT
CAGGCACATGATGAACTTTGATTAGTAGGTCTGTGATTAAGTTCTTAAATTGTTTTGCAGTCTTTTATGTTTATT
ATCATAGGTATAGGTGGACCTAAATTCCTTATCATATCCTTTATTAATTCAGCCAGTGTATCCACCAGTTTTTTG
TTTATGTTTTTAAGTAACCTATTATCTCTGGATTTCATGAAGGTGTAATATCGTTTTTGTTAAACTGAATAGAAT
TGTATAGCGATGACTTCTTAATTATAATTTGATTTGACTGCAAAACTTTTTCCTCCTCTAAGAGGAGATGATGTC
TGCTTTAAGCTGTAATGTTTTGCCATGTTGCAAAAAGCCATAATAATAAGTATAAAAAAGCTTTTTCCTTTACAA
TTTCATGTTAATCTGGTTTGTCTGTCCACCAGAGACAGATCTTCTGTGACAGCCTCCTTATGCAGGTCTATCATT
ATTTGATAGAATGTCTTCTAAAATACTTCACTCACATTGTAATTCAAATTAGAAAGTCATTCCAAAAGGATCATG
TCATGTTGACCTCATTTCATCGGAACTGCAGTATATTTTTGTTGGTTAATTATATTAGTGTTTTCTATTTTGTAA
ATGTGTCCTTTAATTTTACTTTAAATGCCCTGTGTCATTTCTGGATTATATACTAGTTAATTTCTTCCATTCCCC
ACTACACAGAGAGGTGAGCTTTCAAATTTTGCAGAGCTCTGCTATCACTGAATTACATTTATCTGAAGAAAATAG
TACAACTTAATGGATTAGCTTTTGGGTTTAACTGAATATATGAAGAAATTGGGTCTGTCTAAAGAGAGGGTATTT
CATATGGCTTTTAGTTCACTTGTTTGTATTTCATCTTGATTTTTTTCTTTGGAAAATAAAGCATTCTATTTGGTT
CAGATTTCTCAGATTTGAAAAAGGCTCTATCTCAGATGTAGTAAATTATTTCCTTTCAGTTTGTGAAAGCAGGAT
TTGACTCTGAAAGAAGCTTTGCCAATTTTACTTATTCGTGATCAATCAAGGAAAATCTAATAAATTTTAGGCCAA
ATAAGAATATAGCATATTTAGTATGGTTATAGTCAACACAGAGATCACAACTTAGAAGAAATATAAAGAAATGGC

FIGURE 2458B

CACTCCCCATCCCCCACAGTCCTGGAGTAAATCAAAATCAATATATGATTCTTTTAAACATTAAGTTTGAAATAG
GAATGGTTTTCTCAAGAATAGATTTGGTGTGATACCTTGTGTTTGCTTACATTGGCCCACTATATATACATATAT
ATTTATGTAGATATACTTCCATGAAAGGGCTAATACGATGCATATACTGAAGGGCAAGGACTTTGACCATGTGAA
TTTTCAGCCGAGAATGGTCAGAAAGATCAGTACAACCCCATGGATTAGGCTGAAACATATGAAATTGCTGCATTT
GTAGTTTAAAAACTGTCAGCAGTTTCATATGGTTCCACCTAATATTATTGAAGACAATTATTTTCTTAGCTATCA
ATAGGCTTAATAGTTTTAGTTATTTTAGCTTTTGAAAGTGTTTTAAAAGATTTCCTTTATCGGACAGGACCATCT
TTATGACCTGCTTTCTGTTTTTCAATATCATACATTGGTGTATGTCAAAGAATAAATTAGTAAAATTAGTAAATG
AAAAAGACTCTTCCGTACATCATTATTTCCATGCTAATGTGTGTCTGTGATCCAGAATAACTTCTCCCACTCATA
TCTTCAGTTCACCTAATGAAATGAATGGATAGCAAGAGCCCTTTGTTCCCAGGACTTTAAGGCAAAATATTAAAA
ATTATTGCCAAAATTAAGAATATAATGTTTGTATAAATGTCCTTGAATTTGCCATTTAAATTAACTCATTTTCTT
TTCACTTTGATTTGAAAGCTGATAAGTATTTCTGCAGCAGATAGAATATTAAAATCAGGTTGTGTGTACACACTG
CACTATGAGGTACCTTGGTGTCCTGGTGTGAATAGACAAGAAGCTGTACTATATGTTGCTCTCTCAGTGGCAACA
ATGAAGTTTTTGCAATTCTAGAACTTGGATTTTTTTTTAACAAAAGTCCCAAAACACCAAAAATGTAAACAAGAT
AAGAGATTAATATTGTAGTGATGTAATTTAATTAAAGTTATATTTTGGGTTAATTTTAACAACTGAAGTCTTATT
GTTGAAACTTATTTTCAACAAAACTGTGCAGTTAAATTTGTATACGTATTCACATACTGAAAGATGAACCGTTAA
AATAGCACTTAATTTTGTGTTTCTTCAATATGTCTTGATATACTTTGTGCAATTAATATTACACATGTAAGTTGT
ATGGCAGTTTACAGAACTCAATGACTTGTCATGAGGTTTTCATATGAGCTACACATTGTGTACATTGATTGTTTT
TTATTTTTACATAAATCCATTCTGTCATTTTCAACTTTATATATAAATCTCCAATGTTATGGGAAACAATAGATT
GACACATAATTTTTAAAAATTATATTTGTAAAATTTCTCTATTGTGAATAAAGTCTTTTAATATATCTC

FIGURE 2459

VLAGPRRSVPCCSTRCHSPAGRRARPPEPRRGCGTVGQRAQPSLGKRQQSQRGDGERAKLTSLPPTLRPSCPEGL
QPAVCRACLCARGAAPGRRPGAELFPQGGSAAQPRGSGGLATQDPAPQPRTPSGGEVWLLSGAAPDHWTAGAMPV
GGLLPLFSSPAGGVLGGGLGGGGGRKGSGPAALRLTEKFVLLLVFSAFITLCFGAIFFLPDSSKLLSGVLFHSSP
ALQPAADHKPGPGARAEDAAEGRARRREEGAPGDPEAALEDNLARIRENHERALREAKETLQKLPEEIQRDILLE
KKKVAQDQLRDKAPFRGLPPVDFVPPIGVESREPADAAIREKRAKIKEMMKHAWNNYKGYAWGLNELKPISKGGH
SSSLFGNIKGATIVDALDTLFIMEMKHEFEEAKSWVEENLDFNVNAEISVFEVNIRFVGGLLSAYYLSGEEIFRK
KAVELGVKLLPAFHTPSGIPWALLNMKSGIGRNWPWASGGSSILAEFGTLHLEFMHLSHLSGNPIFAEKVMNIRT
VLNKLEKPQGLYPNYLNPSSGQWGQHHVSVGGLGDSFYEYLLKAWLMSDKTDLEAKKMYFDAVQAIETHLIRKSS
SGLTYIAEWKGGLLEHKMGHLTCFAGGMFALGADAAPEGMAQHYLELGAEIARTCHESYNRTFMKLGPEAFRFDG
GVEAIATRQNEKYYILRPEVMETYMYMWRLTHDPKYRKWAWEAVEALENHCRVNGGYSGLRDVYLLHESYDDVQQ
SFFLGRDIEIFVPNIF

FIGURE 2460A

CCGGCGGCGAGACGGAGAGGCGGCGGAGGTGCCGCGCGCAGGATCTGGTGGGCGGCCGCGAGGCTCGGGAGAGGC
GAACCGGAGCGCGGGACCGCGGTCGCCCCGACCAGAGCCGGGAGACCGCAGCACCCGCAGCCGCCCGCGAGCGCG
CCGAAGACAGCGCGCAGGCGAGAGCGCGCGGGCGGGGGCGCGCAGGCCCTGCCCGCCCCTTCCGTCCCCACCCCC
CTCCGCCCTTTCCTCTCCCCACCTTCCTCTCGCCTCCCGCGCCCCCGCACCGGGCGCCCACCCTGTCCTCCTCCT
GCGGGAGCGTTGTCCGTGTTGGCGGCCGCAGCGGGCCGGGCCGGTCCGGCGGGGCCGGGGGATGGCGCTGCTGGA
CCTGGCCTTGGAGGGAATGGCCGTCTTCGGGTTCGTCCTCTTCTTGGTGCTGTGGCTGATGCATTTCATGGCTAT
CATCTACACCCGATTACACCTCAACAAGAAGGCAACTGACAAACAGCCTTATAGCAAGCTCCCAGGTGTCTCTCT
TCTGAAACCACTGAAAGGGGTAGATCCTAACTTAATCAACAACCTGGAAACATTCTTTGAATTGGATTATCCCAA
ATATGAAGTGCTCCTTTGTGTACAAGATCATGATGATCCAGCCATTGATGTATGTAAGAAGCTTCTTGGAAAATA
TCCAAATGTTGATGCTAGATTGTTTATAGGTGGCAAAAAAGTTGGCATTAATCCTAAAATTAATAATTTAATGCC
AGGATATGAAGTTGCAAAGTATGATCTTATATGGATTTGTGATAGTGGAATAAGAGTAATTCCAGATACGCTTAC
TGACATGGTGAATCAAATGACAGAAAAAGTAGGCTTGGTTCACGGGCTGCCTTACGTAGCAGACAGACAGGGCTT
TGCTGCCACCTTAGAGCAGGTATATTTTGGAACTTCACATCCAAGATACTATATCTCTGCCAATGTAACTGGTTT
CAAATGTGTGACAGGAATGTCTTGTTTAATGAGAAAAGATGTGTTGGATCAAGCAGGAGGACTTATAGCTTTTGC
TCAGTACATTGCCGAAGATTACTTTATGGCCAAAGCGATAGCTGACCGAGGTTGGAGGTTTGCAATGTCCACTCA
AGTTGCAATGCAAAACTCTGGCTCATATTCAATTTCTCAGTTTCAATCCAGAATGATCAGGTGGACCAAACTACG
AATTAACATGCTTCCTGCTACAATAATTTGTGAGCCAATTTCAGAATGCTTTGTTGCCAGTTTAATTATTGGATG
GGCAGCCCACCATGTGTTCAGATGGGATATTATGGTATTTTTCATGTGTCATTGCCTGGCATGGTTTATATTTGA
CTACATTCAACTCAGGGGTGTCCAGGGTGGCACACTGTGTTTTTCAAAACTTGATTATGCAGTCGCCTGGTTCAT
CCGCGAATCCATGACAATATACATTTTTTTGTCTGCATTATGGGACCCAACTATAAGCTGGAGAACTGGTCGCTA
CAGATTACGCTGTGGGGGTACAGCAGAGGAAATCCTAGATGTA**TAA**CTACAGCTTTGTGACTGTATATAAAGGAA
AAAAGAGAAGTATTATAAATTATGTTTATATAAATGCTTTTAAAAATCTACCTTCTGTAGTTTTATCACATGTAT
GTTTTGGTATCTGTTCTTTAATTTATTTTTGCATGGCACTTGCATCTGTGAAAAAAAAAAAAAAACACATCTGTAG
TCTTGGCCAAATGATACACTTTATTTTGTGGAAGTAGAGAATCAAGAGAATTGGTTCTAGGAACCTGGGTTCGTT
CATCATTGTTGTTTATTTTTTTAAAATAAATAAATAAATATATATATAGATGCTCTGCAACAAACTCTGTGACAG
TATCCTTCAGTAGAGAAAGTTTCTTACTTGTGAGTACACTCTTTTAGAACATTTACGGGTGGCAGCAGCTTTGCT
TTAGAGTTTAGAAGATAATAGAAGGAATGACTATTCATGTCCAAAGTGAATGGTTTTGTGCAGTGAACAACACAT
GGCGAGGTACTAACTGAGAAACTTTTTCATGCTTTATGCCTACCTCTTGTAGTTGTTGCAGAGCAAATACAAATT
GTAATAAGATAGCTAGGCCTTGCAGAAACAAACAGAAAAACTTAAAAAAAAAATGATATAAGAGCTGGAGTCTAGT
ATTTATATGAATCTGTGAGAGATAATTTTTTTGGTCTCACTGCAATGAACCAAAAGCGGCTGAGTTTGGTTTTTA
ATTGTAGCCATGTATTGAAGGCATCTTTTTGACCAACTCTTGTTGGTTCTGTCTTGAACCATTGTTAATCACTGT
GCTGTAATTAGTATAGCTAAATCTTTTCCTTCCTTGCTCCTCCCCCAGCCCACCCCGTCTTCCCTTAACATTTTT
TCAGGGGGGGTTGGGAGTGGTTTCATTTTAGTGTGAGTGGATGTTTTGATAGTTGTAAGGAAAAAATGCATTTCA
GACACATTTCACACATGAGCTATTTTCTTACACAGTATGTCTTATTGTTAATAAGAATGTAATTTCATGATACAA
GTATTTAATACCTTTTTTAAGTCAGTAAATATTCTAGCCATCAATAAATTGCAGTAGAGTATTAAGAGGGGACAG
GATGAGTTTACTCTTAAAATTAATCAGTATCAAACTAAGTCTACTGTGTGTGTTTTTTTTTTTTGTTTTTTGTTT
TTGTTTGTTTACTATTATAGTAAGTCTAGTCTTATTTAAATTGGATTTTTGTATTCAAGTTTATATGACAAAATA
GACTAGATCAGCGCTGGTTGTAAATGCATGCTGTACCTCACTGTTTTCTCCCCATCATGCCGCTAAACTTGCTCG
CCAGGTTGTGCTTAACTTGTGGTGAACTGGACTTGATTCTGTTTTGTTTTGTTTTTTTAAANAAAAAAACAAAAA
TGTAAGGGACAGTGCATAAGCCTTTTCTTTGTTAAGTAGTGGTGTTTTGCTTTTTCTTCAGGATTGGATGGCATG
TTGTCCACAGGAATGCCTACTGCAGGGCTAACACTGGCAATATGGCAGCTTTAAATTCTGAGTTACTACAGTCTC
CATGTCAAAGCATAATGTGTAGCATATCAGCAATAACTACATATTTATAGAAAACACTTTTTCACTTTACTGAGC
CAATTCATTTAATTGTCAAATGTCTATATCCATGGTTTAAATGGCAACATATCTATAAGTATGTATACACATTAT
ATTTAAGCTTTTCTCTGGGCCAAACTGCTTCATCCTTTTTTCTTTCTTTTTTTTTTTTTGTATAGCCTTATGATGA
ATTTGTTTGAAGGGCATTTTCTTTATGAACAAAGGCTTGGATGCATATTCCTTTCTTTCTGTGAATGGGTATTAT
TCCCTGAGGAAAGTTGCACAGTGAAAACCAGTCTGGTTGTGACCCACTACATGTTTTGTTTTTAATCACTATTAC
CTGAGTTGAACTTTGCTCACCATGTTTGTACTTGTTGGTCTGTTTAATGAAGTTTGGTTGATGCCATCCTTTGCA
CTGCCGAAGCGTAATCTTGTGTATTACTTAGCTCTCTGCTGATCTCAGTATGGACAGTGTAACAACAAAACCAAA

FIGURE 2460B

ATGGCTGGACAGACTTCTTGTGTTTTGTAAATATAAACTAGGACAGTTCTGTAGGTTTGTTCAGTGTGCTAGTGG
AGTATTTCCTTAATGTAAAACTTCACTTAACAGAGAGATTCTTTGTTTAGCAAGCTTGGAGTGATGATAAAATGG
TAAGAAATAATATAAATGTTGAAGAAAGCATCACAACAGAACTATAGGAGTCTAAATTTAATAAATCTTTAAAAA
AAACCAGTGTCTAGAATATATACCATGTTTTATTATTTAAAATCATTGTCTTAAATTTTTGTTCAAAAAATAAAA
ATTTGAATACAATCAAAAAAAATAAGTATAA

FIGURE 2461

RRRDGEAAEVPRAGSGGRPRGSGEANRSAGPRSPRPEPGDRSTRSRPRARRRQRAGESARAGARRPCPPLPSPPP
SALSSPHLPLASRAPAPGAHPVLLLRERCPCWRPQRAGPVRRGRGMALLDLALEGMAVFGFVLFLVLWLMHFMAI
IYTRLHLNKKATDKQPYSKLPGVSLLKPLKGVDPNLINNLETFFELDYPKYEVLLCVQDHDDPAIDVCKKLLGKY
PNVDARLFIGGKKVGINPKINNLMPGYEVAKYDLIWICDSGIRVIPDTLTDMVNQMTEKVGLVHGLPYVADRQGF
AATLEQVYFGTSHPRYYISANVTGFKCVTGMSCLMRKDVLDQAGGLIAFAQYIAEDYFMAKAIADRGWRFAMSTQ
VAMQNSGSYSISQFQSRMIRWTKLRINMLPATIICEPISECFVASLIIGWAAHHVFRWDIMVFFMCHCLAWFIFD
YIQLRGVQGGTLCFSKLDYAVAWFIRESMTIYIFLSALWDPTISWRTGRYRLRCGGTAEEILDV

FIGURE 2462

ACTCGCGGGTAACTTGCTTTTGGGAGCCAGCGGTATGGCGTCGGGCTGCAAGATTGGCCCGTCCATCCTCAACAG
CGACCTGGCCAATTTAGGGGCCGAGTGCCTCCGGATGCTAGACTCTGGGGCCGATTATCTGCACCTGGACGTAAT
GGACGGAC**ATG**CACATGATGGTGTCCAAGCCAGAACAGTGGGTAAAGCCAATGGCTGTAGCAGGAGCCAATCAGT
ACACCTTTCATCTCGAGGCTACTGAGAACCCAGGGGCTTTGATTAAAGACATTCGGGAGAATGGGATGAAGTCTT
GCTCTGTCACCCAGGCTGAAGTGCAGTGGCACAGTCAGGGCCCATTGCAGGTTGGCCTTGCCATCAAACCAGGAA
CCTCAGTTGAGTATTTGGCACCATGGGCTAATCAGATAGATATGGCCTTGGTTATGACAGTGGAACCGGGGTTTG
GAGGGCAGAAATTCATGGAAGATATGATGCCAAAGGTTCACTGGTTGAGGACCCAGTTCCCATCTTTGGATATAG
AGGTCGATGGTGGAGTAGGTCCTGACACTGTCCATAAATGTGCAGAGGCAGGAGCTAACATGATTGTGTCTGGCA
GTGCTATTATGAGGAGTGAAGACCCCAGATCTGTGATCAATCTATTAAGAAATGTTTGCTCAGAAGCTGCTCAGA
AACGTTCTCTTGATCGG**TGA**AACCATAAGGAGCCCAGTGTTCCTGTTCATGAAATCTCCCTTTTACTGGAAAACA
GGAATATTGACTACCAAATCACAATGCAATTGAAGCCGTACTGCTTTTTTGAGCAGTTATTCATTCCAGTGATTA
AAACTGATTGTGCAGAATATTCTAAGAGGTCAGAAATTGGTGTGTATAACTACATTTTTAGTGATGCAATTTATT
GATTAGTGAGTAAGATACTGTTTTTATTGAGAGATTTGATTTTTATAAAGTAAAAATACGGCTGCATTAGGGTTA
CAAACAGAAAAGTGTCTTAATGTCTAAGGAGGGCATATTAGCTACACTACAAAAACAAATTTTGTCTGTACTTCT
GAAAAGAATTTTGTTGTTTCTCAGCTGTTTTCCAAAAGCAAAGGAAGTCTTTATGGTTTTTTTCTATTTCATGTT
ATTGTGATTTGTTTATAAGTTTGGGTGGGGTGCATACCATATTCTTGGTTCTTAAAATCTATCACTTTTCACCTT
ATACTTGATGTGTGAAAACTATAAAAACAATGTGTGAAACCCAGGGGTTCTAAAATACAAGCATAGATTTTATCA
GGGTGTTTTGTCAAAGCAGGTTATTCAGTGATTCCTCCCCACCATTCTTAAGAACGTTAAATAATGCTGTTGTGT
TAGCTCTGAGTAGAAAGGAAAAAGTAAAACCTCTGTTTGGAGGTAATATTGGGTTGAATTCTGACTGCCCCTTTC
TAGCTGGACCTTTAACAAATCACCCAATCTTTTTTGTGTTTCTCTAAAGTCATTTATACATTAAATGTAATTATA
GCAACTGTGGGGTTCTGTTGAGAATTAAGAGCTAACACTATATATGTAAAGTTTCCAGTACTAGTCCCAGAATTT
AGAATATGCTCAACACAAAGTAAACAGCATTATATAAGTTTATATTTTTGTGAGTTATAAAGTACTTTGATATAT
TCTCATTAAATCTGTAAATCACCTCTATAAGTAAGTGGTAATAATAAAGCAGATATTTTTGTCCCCATTTAAAAA
ATGAAGAAATTAATGCTTAATAGGGTGGTACCCTGGAAAGGATCTGGGAAGTGGTAGAATTTCTGGTCTGTACTT
TTACAAATGGAGCCCTTGGGAGGTGGGTTAGGTAAAAGAAGCTTTTTACTTAACGTTGTCTTATTTCCAGTCTAA
TTTTACGCTGTAGCAGAACCAGATGGCTGAGAAAATTCTGGAACTATGGATCTTGACCCCAAGGATATATTATTT
TATTCCAAGAAAGATCAGGTAGGCGAAAAGATGACAGGATACAGAGTCAATCCATAAACTAAATATTTATAACTG
TTCTGAATTATACAGAGTCTAAAAATATGTGTCAGCTACTTCATTCCTGTAAATACTCTTGCTGTGTTATAAATA
TGGCAAGAAATAAACATGACCAATATCAAT

FIGURE 2463

MHMMVSKPEQWVKPMAVAGANQYTFHLEATENPGALIKDIRENGMKSCSVTQAEVQWHSQGPLQVGLAIKPGTSV
EYLAPWANQIDMALVMTVEPGFGGQKFMEDMMPKVHWLRTQFPSLDIEVDGGVGPDTVHKCAEAGANMIVSGSAI
MRSEDPRSVINLLRNVCSEAAQKRSLDR

FIGURE 2464A

CTCCACAGTACCTGAATGGAGAGCGAAAGATAATGATCTACGATTACTGCTGACAAATGGAAGAATAATTAAAGA
TGAAAGGCAGCCCTTTGCAGATCAAAGTCTTTATACAGCAGATAGTGAAAATGAAGAGGATAAAAGAAGGACAAA
AAAGGCAAAAATGAAGATAGAAGAGAGTTCAGGAGTAGAGGGAGTGGAACATGAAGAATCTCAAAAACCACTGAA
TGGGTTTTTTACAAGTGTGAAATCAGAACTCAGGAGTAGATCATCAGGATATTCTGATATTTCTGAGTCAGAAGA
CTCCGGACCCGAGTGCACTGCACTGAAAAGTATCTTTACCACTGAAGAGTCTGAAAGTTCAGGTGATGAAAAGAA
ACAAGAAATAACATCCAACTTTAAGGAGGAATCTAATGTGATGAGGAACTTCCTTCAAAAGAGCCAGAAGCCATC
TAGAAGTGAAATTCCAATTAAAAGGGAATGTCCTACCTCGACGAGCACAGAGGAAGAAGCTATTCAGGGCATGCT
GTCTATGGCAGGGTTGCACTATTCCACGTGTTTACAAAGGCAAATACAAAGCACAGACTGCAGTGGTGAAAGAAA
CTCTCTCCAGGATCCCAGCAGCTGCCATGGCAGTAACCATGAGGTTAGGCAGTTGTATCGCTATGATAAACCAGT
GGAATGTGGATACCATGTCAAGACTGAAGATCCAGACTTGAGGACTTCCTCCTGGATTAAACAGTTTGATACTTC
CAGATTTCATCCTCAGGATCTAAGTAGAAGCCAGAAATGCATCAGAAAGGAAGGTTCATCAGAAATTAGTCAGAG
GGTACAAAGTAGGAATTATGTGGACAGCAGCGGCTCAAGCCTTCAGAATGGAAAGTATATGCAGAATTCAAACCT
GACTTCGGGGGCGTGCCAGATAAGTAATGGCAGTCTAAGCCCAGAAAGGCCAGTTGGTGAAACTTCCTTCTCGGT
GCCCCTTCACCCCACCAAGAGACCGGCATCAAATCCACCACCTATCAGCAACCAGGCAACAAAAGGTAAACGTCC
AAAAAAAGGAATGGCAACAGCCAAACAACGTCTTGGGAAGATCCTTAAGTTGAACAGAAATGGCCATGCACGTTT
CTTTGTGTGACAGAGCTGCTGTTGCAGCCATTCTTCCCTTTGGAGACCAGTCTAGGGGTGCAGGAGCCTGGAGCT
TCCGCTGTCCCCCTGCCTGGAGCAGTTTGTGTGTATAGTAAGAACACTGCCCGAAGAACAGAATGAACCTGATGC
TGCATTTTCACTGTGCCACACCCACTCAGCAATAACCATTTTGGACCTGGTGGGGGAGAGGAAGAAGGAGGGTAG
AACCTTAAAAAGAGACCTTGAACTGGAAAGGGTCTCTTGTCAGGGCTTGAATTTTATTTTGTTGTTGGTAGTGTC
TTGATGTATTTTCAGTGGTAGGGTAAAGAATTATCAATAATTTATTTAACAGATTTTTTTTTAAAGTTAACAGCT
TTTAAATTCTTTTTTTAAAGCTATTTATTTGGAAGATTTCTGGAGAAATATCTCACTAATTTAGATGTAAGAATG
TGAAGGTTTTTAAATTATTTTTGATAGTGTGTGTGTTACATGTGGGGAAGGGCCACAGTAACAGTAACTAGTCTG
GACTCTTAAATTTGATATTCAGGTTAAAGTCTTAAACAGGGATTTGATGCATTAATTATTTTAAATTAAGATGTA
TATGAAAATCATTTTATTTTATATATTTCATGTGTTTTTTATAAGCTATTAGCTTCGCTTTTGCTAACATCCAAG
GTGCATACTGTTATCCAGGTTGATTACCTTATATCCCACCTTCCCTCTGCACTCCCCATCATTTTGTGATGACCC
AGTAAGACTCTTCTCTTTGCAGGGAAACACTTTCGTAGCCAATGTGTAAGAACTCCATGAAAGATCCCTCATTTC
TCATTTCGTTTGACATTGTGATTTTCTTCTCAACATTAAAAAAAATAGGCTTTTGCATTTTCATTTCTGCTGATG
ATATCTGGGTCCCAAAGAGAGCAGCTTTAATATATTTTTCCTACTTGTGGGAAAAGTATTATAAGTTTGGTTAAA
TTGTCATGTTTATAGTTTTTCCAAGTACATTTGTAACTACAGCAGGCCTTCTTCGTACTGCTGCTGTTGGACAAC
AGGACTGGCACCTGCTGCAGAGGTTATACCTTATGATACTTTTATGCTCCATACCTGATTTGTTGGGAAATGTTA
TTTAGGATATTCAAATCTGCATCATAAGCCGTAATATAATAGGATTAATACTACATTAAGTTGTATAGAAGCAAG
CATGTTGGAATAGATCTTTTGTGTGTATTTACTTTTTTTATTTCTTAATTTTCTAAAGAATTACTTAAGATATGG
ATTTGGAGTAAAATGGGTGCTTTTGGCAGTTTCTTCCATCTATCCTAACCTGACCAGTACATATTGAGGTTAAGT
ATCTGGTTAAACTTTAAGGTATTCATTTATCTCCTTTATGTATGATTTTTACTAAATGCCAGTTTTCATTTGCTT
ATAGTAGCTTCTATTTTCCCTTTTTTCCATCCATGGCATAAAAATAAGTGATTTCTGGGGGTGGGGCAGAAATGT
TCCCAAGTCTGACAATAGAGCATTTTACAAATTCCTACAAAGAAAATATAGGCAAATAGATAAAATTTATTTTTA
TGGAGAAGAAATATGGCCATATTATGGATTTGTCTTTTTTTTTACTCAGCAAGATAGCAGGACTTACCCTTCTCTA
TTAAGTATCACTTGAATTGCTAAGAAGAAAAAAGTCTGTACCATCATCTTTCATGGTTGCATTCAAATGTATATT
TTCAAAGAGAAATACTTCTTGTGTCCCCATTCCAAAATGTCATGGGATAAATATGAAATAGTTTATGAAGTAGCC
TTTCTGGTTCAGAGTGACTGGACCAAAGTCTGAATCTTATCTGGGTATCAGGAAAAAGAATTTTTATGGAAATCC
TTAGTGTCTATAAACAACCCGTGTAAACCCTGTCTACACTATGCCAAAACCAGTGGAAAGATGGGTAGAGTCATC
TTATCTCAGGATGTCAAAAATCTGGGTTTGACTGATTCCCCTACCTTCCCACACAGTATATTCTTGTGATTTTTG
CTTTTCTGTAGATCCTGAGTCGGTGTTACAATAGTCATGTTTTTATTTTGGGTTAAGAAATACGAGGTGTAAGAG
CTATAATTTCCTTTTCGTGTTATATCATGATCTGGGTTTTCTTTTTTCCTTTACGTTTTTCACAGCTCTTGAGTA
TTTTCTATTTTTTTCTTTAGTCACAAAAATTAAAATTAAACTTTATTTTTATGAATTAAAATGAAATTTAATTTA
TTTTTATGAATTAAAATTGTGGCCAGTATCCACTGTGTCCTTAGGCTGAGAAGTACTAATTTGGAGTAGCCCGTG
TGTGGAATTCTAAAGTGAAGGTACTGTGGATTCATTTTTAGTAGTTTTAGCCCCTTAATAAGTGGCTAAGTTAGA
AAACTTTCAGCGAGGTAATAGAACCACTTGAATAGAATCCATGTGTCTTTTTCTGAATTGGTGAAAATTCGGCCA

FIGURE 2464B

CTGATCCAGTGACTCCTGGTCAAACGTCTTATAACATTACTGGCCATAATGCATCCCTTTATCTCATGGAAATGG
CTGAACTTTGTGGTAGCTGCTGCGAGTACCTGGGCTTAACAGTAATAGAGAACCTCATTTATACCATACAGACAC
AGCAACTTAGGAAGACAGCACTGATAGCATTTAGCTAGTTGTAACCAAATACAAATATGTAAAATTGAGAATTAT
GATTAACATATGCAACTTTAGTAATAGGAATAGATGATAATTTTCCTGTATTGTTTCAAATAAGTGACTGTTCAG
CTGGGATCCATTGGATTATAATTTACAATGTCACATAATATTATGCTTTTCAATATTGATGAGTGATGTAAACAA
TATAAAGTTGGCAGTTTGTAGTAGTTCAGTATCCTAGAAATACATTGAACTTCATAAGTATCAGTTCATTTTTAA
GCATACAGAATTGAAGATTCTGACTGAAATCATAAACTCAGAGGAAACAAGCCCATCTTTATCACTAATTACTTA
GCTTGAATACTTTTCTATTTTTAAATAATCCTAATTATTGCCTTTTCAATATAGTCTACTGTATTTATTTATATG
GGATCAACAGGTATTTATCAAACATCTACTGTGTGCCCAGCACTACCTAGTACTGTTGGGGAACATCAATTTGCA
GTTGTGGTCTCTGCCCTTGAAGGTATCTTCTCCAGGAAATTAGCAGTATTATTTTCACTTCTAAGCAAACATGAG
CAAAAGAGGACCTGTTCATTAAAAAACATGCTGACTTTTTTAGTTTCAACTGAGATATGCCACTGTAGAAGTGAA
AGTAATTTCACAATTAAAGAAATGCTTCAACTTGGTAATTAATATGGTCATACAGGGACTTGGTGTAGCATGCAA
GGAAGCAGAAGACCTGGGCTTTTGTCGAAGTTCTGCCATTTAGGTATCAGCTGTGTAACCTTGAATAAGTCACTT
AACTCTTTCTCTTAGTTTTCTCATTTGTAAATTTGGATTAAAGTGTTTATTATGATAATCAATTAAGAAAATCTC
TTAACACTTCATACATACAGAGAACTTATCATTAAGTTAAAACTGGCAATTAATGCACCTTTATATATATTTTTA
AATGAAAACTAATACTATTCATGATGTTTATTTTATATCAAATATATGCCCAGGGCATGCTACTTTAAAAATCCG
AGGAATCTCCAACAAGGTGCTGGATTAAAATCAGATTTTGTGCTTGAAGTGGAAGAAAAATGAAGTTGTTTATGG
ATAAGAGAGTGAGAATGTGTATCCTCAAGTACGTTAAGATGATTTAACTGAAAGATGGCTTTAGGTTTTTCTTGA
AGAATTAGGAAAGTACCATCCCCACAGATTCAGCATACTCTTCAGGTACTAGATAAAGGTGAAGGAAGTCATGGA
ATTAAAATGACTTAGCAACTCCCCAGGGAACTTGTGGGGAGAATGAGGTGGTTAGAAAGGTGAGAATGCACAAAG
ACAGCTCTGGGTTGGGTACCAACAGTTTGCTTGGTAGAAAGAAACCAGTGTAGGAAAGGAGACGCCACCAGACAT
CTTCAACAGACAAGATTCTTTCTGCCTTTTTCAAAAGATGCTCTCTGCAGCAGTAAGACTATAGATAGAGTTGAT
TGGAATATCATGTGACCCAGTATGCTACTGCTAGGCATAATTATCAAAAATTCATTTTTCTCATTAAATATTGTT
AATTGCTCGCCACATAAAGAGAAGCTAGAGCTCACCAGTCTTGGTGGTGTCCTAGACCTTCCTCTAAAGCAGTCT
TGGGAAGCTGGATCATCAGATCTTTAGCCTAGACAGAGTGTCGCTGGTAAATAAAGGAGACACAGGTAACCCAGA
GTGGACAGTGATTTGCGTGGGGAGACACAGTGGATCTGGGGCCTCTGATACTTTGCTTCCTAAAACAGCCCCCAG
TTTTCGGCTTGCCCTATGAGATGATGTTCATGTGCTTCCTTGAAACCAGGTGGAAAGAAAGGGGAAGAATTAATT
TTCTCATTCTGTTGCTGTTGAACGTAATGTAATCTTAATACTGTAGCCTTCCTAGAAGCCCTTCCCTCTTTTTCA
TGCTGTAAAGTCAAATATTTGATATCCTTAACATAAATTTTAAAAATTAAGGTCATTAGGAAGCAAATGTCTATT
TCCAAAGCAATGAGCTTGTTGTGACTGTGATTTTATTCTTCTATAGTATTTTTTTCCTCATTTTAATTGAGAGGA
GAAAATAATACTCTTTTGCAATATCCTTAGGTTCTCCCCTTCCCCCTGGTGCCCCTTCTAGTGTCTTAAGACTTT
GTCTTAACAAGTATAACATTACATTTTGTTGTTAAAACCTTTCGAAACTGTATTCAGTGATTCTTCCAAGTTTAT
CTGCTCTGCACTATTTCACTAATAAACCCTGGCTACCACGTAGCCCTTGATCTCCAAGTAGTTTACCTATGCAAG
ACCTGTGACACTCTGAATTCACTTCTCTTTCTTTCAGAAAGTAGTCATAAATGGAGCTTAATTATAAAGGTAAAA
CTTGTCTCCAACCAGTTTCATTTTGGCCATTTCTTTTTCAAAATGTCAGCTGTTTTCCTCCAAGATTTTTCACCA
AAACAATGATCATAAGTGCTGGAATATATAATACTTTGCAGGCATAAAATAACCCAGACATACTCTCATATTTCT
TTGGTGTATTTTGGTTGGTAAAACTTACCAGCATTAAATGTAAAATATAATGAGGAGTTAATTCCTTACCTAGAA
CTATTTCTTCCTTTTAAGATTCATAAGTAACCTTTTATTTTTACAGAGCTACGTATAACTTCCACATTACAGTCA
GGGACCTGAGGTGTAACTTACTAAGTGAACCCCAAGGTTATTTTATCTTGCAAAAGAAACCTAAACCAAACTAAG
GGCCTTACAGTTTATGGTTAGACTGAATCAAAAGCTATAACCTCAATTTTTCCAAAAACAGCTTCTGACTGCAAA
AGCAAGTCATACAGTTGTTAGGTATGAAATAGCACTGATCAGGAAATGCATCTTCGCAGATGGTATTTCCTTCAG
AAAAGACTTTTCTACTTTTAATATAAATTAAGCCATAACAGTTTCATGCTGTGGAAAGAGGGTGAAAAGGTTCAT
TTTAAGAGATTATATAATATGAACTTTCACATTTACTGTGAAATGTCTAACTTTGCCAGTGCTTCAGCAAGTTTT
TTTGGGGGGGTGATGGGGAGGGGTAGTATTGGTTTTAGAGGTTTCAAATCTGTGAACTTTGGAGAGGGGACAGTTG
TTGGCTCTGGTATTTACTAGTTTTGTAGTAACGTTTTGCTAGCCTGACTGACTTTTCTTACTGGTTTTTATGCCC
ACGGTCCGAGGGGACTGTTCTTCTTGTTTGGGGTGTCTGCGGAATAGCGTCTCGTCTTGTTTGTATAGGCAGTCA
ATGTGTGTGACATGTGTGTCCTTTCAGTCCGGAAGCCCACTGTGTGACAATGGCGTGGGGTGTGGCTGGGAGGTG
GGGTGCTGAAGCTTGAAGAGCATTTCTTTGCTGATTCATAACAGTATTTCCCATCTTTTGCCTGCAGGCAGGGAA

FIGURE 2464C

AGTGTACAGTATTTATTTTGTTTCTGTTTTACTTTAAATTTGTAAGTCTTTAAGTAGCTTACATTGATTATTATA
GGGGAGGACAAGTGACTTGTTTAAAGTTGTATTTAGTATTCTTTCCAATTTCTGTATTTTAAAATATTGAAATTA
AAATTGTATTACTTCTGTTTTGATTTTTTTAGCACTCAGTGTATTTTTTGCTCATTTTGTTTGAAAGTATAAATG
TTGAAAATTGTATAAAATGCGTCCTTGAAAGAAAAAGAATCTGAATTCTATATCC

FIGURE 2465A

GGTTGGCTCTTGCACTTCCTGGCTCTCTGGACTTGGTTATGTGATTGAGCCTCCATGGCCTCCGTGTCTTTGTCT
GTCAATGGGTTTGATTAAAGCGTTGACCTCATAGGTTCTTAGGAGGATTAATGAGAACATTTTATGTAAAGCTGC
TTACATGGAGCCTTGGTATGTGCCGGAAAGCTTTAGCCCTTTATTAAAAGTGACAGCAGACCCAGCACGGTGGCT
CATGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCGGGCAGATCACTTGGGGTCAGGAGTTCGAGACCAGCTAC
TCGGGAGGCAGAGGCAGGAGAATCGCTTGAACCTGGGGTGCAGAGGTTGCAGTAAGCTGAGCTCGCACCACTGCA
CTCCAGCCTGAGTGACAGAGTGAAACTCAGTCTCAAAAAAAAAAAAAAAAAAAGAGTGGCAGTAGTGGTGGGGGA
GACCCCCATCCCCCTTGCTGGGGTTTCCTAGGAAAGAAGGCTGGTGAGAGCTGTTGCTGGTGGTGGGCCCTGAGC
CGCAGGGTCTGAGGGCCTACCCTGTGCTACCCCAGAGCTGCCTGAGAACTGGACAGACACGCGGGAGACGCTGCT
GGAGGGG**ATG**CTGTTCAGCCTCAAGTACCTGGGCATGACGCTAGTGGAGCAGCCCAAGGGTGAGGAGCTGTCGGC
CGCCGCCATCAAGAGGATCGTGGCTACAGCTAAGGCCAGTGGGAAGAAGCTGCAGAAGGTGACTCTGAAGGTGTC
GCCACGGGGAATTATCCTGACAGACAACCTCACCAACCAGCTCATTGAGAACGTGTCCATATACAGGATCTCCTA
TTGCACAGCAGACAAGATGCACGACAAGGTGTTTGCATACATCGCCCAGAGCCAGCACAACCAGAGCCTCGAGTG
CCACGCCTTCCTCTGCACCAAGCGGAAGATGGCACAGGCTGTTACCCTCACCGTAGCCCAGGCCTTCAAAGTCGC
CTTTGAGTTTTGGCAGGTGTCCAAGGAAGAGAAAGAGAAGAGGGACAAAGCCAGCCAAGAGGGAGGGGACGTCCT
GGGGGCCCGCCAAGACTGCACCCCCCCCTTGAAGAGCTTGGTCGCCACTGGGAACCTGCTGGACTTAGAGGAGAC
GGCTAAGGCCCCGCTGTCCACGGTCAGCGCCAACACCACCAACATGGACGAGGTGCCGCGGCCACAAGCCTTGAG
TGGCAGCAGTGTTGTCTGGGTGAGTGGTTGTGTGGCCAGCAGATCGGTGATCCTCAGCCTGACCTCTGGG**TGA**GC
CTGGGGCTGCTCCAGGGACCAGGCTCTGGGACCCGTGACTTGTGGGCCTCTGGGAGGACCAGACCCAGCCCGGTA
GTGCCCAGGCGCAGGATAGGGGATGAACAATGTCCCTTTTGAACCTGAGGCTGCATCCCCAACAGGCTTGGCTCC
CAGCACAGCTGTCTCCTCACAATGCTTGGCCTCTTGGCCTGAGCGTCCACGGCTCTGCCCACCACAAGACCAGCC
AAAGGCGCCCTTGTTCTTGGTGTGGCAGAGCTCGCTCCTACCACCCCTCCCCCTCAGCCGCCTGAATGAGGACCC
AGAGACTTGGGCAGTCACCAGCTTGGTCCCTGACTCCCTCAGGGACTCAGGGCAAGCCCCCTGACCTCTCTGTCT
CAGCTTTTTCATCTCAGTAAGGGTGATGACCTCTGCCAACGGAATCTCCCCGAGGAACCTGAAATTTAATTTTAA
TTTTTCATTTGGAAATAATTTCAGACTGTGTTACAAAATTAGTACAGAGAATTCCTGTTCACCCGTCATCCAGAT
TCCCCAATTGTTAACATCTTGCATGACCACATTACACTGGTCAGAATCAGGAAACAAACACGATACTGTGCTGTT
ATATAATCTATAGAACTTACACATTTCTCCAGGTGCCCCTTCAGTGTCCTGTTTCTGGCCCAGGATCCATTGCAG
AATCACATGTTAACTTGTCGTCTCTTTAATTTTTAAAAATCTGGGTACTGGGGGCTCCCCTGGTGTCCCTCGAGC
CTGTTCTCTGCTGTTTGGGAACCACCCTTGCCACTTGCCCATCCTCACCAGAACGCCATGGAGGGACCTCACCTG
TCGCTTTTCTGCTGAGGCTGTGGGACTCCTGGCATCAGTTATCCCTCATGAACTTGGAATTTTGGCTTGGCTTTT
GGAAGTAAATGAAGGCAAGAAAACTCCCTTCCCCACCCTCTTCCTTTTGGAATTTGAAAGCCATAGAAGTCATCA
GGTCCAATGCCCTCCTCTTATTGAAGGAAAAGCTGAGTTTCAACGTGGAGCAGTGACTTGCCCAAGGTCTCACGG
GCAGGTAGCATGGACCAGGGCACTGAACCCACCTGGGTCTCCAGACACCCTGGGACATGGCCTTTCTCCTCTCCC
ACGTCTCCAGCTTTGGGTCCTTGGGCTGAGATGCTGGCGATGCACCCAGGCAGGAGGCCTGCCTGAGGCCGTGCC
TCCAGGCGCCCACCCTGAGCTTGTGTCCTGAGTCCCTGTAGCTTACCCAGGGCTGGGACAAGCCCCAGCTGTGAG
CATGGGCTCCCCCAAACATAGTTCTTATCTCCTGCTTTGTTTTTCCCAAGGAGCTGGATGATGGCCTGGATGAAG
CGTTTTCGAGGCTTGCCCAGTCTCGGACAAACCCTCAGGTCCTGGACACTGGCCTGACAGCCCAGGACATGCATT
ACGCCCAGTGCCTCTCGCCTGTCGACTGGGACAAGCCTGACAGCAGCGGCACAGAGCAGGATGACCTCTTCAGCT
TCTGAGGGCCCGGGGCCAGCCGGACACAAGCGGCCCTGACACGTGATGGACCAAAGCCACCTGCTGCGGGGGAGC
CAGTTCTGGGGCCCGCCTGCCACCTCTCCCAGCCCTCAGCATTGTCAGCCTGAAGATCAGAGCTGCAGCCAGTCA
GGCAGGGGAGAGATTTTTCTTTTAAGCCCTGCTCTTTCTCTGAGAACCAAAAGATGCCTTGAATATTTATTCAGT
GACTTCTGGCTTATGCTCAGAAGCCAGTCTGCGTCAGGCACGTCTCCTGCTGCGTGACATGTGCAGTGCTGTAAT
CGGCTCCCGCTTGCTCTCCTGGAGCAAGCTCTGCCCTGGCTGTGGGTATCAGGACTGTGACCAAAGCATTTCTAG
TCCCTTCTCTCTTTCTAAGGACCCAAATTTCCCTGGGGGCATCCTGCTTCCTGAAAGCTGTTGGATTTCAGTGAT
TTTTCCCCCCACCCCCCAGCACAGGAGAGCACCCACAGCCGCAGAAGGGGAATGTGTCCTCCTGCTCTGCTTCCT
CAGGGCCCAGCAGGCGGGGGTTTGAGCCCTGGACCCCAGGCTCTTAGAGACTAAGGGGCAGCTCCTGACCAAAGA
CGATACAGCTTGGCACTTTAAAGCATTAACAGCAGGTGTGACCCTGAGGGCTCCTCCATGGTGCTGCATTGAGTC
CAGCTTTCCTTCTGCCCTTCCTCCAGGAGAAGGGGCCCAAGGTCCCCGTGGATGGTCTCCACCTGTGCTTGGAAC
CAGTGTAACTGGCTGCTCCCTGCTCCCAGGGACTGACACGGGGATCATCTCTGTGACCGCCCTCCGTCGGGCCCC

FIGURE 2465B

TGCCTGCCTTCTCCCCTCCACGCAAGGCTGTGCTCTTCCTCTGGTTTCTGTGTGTCCGTTTGAGTGTCTGCGCCC
CGCCTCCCCATACTTCCTGGGATGATGTGTGAAACCTGACACCTAGATTTATTTGGAAATATTCTATGACCACTT
TACAGATGAGGAAACTGAGGCCTCAAGCGTGGAGGGGTAGAGTGAAGAGTAGAACCCAGGTCTGATGCCAAAGCT
GCTTTCTTCTCTGCCTCCTCCTCACGCAACTCACACCTCCTTTTCTTCTAGCTTTGTTGTCCTCCCAGGAACCAA
AAAACCCCAGCTATTTTCTGACCAAAATGTGTTTCATAACAAACCATCTGGTGCCTTTCCACACAGAACTGGCAG
GAGCCTCGTGTCCTGCTAGCTGTCTCTCTTGTTGATTTCCGTGAAAATGCAAGTGTTTGAAGTCTGCTCATTCCG
AGGGTGAAACAAAATCCAACCCTGTCAGAATCATGCTGTTCTCTTTGCTGACACTGTGACCCTGGGTCGGGACAG
ACCAGCAGCAATCTGTCTTTAGAATCGCTTTCCTTCCTCCCCTTTTGCCCCCGTGGGGCTCCCGGCATCCTGAAA
GCCAGCAAAGCCTCCAGCATCTTTTCCATCCTGAGGTGCCTCCCAGTGGCCTGGCTTGTCGGAGCAAGTTTCATC
AGCCCTAGGGAAAACACGGCCCTCCTGGGAACCTCCTTACCTGGAGTAACCGGACACCTTAGACGGAGGTGCCTG
AGGGTGGGGTGGGATTTGCAGGGTCATTATCAGAACATGAGGATAACTTCCTTGCCCCTGCTCTGTAGCCACCTC
CTTGGCACCGGCCTCTATTTGTCATAAGGCGGCGTGGGCGAGGCCTGACACAGGCCAGCCTTGGCACGAGGGGGG
CCAGGGGTTCTGAGAAGCGCTGCCCTGTGAGAGCCACGCTGGCCTTCGTCTCCATCTCTGGTTGACGGGCTGTCC
GTTTGCCTCCTGTGTGTCTGCAGACAAGTCTTGCTGTGCTTTATTTGTGAAACTTTAATGAGGAAAAAACAAATA
ATAAATGTTCTCGTTTTGAAACTC

FIGURE 2466

MLFSLKYLGMTLVEQPKGEELSAAAIKRIVATAKASGKKLQKVTLKVSPRGIILTDNLTNQLIENVSIYRISYCT
ADKMHDKVFAYIAQSQHNQSLECHAFLCTKRKMAQAVTLTVAQAFKVAFEFWQVSKEEKEKRDKASQEGGDVLGA
RQDCTPPLKSLVATGNLLDLEETAKAPLSTVSANTTNMDEVPRPQALSGSSVVWVSGCVASRSVILSLTSG

FIGURE 2467

TGTGGCATTTAGAGGCCAAGCAATTGACAGAAAGGGTTTCTTCTACCTCTGTTATCTAAGCAGAGGGAAGTAAAC
TTCTCACCGCCCCCCACCCCTCACTGCCCCCGATTACACTAGAATTGCTTTCGCCAAATTGTAGTTGAAGCTAAG
GAAGGGGAATCTGGCCCCTGCTGGGAGAGGGAACTGGAATGCCACACAAGGCAAGGCCTGCTTCCTTCCTTCCCC
TCTGCTGCTGCTGCCTCGGAACGCTGCAGCCCAGGCTTCCTCCCACAGTGGCCCTTGGAAGCAGGCCGCAGAGTA
GACAGCTGCTCCTTTTGGAAGAGTCAGTCCCCTGTGTTTTCTGAACTGTTTTTCCTAGCATGTATGTGGGTAGAG
CTTTCATGCATCTCTAGTAATAATAAGCTGAAATTAGTTTTTTTTTTAATTCTCCAATTTAAAACTTTTAATTAA
AAAGTAAATTTTA**ATG**TCGAAAATGCAAACTTGGGGAGGGCAGAAAGATCACACACAAGGCTGTCACTTCATACT
TGCAGGATTGCACAGCAGCCGGGCAGAGGCGCTCCTCACTTCCCAGATGGGGCGGCGGGCAGCAGAGACGCACCT
CACTTCC**TAG**ACAGTGCGGCAGCCAGGCACAGGCACACCTCACTTCCCAGACAGTTGGGCGGCCAGGCAAGCGCT
CCTCACTTCCCAGATGGGGCGGCTCGCGGGAAGCGGGGCTCCTCACTTCCCAGACAGGGTGGCCAGGCAGAGGTG
CTCCTCACTTCCCAGAACAATTCTTTATGAATTTGATAAAGGACTGAAGTGCAACTGAAAGCTGCTAGTGATGAT
CTGGTAATATACAATTTGTCCAGTAGCCAGTTTGTTTTTATTGTGTTTTCTAACCATAAGAGATCATTAAAGGCA
AAGCCTGTATGACGCTGTACACACACAAAAAAATGGTCACCGCAGGCCATACTACCAATGAAATGGTAGGTAAAC
AAATCTTCTGGCCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 2468

MSKMQTWGGQKDHTQGCHFILAGLHSSRAEALLTSQMGRRAAETHLTS

FIGURE 2469

CACAAAGGCACCAAACCACAAAACGTCACACGTAAACATCATACGTGGCAACCACAAGCCAATCAGTTGGATATT
TCATTCATTGGTATACATATGGACTGTAAGGTGTCTTTCAGGTTGCAGAAAAG**ATG**GAAAAAAGGACATGTGCAC
TCTGCCCCAAAGATGTCGAATATAATGTCCTGTACTTTGCACAATCAGAGAATATAGCTGCTCATGAGAATTGTT
TGCTGTATTCTTCAGGACTTGTGGAATGTGAGGATCAGGATCCACTTAATCCTGATAGAAGTTTTGATGTGGAAT
CAGTAAAGAAAGAAATCCAGAGAGGAAGGAAGTTGAAATGCAAATTTTGTCATAAAAGAGGAGCCACCGTGGGAT
GTGATTTAAAAAACTGTAACAAGAATTACCACTTTTTCTGTGCCAAGAAGGACGACGCAGTTCCACAGTCTGATG
GAGTTCGAGGAATTTATAAACTGCTTTGCCAGCAACATGCTCAATTCCCGATCATCGCTCAAAGTGCTAAATTTT
CAGGAGTGAAAAGAAAAAGAGGAAGGAAGAAACCCCTCTCAGGCAATCATGTACAGCCACCCGAAACAATGAAAT
GTAATACATTCATAAGACAAGTGAAAGAAGAGCATGGCAGACACACAGATGCAACTGTGAAAGTTCCTTTTCTTA
AGAAATGCAAGGGAAGCAGGACTTCT**TAA**TTACTTACTTGAAGAAATATTAGACAAAGTTCATTCAATTCCAGAA
AAACTCATGGATGAGACTTACTTCAGAATCAGACTATGAAGAAATCGGGAGTGCACTTTTTGACTGTAGATTGTT
CGAAGACACATTTGTAAATTTTCAAGCAGCAATAGAGAAAAAAATTCATGCATCTCAACAAAGGTGGCAGCAGTT
GAAGGAAGAGATTGAGCTACTTCAGGACTTAAAACAAACCTTGTGCTCTTTTCAAGAAAATAGAGATCTTATGTC
AAGTTCTACATCAATATCATCCCTGTCTTATTAGGGATTACCATTTCCTAAGCCAAGAGTCATGTCAAATTGCAA
TCAGGCTCAAAACCAGAGACCAGGCTGTGAAATCCACACATCTTTAGAACTAGTCGTCTCCTCTTGGCCTCAGCA
GCTCTTCCCTGTTCTTACTGGTTGACATTTTGATCACTCTTTGCACACTCTTGTGTTTTTTGCTCACTGTCACAC
TCCCAGCACCTAGTATGCTCAGTAAATGTTTGTGGAATAAGTGCATAAAATGTTCTTAACCTTTGATTCTACTTA
CAGCCCATGATAGCCTCTTAGATATAATAAATTTGGATTATACTAAAA

FIGURE 2470

MEKRTCALCPKDVEYNVLYFAQSENIAAHENCLLYSSGLVECEDQDPLNPDRSFDVESVKKEIQRGRKLKCKFCH
KRGATVGCDLKNCNKNYHFFCAKKDDAVPQSDGVRGIYKLLCQQHAQFPIIAQSAKFSGVKRKRGRKKPLSGNHV
QPPETMKCNTFIRQVKEEHGRHTDATVKVPFLKKCKGSRTS

FIGURE 2471A

ACGGCCAGTGCAAGCTAAAATTAACCCTCACTAAAGGGAATAAGCTTGCGTCCGCGGAGGGACG**ATG**CGCGAGTA
CAAAGTGGTGGTGCTGGGCTCGGGCGGGGTAGGCAAATCCGCCCTGACCGTGCAGTTCGTGACCGGCACCTTCAT
CGAGAAATACGACCCCACCATCGAGGACTTCTACCGCAAGGAGATCGAGGTGGATTCGTCGCCGTCGGTGCTGGA
GATCCTGGACACGGCGGGCACCGAGCAGTTCGCGTCCATGCGGGACCTGTACATCAAGAACGGCCAGGGCTTCAT
CCTCGTCTACAGCCTCGTCAACCAGCAGAGCTTCCAGGACATCAAGCCCATGCGGGACCAGATCATCCGCGTGAA
GCGGTATGAGAAAGTGCCAGTCATCTTGGTTGGGAACAAAGTGGACCTGGAAAGTGAGAGAGAAGTATCGTCCAG
CGAAGGCAGAGCCCTTGCTGAAGAGTGGGGCTGCCCCTTTATGGAAACTTCCGCTAAGAGTAAAACAATGGTGGA
CGAACTCTTTGCAGAAATTGTGAGGCAGATGAACTATGCTGCTCAGCCTGACAAAGATGACCCATGCTGTTCTGC
ATGTAACATACAA**TAG**CATCCAAATATGGCTGTCCTGGATGGGATTTGCCCAATGTCGTAGGTGATAGAAAACTC
GCCTACTCCACTGCAGAACTTGCAGAATGCGTGGTGTTAATCTACAGAGAACTGCAGCCCTTATTCAGAATTGAG
CAGTGATTGTCAGTTGATATCTCTGAGTAACATTTGGGTTCAGTAACTACAGTTTTCACCATTTGTCCTCAGTCT
CCTTTATGCATCTGCAACTTTAAGGCATAGTCCATCGATCTACAGGGTGATCTCATTTGAAAGCTATGATGGCAT
TGTCGCTGAGTTGACAGAAGCAACTATTGTACAAATTAAAAATAACCATAAGGGAGAAACCAGAAGAATTCCTCT
GACCACTTACAATTAAAATATTTTGTCTTCTTTAAAAAAATAAGTAAAGGAGAAATATTTTCCTACAAGAGTACT
GAATTTCAGGAAATGGGATAGAGCTTCTAACCAATGTATTCCGTCAAGTAAGATAATAACAGCTGACCTGCCAAC
AGCATTACAGGGAGATTCTTTGCTCAGCTAACACATTTCTGTTTTTCAAAATTGATGCTTAATTGTAGCTGTTAT
TCTAATTTGTGACATGGAACTAACTCATGCTTCAATCCTTGATAGAGCAAAACTCAGAACAGGTTATGTAAAAAT
ATAGTCTGGCTTTAGAATTTGTTAATTCACCTGCTTTGCCACAGAAAATGGAGGCTTTCACAAGGGTTTGATCAG
AATTAAAACCCCAAACCCGCCCTCTGTTAGGGGTGGTCTTTATAACTTTACTGAACAAGAGGGAAGCAACTGTGA
TGGGAAGAGATTACCTAGCCTTACTAACAAGAAGCATTCTAATAGATAAACTAGTACCATCATGTAAGGAAGATG
AAGCCATGTTGCATCCACATGTTCCCGTTTGCAGAAACCTCACAGGACAGTACGAATATCTGGCATTTTTAAGTT
CATTAAAGCAGCAAATTCCTTCTCGCCTTTAAGGGCTATGGTTGTAGTGTGACCCGTGGCTAACCTGCTTTCAAA
ATCAAGTATTTGCTGTAGCAGAGCTTTATTGCAGGCATTTTAAAAATTGAATAACCATGTGAAATAATTTGGGCT
TAAAAGTGAACATAAATTATAGAGTGGAAGGTAAGGGACAAAAGCCTTTTACCTTTAATTTTCCTGGAGAATTAT
ATAAAGGTTTTCTTAGAACAATTTTGCCCTGATTACTGAAGCGTCAAATAAAGCTGGAGTGAAAATTTTGTTTTG
AAAAGGTGCTCAAGCTCTGACATTTTTGGTTTTCATAGTCGTGAAGTATTTATCATTTGCATGACTAATGGCACA
GGAAAAACCTATTCATAAGTTTTACAATCAAGTATAGAGGGGTCTTCAGCTAACTTAGTTATACATAAATGCTGA
AAAGATTATCTTGAGCTGGGCCTTGGGAGAAGAATTTGGCCTTCAGAACTGCAATATCACTGAGCCTGCGATCTA
TACACCACCCCACATTTTGTTGGTTTCACAGTCTTGTGCAAGTAACCTCTGGTCTTACGTGTGTAACTGAGAGAA
GAGTGTGTGTTTGTGTGTGCATGTGTGTTTATTGTTCCTAAGAATTTGGCACAAGTCAGAGATAATTGCCTATAC
TAAGAATCTATACTGCAGAATATAGTGTATCAAAAACTTTTTTCTTTTAAATTATTAAAGTGTCTTTTATACTTT
TATGAAATCATTGGTAGCCCCCCAAGTGTTTAATAACTGGCATTAAGCTTAGAGGGTGAAAAAAAAAAAAAGATT
GATAGTATTTTTCATAATGAAAAAACTGAAGAGATACGTGAATGAAACCAGGCCATAGCTGTCATAAATCTTTGA
CTTTTGAATATTTACATTCTTCAGTATAATTTTTTATAATCCTCAATTATGAACCACCTTGTTTATAGGACAAAA
AAATTTAACCAATTTTATTGAAACGAATTTCACTGTGTAAAAGTTGGTTTGATTCAAACATGTAGAGAAGTTGTA
GATTCAAGATATATGATTTCTCTATGGAAATAAAAATATTTGTTAGTGAATTGGTTGAGTTTTGATTCCTCTAAC
TTCTCAGAATGATTCTTTAGAATTCTATAATTCATAGCAATTTTTGACAAGTAAGATTGCAAAATAGAAATATCT
ATAAAGATTCCACAGTTTGACATTATGGCTTGCTATGCAGATGTGAAAATAGGTTAAATAATATGAAAGATATGG
CAGAATGTAAAGTGGAAAAGATGACCTAAAATTTTGAGTTGTATTAATAGTTAAAAACATTTGTGTCAGATGACA
GGGTGGGCTTTTACTGTCAAGACATGAATAAGAACTGATCTGGCTGCCTGATGAGTGTTTCCACGCAGCCCTGCA
TATTTAGTGACCAAGGCATCAAGGACATCCCGAAACTGGAAATTCATATCCATCTGGTATGAATATATAACTCAG
CTGGCAAATGAATGTGTTTGTTGAGATATTACAGTAATAAAACACTTAAGAACAGGAAGATTACATTTGTTGGCA
TACGAAACCTTAGTGGCTACAGAAGAAAGTTGACCTTGTGTCACTATTTATTTTATGCCCTGATCAGACTAGCAA
CTTAGATAAGTGAAAGTTTTTCTAACATGCCTTAAAAATATTATGGTTTGATCCAAAGACCCACTTTTTCTTTAG
CTCTTGTGATAAGATTTTCTTTTTTTTACTTTTATACAAAGGCAGCATCTTTGAATTTTTTTTTCTTTTGATGTT
GCAACTTTTGGGTTCTTTTAAACTGTGATAGTGATGGTAACTGATGCCTTTCATTTTGTTCAACTTATACAAAAC
AAGCCAGCATCTGATCAAAAGTATTACATAAAATATTTTCTTAAACTATTGAAAGGTGCTTTGATGATTTTCTCC
TTTGGTTTGTAGAATTAGGACTGAACTTTTGACTCAAATTGCTACAGTTGCCATCACCTTTCTGTGGTAATACTA

FIGURE 2471B

CTGATATTTGCTTTTCTATATAAAGAAATGTTGCCTAAGGCTGTCTGGTATTTCTTTTCAAGGGTTTTCCAGTAT
GAATGTTAATGTTGTCAGTGTATGTATGAATATGAAAGTGCTTTGTTTTGTTTGTTGCTGTTTTTTGTTTATGTG
TGTGTTTTTAATTTTTTTGTTCTTATCAGCAGTCTTGTGTTAGCACTGGGTAAGCTTTAATTGTCCCTTAGCCAA
TCAAACATTAAGGACTATGGAGGTCTTTTTTTTTTTATTTAACATGTCATTGTTCATCTATTAAATCTTGATCAG
GGTTTCAAGAATGACTGCAGTGGGTTTTGGAAACAGACTTATCATTATTGATTTGAGGTTTCCCAGAGATATAGT
TCACAGTTAATTGTTGCGCTCTAATACAACTGACCATTTAAAATTGAACAAGTTTATTGTTTTGTAACAATGTCA
GTTGTTAAACCTTGACATTTCAATTAAAACATGAATTGTAGTTATAACTCAATGCAAATTCAACAGTTGTATTTG
GAGTTAAATTATTTTAACAAATAAATTTAACTCCAAATACAACTGTTGAATTTGCATTGAGTTATAACTACAATT
CATGTTTTAATTGAAATGTCAAGGTTTAACAACTGACATTGTTACAAAACAATAAACTTGTTCAATTTTAAATGG
TCAGTTGTATTAGAGCGCAACAATTAACTGTGAACTATATCTCTGGGAAACCTCAAATCAATAATGATAAGTCTG
TTTCCAAAACCCACTGCAGTCATTCTTGAAACCCTGATCAAGATTTAATAGATGAACAATGACATGTTAAATAAA
AAAAAAAAAGACCTCCATAGTCCTTAATGTTTGATTGGCTAAGGGACAATTAAAGCTTACCCAGTGCTAACACAA
GACTGCTGATAAGAACAAAAAAATTAAAAACACACACATAAACAAAAAACAGCAACAAACAAAACAAAGCACTTT
CATATTCATACATACACTGACAACATTAACATTCATACTGGAAAACCCTTGAAAAGAAATACCAGACAGCCTTAG
GCAACATTTCTTTATATAGAAAAGCAAATATCAGTAGTATTACCACAGAAAGGTGATGGCAACTGTAGCAATTTG
AGTCAAAAGTTCAGTCCTAATTCTACAACCAAGGAGAAAATCATCAAGCACCTTTCAATAGTTTAAGAAAATATT
TTATGTAATACTTTTGATCAGATGCTGGCTTGTTTTGTGTAAGTTGAACAAATGAAAGGCATCAGTTACCATCAC
TATCACAGTTTAAAAGAACCCAAAGTTGCAACATCAAAAGAAAAAAAAAATTCAAAGATGCTGCCTTTGTATAAAA
GTAAAAAAAAGAAAATCTTATCACAAGAGCTAAAGAAAAAGTGGGTCTTTGGATCAAACCATAATATTTTTAAGG
CATGTTAGAAAAACTTTCACTTATCTAAGTTGCTAGTCTGATCAGGGCATAAAATAAATAGTGACACAAGGTCAA
CTTTCTTCTGTAGCCACTAAGGTTTCGTATGCCAACAAATGTAATCTTCCTGTTCTTAAGTGTTTTATTACTGTA
ATATCTCAACAAACACATTCATTTGCCAGCTGAGTTATATATTCATACCAGATGGATATGAATTTCCAGTTTCGG
GATGTCCTTGATGCCTTGGTCTCTAAATATGCAGGGCTGCGTGGAAACACTCATCAGGCAGCCAGAGCAGTTCTT
ATTCATGTCTTGACAGTAGAAGATCACTCTGTCATCACTCAACGTAT

FIGURE 2472

MREYKVVVLGSGGVGKSALTVQFVTGTFIEKYDPTIEDFYRKEIEVDSSPSVLEILDTAGTEQFASMRDLYIKNG
QGFILVYSLVNQQSFQDIKPMRDQIIRVKRYEKVPVILVGNKVDLESEREVSSSEGRALAEEWGCPFMETSAKSK
TMVDELFAEIVRQMNYAAQPDKDDPCCSACNIQ

FIGURE 2473

TCGAGGCGACCGCGACAGTGGTGGGGGACGCTGCTGAGTGGAAGAGAGCGCAGCCCGGCCACCGGACCTACTTAC
TCGCCTTGCTGATTGTCTATTTTTGCGTTTACAACTTTTCTAAGAACTTTTGTATACAAAGGAACTTTTTAAAAA
AGACGCTTCCAAGTTATATTTAATCCAAAGAAGAAGGATCTCGGCCAATTTGGGGTTTTGGGTTTTGGCTTCGTT
TCTTCTCTTCGTTGACTTTGGGGTTCAGGTGCCCCAGCTGCTTCGGGCTGCCGAGGACCTTCTGGGCCCCCACAT
TAATGAGGCAGCCACCTGGCGAGTCTGAC**ATG**GCTGTCAGCGACGCGCTGCTCCCATCTTTCTCCACGTTCGCGT
CTGGCCCGGCGGGAAGGGAGAAGACACTGCGTCAAGCAGGTGCCCCGAATAACCGCTGGCGGGAGGAGCTCTCCC
ACATGAAGCGACTTCCCCCAGTGCTTCCCGGCCGCCCCTATGACCTGGCGGCGGCGACCGTGGCCACAGACCTGG
AGAGCGGCGGAGCCGGTGCGGCTTGCGGCGGTAGCAACCTGGCGCCCCTACCTCGGAGAGAGACCGAGGAGTTCA
ACGATCTCCTGGACCTGGACTTTATTCTCTCCAATTCGCTGACCCATCCTCCGGAGTCAGTGGCCGCCACCGTGT
CCTCGTCAGCGTCAGCCTCCTCTTCGTCGTCGCCGTCGAGCAGCGGCCCTGCCAGCGCGCCCTCCACCTGCAGCT
TCACCTATCCGATCCGGGCCGGGAACGACCCGGGCGTGGCGCCGGGCGGCACGGGCGGAGGCCTCCTCTATGGCA
GGGAGTCCGCTCCCCCTCCGACGGCTCCCTTCAACCTGGCGGACATCAACGACGTGAGCCCCTCGGGCGGCTTCG
TGGCCGAGCTCCTGCGGCCAGAATTGGACCCGGTGTACATTCCGCCGCAGCAGCCGCAGCCGCCAGGTGGCGGGC
TGATGGGCAAGTTCGTGCTGAAGGCGTCGCTGAGCGCCCCTGGCAGCGAGTACGGCAGCCCGTCGGTCATCAGCG
TCAGCAAAGGCAGCCCTGACGGCAGCCACCCGGTGGTGGTGGCGCCCTACAACGGCGGGCCGCCGCGCACGTGCC
CCAAGATCAAGCAGGAGGCGGTCTCTTCGTGCACCCACTTGGGCGCTGGACCCCCTCTCAGCAATGGCCACCGGC
CGGCTGCACACGACTTCCCCCTGGGGCGGCAGCTCCCCAGCAGGACTACCCCGACCCTGGGTCTTGAGGAAGTGC
TGAGCAGCAGGGACTGTCACCCTGCCCTGCCGCTTCCTCCCGGCTTCCATCCCCACCCGGGGCCCAATTACCCAT
CCTTCCTGCCCGATCAGATGCAGCCGCAAGTCCCGCCGCTCCATTACCAAGAGCTCATGCCACCCGGTTCCTGCA
TGCCAGAGGAGCCCAAGCCAAAGAGGGGAAGACGATCGTGGCCCCGGAAAAGGACCGCCACCCACACTTGTGATT
ACGCGGGCTGCGGCAAAACCTACACAAAGAGTTCCCATCTCAAGGCACACCTGCGAACCCACACAGGTGAGAAAC
CTTACCACTGTGACTGGGACGGCTGTGGATGGAAATTCGCCCGCTCAGATGAACTGACCAGGCACTACCGTAAAC
ACACGGGGCACCGCCCGTTCCAGTGCCAAAAATGCGACCGAGCATTTTCCAGGTCGGACCACCTCGCCTTACACA
TGAAGAGGCATTTT**TAA**ATCCCAGACAGTGGATATGACCCACACTGCCAGAAGAGAATTCAGTATTTTTTACTTT
TCACACTGTCTTCCCGATGAGGGAAGGAGCCCAGCCAGAAAGCACTACAATCATGGTCAAGTTCCCAACTGAGTC
ATCTTGTGAGTGGATAATCAGGAAAAATGAGGAATCCAAAAGACAAAAATCAAAGAACAGATGGGGTCTGTGACT
GGATCTTCTATCATTCCAATTCTAAATCCGACTTGAATATTCCTGGACTTACAAAATGCCAAGGGGGTGACTGGA
AGTTGTGGATATCAGGGTATAAATTATATCCGTGAGTTGGGGGAGGGAAGACCAGAATTCCCTTGAATTGTGTAT
TGATGCAATATAAGCATAAAAGATCACCTTGTATTCTCTTTACCTTCTAAAAGCCATTATTATGATGTTAGAAGA
AGAGGAAGAAATTCAGGTACAGAAAACATGTTTAAATAGCCTAAATGATGGTGCTTGGTGAGTCTTGGTTCTAAA
GGTACCAAACAAGGAAGCCAAAGTTTTCAAACTGCTGCATACTTTGACAAGGAAAATCTATATTTGTCTTCCGAT
CAACATTTATGACCTAAGTCAGGTAATATACCTGGTTTACTTCTTTAGCATTTTTATGCAGACAGTCTGTTATGC
ACTGTGGTTTCAGATGTGCAATAATTTGTACAATGGTTTATTCCCAAGTATGCCTTAAGCAGAACAAATGTGTTT
TTCTATATAGTTCCTTGCCTTAATAAATATGTAATATAAATTTAAGCAAACGTCTATTTTGTATATTTGTAAACT
ACAAAGTAAAATGAACATTTTGTGGAGTTTGTATTTTGCATACTCAAGGTGAGAATTAAGTTTTAAATAAACCTA
TAATATTTTATCTG

FIGURE 2474

MAVSDALLPSFSTFASGPAGREKTLRQAGAPNNRWREELSHMKRLPPVLPGRPYDLAAATVATDLESGGAGAACG
GSNLAPLPRRETEEFNDLLDLDFILSNSLTHPPESVAATVSSSASASSSSSPSSSGPASAPSTCSFTYPIRAGND
PGVAPGGTGGGLLYGRESAPPPTAPFNLADINDVSPSGGFVAELLRPELDPVYIPPQQPQPPGGGLMGKFVLKAS
LSAPGSEYGSPSVISVSKGSPDGSHPVVVAPYNGGPPRTCPKIKQEAVSSCTHLGAGPPLSNGHRPAAHDFPLGR
QLPSRTTPTLGLEEVLSSRDCHPALPLPPGFHPHPGPNYPSFLPDQMQPQVPPLHYQELMPPGSCMPEEPKPKRG
RRSWPRKRTATHTCDYAGCGKTYTKSSHLKAHLRTHTGEKPYHCDWDGCGWKFARSDELTRHYRKHTGHRPFQCQ
KCDRAFSRSDHLALHMKRHF

FIGURE 2475

GAATTCCATTGTGTTGGGGCCCTGGGGGCGGAGGGGAGGGGCCCACCACGGCCTTATTTCCGCGAGCGCCGGCAC
TGCCCGCTCCGAGCCCGTGTCTGTCGGGTGCCGAGCCAACTTTCCTGCGTCC**ATG**CAGCCCCGCCGGCAACGGCT
GCCCGCTCCCTGGTCCGGGCCCAGGGGCCCGCGCCCCACCGCCCCGCTGCTCGCGCTGCTGCTGTTGCTCGCCCC
GGTGGCGGCGCCCGCGGGGTCCGGGGACCCCGACGACCCTGGGCAGCCTCAGGATGCTGGGGTCCCGCGCAGGCT
CCTGCAGCAGGCGGCGCGCGGCGCTTCACTTCTTCAACTTCCGGTCCGGCTCGCCCAGCGCGCTGCGAGTGCT
GGCCGAGGTGCAGGAGGGCCGCGCGTGGATTAATCCAAAAGAGGGATGTAAAGTTCACGTGGTCTTCAGCACAGA
GCGCTACAACCCAGAGTCTTTACTTCAGGAAGGTGAGGGACGTTTGGGGAAATGTTCTGCTCGAGTGTTTTTCAA
GAATCAGAAACCCAGACCAACTATCAATGTAACTTGTACACGGCTCATCGAGAAAAAGAAAAGACAACAAGAGGA
TTACCTGCTTTACAAGCAAATGAAGCAACTGAAAAACCCCTTGGAAATAGTCAGCATACCTGATAATCATGGACA
TATTGATCCCTCTCTGAGACTCATCTGGGATTTGGCTTTCCTTGGAAGCTCTTACGTGATGTGGGAAATGACAAC
ACAGGTGTCACACTACTACTTGGCACAGCTCACTAGTGTGAGGCAGTGGAAAACTAATGATGATACAATTGATTT
TGATTATACTGTTCTACTTCATGAATTATCAACACAGGAAATAATTCCCTGTCGCATTCACTTGGTCTGGTACCC
TGGCAAACCTCTTAAAGTGAAGTACCACTGTCAAGAGCTACAGACACCAGAAGAAGCCTCCGGAACTGAAGAAGG
ATCAGCTGTAGTACCAACAGAGCTTAGTAATTTC**TAA**AAAGAAAAAATGATCTTTTTCCGACTTCTAAACAAGTG
ACTATACTAGCATAAATCATTCTTCTAGTAAAACAGCTAAGGTATAGACATTCTAATAATTTGGGAAAACCTATG
ATTACAAGTAAAAACTCAGAAATGCAAAGATGTTGGTTTTTTGTTTCTCAGTCTGCTTTAGCTTTTAACTCTGGA
AGCGCATGCACACTGAACTCTGCTCAGTGCTAAACAGTCACCAGCAGGTTCCTCAGGGTTTCAGCCCTAAAATGT
AAAACCTGGATAATCAGTGTATGTTGCACCAGAATCAGCATTTTTTTTTTAACTGCAAAAAATGATGGTCTCATC
TCTGAATTTATATTTCTCATTCTTTTGAACATACTATAGCTAATATATTTTATGTTGCTAAATTGCTTCTATCTA
GCATGTTAAACAAAGATAATATACTTTCGATGAAAGTAAATTATAGGAAAAAAATTAACTGTTTTAAAAAGAACT
TGATTATGTTTTATGATTTCAGGCAAGTATTCATTTTTAACTTGCTACCTACTTTTAAATAAATGTTTACATTTC
TAAAAAAAAAAAAAAAA

FIGURE 2476

MQPRRQRLPAPWSGPRGPRPTAPLLALLLLLAPVAAPAGSGDPDDPGQPQDAGVPRRLLQQAARAALHFFNFRSG
SPSALRVLAEVQEGRAWINPKEGCKVHVVFSTERYNPESLLQEGEGRLGKCSARVFFKNQKPRPTINVTCTRLIE
KKKRQQEDYLLYKQMKQLKNPLEIVSIPDNHGHIDPSLRLIWDLAFLGSSYVMWEMTTQVSHYYLAQLTSVRQWK
TNDDTIDFDYTVLLHELSTQEIIPCRIHLVWYPGKPLKVKYHCQELQTPEEASGTEEGSAVVPTELSNF

FIGURE 2477

AAAAAAAAGGAAGAGGTAAAAGGCAAGGCAGCATTTAATAAGTACCTGTTGTATCCTTTTAAGTGTTTGTTGTGG
TAATCCTCACAAAGACCGGGACTGATGGAAACTCCTTGCTATTAAACTTTTTTTCTTGAGGAATTTTGCTTTTCA
AGTGCATATACACTATTAATATTTTTTACCCAAGAGAGCATTCTAAGCTAATTTATGCAGTGTGACTGTATTAAG
CATTAAGCTTCCTTCAGAGCTGGCCTATCGGAGATGCTACTGCCCTCTCTACAGATGTGTCTGAAATGCCTGCCC
AAGGATGGCCCTTAGCCAGTTAACAGCTTTATAGCCCATCCTCATTGCTTACTGCCACCCCTCAGCTGGGGTCCA
AGGCAGTACTATTCAGTTTATTCACCAGACCTGCCTCCAGACATCTACTTCTTTCAAAAATTAGTGTTTTCCATC
AAGGAGCATGTTCCAGAGCATTTCCCAGAGATGTCCCAAAGAACACTGTCCGGTGCTGTGGCGTACAGTGGCAAC
AGCATTAGACTAAGTGGAACATCCCAGCAGGCTGCTTTAGAATCCGCTCATTTGACTAGATACAATGTAATTGGC
TGTCTTTAAAAAACGCGCACACACACACAATCTGATAGGCATATCTCATGCCCATTCAATATGGAATGTTCTTCG
CTTGCTGAATTTAAGCCTGTATTTTAAGGTTTTGTGGTTCCTCGGCCACAATGGGTGATGTCACTGATAGAACGA
AGCTGAGTTTCCAAGGGTTTGGGGCTGTGCAAGAGTAAACACTAGAGCTTGAGTTGTTATCCAGCTGGCAAGCAC
GGAAGTCTTTGAAGAATGTAATGTAAAAAGGGAAAAGAATGTAAAGCTTTTTGTACCAAATGAGAGTTGGAGCCC
AGCCAACAAATGCTTTTCCCTGTGTAAAAGTCTCTCTGGAAGGGACATTCCATCTCCATGGTGCACTCTGAGGGG
CACTGTCAACTAGAGATTGGCCCCATCCAGGTGGGAGGAACCCCTTTGGGATGGTGAGTATCCAATCTGCTGTGC
ATTTGACAGGATCTCTGAATGGCTAGGTAATGGATCCCAAGCAGGCTCACAAATTTAAATGAGGGCTTTGTGTGC
AGAAAGAGGAATAAGTACAGATTATTTTCCTACCACTAGATTTTTGGGGAGAGTCACCATGGAATGTTGACAATT
ACTTAAAATATTTTAAGCTCCCTTGCTGAATTCCTGTCCTGTCCCTGAGGAATCAGATGGTCATACAGCCATAGG
CACCCACCCGAAATTTCCCTAGGAGTTGGAGTAATGCTAGAATTGAAGACCTTCTGAGTAAAGGGCTTCTCTGCC
TTCTCAGAGGCAGGAGAATTTGCACTGGTTGTGTTAAATGTATAAAAAGCTATATGTTCACCAGTTTACTCATTT
CCAATGTGTAGATGAATAAAATGTAGTGTACAAATTATTTGAAAATCCCAGAAGGAAGGTACTTTTCAAATACAG
TATTTTTTTTAACAAATAAACTTACGATTTTTACAGCAAAAAA

FIGURE 2478

KKKEEVKGKAAFNKYLLYPFKCLLW

FIGURE 2479

AAATTGCAGAAGTTACTTATTCTTTTAAGAGGTCTGCCTGGTTCTGGGAAAACAACATTGTCTCGAATTCTGCTT
GGTCAGAATCGTGATGGCATTGTGTTCAGCACTGATGACTATTTTCACCATCAAGATGGGTACAGGTATAATGTT
AATCAACTTGGTGATGCCCATGACTGGAACCAGAACAGAGGTTTGTTTTGGGCTAAGTGTCCCAGGATAGAATAT
TTGGCTAGGAGTCAAAAGACC**TAG**ATTTTATTTTCAGCTTAGGTTTTTACCAGCTGAATGACTGTAGGCAAGCCG
TTTAAATAGCTTTGAGACCTAATTTCTCCATCTGTTAGAGGTGGTGATAATTATACTTGCCCTACCTGATCAGGG
TTTTTGTGAAAAGCAGAGAATTTAGATAAAACGCTTTGTAAACTGTAAATAGTTTATCAGTATAAGCTGGTAAAA
TAATAGCAGCATGGGATATTTTAAGAGGCTTTATTTTATACTTGATGAGTAAATTCAGAGAACTTTGAATCTGTA
CCATTGTTATGTAGTCCCAAAGTTATTTCCCCGAGAATAATGCTAATGTTTTCCAAGGCTTAATATACTGGTTGT
GAATATTAAAAGTTTTTCTCATTGATATTGCTCTACAAGAAACCTACTTAATACATTTTTTAGCGGACATGGGTC
AATTTCTGTTTATCATTAATAGGGGTTCTTAACCTGGGCTACACTTTTGAATTTCTTGGGGACTTTAAAAAAAAG
CAAAAAAATCTATGTCGGGTGCGGAGAAAGAGGTAATGAAATGGCAGAATTCGATAGCAAGCTTATC

FIGURE 2480

KLQKLLILLRGLPGSGKTTLSRILLGQNRDGIVFSTDDYFHHQDGYRYNVNQLGDAHDWNQNRGLFWAKCPRIEY
LARSQKT

FIGURE 2481

CCCCCTCCCCTCCTGCAGCCTCCTGCGCCCCGCCGAGCTGGCGG**ATG**GAGCTGCGCAGCGGGAGCGTGGGCAGCC
AGGCGGTGGCGCGGAGGATGGATGGGGACAGCCGAGATGGCGGCGGCGGCAAGGACGCCACCGGGTCGGAGGACT
ACGAGAACCTGCCGACTAGCGCCTCCGTGTCCACCCACATGACAGCAGGAGCGATGGCCGGGATCCTGGAGCACT
CGGTCATGTACCCGGTGGACTCGGTGAAGACACGAATGCAGAGTTTGAGTCCAGATCCCAAAGCCCAGTACACAA
GTATCTACGGAGCCCTCAAGAAAATCATGCGGACCGAAGGCTTCTGGAGGCCCTTGCGAGGCGTCAACGTCATGA
TCATGGGTGCAGGGCCGGCCCATGCCATGTATTTTGCCTGCTATGAAAACATGAAAAGGACTTTAAATGACGTTT
TCCACCACCAAGGAAACAGCCACCTAGCCAACGGGATAGCTGGGAGTATGGCCACCCTGCTCCACGATGCGGTAA
TGAATCCAGCAGAAGTGGTGAAGCAGCGCTTGCAGATGTACAACTCGCAGCACCGGTCAGCAATCAGCTGCATCC
GGACGGTGTGGAGGACCGAGGGGTTGGGGGCCTTCTACCGGAGCTACACCACGCAGCTGACCATGAACATCCCCT
TCCAGTCCATCCACTTCATCACCTATGAGTTCCTGCAGGAGCAGGTCAACCCCCACCGGACCTACAACCCGCAGT
CCCACATCATCTCAGGCGGGCTGGCCGGGGCCCTCGCCGCGGCCGCCACGACCCCCCTGGACGTCTGTAAGACCC
TTCTGAACACTCAGGAGAACGTGGCCCTCTCGCTGGCCAACATCAGCGGCCGGCTGTCGGGTATGGCCAATGCCT
TCCGGACGGTGTACCAGCTCAACGGCCTGCCGGCTACTTCAAAGGCATCCAGGCGCGTGTCATCTACCAGATGCC
CTCCACCGCCATTTCTTGGTCTGTCTATGAGTTCTTCAAGTACTTTCTCACCAAGCGCCAGCTGGAAAATCGAGC
TCCATACTAAAGGAAGGGATCATAGAATCTTTTCT**TAA**AGTCATTCTCTGCCTGCATCCAGCCCCTTGCCCTCTC
CTCACACGTAGATCATTTTTTTTTTTGCAGGGTGCTGCCTATGGGCCCTCTGCTCCCCAATGCCTTAGAGAGAGG
AGGGGACGGCACGGCCGCTCACCGGAAGGCTGTGTGCGGGGACATCCGAGGTGGTGGTGGACAGGAAGGACTTGG
GAAGGGGAGCGAGAAATTGCTTTTTCTCTTCCTCCCTGGGCAGAATGTAGCTTTTCTGCTTCACTGTGGCAGCCT
CCTCCCTGGATCCTTAGATCCCAGAGGAGGGAAGAAAATTTGCAGTGACTGAAAACAGTAAAAAAAAAAAAAAAA
AAAA

FIGURE 2482

MELRSGSVGSQAVARRMDGDSRDGGGGKDATGSEDYENLPTSASVSTHMTAGAMAGILEHSVMYPVDSVKTRMQS
LSPDPKAQYTSIYGALKKIMRTEGFWRPLRGVNVMIMGAGPAHAMYFACYENMKRTLNDVFHHQGNSHLANGIAG
SMATLLHDAVMNPAEVVKQRLQMYNSQHRSAISCIRTVWRTEGLGAFYRSYTTQLTMNIPFQSIHFITYEFLQEQ
VNPHRTYNPQSHIISGGLAGALAAAATTPLDVCKTLLNTQENVALSLANISGRLSGMANAFRTVYQLNGLPATSK
ASRRVSSTRCPPPPFLGLSMSSSSTFSPSASWKIELHTKGRDHRIFS

FIGURE 2483

CTGAATTACGAAGGCAGTCCAATTAAAGTAACACTGGCAACTTTGAAA**ATG**TCTGTACAGCCAACGGTTTCCCTT
GGGGGCTTTGAAATAACACCACCAGTGGTCTTAAGGTTGAAGTGTGGTTCAGGGCCAGTGCATATTAGTGGACAG
CACTTAGTAGCTGTGGAGGAAGATGCAGAGTCAGAAGATGAAGAGGAGGAGGATGTGAAACTCTTAAGTATATCT
GGAAAGCGGTCTGCCCCTGGAGGTGGTAGCAAGGTTCCACAGAAAAAAGTAAAACTTGCTGCTGATGAAGATGAT
GACGATGATGATGAAGAGGATGATGATGAAGATGATGATGATGATGATTTTGATGATGAGGAAGCTGAAGAAAAA
GCGCCAGTGAAGAAATCTATACGAGATACTCCAGCCAAAAATGCACAAAAGTCAAATCAGAATGGAAAAGACTCA
AAACCATCATCAACACCAAGATCAAAAGGACAAGAATCCTTCAAGAAACAGGAAAAAACTCCTAAAACACCAAAA
GGACCTAGTTCTGTAGAAGACATTAAAGCAAAAATGCAAGCAAGTATAGAAAAAGCGCAT**TGA**ACAGTCCTGGGC
ACTACATGTAAATTAAGCCCAAAGATGGGGAGAAAGGAAAAGGAGAGACAAATATAGTCCATACTGAGTGTCATC
AACAATCCAGACTGAAGTCTTCTATTTTAATCTCAATCCCCTTTTCTGATTTGCCACCCATGCCTCTTCAGGCTG
GAAACAATCTCTTGGTTCCCTAAAGCACTTTCTTCTGACTGCTGTGATTCAGTGAACCTTGCCCTTTGCTTTCTA
TTACTTGTGCATTTGCCTCACCTGACAATGTTTTAAATCGCCTTTGTATCTCCTTAGCTGCTCAATAAATATTTG
AATGCATCAAAAAAAAAAAAAAAAAA

FIGURE 2484

MSVQPTVSLGGFEITPPVVLRLKCGSGPVHISGQHLVAVEEDAESEDEEEEDVKLLSISGKRSAPGGGSKVPQKK
VKLAADEDDDDDDEEDDDEDDDDDDFDDEEAEEKAPVKKSIRDTPAKNAQKSNQNGKDSKPSSTPRSKGQESFKK
QEKTPKTPKGPSSVEDIKAKMQASIEKAH

FIGURE 2485

TGTATAGATGTTAAGTGTTTCATGTGGTTTTTGTGTCATTGCTATTTATCAATAGCAATAATTTTGCACTGAAAA
CTTTTTATAGTTCAAAAATTAAGCATGGACTCCCCAGTATACTTTAACTTTCTTTCTTTCTTTTTTTTTTTTGG
AGACAGAGTCTCACTGTCACCCAGGCTGGAGTGCAGTGGCATGATCTCAGTTTATGCAACTTCTGCCTCCCCAGG
TTCAAGCGATTCTTTTGCCTCAGCCACCTGACTAGCTGGGATTGCAGCCTGCACCACCACACCTGGCTAAATTTT
TGTTGTTGTCGTTGAGATACAGTTTCACTCTGTCACCCAGGCTGGAGTGCAGTGGC**ATG**ATCTCAGCTCACTGCA
ACCTCTGCCTTCTGGATTCAAGTGATTCTTGTGCCTTAGCCTCCCAAGTAGCTGGGATTACAGGCGTGCACCACC
ACGCCCAGTTGATTTTTGTATTTTTGATAGAGACGGAGTTTCACCATGTTGGCCAGGCTGGTCTCGAACTCTGGG
TTCAAGAAATCCTCCCACCTTGCCTCCCAAAGTGCTGGGATTACAGGTGTGAGCCACCACGCATGGCCCTGAACC
TTCTCTTTTTAGGAATACCAAAGTTTTCAACTTTTTCAGCTTTAGAATTTGTAAATATTTTTGTAGAATATCATA
TGACTGTAATTCCAGAGTGTTCCAACTTGTTTATGATATATTTGGGTAAATTTACAACTGTTCTTTTATTTGCCA
TAATCTGGTTA**TAA**CACTGTTTGTGGTAGGAAAGGAAAACATGCAAAACATACACACACACACACACACACAC
ACACACGCAGAGTTGTGATTCTCAGTACCAAGCTATAGGACCATGTTATAGATCAGCGTTTAGTCACCTCCAGGT
TATATGCATCGAGAACCTGAATAAATCATGCCACTATATTAATTTATATTACATGTTTCATATTTAAATCATGTT
TTCCTAAAATGTAGCAACTACATGTGATAAAAGCAAATTAGAACATTCTGTAGGACTGTCTTGCATACCTTCTGT
CTGGTTTCCACTGATTCCTTCTTAGCCATGGAGAGCATTTGTGATTAATTAATTTATATATGAAATAATGGTTTC
CATTTTATGCGAGTATTTGTAACTGCATATACCAGTGCGTGTGCGTCTACCTCTGTCAGCATGAAAGTATTCCAG
TCTTTAATTTCAAAAACTTCAAATTAGCCTCATGAAGAGAATTTTTCCCTGTGAAAAGTAAGACCAAGAAAAAAC
AAACTAAAGACATGTGACTTATTCAATGAAAGTGAAAAAGAAGCTCTAAAACAGTGTCATTGATTAAAAAGAATA
TCTGGAATGTAGCCCCACTCTTTGAGTGGGATTCATTTCTTACTGCTTATGAACTTTCAATTTAGTAGTCAGAAA
CCATGGATTTATTTTACTGCACAATGTGAAGTTTACATTTTATTAACACTTGAGTAGTCTGATTTAGAGACTAGT
TACTTCTATTTTTTAAAATAATGGAGTAACAAATTACAGAATAGCTAAATAATTTTTTAAAAATATTTTACAGTT
GTAAAAAATATCCATCAGAAAAATGACACACAAAACAAAATATCTGGACCTTTACAGAAGACGTTTGCTGACCCC
CACTTTAAAGGATTGGAACAGTCTTCTAGAATTGAGGAATATTTATTAAAATACCTGTAAAGAAAATAGTGAATC
ACTGTAGCAATGGCTTTGATTCAGACCTTAAAATCACATAAGAAGAATTACAACATGTTATGGATTTTTAAGTGG
CAGGTATTGTAACTGTTTTTTGTGTGCAAAATACTGAGTAACCACTGGGAAAATATTTCAGATGAAAGGGATGAC
AAAAGCATGTTGCGCTTTGCATCAGCAAGGCATTGACTTCTGAAAAAATGATCTGAAAAAAGTTTCACCGTTTGT
CTTCTTACCTCATTTTAAGAAGCATGTGAAAATGGGATACTATAGACTACTGAGAATTTCAGAAATTGAGAACAA
TTTCATAATAAAACGGCTATATTTGAAGAGAGAATACATTTTATATAAACAGGAAAATACATTTGACACTTTATG
GAATTTTATGAGACTTTTTGTGGGAACAGAAGGTCTTCAAATTGTAAAATGTAAAGATTGCTCTTTTTATTAAGT
CTTTAACAGGGATGTATTTCATTGTATGTTTTGGGTATGGCTTTGGAATAAATCATTTTATATTTTATTTG

FIGURE 2486

MISAHCNLCLLDSSDSCALASQVAGITGVHHHAQLIFVFLIETEFHHVGQAGLELWVQEILPPCLPKCWDYRCEP
PRMALNLLFLGIPKFSTFSALEFVNIFVEYHMTVIPECSNLFMIYLGKFTTVLLFAIIWL

FIGURE 2487

CTCTTTCCCTTCGGTGTGCCACTGAAGATCCTGGTGTCGCC**ATG**GGCCGCCGCCCCGCCCGTTGTTACCGGTATT
GTAAGAACAAGCCGTACCCAAAGTCTCGCTTCTGCCGAGGTGTCCCTGATGCCAAGATTCGCATTTTTGACCTGG
GGCGGAAAAAGGCAAAAGTGGATGAGTTTCCGCTTTGTGGCCACATGGTGTCAGATGAATATGAGCAGCTGTCCT
CTGAAGCCCTGGAGGCTGCCCGAATTTGTGCCAATAAGTACATGGTAAAAAGTTGTGGCAAAGATGGCTTCCATA
TCCGGGTGCGGCTCCACCCCTTCCACGTCATCCGCATCAACAAGATGTTGTCCTGTGCTGGGGCTGACAGGCTCC
AAACAGGCATGCGAGGTGCCTTTGGAAAGCCCCAGGGCACTGTGGCCAGGGTTCACATTGGCCAAGTTATCATGT
CCATCCGCACCAAGCTGCAGAACAAGGAGCATGTGATTGAGGCCCTGCGCAGGGCCAAGTTCAAGTTTCCTGGCC
GCCAGAAGATCCACATCTCAAAGAAGTGGGGCTTCACCAAGTTCAATGCTGATGAATTTGAAGACATGGTGGCTG
AAAAGCGGCTCATCCCAGATGGCTGTGGGGTCAAGTACATCCCCAGTCGTGGCCCTCTGGACAAGTGGCGGGCCC
TGCACTCA**TGA**GGGCTTCCAATGTGCTGCCCCCCTCTTAATACTCACCAATAAATTCTACTTCCTGTCCACCTAT
GTCTTTGTATCTACATTCTTGACGGGGAAGGAACTTCCTCTGGGAACCTTTGGGTCATTGCCCTTTCACTTCAGA
AACAGGTTGACAACTCAGCCCTGCTCATGAGGCAGCAAACCCTGCAAAGGGCTGGGACTGGTGGCCTTATGTCAG
TTGTCTACTCTGGAGCTTGACTTGGACCTCCCCAGGTCCTAGGCAGTAGGTTGAAAAACACTGAAGTGCTTTTCA
TGAAGCACAGCTGCAGCAAAGCCTTGCAATCCCAGGCTGGGGTCAGCCTACAGTTGTGTTGCTTATTACAACACA
TGCGGACCAAGAGGGGCTTGTGGGCTAGAGGCTGACCAGCAGCGTTTATTTAGCAAGGGTAGGTGTGCATCACAT
TGGGCTTGTTCTCACCCATCTGGTTTGGCCATTCCTCCTTGGTGGGAATCATCCAGGTACTGCTGAGGTCACCTG
CGATTTGCCCCATTTCCTATCTCTAGCAACCTCCTGGGCCCCATGCCCCCACCCCTTCTAGAACCTGCATTCCCA
GGGCCTTCACCACCTGACCAAAGGTCTAGGCTAACCTTTGGTCATTTGTAACAAGACCTCGGAACAGACACGTGT
GTGGCATGGTTTGGCCTGGGGATCTTAGATGTCTGACCTGAACTATTGTAGAACAGCGCTGGCTTTTGGGGGAGC
AGCAAAAATGAGAGGAGTGCTAGGTGGGTGGCCTGAGCATCTGTATCCAGGGACAGGACTCCAAAGGCTTTTGGT
CCCAGAGCTGGGGTATGTTGGCCCCAGCCCCCAGCCTGTGGCTCCCAAAAGGCCTCTGGTTTTTTGTAATCTCAG
TTTACAGCCATTTCTTAGGTTTTTAATTACCTTTATTTTATTTTGCCAAACATACCTGGGAATACCTTTTATTTT
TTTTTTACCTTGGGGTGATGGTTCCAAACCATAAATGTGATTATAGTTAACACATGACCCTTCTAGCGTCCCAGC
CAGTGTTTTTCCTGACCTCTCTTCTTTGGAGAGGAGGATGGAAGGGAGGGGTCCGGCATGCTGCTGGCATTTTGC
TGTGTCCTGCAGCCCCTTTCCGGGACACCTGGGTTCACACAGCTTTTTAGCTTACATAACTGGTGCAGATTTTCT
GTGTGGAGATGTTGCCTTGACCAGCCTTGGCTGGACTTTACCAGGCATGCAGAAGCCTGTACCAACACAGACTAC
AGCACCCAGGAGGTGCGAGTGTGGCTGCTCAGCGGTTATAACAGGCCTGACTGCATTGTTCACCGGATTATAATG
AGCCAAAATGTTTCCCGGTGTTTGCTGGTTTCAGGGAAGGAGTTTGATATAGCAGATTAACCACCCTCCTTGTAG
CTATTGGGGCTTAATGGTTTCCTGGTGATTCTTACCAATCCACAATAAACATGGCCCATTGGCATATCTGCAAAA
AAAAAAAAAAAAA

FIGURE 2488

MGRRPARCYRYCKNKPYPKSRFCRGVPDAKIRIFDLGRKKAKVDEFPLCGHMVSDEYEQLSSEALEAARICANKY
MVKSCGKDGFHIRVRLHPFHVIRINKMLSCAGADRLQTGMRGAFGKPQGTVARVHIGQVIMSIRTKLQNKEHVIE
ALRRAKFKFPGRQKIHISKKWGFTKFNADEFEDMVAEKRLIPDGCGVKYIPSRGPLDKWRALHS

FIGURE 2489

GGCACGAGGGAAAGCTGAAAGCGTGCGAGGGGGGTGGGGTGGAAATAGCGGCTGCTTCTTTTCCAAGGATTTATT
TAATGGGGATGTGTTCAAGGCAAGACCGAATTCAGAAGGATATCGACGTCGTGATCCAGAAGTCCAGAGCTGAGG
ACTGCCTGTTTGCAGGGCCCGCCTGGCAGGACGACTGAGCAAGTTCTTGGAAAACCAGAGATATTAGAGCGGTGA
ATCGCGCTGGTCACGTTGGACACCTGCGCGTTAGGAGATTCTGGAGCCAGAGGGAGAGACCCCAGAAACGCCCCG
GTCGGCGACCCAGCCCGAGACGCCTGGGGTCCCAAGGGAAGCTGAACGCCCGGTGGGCTCCCGGGATGGTTCTTC
CGGTTCTTTGTGCCGCCTTCACCCAGTGAAGGAGCCTGTATCCACCCTGCCCAGTCGCTGTTGGGCTGCTGCGGA
GCTTCCGCTGCCATCTTCGGATCCTGTGTTCCGCCCGGGGCTCCACCAGGGCAGGGATGGTGGTGAGGGTCGCTC
GTGGGTCCCCTGGCAGGGAGCAGGGTCTGGCACTCACAAGGGCGCACGACTAGGACTTGTCGAATGAATCCCTTG
TCGCCTTTAGCTTTTAGTCCTTTGAAGAGAGGTGAGAGTGGAAATCAAGAGATTTTTTTCCACGGGGAAGTTCTT
TTTACAAAGCGTTGATTTCTTGGCACCCCGCGGGGCGGGCAACTGACACGGCCTCCGGTGCACCTTCTGCGCTGT
GGAGCCTCTGGGGCTCAGCTGGGCGGTGGTCGGGTCGTGGGGCGGTAGGGCGGGAGCGGGGGAAGGGAAAGCAAA
AGCTGGAAAAGAAGCAGGGGAGTTGTGAACCAGACATCCAGACCTCCTGAAGGGCTCGTGCAGACGTACAGGCGG
GATCTTCTGGAAGTGAGAATTGTTTTTGTTTGTTTATCTATTGTAGCAGAATGGGGAAATGGAGAGAGAACCTGA
AAGAGCCCCAAACTCGAGGACCTATTGCTCCCCAAGAATAACATCTTCCAGAACTAGACAGAAAACTAGGCGTCT
GGGAACCCTGAAATCCTTGGAGGAGTAGATCATCATGACCCTCTGTGTTCCTTTTGGCAAATGACTTGCTTCCAT
TGTTTGTTTGTTCAATTGTCTGTTTGTTAAATAAATAAAACCCTTTTTATGTATCTTTAAAAAAAAAAAAAAAAA
A

FIGURE 2490

GAAAAACAAAAAGAATCTTTGTTTTACCCCGAAAGAGAGGCAGAGGCAGAAAGTCTTCTTCTGCTTTTTGCATCT
CTAAGAGGCTGAAAAAGAGAATGGAAGTGCTGGGGCATTTTGGCCAGGGCAGTAATGGATATTTGGAGTTGGCAC
TTCCCTCAGCTAGAGGAGTCTCAGTGTGTCTGAGAAAATGGCAGTCAGCCATCCAGGATTTTAGGAGCAACGCCA
CTGCTCTGTGCCACATCAGAAATCAGGCATGGCCCCAACCTGAAGGAACTTGTAGCTTAATGGGGAAGCACACCA
AGAATAAAAGAGCCTCCAGAACATGTGGTGCCTGTGGTCCTGAGACAGCAGGAAATGGCTCTCAGGCCAGAGTTG
CTGGAAGAACCCATGTGGCAGGATCGGTGGGAGGCAGTTACAGAGGGAAACGCCCATCCCAGCAACTAGGGGAGG
CCGCCACTCCTCTCGTGGATGGATGATATTCTTGCTTGGGGATGTTGAGACAGCTGCACTCTGCATAGTTCCTGA
TTTGCCTCTCTACTGCTGATGAAAAACCTCTCTTTCTCTATAGCTGCTGCTTATATTGGAAGGCTTTTGGTTATT
CAGCACACTCACTCCTGAGCTTATTTCAGTGATATTCCTTGGTTATTTCGAAACATGGATGCTTGTGGCAGATGG
AGAGCCTGGGTGTACACAGATCTGCCTGTGTTTTGAAATGCATACCATGTTGCCGTTTGTTTGATTGATTGATCT
TGGACCACGAAAGAAAATTATACTGACAGCTTCCAGGGTAGGGGGCAGTTGTAGCTTTCTGCAGATGTTGCCAAA
TATATTGGGGGTGGGGAGCAGCAAATGCCATGTGTTGCTTTTTATGACATAAGGAGGGATTCCACCCCCATCCCA
ATAAAATCGGTGCTTTGACAAAGGAGGGTTCCCAGGCAGCTAAGAGAACCCAGAGTAGATGATCCTCTTTATCTC
TGGTTTAACCTGTGACTAGGATTCTTGGTGTAAGCTCGGCTTTTCCACTTATCCTCTAACCGGAACAGGCTTCTA
TAATCTCTTTGCCTTAAAATAATTATCTGCATCCCTGTGTAGAGCAATCTTAAGCAGCTCTCCTTGTTTCTTCAG
GGAATGGGAATTCTTTTCTAAGTCGCCCCATCAAAGGTACTATTGGTTTTTTACAACGCCGGCGTTTGTGTATGT
AGTAAAAGTATTAACAGCATTAAAGGCGATATTTTTAACATGTTTATAGATACTACTTGGGGGAGGGCAGCTAAT
GAAACCTTCAAGCTCTATGCAGTCCACAGACGTGAGCTCTGTAGAGTTCGCAGAGGTGGGTAAGTACCCAGCCAG
CACACCCAGTTGAATTCAGCCAGGATTTATTGAGTTGGCATCACAGACGCTGACAGCCTCCAAGTGAAAACCCTT
CTCTTGAATATGTACAGGTTTCCCATCCACATACCAAGCTGATGAGGATCCCATCGTTCTTCCCCAGTCCTGAGG
AGCCCCCCTCGCCATCTGCACCTTCCATAGCCAAATCAGGGTCATTGGACTCAGAACTTTCAGTGTCCCCAAAAA
GGAACAGCATCTCTCGGACACACAAAGATAAGGGGCCTTTTCACATACTGAGTTCAACCAGCCAGACAAACAAAG
GACCAGAAGGGCAGAGCCAGGCCCCTGCGTCCACCTCTGCCTCTACCCGCCTGTTTGGGTTAACAAAGCCAAAGG
AAAAGAAGG

FIGURE 2491

MEVLGHFGQGSNGYLELALPSARGVSVCLRKWQSAIQDFRSNATALCHIRNQAWPQPEGTCSLMGKHTKNKRASR
TCGACGPETAGNGSQARVAGRTHVAGSVGGSYRGKRPSQQLGEAATPLVDG

FIGURE 2492

GCACCGTTCACTGGTGGGAGGCTGAGCCGGTGGAAAAGACACCGGGAAGAGACTCAGAGGCGACCATA**ATG**TCGT
TACGTGTACACACTCTGCCCACCCTGCTTGGAGCCGTCGTCAGACCGGGCTGCAGGGAGCTGCTGTGTTTGCTGA
TGATCACAGTGACTGTGGGCCCTGGTGCCTCTGGGGTGTGCCCCACCGCTTGCATCTGTGCCACTGACATCGTCA
GCTGCACCAACAAAAACCTGTCCAAGGTGCCTGGGAACCTTTTCAGACTGATTAAGAGACTGGACCTGAGTTATA
ACAGAATTGGGCTTCTGGATTCTGAGTGGATTCCAGTATCGTTTGCAAAGCTGAACACCCTAATTCTTCGTCATA
ACAACATCACCAGCATTTCCACGGGCAGTTTTTCCACAACTCCAAATTTGAAGTGTCTTGACTTATCGTCCAATA
AGCTGAAGACGGTGAAAAATGCTGTATTCCAAGAGTTGAAGGTTCTGGAAGTGCTTCTGCTTTACAACAATCACA
TATCCTATCTCGATCCTTCAGCGTTTGGAGGGCTCTCCCAGTTGCAGAAACTCTACTTAAGTGGAAATTTTCTCA
CACAGTTTCCGATGGATTTGTATGTTGGAAGGTTCAAGCTGGCAGAACTGATGTTTTTAGATGTTTCTTATAACC
GAATTCCTTCCATGCCAATGCACCACATAAATTTAGTGCCAGGAAAACAGCTGAGAGGCATCTACCTTCATGGAA
ACCCATTTGTCTGTGACTGTTCCCTGTACTCCTTGCTGGTCTTTTGGTATCGTAGGCACTTTAGCTCAGTGATGG
ATTTTAAGAACGATTACACCTGTCGCCTGTGGTCTGACTCCAGGCACTCGCGTCAGGTACTTCTGCTCCAGGATA
GCTTTATGAATTGCTCTGACAGCATCATCAATGGTTCCTTTCGTGCGCTTGGCTTTATTCATGAGGCTCAGGTCG
GGGAAAGACTGATGGTCCACTGTGACAGCAAGACAGGTAATGCAAATACGGATTTCATCTGGGTGGGTCCAGATA
ACAGACTGCTAGAGCCGGATAAAGAGATGGAAAACTTTTACGTGTTTCACAATGGAAGTCTGGTTATAGAAAGCC
CTCGTTTTGAGGATGCTGGAGTGTATTCTTGTATCGCAATGAATAAGCAACGCCTGTTAAATGAAACTGTGGACG
TCACAATAAATGTGAGCAATTTCACTGTAAGCAGATCCCATGCTCATGAGGCATTTAACACAGCTTTTACCACTC
TTGCTGCTTGCGTGGCCAGTATCGTTTTGGTACTTTTGTACCTCTATCTGACTCCATGCCCCTGCAAGTGTAAAA
CCAAGAGACAGAAAAATATGCTACACCAAAGCAATGCCCATTCATCGATTCTCAGTCCTGGCCCCGCTAGTGATG
CCTCCGCTGATGAACGGAAGGCAGGTGCAGGTAAAAGAGTGGTGTTTTTGGAACCCCTGAAGGATACTGCAGCAG
GGCAGAACGGGAAAGTCAGGCTCTTTCCCAGCGAGGCAGTGATAGCTGAGGGCATCCTAAAGTCCACGAGGGGGA
AATCTGACTCAGATTCAGTCAATTCAGTGTTTTCTGACACACCTTTTGTGGCGTCCACT**TAA**TTTGTGCCTATAT
TTGTATGATGTCATAATTTAATCTGTTCATATTTAACTTTGTGTGTGGTCTGCAAAATAAACAGCAGGACAGAAA
TTGTGTTGTTTTGTTCTTTGAAATACAACCAAATTCTCTTAAAATGATTGGTAGGAAATGAGGTAAAGTACTTCA
GTTCCTCAATGTGCCAGAGAAAGATGGGGTTGTTTTCCAAAGTTTAAGTTCTAGATCACAATATCTTAGCTTTTA
GCACTATTGGTAATTTCAGAGTAGGCCCAAAGGTGATATGACTCCCATTGTCCCTTTATTTAGGATATTGAAAGA
AAAAATAAACTTTATGTATTAGTGTCCTTTAAAAATAGACTTTGCTAACTTACTAGTACCAGAGTTATTTTAAAG
AAAAACACTAGTGTCCAATTTCATTTTTAAAAGATGTAGAAAGAAGAATCAAGCATCAATTAATTATAAAGCCTA
AAGCAAAGTTAGATTTGGGGGTTATTCAGCCAAAATTACCGTTTTAGACCAGAATGAATAGACTACACTGATAAA
ATGTACTGGATAATGCCACATCCTATATGGTGTTATAGAAATAGTGCAAGGAAAGTACATTTGTTTGCCTGTCTT
TTCATTTTGTACATTCTTCCCATTCTGTATTCTTGTACAAAAGATCTCATTGAAAATTTAAAGTCATCATAATTT
GTTGCCATAAATATGTAAGTGTCAATACCAAAATGTCTGAGTAACTTCTTAAATCCCTGTTCTAGCAAACTAATA
TTGGTTCATGTGCTTGTGTATATGTAAATCTTAAATTATGTGAACTATTAAATAGACCCTACTGTACTGTGCTTT
GGACATTTGAATTAATGTAAATATATGTAATCTGTGACTTGATATTTTGTTTTATTTGGCTATTTAAAAACATAA
ATCTAAAATGTCTTATGTTATCAGATTATGCTATTTTGTATAAAGCACCACTGATAGCAAA

FIGURE 2493

MSLRVHTLPTLLGAVVRPGCRELLCLLMITVTVGPGASGVCPTACICATDIVSCTNKNLSKVPGNLFRLIKRLDL
SYNRIGLLDSEWIPVSFAKLNTLILRHNNITSISTGSFSTTPNLKCLDLSSNKLKTVKNAVFQELKVLEVLLLYN
NHISYLDPSAFGGLSQLQKLYLSGNFLTQFPMDLYVGRFKLAELMFLDVSYNRIPSMPMHHINLVPGKQLRGIYL
HGNPFVCDCSLYSLLVFWYRRHFSSVMDFKNDYTCRLWSDSRHSRQVLLLQDSFMNCSDSIINGSFRALGFIHEA
QVGERLMVHCDSKTGNANTDFIWVGPDNRLLEPDKEMENFYVFHNGSLVIESPRFEDAGVYSCIAMNKQRLLNET
VDVTINVSNFTVSRSHAHEAFNTAFTTLAACVASIVLVLLYLYLTPCPCKCKTKRQKNMLHQSNAHSSILSPGPA
SDASADERKAGAGKRVVFLEPLKDTAAGQNGKVRLFPSEAVIAEGILKSTRGKSDSDSVNSVFSDTPFVAST

FIGURE 2494

CTTCCCACCGCCAGAACGTGCAAATAGGGGATAATCAGCCCTGCACGGCCATCCTCAGCAATGCTGCTTATTTAA
CCCATTTTTTAAAATGACACTTAATGTTATTGGCTGGCGTACGTGTGTGCGCATACTTAAAAGTTGATGCGTGGT
GCAGCTCTGCTGCTAATGTCTGCTGACAGCGTCGCCCGATGTTGCTCAGGGCCTCTGGGAAGAGGGGACACCTTT
GATGTGGGCGTGCTGGCACCCAAGAGGCAACGTGGTCAGGCTCGATGCTTGCCAGCCCTGGAAGGTCCCGCCAGG
GTTGGGGGGTCGGGTGAGCACTCAGAGATCTGGGGAGGAAGCGAGGAGCCTGGTGTCCTCACCAGGTGCAGAGGG
GAAATGCGTACTGCTCCAGAAGGTTCTGACTCAAGTCTCGGCCCTGAGGACTCAGAACTCACAAGTCATGGATCA
AGTACAGAGGGAGGGAGGGCCCCAGCCCACCCCTGCGGGGGAGGAGGAGGGTCTGAAGGTGGGAGGGCAGCTCCA
TGAGCAGCCACTGTTCCTGACCAGCCGAAGTGCCAGGCAGGGGGAGGTTTCCATGTCCAGGAGGGAGAGGACCTC
CACCCTCTGACCTTTCAGTTTTCCATAGCAGCCCAGTGTGAAGCTCGGCGGGGGTGGGCAGGGCATCAGGACAAG
ATGAAGATGCTGGCTCTGGAATGGGGACTCCCCTTGGGCTAAGGGGTAGTGGCTGGCAGAGGTTGCCCAGCTCTT
TTGGAGGCCACAGGGAATAGAGGTGGGGTGGTGCTTCCGTTCCTGTGAGGCCCGCCCCCCTGAGCCCCCTCGTCT
GCTTCTTGTTTGGCAGAAATAGATGTGGGGCACAGCCCCTAG**ATG**ATGGGAATCTGCCCAAGCTGTGCCCTCTGG
GGAATGAAATCTTGCTCCTCGTGCAGCTTCCCCTTTCCCTTGCGGGGTGGGGGCTGGGGGTGCCAAGGCTCCACC
CTTGGAGGGGGTTGCTGGGGGTGCCAAGGCTCCACCCTTTGCTCGCTGGGCAGAGGGAAGGAAGCACCTCCCTGT
ATGCTCTGCAGGGGCCCCTGCAGGCCACTTTGCCTCAGAGGAAGGAGGAGAGGTCCCCTGGGAAAATGCGCACAC
ACACACACACACACACACACACACACACGCACATGCACACACGCACGCATGCACACACACACACACATATGTGCA
GGGGTGCAGCCTAAGTCAGTGGAGCCAGGACTGGCTGCGCAGCTGGGCCTGCCCCATTCTTGGAGTCCCCAGGGA
ATGAGCCTCAGGATCCACTTCGTCCCTTGTTTC**TAA**GCCAGGCTGCACGGCCGTTCCTGGGTGTGAAAGCATTCT
GTCCTGTCTCCAGTCAGAGGGAACCGCCCCCAAACTAGAAAGCTAATTTCCCCCGAAGGTTCATGAAGCCAGAGG
CATGCCCTTGGGGGTTGGTCGGGAGAAGGGTGAGAGGCAGTGCTGTGGAAGGGGCCTGGCCCCTGCTGCCTGCGA
TTCCCCCCGGGTATGTGGCCTTCTGCCTCCTTCAGCCTCAGTTTCCTCACCTGTAACATGAGAATAATGATGCCT
GCCTGCCCAGGCCACCTCCTGGGAGTGCATTGGGGACTCTAAGTGTAAAACTGTCATGAGGATGGTTTATGAAGT
CCCAGGGACCACACCTGCCACTCAGGGAAGAGACCGCTGACCTCAGCCATCAGCCGTGTGCATCGTGAGGGGCAG
CGAGCTCAGGACGGAGAGCTCTCCCTTGGTTCGGAGTCAGCACACCTGCACTCCCACACGCCCACCCAGCTGTGT
GTCCTCCGCCGAGGGCGAGCCTCTCTGTGACTCTTCTGTAAAATGCACCCCATTCTGCCCACTCCTGCCACGAGA
CCCATCCTCTGCGATCCCGCCAGGCATGTGTGTGTGAATGCATGTGCAAAGCTCTCCATCAGAAGGGTGGTGTGG
GCCCTGCAGGTCCTACCCCTCGGCCTTGAAGCTCCCTCGGGCTGCGGACTCTGCCTCCTGGGTCTGAGCATTAGA
ACCAGGAGAGGGGTGTCCCTGGGCAGAGCCAGGGGTGCAAACAGCCTGCAGCCATCTGGCCTTTTAAGTATAGTG
TGTCGCATTTCCGGGTAGGAAGGTAGCATTTCAAGTTCAAAGAGAGGTCAAGTCATGCAACCATCTTTCCTCCAG
CACTTTTGGGGTAAGGAGGACAGTTTTTGTTATGGTTTAGGGGAAATTTTCATGAAATTTCCACCATTACCAATA
GATTACTGATGTCCATGGCAAGTGATCTGTTCTTGGTATTTTGTTTTGTTTTGTTTTGGTTTTTAAATGTAATCA
CCCATTGGTCAGGCCCAGGACTGGTCACCATGAGCTCTGCTAGCCACGGCCCCAACGATGCTTCCGGCTCTCATG
GATTCCACAGCAAATAAAACTGTACTGACAAC

FIGURE 2495

MMGICPSCALWGMKSCSSCSFPFPLRGGGWGCQGSTLGGGCWGCQGSTLCSLGRGKEAPPCMLCRGPCRPLCLRG
RRRGPLGKCAHTHTHTHTHTRTCTHARMHTHTHICAGVQPKSVEPGLAAQLGLPHSWSPQGMSLRIHFVPCF

FIGURE 2496

GCAGAGGAGGCGGCGGAACACCCCGGGTTGGTCGGGTTTCCAAGGGCTGACCCGAGCTCCAGCACTTTTTCCGCG
CCTGATTTTTCAGAGCTCTTCAGAAACCAGGCTGCTTTCAGGAACATTGCTGTGGATTCCCAGGGCCTATTCCAC
TAGAAGCAAG**ATG**GCTGAACTCAATACTCATGTGAATGTCAAGGAAAAGATCTATGCAGTTAGATCAGTTGTTCC
CAACAAAAGCAATAATGAAATAGTCCTGGTGCTCCAACAGTTTGATTTTAATGTGGATAAAGCCGTGCAAGCCTT
TGTGGATGGCAGTGCAATTCAAGTTCTAAAAGAATGGAATATGACAGGAAAAAAGAAGAACAATAAAAGAAAAAG
AAGCAAGTCCAAGCAGCATCAAGGCAACAAAGATGCTAAAGACAAGGTGGAGAGGCCTGAGGCAGGGCCCCTGCA
GCCGCAGCCACCACAGATTCAAAACGGCCCCATGAATGGCTGCGAGAAGGACAGCTCGTCCACAGATTCTGCTAA
CGAAAAACCAGCCCTTATCCCTCGTGAGAAAAAGATCTCGATACTTGAGGAACCTTCAAAGGCACTTCGTGGGGT
CACAGAAGGCAACAGACTACTGCAACAGAAACTATCCTTAGATGGGAACCCCAAACCTATACATGGAACAACAGA
GAGGTCAGATGGCCTACAGTGGTCAGCTGAGCAGCCTTGTAACCCAAGCAAGCCTAAGGCAAAAACATCTCCTGT
TAAGTCCAATACCCCTGCAGCTCATCTTGAAATAAAGCCAGATGAGTTGGCAAAGAAAAGAGGCCCAAATATTGA
GAAATCAGTGAAGGATTTGCAACGCTGCACCGTTTCTCTAACTAGATATCGCGTCATGATTAAGGAAGAAGTGGA
TAGTTCCGTGAAGAAGATCAAAGCTGCCTTTGCTGAATTACACAACTGCATCATTGACAAAGAAGTTTCATTAAT
GGCAGAAATGGATAAAGTTAAAGAAGAAGCCATGGAAATCCTGACTGCTCGTCAGAAGAAAGCAGAAGAACTAAA
GAGACTCACTAACCTTGCCAGTCAGATGGCAGAGATGCAGCTGGCCGAACTCAGGGCAGAAATTAAGCACTTTGT
CAGCGAGCGTAAATATGACGAGGAGCTCGGGAAAGCTGCCCGGTTTTCCTGTGACATCGAACAGCTGAAGGCCCA
AATCATGCTCTGCGGAGAAATTACACATCCAAAGAACAACTATTCCTCAAGAACTCCCTGCAGCTCCCTGCTGCC
TCTGCTGAATGCGCACGCAGCAACCTCTGGGAAACAGAGTAACTTTTCCCGAAAATCATCCACTCACAATAAGCC
CTCTGAAGGCAAAGCGGCAAACCCCAAAATGGTGAGCAGTCTCCCCAGCACCGCCGACCCCTCTCACCAGACCAT
GCCGGCCAACAAGCAGAATGGATCTTCTAACCAAAGACGGAGATTTAATCCACAGTATCATAACAACAGGCTAAA
TGGGCCTGCCAAGTCGCAGGGCAGTGGGAATGAAGCCGAGCCACTGGGAAAGGGCAACAGCCGCCACGAACACAG
AAGACAGCCGCACAACGGCTTCCGGCCCAAAAACAAAGGCGGTGCCAAAAATCAAGAGGCTTCCTTGGGGATGAA
GACCCCCGAGGCCCCGGCCCATTCTGAAAAGCCCCGGCGAAGGCAGCACGCTGCAGACACCTCGGAGGCCAGGCC
CTTCCGGGGTAGTGTCGGTAGGGTTTCACAGTGCAATCTCTGCCCCACGAGAATAGAAGTTTCCACAGATGCAGC
AGTTCTCTCAGTCCCGGCTGTGACGTTGGTGGCC**TGA**GCTAGGAGGAAAAAGAGCAGTTTTCACTCAGTTTTGGT
TCCCTGCCCGAGGTGCTGACCCAATTCGCTGCCAAAAGAGTGTCAATCAGAATATACAAATCCCGTATGGTTGTG
TCATCCTCTCTTAATCATTTTTACTAATTCTAATAATCAGCTCTAGCTTGCTTCATAATTTTCATGGCTTTGCTT
GATCTGTTGATGCTTTCTCTCATCAAGACTTTGCAGCATTTTAGCCAGGCAGTATTTACTCATTATTAGGAAAAT
CAAGATGTGGCTGAAGATCAGAGGCTCAGTTAGCAACCTGTGTTGTAGCAGTGATGTCAGTCCATAGATTGTCTT
TAGAGAGTTAATGTTACAAAAAAGAATTCTTAATAATCAGACAAACATGATCTGCTGAGGACACATGCGCTTTTG
TAGAATTTAACATCTGGTGTTTTTCTGAAAAAATATATATACATATATTGCTTTATTTGAAACAAATTAAAATAT
GCTGCATTTGAAAAAAAAAAAAAAAAAAA

FIGURE 2497

MAELNTHVNVKEKIYAVRSVVPNKSNNEIVLVLQQFDFNVDKAVQAFVDGSAIQVLKEWNMTGKKKNNKRKRSKS
KQHQGNKDAKDKVERPEAGPLQPQPPQIQNGPMNGCEKDSSSTDSANEKPALIPREKKISILEEPSKALRGVTEG
NRLLQQKLSLDGNPKPIHGTTERSDGLQWSAEQPCNPSKPKAKTSPVKSNTPAAHLEIKPDELAKKRGPNIEKSV
KDLQRCTVSLTRYRVMIKEEVDSSVKKIKAAFAELHNCIIDKEVSLMAEMDKVKEEAMEILTARQKKAEELKRLT
NLASQMAEMQLAELRAEIKHFVSERKYDEELGKAARFSCDIEQLKAQIMLCGEITHPKNNYSSRTPCSSLLPLLN
AHAATSGKQSNFSRKSSTHNKPSEGKAANPKMVSSLPSTADPSHQTMPANKQNGSSNQRRRFNPQYHNNRLNGPA
KSQGSGNEAEPLGKGNSRHEHRRQPHNGFRPKNKGGAKNQEASLGMKTPEAPAHSEKPRRRQHAADTSEARPFRG
SVGRVSQCNLCPTRIEVSTDAAVLSVPAVTLVA

FIGURE 2498

GGCACGAGGGTCCCTGGGCCGGACGGCGGTGTCCCGGCGTGGCGGGAAGCCGGCACTGGAGCGGGAGCGCACTGG
GCGCGGGACCGGGAGGCGCAGGGACCGGACGGCTCCCGAGTCGCCCACCTGACGCTAGAAGAAGTCTTCACTTCC
CAGGAGAGCCAAAGCGTGTCTGGCCCTAGGTGGGAAAAGAACTGGCTGTGACCTTTGCCCTGACCTGGAAGGGCC
CAGCCTTGGGCTGA**ATG**GCAGCACCCACGCCCGCCCGTCCGGTGCTGACCCACCTGCTGGTGGCTCTCTTCGGCA
TGGGCTCCTGGGCTGCGGTCAATGGGATCTGGGTGGAGCTACCTGTGGTGGTCAAAGAGCTTCCAGAGGGTTGGA
GCCTCCCCTCTTACGTCTCTGTGCTTGTGGCTCTGGGGAACCTGGGTCTGCTGGTGGTGACCCTCTGGAGGAGGC
TGGCCCCAGGAAAGGACGAGCAGGTCCCCATCCGGGTGGTGCAGGTGCTGGGCATGGTGGGCACAGCCCTGCTGG
CCTCTCTGTGGCACCATGTGGCCCCAGTGGCAGGACAGTTGCATTCTGTGGCCTTCTTAGCACTGGCCTTTGTGC
TGGCACTGGCATGCTGTGCCTCGAATGTCACTTTCCTGCCCTTCTTGAGCCACCTGCCACCTCGCTTCTTACGGT
CATTCTTCCTGGGTCAAGGCCTGAGTGCCCTGCTGCCCTGCGTGCTGGCCCTAGTGCAGGGTGTGGGCCGCCTCG
AGTGCCCGCCAGCCCCCATCAACGGCACCCCTGGCCCCCCGCTCGACTTCCTTGAGCGTTTTCCCGCCAGCACCT
TCTTCTGGGCACTGACTGCCCTTCTGGTCGCTTCAGCTGCTGCCTTCCAGGGTCTTCTGCTGCTGTTGCCGCCAC
CACCATCTGTACCCACAGGGGAGTTAGGATCAGGCCTCCAGGTGGGAGCCCCAGGAGCAGAGGAAGAGGTGGAAG
AGTCCTCACCACTGCAAGAGCCACCAAGCCAGGCAGCAGGCACCACCCCTGGTCCAGACCCTAAGGCCTATCAGC
TTCTATCAGCCCGCAGTGCCTGCCTGCTGGGCCTGTTGGCCGCCACCAACGCGCTGACCAATGGCGTGCTGCCTG
CCGTGCAGAGCTTTTCCTGCTTACCCTACGGGCGTCTGGCCTACCACCTGGCTGTGGTGCTGGGCAGTGCTGCCA
ATCCCCTGGCCTGCTTCCTGGCCATGGGTGTGCTGTGCAGGTCCTTGGCAGGGCTGGGCGGCCTCTCTCTGCTGG
GCGTGTTCTGTGGGGGCTACCTGATGGCGCTGGCAGTCCTGAGCCCCTGCCCGCCCCTGGTGGGCACCTCGGCGG
GGGTGGTCCTCGTGGTGCTGTCGTGGGTGCTGTGTCTTGGCGTGTTCTCCTACGTGAAGGTGGCAGCCAGCTCCC
TGCTGCATGGCGGGGGCCGGCCGGCATTGCTGGCAGCCGGCGTGGCCATCCAGGTGGGCTCTCTGCTCGGCGCTG
TTGCTATGTTCCCCCCGACCAGCATCTATCACGTGTTCCACAGCAGAAAGGACTGTGCAGACCCCTGTGACTCC**TGA**GCCTGGGCAGGTGGGGACCCCGCTCCCCAACACCTGTCTTTCCCTCAATGCTGCCACCATGCCTGAGTGCCTG
CAGCCCAGGAGGCCCGCACACCGGTACACTCGTGGACACCTACACACTCCATAGGAGATCCTGGCTTTCCAGGGT
GGGCAAGGGCAAGGAGCAGGCTTGGAGCCAGGGACCAGTGGGGGCTGTAGGGTAAGCCCCTGAGCCTGGGACCTA
CATGTGGTTTGCGTAATAAAACATTTGTATTTAAAAAAAAAAAAAAAAAAAAA

FIGURE 2499

MAAPTPARPVLTHLLVALFGMGSWAAVNGIWVELPVVVKELPEGWSLPSYVSVLVALGNLGLLVVTLWRRLAPGK
DEQVPIRVVQVLGMVGTALLASLWHHVAPVAGQLHSVAFLALAFVLALACCASNVTFLPFLSHLPPRFLRSFFLG
QGLSALLPCVLALVQGVGRLECPPAPINGTPGPPLDFLERFPASTFFWALTALLVASAAAFQGLLLLLPPPPSVP
TGELGSGLQVGAPGAEEEVEESSPLQEPPSQAAGTTPGPDPKAYQLLSARSACLLGLLAATNALTNGVLPAVQSF
SCLPYGRLAYHLAVVLGSAANPLACFLAMGVLCRSLAGLGGLSLLGVFCGGYLMALAVLSPCPPLVGTSAGVVLV
VLSWVLCLGVFSYVKVAASSLLHGGGRPALLAAGVAIQVGSLLGAVAMFPPTSIYHVFHSRKDCADPCDS

FIGURE 2500

GGCACGAGGGTCCGCGGGAGCCGCCGCCGCCGCCGTCCCGTCCCAGCTGCCGCCCCGCGCGGCCCCGCCGCCGGC
CAGGATGCTGGAGGAAGCGGGCGAGGTGCTGGAGAACATGCTGAAGGCGTCTTGTCTGCCTCTCGGCTTCATCGT
CTTCCTGCCCGCTGTGCTGCTGCTGGTGGCGCCGCCGCTGCCTGCCGCCGACGCCGCGCACGAGTTCACCGTGTA
CCGCATGCAGCAGTACGACCTGCAGGGCCAGCCCTACGGCACACGGAATGCAGTGCTGAACACGGAGGCGCGCAC
GATGGCGGCGGAGGTGCTGAGCCGCCGCTGCGTGCTCATGCGGCTACTGGACTTCTCCTACGAGCAGTACCAGAA
GGCCCTGCGGCAGTCGGCGGGCGCCGTGGTCATCATCCTGCCCAGGGCCATGGCCGCCGTGCCCCAGGACGTCGT
CCGGCAATTCATGGAGATCGAGCCGGAGATGCTGGCCATGGAGACCGCCGTCCCCGTGTACTTTGCCGTGGAGGA
CGAGGCCCTGCTGTCTATCTACAAGCAGACCCAGGCTGCCTCCGCCTCCCAGGGCTCCGCCTCTGCTGCTGAAGT
ACTGCTGCGCACGGCCACTGCCAACGGCTTCCAGATGGTCACCAGCGGGGTACAGAGCAAGGCCGTGAGTGACTG
GCTGATTGCCAGCGTGGAGGGGCGGCTGACGGGGCTGGGCGGAGAGGACCTTCCCACCATCGTCATCGTGGCCCA
CTACGACGCCTTTGGAGTGGCCCCCTGGCTGTCGCTGGGCGCGGACTCCAACGGGAGCGGCGTCTCTGTGCTGCT
GGAGCTGGCACGCCTCTTCTCCCGGCTCTACACCTACAAGCGCACGCACGCCGCCTACAACCTCCTGTTCTTTGC
GTCTGGAGGAGGCAAGTTTAACTACCAGGGAACCAAGCGCTGGCTGGAAGACAACCTGGACCACACAGACTCCAG
CCTGCTTCAGGACAATGTGGCCTTCGTGCTGTGCCTGGACACCGTGGGCCGGGGCAGCAGCCTGCACCTGCACGT
GTCCAAGCCGCCTCGGGAGGGCACCCTGCAGCACGCCTTCCTGCGGGAGCTGGAGACGGTGGCCGCGCACCAGTT
CCCTGAGGTACGGTTCTCCATGGTGCACAAGCGGATCAACCTGGCGGAGGACGTGCTGGCCTGGGAGCACGAGCG
CTTCGCCATCCGCCGACTGCCCGCCTTCACGCTGTCCCACCTGGAGAGCCACCGTGACGGTCAGCGCAGCAGCAT
CATGGACGTGCGGTCCCGGGTGGATTCTAAGACCCTGACCCGTAACACGAGGATCATTGCAGAGGCCCTGACTCG
AGTCATCTACAACCTGACAGAGAAGGGGACACCCCCAGACATGCCGGTGTTCACAGAGCAGATGCAGATCCAGCA
GGAGCAGCTGGACTCGGTGATGGACTGGCTCACCAACCAGCCGCGGGCCGCGCAGCTGGTGGACAAGGACAGCAC
CTTCCTCAGCACGCTGGAGCACCACCTGAGCCGCTACCTGAAGGACGTGAAGCAGCACCACGTCAAGGCTGACAA
GCGGGACCCAGAGTTTGTCTTCTACGACCAGCTGAAGCAAGTGATGAATGCGTACAGAGTCAAGCCGGCCGTCTT
TGACCTGCTCCTGGCTGTTGGCATTGCTGCCTACCTCGGCATGGCCTACGTGGCTGTCCAGCACTTCAGCCTCCT
CTACAAGACCGTCCAGAGGCTGCTCGTGAAGGCCAAGACACAGTGACACAGCCACCCCCACAGCCGGAGCCCCCG
CCGCTCCACAGTCCCTGGGGCCGAGCACGAGTGAGTGGACACTGCCCCGCCGCGGGCGGCCCTGCAGGGACAGGG
GCCCTCTCCCTCCCCGGCGGTGGTTGGAACACTGAATTACAGAGCTTTTTTCTGTTGCTCAAAAAAAAAAAAAAA
AAA

FIGURE 2501

MLKASCLPLGFIVFLPAVLLLVAPPLPAADAAHEFTVYRMQQYDLQGQPYGTRNAVLNTEARTMAAEVLSRRCVL
MRLLDFSYEQYQKALRQSAGAVVIILPRAMAAVPQDVVRQFMEIEPEMLAMETAVPVYFAVEDEALLSIYKQTQA
ASASQGSASAAEVLLRTATANGFQMVTSGVQSKAVSDWLIASVEGRLTGLGGEDLPTIVIVAHYDAFGVAPWLSL
GADSNGSGVSVLLELARLFSRLYTYKRTHAAYNLLFFASGGGKFNYQGTKRWLEDNLDHTDSSLLQDNVAFVLCL
DTVGRGSSLHLHVSKPPREGTLQHAFLRELETVAAHQFPEVRFSMVHKRINLAEDVLAWEHERFAIRRLPAFTLS
HLESHRDGQRSSIMDVRSRVDSKTLTRNTRIIAEALTRVIYNLTEKGTPPDMPVFTEQMQIQQEQLDSVMDWLTN
QPRAAQLVDKDSTFLSTLEHHLSRYLKDVKQHHVKADKRDPEFVFYDQLKQVMNAYRVKPAVFDLLLAVGIAAYL
GMAYVAVQHFSLLYKTVQRLLVKAKTQ

FIGURE 2502

ACAAACTACTCCCTGAGATCCTACAATCCGCTTCATTTCTAACTGCTAATGGGGCCTTGTATATGGCTTTCTTTT
GCATTTTAAGGAAGATACTTGGAAAATTCTACTCATGGACTCCTGGCTTTGGTGCCGCTCTGCCAGCATCTTATG
TGGCCATTCTCATTGAAAGAAAAAGCAGGAGAGGGCTGCTCACAATTTATATGGCCAACTTGGTCCTTTTGTTTT
GCATCACAGCTGCCATGTACATGTTCTTTTTCAGGTGCAAGGATGGCTTGAAAGGATTTACATTTTCTGCACTTA
GGTTCATTGTAGGGAAGGAAGAAATTCCCACACATTCTTTTTCACCAGAGGCAGCATATGCAAAAGTGGAACAAA
AGAGAGAGCAACATGAGGAAAAACCCAGAAGAATGAATATGATTGGTCTAGTCAGGAAATTTGTGGATTCAATAT
GCAAACATGGACCAAGGCATAGATGTTGCAAACATTATGAAGATAATTGCATCTCTTATTGCATTAAAGGTTTCA
TCAGAATGTTTAGCGTGGGGTACTTGATCCAGTGCTGCCTCCGAATCCCTTCTGCATTTAGGCATCTGTTTACAC
AGCCATCTCGGCTACTTTCTCTCTTCTACAATAAAGAAAACTTCCAGCTTGGAGCTTTTCTTGGCTCTTTTGTTA
GTATATACAAGGGTACTAGTTGCTTCCTGCGCTGGATCAGAAACTTAGATGATGAACTACATGCTATTATAGCTG
GATTTTTGGCAGGTACATCAATGATGTTTTATAAAAGCACAACAATTTCCATGTATTTAGCGTCCAAATTGGTAG
AGACAATGTATTTCAAAGGCATTGAAGCAGGGAAGGTTCCCTATTTTCCTCATGCAGATACTATCATCTATTCCA
TCTCTACAGCAATTTGCTTCCAGGCAGCTGTCATGGAAGTTCAGACTTTGAGACCATCTTACTGGAAGTTCCTTT
TAAGACTCACCAAGGGCAAATTTGCTGTCATGAACCGAAAAGTCCTTGATGTTTTTGGTACTGGTGCATCTAAAC
ACTTTCAGGATTTCATCCCCAGGTTGGATCCAAGATACACAACTGTAACACCAGAGTTGCCCACAGAGTTTTCCTG
AAGATGACTGTAACTTATTAATGTGACTAAATGTTTCATCTTGAAGAGTTAATTATGTTGAACACAAAGGAGGG
GGCCCAAGCTCGAACTTCAGTGTTATTTCAGTTAGAGATACTCTTTTCATTTGTTTTGTTTTTCTTATGAATCAG
AAATTCAGAAGCTTTTTAGGAAGATGTTGCTTAATAATTAAGCTTCCTCCATAGCCAGAATAAGATTCTGGATCA
CTGTAGTGACTGACATTATATATTATTGATCAAATTATGTCCACAAGCAATATTATATAATCTACGTAGAAGTGT
AATAACAAACAAGAGTACACTTAAAATTACTTTAAAAGATGTCTTTAGTTCATTCCAATATAATTCTTGATTAAA
ATTAGGATTATTTCTACATTTTAGGATTTACAAAGGATCACGGGTACATGGGTTTGGTCTATATATTTTTTTAAA
GTTTTGAATTGGTATCTGTAGTAGTGGAATGTTATAGATTTGAAGTAACTCTCCACGGACAGTGCTGCTTTCGTG
TAGAGCAATTTAATTGGAGAAGTGGCCATTCTTACTTCAGGGATGCAAAGATGGGTCTCATACCATTTGGATAAA
TGTCGTGGTATCCATGCTTTTTTTCAACTAATAACATCATCTCTCTTCATGACCAGTTAATTGGGCTATTTGGCA
GCCCAGTGAACCTATGTACTAATGGCAAGTTAGGGGCAAATGGAAATGGACACATCCGTTAAAGTTGAAATGTAT
GTTTTAATCTTTCACAGAAGTATTACACTTGAATATTTAAAAACAAAACTTTTAAACTTCCTATAGGTTTATGAT
GTTTGTTTTCATTTATATGGACATAATCCTTCATAGCTCAGTTTATATGCCATTGTTGTATTAGAAGGGATCAAA
ATCCTATGGAACAAAGTAGTCTTGGCAAGTTGGCAGTTTGTGTCCTCTCAGCTGTTTAACTTATGTAATGGATGT
TTTGCACCTGAAAACACTATAAAAATCCAGTGGTTGTTTAAAAAGTCCATTTGTCACTAATTCCATTCAGGTTCT
CCAACCTTCTTCTTGAATATCATTGTCACCATTTATACTGTTAGAATAAAGAGGTGACACCATAAAGTCCTGCTG
ATAATGAGAGTAGTTCAGGACAGCTGTGATTGAAATATGGTCGCTATTTACAGTTTTTCAGGGAAAAGTTATACT
TTTCTATGTTAATAAAGAGCTGAAGTGGTCTACAGTTAATGTGACATGTAGGGATGATGATATTTTTAAAATACA
TTTTGTTGCTAAAAAGTTGTTAGGCCAGTGCAAATTATGCAGTAGAACTTGTGTTGCAAAAGGAATTATAACCCA
TACTTTAAAAATGCTTAATCCCTCATATTCAATTTCATCAAGCCTTGTATACTTCTGCTTAAATGTAATTCAATC
CTTGGTTGTTATGGCAAACAGAAACCCAACAAAAAGACAGACTCTGGTACTATGGTAACAGAGCCACTTTATCAT
TTGGTCAAAATTTGACATTATGATTAGCTTTGTAGAACTGACCTGTTTATTTGGCAATGCTGTTAAAGGATCATT
TCGGTTTCAGACTTCAAAGTTGATTAATAAATTTAATCTTAACTTTTTATTCACTGGAATCAAAACGATGGTTGG
TACTGTGTTTACTGTTTAAAATGAAGTACTAAAGCCCTGAGAACTGCACCTCATTTTCTTTATCCAGAAATTGTG
CTTATATATTTTCCTGTCAGGTTTAAAAAGATGTTTTAATTCATAAATTATTGTTTTCATTGACATTAAAGGACT
GTGATATTGAAAAAAAAAAAAAAAAAA

FIGURE 2503

MAFFCILRKILGKFYSWTPGFGAALPASYVAILIERKSRRGLLTIYMANLVLLFCITAAMYMFFFRCKDGLKGFT
FSALRFIVGKEEIPTHSFSPEAAYAKVEQKREQHEEKPRRMNMIGLVRKFVDSICKHGPRHRCCKHYEDNCISYC
IKGFIRMFSVGYLIQCCLRIPSAFRHLFTQPSRLLSLFYNKENFQLGAFLGSFVSIYKGTSCFLRWIRNLDDELH
AIIAGFLAGTSMMFYKSTTISMYLASKLVETMYFKGIEAGKVPYFPHADTIIYSISTAICFQAAVMEVQTLRPSY
WKFLLRLTKGKFAVMNRKVLDVFGTGASKHFQDFIPRLDPRYTTVTPELPTEFS

FIGURE 2504

GGCGGGCAGAAGTTGGAAAC**ATG**CGGCTGTCGGTCGCTGCAGCGATCTCCCATGGCCGCGTATTTCGCCGTATGG
GCCTCGGTCCCGAGTCCCGCATCCATCTGTTGCGGAACTTGCTCACAGGGCTGGTGCGGCACGAACGCATCGAGG
CACCATGGGCGCGTGTGGACGAAATGAGGGGCTACGCGGAGAAGCTCATCGACTATGGGAAGCTGGGAGACACTA
ACGAACGAGCCATGCGCATGGCTGACTTCTGGCTCACAGAGAAGGATTTGATCCCAAAGCTGTTTCAAGTACTGG
CCCCTCGGTACAAAGATCAAACTGGGGGCTACACAAGAATGCTGCAGATCCCAAATCGGAGTTTGGATCGGGCCA
AGATGGCAGTGATCGAGTATAAAGGGAATTGCCTCCCACCCCTGCCTCTGCCTCGCAGAGACAGCCACCTTACAC
TCCTAAACCAGCTGCTGCAGGGTTTGCGGCAGGACCTCAGGCAAAGCCAGGAAGCAAGCAACCACAGCTCCCACA
CAGCTCAAACACCAGGGATT**TAA**CTGGATCTGAAGAGTCTGCAGCCCTTAATCAGTACCCATGATCACAGGCCTT
TGGAGCACTTTTACTCTCTGAGAAGAACTGGAGCTAGAGATGTAAAATGGACAGTCTTGATGGGGTTGAGAACCT
TCTGGGGAGCCAGATGACCCTCTCTTTGCACAATAGATAAAAGTCTTTATATGAATATATATAAATTTATTTATT
TTTTCCTTCCTGTGGGATTTCTGGAGAATGAGAATTATCCAAATGCTCAGTCTACCTGAGATAGTAAATTCATGG
CTTATGCTTCTGGTCCTTAAATTTGGGTTATTTTTGGTTAGTG

FIGURE 2505

MRLSVAAAISHGRVFRRMGLGPESRIHLLRNLLTGLVRHERIEAPWARVDEMRGYAEKLIDYGKLGDTNERAMRM
ADFWLTEKDLIPKLFQVLAPRYKDQTGGYTRMLQIPNRSLDRAKMAVIEYKGNCLPPLPLPRRDSHLTLLNQLLQ
GLRQDLRQSQEASNHSSHTAQTPGI

FIGURE 2506

TGTCTGAAAAAATCAATTGACTATTCCCTTTTCCTAAAGGGCAGAGACAGATAATCTCACTTCCAGAGAAATGAC
TTGGAGAAAAAAAAAGTGTTGGTCTTTTTGCTCTTTTGTAATTAAATCCGGATGTACCTCAAAAGACTTAAGACTG
TGGTGATAAGATGCTTTCCTCAGCAGAAAGGAGGGAAAAAAAACAACTGGAACTCAAAGCTTGAAATTCTGTGGC
AAAACATGAGATGTCCAGGATTGGAGGTTGAAAAGATTTCACTACAGTGTTCTGCAATAGTTGGAGCAGATAACT
TTCAGTGTAGCCACAGCC**ATG**GACTCCAGATTTCCAGATTTTCAAGACCTGGACCTGGAACCCGAAAGAGCTTGT
CACGATGCGGCAGGAACACTGGAGGTAGATTTTTTTTTATTTTTGAATTTTGGGACTGTTGACCTTGCTGTGAGA
AAAGAGACAACGACTGAGCAAGCACTACCACCAGCACTGTTACTGGGAATTAGAAGACCTGAGTTTCTGTCCAGA
CCCTCAGTGCAAACTGAGGATGCTCCATCCAAAGTGAATTATGTCCTGTGCCTCCTGATTGCTGAGTGTTCACCT
GGACCTTCTGACTACCTTCCCTGTGCTATTCCATCAGCCTACAGACCTGGTACCTGGATTTTTGCCCGAGATGAT
TCCTACCACCTTACTACTGACGAAGACACCCATTCCAGTGGACCACTG**TGA**CCCAGGAGGCATTCAGCCATCATG
ATGTGGCCTTTACCTCCACTCCTGTCTTGTTCTACCCAGATTCAGCACAGCCCTTTATAGTGAAGTCAGAGTCCT
CAAGCCAAATAGCTAAAGCTGTTTTATCACAACAAAGGCCTAGTTTGTTCCATGAGTGTGCATTTCATTTCTTCA
GTTAAAGCCTTCAGAGACACACAATAAATTTGGACCAGGGGATTTTTTAGTTATTAATGCTCTCTGAAGAAAGGC
AACATCTTTTTGAGAGCAGCATTGGACCACACCCCACAATCTCAAATGATTGAAATTCATGAACATCTAGGATCC
CATGAAGGTCACTGGACCCTGTTTTTTCTACTTCAAATCCTGTAGTAGCCTACTGAATGAGAAAACATATTCTGA
CCCATTGGGATCAAATCAAAGGCACAGTGAACTCCTCATAGCATCTTCTTTGGAATTACTCAGGAACCAGAACTT
TTTACACAAATGTAAGAAATTCTACCAAGGAGTCCCCTTACCTAACAGCATCTCACAAGGCTGCACCAGATTCCA
GAAAAGGCTTCTCTTGATACATCAAGCATTTTGTGACCGACTTATTCTTAGATCATTGGTTTTCCAAAGGCTTTG
TGGCCATGAAGCCCTTTGAGTGAAAACTGTGCAGAAGCCCAGAGTAAAAGTGAAGCTGCTCTGGATGAAGTAGTG
AAGCAAGAGTAGGGGCCTGAATCCTGCTACAACTATCTTCCTTTACCACCGTGGTGACACCTAAGGGGACTTCCT
TACAACACCTTGAACTCTTCCGAACACAGTTTGAAAACCACTGCCCCAGACAGCAATATGTTTGACCTGAATGGC
ATTCCAATCTTTTCTGTACCTCCACTCAGCACAGTTCATGTTCAGTAGATGCTGAACATTCTTAGAAATACTGTG
TGTGAACTTAGAAAAGTGCAAGAAGACAGGCATGTCTTTGACCCCAGGAATGATCATTTGCTGAAGATGGTGTCA
AGTGAACCTAGATTAACAGCCCTCCACTCCAGATGGATATCCAGTGATTCCTAGAATGGGATATAGCCAGAGAAC
AATTCTATGCACCCTACACTGACAGACTCCCTTAAGCAACACCAGATGCTCTACTGGTACTTGAAGTACATGACT
TTGAAGTCTTGACCCTCCATGAATACCTGAATTATCAGCAAGCGGGTTTTGAAGCTGGTGCCTCATTGAGGCCAT
ATTAGAGCAACTTGTACATTTGACCTCTTGTTATCAGCCATGGTACTCTACTTCGTGTGCAAGAGATAACTATGA
AAGCCAAATTCAAATACTGGCAACATTTCCTAAAGGGGCTCAATATCTTATCATTCGTCTTCTTTTCCAAACTAC
ACATCACTGTATGACTCAACCAGTAGCAGTTATATTGCCCCTTGGTTTTTATTCAGTTTAACTACTGTTTCCAAG
ATAAATGAGCTAATAAGCTTTAAAAAAAAAAAAAAAAA

FIGURE 2507

MDSRFPDFQDLDLEPERACHDAAGTLEVDFFLFLNFGTVDLAVRKETTTEQALPPALLLGIRRPEFLSRPSVQTE
DAPSKVNYVLCLLIAECSPGPSDYLPCAIPSAYRPGTWIFARDDSYHLTTDEDTHSSGPL

FIGURE 2508A

CAAGGATTTGCTAGCTGATAAAGAACTGTGGGCTCGACTTGAAGAACTAGAGAGACAGGAAGAATTGCTGGGTGA
ACTTGATAGTAAGCCTGATACTGTGATTGCAA**ATG**GAGAAGATACCACATCTTCTGAAGAGGTATACTTCTTGTG
ATAAGGATGTTGCAAGTTCAGAACCATTCAGTGGTCAAGTGAATAGTCAGTTGAACTGTTCAGTGAATGGTTCCA
GATCTTACCACAGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNATTGACGACGATGATGGTGATA
ACGACCATGAGGCTTTAGGGGTTGGAGATAATTCTATACCAACAATATATTTTTCACATACTGTTGAGCCTAAGA
GGGTCCGAATAAATACTGGAAAGAATACCACTTTAAAATTCAGTGAAAAGAAAGAAGAAGCCAAACGTAAACGAA
AGAACAGCACTGGCAGTGGCCACTCTGCCCAGGAGCTGCCGACCATCAGGACGCCTGCAGACATTTACAGAGCCT
TTGTTGATGTTGTGAATGGAGAATATGTCCCTCGCAAATCCATCCTGAAGTCTCGAAGTAGAGAGAATAGTGTGT
GTAGCGACACTAGTGAAAGCAGTGCTGCTGAATTTGATGATAGGCGGGGAGTTTTGAGGAGTATCAGCTGCGAAG
AAGCCACTTGCAGTGACACCAGTGAGAGCATTTTGGAAGAGGAACCACAAGAAAATCAAAAGAAACTTTTGCCCT
TATCAGTAACACCTGAGGTGTGTGTGTGTATCTTT**TAA**TTCTTTATTTCATATAGTATCTTTGACCAGTTTTAGC
TATTTAATCTGAAAAGTCATAAGATTAAATTAATTCTAGGTTTTATACTTTCTTGGTACTAATTAATAAAAAATT
AATAGTCACAAACAGTACAAATATTGTGATAATCAAATAGTTTATTTTTTGATAAACACATTACTTGTCTTAACG
TTCTATTTCAGCAAAATGGGAAATTTAAAATGTCTTACTTGGCATTATGTATTACATTTGTAGCTAGGAAATTAT
TTCGCAGTTTATTTTAAATAAATTACCAGTAGGTCATTTTCTGATAGTGTAAGGAGCAGATTACATTATTCTCTT
TTAAATACCTTGGCTAAGTTAAAGAAAAATAATGCATGCATAGCAGATAATTACCTAAAGTCTAATATTTTACCT
TGTACCAGTGAAACTTAACTCTTGGGGGATTATGGAATTGTTTTATAATCTGATGAAAGCTGTAGACCCTGTCCA
TAGAAAAAATAGTGCACACTCAATACACTTTCACCCACCACACTTCTTACAGTTTTTGGTGGTGGTGCAGGGGAG
GTTAGGAAATCCCCAAATAAGGATGTCTGTGAAATATAAGGCTATTGATTTCTTCATTCTTGTGTTTTGGTGCGT
ATTTGAAGTTTTCAATTTAAAAAGTATTTAGGAAGATTGGGGAACCCATGCCTGGATCAAACCAGTGTACACATT
TGTATATACAATAAGATACATGCATATATATAACCTTATCTAAAAATTCCATTGCTTTTACTAAATGGTATTATA
CTCAGTGTATTAAATGGTAATTGGGGATGGAGATTGGTAGCATTTAGGGACAGTACATATGACTAGAATGTTTTC
TTCCCCTCTTCTTAGTATAATGATCTTAGGTGACCTGGAAAGTATCTTACCTTATTTGATAGTCTTCCATACTGT
TAGAAAACAGGTAATGGATGTTATCAGGTAATTGCTGATAAATGTTTGAAAATTAGTTTTTTGTAAGGACTTAGT
GTATCATGGTACAGCTAGAGTGTGGAACCTATTTTTTATTTCACCCTTAGTAGCTTTGCATTTTGTATGGAAATG
TTTAATAGTAGTTGCTATACATTTTTTAACATCAAAGAAATAGTTCATGATTATGGTAAGTACTTTGGAAGATAT
CCTTTTCAGTATCTTTTTAAATGCTAAAATACCTCTTTTTCAAAGGCATTTTAAATAGAAGAAGGAGAAGAAGGC
TCTATGCTCATCGTGATAAAGTGGAGTTTTTAGGAAAGTAAGCTTTAAGCTGCTTTTACCAGTTGAACTCCAAAA
ATAATGTAGGAGAGAGATGGCTTTCTTTGTTTTTGTTTCAGTGGCGGGGCAAGGTAGAAGAAGGTGGCTTTTTAA
ATTATTTAGGTGTTACGTTGTTTTAACTAATTTTGAGCACTTGGTAGACAGAGGAGAACAAAATGTACATTAAAG
TTCACCTGTCAAATTTTCATTTGTAGAGGGAAGGATGGAGGTTCTAAATACCAGCAATCTTAAAAAAAAAAAAAA
ATATTAACTCCTTGTGTCTTACCTATTTTTGTATAAAACGACATGTACAGATATTTCCAGCAATTTATGCACATT
CTTTAATTCTGTTCCAGTTGAACATATAGTTGACCAGATTAAATGCAGCAAACATCCAGGTGAAATTGAGTCATT
TCTTTTTTTGTGGAACTTCTGATTTCTGTCATTGAGTTAATTATATTAAAATTTTGAAACCTGTACTTATTCCTA
CTAGTATCAGCACTTTTATTTTTCAACTTCCACTGATCTTTTAAAATTGAGGCAATATGCAGTAAAATATTTAAA
TAATTGCATAAACACCACCAAAGAGATATCAGTTAGAAATGTCAGTACTGGTGAAACTAAGCTATTGGCTAGCAG
GCAGCAAGGCCATCATAGGATAGCTCATTCATCAACTGATGTACAAAAGTCAGAGTTTGACACCCTAATAGCATT
TTTATTTTAATACATTATTTTTCACAGCATGGGCTGGACATGAATGGAATGTATGAAAGTTTGAAGACCTTTTAT
TTATCCATTTCTTTTTTTTCCCAGATAAAATTTACATTTTACATTTTGTTTTCTTGCATGTATACTGTAAAAATT
ACTTCTGTTTGGTGGTGAAATTAAAACTTAATGGTGTTGGTTTCTCTGAACAATTAGTATTTTGGTGTAGTAGTG
TTGTCTAGCCAAAAATCTCGTGAATTTACTTTTAATGAAAAGAATTGCCAAATGAGTGAATGGGAAGATTTTGTG
GGTGTCTTATTTGCATTTTATTACCATAACCTGACTTTTGTTTTCTAGGCTTTTTCTGGAACTGTTATAGAAAAA
GAATTTGTATCACCTTCCTTAACACCACCCCCAGCCATTGCTCATCCCGCACTACCCACTATTCCAGAACGAAAG
GAAGTTCTGTTGGAAGCATCTGAAGAAACTGGAAAGAGGGTTTCAAAGTTTAAAGCTGCCAGATTGCAACAGAAA
GACTAGGCCCTGTCTAGGAAATGGGAATTTACATCCTAAAACCTAGTTGTTCATTTGTTTAGAGTATCTATAGCA
AAATAGGTTACATGTAGTTTGAAATAAGGTATCCTGAGTTACTTTGGCAACAAGTTCTTTTACCCTTACCCGTGG
TATTTGAAAAAAATCAAGGTAACTGTCTGAATACTTTAATATCAGCTTGTTTTGTGAATTCTCTGAATACTGTCA
ACACTCCTATCTAAGTTTGCCTTTATGATGCAGTGGCAGCATTTTGAATTACTTTTCAAAGAATACTGTTCATAT

FIGURE 2508B

GCATTGTTTTTGTGTTTCAAACTAAATACAGGCAGATTTGTGCCAGCTGTGATATTGTGCATACCATATGGACCA
TTTTAAAGAAAATTTTAAAATTTCAAATAGATTCAACAATTACATTACTTGCTTTCACATTTTAAAGGCACTTTA
AAAAAATCTACTTCTCTTGTAGGTTTTGCGGCTAGTTGGCTATTCAAGAAACCTCGCCCCTCTGAATGTCATACT
GTAATCTTTAAGGAAGAAAGCTACATGAATTAATTGTACTCTATGGGAAAATTTCTTTGGAAAGATATTTTGTAA
AACTTTTTTTTCCAAGTAAAAACTTTATGAAACTTGGTCTCAAAAATGTTGTGAACTTTATGATTCAAAATTGAG
TACAGATATGTCCTTGATTCATATGTATGCTACATGTATCACACAACAGATCTGGAATTCTTTCAGTTCCTCAGA
TACTTCTCCCTTAGTTTTTGCAGTTTCACTGGGATTATGTTTTGGGAAACAAGGAAAGGTCTAGATGCTTAAACA
TTTTAAATAAAAATTCCTTACAGTTTCATCTTCCCAACATTTTCATTCTTTAAGGCTACTTTCCTACTAACTGAA
ATAACACATTTACTTTTACCACAATTCCTCAAAATAAATTTATTCTAACATTGAAAATAACATTACAAGTTAATC
ATTAGCTTGATGCATGCTAAAATGTAGCTTTTAAAAAGCATTCTGCATTAGTACTAAAATAAGCCATCAATGCCA
GTCCACCCTCTCTATTCATGGCTAAATATTTAAAGGTTATTTATAGCTTCTTTAATGAATTCTTCTTAAACAAAG
TGAAATTATGTCCTAGAAAAGTAGAAGCTATTCGTAACTAGAGCAGTGCAACTTTAAAGTTTTATGAATATGTAT
TTTAATGACAAGGGGGCGAGCTTGCATCCCCACTAGTTAATGGATAATTCAAACCGAGGACTGATTTTGAAAGAT
CACCTAAAAATGTAGATTTGTTCTTTAGTAAATTTAGATCAACTATGCATATATTTTGTAGGTAAATCTTTCAGT
CCATGCCCCAACCCTCACCAAAACCAAAGCAGAAATTACACACACAAAGATGCTCCCGTTAGGAATTGCTATTCA
CATGAGGCTTTCTGTGCTAGATTTTTTTCTCAGAAACAAACTTTACTGTAGGACTATTGTGGTGTTCTTAACAGA
TTTGTAATTTCAAGATGCGTGTCATTAAATAATTTTTCATGTTCACAGACAAA

FIGURE 2509

MEKIPHLLKRYTSCDKDVASSEPFSGQVNSQLNCSVNGSRSYHXXXXXXXXXXXXXXIDDDDGDNDHEALGVGDN
SIPTIYFSHTVEPKRVRINTGKNTTLKFSEKKEEAKRKRKNSTGSGHSAQELPTIRTPADIYRAFVDVVNGEYVP
RKSILKSRSRENSVCSDTSESSAAEFDDRRGVLRSISCEEATCSDTSESILEEEPQENQKKLLPLSVTPEVCVCI
F

FIGURE 2510

CCATTGTTATGTGTGTGCAGTTTTATTTAACAGTGCCGTGTACATGGTGGACAAGCTATGAAATATCTAGTCTTTAGATATTTGGAAGTGCTTGATGTATTTTAAAGTAGTAGTAGTAGAATAACACTTTTTGTAAATAGCTTTTAAAAACTGATGGGAAATGCTGTTTGGAAGTGGATTTGTTGAACCACCTGGGAGGTGGGAGGGAAAAAATTGCAAAAGGTGTTTTGCCATTGTTTATTAGAAAATTTCAGCTTAATCCATTGCCTATATGTTACAAGCATTTCATTTAACTTTGCTATACTGTATATATTGTGTATATACTGGACAAATGAGTCCTGATTTTATAATATCTAGTCTGTAGCTATTAAAGAGGTTGCCAGTGTATGACAAAAGTAGTTAGTAAACTAATGCATTTTGTACACTTTGTTAAAATTCATAGAGAGGCTGTCTTCTGAAAAGGACTTTTTGGAAGTGAAATGATAACATCAGCTCGAAGTGACACATGTGCTTATATCCACCAGGTTGGTGGTGGAGAGGAGTTGGAAGGAATGAAGGGTTCTAGACCAGAATGTTCCTATTTAGAAGACACTTTCAGATATAACCATTGTTACATGTGTGTAGTTTATTCAACAGTGCTATGTATATAGTGGACACACTTAAGTCCTTATTTGAAATATCTAGTCTTTCTAGATGTTTAGAAGTGCACAAAGCATGTTAAAAGTAGAGGTAGTAAGTAACACATTTTGTAGTTATTTTGATATGAAATATTGTCTTGGAAATTGATCAATTCTCTGAGAAGTACACGTTATGATATTTGTGCTGGTTCAGGGGGAAGAAGGAGCACAAAGTTCAAAGGGCTTTCTACCAGTGTCCAGTGTGTTTATGATGAGGCACATTGACCATTGTCCCTTATGTCTGCATTTTCGTTTACTGTGCTGTGTATATAAGCAGACATAGGAGTCCTAATTTATATCTAGTCGATGTTAAAGAGGTTGCCAGTGTATGGCAAAAGTAGAGTTAGTAAACTAATACATTGAGTACACTTTGTGTTAAAATTCATAAGGAACACTTCTTAAAAACAGAAGTAAAATTGTTAAACGCCCCCCGCCCCCAAGCATTACAGATGGCTTATAGCTGTCAACGGGGTTGGTAGAGGTCAGAAAGGGAAGTGTTCTAGGCCAGAATGTTCCTATTTAGAAGACACTCAAATTATAGTCTATGTTATGTATATATGCCATTTATTCAATACTACTGTGTATATAATGGAAAACTTAAGTGCAGTTTGAAACATCTAGTCTTTCTAGGTGTTTAAAAGTGCACAATGGCCACCGTGCCCAGCCCCTATTTTTTCTGAAATAATTTTTCGGATATACTTTTATATTTGAAATTAGTTGAACATAAGATGATCATCAAGCTTGCTATAAGTTTTAAGCTATTGCTACATTTGAACAAAGACCCACGTACTTATCTTAGAAAGTACTTAGGATATCTTTGAGATTAATGGTGCTACATCACTCTACAGTACTATGTAAAATGAATGGAGCTGCTGTTCCTTTCTAGCTAGCTGTTTGTGTAGTTCATATTAATTTACCCTGCCTTTTATTTGGATTGTCTGATTTCTTAGTTGTACACATGAACCTCATTATTTGCCTGGAATAAGTAATCAAATAAAATTGCTTTGATAAATAGGAAAAAAAATCTATGTCGGGTGCGGAGAAAGAGGTAATGAAATGGCAG

FIGURE 2511

IVMCVQFYLTVPCTWWTSYEISSL

FIGURE 2512

GTTTTGAAAGTTGATGGAGCGAACTGCTTTTCCAAAGACTCTTTTGAAAAACTTTTTAAGTAGGCCATTCTGACT
TTAACATTTCTCTTTGTCTTAACATTAGACAAAAAGTAACCTTCCTGAAGAGGACATGTGATTGGAAGTTGTCAA
TTGTTGAAGCATTGGTAACTCCAGTCTCTAACGTTTTAGAAAATCATAACAAGCGGTTCTCTACCCTGTAAAGGT
GAACTACTGAGTTCTTCATT**ATG**TCTGATGGAGATTATGATTACCTCATCAAGTTTTTAGCTTTGGGAGACTCTG
GTGTAGGGAAGACCAGTGTACTTTACCAATATACAGATGGTAAATTTAACTCCAAATTTATCACAACAGTGGGCA
TTGATTTCAGGGAAAAAAGAGTGGTGTACAGAGCCAGTGGGCCGGATGGAGCCACTGGCAGAGGCCAGAGAATCC
ACCTGCAGTTATGGGACACAGCAGGGCAGGAGAGGTTTCGTAGCTTAACGACAGCGTTCTTCAGAGATGCTATGG
GTTTTCTTCTACTTTTTGATCTGACAAATGAGCAAAGTTTCCTCAATGTCAGAAACTGGATAAGCCAGCTACAGA
TGCATGCATATTGTGAAAACCCAGATATAGTGCTGTGTGGAAACAAGAGTGATCTGGAGGACCAGAGAGTAGTGA
AAGAGGAGGAAGCCATAGCACTCGCAGAGAAATATGGAATCCCCTACTTTGAAACTAGTGCTGCCAATGGGACAA
ACATAAGCCAAGCAATTGAGATGCTTCTGGACCTGATAATGAAGCGAATGGAACGGTGTGTGGACAAGTCCTGGA
TTCCTGAAGGAGTGGTGCGATCAAATGGTCATGCCTCTACGGATCAGTTAAGTGAAGAAAAGGAGAAAGGGGCAT
GTGGCTGT**TGA**GAAGTCAAGTAAGCGACATAGTAGTTCAGGTGGCCCATGCCTGGGATCTTCTCTATGATTGATA
CATGGCACAGTGAGAGATTAATGGGCATTGTGTACAAATTGCTTCTCACCATCCCCATTAGACCTACGAATAAAG
CATCCGGTTCTAAAATTAATTTGTTGCAGCTTTGTAAATATTTCTTTAAGATTCAGCCTGAGAGTTAGGAGAAAT
ATTTCAGAGCCAAAAGTGCCTTATACAACCTTAGCCTATTATAGTAAATCATTCAAGGATTCAGAATTTTGCAGT
CACAGAAGAGTGTATTTATTATGTAGAATGAATGAGGGTACTGTCACCTGCCTTAATGTAGGTAGGCCCAGAGTC
TTACATTTAAGATCTTACATGCAGTTATAAAACCGCCACAGTCTTCAATCCAGATTTGAAGACTCATGCCATAGG
TGACATTCTAAAATACCATTAAAGCCACTTAAATGTTAAATAAGAATATACATGCACATCAGCTCAATGTCTTTG
AGTATTAATTTTATGTAAGCATTCTATTTAACATGAATATAGGACAAATCATGGCTATATCTATAGACCTTGGAT
AAACTGGATTGACCAATTATACACTCACGGTGACTTTTTTATTGGTGGGAAGGGGATTGGGGTGGGGCAGGCTGG
CTTAATGTAATATGAGCAACCAAAGTGGGACTTCTGTCTCCCCGCTATATTCCCATTGCTCTGAATGGTTGATTG
AAGGGTCAGGGAACTAGATTTTATGGCTTTAGTTCACTGTGATTGTACATTTATACTTGGCCTATGTGCTGGCCG
CACCTGAACATAGCTGGTGCTTATGCCGAGTTATTTGCGATGAGTAAATATTTAGTTTCTTTTTCTTCATATTTA
TAATGTTGATCTGGCATCCTCAGGCTGCAGCTTTATTAGCTTATAACTTACTCATCTCTATCTTTACCAGCAGGC
TCTGTATTGTTGATATTTGCAACTTGTTTTGCTTTTCCATTGGTGGAATTGAAATAATTAGTTTTTAATTACATA
AGATGCCTGTTTGCTATTTGGTGGAAGATAGATGTTCATATTGAAGCAGTCACATTTGTACTGTAGTTCAATAAA
AGAAAAATGAAGTATTCTGTAGCCTATATTTTTCATAGAGCTCATGAGCATTTACTGTACTTGCTGGGTCTTGCC
AAGATCATTTATTCCGCTGCATTGCCAAAGTGTCTTCATACCAAATTAAAGGTGGTTTTAATATATGTTTCATGG
AAGTTGTTTATAAAATTCAAAGGTATTTCATTTAGGTGAAAAGTCTTATTTATTAAAGTGGTTTGAATAAAGTAG
ATCAAAACTTCCAGAGATCTTAATGGCTATATAGGAAGAAATATCACTCACCATAATTTAAATAAAGAATAAAAA
TACTTGTATTTTGTGGTGGCAAATGTTTGGTAGAACTGTAATTAGAAAAATACAAGTATATTTGCGTGATGGTTA
CACTAGAAGCCCAGACTTTACGACTACACAATATATTCATGTATCTAAACTGTACTTGTACCCCCTAAATTTATT
TTTAAAAAAGGAAAAATAAAAGTATCATGAAAAAACCTATTTTTTTTTCCACTGTCCTTCCACTACTCCCATAAC
AAACTTATCCATGGTTGGTAAAATTTTACATATTTCTATCCTTGAAATGAAGGCTTCTTTTAAATTCCAAAGAAG
TCATGGAGGCCTGTGCATTTGAATTGTATATGCTAGTGAGGAAAAGATTTAGACATTTCAAGAGCAGGGTTGGCC
AGGCGCGGTGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCCGAGGAGGGCGGATCACGAGGTCAGGAGATCG
AGACCATCCTGGCTAACACAGTGAAACCCCATCTCTACTAAAAAAAAAAAAAAAAAAAAAAATGGGCTGGGCGTGG
TGGTGGGCACCTGTAGTCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATGGCGTGAACCTGGGAGGCGGAGCTTG
CAGTGAGCCGAGATTGCGCCACTGCACTCCAGCCTGGGCGACAGAGGAGACTCTGTCTCAAAAAAAAAAAAAAAA
AAAAAGAGCAGGGTCATAATCACACAGCAGTGCCTTATATAGTTGCCATAAGACTTCAGTGCAGTACAACATAAT
TTTACAGCTACATATCAGGGCATATTCTATATGGTGTATTTGTGTTAGAATAACACATTAAATGTCTTTAAACAT
AAAAATAAGAATGTTTGCATGTTTCAGTTTTCAAGAACCAAATGAGTAATTAGCTATAGATTCCACTGGCCTTAA
ACATACAATTAAGTGTATACATGATATAGTGCACACACAAAAGCCACCTTTAATTATTGAAATAACCTGTATTCT
TTTTGGAAATCATTTAAGTTTGGTATTGAAGTACTATATTTTTTGTGCATCAATGTATTTTTCTATTTACAAGCC
TATGTAAAAGTGAAGTGTATCTTCAGTGAACCATGTGCCAATTAAGCTGTAATAAAAAAGTGGTCTAGTCTGTCA
AA

FIGURE 2513

MSDGDYDYLIKFLALGDSGVGKTSVLYQYTDGKFNSKFITTVGIDFREKRVVYRASGPDGATGRGQRIHLQLWDT
AGQERFRSLTTAFFRDAMGFLLLFDLTNEQSFLNVRNWISQLQMHAYCENPDIVLCGNKSDLEDQRVVKEEEAIA
LAEKYGIPYFETSAANGTNISQAIEMLLDLIMKRMERCVDKSWIPEGVVRSNGHASTDQLSEEKEKGACGC

FIGURE 2514

AGTTAGTCTACAAGCTGAGATACAGGCTGCCAAATTTAAGATAACGATCAGTGAGATACTCGCTAACCACTCCTA
TCCCTAGGTTAGAAGGTGAAACATTATTATGCCAAAGGATAAAATCACCTTAAATCCCTAGCACTGAAGTCATCT
ACTTACTGATTAGTTCTCACTCTATCTTATCACTTTTATTTAATCTCCAGTTCAGAATAAGTTTGGTTGATGAAG
CAGACTAGAAGTAGAAAGCACTAAAAAGTGTGGGTCAGGAAGATGGAGGAAAGGGAGAGGAATTCGTAGACAGAT
ATAACAGTGTAAGTGATAGCTGTACTTCTTGACTTTGAAGCATAAAAGGGAAAAAAATAAACGTATGCTGTCTAT
GATAATTATCCTGGATTATTAAAAAATTTATAATTCCTATGATCTGAATAAAAACTCAGGAAATATACATTTCTA
AAAAAAGTTTATCCACAGTGGTTTTGTTTGTTTGTTTCGT**ATG**AGAATGATAAAACTCTTAGCAGTCTTTAAAAA
AAAAAAACCTATTAGAATGTATAGTCCATCCCCACACCTGGCTCCAGGGGTACTA

FIGURE 2515

MRMIKLLAVFKKKKPIRMYSPSPHLAPGV

FIGURE 2516

CATGCATGGCATGGAGTGTGTCTTTGCCTCCCCTGTGCAATCCTTCTTCCCCAACCTGCCAGCTTTCCTCTTATC
CTGACCACAGTTCACCACCATCCCTTTTCCCCAATCTCAGCTGCCTGGTCAGCACCTCTTTCGAACATTCTGAGC
CCCAACTTTGCAGTAAGGTGGTAGAAAATGGAAATCCAGAGAGCTGCAAAAAGATTTTTTTT**TAA**TGTAATGAAT
GGGGAGTAGTTTTGTGAACACACTCGTATTCACCTCTTCTTTCCTCTGGGAGGCCTGCCTGCCTTCCCCTCCCCC
CCAACCTTGATCCCTGTCTGCTGGAAAAGGCGCGATTGCTTCTCTTCCTCTTCTGCCCAAGACCAAGACTCTAGG
TCTGATATCCTTTTTAGCCACACACACACACCCCCCACACACGAAGTCTTCTTAATCTTCTTGAATTTACCAGTT
ACTCTGGACACTTCTTGCCATAACCCCATTTCACAGACAAAGGCTTAGGAGGGAAAAAGAACCAAACTGTTTCTG
TGTTTGTCATGTTAATGATGTCCATCCCCACACACCCAGTTCCCATCCCTGATGCTTCTTGTGCCTGTATCTTGA
ACCTTCAGAATGAAAAAAAAAAAAATCTCTGGGATAGCTGGATACAGTTTCTTTA

FIGURE 2517

CMAWSVSLPPLCNPSSPTCQLSSYPDHSSPPSLFPNLSCLVSTSFEHSEPQLCSKVVENGNPESCKKIFF